East Kern Health Care District

COMMUNITY HEALTH NEEDS ASSESSMENT

PREPARED BY HPSA ACUMEN

2024

East Kern Health Care District Community Health Needs Assessment

Acknowledgements

HPSA Acumen would like to acknowledge the invaluable contributions and assistance provided by local public health experts in preparing this report. In particular, this report would not have been possible without the guidance of Karen Macedonio, Tom Hayes, and representatives from the Kern County Public Health Department. HPSA Acumen also would like to thank all those who generously offered their time in interviews and focus groups, as well as the greater community of East Kern County for sharing their experiences and perspectives with our team.

A special thanks to the California Department of Health Care Access and Information. California health statistics and data set an exceptional standard for the nation.

Introduction

East Kern Health Care District (EKHCD) is a government agency, an independent Special District, located in the southeast portion of Kern County. The East Kern Health Care District was established in 1977 to serve the East Kern communities. The district provides property management for four medical facilities in California City. The district continues to explore expansion of medical services to provide access to fill the medical needs of the East Kern communities. Additional details about EKHCD can be found at https://www.ekhcd.org/.

EKHCD staff partnered with HPSA Acumen, a healthcare shortage analysis firm headquartered in Jamestown, New York. HPSA Acumen outlined a strategic plan focused on utilizing a multitude of data sources, combined with a joint effort of community-informed data collection, to ensure a comprehensive approach for addressing prioritized health needs of community members in East Kern County. The following report provides information regarding the report methodology, our findings gathered from a series of surveys, interviews, and a compilation of pertinent health indicator data from publicly available sources. The goal of this report was to document, synthesis, prioritize and understand the community through the needs of residents, public health experts, community leaders, using the best available health indicator data.

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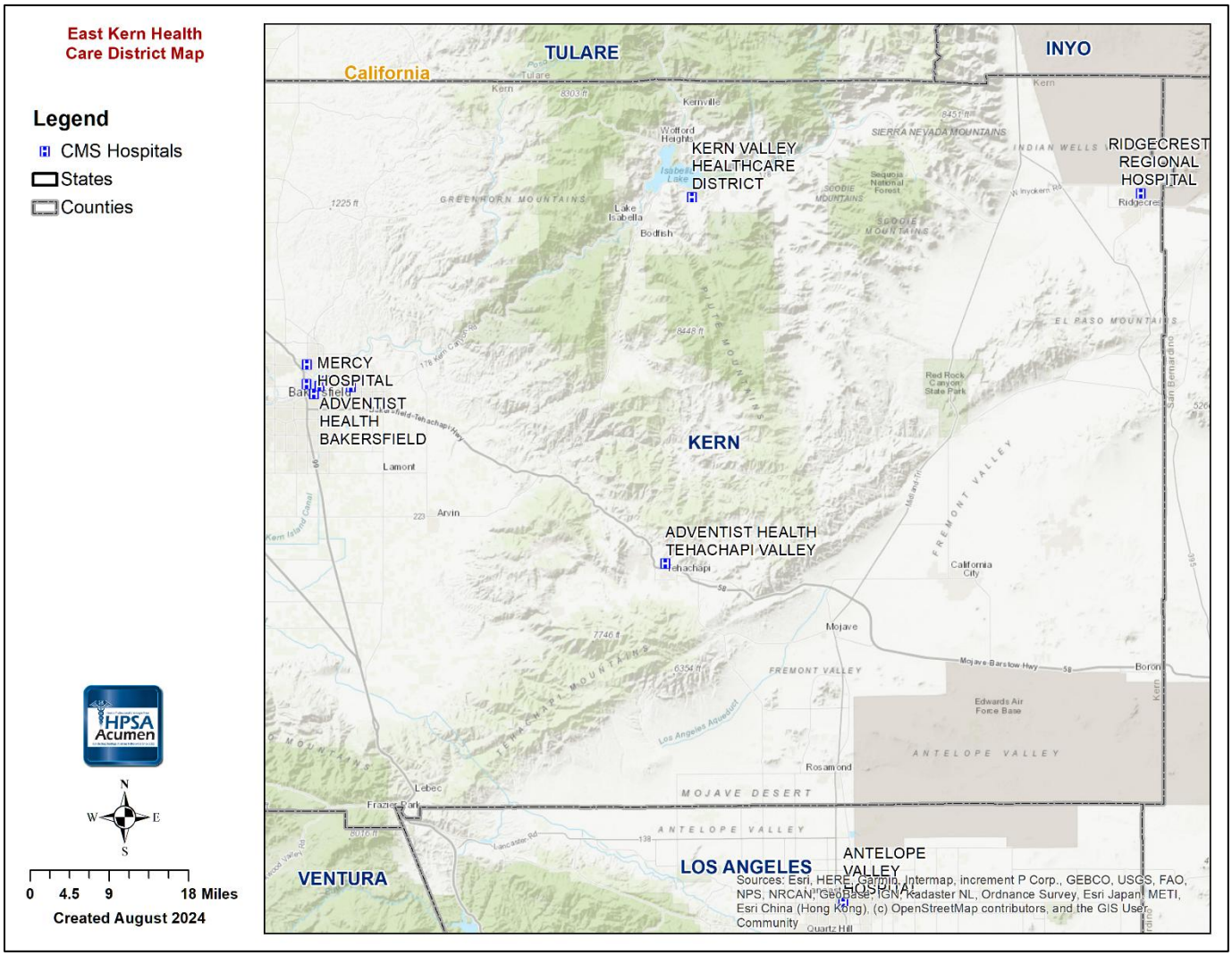
Initial Efforts

Our initial efforts led us to examine the previous Community Health Needs Assessment (CHNA) conducted in the region. In doing so, we hoped to understand the major medical facilities and communities that would be served within the northern expansion of the EKHCD. Ultimately, focusing on this previous report would help us investigate and identify the ideal geographic areas to include in a newly expanded health care district.

Figure 1: East Kern County



Source: HPSA Acumen, ArcGIS – ESRI.

Methodology

In conducting this report, a multitude of data collection methods were implemented, and the results were integrated into this report. Data collection strategies involved a community survey, interviews with stakeholders, and aggregation of health data from publicly available sources. The details about the data collection, as well as the selection of topics and analysis/prioritization process are provided below. Each Table and figure throughout the document will highlight the individual source.

- U.S. Census American Community Survey (ACS) data
- CA Department of Health Care Access and Information (HCAI)
- National Center for Education Statistics
- Education Data Partnership (CA)
- FBI Crime Data Explorer
- California Office of the Attorney General
- CMS Medicare, and
- UCLA Center for Health Policy Research data.

ACS topics included:

Gender, race/ethnicity, citizen status, veteran status, languages spoken, education attainment, income poverty and unemployment, internet access, and transportation access.

Crime topics included:

Violent and property crime, ER cause of injury, and crimes reported.

Health topics included:

Patient origin, health insurance status, payor source, ER visitation, sexually transmitted infection data, and death/morbidity statistics.

Description of Service Area

The East Kern Health District service area, and future expansion, incorporates the majority of East Kern County. While there are smaller towns and communities, the dominant two locations in these areas are California City and Ridgecrest, California.

California City, CA

California City is situated in the southeastern side of Kern County. It is located in the Mojave Desert, about 100 miles northeast of Los Angeles. It was incorporated in 1965 with the goal of becoming a major metropolis. However, it is still striving to reach its projected population and is currently a relatively small city. As of the 2023 census, the population of California City was just under 15,000.

California City is known for its wide-open spaces, which offer residents and visitors a sense of peace and tranquility. The city is also home to several parks and recreational areas, where people can enjoy the outdoors. The economy of California City is based on the surrounding Edwards Air Force Base, agriculture, tourism, and government services. The city is also home to a number of small businesses, including restaurants, shops, and service providers.

Ridgecrest, CA

Ridgecrest is a city located in the northeast corner of Kern County. It is known for being the home of Naval Air Weapons Station China Lake, a major employer in the region. Ridgecrest is in the Mojave Desert, about 150 miles northeast of Los Angeles. The city is surrounded by mountains, including the Tehachapi Mountains to the west and the Sierra Nevada Mountains to the east. Ridgecrest has a hot and dry climate, with average summer temperatures in the high 90s and low 100s Fahrenheit. Winters are mild, with average temperatures in the 40s and 50s Fahrenheit. The city is relatively dry, receiving an average of about four inches of rain per year. The economy of Ridgecrest is largely driven by the presence of Naval Air Weapons Station China Lake. Other major employers in the city include Ridgecrest Regional Hospital (RRH), Inyokern Elementary School District, and Ridgecrest Unified School District. Ridgecrest also has a growing tourism industry, thanks to its proximity to recreational areas.

Ridgecrest has public and private schools, including Ridgecrest High School, Ridgecrest Middle School, and Inyokern Elementary School. The city also has a community college, Cerro Coso Community College. Ridgecrest has a variety of cultural attractions, including the Ridgecrest Chamber of Commerce Museum, the Ridgecrest Depot Museum, and the Ridgecrest Historical Society Museum. The city also hosts several annual events, such as the Ridgecrest Cherry Festival and the Ridgecrest Cowboy Festival.

Surrounding Health Care Districts

The map below displays the closest health care districts. East Kern Health Care District (EKHCD) is in the center-right. To the northwest is Kern Valley Health Care District (KVHCD), to the west is Tehachapi Valley Healthcare District (TVHD), to the southeast is a small Muroc Health Care District. Muroc is not listed on the ACHD.org website and the comptroller showed zero wages for the last years. We included this territory in our initial assessment of healthcare needs as safety net planning for the residents of the community.

Unlike the other planning districts, East Kern Health Care District does not have a hospital. Tehachapi has a centrally located hospital in TVHD. Likewise, KVHCD also has a centrally located Health Professional Shortage Area (HPSA). RRH is not included in any planning district and is directly north of East Kern Health Care District, creating potential for Ridgecrest network extensions south to improve coverage of East Kern Health Care District. The geography places the other planning districts in the mountains, often referred to colloquially as being separated from the east by the ‘Cactus Curtain’. Both EKHCD and Ridgecrest are together in the high desert.

Figure 2: East Kern County Map

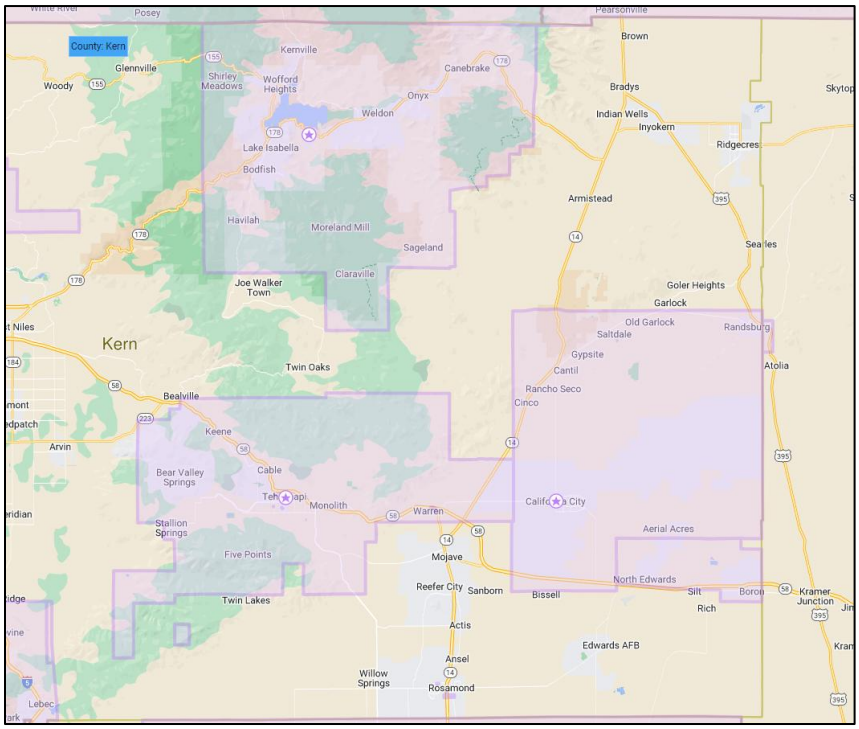


Figure 3: EKHCD – Current Composition Map

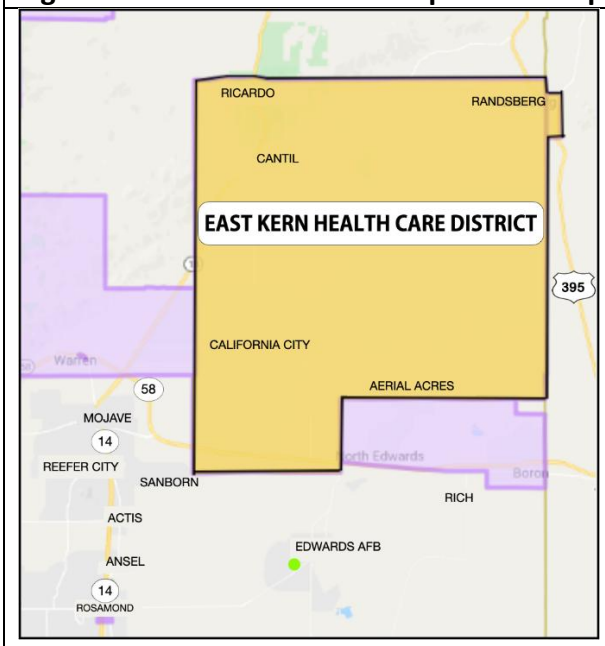
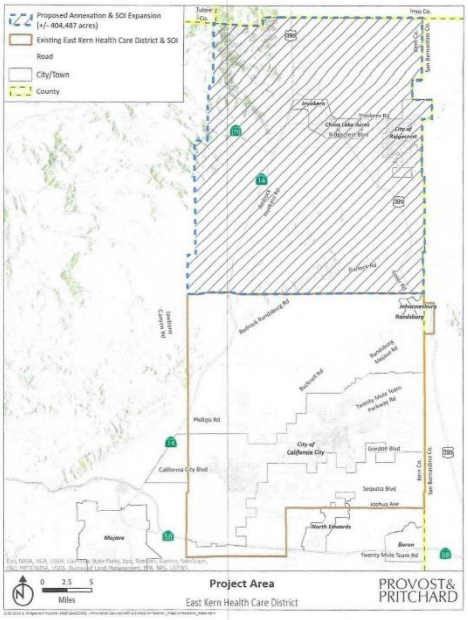


Figure 4: EKHCD - Proposed Annexation Map



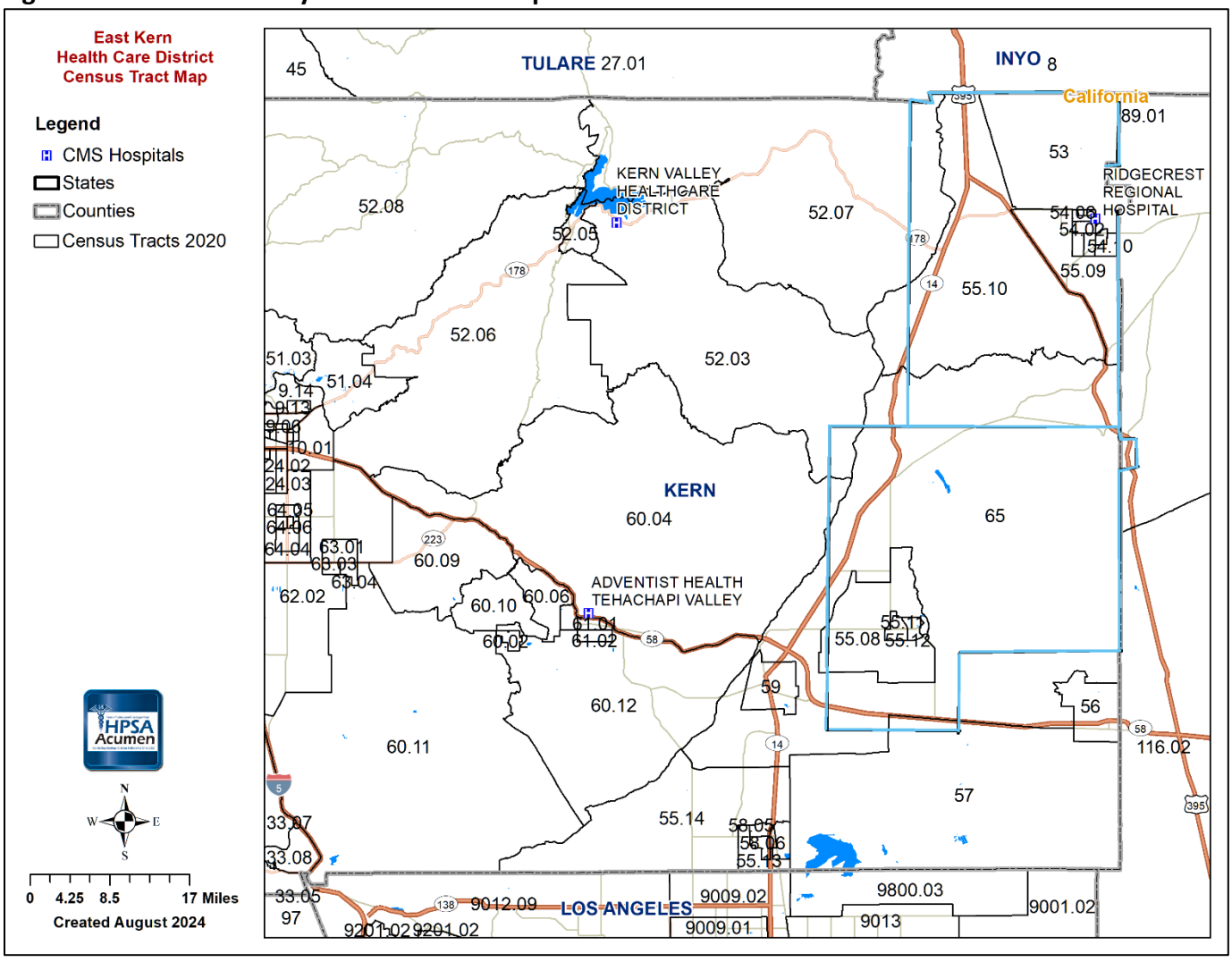
Source: All three previous maps were acquired through EKHCD and the California Special Districts Association.

Proposed Service Area Methodology

One roadblock initially experienced was composing the area with definable geographic units. The current geographic structure and proposed annexation, shown above, are not comprised of any geographic levels that are associated with typical mapping or data collection used in the last decade.

Usually, when studying research areas, one uses census tracts, municipal civil divisions (MCD), zip codes, or higher geographic levels like full county service areas. In the following three maps, you will see we superimposed a rough estimate of the future annexation area of EKHCD. These were simply drawn on estimations of where the future area is located (marked with thick blue lines).

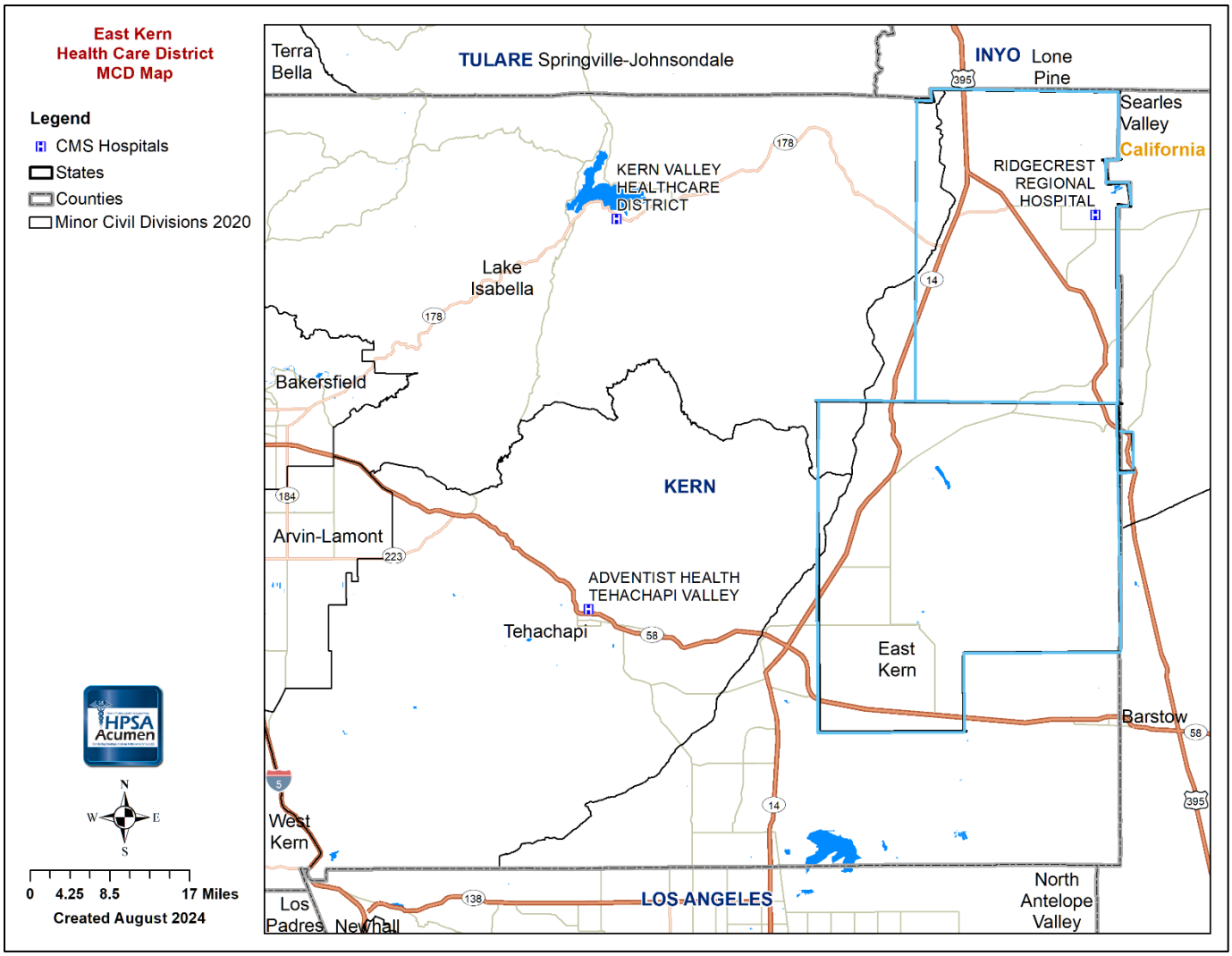
Figure 5: East Kern County – Census Tract Map



Source: HPSA Acumen, ArcGIS – ESRI.

As shown above, census tracts were not suitable for this study, as they did not align with the current study boundaries. The same issue applied to the MCDs and zip codes, is illustrated on the maps below. MCDs did not match either the current or proposed structure.

