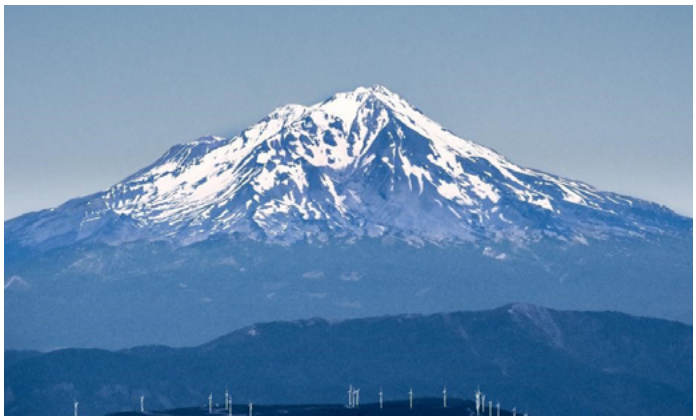
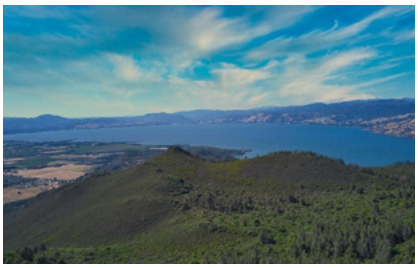


California's Rural North: Health Equity Landscape Scan

California Center for Rural Policy
at Cal Poly Humboldt
February 2023



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Executive Summary

The Rural Association of Northern California Health Officers (RANCHO) is an eleven county consortium consisting of Health Officers and Public Health leaders in the far northern region of California. The eleven counties that comprise RANCHO include: Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Shasta, Siskiyou, Tehama, and Trinity.

California's far north region is sparsely populated and topographically intricate. The counties that comprise the RANCHO region comprise about 2 percent (701,548) of California's total population but roughly 21.6 percent (35,291 sq. mi.) of California's total land area. All eleven of the counties are among the most rural counties in California.

In June 2022, the California Center for Rural Policy (CCRP) at Cal Poly Humboldt contracted with the California Department of Public Health (CDPH) as the Regional Contractor for RANCHO. CCRP is partnering with RANCHO & CDPH to achieve an equitable recovery from the COVID-19 pandemic and advance health equity across the region. The work plan includes four focus areas, all of which are covered in the report. The goal of the report is to provide a baseline snapshot of health disparities in the region, current efforts to advance health equity and equity in the public health workforce, data and measurement challenges, and the work the region will do moving forward.

Key Findings

Health Disparities

- RANCHO counties consistently rank below most other counties in the state on key health outcome measures related to length and quality of life. In 2022, nine of the eleven RANCHO counties fell within the lowest quartile of the health outcome rankings across the state.
- Local health departments in the RANCHO region have identified similar concerns in county-level Community Health Assessments (CHA): Lack of housing, limited access to health care and behavioral health care, socioeconomic disadvantage, geographic isolation, and high-risk health behaviors.
- LHDs highlighted health disparities for the following groups: Tribal populations, Latinx populations, populations living in poverty, aging populations, those who are geographically isolated, and those who are experiencing substance use or mental health issues.
- Behavioral health–including substance use and suicide–are cited as contributing factors for morbidity and mortality in the RANCHO region.

Health Equity Efforts

- Both RANCHO and the rest of the state's LHDs report being in the early stages of health equity efforts. Funding from CDPH is allowing RANCHO LHDs to advance this work.

- LHDs in the RANCHO region are working to create more equity infrastructure within their departments and agencies with the long-term goal of advancing equity in their communities.
- RANCHO counties are currently working to embed health equity efforts into basic organizational functions such as recruitment, retention, outreach, and service delivery. RANCHO LHDs are updating or creating strategic plans, communications plans, and language access plans as well as developing equity checklists, and creating and participating in equity-based affinity groups and spaces.

Public Health Workforce

- The structure and size of the LHDs across the RANCHO region vary greatly. LHDs in the region roughly range from 16 to 230 full-time employees. However, despite variations in structure and size, LHDs have similar funding streams and programs.
- Turnover, a lack of qualified applicants, and housing shortages make recruitment and retention of the Public Health workforce difficult. These are common workforce challenges across the region.
- Specialty positions that are difficult to staff and/or recruit across the region include: Health Officers, Public Health Nurses, and Epidemiologists. RANCHO LHDs reported challenges in staffing across other classifications as well.
- LHDs in the RANCHO region want to expand academic partnerships that help students find their way to careers in Public Health. LHDs in the region want to create career ladders for entry-level positions so those positions have advancement opportunities. Other ideas generated for workforce development include creating a paid internship program with the county government, establishing Community Health Worker certification pipelines, and establishing two-year entry level Public Health associate's degree programs.

Trust Building and Community Engagement

- RANCHO counties rely on collaboration with community partners to expand the reach and scope of efforts to advance health equity. Currently, RANCHO's efforts center around four primary strategies to engage communities across the region:
    - Strategic community and/or Tribal partnerships for a specific purpose (i.e. vaccination clinics, health fairs).
    - Facilitation and participation in community-wide coalitions focused on health.
    - Community-wide outreach and education including media outreach and trainings.
    - Utilization of Community Health Workers (or equivalent positions) that are embedded within specific geographic regions and/or have experience with a specific population that experiences health disparities.

Data & Measurement Challenges in a Rural Region

- RANCHO has a high level of interest in data equity and in the identification of metrics that are meaningful for small rural counties. Multiple RANCHO counties expressed concern they did not have adequate data to drill down on populations or regions that experience health disparities.
- Rural counties face unique challenges around availability and usefulness of population-level data. Small sample sizes and multi-county data aggregations make analysis of certain metrics unreliable and inconclusive.
- Epidemiologist positions are difficult to staff and many RANCHO counties do not have full-time Epidemiologists.

Resource and Learning Needs

- There are various training, technical assistance, and peer learning topics RANCHO has identified that are pivotal to improving health equity and furthering COVID-19 recovery in the region.
- Based on survey data, one-on-one interviews with counties, and a review of RANCHO meeting minutes, CCRP developed a preliminary learning needs summary and plan (see Figure 28) to bring training and technical assistance to RANCHO.
- Learning needs summary topics are categorized as they relate to the four focus areas of CCRP's work plan:
    - Coordinate Region LHD Equity COVID-19 Response and Recovery Efforts (Category: Health Equity).
    - Build a Foundation for Pursuing Equity Work within Communities (Category: Community Engagement).
    - Adopt Regional Data and Measurement Standards (Category: Data & Measurement).
    - Equity in the Public Health Workforce (Category: Workforce Development).

Background

The Rural Association of Northern California Health Officers (RANCHO) is an eleven county consortium consisting of Public Health and Health Services Department Directors, Assistant Directors, Health Officers, and Deputy Health Officers in the far northern region of California. The eleven counties that comprise RANCHO include: Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Shasta, Siskiyou, Tehama, and Trinity. The RANCHO consortium started in the early months of the COVID-19 pandemic by several Health Officers in the region and was modeled after The Association of Bay Area Health Officers (ABAHO).

Public Health leaders from each county meet on a weekly to bi-weekly basis to collaborate as a region towards the goal of improving the health of all communities in rural northern California. RANCHO meetings are well attended by the eleven counties and offer space for regional coordination and peer learning. Meetings provide an opportunity for members to:

In June 2022, the California Center for Rural Policy (CCRP) at Cal Poly Humboldt contracted with the California Department of Public Health's (CDPH) Office of Health Equity (OHE) as the Regional Contractor for RANCHO. The Bay Area, Greater Sacramento, San Joaquin Valley, and Southern California comprise the other four regions in the state. As the Regional Contractor, CCRP is partnering with RANCHO and CDPH to achieve an equitable recovery from the COVID-19 pandemic and advance health equity across the region.

Overview of RANCHO Region

Rural Northern California's landscape is characterized as sparsely populated and topographically intricate. The counties that comprise the RANCHO region comprise about 2 percent (701,548) of California's total population, while the region itself comprises roughly 21.6 percent (35,291 sq. mi.) of California's total land area.[1,2] National forests (namely the Six Rivers, Klamath, Shasta-Trinity, Modoc, Mendocino, and Lassen National Forests) and mountains (namely Mount Shasta, Lassen Peak, Klamath Mountains, Mount Linn, and Mount Eddy) comprise a substantial portion of the RANCHO region's physical geography. The region is distinguished from the majority of the state as a rural area with a low population density. The Index of

[1] United States Census Bureau (2021). American Community Survey 5-Year Estimates Subject Tables. Table S0101. https://data.census.gov/

[2] California State Association of Counties. (n.d.). Square Mileage by County. https://www.counties.org/pod/square-mileage-county

Relative Rurality (IRR) which evaluates counties from least rural (0) to most rural (1) indicates that all eleven counties are among the most rural counties in the state.[3] The table below demonstrates the variations in size between counties in the region:[4]

Figure 1: RANCHO County Population Size

County	Population Size
Shasta County	181,935
Humboldt County	137,014
Mendocino County	91,534
Lake County	67,749
Tehama County	65,345
Siskiyou County	44,151
Lassen County	32,949
Glenn County	28,675
Del Norte County	27,655
Trinity County	15,818
Modoc County	8,723

RANCHO's population is predominantly white (78.6%) compared to the rest of the state (52.1%). Additionally, RANCHO has a higher proportion (3.2%) than the state (0.9%) of the population identifying as American Indian or Alaska Native. RANCHO also has a significant percentage of the population that identify as Hispanic or Latino (17.9%) and multi-racial (8.1%). RANCHO's population is, on average, older than that of California's. The tables below present breakdowns of RANCHO and California's race/ethnicity and age proportions:[5]

Figure 2. Race/Ethnicity Breakdown, RANCHO and California Comparison

Race/Ethnicity	RANCHO Population	RANCHO	CA
Asian	17,896	2.6%	14.9%
American Indian/Alaska Native	22,651	3.2%	0.9%
Black	11,484	1.6%	5.7%
Hispanic or Latino	125,545	17.9%	39.5%
Multi-racial	57,119	8.1%	10.7%
Native Hawaiian/Other Pacific Islander	1,569	0.2%	0.4%
Some Other Race	39,711	5.7%	15.3%
White	551,118	78.6%	52.1%
Total Population	**701,548**		

[3] The IRR is a composite measure of rurality that takes into account four indicators of rurality: population, population density, urbanized area, and distance to the nearest metropolitan area.

[4] United States Census Bureau (2021). American Community Survey 5-Year Estimates Subject Tables. Table S0101. https://data.census.gov/

[5] United States Census Bureau (2021). American Community Survey 5-Year Estimates Subject Tables. Tables B02001 & S0101. https://data.census.gov/

Figure 3. Age Group Proportions, RANCHO and California Comparison

Age Group	RANCHO Population	RANCHO % Rate	CA % Rate
0-9	80,630	11.5%	11.6%
10-19	83,801	11.9%	13.3%
20-29	86,582	12.3%	13.7%
30-39	87,313	12.4%	14.8%
40-49	79,187	11.3%	12.9%
50-59	89,323	12.7%	12.6%
60-69	100,690	14.4%	10.9%
70-79	64,695	9.2%	6.7%
80+	29,327	4.2%	3.4%

Methods

CCRP utilized a mixed-methods approach and drew upon both primary and secondary data sources to create the report. CCRP used ATLAS.ti to analyze qualitative data from interview responses with an abductive approach, and RStudio to analyze quantitative data. Packages used in RStudio included tidyverse, tidycensus, and ggplot2.[6]

Primary Data

Primary data refers to information gathered directly from first-hand sources. The following primary data sources were utilized:

- Interviews with Public Health Directors and Health Officers from nine out of eleven RANCHO counties in September/October of 2022 to understand regional trends, concerns, and current equity-focused work.