Figure 6: East Kern County – Municipal Civil Division Map

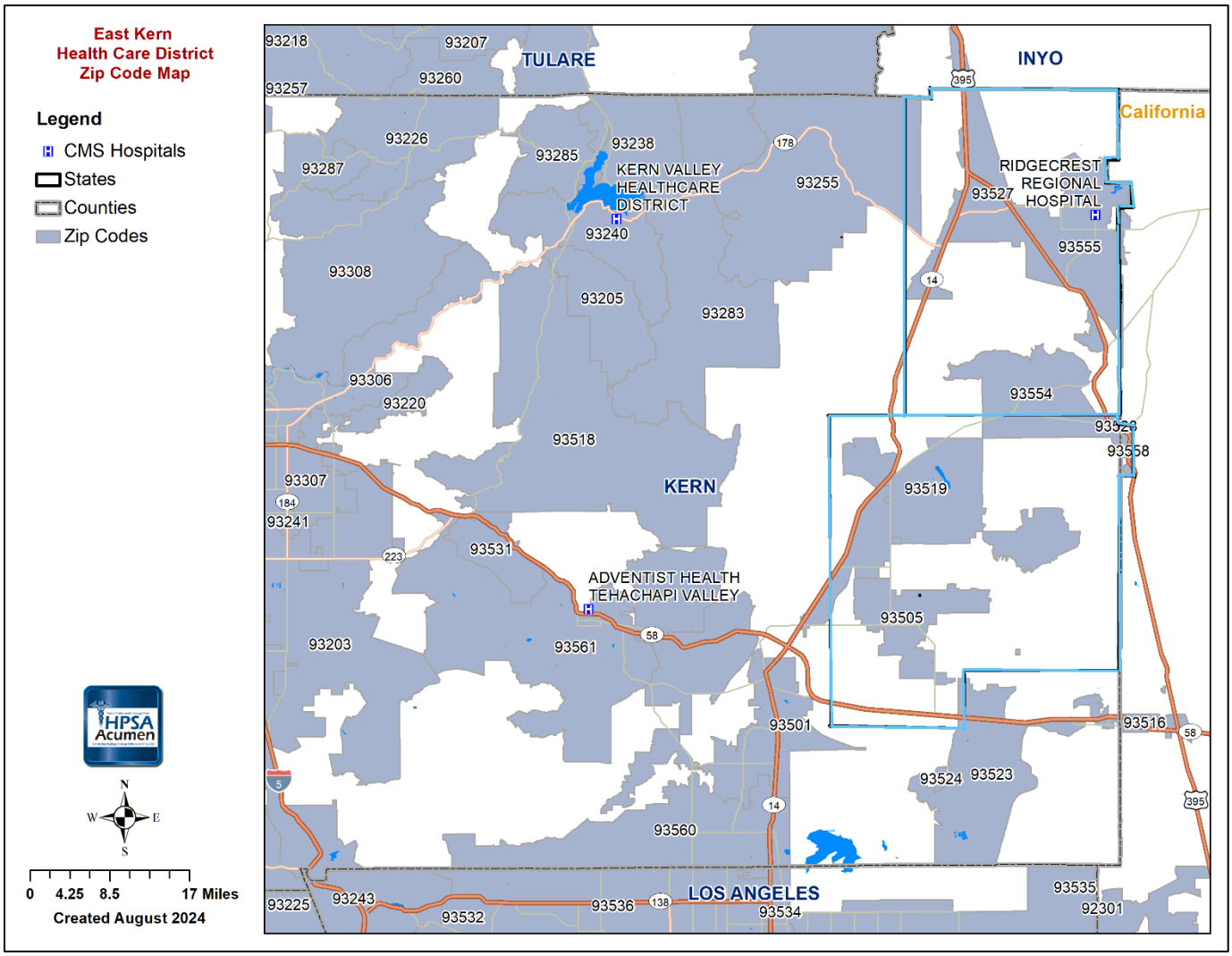


Source: HPSA Acumen, ArcGIS – ESRI.

The zip codes, while not perfectly aligned, were the most appropriate choice due to the availability of data and lack of cross-boundary issues. One complexity that arose was Zip Code 93501, which extends from Mojave (outside the district) and into EKHCD toward the northern end of California City.

We decided that using zip codes was the most effective method to conduct the majority of area analysis. While the zip structure did not concisely align with current and/or future boundaries, most of the California health data, Medicare, and various other data is associated with zip codes. There was some overlap of zip codes between Tehachapi Valley Healthcare District (TVHD) and EKHCD. However, given the complexity and the low population within the zip code - this study will continue to include this population for health care and demographic comparison purposes.

Figure 7: East Kern County – Zip Code Map



Source: HPSA Acumen, ArcGIS – ESRI.

Selection of Health Topics

To enhance comparability between years and neighboring studies, ten topics were selected for assessment from previous CHNAs. These topics were determined based on several factors, including continuity with the previous CHNAs, available data, and relation to emergent issues of broader public health concern regarding health disparities and the broader public health impact of COVID-19. These topics were used to organize the results in a subsequent section of this report. The ten topics were 1. mental health; 2. substance use or addiction; 3. chronic disease; 4. acute illness and injury; 5. elder/senior care; 6. maternal health; 7. sexual health; 8. environmental conditions; 9. health education, wellness, and disease prevention; and 10. access to care.

Prioritization

Section 501(r)(3) requires that health topics be prioritized based on criteria such as the burden, scope, severity, or urgency of the health need, estimated feasibility and effectiveness of possible interventions, health disparities associated with the need, or the importance the community places on addressing the need. In this assessment, prioritization of health topics was determined primarily by the rankings provided by interviewees. However, the

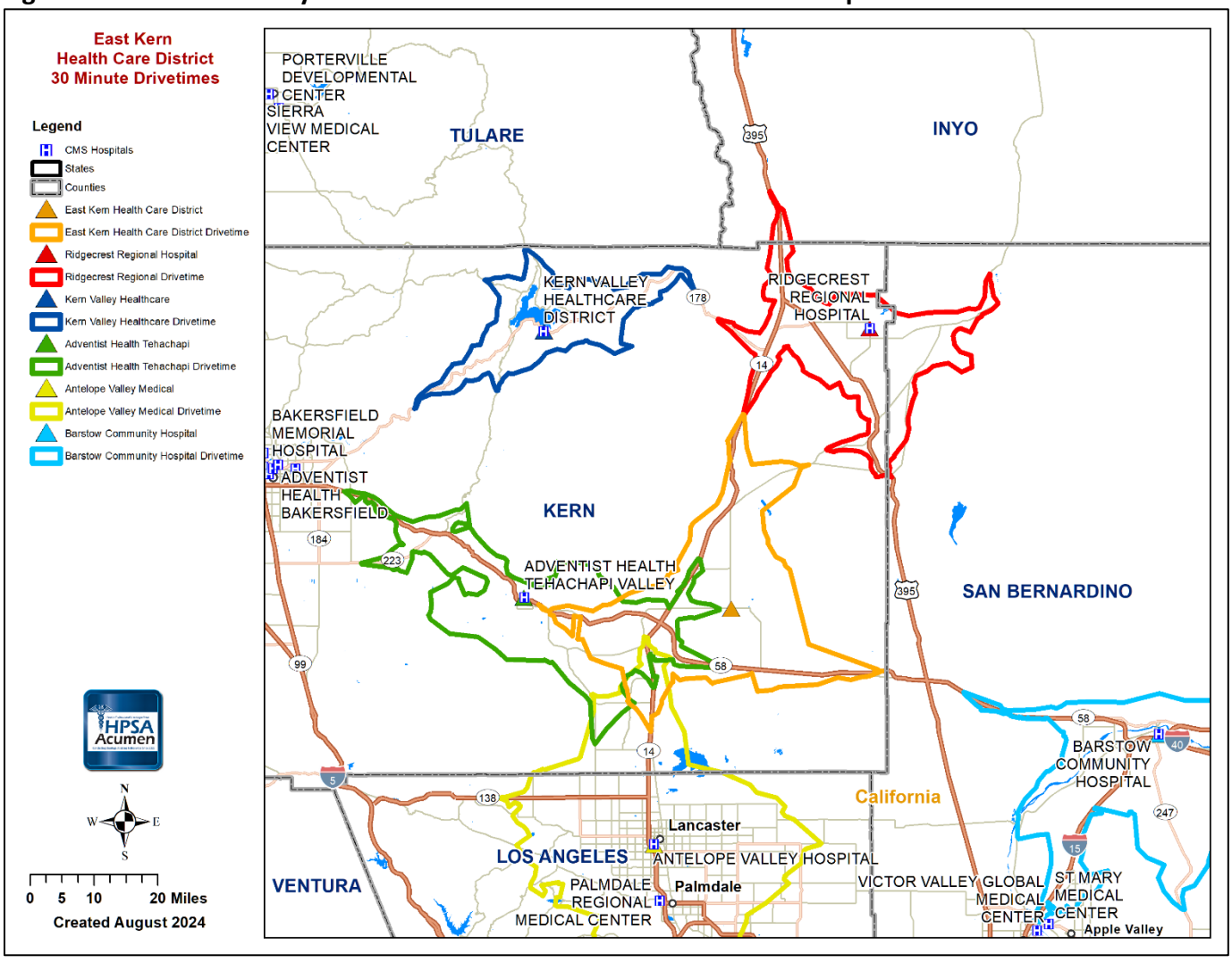
final rankings also incorporated quantitative information from extant data sources and community survey results to fine-tune or adjust rankings provided by interviewees in the first step of the analysis. Additional information about each ranking was provided in each health topic section of the current report, as well as in the summary section at the end of this document.

Drive-Times Between Closest Medical Facilities

The map below highlights the driving distances between the various local hospitals. For the EKHCD drive time, we used the office address as our centroid.

- KVHCD and RRH do not overlap in direct service areas.
- Neither does Barstow Community Hospital.
- The RHH and EKHCD centroids are approximately one-hour distance from each other.
- TVHD and EKHCD drive times intertwine with the service areas coming from the northernmost Los Angeles County hospitals.
- The concern of proximity to Los Angeles will be outlined later through Medicare data.

Figure 8: East Kern County – Drive Times Between Medical Facilities Map



Source: HPSA Acumen, ArcGIS – ESRI.

Ridgecrest Regional Hospital

Located in Ridgecrest, CA, RRH is a level IV trauma center, non-profit owned, and a critical access hospital. According to American Hospital Directory, the total patient revenue is just under $361 million, with 150 staffed beds. The hospital's website notes this includes twenty-five inpatient beds, and a 99-bed skilled nursing facility. The hospital owns Liberty Ambulance, which includes both EMS vehicles and helicopter transport. The hospital earned recognition from the American Medical Association as a "Joy in Medicine" recognized organization.

The hospital lists extensive services besides their emergency department. Including, but not limited to, an addiction clinic, adult medicine / internal medicine, home health including nursing services, cardiology, cardiopulmonary rehab, chiropractic care, chronic care, an intensive care unit, mental health services, skilled nursing facility, sleep lab, OB/GYN and delivery services, oncology support, a pharmacy, physical therapy, and outpatient therapy/rehabilitation.

Ridgecrest Regional Hospital – 2022 State Patient Origin Data

We wanted to ensure that if EKHCD planned to incorporate RRH into their district, that we knew who the hospital served, and where most patients originated. In the following maps, we examined all the patient origin data from RRH, which the state provided for 2022. Most cases come from within Kern County, and the surrounding counties. There are some clear visitation cases, where patient origin was international or of other state origin. Close to 90% of all patient origin data to RRH were from three zip codes. Using California Health Care Access and Information (HCAI) data, we concluded that between 2020 and 2022, an estimated 87 – 89% of all patient origins came from three zip codes (93555, 93527, and 93562). This coincided with previous RRH CHNA results. Below is a map showing the composition of those zip codes.

Table 1: East Kern County – Patient Origin

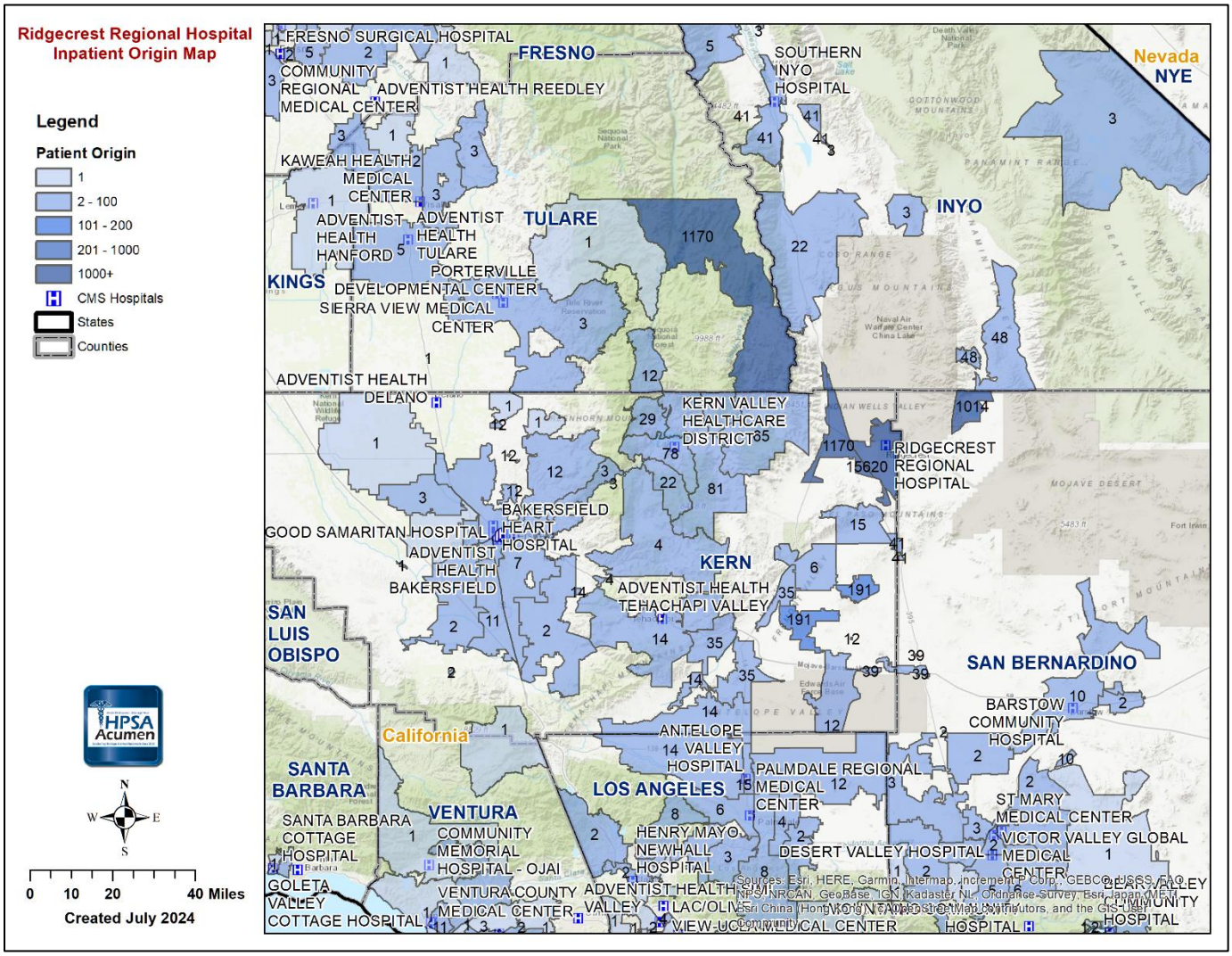
Zip Code	Primary Community	Zip Population	2020	2021	2022
93555	Ridgecrest	33,490	77%	77%	78%
93527	Inyokern	1,734	6%	6%	6%
93562	Trona	1,867	6%	4%	5%
Other			11%	13%	11%

Source: California Patient Origin Report. 2020-2022. Department of Health Care Access and Information (HCAI).

Source: ACS 2018-2022.

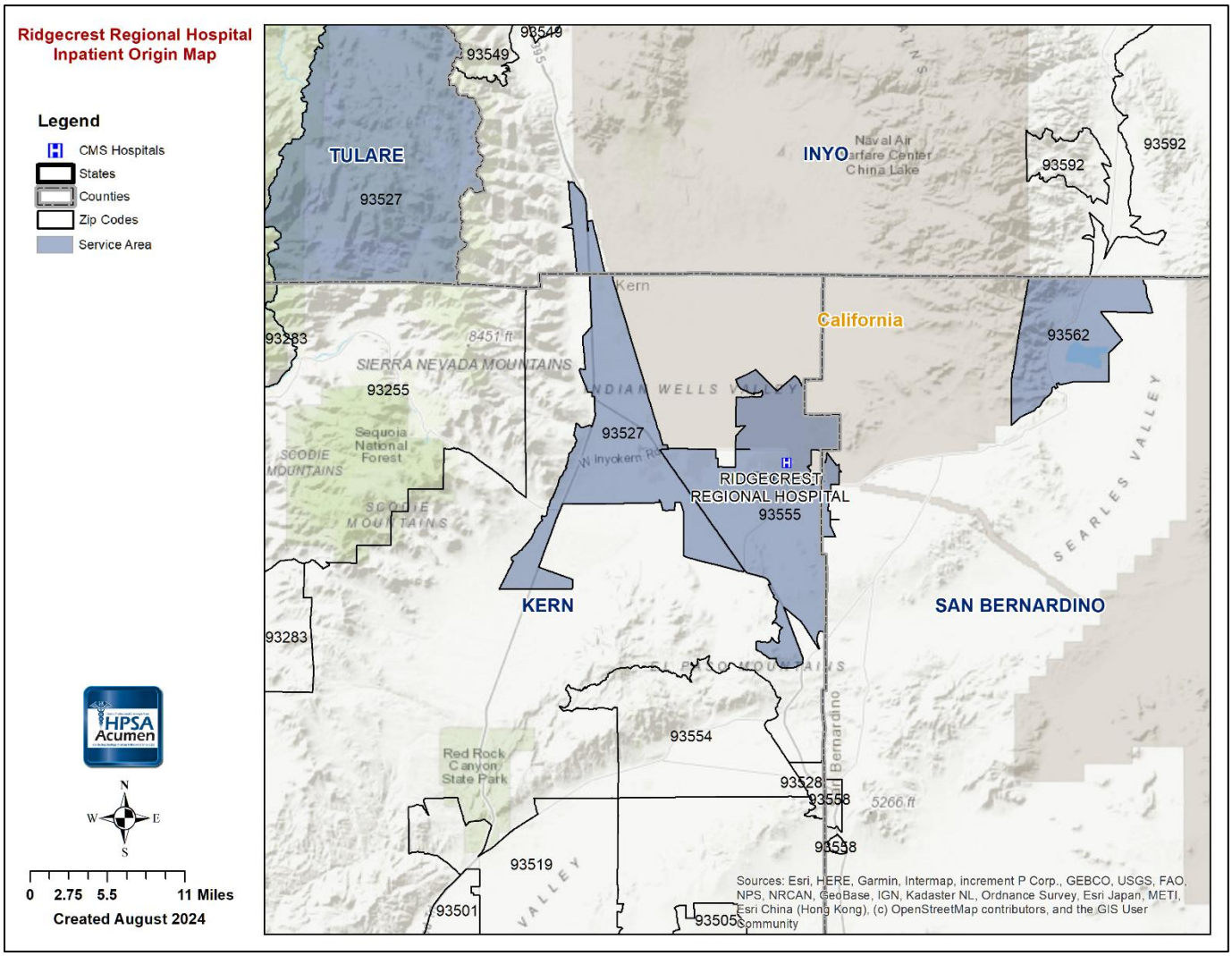
The following map illustrates the RRH cases in each zip code followed by a map of the three zip codes that account for 89% of their market.

Figure 9: East Kern County – Patient Origin – Zip Codes Map



Source: HPSA Acumen, ArcGIS – ESRI, California Patient Origin Report. 2020-2022. HCAI.

Figure 10: East Kern County – Patient Origin – Primary Zip Codes Map



Source: HPSA Acumen, ArcGIS – ESRI, California Patient Origin Report. 2020-2022. HCAI.

Medicare – 2023 Patient Origin Data

Expected Payer Source	Discharges	Percent of Total
Medicare	712	34%
Medi-Cal	708	33%
Private Coverage	546	26%
Other Government	122	6%
Self-Pay	27	1%
Workers' Compensation	2	0%
Other Payer Types	-	0%
Total	**2,117**	**100%**

Table 2: Ridgecrest Regional Hospital Payer Source
Source: Hospital Discharge Summary Report. HCAI. 2022.
Note: Payer source data is inpatient data.

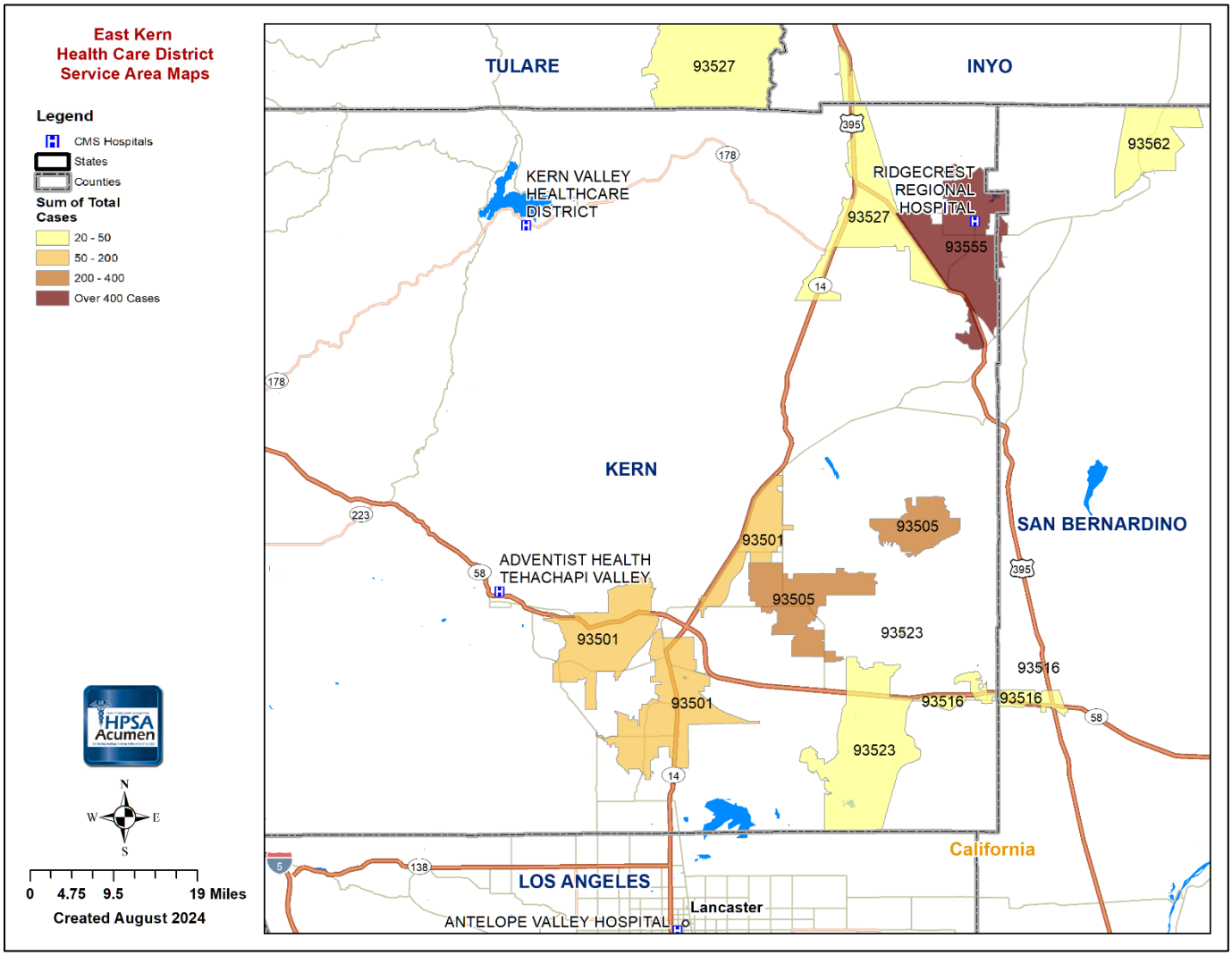
The largest number of patients were utilizing Medicare or Medi-Cal. Looking at 2021 inpatient data, slightly more than one-third of patients paid with Medicare, and Medi-Cal paid an additional one-third of the charges. Roughly one-quarter paid with private coverage and less than 2% self-paid.

The map below is the number of total Medicare cases for all the zip codes in the proposed health care district. This was regardless of which hospital was conducting services. The Zip Code with the largest instance of cases was in zip code 93555. That accounted for 896 cases or 58% of Ridgecrest Regional Hospital's volume.

Methodology Note:

The following maps describe where these patients were receiving services. For these maps and other analyses, we decided to focus on the number of cases rather than charges. While we created identical maps for charges, we decided upon cases as a better measure of overall public health. In the case of charges, more severe cases often come with more severe healthcare bills. The reason for the difference in market share maps between charges and cases is that a significant number of costly procedures are conducted in distant hospitals, such as those in Los Angeles County. The aim of the study is not to develop the most specialized services so that they are available locally, but rather a focus on a general platform of healthcare. By focusing on the number of cases, we gain a clearer and more accurate understanding of local health trends. This map below shows the total volume of Medicare cases generated in each zip code, regardless of where the claims were going.