  Counties: Humboldt, Mendocino, Trinity, Glenn, Shasta, Lake, Tehama, Modoc, and Lassen.

  The interviews covered the following topics: behaviors that contribute to morbidity and mortality, populations experiencing health inequities, efforts to achieve health equity, makeup of the Public Health workforce, technical assistance needs, community engagement, and data. Please see Appendix B for CCRP's interview script.
- Agendas and minutes from CCRP hosted RANCHO collaborative meetings. Twenty-one (21) meetings occurred between July and December 2022 with all eleven RANCHO counties actively participating.
- Information from CCRP's meeting hosted by CDPH for RANCHO Equity Leads (10.26.22).
- Weekly correspondences with RANCHO counties.
- A survey conducted by CCRP in December 2022, focused on meeting cadence and opportunities for collaboration.

Secondary Data

Secondary data refers to information that is already available to the public. The following secondary data sources were utilized:

- United States Census Bureau
- Public Health National Center for Innovations
- Health Resources and Services Administration (HRSA)
- California Health and Human Services (CHHS) Open Data Portal
- California Department of Education (CDE), DataQuest
- California Department of Health Care Services (DHCS)

[6] Charts included within the sections Health Equity in the RANCHO Region and Building Trust and Engaging RANCHO Communities were adapted from California's Rural North: Health Equity Data Book.

- Kidsdata.org.
- University of Wisconsin Population Health Institute & Robert Wood Johnson Foundation's County Health Rankings.
- California Department of Public Health, Office of Health Equity's Baseline Organizational Assessment for Equity Infrastructure - Results Report.
- Health Career Pathways: Growing Our Own Workforce conducted by The California Center for Rural Policy.
- Reports provided by RANCHO counties including Community Health Assessments (CHA) and health equity reports.
- Purdue University Research Repository (PURR).
- LHD webpages for all RANCHO counties.

Limitations

Nine out of 11 LHDs were interviewed directly.

Wherever feasible, data points include margins of error (MOE) provided by the data source. MOE is represented in the figures throughout this report (first seen in Figure 5) as lines intersecting point estimates. Several counties in the RANCHO region have low populations and this results in lower sample sizes for many variables, particularly those that apply only to a fraction of the population. Small sample sizes result in point estimates with wide confidence intervals and wide margins of error, which indicate a point estimate as less reliable. Data limitations for the RANCHO region are discussed in more detail in the data & measurement section of the report.

Results

Health Equity in the RANCHO Region

Health equity is achieved when all people have equivalent opportunities and resources necessary to lead healthy lives.[7] An important step to improve health equity is to determine which populations experience health disparities. According to the CDC, ***"health disparities are inequitable and are directly related to the historical unequal distribution of social, political, economic, and environmental resources."***

RANCHO Public Health Directors and Health Officers identified both specific populations that experience health disparities as well as health behaviors that contribute to poor health outcomes in the region. CCRP reviewed and has included relevant secondary data on the topics raised by RANCHO counties. Some themes emerged that are specific to the RANCHO region:

- RANCHO counties experience poverty at a higher rate than the state as a whole. Health equity work must address poverty, a key factor that contributes to health disparities in the region.
- The racial and ethnic make-up of the RANCHO region are quite different from the state as a whole (see Figure 2), and RANCHO also has a higher percentage of residents over the age of 65 (see Figure 3). Among other factors, health disparities are influenced by race, ethnicity, and age, and RANCHO members clearly stated the need to develop and share strategies to advance health equity within these populations.
- The RANCHO region is home to many geographically isolated communities, and residents in those communities must travel long distances to access health care and other resources such as schools, parks, and grocery stores. Health equity work must take into account the needs of isolated communities, posing real challenges around equitable distribution of resources in an already under-resourced region.
- Available data and reports from RANCHO counties support the need to address health behaviors that significantly contribute to morbidity and mortality. Behavioral health, including substance use and suicide, are at the top of the list.
- While it is very difficult to measure, counties also noted that adverse childhood experiences (ACEs) and historical trauma have a significant impact on the RANCHO region.
- Small population size in the RANCHO region makes it difficult for some counties to use data to determine with certainty which groups and populations experience health disparities.

As mentioned above, CCRP conducted a secondary data scan to determine if data exists to support the concerns shared by RANCHO counties. Partial results of the scan are included in this report. Additional data about the region will be compiled and shared in a future CCRP report.

According to the University of Wisconsin Population Health Institute, the RANCHO counties have consistently ranked below most other counties in the state when it comes to overall health outcomes. Health outcomes indicate how healthy a county is. They reflect the physical and mental well-being of residents within a community through measures that represent both length of life and quality of life.

[7] California Department of Public Health (2020). Racial and Health Equity Glossary of Terms.

[8] Health Disparities. DASH. CDC. (2022, October 4). https://www.cdc.gov/healthyyouth/disparities/index.htm

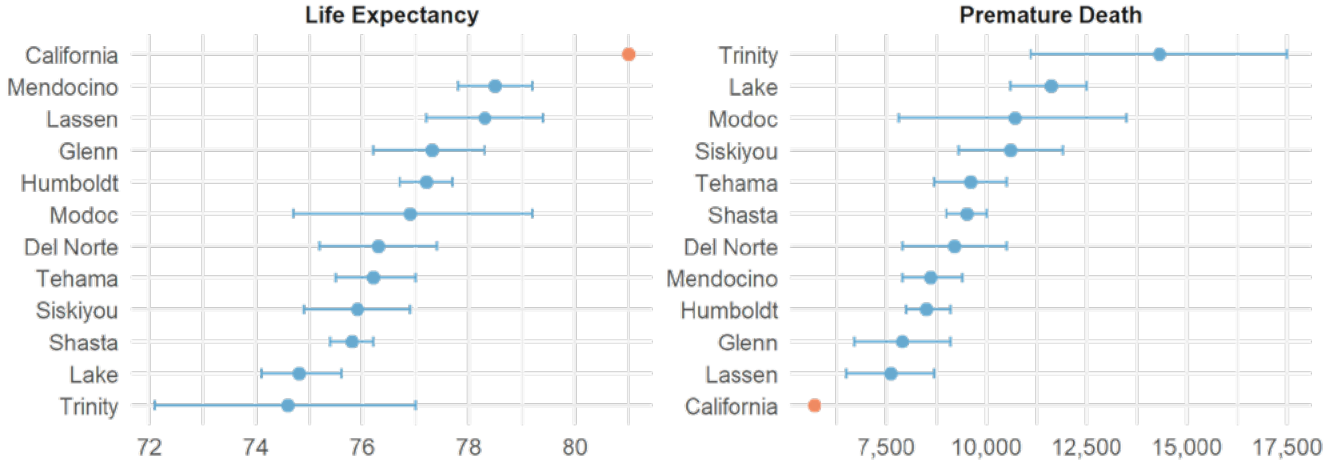
In 2022 nine of the eleven RANCHO counties fell within the lowest quartile of the health outcome rankings as highlighted in Figure 4 below. There are 58 counties in California. Higher rankings represent poor health outcomes for county residents.[9]

Figure 4. Health Outcome Rankings for RANCHO Counties

Counties	2020	2021	2022
Del Norte	45	50	51
Glenn	35	44	40
Humboldt	47	45	39
Lake	58	57	56
Lassen	42	48	48
Mendocino	41	41	44
Modoc	55	55	55
Shasta	46	49	46
Siskiyou	57	56	57
Tehama	49	51	52
Trinity	56	58	58

As shown in Figure 5 below, life expectancy rates are significantly lower and premature death rates are significantly higher for RANCHO when compared to the state average.[10] Premature death relates to the number of years of life lost prior to age 75 per 100,000 population.

Figure 5. Life Expectancy and Premature Death Rates, RANCHO and California Comparison.

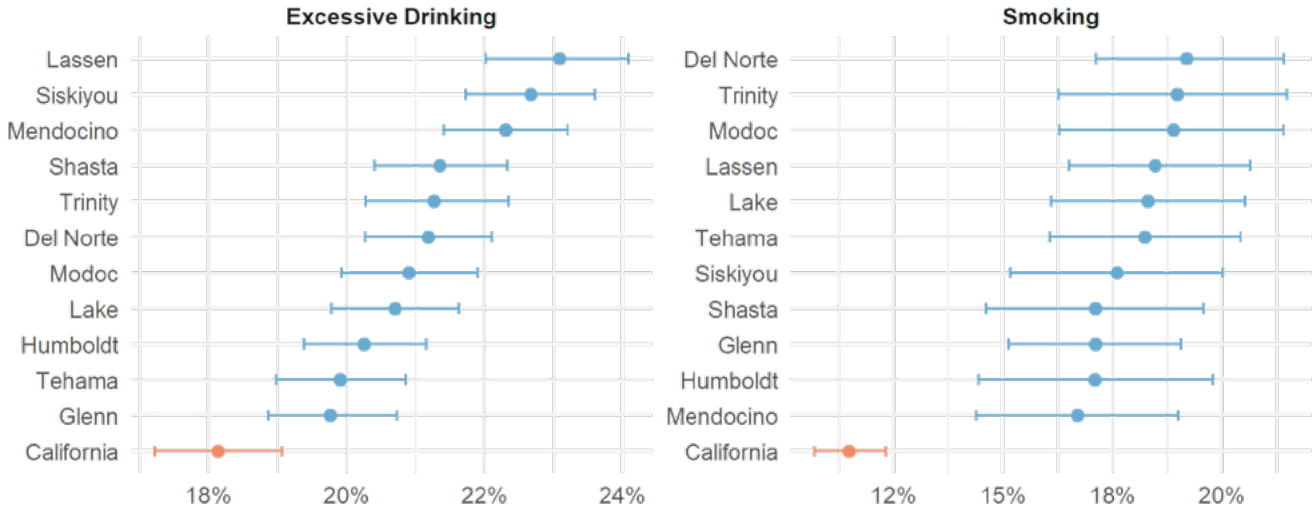


[9] University of Wisconsin Population Health Institute & Robert Wood Johnson Foundation. (2020-2022). County Health Rankings & Roadmaps. California. https://www.countyhealthrankings.org/explore-health-rankings/california?year=2022&tab=1

[10] University of Wisconsin Population Health Institute & Robert Wood Johnson Foundation. (2018-2020). County Health Rankings & Roadmaps. Premature Death. Life Expectancy. Premature Death & Life Expectancy

In interviews with RANCHO counties, one of the most cited contributing factors to morbidity and mortality in the region were substance use disorders.[11] Rates of excessive drinking and smoking are higher in all RANCHO counties in comparison to the state, with rates significantly higher for most counties.[12] See Figure 6 below for a breakdown.