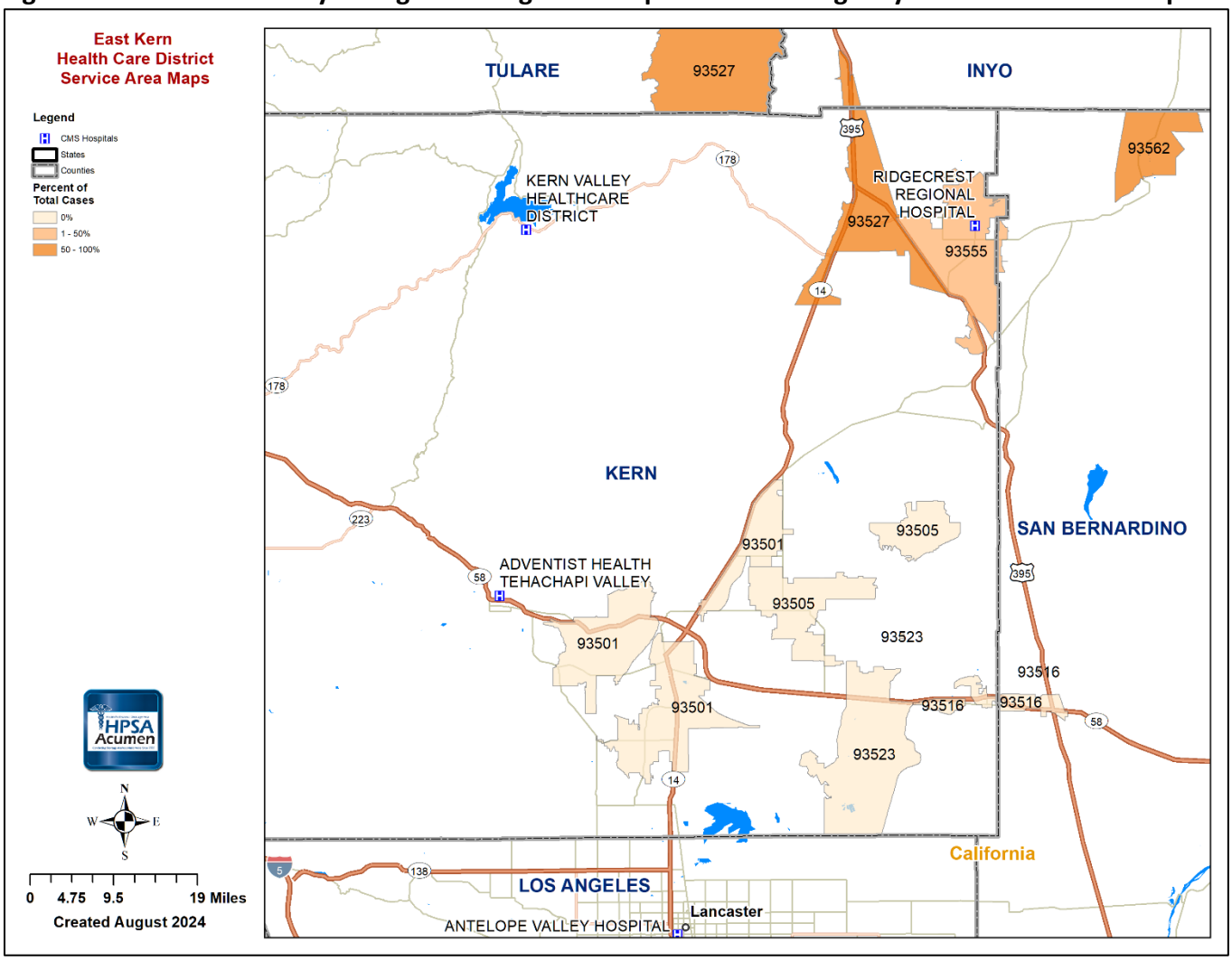
Figure 11: East Kern County – Total Volume of Medicare Cases – Medicare Map



Source: HPSA Acumen, ArcGIS – ESRI, CMS Medicare Hospital Service Area File. 2023.

The map below represents the percentage of total Medicare cases for RRH, within the entirety of the proposed area zip codes. Out of all the zip codes in yellow, Medicare data had zero percent allocated to RRH. Meaning, there were no cases from the current EKHCD going to RRH, at least according to Medicare. This fact was substantiated by the previous state data, which showed 1.3% of patient origins at RRH were from the zip codes surrounding California City.

Figure 12: East Kern County – Ridgecrest Regional Hospital Patient Origin by Cases – Medicare Map



Source: HPSA Acumen, ArcGIS – ESRI, CMS Medicare Hospital Service Area File. 2023.

The charts below detail the study zip codes that had no Medicare data associated with RRH but encompassed most of the population surrounding California City. For 93505, 62% of cases went to hospitals outside of Kern County. For 93501, that same metric was 57% of Medicare data. For 92523 it was 100% of Medicare cases left Kern County.

Table 3: Medicare Data: Zip Code 93505

Provider Number	Hospital	Zip	Days of Care	Total Charge	Total Case	Percent of Cases
50204	PALMDALE REGIONAL MEDICAL CENTER	93505	190	$7,430,254	47	12%
50455	ADVENTIST HEALTH BAKERSFIELD	93505	310	$7,203,541	60	16%
51301	ADVENTIST HEALTH TEHACHAPI VALLEY	93505	284	$3,736,301	81	21%
50056	ANTELOPE VALLEY HOSPITAL	93505	938	$18,193,863	189	50%

Source: CMS Medicare Hospital Service Area File. 2023.

Table 4: Medicare Data: Zip Code 93501

Provider Number	Hospital	Zip	Days of Care	Total Charge	Total Case	Percent of Cases
50204	PALMDALE REGIONAL MEDICAL CENTER	93501	115	$4,371,369	21	16%
50455	ADVENTIST HEALTH BAKERSFIELD	93501	150	$4,105,710	23	17%
51301	ADVENTIST HEALTH TEHACHAPI VALLEY	93501	107	$1,572,491	33	25%
50056	ANTELOPE VALLEY HOSPITAL	93501	264	$4,676,784	55	42%

Source: CMS Medicare Hospital Service Area File. 2023.

Table 5: Medicare Data: Zip Code 93523

Provider Number	Hospital	Zip	Days of Care	Total Charge	Total Case	Percent of Cases
50056	ANTELOPE VALLEY HOSPITAL	93523	125	$2,968,554	22	67%
50204	PALMDALE REGIONAL MEDICAL CENTER	93523	44	$1,386,044	11	33%

Source: CMS Medicare Hospital Service Area File. 2023

Proposed Area Description

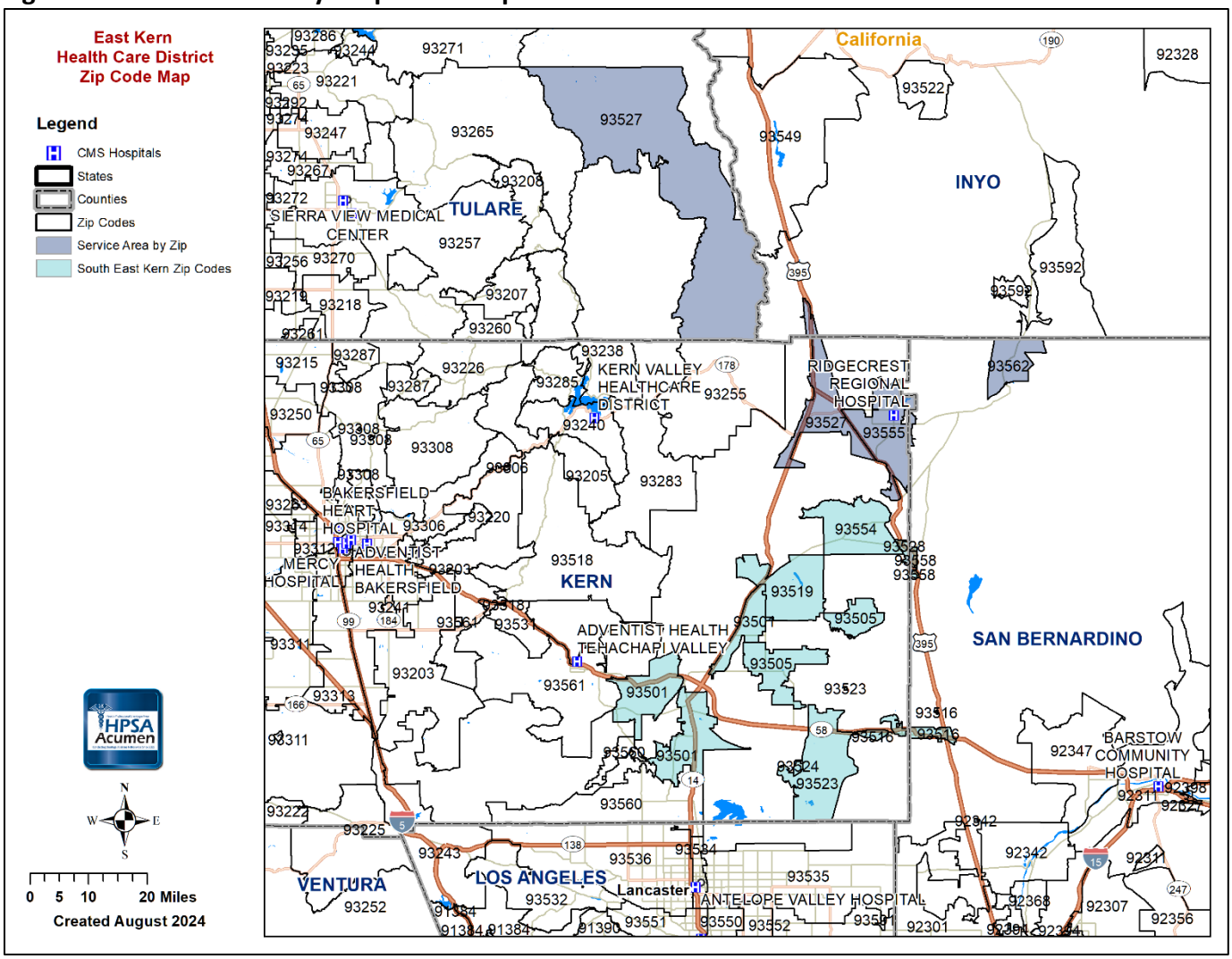
For this analysis, we decided to group all the zip codes shown below into two areas when applicable. In some datasets, smaller populated zip codes lacked sufficient data for representation or had to be masked due to their small size. For most datasets, the comparative groups are highlighted below, with zip codes in Ridgecrest: three zip codes highlighted from the patient origin data. The remaining zip codes follow the current composition of EKHCD, in addition to any zip codes incorporated into EKHCD that were not identified as RRH's clear patient origin service area. This area will be referred to as EKHCD + Expansion or abbreviated in tables as EKHC+. The current EKHCD area covers approximately 650 square miles, but it is proposed to expand to a 1,200 square mile service area with a hospital.

Table 6: Ridgecrest, EKHCD, and Expansion Zip Codes

Zip Codes	Study Area
93501	EKHCD+
93505	EKHCD+
93516	EKHCD+
93519	EKHCD+
93523	EKHCD+
93524	EKHCD+
93528	EKHCD+
93554	EKHCD+
93558	EKHCD+
93527	Ridgecrest
93555	Ridgecrest
93562	Ridgecrest

We assigned those zip codes to either Ridgecrest (dark blue), or EKHCD + Expansion (light blue) in our mapping software. There was an imperfect match with some zip codes. Zip code 93527 extended far into Tulare County, but this area was mostly unpopulated. In rural areas, zip codes can split into different sections, as seen here. The vast majority of people in zip code 93527 lived in the section surrounding Ridgecrest, CA. A similar situation occurred with zip code 93501, which included areas north of Mojave, CA, and slightly north of California City's primary zip code, 93505. In any case, each zip code represents a population primarily served by RRH, or within a clear boundary of EKHCD's current service area. The figure below depicts a color-coded rendering of the zip code locations.

Figure 13: East Kern County – Zip Code Map



Source: HPSA Acumen, ArcGIS – ESRI.

Proposed Area Demographics – Base Metrics

It was imperative to understand the demographics of EKHCD + Expansion, particularly in relation to Ridgecrest, as it helped to clarify the specific populations served in these areas. For comparison, most of the charts - where applicable or available - compared these areas to Kern County as a whole, California, and the United States.

Table 7: Zip Code Breakdown

Year	ZCTA5A	Area	Total Population
2018-2022	93519	EKHCD + Expansion	-
2018-2022	93524	EKHCD + Expansion	93
2018-2022	93558	EKHCD + Expansion	17
2018-2022	93554	EKHCD + Expansion	65
2018-2022	93528	EKHCD + Expansion	94
2018-2022	93516	EKHCD + Expansion	2,583
2018-2022	93523	EKHCD + Expansion	3,867
2018-2022	93501	EKHCD + Expansion	5,404
2018-2022	93505	EKHCD + Expansion	14,952
		Total for EKHCD + Expansion	**27,075**
2018-2022	93527	Ridgecrest	1,734
2018-2022	93562	Ridgecrest	1,867
2018-2022	93555	Ridgecrest	33,490
		Total for Ridgecrest	**37,091**
		Total Combined	**64,166**

Source: ACS 2018 – 2022: 5-Year Estimates: B01001.

Proposed Area Demographics – Base Metric Projections

Looking at the past, we can examine the anticipated growth of the entirety of the area. Based on the last twelve years, which is the extent of ACS Five-Year Estimate data, we calculated that there was a total growth rate of 4.4%. For context, California grew approximately 5.8% from 2010 to 2020. While this 4.4% was lower, it was not significant compared to California.

Table 8: Projected Growth Rate

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Population	61,489	60,763	61,343	61,635	62,039	62,754	62,495	62,017	62,578	62,578	63,281	64,166
Population Annual Growth Rate		-1.2%	1.0%	0.5%	0.7%	1.2%	-0.4%	-0.8%	0.9%	0.0%	1.1%	1.4%
Total Growth Rate												**4.4%**

Source: ACS 2011 – 2022: 5-Year Estimates: DP05_0001E.

To further substantiate this growth rate, we decided to analyze the individual zip codes within the service area. Some of these zip codes have significantly lost population, such as 93519. Others like 93554 had tremendous growth over the study period. While useful to identify areas of growth and loss, we will focus on the overall growth rate of 4.4% over the last decade.

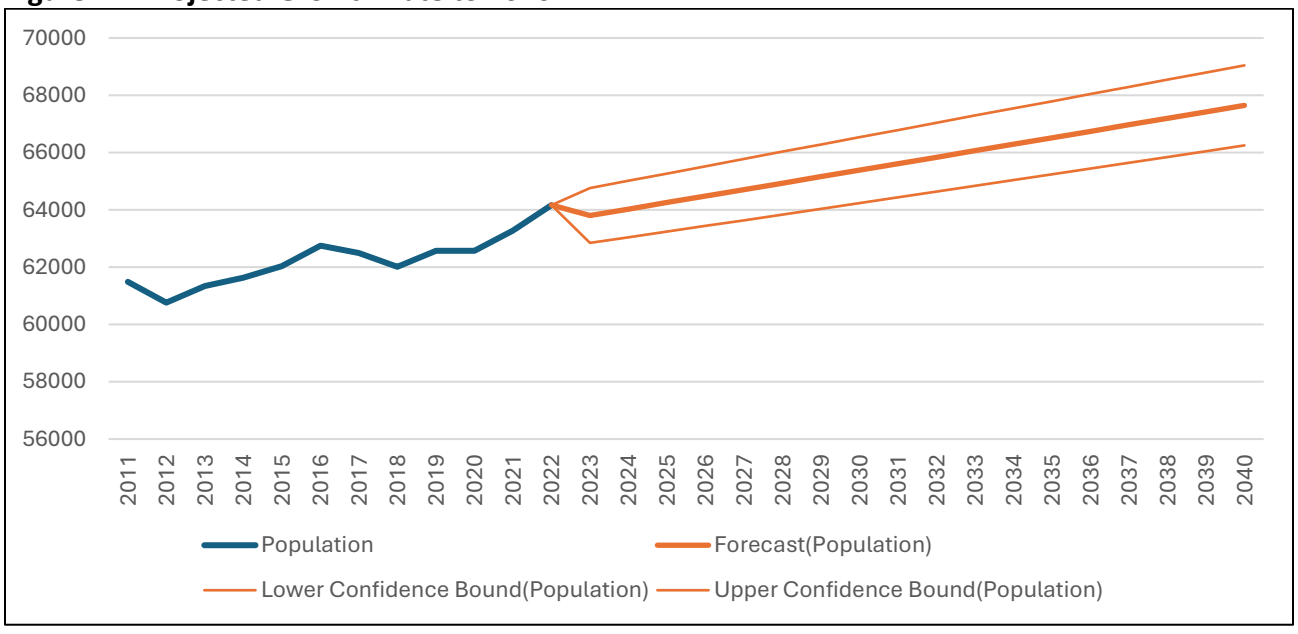
Table 9: Projected Growth Rates

Area	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Growth Rate
93501-EKHCD+Expansion	5,233	5,042	5,411	5,258	5,125	5,134	5,063	4,861	4,798	4,798	5,128	5,404	3.3%
93505-EKHCD+Expansion	13,658	13,347	13,324	13,232	13,165	13,324	13,445	13,606	13,993	13,993	14,914	14,952	9.5%
93516-EKHCD+Expansion	2,355	2,046	2,347	2,271	2,326	2,314	2,425	2,335	2,406	2,406	2,548	2,583	9.7%
93519-EKHCD+Expansion	91	96	89	97	67	36	28	22	-	-	-	-	-100.0%
93523-EKHCD+Expansion	3,021	3,002	2,926	3,378	3,469	3,366	3,312	3,700	3,681	3,681	3,876	3,867	28.0%
93524-EKHCD+Expansion	793	668	454	263	177	171	168	168	164	164	108	93	-88.3%
93528-EKHCD+Expansion	179	183	49	79	118	127	124	138	48	48	90	94	-47.5%
93554-EKHCD+Expansion	26	30	116	128	140	156	143	64	99	99	78	65	150.0%
93558-EKHCD+Expansion	66	50	249	267	284	236	221	40	17	17	17	17	-74.2%
93527-Ridgecrest	2,265	2,335	2,125	1,914	1,876	2,206	1,852	1,618	1,690	1,690	1,705	1,734	-23.4%
93555-Ridgecrest	31,755	32,021	32,376	32,967	33,580	34,064	34,075	33,742	33,925	33,925	33,060	33,490	5.5%
93562-Ridgecrest	2,047	1,943	1,877	1,781	1,712	1,620	1,639	1,723	1,757	1,757	1,757	1,867	-8.8%
Grant Total	**61,489**	**60,763**	**61,343**	**61,635**	**62,039**	**62,754**	**62,495**	**62,017**	**62,578**	**62,578**	**63,281**	**64,166**	**4.4%**

Source: ACS 2011 – 2022: 5-Year Estimates: DP05_0001E.

Using this projected growth rate over our 12-year study period, we estimated population growth until 2040. With a 95% confidence interval and recent trends, the total population of the study area will be approximately 67,648, with a variation between 66,252 and 69,045.

Figure 14: Projected Growth Rate to 2040



Source: HPSA Acumen, ACS 2011 – 2022: 5-Year Estimates: DP05_0001E.

The table below illustrates the natural increase, exodus, and attrition rates of the total study area. The natural increase of the region helps us understand the factors contributing to population growth and decline. It is calculated as the number of births minus deaths, relative to the population for a given year. Exodus refers to population loss due to out-migration, calculated as the population in the current year divided by that of the estimated attrition. Attrition represents the overall loss of population, combining both migration (exodus) and natural decrease (more deaths than births), calculated as the change in population from the previous year, adjusted for births and deaths: rate of the current year minus previous year, plus births minus deaths.

Table 10: Natural Increase of Area

Area	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Population	61,489	60,763	61,343	61,635	62,039	62,754	62,495	62,017	62,578	62,578	63,281	64,166
Births	973	958	920	915	894	919	875	866	853	774	757	800
Death	521	494	534	506	527	609	554	581	528	690	706	672
Natural Increase	0.7%	0.8%	0.6%	0.7%	0.6%	0.5%	0.5%	0.5%	0.5%	0.1%	0.1%	0.2%
Exodus		-0.43%	1.57%	1.14%	1.24%	1.63%	0.10%	-0.31%	1.42%	0.13%	1.19%	1.58%
Attrition		(262)	966	701	771	1,025	62	(193)	886	84	754	1,013

Source: ACS 2011 – 2022: 5-Year Estimates: DP05_0001E.
Source: California Department of Health – California Vital Data (Cal-ViDa): 2011 – 2022.

Proposed Area Demographics – Gender

The gender distribution in EKHCD + Expansion shows a significant disparity, with 55.6% men and 44.4% women. At first glance, it seems like an 11-point gap, but that is misleading. Experientially, the gap feels like the male population is 20% higher. Think of it like this, you have 55 single men and 44 single women in a room, and each of the women find a man to marry. That leaves 11 men alone which would feel like 20% of the men could not find women (11.2/55.6=20%). This is significant enough that it must be perceptible in the community. Ridgecrest seems to show a version of the reverse with about half of the volatility, as there were 8% extra women.

Table 11: Gender

Gender	EKHCD + Expansion	Ridgecrest	Kern County	CA	U.S.
Male	55.6%	47.8%	51.2%	50.1%	49.5%
Female	44.4%	52.2%	48.8%	49.9%	50.5%

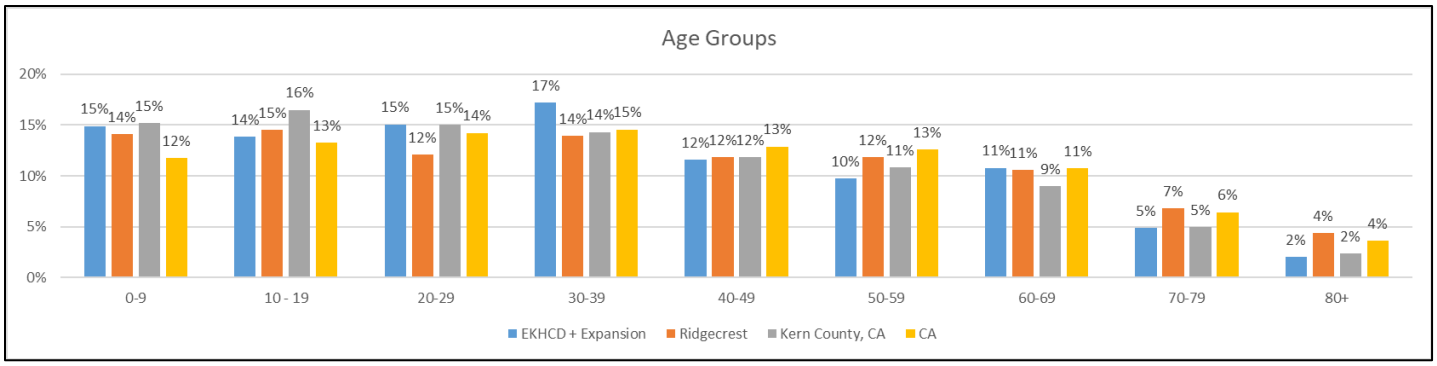
Source: ACS 2018 – 2022: 5-Year Estimates: B01001.

This differs from both the national and state averages, where the gender ratio in the U.S. and California is close to parity. The gender imbalance in EKHCD + Expansion could have various implications for the community, influencing social dynamics and health outcomes. Healthcare providers may need to adapt to these gender-specific disparities in order to better serve the population.

Proposed Area Demographics – Age

The two study areas, were not particular far outside the norms of age groups, compared to California and the United States. Below, we see the age demographics below comparing EKHCD + Expansion and Ridgecrest, against Kern County and California. There were no dramatic differences.

Figure 15: Age Groupings



Source: ACS 2018 – 2022: 5-Year Estimates: B01001.

What is noteworthy, is that our total service area had a higher percent under 18 then California and the U.S. This demonstrated that the survey area is not a retirement community, it is diverse in ages, and the health services provided should reflect that. There is no significant difference between the age groups within the study area.

Table 12: Age Groups Breakdown

Age Groups	EKHCD + Expansion	Ridgecrest	Kern County	CA	U.S.
Total Population	27,075	37,091	906,883	39,356,104	331,000,00
Under 18	7,786	10,603	287,461	9,838,632	82,257,022
Under 18 %	28.8%	28.6%	31.7%	25.0%	24.9%
60 and over	4,790	8,075	147,626	8,171,741	75,779,824
60 and over %	17.7%	21.8%	16.3%	20.8%	22.9%

Source: ACS 2018 – 2022: 5-Year Estimates: B01001

Proposed Area Demographics – Diversity

For race and ethnicity, EKHCD + Expansion had a 17.0% Black population, which was relatively high compared to Kern County's 4.9% and Ridgecrest's 3.7%. It was triple the rate of California State. In addition, the California City area was 37.6% Hispanic, while Ridgecrest was close to the national average at 19.8%. In all, they were substantially lower than Kern County, which was approximately 55.3% Hispanic. Throughout this study, White (non-Hispanic) will be referred to simply as "White" race to accommodate a more intuitive read.

Table 13: Race and Ethnicity

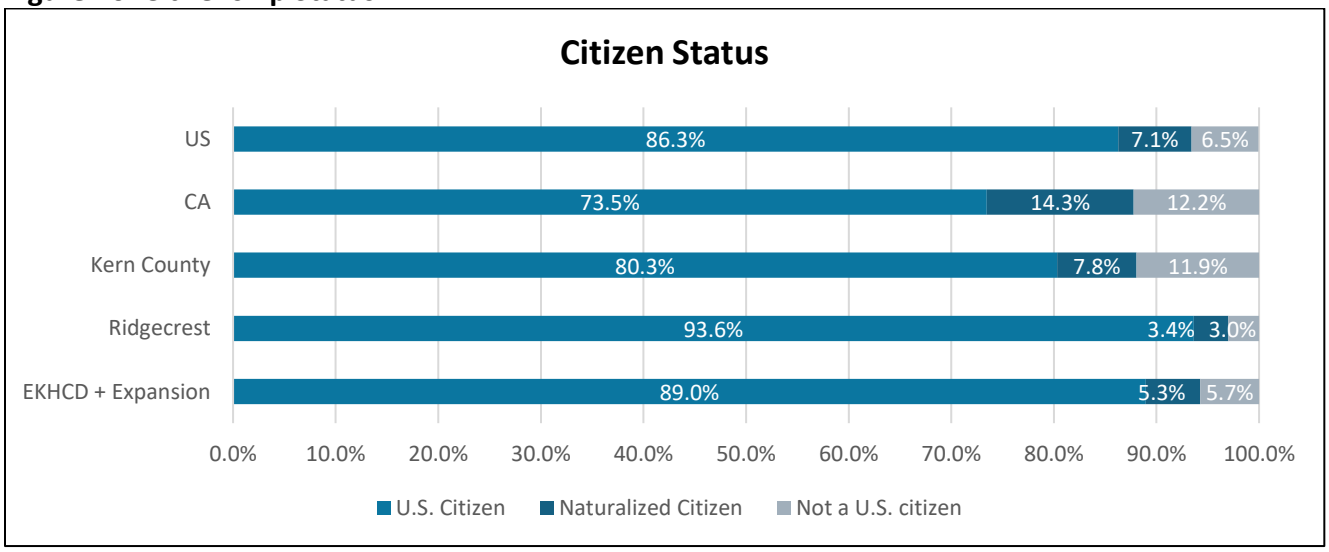
Race and Ethnicity	EKHCD + Expansion	Ridgecrest	Kern County	CA	U.S.
Total Population	27,075	37,091	906,883	39,356,104	331,097,600
White (non-Hispanic)	35.4%	66.8%	31.5%	35.2%	58.9%
Black or African American	17.0%	3.7%	4.9%	5.3%	12.1%
Native American/American Indian/Alaskan Native	1.4%	0.2%	0.4%	0.3%	0.6%
Asian	2.4%	3.1%	4.8%	14.9%	5.7%
Native Hawaiian/Pacific Islander	0.1%	0.3%	0.1%	0.3%	0.2%
Other Alone	0.3%	0.5%	0.4%	0.4%	0.4%
Two or More Races	5.8%	5.6%	2.7%	3.8%	3.5%
Hispanic	37.6%	19.8%	55.3%	39.7%	18.7%

Source: ACS 2018 – 2022: 5-Year Estimates: B03002.

Proposed Area Demographics – Citizenship/Language Metrics

The citizen status of EKHCD + Expansion and Ridgecrest was much higher than California and Kern County. Only 5.7% of EKHCD residents (on par with national standards) were not U.S. Citizens. Approximately 3% of Ridgecrest residents were not U.S. Citizens. This was compared to Kern County's 11.9% and California's 12.2%, which were both substantially higher. Essentially, California was double the national rate of reported non-citizens. That calculated out to 4.8 million in the state, or 108,000 in Kern County.

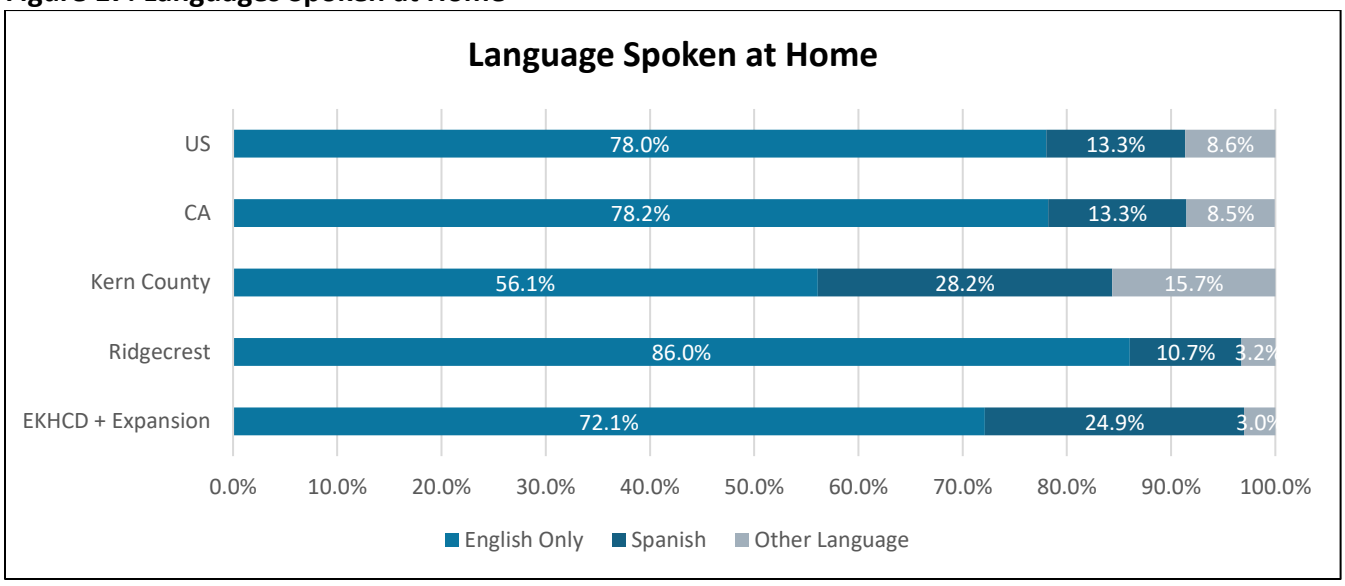
Figure 16: Citizenship Status



Source: ACS 2018 – 2022: 5-Year Estimates: B05001.

Compared to Kern County, EKHCD + Expansion had a much higher English-only population. 24.9% of residents speak Spanish as compared to Kern County's 28.2%, however, other languages were significantly lower. This was the same for Ridgecrest. English Only was the highest for Ridgecrest compared to any other compared area. Spanish language was comparable to National and California metrics.

Figure 17: Languages Spoken at Home



Source: ACS 2018 – 2022: 5-Year Estimates: B06007.

This was similarly shown below with the percentage of English Learners in corresponding school districts. Mojave Unified (EKHCD + Expansion) had 15% of students who are English Leaners, while Sierra Sands Unified (Ridgecrest) had a much lower percent (5.6%) than all other area metrics. The inference is that there may be broader language barriers in the community that impact communication, access to services, and overall support for non-English speakers.

Table 14: English Learners

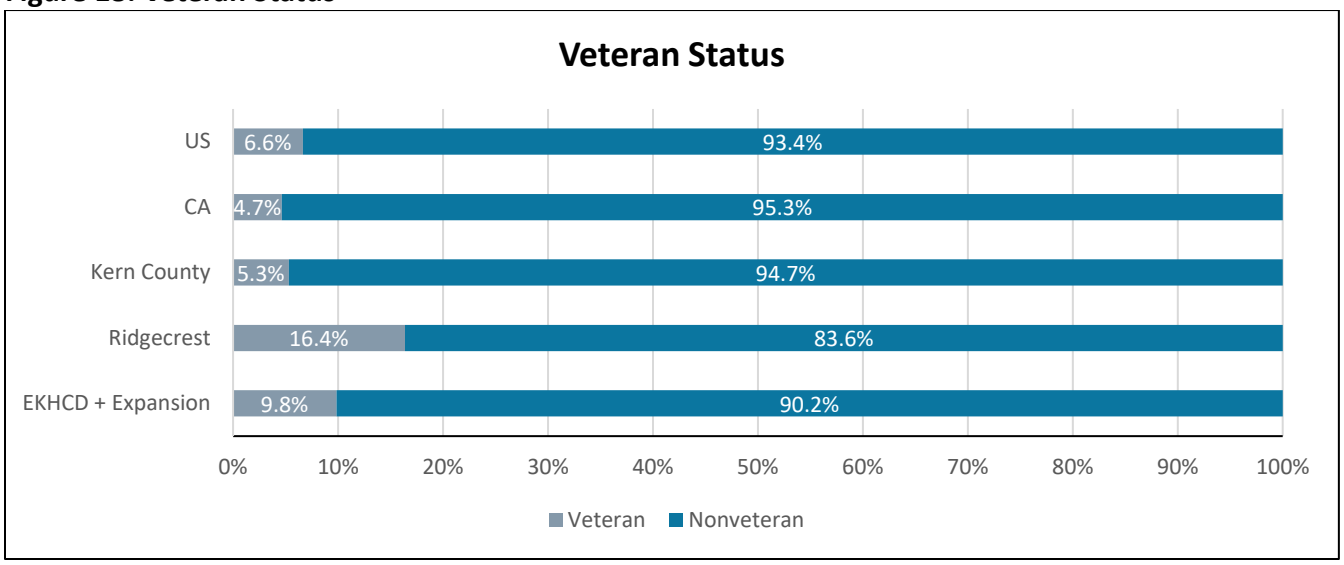
% English Language Learners	Mojave Unified	Sierra Sands Unified	Kern County	CA	U.S.
English Learners	15.1%	5.6%	18.5%	19.0%	10.6%

Source: https://www.ed-data.org/ in 2022 – 2023.
Source: https://nces.ed.gov/ in Fall 2020.

Proposed Area Demographics – Veteran/Education Metrics

The proportion of residents who have served in the armed forces in EKHCD + Expansion and Ridgecrest is notably higher than in other areas, with Ridgecrest having more than three times the rate of California, and EKHCD + Expansion having over twice the state average. This difference underscores the importance of veteran-specific healthcare services in these areas. Given that veterans often face unique health challenges, such as mental health conditions (e.g., PTSD, depression), physical disabilities, and other service-related health concerns, it is crucial that healthcare services in these communities are equipped to meet their needs. In fact, it can be estimated that 10-15% of the population's healthcare needs may be directly related to veteran services, which require specialized care, mental health support, and access to Veterans Affairs (VA) services.

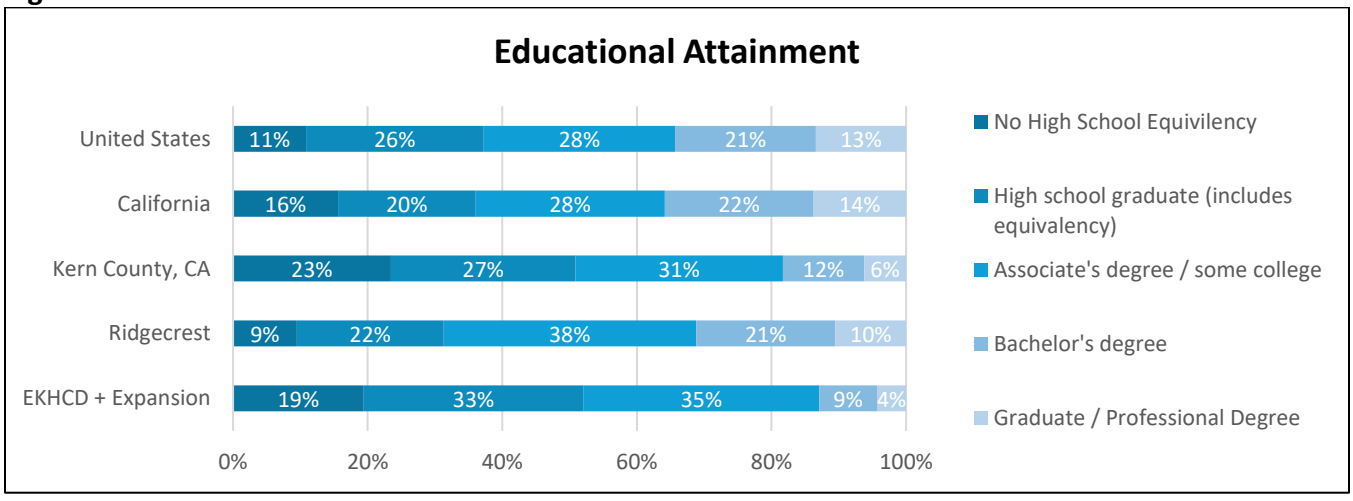
Figure 18: Veteran Status



Source: ACS 2018 – 2022: 5-Year Estimates: B21001 – Age 18 and over.

Regarding Educational Attainment, EKHCD+ had over half the population (52%) with no college education. EKHCD+ residents with bachelor's degrees or higher amounted to 13% relative to one- third of the population nationally – the state and national rates were more than 2.5X higher. Also noteworthy, we see that Ridgecrest did well with the lowest percent of No High School Equivalency across all study areas. Ridgecrest's relatively high rates of high school completion and lower rates of high school dropout may be associated with better overall health outcomes and greater economic mobility. Conversely, the lower educational attainment in EKHCD + Expansion suggests the need for targeted interventions to address the social determinants of health. Residents may face challenges in accessing healthcare, understanding health information, and maintaining health-promoting behaviors, which can exacerbate chronic health conditions and hinder efforts to prevent disease.

Figure 19: Educational Attainment



Source: ACS 2018 – 2022: 5-Year Estimates: B15002 – Age 18 and over.

Proposed Area Demographics – Poverty/Fiscal Metrics

According to the most recent demographics available, EKHCD + Expansion had 1-in-5 residents living below the Federal Poverty Level (100% FPL). Essentially 1-in-2 residents were below the low-income level (200% FPL). Within these metrics, those living in 100% FPL are included in the 200% FPL. Overall, the poverty in EKHCD + Expansion was 83% higher than Ridgecrest. Altogether, the portion of the residents living below the low-income line (poverty 22.48% + low income 23.02%) was 1.5X the rate in Ridgecrest.

Table 15: Federal Poverty Levels

Area	PPD	100% FPL	100% FPL Percent	200% FPL	200% FPL Percent
EKHCD + Expansion	24,785	5,571	22.48%	11,278	45.50%
Ridgecrest	36,524	4,462	12.22%	10,888	29.81%
Combined Area	**61,309**	**10,033**	**16.36%**	**22,166**	**36.15%**
Kern County	881,217	170,013	19.29%	379,182	43.03%
California	38,643,585	4,685,272	12.12%	10,828,010	28.02%

Source: ACS 2018 – 2022: 5-Year Estimates: S1701.

Local students are impacted by the metrics above. Nine-out-of-ten students at Mojave Unified (EKHCD + Expansion) were eligible for free or reduced meals. This was higher than all other metrics, including 46% for Sierra Sands Unified (Ridgecrest), and the national average of 53%. This is a significant health metric as children in poverty are at higher risk of developing chronic health conditions, experiencing mental health challenges, and facing educational barriers, which can perpetuate cycles of generational poverty and chronic poor health.

Table 16: Free or Reduced Meals

% Eligible for Free and Reduced Meals	Mojave Unified	Sierra Sands Unified	Kern County	CA	U.S.
Eligible	89%	46.4%	74.1%	59.9%	53.3%

Source: https://www.ed-data.org/ in 2022 – 2023.
Source: https://nces.ed.gov/ in Fall 2020.

Unemployment, corresponding with poverty, was also high in EKHCD + Expansion and Ridgecrest, compared to Kern County, California, and the U.S. The unemployment rate for the EKHCD + Expansion area was roughly three times the national unemployment rate, and Ridgecrest was more than double the national rate. The high unemployment rate in EKHCD + Expansion and Ridgecrest means that a larger portion of the population may experience economic stress, which is strongly linked to poorer health outcomes, including higher rates of chronic diseases (such as heart disease, diabetes, and obesity), mental health issues (such as depression and anxiety), and higher mortality rates.

Table 17: Unemployment

Unemployment	EKHCD + Expansion	Ridgecrest	Kern County	CA	U.S.
Unemployed	1,304	1,531	28,398	1,060,822	7,262,661
Labor Force	9,506	16,617	402,919	20,003,799	169,852,882
Unemployment Rate	13.7%	9.2%	7.0%	5.3%	4.3%

Source: ACS 2018 – 2022: 5-Year Estimates: DP03.

Proposed Area Demographics – Occupation/Industry Metrics

Understanding the types of industries and occupations that dominate the local workforce can help identify potential health risks, resource needs, and social determinants of health that impact the community. The most recent estimates for occupation and industry metrics were not on a zip code level; however, we could examine this data based on local communities. For Ridgecrest, the greatest proportion of those assigned to specific industries belonged to public administration, followed by educational services, professional and management services, and healthcare. For California City, it was public administration, retail trade, healthcare, and manufacturing.

Table 18: Industry Groups

Industry Category	Ridgecrest	California City
Civilian employed population 16 years and over	**11,840**	**4,600**
Agriculture, forestry, fishing and hunting, and mining:	**324**	**282**
Agriculture, forestry, fishing and hunting	161	189
Mining, quarrying, and oil and gas extraction	163	93
Construction	**451**	**141**
Manufacturing	**502**	**476**
Wholesale trade	**35**	**72**
Retail trade	**970**	**515**
Transportation and warehousing, and utilities:	**509**	**219**
Information	**149**	**14**
Finance and insurance, and real estate and rental and leasing:	**354**	**136**
Professional, scientific, and management, and administrative and waste management services:	**1,348**	**302**
Educational services, and health care and social assistance:	**2,388**	**961**
Educational services	1,356	436
Health care and social assistance	1,032	525
Arts, entertainment, recreation, and accommodation and food services:	**716**	**404**
Arts, entertainment, and recreation	41	131
Accommodation and food services	675	273
Other services, except public administration	**446**	**245**
Public administration	**3,648**	**833**

Source: ACS 2018 – 2022: 5-Year Estimates: S2403.

In Ridgecrest, there is a strong representation in management, business, computer sciences, and education—fields often associated with higher wages, job security, and better health outcomes. In contrast, California City has more residents employed in sales/office and production/transportation occupations, which may offer fewer opportunities for economic advancement and better health coverage. Access to higher-paying jobs and educational opportunities can directly influence health by providing the means to afford better healthcare, nutrition, and living conditions.

Table 19: Occupational Groups

Occupation Category	Ridgecrest	California City
Civilian employed population 16 years and over	**11,840**	**4,600**
Management, business, science, and arts occupations:	**6,289**	**1,386**
Management, business, and financial occupations:	**1,755**	**511**
Computer, engineering, and science occupations:	**2,899**	**331**
Education, legal, community service, arts, and media occupations:	**1,347**	**416**

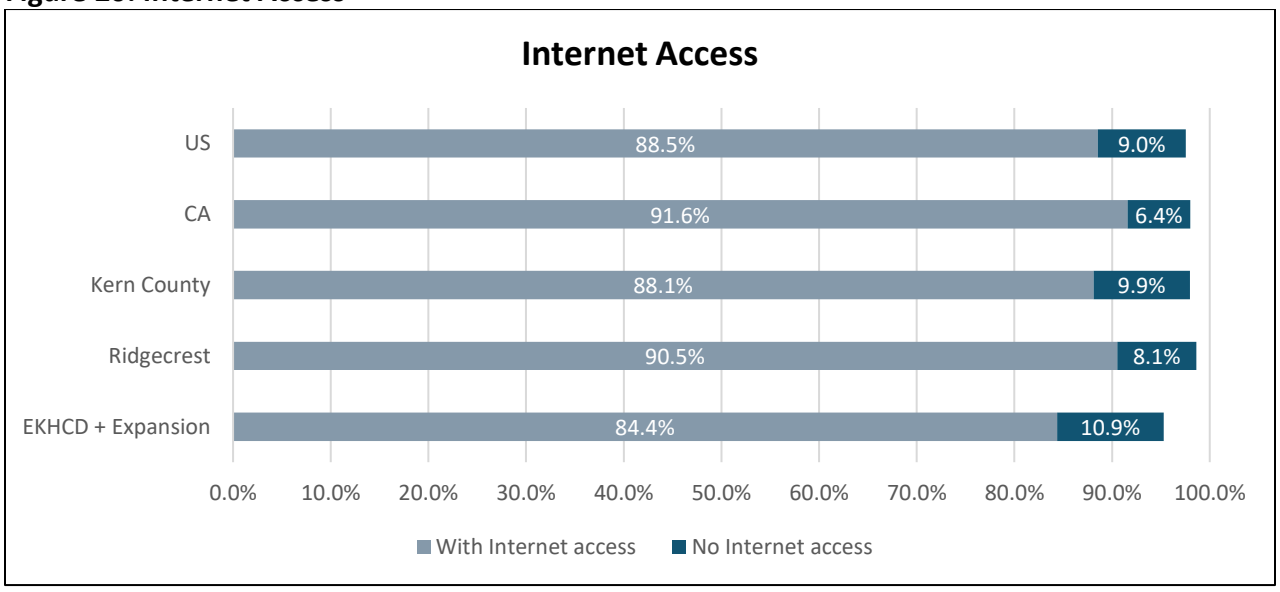
Occupation Category	Ridgecrest	California City
Community and social service occupations	406	73
Legal occupations	0	19
Educational instruction, and library occupations	782	228
Arts, design, entertainment, sports, and media occupations	159	96
Healthcare practitioners and technical occupations:	**288**	**128**
Health diagnosing and treating practitioners and other technical occupations	121	24
Health technologists and technicians	167	104
Service occupations:	**1,580**	**1,133**
Healthcare support occupations	312	381
Protective service occupations:	353	173
Firefighting and prevention, and other protective service workers including supervisors	149	109
Law enforcement workers including supervisors	204	64
Food preparation and serving related occupations	482	96
Building and grounds cleaning and maintenance occupations	165	260
Personal care and service occupations	268	223
Sales and office occupations:	**1,813**	**958**
Natural resources, construction, and maintenance occupations:	**1,053**	**524**
Farming, fishing, and forestry occupations	54	123
Construction and extraction occupations	418	192
Installation, maintenance, and repair occupations	581	209
Production, transportation, and material moving occupations:	**1,105**	**599**

Source: ACS 2018 – 2022: 5-Year Estimates: S2401.

Proposed Area Demographics – Healthcare Access Metrics

Out of all the comparison areas, EKHCD + Expansion had the least access to the internet, with 84.4%. This was not substantially far off from the comparisons. This high level of connectivity, paired with the willingness of community members to use telehealth (referenced later in the community survey), creates new opportunities for boosting health access that were not available twenty years ago.