Figure 6. Rates of Excessive Drinking and Smoking, RANCHO and California Comparison



Physical health and mental health were also cited by RANCHO leaders as leading concerns that impact the health of the region. In accordance with Figure 7 below, residents of the RANCHO region report approximately one additional day of both physically and mentally unhealthy days each month when compared to the state.[13] Relating to physical illnesses, factors that were of concern include unhealthy eating habits, diabetes, heart disease, lung disease, cancer, hypertension, and physical disabilities. Relating to mental illness, specific responses included chronic mental illness, historical trauma, and mental disabilities, all of which lead to higher rates of suicide as indicated by interviewees. From 2010-2019, RANCHO's suicide rate (24.2 per 100,000) was more than double California's (10.7 per 100,000).[14]

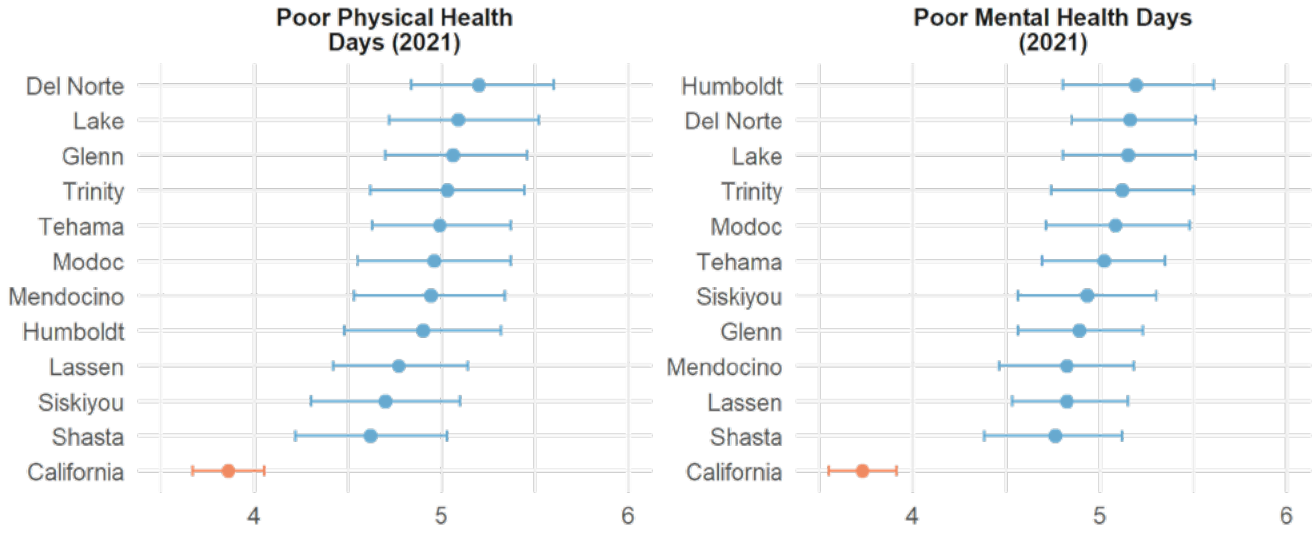
[11] Smoking, tobacco use, and excessive drinking were aggregated with substance use disorders in the qualitative analysis.

[12] University of Wisconsin Population Health Institute & Robert Wood Johnson Foundation. (2018-2020). County Health Rankings & Roadmaps. *Adult Smoking, Excessive Drinking.* Adult Smoking & Excessive Drinking

[13] University of Wisconsin Population Health Institute & Robert Wood Johnson Foundation. (2018-2020). County Health Rankings & Roadmaps. *Poor Physical Health Days, Poor Mental Health Days.* Poor Physical Health Days & Poor Mental Health Days

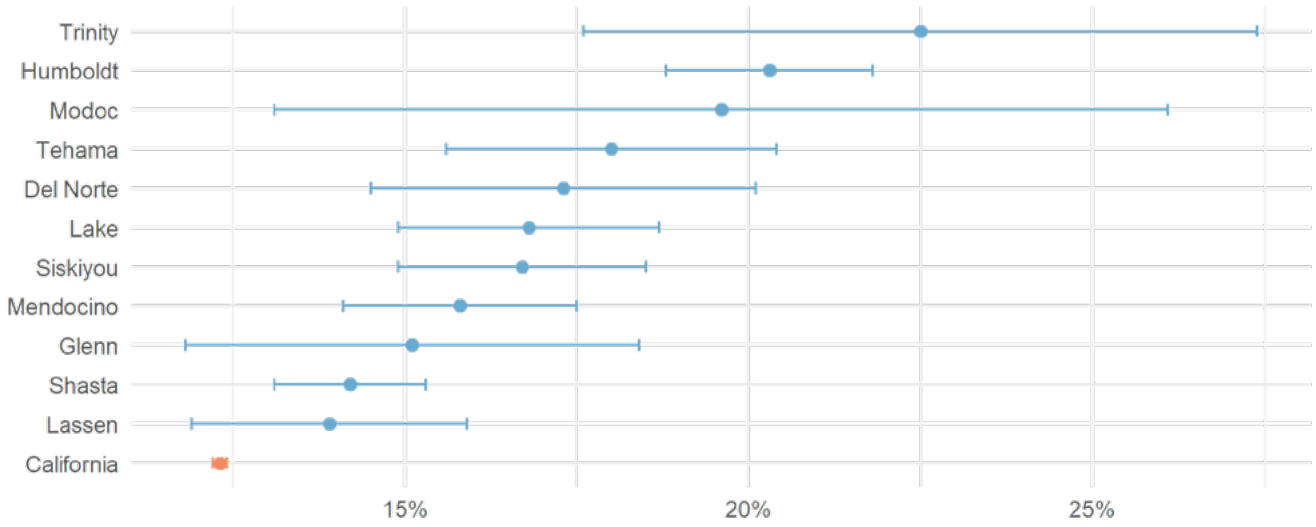
[14] Mental Health Services Oversight & Accountability Commission (MHSOAC). (2010-2019). *Suicide Incidence and Rate Dashboard.* https://mhsoac.ca.gov/transparency-suite/suicide-incidence-and-rate/

Figure 7. Average Physically and Mentally Unhealthy Days Reported in the Past 30 Days.



As cited in one-on-one interviews with RANCHO counties, poverty in the RANCHO region acts as a significant barrier to health equity.[15] As shown in Figure 8 below, all RANCHO counties have a higher poverty rate than the state.[16]

Figure 8. Poverty Rates, RANCHO and California Comparison



Poverty rates for the region include large margins of error. To get a more extensive view of poverty in the region, supplementary data points related to income-based benefit programs such as Medi-Cal proportions and Free and Reduced Price Meal (FRPM) data are below. The majority of RANCHO counties have a higher percentage of the population eligible for Medi-Cal compared to the state. The majority of RANCHO counties also have a higher percentage of their K-12 students qualifying for FRPM compared to the state.

[15] *Health, Income, & Poverty: Where We Are & What Could Help. Health Affairs Brief.* (n.d.). https://www.healthaffairs.org/do/10.1377/hpb20180817.901935/full/

[16] United States Census Bureau. (2021). American Community Survey 5-Year Estimates Subject Tables. Table S1701. https://data.census.gov/

Figure 9. Percent of Population Eligible for Medi-Cal, RANCHO and California Comparison[17]

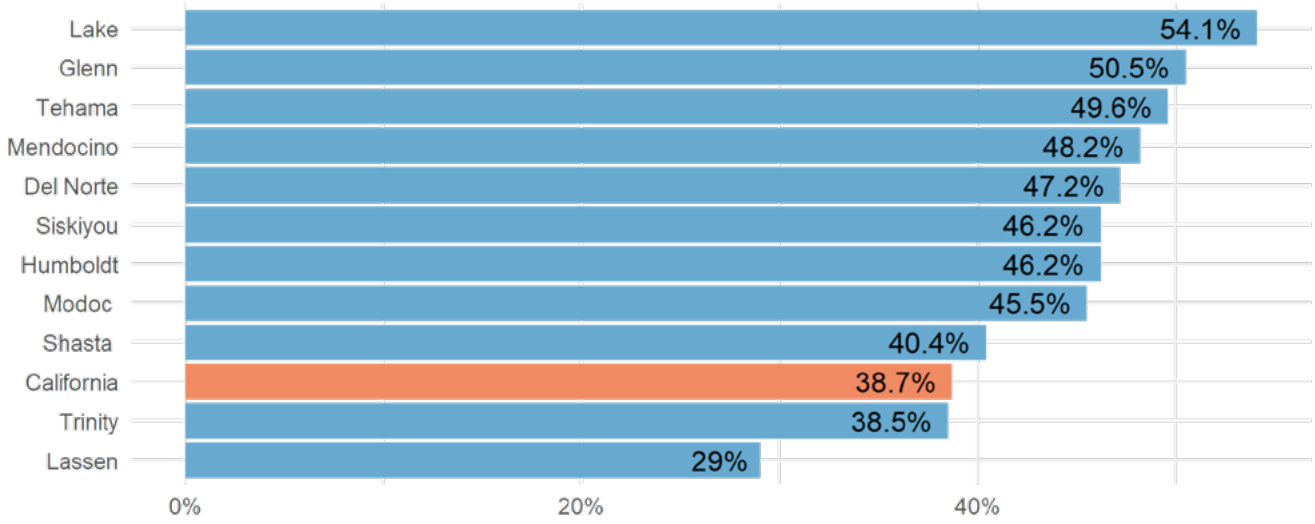
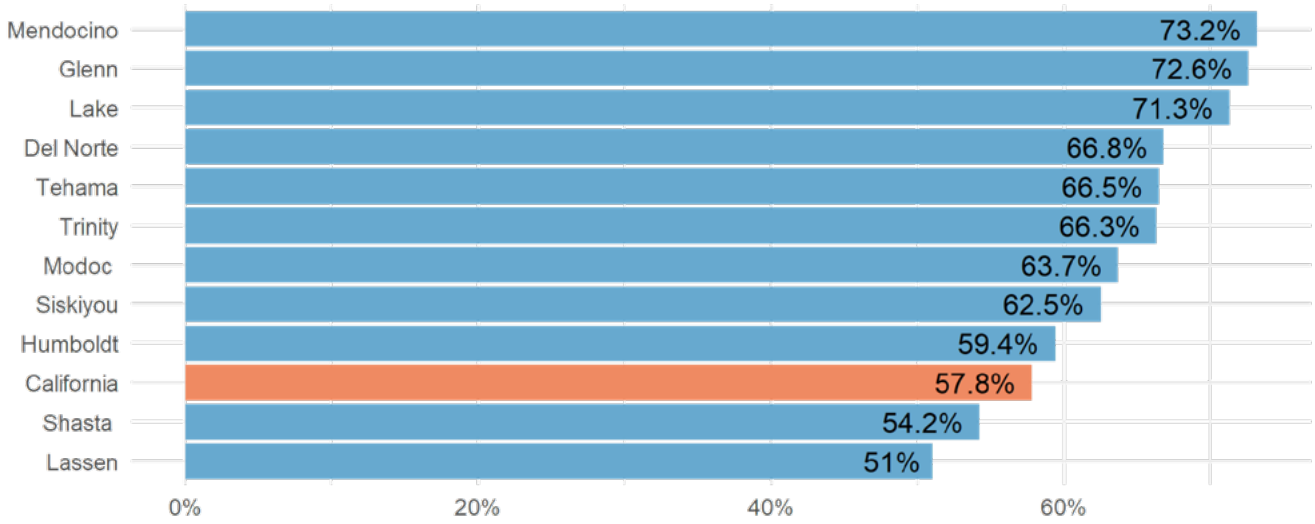


Figure 10. Percent of K-12 Students who qualify for Free and Reduced Price Meals, RANCHO and California Comparison[18]