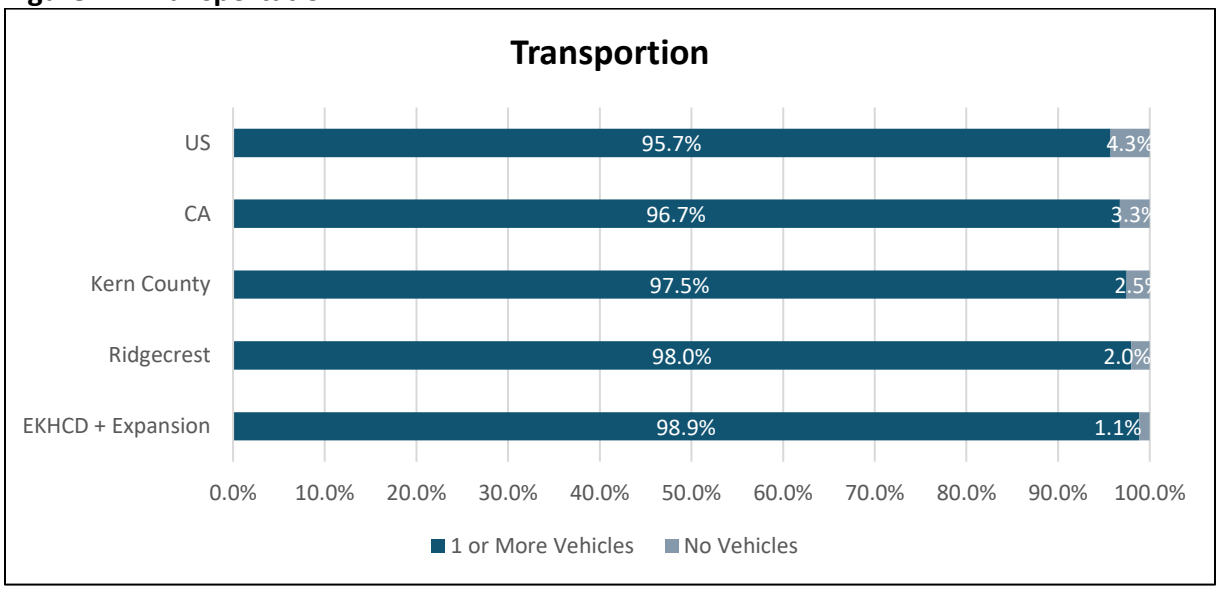
Figure 20: Internet Access



Source: ACS 2018 – 2022: 5-Year Estimates: B28011.

EKHCD + Expansion and Ridgecrest scored as 98-99% of the population has access to at least one vehicle. This indicates a high level of transportation access, suggesting that most households have a way to reach healthcare services. As a result, transportation was not viewed as a key barrier to seeing a physician for these populations.

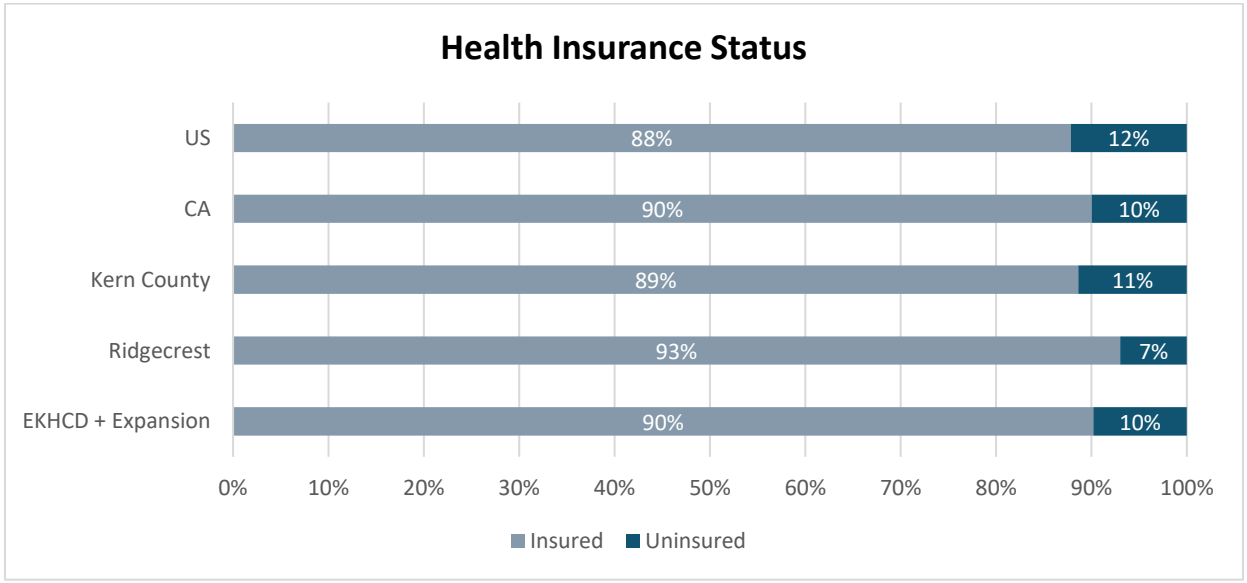
Figure 21: Transportation



Source: ACS 2018 – 2022: 5-Year Estimates: B08014.

Uninsured rates across Kern County, Ridgecrest, and EKHCD + Expansion were consistent with national and state trends. As a result, health insurance coverage was not a major concern for this study, as it mirrors the broader national issue of uninsured rates. While the uninsured rate is a significant national issue, it was not a key focus for this specific analysis.

Figure 22: Health Insurance



Source: ACS 2018 – 2022: 5-Year Estimates: B27011.

2020 – 2023 California Mortality Statistics

Beginning with a high-level view, the chart below showed the top causes of death per population for the entire state of California. We then compared Kern County to the state and ranked it against all other ratios for each county in the state. This showed us the top eleven causes of death in the state ranked by order. Kern County areas of concern were rated as fifth for Poisoning and second for Diabetes across all county-per-population ratios. These were the top eleven causes of death according to California Death Data. We expanded on this data below, in our following section, to offer an alternative view of this data. Note: Of the fifty-eight counties, fifty-three counties had unmasked data for this calculation. The rest of the counties had numbers masked for privacy.

Table 20: California Cause of Death Data

Cause of Death	Rank of Cause of Death in California	Kern Rank Across all CA Counties	Kern Quartile in State
All other diseases (Residual)	1	49	4th Quartile
Other and unspecified infectious and parasitic diseases and their sequelae	2	16	2nd Quartile
All other forms of chronic ischemic heart disease	3	18	2nd Quartile
Cerebrovascular diseases	4	46	4th Quartile
Alzheimer's disease	5	27	2nd Quartile
Diabetes mellitus	6	2	1st Quartile
Other chronic lower respiratory diseases	7	17	2nd Quartile
All other forms of heart disease	8	44	4th Quartile
Accidental poisoning and exposure to noxious substances	9	5	1st Quartile
Malignant neoplasms of trachea, bronchus, and lung	10	42	4th Quartile
Acute myocardial infarction	11	36	3rd Quartile

Source: California Department of Health – California Vital Data (Cal-ViDa): 2020 – 2023.

We did discover causes of death that existed in Kern County, which were not viewable in the data due to masking. This showed that overall Kern had a significantly higher ratio for assault (homicide) than the state ratio. This amounted to around 114 deaths per year for Homicides and 114 deaths per year for Suicides.

Table 21: California Cause of Death Data

Cause of Death	California	Kern	Kern VS. CA	Ridgecrest	Ridgecrest vs. CA	California City	CA City vs. CA
Assault (homicide)	0.06	0.12	213.6%	0	0.0%	0	0.0%
Intentional self-harm (suicide)	0.11	0.12	117.3%	0	0.0%	0	0.0%
Essential hypertension and hypertensive renal disease	0.17	0.18	105.5%	0	0.0%	0	0.0%
Influenza and pneumonia	0.14	0.13	97.2%	0	0.0%	0	0.0%
Nephritis, Nephrotic Syndrome, and nephrosis	0.12	0.11	94.1%	0	0.0%	0	0.0%
Parkinson's disease	0.11	0.09	81.8%	0	0.0%	0	0.0%

Source: California Department of Health – California Vital Data (Cal-ViDa): 2020 – 2023.

To put the size of the problem in perspective, Diabetes deaths on average were 404 per year and Chronic Lower Respiratory Disease was an average of 435 per year. Accidents averaged 764.

Using California vital statistics data, we calculated ratios of cause of death across California, Kern County, Ridgecrest, and California City. These ratios were calculated using total deaths across four years (2020 – 2023), while also considering population for each geographic area. The notes below detail our initial findings. Any missing data were determined to be masked and not considered in the analysis.

We identified five causes of death California City that need further study: 1. chronic liver disease, 2. chronic lower respiratory disease, 3. diabetes, 4. accidents, and 5. diseases of the heart. Items marked red represent instances where rates were one-third worse than the state average. Ridgecrest, relative to the state levels, showed an issue with liver disease and diabetes and heart. Ridgecrest also showed concerns with liver disease, diabetes, and heart disease, with both Ridgecrest and California City facing overlapping issues in these three areas.

Please note that yellow shading marks any rates 15% above the state average to one-third above state average. Anything 33% above the benchmark is in red highlights.

Table 22: California Cause of Death Data

Cause of Death	California	Kern	Kern VS. State	Ridgecrest	Ridgecrest VS. State	California City	CA City VS. State	Notes
Chronic liver disease and cirrhosis	0.17	0.21	124%	0.00	0%	0.30	176%	No data for Ridgecrest, instances were not statistically significant.
Chronic lower respiratory diseases	0.31	0.47	153%	0.45	147%	0.53	170%	California City was similar to county ratio but higher than state.
Diabetes mellitus	0.29	0.44	150%	0.54	182%	0.45	154%	California City was similar to county ratio but higher than state.
Accidents (unintentional injuries)	0.52	0.83	160%	0.55	106%	0.78	149%	California City was similar to county ratio but higher than state.
Diseases of heart	1.68	1.76	105%	2.00	119%	2.35	140%	California City was higher than all others.
Other	1.96	2.02	103%	1.79	91%	2.49	128%	California City was higher than all others but not of pressing concern.
Malignant neoplasms	1.53	1.32	86%	1.42	93%	1.58	103%	California City was similar to state ratio.
Alzheimer's disease	0.44	0.41	93%	0.00	0%	0.39	87%	No data for Ridgecrest, instances were not statistically significant.
Cerebrovascular diseases	0.46	0.34	73%	0.50	107%	0.40	86%	California City was lower than all other areas.

Source: California Department of Health – California Vital Data (Cal-ViDa): 2020 – 2023.

The ratios in the data above represent occurrence rates over a four-year period, which considered the individual average population of each area examined. We used this method to create a population based weighted average. The scoring number represents a figure used to stabilize comparisons between areas of high incidence like the entire state, or smaller areas like the service area.

Understanding the impact of lifestyle choices on chronic diseases is crucial for improving public health outcomes. Nationally, heart disease and cancer remain the top causes of mortality, but many other preventable conditions, such as diabetes, chronic liver disease, and chronic lower respiratory disease, also contribute significantly to death rates. While healthcare providers are likely familiar with these conditions, a broader understanding of how lifestyle factors like diet, physical activity, and smoking can prevent or mitigate these diseases is essential for the public and policymakers to address these health challenges effectively.

Diabetes deaths are largely preventable. According to the CDC: National Diabetes Statistics Report, 5% of diabetes is Type 1 which is typically understood as a person is born with it (could be as high as 10%). It used to be referred to as childhood diabetes, but now due to the American experience we are seeing children with diabetes who develop it largely as a result of poor diet. Gestational Diabetes occurs in 2% of pregnancies (could be as high as 10%). That leaves 90 to 95% of diabetics falling into the category of Type 2 – that develop it with lifestyle and poor diet. Regarding preventable deaths, it is estimated that a significant portion of diabetes-related deaths can be prevented through proper management and lifestyle changes. The CDC notes that many complications of diabetes, which can lead to death, are preventable with effective blood sugar control, healthy eating, regular physical activity, and regular medical check-ups.

Chronic Liver Disease and Cirrhosis (CLDC) is approximately 50% alcohol-related liver disease. Another 15% (CLDC) is derived from Nonalcoholic Fatty Liver Disease (NAFLD) which has several contributing factors such as obesity, high blood sugar and insulin resistance (i.e. Type 2 Diabetes), and metabolic syndromes. Therefore, approaching two-thirds of this CLDC cause of death should be largely mitigatable.

Finally, Chronic Lower Respiratory Disease (CLRD), is 92% Chronic Obstructive Pulmonary Disease (COPD). COPD is caused by cigarette smoking 75% of the time and 24% from workplace exposures. In other words, these three top causes of death can be greatly mitigated by diet and lifestyle changes.

2020 – 2023 California Death Statistics – Grouped Data

As mentioned above, the California Death Data, at times, is structured in a way that is difficult to digest. There were instances where deaths related to heart conditions or other causes were allocated across multiple categories, making the data less straightforward. To address this, we have amalgamated/consolidated the underlying data into broader categories of death rather than keeping individual causes separate. Our methodology involved grouping related deaths together, allowing for a more cohesive and comprehensive view of mortality trends. We believe this approach provides a clearer, more holistic picture of deaths within California and Kern County.

This section below expands on available data, breaking out Kern County metrics surrounding education, diversity, and gender. In some instances, this data was not available on such a small scale as zip codes. Since statistics were not available for EKHCD+, we will default to county statistics and assume these inferences are applicable for EKHCD+.

Table 23: Grouped - California Cause of Death Data – California

Cause of Death	2020	2021	2022	2023	Grand Total
Heart Related	66,426	65,450	66,038	63,151	261,065
Cancer	59,078	58,744	59,424	59,018	236,264
Other	31,822	33,291	35,333	34,320	134,766
Infections	33,504	46,024	19,468	6,831	105,827
Lung Related - Not Cancer	22,163	20,190	21,081	21,673	85,107
Brain Disorder - Parkinson, Alzheimer's, etc.	22,783	20,818	21,490	19,968	85,059
Accidents	17,795	20,290	20,426	19,487	77,998

Cause of Death	2020	2021	2022	2023	Grand Total
Cerebrovascular and Related	17,877	18,334	18,327	17,736	72,274
Diabetes	11,609	11,410	11,538	11,188	45,745
Kidney Related - Not Cancer	10,255	11,005	11,534	11,313	44,107
Liver Related - Not Cancer	6,514	7,332	6,810	6,533	27,189
Suicide	3,902	3,946	4,053	3,783	15,684
Medical Complications	1,443	1,740	3,014	2,518	8,715
Violence	2,142	2,294	2,089	1,692	8,217
Blood Poisoning (Bacterial, Fungal, or Viral)	1,656	1,739	1,760	1,679	6,834
Malnutrition	997	1,032	1,322	1,272	4,623
Circulatory system - Not Stroke or Heart	1,165	1,038	1,165	1,113	4,481
Stomach Related - Not Cancer	421	420	460	424	1,725
Pregnancy	18	16	-	-	34

Source: California Department of Health – California Vital Data (Cal-ViDa): 2020 – 2023.

When examining the mortality data over time, the most notable trend was the spike in infections in 2021, followed by a significant decline in subsequent years. We believe this increase was driven largely by -COVID-19-related deaths. Observing similar trends at the state level has led us to consider this pattern typical for this period.

Table 24: Grouped - California Cause of Death Data – Kern County

Cause of Death	2020	2021	2022	2023	Grand Total	Percent of Total
Heart Related	1,635	1,622	1,562	1,618	6,437	20.8%
Cancer	1,225	1,185	1,221	1,279	4,910	15.9%
Other	668	782	834	780	3,064	9.9%
Accidents	642	795	803	762	3,002	9.7%
Infections	740	1,400	454	161	2,755	8.9%
Lung Related - Not Cancer	633	618	643	639	2,533	8.2%
Brain Disorder - Parkinson, Alzheimer's, etc.	482	486	447	404	1,819	5.9%
Diabetes	422	418	402	377	1,619	5.2%
Cerebrovascular and Related	259	329	358	301	1,247	4.0%
Kidney Related - Not Cancer	242	269	261	280	1,052	3.4%
Liver Related - Not Cancer	201	233	202	191	827	2.7%
Suicide	121	107	113	117	458	1.5%
Violence	130	133	111	81	455	1.5%
Blood Poisoning (Bacterial, Fungal, or Viral)	75	77	67	90	309	1.0%
Medical Complications	44	43	84	67	238	0.8%
Malnutrition	16	22	38	28	104	0.3%
Circulatory system - Not Stroke or Heart	15	36	31	-	82	0.3%
Stomach Related - Not Cancer	11	15	14	12	52	0.2%
Grand Total	**7,561**	**8,570**	**7,645**	**7,187**	**30,963**	

Source: California Department of Health – California Vital Data (Cal-ViDa): 2020 – 2023.

That left us focused on heart disease, diabetes, liver, and lung conditions. In our further analysis, we cross-referenced these causes with demographic data to identify which populations were most affected. A key finding

across Kern County was that high school or GED attainment, without further education, had higher per capita instances of mortality for all the highlighted categories below in red. This trend was consistent across all the causes of death listed.

Of particular note from the Table below, Cancer was 27% higher in residents with a high school level of education vs. graduate degree. Cerebrovascular and Related was 71% higher. Lung Related – Not Cancer was 93% higher, Heart Related was 128% higher, and Diabetes was 134% higher.

Table 25: Grouped - California Cause of Death Data – Kern County, Education

Cause of Death	Bachelor's Degree	Graduate Degree	High School Graduate or GED Completed	Less than High School	Some College Credit, No 4-Year Degree
Blood Poisoning (Bacterial, Fungal, or Viral)			1.78	2.04	0.71
Brain Disorder - Parkinson, Alzheimer's, etc.	5.08	5.14	5.73	4.22	2.90
Cancer	15.14	18.16	23.03	20.45	17.45
Cerebrovascular and Related	3.73	4.18	7.13	5.90	4.25
Diabetes	4.06	4.11	9.60	8.74	4.80
Infections	4.91	7.92	8.22	9.46	4.46
Kidney Related - Not Cancer	2.63		3.53	2.43	1.61
Liver Related - Not Cancer	1.76		4.01	3.88	2.38
Lung Related - Not Cancer	4.06	4.48	8.66	5.88	5.23
Other			0.77	1.84	
Suicide	2.05		3.29	1.69	1.39
Violence			3.14	3.47	0.94
Heart Related	20.15	17.86	40.69	28.32	19.74
Grand Total	**6.70**	**8.80**	**9.50**	**7.15**	**5.35**

Source: California Department of Health – California Vital Data (Cal-ViDa): 2020 – 2023.

The data by gender reveals notable disparities across Kern County, particularly for the categories below highlighted in red. Males were 5.5X more likely to die from violence than females, 3.5X more likely to die by suicide, and over 2.7X more likely to die from an accident. Whereas females are experiencing a mortality rate from brain disorders nearly double that of males. While these trends are in line with broader national patterns, they may highlight a need for targeted interventions.

Table 26: Grouped - California Cause of Death Data – Kern County, Gender

Cause of Death	Sum of Death Female	Sum of Death Male	Weighted Avg. Female	Weighted Avg. Male	Gender Disparities in Male over Female
Accidents	812	2,249	4.51	12.12	2.69
Blood Poisoning (Bacterial, Fungal, or Viral)	155	155	0.86	0.84	0.97
Brain Disorder - Parkinson, Alzheimer's, etc.	1,153	666	3.20	1.80	0.56
Cancer	2,375	2,569	6.60	7.91	1.20
Cerebrovascular and Related	642	605	3.57	3.26	0.91
Diabetes	722	898	4.01	4.84	1.21
Infections	1,243	1,782	3.45	4.80	1.39

Cause of Death	Sum of Death Female	Sum of Death Male	Weighted Avg. Female	Weighted Avg. Male	Gender Disparities in Male over Female
Kidney Related - Not Cancer	524	537	1.46	1.45	0.99
Liver Related - Not Cancer	268	541	1.49	1.67	1.12
Lung Related - Not Cancer	985	849	3.13	2.62	0.84
Other	189	189	0.38	0.34	0.89
Suicide	100	360	0.56	1.94	3.49
Violence	68	387	0.38	2.09	5.52
Heart Related	2,713	3,751	15.07	13.48	0.89
Grand Total	**11,949**	**15,538**			

Source: California Department of Health – California Vital Data (Cal-ViDa): 2020 – 2023.

The data presented in the following table provides a breakdown of causes of death in Kern County by race and ethnicity, revealing significant disparities across different populations. These disparities in mortality rates are crucial to understanding the unique health challenges faced by various racial and ethnic groups, and they highlight the need for tailored public health strategies. One interesting discovery we found across Kern County, were the disparities between the incredible Hispanic rates on the one hand, contrasted with White and Black mortality rates. This can be found on the table below. It should be noted that data for other race/ethnicities, particularly Native American/Alaskan Native and Multi-Race, do not have sufficient data to make accurate comparisons.

Table 27: Grouped - California Cause of Death Data – Kern County, Race/Ethnicity

Cause of Death	Hispanic	White	Black/ African American	Asian	Native American / Alaskan Native	Multi-Race	Black Rates vs. White Rates	White Rates vs. Hispanic Rates
Accidents	5.46	14.31	15.25	3.70	46.00	4.84	**107%**	**262%**
Blood Poisoning (Bacterial, Fungal, or Viral)	0.58	1.32					**0%**	**228%**
Brain Disorder - Parkinson, Alzheimer's, etc.	0.83	6.44	3.75	2.47			**58%**	**776%**
Cancer	6.24	14.50	17.26	10.27		4.26	**119%**	**232%**
Cerebrovascular and Related	1.71	6.72	5.39	3.70			**80%**	**393%**
Diabetes	2.97	7.17	7.86	4.27			**110%**	**241%**
Infections	3.44	5.79	8.54	7.71	72.00	4.10	**147%**	**168%**
Kidney Related - Not Cancer	0.69	2.83	3.27	3.03			**116%**	**410%**
Liver Related - Not Cancer	1.56	3.05					**0%**	**196%**
Lung Related - Not Cancer	0.67	6.89	5.62	4.71			**82%**	**1028%**
Other	0.35	0.64					**0%**	**183%**
Suicide	0.71	2.57					**0%**	**362%**
Violence	1.36	0.81	4.42				**546%**	**60%**
Heart Related	7.42	26.19	26.21	13.64	68.00	4.81	**100%**	**353%**
Grand Total	**2.10**	**7.57**	**9.91**	**6.62**	**58.00**	**4.58**		

Source: California Department of Health – California Vital Data (Cal-ViDa): 2020 – 2023.

Note: the discrepancies between the races were too significant, which casts doubt on the reliability of Table 27.

Going back to our key issues: **Heart rates** for White and Black was 3.5X the Hispanic rate. **Diabetes**: White and Black was 2.5X the rate of Hispanic. **Liver** was double, and **Lung** was nearly 10X.

For all key issues, the data suggests tailoring approaches specifically to communities of Black and White residents. For Hispanic, the only rate higher than White was violence (homicide), but even still, the Black rate was 3.25X the Hispanic rate. The contrast is too great not to question the veracity of the data. This led to searching poverty level by race to uncover additional reasons the Hispanic rate was so different from White and Black rates. That did not solve the mystery.

Hispanic populations may experience lower mortality rates due a myriad of reasons. Home-cooked meals, stronger family ties, community support systems, cultural attitudes about substance use are all contributors. The most probable factor is the lack of tracking: migratory behaviors for healthcare and non-permanent resident status, or even a form of alternative medicine that does not submit trackable numbers.

Black residents experience disproportionately high mortality rates in several categories, particularly violence, cancer, and infections, highlighting the need for focused interventions that address social determinants of health and improve access to care within Black communities. When comparing the Black rates against the White rates, Black was about 20% higher for Cancer, approaching 50% higher for infections, and had a rate of violence (homicide) 5.5X that of White.

In contrast, Hispanic residents generally have lower mortality rates across most causes of death, indicating health risks tied to lifestyle factors. While potential explanations for these disparities include cultural, lifestyle, and healthcare access factors, further investigation into poverty levels and other socioeconomic variables did not fully clarify the differences in mortality rates between these groups. This disparity in data warrants careful consideration and further analysis to better understand the root causes of these health outcomes.

2020 – 2023 Morbidity Data Statistics

In addition to the statistics on causes of deaths, we rounded out our picture by looking into illnesses and diseases that the population may face, along with high-risk behaviors, social needs, disabilities, and prevention measures. We examined the Center for Disease and Control's (CDC) morbidity data to understand any additional community issues that might be identifiable. The available data levels for this include U.S., County, and Zip Code. Statewide statistics were not available from the CDC. For this metric, we applied a weighted average across all counties and summarized by each data measure.

Health Status

Health Status included higher level metrics across resident opinions on their general health, mental health, and physical distress. The totals across all measures in the Health Status category were averaged, showing an overall picture for this category.

Table 28: Morbidity – Health Status – Percent of Population

Health Status	U.S.	California	Kern County	EKHCD + Expansion	Ridgecrest
Fair or poor self-rated health status among adults	17.9	18.8	25.3	25.9	20.0
Frequent mental distress among adults	15.8	16.0	18.8	19.8	17.3
Frequent physical distress among adults	12.7	13.1	16.2	17.9	15.3
Health Status Avg.	**15.5**	**16.0**	**20.1**	**21.2**	**17.5**

Source: CDC Places: Local Data for Better Health – 2021/2022.

EKHCD+ scored an average of 7.1 points higher than California (equivalent to 38%), of which physical distress stuck out as the largest variant. Ridgecrest scored between Kern County and state/national averages. When comparing the rates in the EKHCD+ area, all three indicators ranked higher than the top decile of county rates. This warrants consideration in that it documents the communal belief that they have poor health and mental and physical distress.

Table 29: Morbidity – Health Status – Percent of Population

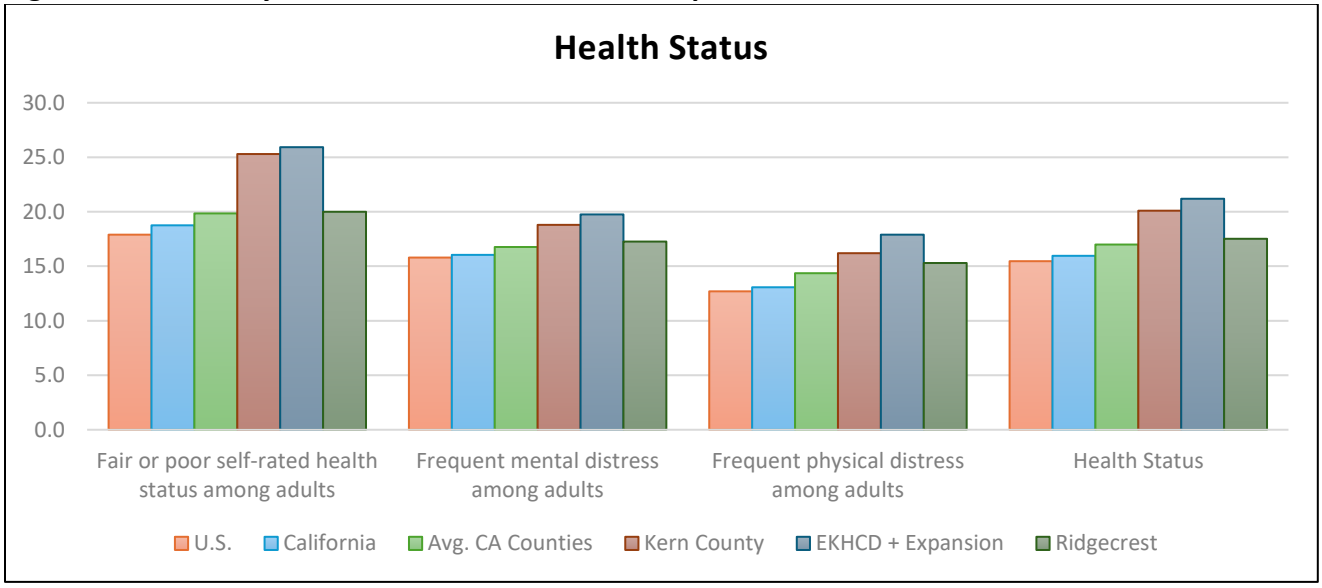
Health Status	EKHCD + Expansion	Ridgecrest	Lower Quartile	Upper Quartile	Upper Decile
Fair or poor self-rated health status among adults	25.9	20.0	17.1	21.9	25.4
Frequent mental distress among adults	19.8	17.3	15.7	18.3	19.2
Frequent physical distress among adults	17.9	15.3	12.9	15.9	16.9
Health Status Avg.	**21.2**	**17.5**	**14.7**	**18.7**	**21.7**

Source: CDC Places: Local Data for Better Health – 2021/2022.

Physical distress, in the context of health status metrics, typically refers to the frequency and severity of physical health problems experienced by individuals within a population. This can include chronic pain, physical disability, fatigue, and other conditions that affect an individual's ability to perform daily activities. In the reported data, elevated levels of physical distress in a community might indicate widespread issues related to physical health that could impact overall quality of life and well-being. The data collected provides a picture of how physical

health challenges were distributed across different regions, highlighting areas that may require more focused healthcare interventions and resources.

Figure 23: Morbidity – Health Status – Percent of Population



Source: CDC Places: Local Data for Better Health – 2021/2022.

Health Outcomes

Health Outcomes in the study encompassed a range of resident-reported conditions, from tooth loss to arthritis and diabetes. The totals for all measures Health Status category were averaged to provide an aggregate view of health across the areas studied. EKHCD+ scored rates were elevated in comparison to other regions.

Table 30: Morbidity – Health Outcomes – Percent of Population

Health Outcomes	U.S.	California	Kern County	EKHCD + Expansion	Ridgecrest
All teeth lost among adults aged >=65 years	12.2	10.7	21.5	19.3	12.3
Arthritis among adults	26.6	21.8	21.1	26.7	28.8
Cancer (non-skin) or melanoma among adults	8.2	6.7	5.8	7.5	9.6
Chronic obstructive pulmonary disease among adults	6.8	5.4	7.1	10.6	8.3
Coronary heart disease among adults	6.8	5.8	6.3	8.8	7.9
Current asthma among adults	9.9	9.6	10.4	11.4	11.0
Depression among adults	20.7	20.6	21.8	23.5	23.7
Diagnosed diabetes among adults	12.0	11.5	12.8	14.1	12.6
High blood pressure among adults	32.7	28.4	30.1	34.4	35.8
High cholesterol among adults who have ever been screened	35.5	34.1	33.4	34.9	37.8
Obesity among adults	33.3	28.3	35.6	35.2	33.8
Stroke among adults	3.6	3.1	3.7	5.1	4.2
Health Outcomes Avg.	**17.4**	**15.5**	**17.5**	**19.3**	**18.8**

Source: CDC Places: Local Data for Better Health – 2021/2022.

The data highlights several concerning health outcomes within the EKHCD+ community. What we found concerning in the table above was teeth loss in senior citizens approaching 20%. Causes of this are once consideration, but future nutrition is of particular concern if food selections are significantly reduced therefore, undermining complete nutrition. Kern County was pushing double the rate found in the state. The table below does well to paint a picture of the health issues in the EKHCD+ community: 11% have asthma, 11% have COPD, 14.1% have diabetes, over 1/3 are obese, and 5% have had a stroke and survived. This mentally draws back on the positive note that cerebrovascular deaths in EKHCD+ were lower than normal, and survival rates were listed higher here for stroke.

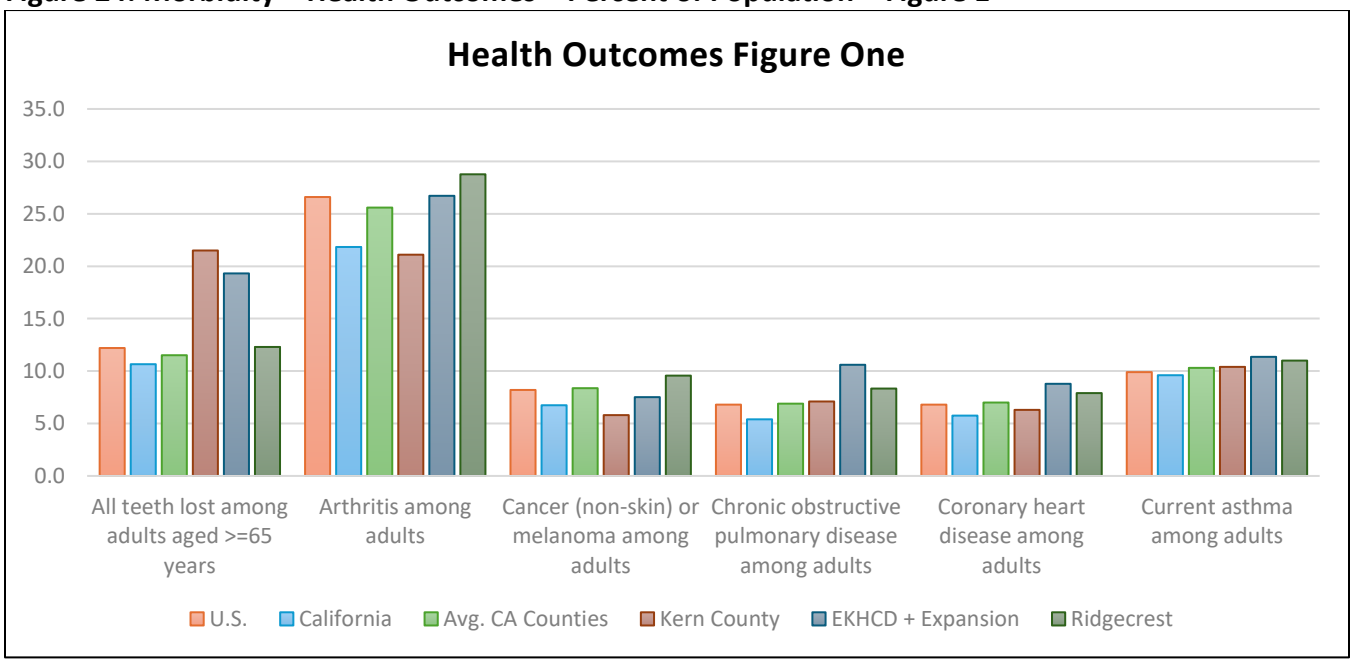
Overall, these health issues paint a picture of the health challenges faced by the EKHCD+ community, with rates for conditions like obesity, diabetes, COPD and Asthma remaining high. The data underscores the need to identify effective ways to address these chronic conditions, thereby improving overall health outcomes. These figures are visualized further in the accompanying tables and charts, which provide a clearer view of the health status in EKHCD+ compared to local and national benchmarks.

Table 31: Morbidity – Health Outcomes – Percent of Population

Health Outcomes	EKHCD + Expansion	Ridgecrest	Lower Quartile	Upper Quartile	Upper Decile
All teeth lost among adults aged >=65 years	19.3	12.3	8.5	14.5	15.8
Arthritis among adults	26.7	28.8	22.2	29.2	32.6
Cancer (non-skin) or melanoma among adults	7.5	9.6	6.7	10.4	11.5
Chronic obstructive pulmonary disease among adults	10.6	8.3	5.7	8.0	9.2
Coronary heart disease among adults	8.8	7.9	6.0	7.8	9.2
Current asthma among adults	11.4	11.0	10.0	10.8	11.1
Depression among adults	23.5	23.7	21.0	23.3	24.1
Diagnosed diabetes among adults	14.1	12.6	10.7	12.8	13.5
High blood pressure among adults	34.4	35.8	29.0	33.2	36.9
High cholesterol among adults who have ever been screened	34.9	37.8	33.4	36.8	39.3
Obesity among adults	35.2	33.8	28.3	32.7	34.6
Stroke among adults	5.1	4.2	3.2	4.0	4.7
Total Health Outcomes Avg.	**19.3**	**18.8**	**7.6**	**27.1**	**33.6**

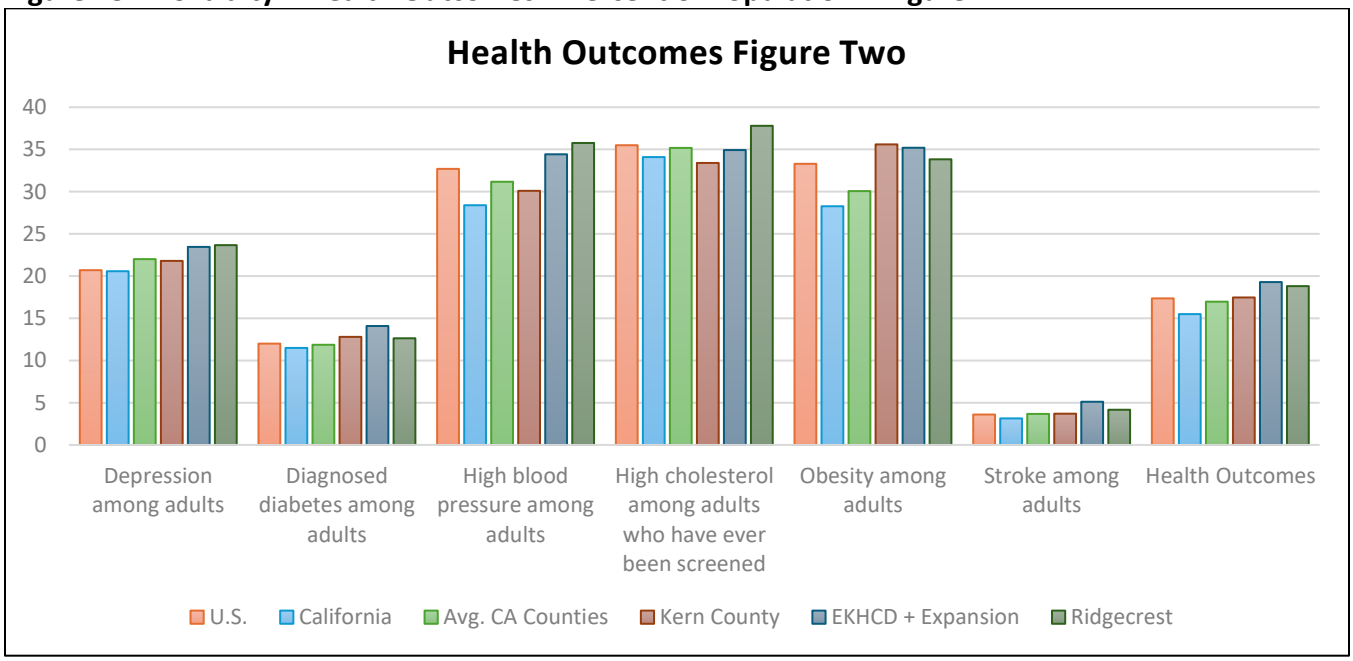
Source: CDC Places: Local Data for Better Health – 2021/2022.

Figure 24: Morbidity – Health Outcomes – Percent of Population – Figure 1



Source: CDC Places: Local Data for Better Health – 2021/2022.

Figure 25: Morbidity – Health Outcomes – Percent of Population – Figure 2



Source: CDC Places: Local Data for Better Health – 2021/2022.

Health Risk Behaviors

Health Risk Behaviors include activities that contribute to poor health, such as binge drinking and cigarette use. In addition, lack of exercise and short sleep duration are metrics tracked by the CDC. Overall, Ridgecrest scored similarly to state/national levels, and lower than Kern County. EKHCD+ was the highest among all areas, yet similar to Kern County. It scored particularly high for smoking, no leisure time, and sleep duration.

Table 32: Morbidity – Health Risk Behaviors – Percent of Population

Health Risk Behaviors	U.S.	California	Kern County	EKHCD + Expansion	Ridgecrest
Binge drinking among adults	16.6	18.1	18.1	18.1	17.3
Current cigarette smoking among adults	12.9	11.3	16.5	18.4	14.5
No leisure-time physical activity among adults	23.7	22.4	30.5	29.2	23.7
Short sleep duration among adults	36.0	35.2	38.5	39.0	35.7
Health Risk Behaviors Avg.	**22.3**	**21.7**	**25.9**	**26.2**	**22.8**

Source: CDC Places: Local Data for Better Health – 2021/2022.

When flagging rates higher than the top ten counties in the state, we see clearly that binge drinking rates were normal, but all other rates were noteworthy.

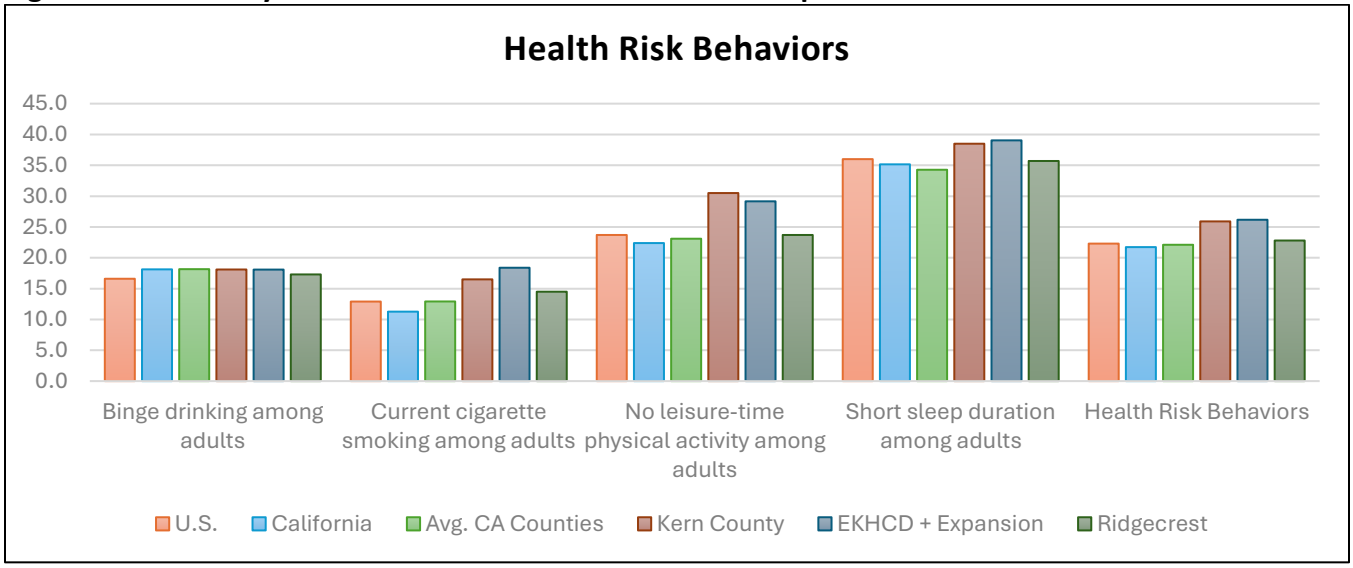
Table 33: Morbidity – Health Risk Behaviors – Percent of Population

Health Risk Behaviors	EKHCD + Expansion	Ridgecrest	Lower Quartile	Upper Quartile	Upper Decile
Binge drinking among adults	18.1	17.3	17.0	19.1	19.8
Current cigarette smoking among adults	18.4	14.5	10.8	14.9	15.9
No leisure-time physical activity among adults	29.2	23.7	20.7	25.3	28.3
Short sleep duration among adults	39.0	35.7	32.4	35.9	38.0
Health Risk Behaviors Avg.	**26.2**	**22.8**	**16.0**	**30.5**	**34.9**

Source: CDC Places: Local Data for Better Health – 2021/2022.

There were clearly high rates of cigarette smoking, 63% higher than the state. Habitual cigarette smoking introduces significant toxins localized to the lungs. Less sleep has been linked to heightened stress on the overall immune system. Less physically active leisure activities indicate less detoxification. Together, these lifestyle choices point to potential for cultural improvements.

Figure 26: Morbidity – Health Risk Behaviors – Percent of Population



Source: CDC Places: Local Data for Better Health – 2021/2022.

Health-Related Social Needs

The Health-Related Social Needs category highlights the significant role that societal factors, such as poverty and access to resources, play in shaping health outcomes, all of which have a negative impact on health and well-being.

Table 34: Morbidity – Health-Related Social Needs – Percent of Population

Health-Related Social Needs	U.S.	California	Kern County	EKHCD + Expansion	Ridgecrest
Feeling socially isolated among adults	31.9	34.9	35.9	35.8	32.4
Food insecurity in the past 12 months among adults	13.9	15.9	22.9	21.4	14.6
Housing insecurity in the past 12 months among adults	11.8	14.2	19.5	17.4	12.9
Lack of reliable transportation in the past 12 months among adults	8.2	9.3	12.9	12.8	9.2
Lack of social and emotional support among adults	25.1	30.8	32.3	32.4	28.1
Received food stamps in the past 12 months among adults	11.8	14.6	23.6	23.9	15.9
Utility services shut-off threat in the past 12 months among adults	7.5	6.9	10.1	9.7	7.1
Health-Related Social Needs Avg.	**15.7**	**18.1**	**22.5**	**21.9**	**17.2**

Source: CDC Places: Local Data for Better Health – 2021/2022.

A number of these areas did not flag in the upper decile but did have rates among the highest quarter of county rates in the state, all with a clear link to poverty.

Table 35: Morbidity – Health-Related Social Needs – Percent of Population

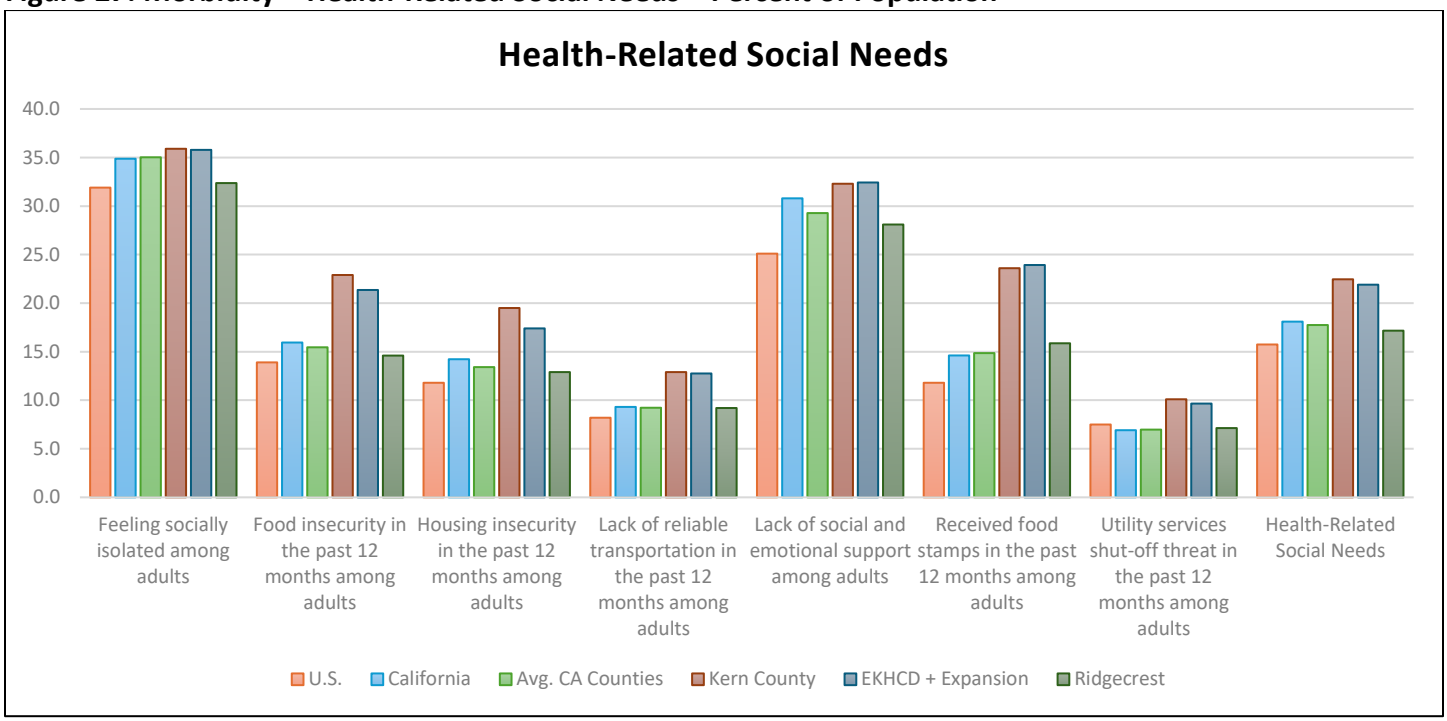
Health-Related Social Needs	EKHCD + Expansion	Ridgecrest	Lower Quartile	Upper Quartile	Upper Decile
Feeling socially isolated among adults	35.8	32.4	33.2	36.8	37.7
Food insecurity in the past 12 months among adults	21.4	14.6	11.8	18.5	22.9
Housing insecurity in the past 12 months among adults	17.4	12.9	10.5	16.6	19.4
Lack of reliable transportation in the past 12 months among adults	12.8	9.2	7.4	10.8	12.8
Lack of social and emotional support among adults	32.4	28.1	26.9	31.5	33.5
Received food stamps in the past 12 months among adults	23.9	15.9	10.9	18.2	22.0
Utility services shut-off threat in the past 12 months among adults	9.7	7.1	5.6	8.3	9.8
Health-Related Social Needs Avg.	**21.9**	**17.2**	**9.2**	**27.3**	**34.0**

Source: CDC Places: Local Data for Better Health – 2021/2022.