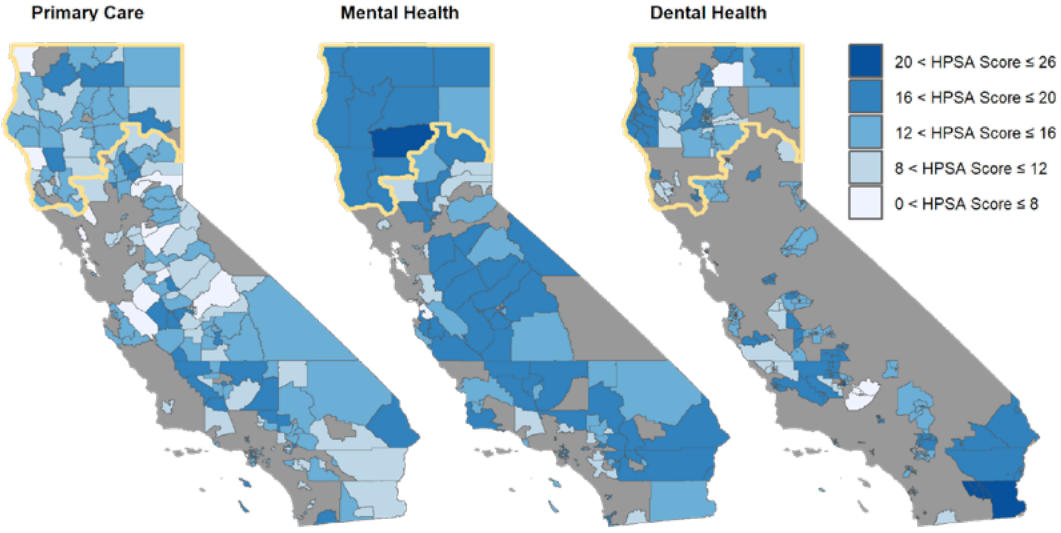
Geographic isolation was another theme discussed by county representatives. The RANCHO region is characterized by many two-lane, narrow highways and isolated micro communities that require residents to travel long distances for basic amenities including health care, schools, groceries, and support services. Transportation challenges are commonly cited as barriers for geographically isolated residents to seek basic services. Many residents in RANCHO counties also have to travel long distances for any type of specialty care, as access to specialty care is very limited in the RANCHO region. CCRP was not able to find reliable data on average distances that residents in RANCHO travel for essential services.

[17] California Department of Health Care Services. (2022). Dec 2022 Medi-Cal Monthly Enrollment Recent Trends. *Certified Eligible Counts by County.* https://www.dhcs.ca.gov/dataandstats/statistics/Pages/Medi-Cal-Certified-Eligibles.aspx

[18] California Department of Education. (2021-2022). DataQuest. *Free and Reduced Price Meals.* https://dq.cde.ca.gov/dataquest/

Health Professional Shortage Areas (HPSAs) are regions or populations identified by the Department of Health and Human Services as having a shortage of primary, mental health, or dental health providers. Higher HPSA scores indicate a greater need. The majority of the RANCHO region is covered by an HPSA for primary care providers and dental care providers, while the entirety of the region is identified as an HPSA for mental health care providers.[19] Figure 11 below highlights counties or specific census tracts in California that are designated HPSAs by type. Gray areas represent areas that aren't designated HPSAs.

Figure 11. Health Professional Shortage Areas and Scores



CCRP reviewed community health assessments conducted by 10 of the 11 RANCHO counties to summarize common health-related priorities across the region. There is a lot of overlap in priority areas across the RANCHO region, both in the community health assessments and as evidenced by the interviews with RANCHO counties. Figure 12 provides a summary of that analysis.

Figure 12. Common Health Concerns in RANCHO Region[20]

Topic	# of counties experiencing this issue	Specific Issues
Housing	10	▸ Scarcity of available housing. ▸ Lack of affordable housing. ▸ People experiencing houselessness.
Behavioral Health	9	▸ Shortage of mental health services and providers. ▸ Increase in substance use, especially opioids. ▸ High levels of tobacco use (including vaping and e-cigarettes).

[19] Health Resources & Services Administration. (2021). HPSA Find. https://data.hrsa.gov/tools/shortage-area/hpsa-find

[20] Information on priorities was adapted from Community Health Assessments (CHA) and Community Needs Assessments (CNA) from the RANCHO counties. Nine of the eleven RANCHO counties had completed Community Health Assessments. It's important to note that information for 10 counties were used to create Figure 12, as one CNA covered two RANCHO counties through examining a three-county service area.

Topic	# of counties experiencing this issue	Specific Issues
Access to Healthcare	8	▸ Lack of healthcare providers. ▸ Lack of affordable services. ▸ Insurance not accepted by health providers. ▸ Lack of insurance. ▸ Lack of specialty care.
Socioeconomic Status/Poverty	8	▸ Shortage of employment opportunities. ▸ Low median household income. ▸ High levels of people living in poverty. ▸ High rates of CalFresh enrollment. ▸ High rates of high school dropouts/low rates of post-secondary educational attainment.
Transportation	8	▸ Long commutes to work, school, shopping, healthcare facilities. ▸ Limited/unreliable transportation options.

While not highlighted in community health assessments, information gathered from RANCHO meetings and interviews suggest that climate resilience and adaptation is an area where further work is needed. The RANCHO region has been impacted heavily by wildfires. Impacted communities include those with less insulated infrastructure, agricultural workers, aging populations, individuals with health conditions, and those living in substandard housing. RANCHO is disproportionately impacted by these effects considering that agriculture, forestry, fishing, and hunting constitute a larger share of the regional economy than that of the state economy.[21] Climate change events tend to disproportionately impact populations that experience health disparities. They experience the threats of climate change and wildfires, but subsequently face limitations in healthcare, services, and transportation.

Health Equity Efforts in the RANCHO Region

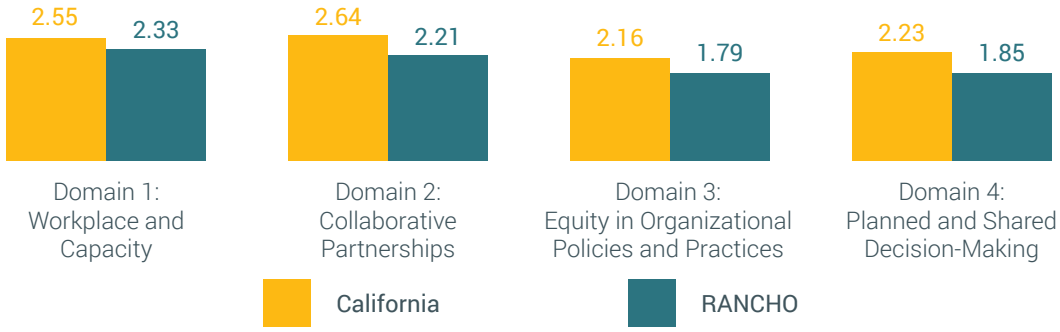
The purpose of the California Equitable Recovery Initiative (CERI) is to address COVID-19 related health disparities and advance health equity.[22] More specifically, the funding supports LHDs to examine their organizational structure, embed equity in policy and practice, and establish equity infrastructure. The California Department of Public Health developed a tool and conducted a Baseline Organizational Assessment for Equity Infrastructure to determine where the regions across the state land in regards to equity infrastructure.

[21] United States Department of Commerce Bureau of Economic Analysis. (2020). *GDP and Personal Income.* https://apps.bea.gov/itable/?ReqID=70&step=1&acrdn=5#eyJhcHBpZCI6NzAsInN0ZXBzIjpbMSwyNCwyOSwyNV0sImRhdGEiOltbIlRhYmxlSWQiLCI1MDMiXSxbIkNsYXNzaWZpY2F0aW9uIiwiTkFJQ1MiXV19

[22] California Department of Public Health. (2021). *California Equitable Recovery Initiative (CERI)*. https://www.cdph.ca.gov/Programs/FCSD/Pages/California-Equitable-Recovery-Initiative-(CERI)QandA.aspx

RANCHO's average scores in all domains are less developed than the state as a whole, however it is clear that both RANCHO and the rest of the state report being in the earlier stages of equity implementation. As shown in Figure 13 below, domain averages for RANCHO and the state are measured on a scale of 1 to 6, with 1-2 indicating early stages of equity infrastructure implementation, 3-4 indicating established equity infrastructure, and 5-6 indicating strong equity infrastructure.

Figure 13. Domain Average Results, RANCHO and California Comparison[23]



LHDs in the RANCHO region are working to create more health equity infrastructure within their departments and agencies with the long-term goal of advancing health equity in their communities. For example, several LHDs are reviewing Human Resources policies and strategic plans for opportunities to incorporate equity from the ground up. Other practices include: revising job descriptions, developing equity checklists, and convening equity-focused groups and spaces. These efforts build internal capacity for equity whether they center around racial equity and injustice, dismantling inequitable policy, supporting multilingual spaces, or building affinity groups. Figure 14 below features some of the ongoing equity efforts in the RANCHO region.

Figure 14. Equity Efforts in the RANCHO Region

County	Equity Efforts
Glenn County	Started internally, built a bilingual subcommittee as COVID-19 disproportionately impacted the Latinx community, some American Sign Language pieces included. Building resources and a toolkit to be used by the subcommittee.
	CERI Leads are working to be certified as Equity Champions via the Center for Healthy Communities at CSU Chico.
	Drafting a language access plan and coordinating a communication plan.
Humboldt County	Expanding staff training and engagement opportunities around health equity.
	Looking at HR policies.
	Improving and engaging in equity-based spaces (affinity groups).
	Developed a portal for staff to communicate their experiences and receive support (funded through County Diversity, Equity, and Inclusion (DEI) grant).
	Adapted Shasta's equity checklist for programs to determine where they are at with equity.
	Building a data dashboard to democratize data.

[23] California Department of Public Health. (May, 2022). Baseline Organizational Assessment for Equity Infrastructure. https://www.cdph.ca.gov/Programs/OHE/Pages/Baseline-Organizational-Assessment-for-Equity-Infrastructure.aspx

[24] The Center for Healthy Communities meets quarterly to speak about matters around Public Health and Equity. https://www.csuchico.edu/chc/. Champions for Equity: https://www.surveymonkey.com/r/VDNGL32#msdynttrid=pB8OspCZzG9EO9shlbxppiM7GRdywfbyZzJEI6kUrCs

County	Equity Efforts
Lassen County	Opened up wellness centers in remote areas of the county.
	Working on a nutrition grant with SnapEd to develop farm stands and community gardens.
	Working to collaborate with a company doing lifeline cell phones and tablets, giving 250 away and teaching people how to use them.
Mendocino County	Has a Racial Equity and Injustice committee that meets twice a month to identify inequities.
	Has integrated equity throughout the county strategic plan.
	Established (or is looking to establish) an equity work board to look at policies and procedures that are not equitable and dismantling them.
	Working on a Tribal consultation policy.
	Adapted Shasta's equity checklist for programs to determine where they are at with equity.
	The DEI committee started at the beginning of the pandemic and identifies and addresses language barriers. All documents have been translated into Spanish at the time of publication.
	Funded a promotores program and are in the process of continuing to find funding for the program.
	Conducting an equity assessment of the county workers and offering equity trainings to all employees.
Modoc County	Reaching out to the Tribes through the promotores program.
	Embedded CERI into the Cultural Competency Committee.
Shasta County	Shasta's Capacity Building for Equity Unit including four community organizer positions and two policy analyst positions.
	Developing an equitable recovery and resilience plan.
	Developed an equity checklist & an Equity 101 training.
Tehama County	Desire to create and embed equity into job classifications for Public Health with CERI and Future of Public Health (FoPH) funding.
Trinity County	Fully staffed equity team and consultants conducting Community Equity Assessment and Equity Strategic Plan in coordination with the General Plan update to ensure equity is at the forefront of community plans and economic development.

Impact of New CDPH Funding in the RANCHO Region

Funding that supports health equity infrastructure such as CERI has provided RANCHO LHDs with an opportunity to build capacity in this area. All 11 of the RANCHO counties are participating in CERI. Some have faced challenges finding qualified staff to lead these efforts. FoPH funding from CDPH is also available for LHDs to expand Public Health infrastructure to effectively respond to the needs of communities within the region.

Recipients of CERI funding are strongly encouraged to staff a full-time equivalent Equity Lead position, and in some cases, part-time equity positions.[25] Likewise, Future of Public Health funding in the RANCHO region is being used to continue to fund or hire for positions including: Health Officers, Communication Managers and Specialists, Epidemiologists, Fiscal and Analyst staff, and other positions.

Some counties in the RANCHO region are using funding to further efforts in becoming accredited Public Health Departments. Both Humboldt and Shasta are currently accredited through the Public Health Accreditation Board (PHAB).[26] According to interviews with RANCHO health entities, seven other counties are in the process of accreditation at varying stages. Some LHDs have developed Community Health Assessments (CHA) and Community Health Improvement Plans (CHIP), which inform the accreditation process.

Figure 15 includes plans from RANCHO counties for Future of Public Health funding. Please note that information does not represent the final plans of the LHDs.

Figure 15. RANCHO Future of Public Health Funding Plans

County	Funding Plans
Del Norte County	Fill positions around basic Public Health functions such as staff analysts. Funding will be used for establishing Medication-Assisted Treatment (MAT) programs for Native American populations.
Mendocino County	Continue to fund the Health Officer. Possibly establish a fatality review team and facilitate a health systems collaborative.
	Tackle Public Health Accreditation and create a CHA, CHIP, and Strategic Plan.
Humboldt County	Increase permanent Communicable Disease Investigator (CDI) and Public Health Nurse positions in the Communicable Disease Program and fund a second Epidemiologist.
	Add two Health Education Specialists, one for health equity and one for emergency preparedness.
Lake County	Hired a Health Equity position and new EHR Administrator and Epidemiologist.
	In the process of Public Health Accreditation.
Lassen County	CHA and Public Health Accreditation efforts are embedded in the FoPH work plan.
	Keep part-time temporary grant positions hired and sustain media outreach.
Mendocino County	Hire a Communications Manager and Specialist, a program level position for DEI, Fiscal Manager and Analysts, an Epidemiologist, and Human Resources (HR) hiring staff. Other expenses in the work plan include media posts, supplies, and billboards.
	Apply an equity lens to accreditation work. Hope to be accredited in 2023.

[25] As of February 2023, nine out of the eleven RANCHO counties have dedicated Equity Lead positions staffed.

[26] Public Health Accreditation Board. (n.d.). *Accreditation Activity*. https://phaboard.org/accreditation-recognition/accreditation-activity/#_California

County	Funding Plans
Modoc County	Started a promotores program via a County Medical Services Program (CMSP) grant and transitioned to funding the program through CERI. Modoc's Equity Lead is the Health Program Manager, with support from a part-time Equity Specialist funded through CERI and ELC COVID funding.[27]
	Start a Community Health Assessment (CHA).
	Continue to fund CERI positions (including Equity Coordinator and Health Specialist). Hire an Accreditation Coordinator and a communications position.
Shasta County	Move programs (WIC, CalFresh, Epidemiology) under Public Health. Funding will help hiring new supervisors, staff, and branch director deputies.
Siskiyou County	Fill positions around basic Public Health functions. Funding will also be used for harm reduction programs and vending machines.
Tehama County	Conduct surveys and focus groups to inform the CHA and CHIP now that staffing levels have improved.
	Improve administrative infrastructure and establish management information systems. Planning to hire program manager positions and an Accreditation Coordinator.
Trinity County	FoPH funding added 1 CHW for the public health branch and 1 CHW for environmental health for community outreach. Filled part-time data specialist to support opioid, chronic disease, and STI data.

Equity in the Public Health Workforce

RANCHO LHDs want to develop strategies to diversify their Public Health workforce. They want the demographics of their workforce to more closely mirror the demographics of their communities. The one-on-one interviews revealed that, for a variety of reasons, RANCHO LHDs were not able to easily access information about the demographics of their current workforce. Many RANCHO LHDs are embedded in larger agencies (see section below) and they do not have direct access to Human Resources data.

Structure and Size of RANCHO LHDs

The structure and size of the LHDs across the RANCHO region vary greatly, as is true of LHDs across the State of California. They have similar funding streams, programs, and priorities but the size of their workforce varies considerably across counties. LHDs in California are decentralized, meaning that they are primarily led by employees of local governments, and have structural differences.[28] Figure 16 below shows the organizational structure of the RANCHO LHDs and where the departments are nestled in the local governmental structure.[29]

[27] ELC = Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases

[28] CDC Public Health Governance Fact Sheet.

[29] Sources for Figure 16 include Public Health Department webpages for all eleven RANCHO counties. Figure 16 reflects a snapshot of the current organizational structure for counties but should not be considered permanent as counties periodically reorganize the structure of their local government.

Figure 16. RANCHO Public Health Organogram

Health & Human Services Dept.

Humboldt
- Behavioral Health
- Public Health
- Social Services
- Child Welfare Services

Trinity
- Social Services
- Public Health
- Veterans Services
- OES

Del Norte
- Behavioral Health
- Public Health
- Public Assistance/ Employment & Training
- Social Services

Mendocino
- Behavioral Health & Recovery Services
- Child Support Services
- Environmental Health
- Social Services
- Veterans Services
- Public Health

Health Services Department

Lake
- Children's Services
- Emergency Preparedness
- Public Health
- Veteran's Affair
- First 5 Lake
- Environmental Health

Modoc
- Behavioral Health
- Environmental Health
- Public Health

Health Services Agency

Tehama
- Behavioral Health
- Emergency Preparedness
- Medical Clinic Services
- Public Health
- Substance Use Recovery

Health & Human Services Agency

Glenn
- Behavioral Health
- Public Health
- Social Services

Siskiyou
- Behavioral Health
- Public Health
- Social Services

Lassen
- Behavioral Health
- Community Social Services
- Environmental Health
- Grants and Loans
- Public Health

Shasta
- Adult Services
- Children's Services
- Emergency Preparedness
- In-Home Supportive Services (IHSS)
- Mental Health & Substance Use Treatment
- Public Health

Recruitment and Retention of the Public Health Workforce

LHDs in the RANCHO region across the board identified recruitment and retention of their Public Health workforce as a challenge. Turnover, a lack of qualified applicants, and housing shortages make recruitment and retention of the Public Health workforce difficult for the region. Workforce shortages exist across the region for a variety of professions; these are not challenges unique to Public Health.

Interviews with the LHDs highlighted that vacancy rates are constantly in flux. Many LHDs indicated that it was an ongoing challenge to keep vacancy rates low. RANCHO region LHDs vary in size and differ in their estimated capacity of FTEs (Full-Time Equivalents) currently employed. LHDs in the region roughly range from 16 to 230 FTEs, as demonstrated in Figure 17 below. It should be noted that the number of FTEs was in some cases estimated, and that this number is constantly in flux as employees are hired and depart from the organization. The Public Health Workforce Staffing Needs Calculator is a resource that LHDs can utilize to determine how many FTEs they will need to adequately serve the foundational needs of their community.[30,31] Numbers in the two tables on next page were reported with varying levels of certainty.

[30] Public Health National Center for Innovations. (n.d.). Transforming Public Health through the FPHS. https://phnci.org/transformation/fphs

[31] Public Health National Center for Innovations, CDC, de Beaumont Foundation, Center for State, Tribal, Local, and Territorial Support. (n.d.). *Workforce Calculator*. https://phnci.org/transformation/workforce-calculator

Figure 17. RANCHO County Public Health Estimated FTE Counts	
Public Health Department	**Estimation**
Modoc County	16
Trinity County	17
Lassen County	20
Tehama County	24
Lake County	67
Mendocino County	100
Shasta County	150
Humboldt County	230

Figure 18. Vacancy Rate Estimates for RANCHO Counties[32]	
County Public Health Department	**Estimated Vacancy Rate**
Humboldt County	Hovering around 30%
Lake County	Moderate to medium vacancy
Mendocino County	30% vacancy rate
Modoc County	3 vacancies (18% rate)
Tehama County	High vacancy rate

LHDs in the region reported that public health nursing positions are difficult to keep staffed. The regional difficulty in staffing applies generally to nursing positions, ranging from Director of Nursing positions to Public Health Nurses (PHN), Registered Nurses (RN), and Licensed Vocational Nurses (LVN). Other positions that are difficult to staff and keep staffed include: Health Educators, Health Program Managers, Office Assistants, Epidemiologists, Analysts, fiscal staff, dietician staff, and supervisor level positions.