EKHCD+ stands out in several areas, such as food insecurity, which is 33% higher than the state average, and lack of reliable transportation, which is 38% higher. The percentage of adults receiving food stamps in EKHCD+ is also 67% higher than the state average, and the threat of utility shut-off is 40% higher. These figures clearly reflect the links between social determinants of health and poverty in this community.

Ridgecrest, while slightly better off, still faces elevated rates of food insecurity and social isolation compared to national averages. Overall, while EKHCD+ shares similar rankings with Kern County, it is the higher levels of food insecurity, social/emotional support deficits, and utility shut-off that paint a concerning picture of the ongoing social challenges facing this region.

Figure 27: Morbidity – Health-Related Social Needs – Percent of Population



Source: CDC Places: Local Data for Better Health – 2021/2022.

Disability Topics

Disability encompasses a wide range of issues afflicting the residents. In Kern County, EKHCD + Expansion, and Ridgecrest, disability was a prominent factor across nearly all categories of morbidity, with self-care disability surpassing the upper decile threshold the most. The lack of ability to take care of oneself is a significant contributor to health challenges. The rest of the rates were not far behind self-care.

Table 36: Morbidity – Disability Topics – Percent of Population

Disability Topics	U.S.	California	Kern County	EKHCD + Expansion	Ridgecrest
Any disability among adults	29.9	29.2	35.4	38.1	32.6
Cognitive disability among adults	13.4	13.9	18.5	18.9	14.9
Hearing disability among adults	7.1	6.2	7.3	9.5	8.4
Independent living disability among adults	7.9	7.7	10.4	11.9	9.0
Mobility disability among adults	13.7	12.8	16.3	19.5	15.8
Self-care disability among adults	3.8	3.7	5.5	6.5	4.6
Vision disability among adults	5.7	5.9	8.5	8.6	6.0
Disability Avg.	**11.6**	**11.3**	**14.6**	**16.1**	**13.1**

Source: CDC Places: Local Data for Better Health – 2021/2022.

When flagging rates that would fall in the top 10% of California counties, we see disability as a high factor in almost all categories, with mobility surpassing the upper decile for most categories. The table below expresses percents of the population. The very first number is shocking: nearly 40% of the population in EKHCD+ has a disability. This highlights the disproportionate challenge of disability in the area.

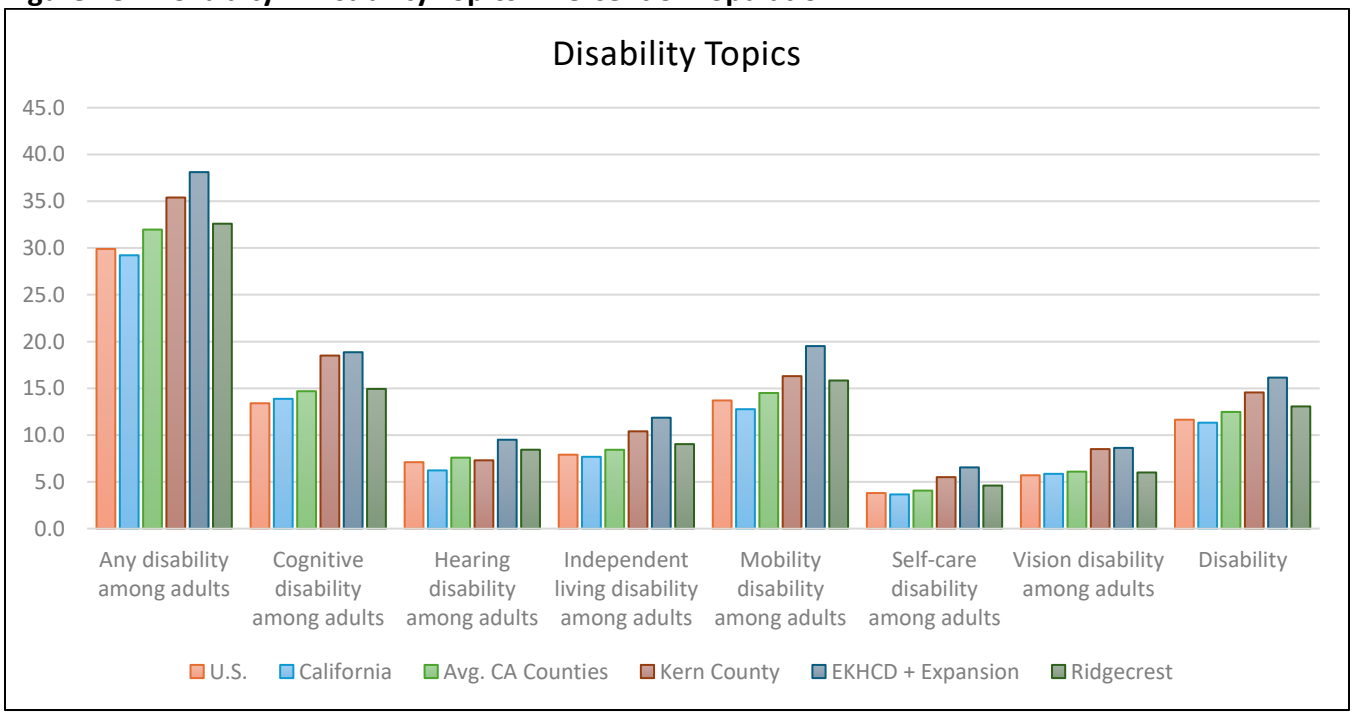
Table 37: Morbidity – Disability Topics – Percent of Population

Disability Topics	EKHCD + Expansion	Ridgecrest	Lower Quartile	Upper Quartile	Upper Decile
Any disability among adults	38.1	32.6	28.5	35.1	37.1
Cognitive disability among adults	18.9	14.9	13.1	16.7	18.3
Hearing disability among adults	9.5	8.4	6.5	8.3	9.7
Independent living disability among adults	11.9	9.0	7.4	9.7	10.4
Mobility disability among adults	19.5	15.8	12.2	16.6	17.5
Self-care disability among adults	6.5	4.6	3.4	4.7	5.3
Vision disability among adults	8.6	6.0	5.1	6.6	8.2
Disability Avg.	**16.1**	**13.1**	**6.0**	**15.2**	**29.5**

Source: CDC Places: Local Data for Better Health – 2021/2022.

Additionally, EKHCD+ has approximately double the state average concentration of veterans, with Ridgecrest having nearly triple the rate of veterans compared to the statewide average. According to Statista.com, 27% of U.S. veterans report a disability. While veterans are entitled to specific support services through the Department of Veterans Affairs (VA), there has been significant media coverage of veterans falling through the cracks of the system. That may not be the case in Kern County, given the numbers below, it is worth verifying the disabled and the veterans are properly supported.

Figure 28: Morbidity – Disability Topics – Percent of Population



Source: CDC Places: Local Data for Better Health – 2021/2022.

Prevention

Prevention morbidity topics include topics related to access and health prevention patterns across residents of each area. Unlike most other topics, a lower score here is negative. EKHCD + Expansion and Kern County were lower than Ridgecrest and state/national averages.

Table 38: Morbidity – Prevention – Percent of Population

Prevention	U.S.	California	Kern County	EKHCD + Expansion	Ridgecrest
Cholesterol screening among adults	86.4	85.5	80.7	81.9	85.9
Colorectal cancer screening among adults aged 45–75 years	66.3	57.4	52.7	51.1	63.1
Mammography use among women aged 50-74 years	76.5	75.7	73.4	71.6	74.7
Taking medicine to control high blood pressure among adults with high blood pressure	78.2	72.6	69.8	67.4	75.4
Visited dentist or dental clinic in the past year among adults	63.9	62.7	52.1	52.7	61.6
Visits to doctor for routine checkup within the past year among adults	76.1	70.9	69.5	71.6	74.1
Prevention Avg.	**74.6**	**70.8**	**66.4**	**65.9**	**72.5**

Source: CDC Places: Local Data for Better Health – 2021/2022.

Referencing Table 36, EKHCD + Expansion scores were flagged as 'yellow,' indicating that they fell within the lower quarter (but not the lowest decile) for cholesterol screening, colorectal cancer screening, blood pressure medication adherence, and dental care. These areas show room for improvement, but the rates were not as low as the most critical thresholds.

Table 39: Morbidity – Prevention – Percent of Population

Prevention	EKHCD + Expansion	Ridgecrest	Lower Quartile	Upper Quartile	Lower Decile
Cholesterol screening among adults	81.9	85.9	79.1	87.3	79.1
Colorectal cancer screening among adults aged 45–75 years	51.1	63.1	57.7	64.0	49.3
Mammography use among women aged 50-74 years	71.6	74.7	73.0	77.0	68.9
Taking medicine to control high blood pressure among adults with high blood pressure	67.4	75.4	72.5	76.7	69.0
Visited dentist or dental clinic in the past year among adults	52.7	61.6	58.0	65.8	49.8
Visits to doctor for routine checkup within the past year among adults	71.6	74.1	69.2	72.9	66.6
Prevention Avg.	**65.9**	**72.5**	**60.5**	**75.8**	**83.0**

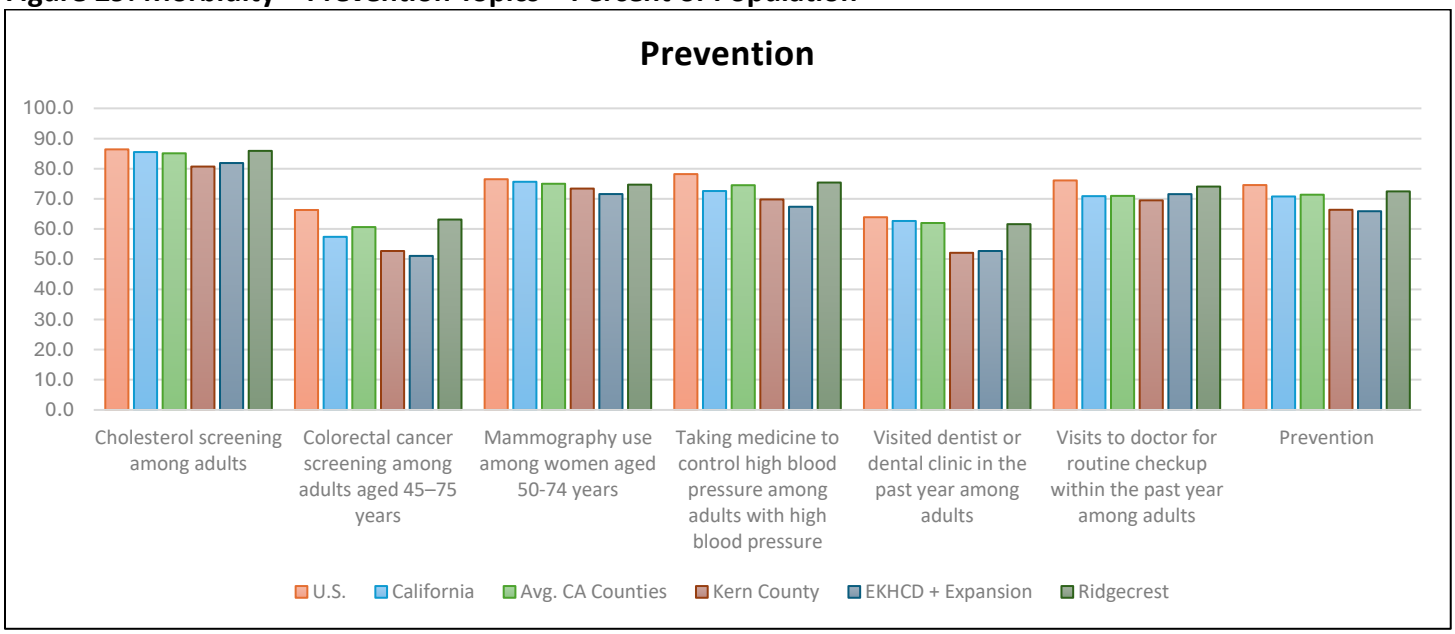
Source: CDC Places: Local Data for Better Health – 2021/2022.

Prevention is of peak importance in healthcare as it provides a proactive approach to maintaining overall well-being and avoiding severe health complications. The data above highlights the critical areas where preventive measures such as cholesterol screening, cancer screening, blood pressure management, and dental care can significantly benefit the population by preventing chronic diseases and promoting early detection. EKHCD + Expansion consistently falls below state and national averages in key preventive health measures, with particularly low rates in colorectal cancer screening (51.1%), blood pressure medication adherence (67.4%), and dental visits (52.7%). Overall, the prevention average for EKHCD + Expansion (65.9%) is well below both state

(70.8%) and national (74.6%) benchmarks, indicating a critical need for improved access to and engagement with preventive healthcare services.

Consistent preventive measures can lead to a healthier community, reduce the incidence of chronic diseases, and enhance the quality of life for individuals. By prioritizing prevention, we invest in a future where costly health disasters are minimized, and resources can be allocated more efficiently to improve healthcare outcomes. It is essential that we continue to emphasize and support these preventive strategies to foster a healthier society and ensure sustainable healthcare practices.

Figure 29: Morbidity – Prevention Topics – Percent of Population

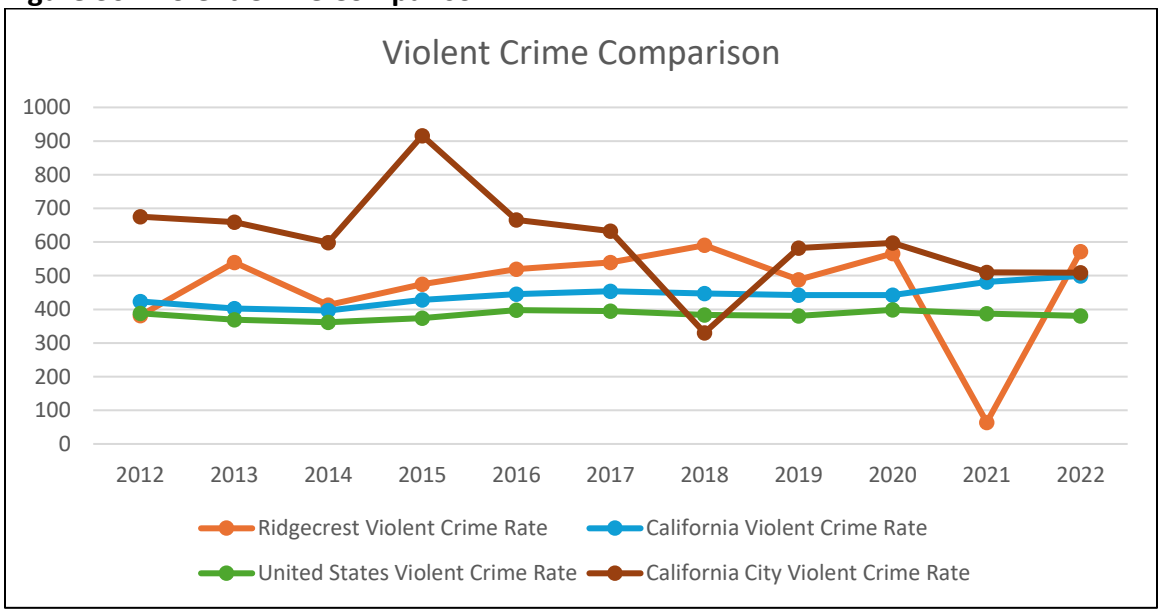


Source: CDC Places: Local Data for Better Health – 2021/2022.

Violent Crime Considerations

As shown below, we can equate California City as representative to the EKHCD area. Looking at 2022, violent crime in California City came in at roughly 25% higher than the national average but aligned with the state average for California. Ridgecrest, on the other hand, had violent crime rates roughly 50% higher than the national average. The occasional fluctuations in the data were disregarded, assuming a small community could experience significant rate changes by a few instances or reporting anomalies.

Figure 30: Violent Crime Comparison



Source: FBI Crime Data Explorer. https://cde.ucr.cjis.gov/LATEST/webapp/#/pages/explorer/crime/crime-trend
Ridgecrest/California City were calculated at the same rate of per 100k.
There was no available data for Ridgecrest during 2021. Population Source: U.S. Census Bureau 2012 – 2022.

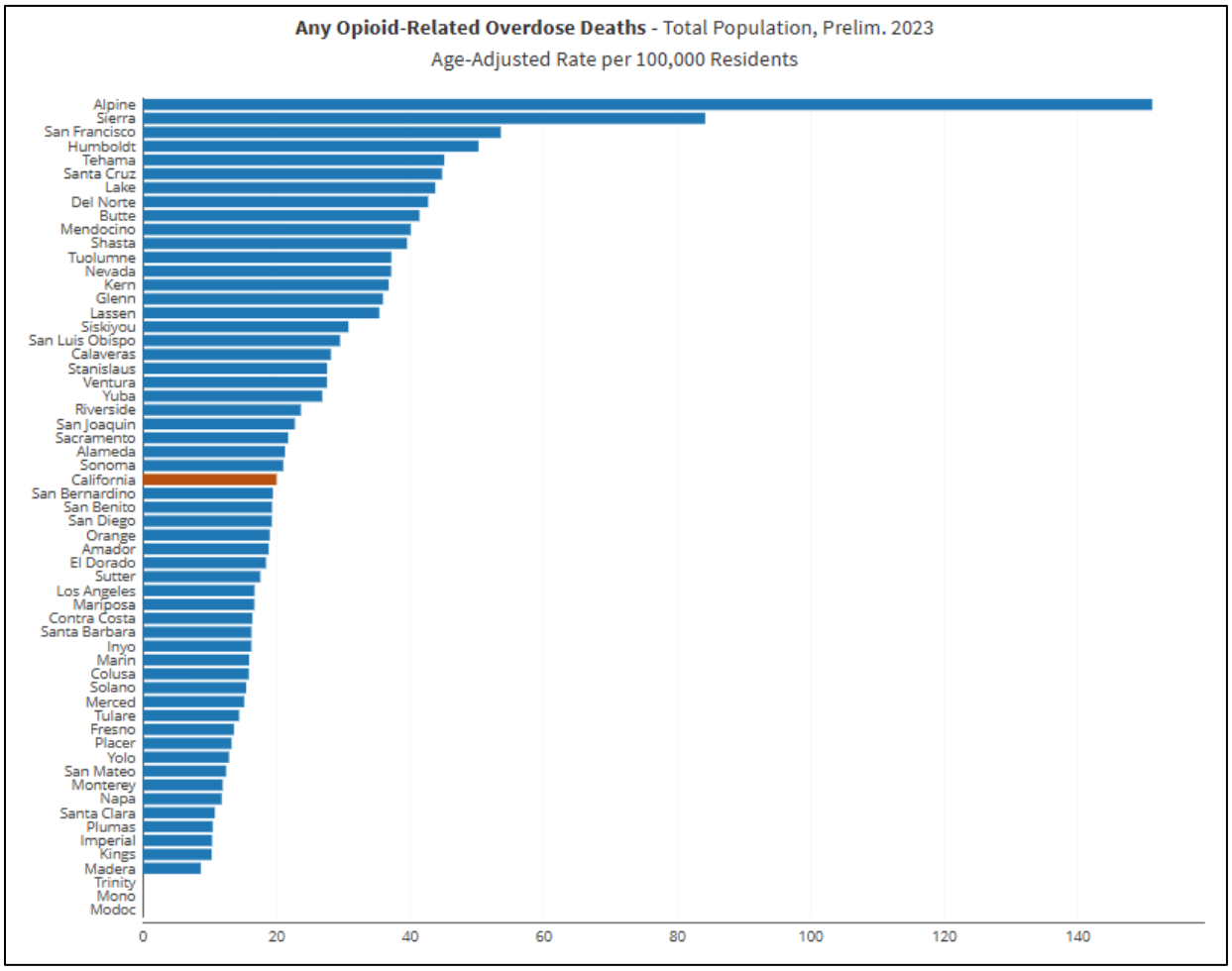
Overdose Data Statistics

The chart below shows the number of opioid overdose deaths per county in California, age-adjusted per 100,000 residents. Kern County reported 319 overdose deaths, resulting in an adjusted rate of 36.82, while the state average was 20.04. For context, the worst county in the state with the highest stable rate, San Francisco, had an adjusted rate of 53.6. Though the rate in Kern is 84% higher than the state average, it would proportionately account for 23 deaths per year in the study area and may be considered a smaller issue relative to the much higher death rates of other preventable health issues (319 deaths/906,883 County Pop X 64,166 residents in study area=22.6). The magnitude of the problem should be assessed locally since data is not available on the local scene and the cost is not only lives lost, but young lives lost, theft, violence, homelessness, sexually transmitted infections, etc.

If you look at the chart below, first you will notice extremely high rates in Alpine County. This county actually had a 2020 population of 1,204 residents, so any overdoses had a massive effect on the rates per 100,000 residents. The same logic would follow for Sierra County (3,236 residents). The second set of revelations were that

California on average was in the middle, San Francisco was at the top of the chart. Right near the upper quarter mark is where Kern County fits into the mix.

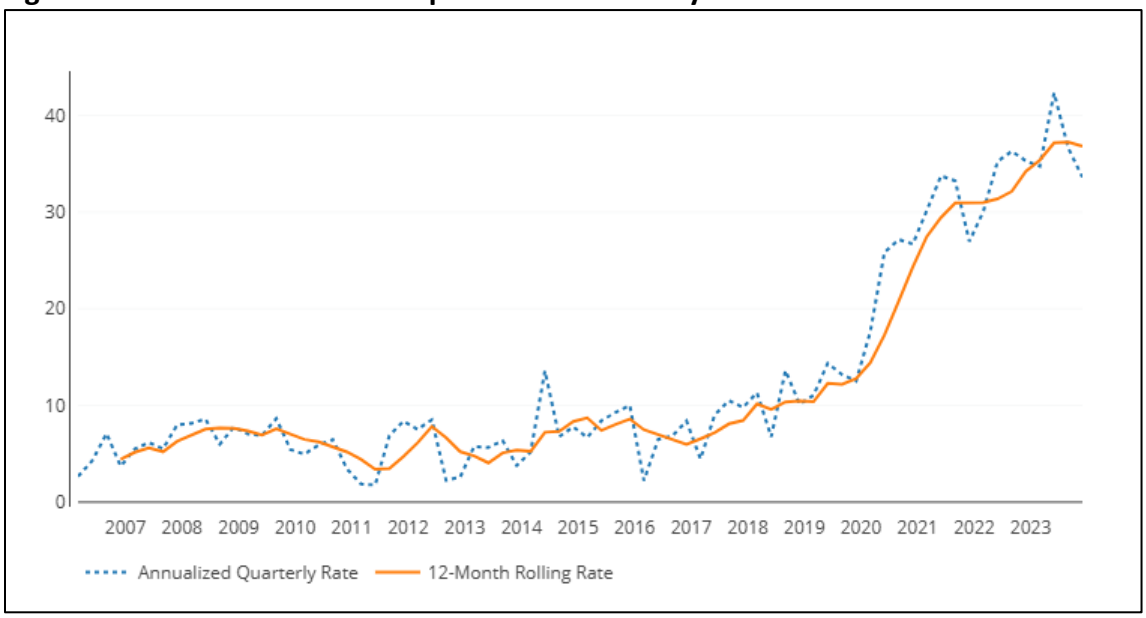
Figure 31: Overdose Deaths – All Opioids – California Counties



Source: California Department of Health. 2023.