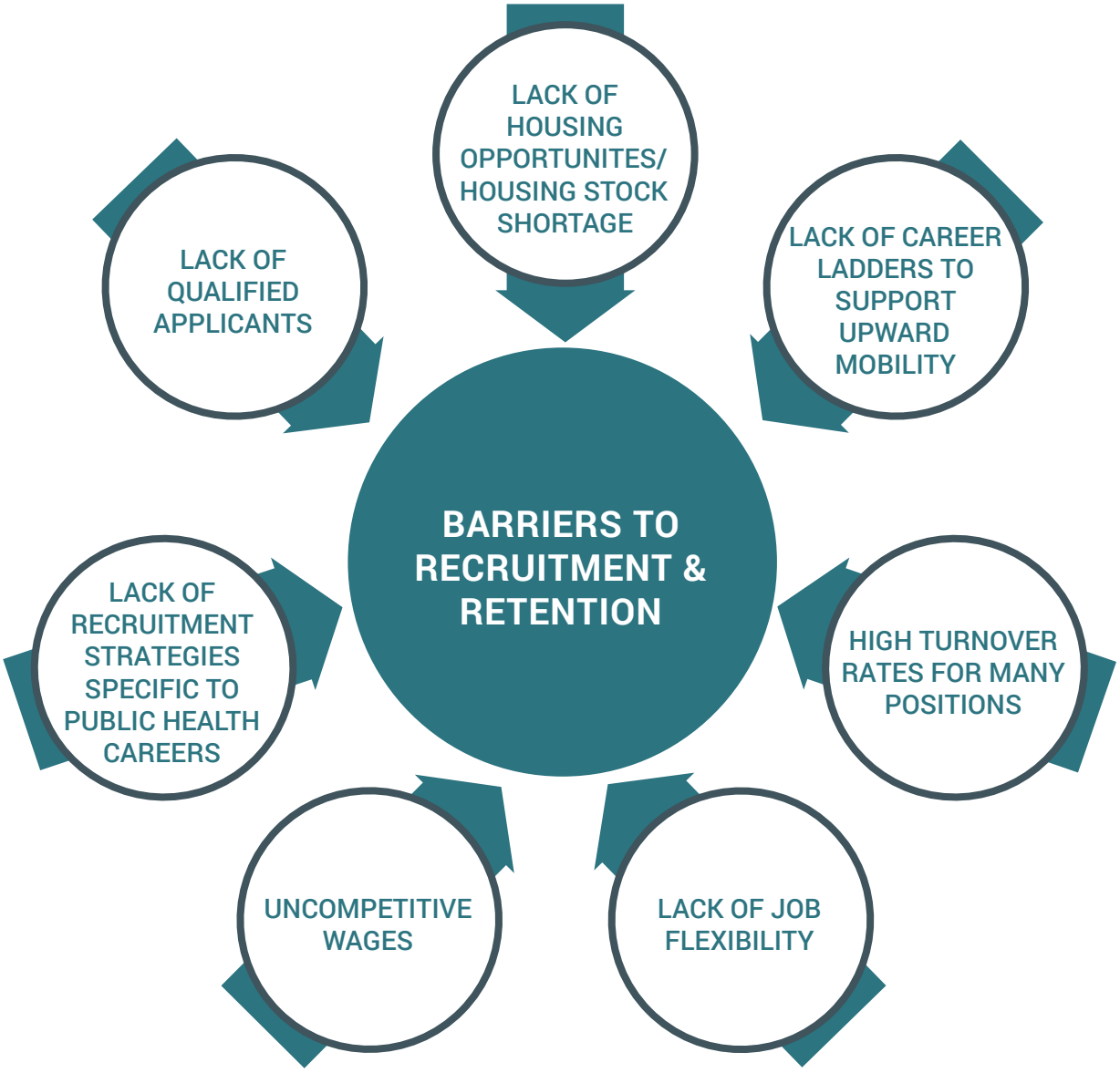
RANCHO LHDs also reported that, for many counties, it is not possible nor feasible to have a full-time Health Officer or a full-time Epidemiologist. Both are critical positions but, for various reasons, they are difficult to staff full-time. Health Officer and Epidemiologist positions are presumably difficult to staff based on the high-level qualifications required. Some LHDs have reported that not having full-time Health Officers has presented challenges, such as needing one to meet grant requirements.

RANCHO LHDs noted the lack of qualified candidates as a significant barrier to recruitment and retention. Turnover is also commonplace for both entry-level and leadership positions, as the region lacks housing and more lucrative job opportunities exist elsewhere. Turnover presents Public Health departments in the RANCHO region with a vicious cycle, as workforce development systems are often not established (i.e. cross-training or succession plans), meaning that when staff members quit, their skills, expertise, and the resources invested in training them leave with them.

Figure 19 below includes a summary of barriers to recruitment and retention reported by RANCHO counties.

[32] Vacancy rates for Public Health Departments are highly volatile and are not always known by Public Health staff. Vacancy rates were not provided for many RANCHO counties.

Figure 19. Barriers to Recruitment and Retention in the RANCHO Region.



For LHDs that are part of a larger agency, many reported working with a Human Resources Department that has oversight for all recruitment and retention efforts for the entire agency. This means that recruitment and retention strategies must be coordinated with and approved by their agency as a whole. This function being outside of the LHD has benefits and drawbacks. The benefits include Human Resources functions being covered for an LHD and standardized across the agency, but also makes the LHD less nimble to create and implement their own recruitment and retention strategies.

Several RANCHO LHDs spoke at length about their efforts to create and support a "people-centered workforce." One RANCHO member specifically talked about this as a strategy to increase diversity and create an inclusive work environment and stated that "we focus on people. People before programs. We protect people's benefit time. We allow flexibility so people can be there for their family."

RANCHO LHDs are actively engaged in strategies to improve recruitment and retention of their workforce by offering bonuses, incentives, and flexible work schedules. As one RANCHO member stated, "we get creative."

Types of bonuses and incentives offered range from loan and tuition repayment programs to sign-on bonuses with stipulated commitments. Interviewees believed that job flexibility such as supporting remote work, respecting earned time-off, or increased flexibility to further education or deal with family matters was beneficial to the workforce. Additionally, LHDs support recruitment by advertising to the community the benefits of Public Health careers. Specifically, several counties wanted to create more recruitment materials that connect prospective applicants to the core mission and values of Public Health to improve community health and well-being.

Figure 20. Strategies for Workforce Development in RANCHO

County	Strategies for Workforce Development
Glenn County	Incentives (hiring bonuses of 12k for an 18 month commitment) for nurses. Looking to expand these to other positions.
	Loan repayment incentive. Tuition incentives.
Humboldt County	Department of Health and Human Services (DHHS) produced a video for a Health Equity Officer. Materials describing the benefits of becoming a Public Health Nurse.
	Pay raises and benefit packages.
Lake County	Flexibility with the workforce (supporting remote work, respecting time earned, flexibility for parents).
	Leverage consultants to hire for specific positions.
	Using Indeed and LinkedIn for county job postings.
Lassen County	More outreach will help out with filling positions.
Mendocino County	Utilizing bonuses (5% bonus for people who work on the coast, since the housing crisis is worse inland). Setting up bonuses for supervisors.
Modoc County	Having succession plans and job ladders (ex. Office Specialist promoted to Health Specialist).
	Utilizing the Health Services Corps Loan Repayment program.
	Incentives (no work on Fridays).
Tehama County	Embedding childcare into work.
	Flexibility for workforce furthering education (higher and vocational).
	Sign on bonuses.
Trinity County	Training entry level staff up (career ladders), cross-training all staff.
	Succession planning during recruitment.

Academic Partnerships in the RANCHO Region

Higher education opportunities are limited in the RANCHO region. While many RANCHO counties have community college districts, the only four-year public university within the region is Cal Poly Humboldt. Multiple RANCHO counties have partnerships with schools outside of their county and region, such as CSU Chico in Butte County. See Appendix A for a list of colleges and universities in the RANCHO region.

Counties in the RANCHO region want to expand partnerships with local academic institutions to adequately staff and diversify their workforce. A few counties in the region have developed workforce pathways. For example, Humboldt County leverages graduates from the nursing program through College of the Redwoods (CR) and Cal Poly Humboldt. Mendocino County operates the SCRUBS program which prepares high school students for medical professions.

Other counties in the region have partnered with their relative academic institutions and offer internships for students. Although RANCHO has had mixed success with the strategy, internships allow students to receive on the job experience and allow health departments to train up prospective employees. LHDs in the region want to fill more entry-level Public Health positions and create career ladders for them to advance.

Other ideas generated for workforce development include creating paid internship programs, establishing Community Health Worker certification programs, and establishing two-year entry level Public Health associate's degree programs. LHDs in the RANCHO region find academic partnerships very beneficial and are interested in continuing to expand them.

Figure 21. Existing Pipelines to Public Health Careers in RANCHO

County	Pipelines to Public Health Careers
Del Norte County	Licensed Vocational Nursing (LVN) program offered through CR Del Norte Campus.[33]
	LVN to RN Bridge offered through CR Del Norte Campus.[34]
	Del Norte High School's (DNHS) Career Technical Education (CTE) Health Career Pathway & Science Based Health Career Pathway.[35]
Glenn County	Agreement with CSU Chico for clinical and non-clinical student interns (student nurses included). Getting them to stay is a challenge.
Humboldt County	Licensed Vocational Nursing (LVN) program offered through CR Eureka Campus.
	LVN to RN Bridge offered through CR Eureka Campus.
	Bachelor of Science in Nursing (BSN) program offered through Cal Poly Humboldt.
Lassen County	Coordinated with Lassen Public College for students to come help in Public Health. Two students have been hired from that collaboration.

[33] The California Center for Rural Policy. (2022). Health Career Pathways: Growing Our Own Workforce.

[34] Ibid, pg. 15.

[35] Ibid, pg. 14.

County	Pipelines to Public Health Careers
Mendocino County	High school SCRUBS program, a six-month program that prepares students for different medical positions (nurses, medical assistants, etc.).
	Mendocino Community College works with Adventist Health Ukiah Valley (AHUV) on an LVN to RN bridge program and offers classes for Certified Nursing Assistants (CNA) and Medical Assistants (MA).
Modoc County	RN (Registered Nurse) to BSN (Bachelors in Science and Nursing) educational pathway.
Tehama County	Public Health is partnering with a CBO receiving a regional education-based grant to work with the high school/junior college level and connect students with public health professions.
Trinity County	Internships for dental students with the Office of Oral Health.
	Cradle to Career program where high school seniors can work with the communicable disease team.

Figure 22. Academic Partnerships in RANCHO to Establish or Expand

County	Academic Partnerships to Establish or Expand
Humboldt County	Getting into grade schools and talking about careers in PH.
	Coordinating efforts with existing high schools programs centered around Public Health.
	Interest in a partnership with CR on a two-year basic degree in Public Health education to increase entry level access and diversity.
Lassen County	Desire to leverage the California Pathways into Public Health (Cal-PPH) program. Offer this program to Lassen Junior College students.
Mendocino County	Interest in establishing a Community Health Worker educational pipeline and creating career ladders.
	A high school to RN pathway.
Modoc County	Interest in a regional internship process between RANCHO LHDs where interns would spend time between departments.
Tehama County	Discussions around paid internships with county government, which could act as a pipeline.

Building Trust and Engaging RANCHO Communities

RANCHO has prioritized trust-building and community engagement as one of four goal areas for their health equity work with CCRP and CDPH. LHDs in RANCHO, similar to LHDs across the state, prioritize and highly value collaborative, community-based efforts and recognize that improving health equity and the overall health of a community requires a broad base of community support and energy.

RANCHO Context for Building Trust & Community Engagement

Based on CCRP's research, and in discussions with RANCHO representatives, the region faces mixed public acceptance of public health measures that protect and promote health. A couple of data points that demonstrate this include vaccination and immunizations rates in the region. The RANCHO region has a lower uptake around COVID-19 vaccines and child immunizations when compared to state averages.[36,37]

Figure 23. Percent of Population with Full COVID-19 Vaccinations (2022)

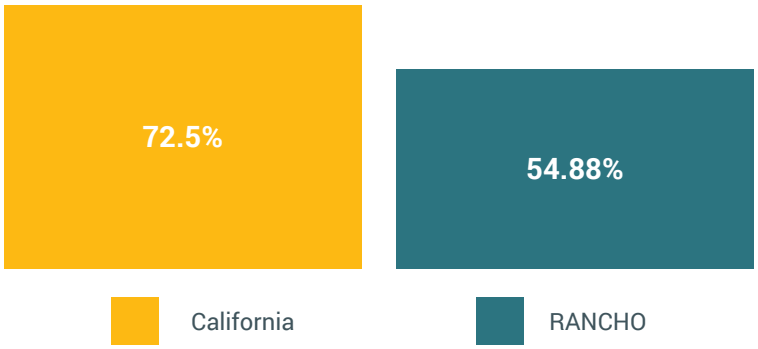
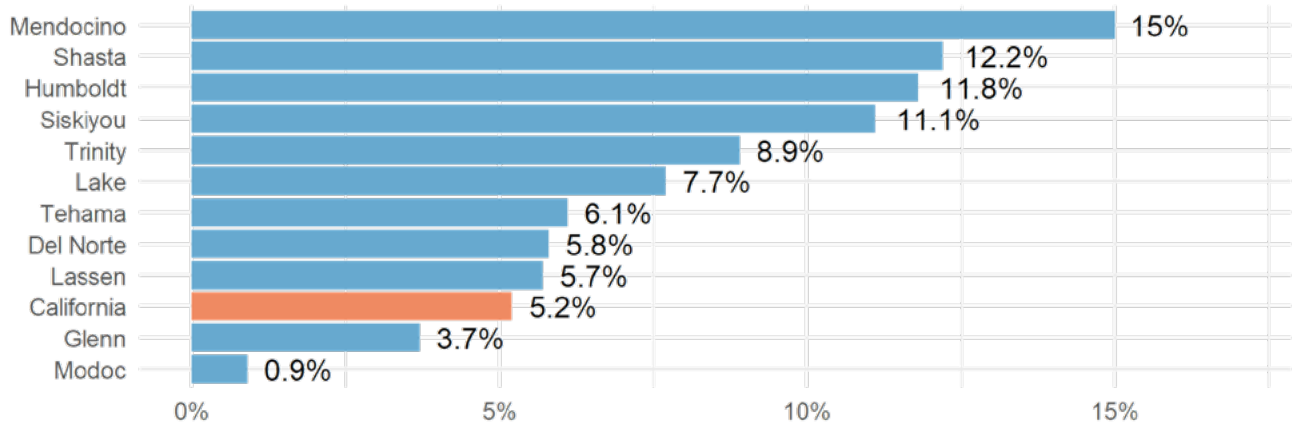


Figure 24. Percent of Kindergartners Missing One or More Required Immunizations (2019)



Comparatively lower rates of vaccination and immunization suggest the LHDs in the RANCHO region have to consider that a percentage of residents may be resistant to public health practices used to protect and promote population-level health. It is also likely that the term "health equity" may not be widely understood by the general population.

[36] CHHS Open Data. (2022). California Department of Public Health. *COVID-19 Vaccine Progress Dashboard Data*. https://covid19.ca.gov/vaccination-progress-data/

[37] Kidsdata. (2019). *Kindergartners with All Required Immunizations*. https://www.kidsdata.org/topic/292/immunizations-kindergarteners/Map#loct=3&fmt=63&tf=124&center=-13325098.893387,4509031.392449&zoom=1

Capacity and Strategies for Community Engagement in RANCHO Region

RANCHO LHDs across the board spoke to the importance of community-wide partnerships to promote equitable COVID-19 recovery and advance health equity. Community relationships and partnerships are the cornerstone of trust building in the RANCHO region. One strength in the region is that "everyone knows everyone"- a common feature of small communities. One member said, "We know the EMS (emergency medical services) person. We know the Superintendent of the school district. We know the Sheriff." These relationships help to facilitate collaboration and further trust-building efforts.

Based on input from the counties, LHD work to build trust and community engagement centers around four primary strategies:

01 Strategic community and/or Tribal partnerships for a specific purpose (i.e. vaccination clinics).

02 Facilitation and participation in community-wide coalitions focused on health.

03 Community-wide outreach and education.

04 Utilization of Community Health Workers (or equivalent positions) that are embedded within specific geographic regions and/or have experience with a specific population that experiences health disparities.

Counties in the region have similar strategies for community engagement, though some have differing levels of capacity to do so, and some RANCHO counties have a more robust network of non-profit and community-based organizations than others.

LHDs in RANCHO commonly partner with local schools, Tribes, law enforcement entities, hospitals, and community-based organizations for a specific purpose. Examples of this include: 1) partnerships to offer vaccination clinics at community-based locations, 2) offering oral health screenings at local schools, 3) health fairs, and 4) partnerships to provide emergency response services such as clean air centers or charging stations. RANCHO Health Officers cited a high level of contact with schools in their counties both during and after the pandemic, supporting schools in vaccination efforts, monitoring of cases, and implementing safety practices.

All LHDs in the region, at some capacity, engage with their community partners through coalitions or groups. LHDs improve community-based relationships, heighten their community's voice, and share resources by participating in coalitions. Examples of coalitions in the RANCHO region include, but are not limited to: opioid safety, suicide prevention, oral health, Tribal wellness, tobacco prevention, youth support, health systems, and data sharing. Although coalitions exist across the region, not all LHDs have the capacity or funding to sustain or lead coalitions for each topic area.

Some LHDs in the RANCHO region participate in cross-sector community partnership collaboratives (ex. Healthy Shasta, Healthy Mendocino, and Live Well Humboldt). Cross-sector collaboratives such as these catalyze and recommend strategic action around health disparities in their communities. Some county collaboratives provide accessible and relevant data around health indicators, community resources, and trainings.

LHDs work with community partners to provide training opportunities such as 1) child safety seat technician trainings, 2) suicide prevention trainings such as Question, Persuade, Refer (QPR), 3) opioid prevention trainings, and others. RANCHO LHDs also cited media outreach as a strategy to build community trust and engagement. Media outreach typically includes online media (social media, websites, blogs) and local media (newspaper, radio, television). LHDs also directly collaborate with partners for events such as vaccination clinics, Tribal health events, and health fairs. These strategies are reported as beneficial in engaging rural communities, however, some smaller LHDs in the region are in especially remote areas and have less capacity to conduct outreach. Strategies listed in the table below were highlighted in interviews with LHDs, however this is not an exhaustive list of all outreach strategies.

Figure 25. RANCHO Community Outreach Strategies

County	Community Outreach Strategies
Glenn County	Public Health partners with North Valley Indian Health for vaccination clinics.
Humboldt County	Creating videos to get information out to the community, doing regular news pieces.
	Conducting outreach around COVID-19 testing and vaccination. Conducting outreach to Latinx communities via Centro del Pueblo.
Lake County	Continually updating websites and online information.
	Weekly Health Updates that focus on various health topics on Facebook.
	Monthly Board of Supervisor (BOS) community update from Public Health with a health equity focus.
Lassen County	Public Health hosts back to school vaccine events, flu and COVID-19 booster events for migrant farm workers, and health events for the Indian Rancheria.
	Small-business staff meetings.
	Getting into schools.
	Hosting community vaccination and health fairs.
Mendocino County	Monthly media day where Public Health invites the news media to get information out to the public.
	Public Health meets with rural clinics, Federally Qualified Health Centers (FQHCs), business leaders, religious leaders, and city managers.
	Public Health has distributed COVID-19 tests through clinics and Community-Based Organizations (CBOs). Public Health collaborates with Tribal governments to run clinics.
Modoc County	Public Health collaborates with local CBOs on equity work.
Shasta County	Public Health participates in Indigenous Community Advisory Group gatherings.
Trinity County	Health Systems Collaborative that focuses on access to health, behavioral health, and social service systems. Native Wellness Coalition in collaboration with Humboldt Area Foundation.

One of the key strategies highlighted by LHDs to build trust and community engagement focused on creating and sustaining staff positions whose work is embedded in the communities that are experiencing health inequities. Several RANCHO counties indicated a high level of interest in expanding this sector of their workforce.

LHDs staff Community Health Worker or equivalent positions to engage and build trust with their communities. These community-facing positions have a variety of job titles, depending on the job description, where the position is located, and the focal communities worked with. Other names include Community Health Outreach Workers (Humboldt), Promotores (Modoc), Health Education Specialists (Multiple), Community Organizers (Shasta), and Community Health Workers (Trinity). Community Health Worker positions are valuable in rural health departments because of their flexibility and because they provide an entry-level pathway into a Public Health career.

For example, Trinity County utilizes Community Health Workers in its Environmental Health department, and Modoc County manages a Promotores program to address disparities in their Hispanic communities. They primarily serve geographic regions of their county with a high population of Spanish speakers. Shasta County has Community Organizers who work with the community at large, and have their work directed by the community.

Data & Measurement Challenges in a Rural Region

As discussed throughout the report, rural counties face unique challenges with regards to the availability and usefulness of population-level data that is necessary to assess and improve health equity. RANCHO has identified the need for advancements in how data can be used to further health equity and COVID-19 recovery in the region. Specifically, RANCHO desires to:

- Create opportunities to share data regionally to inform efforts to support equitable recovery from COVID-19 across the region.
- Identify barriers to sharing data.
- Establish regional equity principles guiding data practices to ensure COVID-19 recovery for the region.
- Ensure use of equity metrics that are meaningful for rural counties to further COVID-19 recovery.

About a quarter of counties in the RANCHO region have epidemiologist positions staffed, with other counties in the region either contracting with neighboring county epidemiologists or ones outside the region for data. Additionally, a few RANCHO LHDs acquire meaningful data from community partners through data sharing agreements.

Public Health Directors and Health Officers highlighted health equity metrics that are important to rural counties. These metrics are related to health behaviors, health outcomes, and social determinants of health. CCRP will include these metrics in a subsequent report, expected for release in Spring 2023.

LHDs in RANCHO face a number of barriers and challenges around gathering and analyzing data relevant to their individual counties. One is that per capita data comparisons for rural counties, which commonly have smaller population sizes, exaggerate trends seen in data for these communities. Taking COVID-19 rates for instance, certain racial and ethnic groups have such small population sizes that a singular event could spike rates, exaggerating a higher occurrence of COVID-19 within that racial or ethnic group.

Small sample sizes produce higher margins of error and make analysis from the data unreliable. In many cases for rural county-level data, the sample sizes are too small to even be reported, and are consequently suppressed for anonymity. In order to make data with small sample sizes usable on the macro-level, Public Use Microdata Areas (PUMAs) were created. PUMAs are geographic partitions of each state, not exceeding 100,000 people. PUMA level data is often not suppressed as they contain large enough sample sizes. Several counties in the region expressed concerns with PUMA data as their population gets grouped with the populations of neighboring counties. RANCHO counties are unable to use PUMA data as it doesn't solely reflect what is happening within their county.

Multiple RANCHO counties expressed concern that they did not have adequate data to drill down on populations or regions that experience health disparities. Even Shasta, the region's largest county, specifically mentioned this as a barrier.

For example, the following metrics are missing/omitted due to small sample sizes for some RANCHO counties:

- All drug-related overdose death rates.
- Opioid-related overdose death rates (for 2019 and 2020).
- Psychostimulant-related overdose death rates.
- Infant death per 1,000 live births.
- Number of deaths among children under the age of 1 per 1,000 live births.
- Number of deaths per 100,000 children and young adult ages 1-24.

Data were unstable for some RANCHO counties due to small sample size. Examples include:

- Rates of early syphilis cases.
- Rates of gonorrhea cases.

Some data had wide margins of error due to small sample size. Examples include:

- Percentage of driving deaths with alcohol involvement.
- Years of potential life lost before age 75.

Figure 26 below includes a snapshot of barriers related to data based on interviews with RANCHO members.

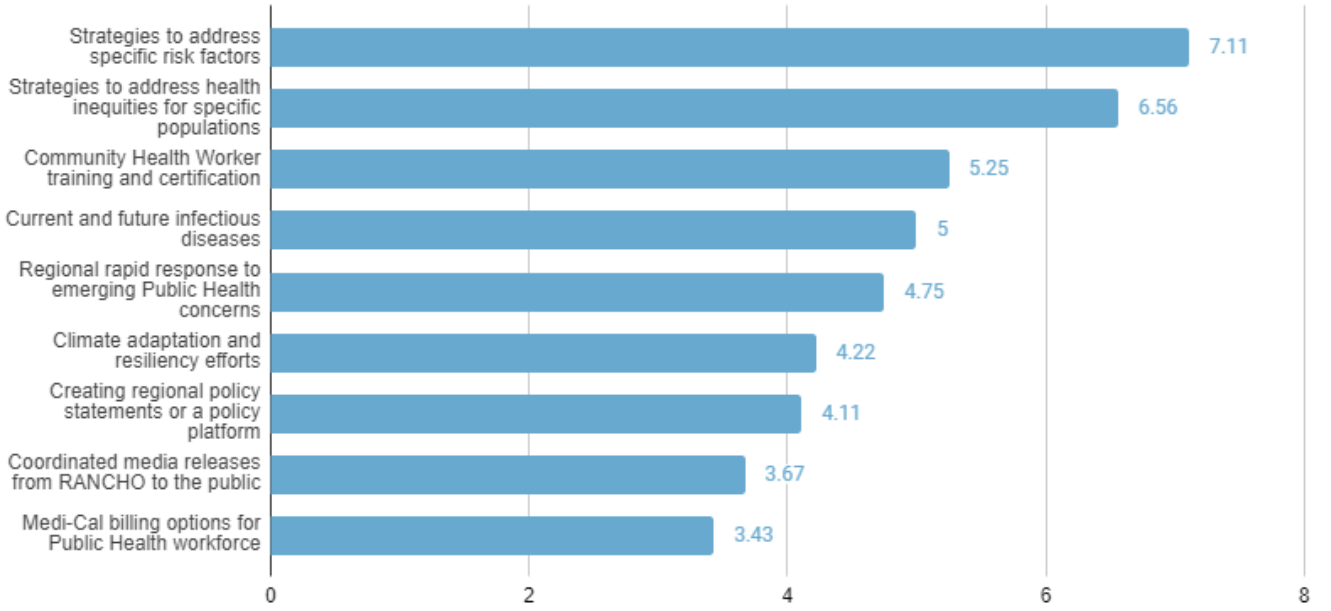
Figure 26. Data Barriers in Rural Contexts

County	Barriers
Glenn County	Program data is siloed between departments internally.
	Struggle with populations so small, and comparing rates per capita exaggerates what we see in the data.
	Data for Glenn County is lumped in with Colusa and Tehama counties. Cannot identify what is happening in Glenn County specifically.
Humboldt County	Data with small sample sizes, which usually relates to rural data, is legally unshareable and unusable.
Lassen County	Lack of a way to get information and data out to the community.
	Data is impacted because of the prison population, very few data sources separate the prison population.
Mendocino County	For populations that are so small, they become invisible in the data. The Black, Pacific Islander, and Hmong populations for the county are so small that Public Health is unaware of what is happening with them.
	Utilizing the state information on the Healthy Places Index (HPI) levels. Mendocino is finding that they need to get down to the census tract level with data around housing and transportation. The HPI uses ZIP Codes which are too big for rural micro-communities.
	The Native American population is underrepresented in incarceration rates and overrepresented in overdose and suicide deaths.
Modoc County	With such small population sizes, data rates and insights can be skewed.
	County level data is difficult to get.
	Modoc County gets lumped in with other counties for data pieces. Public Use Microdata Areas (PUMA). If organizing data by ZIP Codes, problems arise in Modoc County as it shares ZIP Codes with Siskiyou, Lassen, and Shasta counties.
Shasta County	Problem that data isn't large enough to be stable. Asian and Native American populations are small, so a small event will spike COVID-19 rates for these populations.
	Breaking down county level data points (which are available) is difficult because numbers become too small and unstable to use. That is the case with AskCHIS and County Health Profiles.
	HPI, a problem with the system in rural counties is that multiple micro-communities make up a census tract. Differences in the health of micro-communities can be the determinant in scoring high on the HPO and thus the HPI won't be reflective of all micro-communities in a census tract.
Trinity County	The HPI isn't accurate for rural communities since those communities all have different levels of access issues.
	Data is put into PUMA for small populations.
	Data can be misconstrued in rural contexts because of small populations.

RESOURCE & LEARNING NEEDS SUMMARY

Public Health Directors and Health Officers in the RANCHO region are interested in training, technical assistance, and peer learning around a variety of topics. Between June and December 2022, a review of meeting agendas confirms that there are many topics that are of interest and that are important to improve health equity and further COVID-19 recovery in the RANCHO region. CCRP conducted a short survey with RANCHO members in December 2022 in response to a request from RANCHO members to prioritize topics to address collaboratively. Members were asked to rank topics in order of importance. Figure 27 below highlights averages for responses.

Figure 27. RANCHO Topics of Interest, Prioritized in Order of Importance (n=11)



Based on survey data, one-on-one interviews with counties, and a review of RANCHO meeting minutes, CCRP has developed a preliminary learning needs summary and plan to bring training and technical assistance to RANCHO.

Learning opportunities will be offered to RANCHO that align with stated needs and interests of the region. In addition to trainings, CCRP will host peer learning sessions and strategic conversations for the region. Peer learning sessions will feature the work of one of the RANCHO counties with a focus on innovative strategies and/or partnerships that advance health equity. Peer learning sessions will be open to any Public Health staff as well as community partners across the region and state. Peer learning sessions will be led by experts living in the region and will be centered around strategies that work in rural settings. Strategic conversations will be structured sessions for RANCHO leaders to do a deeper dive into some of the more complex issues facing the region. These conversations will be focused on region-wide collaboration and planning. RANCHO will continue to meet every other week in addition to the sessions described above.

Figure 28 below contains training and technical assistance topics of interest to the region, the type of meeting, their category, and the audience the meetings will be open to. Topics are categorized as they relate to the four focus areas of the work plan: 1) Coordinate Region LHD Equity COVID-19 Response and Recovery Efforts (Category: Health Equity), 2) Build a Foundation for Pursuing Equity Work within Communities (Category: Community Engagement), 3) Adopt Regional Data and Measurement Standards (Category: Data & Measurement), and 4) Equity in the Public Health Workforce (Category: Workforce Development). Please note that the following is a preliminary needs summary and plan; adjustments and additions will be made based on further RANCHO input and adapted as additional needs are identified.

Figure 28. Resource & Learning Needs Summary & Action Plan

Topic Category	RANCHO TA & Training Topic	Type of Meeting	Attendees
Community Engagement	Community engagement best practices	Peer learning	Public Health staff
Community Engagement	Community resilience hub	Peer learning	Public Health staff
Community Engagement	Community resilience modeling (CRM)	Training	RANCHO members & relevant staff
Community Engagement	Tribal engagement	Peer learning	Public Health staff
Community Engagement	Addressing racial equity in predominantly white communities	Strategic conversation	RANCHO members
Community Engagement	Medical Reserve Corps	Peer learning	Public Health staff
Data & Measurement	Epidemiology	Peer learning	Public Health staff
Data & Measurement	Healthy places index	Training	RANCHO members & relevant staff
Executive Planning	Fatality review teams	Peer learning	Public Health staff
Executive Planning	Disaster planning/emergency preparedness and response	Peer learning	Public Health staff
Health Equity	Public health accreditation	Peer learning	Public Health staff
Health Equity	Climate change influence on Public Health	Strategic conversation	RANCHO members
Health Equity	Best practices around working with the elderly population	Peer learning	Public Health staff
Health Equity	Access to healthcare and health insurance needs in healthcare shortage areas	Strategic conversation	RANCHO members
Health Equity	Health Equity 101	Peer learning	Public Health staff
Workforce Development	Implicit bias	Training	RANCHO members & relevant staff
Workforce Development	Public Health recruitment and retention strategies	Strategic conversation	RANCHO members

Topic Category	RANCHO TA & Training Topic	Type of Meeting	Attendees
Workforce Development	Strengthening partnerships with academic institutions	Strategic conversation	RANCHO members
Workforce Development	Community Health Worker/ Promotores program	Peer learning	Public Health staff
Workforce Development	Regional grant collaboration	Strategic conversation	RANCHO members

Additional Topics of Interest

The below list are some topics that emerged that are also of interest to RANCHO, but are not yet covered in the above summary.

- Work around MPx, COVID-19, Ebola (Current and future infectious diseases).
  - Tridemic (RSV, Flu, COVID-19).
  - Vaccination efforts.
  - Utilization of SnapNurse.
  - Wastewater surveillance.
- Addressing the Health Officer's ability to place standing orders for schools. Having them for EpiPens for Anaphylactic Shock, and NARCAN for Opioid Overdose.
- Interest in regional Medi-Cal reimbursement.
- Career Ladder or other grant opportunities.
- Racial Equity/Government Alliance on Race and Equity (GARE).

APPENDICES

Appendix A: Colleges and Universities within RANCHO Counties

Del Norte County	College of the Redwoods – Del Norte Education Center (Community College)
	College of the Redwoods – Pelican Bay Scholars ▸ Provides AA degrees to incarcerated students.
Glenn County	Glenn County Center (Butte-Glenn Community College District)
Humboldt County	Cal Poly Humboldt (University)
	College of the Redwoods (Community College)
Lake County	Woodland Community College – Lake County Campus (Community College)
Lassen County	Lassen Community College (Community College)
Mendocino County	Mendocino College (Community College)
Shasta County	Shasta College (Community College)
	Shasta Bible College and Graduate School ▸ Private College, religious-based education.
	Simpson University (Private University)
Siskiyou County	College of the Siskiyous (Community College) ▸ Weed and Yreka campuses.
Tehama County	Shasta College – Tehama Campus (Community College)
Trinity County	Shasta College – Trinity Campus (Community College)
	College of the Redwoods – Klamath-Trinity Campus (Community College) ▸ Located on Hoopa Indian Reservation.
Modoc County	No Colleges or Universities

APPENDICES
Appendix B: Final Interview Script

Purpose of Interview: To learn more about the RANCHO counties and identify common strengths, challenges, and strategies to advance health equity and promote COVID-19 recovery in the region. Information gathered will be analyzed, summarized, and shared with the RANCHO region.

Interview Questions:

1. **What are some of the specific populations in your county that are particularly vulnerable to health inequities?**
    a. E.g. migrant workers, elderly, Hispanic populations, Native American populations, others?
2. **What are factors in your county that contribute to morbidity and mortality?**
3. **How are your health equity efforts going so far?**
    a. Strengths, opportunities, challenges.
4. **Can you share an overview of the current makeup of your Public Health workforce? How is your department structured and where is health equity situated?**
5. **Are there specific academic partnerships that you would like to establish or expand in your county to create pipelines to Public Health careers and recruit a diverse workforce?**
6. **Do you have any best practices and/or effective strategies in place that support recruitment and retention of your workforce? What resources are available/being used to recruit and retain a diverse health workforce?**
7. **Broadly speaking, what are some of the topics that you'd like to have trainings for, technical assistance, and/or peer learning with the other RANCHO counties?**
8. **From your perspective, what are the technical assistance and training needs/interests for your county (management and staff) related to the following areas?**
    a. Mitigate impacts of inequities due to:
    - Aging population
    - Long-COVID
    - Climate change
    - Current & future infectious diseases

9. **Are there specific trainers, organizations, or partners that you look to for expertise on health equity and equitable recovery within a rural context? Are there curriculums already in use?**

10. **What are some of the strengths/assets and/or current strategies that exist in your county around trust building and community engagement?**

    a. E.g. Community Health Workers, Community Organizers, resilience hubs, migrant seasonal farmworker collaboratives, others?

11. **What comes to mind with regards to health equity metrics that are meaningful for rural counties? What data sources are you currently using?**

12. **What are some of the barriers that prevent or make it difficult to obtain or share data regionally?**