Having noted that Kern County's rates were in the top quarter of the state, we looked at trends over time. Over the past fifteen years, the rolling rate of opioid overdose death rate in Kern County has quadrupled in Kern County, which is a significant concern warranting further consideration.

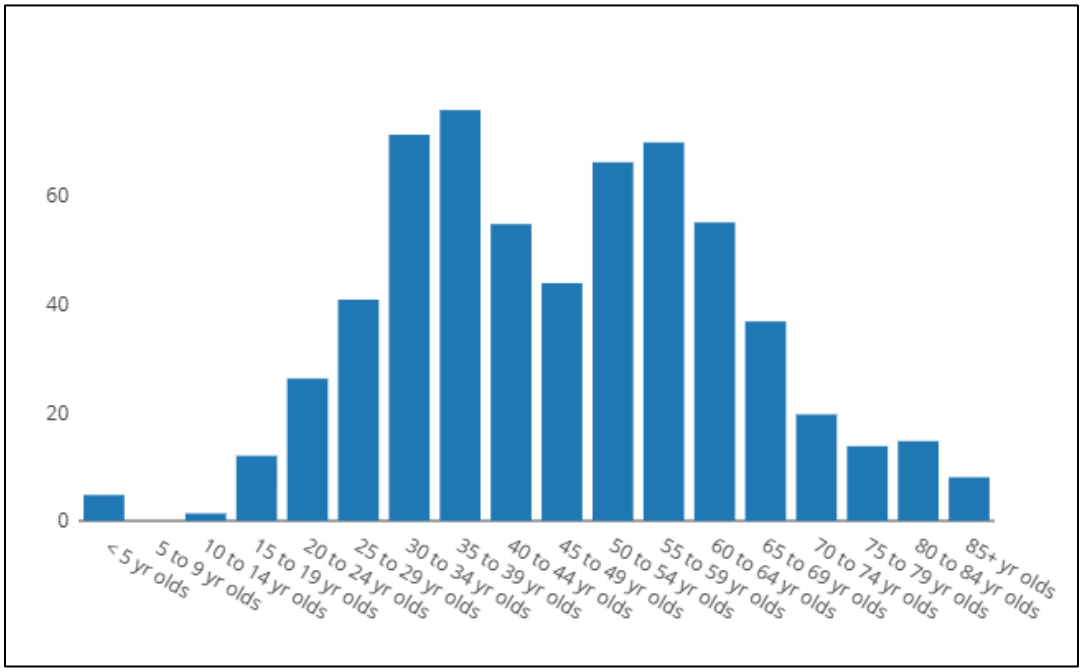
Figure 32: Overdose Rate – All Opioids – Kern County



Source: California Department of Health. 2023.

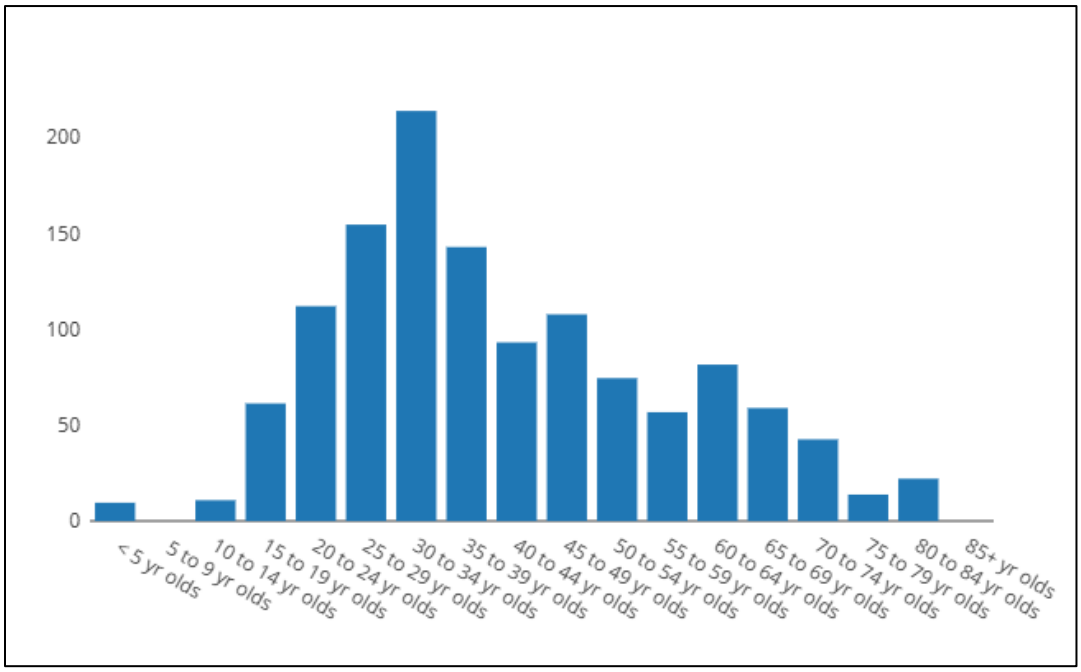
A deeper dive into this data revealed that overdose rates were particularly elevated among individuals aged 30 to 40, and surprisingly also among those aged 50 to 60. The following charts show that the majority of emergency department visits related to opioids were from the 30-35 age range.

Figure 33: Overdose Deaths – All Opioids – Kern County



Source: California Department of Health. 2023.

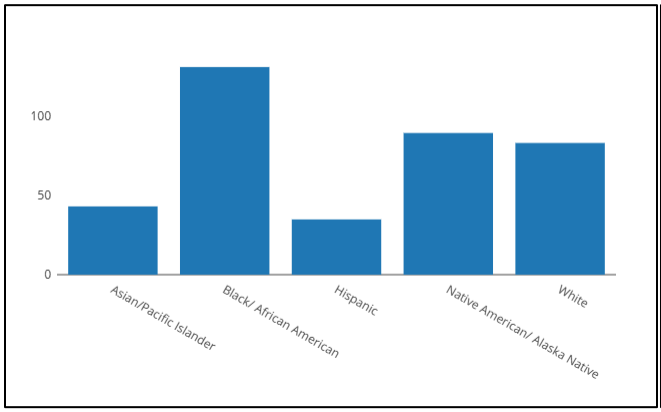
Figure 34: Emergency Department Visits – All Opioids – Kern County



Source: California Department of Health. 2023.

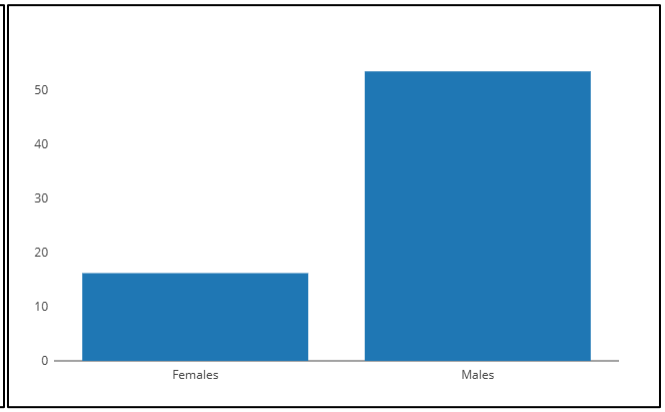
The racial and ethnic and sex breakdown also provided valuable insights. As expected, African American men showed the highest rates at 86.31 per 100,000 residents. Hispanic rates were much lower in comparison, less than half of those experienced by White and Native residents. These findings suggest that a targeted approach could be beneficial, focusing on African American men to promote cultural change and provide additional support, with the goal of reducing the overdose rate back to pre-covid levels.

Figure 35: Emergency Department Visits – All Opioids – By Race/Ethnicity – Kern County



Source: California Department of Health. 2023.

Figure 36: Emergency Department Visits – All Opioids – By Gender – Kern County

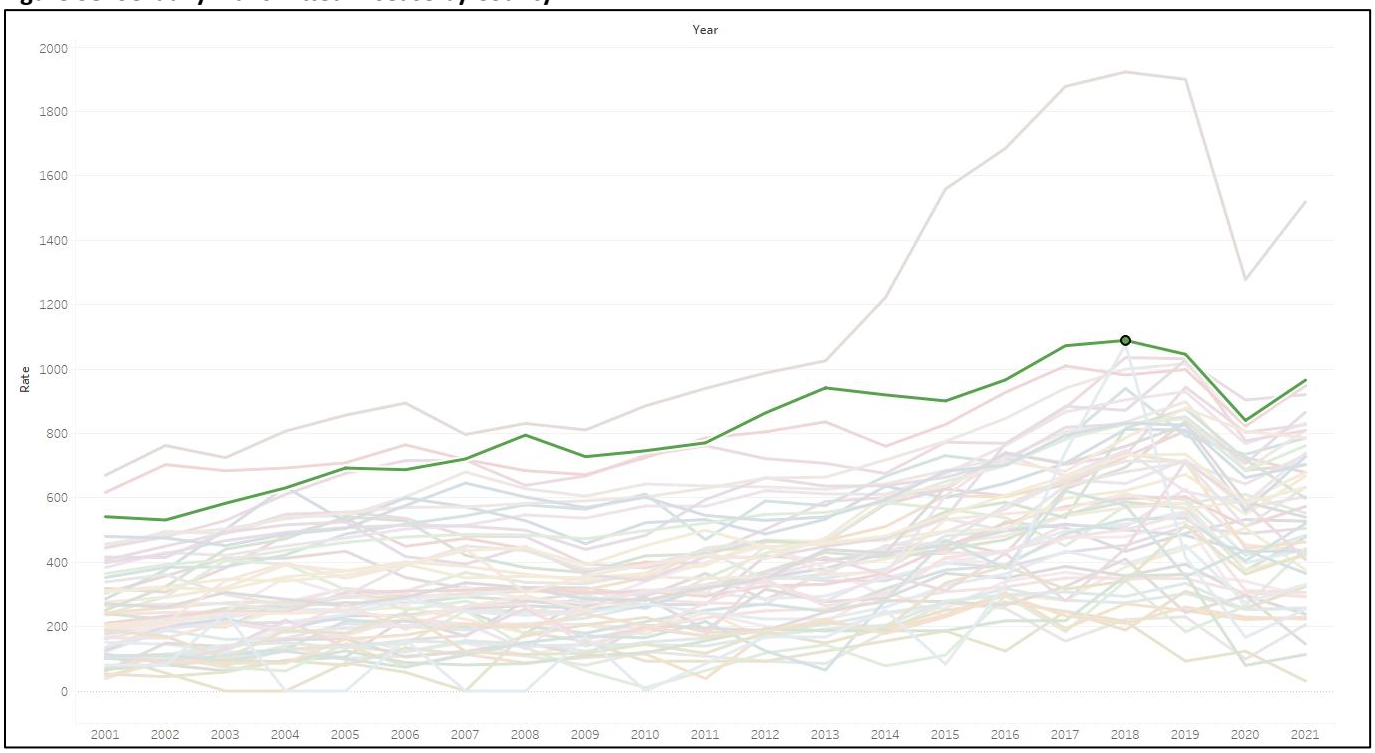


Source: California Department of Health. 2023.

Sexually Transmitted Diseases

Data from the California Department of Health showed us that Kern County as a whole suffers from a high rate of sexually transmitted diseases. Per capita, calculated at the total number of instances against the population for each county, it had a higher rate than nearly every other county in the state. Below, we see Kern County highlighted in green. This data accounts for incidence rates of chlamydia, gonorrhea, and early syphilis.

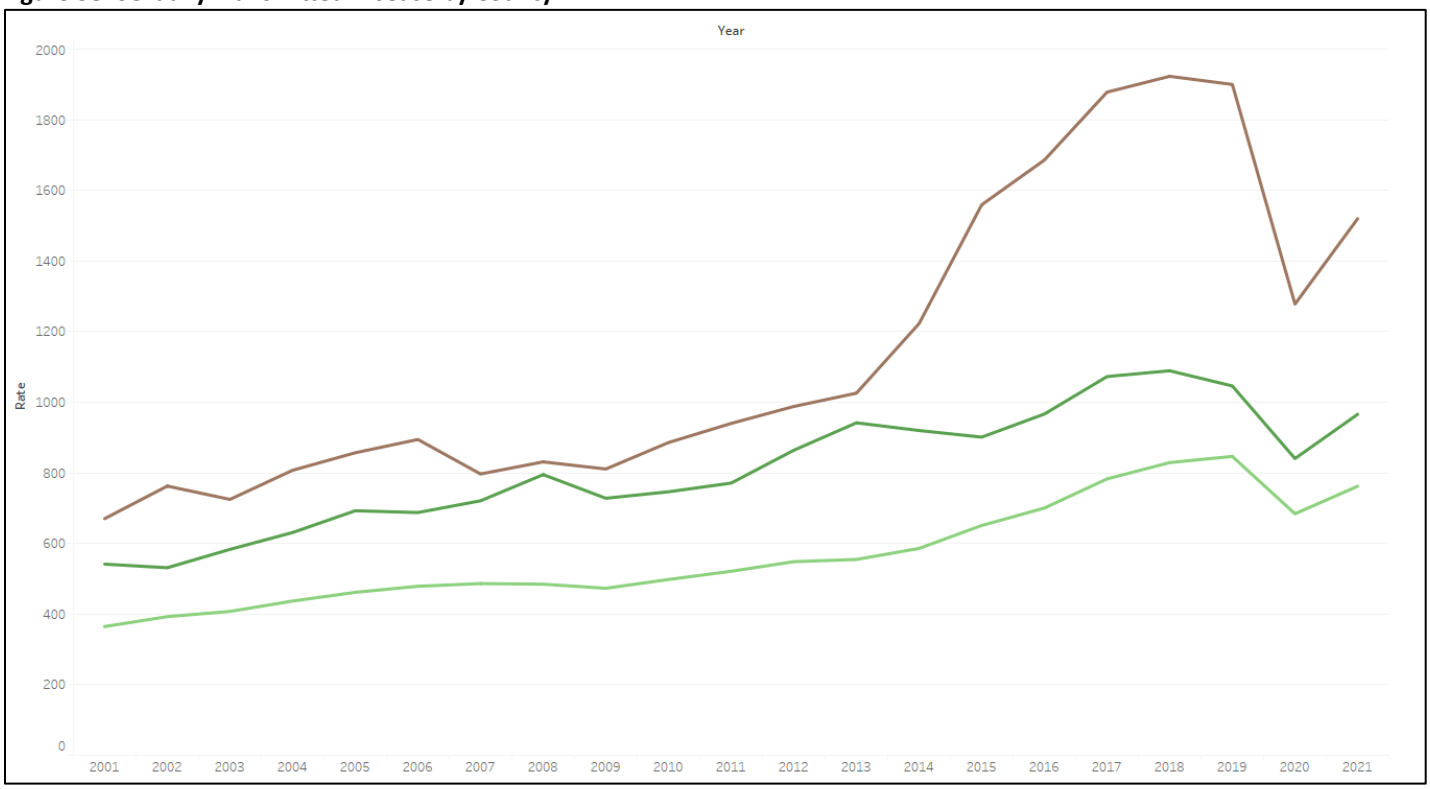
Figure 38: Sexually Transmitted Disease by County



Source: California Department of Health. 2023.

The second chart below, compares the rates between California (light green), Kern (dark green), and San Francisco County (brown). Kern rated second in the state for this rate, right behind San Francisco County. Given the variance in survey results below for sexual health, this should be an important aspect of any future health strategy.

Figure 38: Sexually Transmitted Disease by County



Source: California Department of Health. 2023.

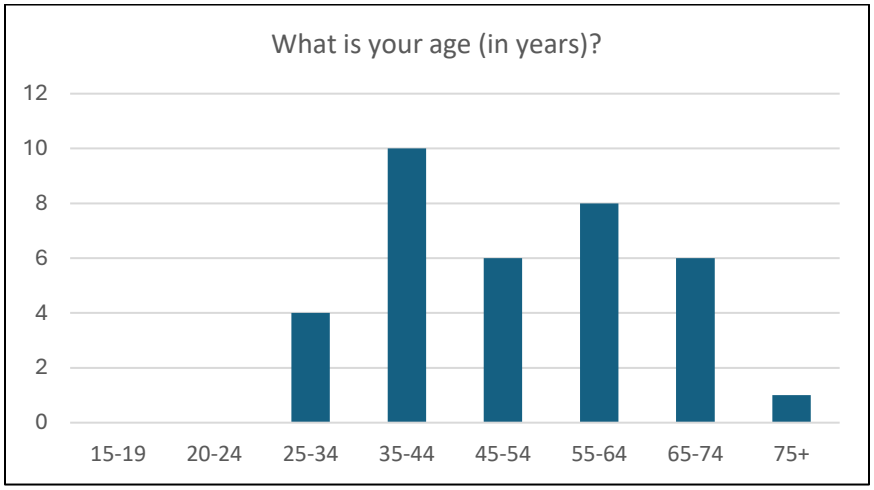
Survey Results

In conducting this 2024 EKHCD Community Health Needs Assessment, we aimed to assess the community's overall health experience, which included both data on experienced illnesses and causes of death, as well as perceptions that influence health struggles. By surveying community residents, we sought to identify the perceived health struggles, not captured in the public data, along with barriers to care, i.e., negative perceptions of healthcare facilities or lack of awareness about available resources.

A variety of data collection methods were implemented, with the results integrated into this report. Over the seven-week data collection period, approximately 500 surveys were distributed. In total, we received thirty-two community member surveys, and three provider surveys were received. The tables below summarize findings from the community survey respondents, all of which were from California City (Zip Code 93505).

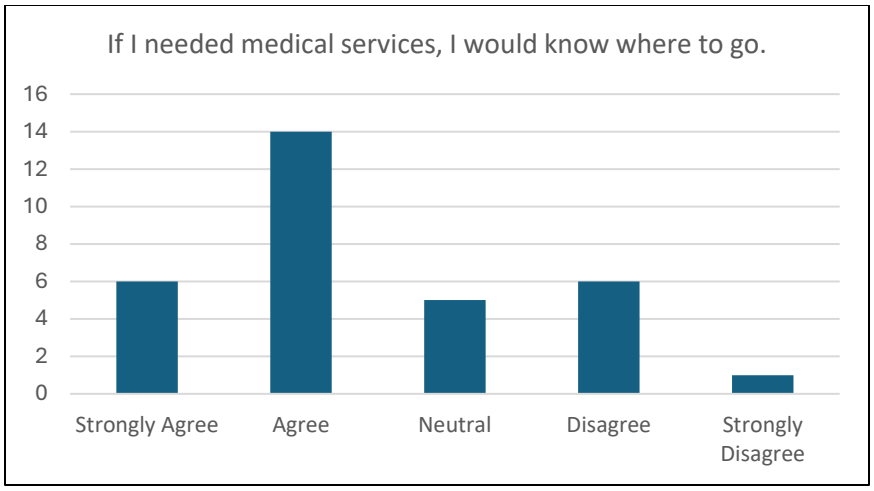
The response rate from local healthcare providers was limited, with only three providers participating in the survey. These providers identified a significant shortage of health and medical services, particularly for the uninsured and under-insured. They also emphasized the need for more educational and wellness programs to promote healthy living. Providers reported feeling well-equipped by their employers and were familiar with where to refer patients for addiction, sexual health, maternal, and elderly care.

The community response, though based on a small sample size, provided valuable insights. The majority of respondents were 35-44, followed by 55-64. Overall, the responses represented a variety of age groups.

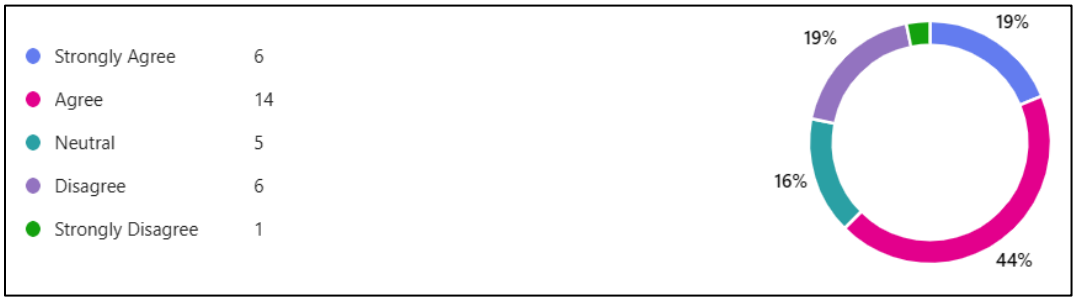


Source: HPSA Acumen, Community Survey.

Below, we see that 62.5% of respondents strongly agree or agree that they know where to go if they need medical services. This provides a clear pattern for this category, highlighting that 21% of respondents do not know where to find medical care.

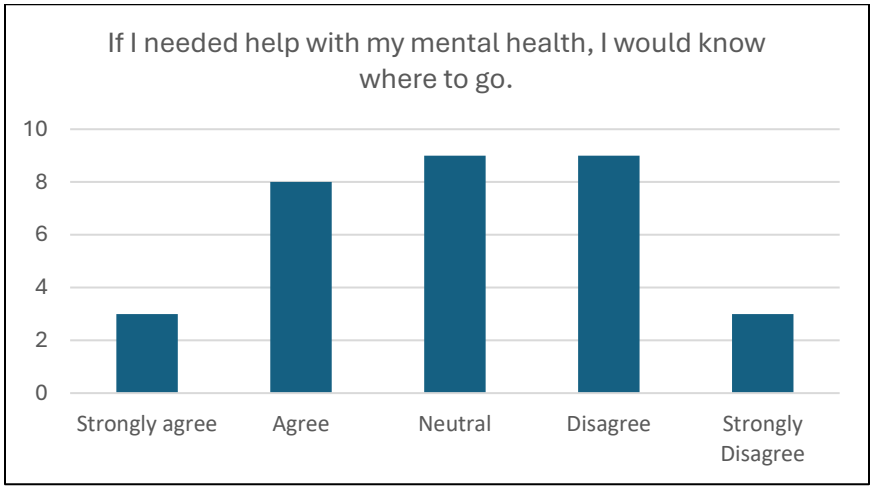


Source: HPSA Acumen, Community Survey.

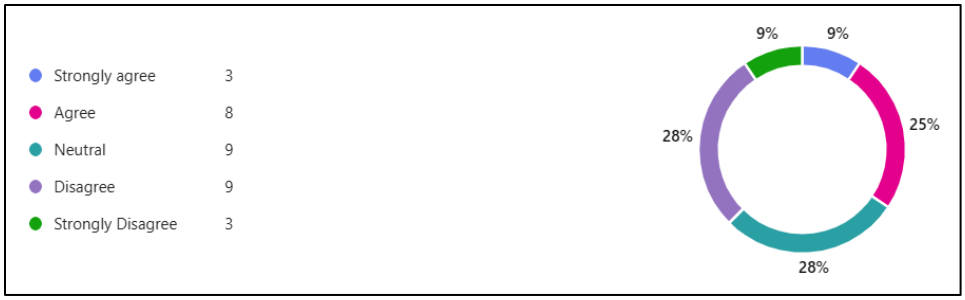


Source: HPSA Acumen, Community Survey.

Our survey results indicate that 34.3% of respondents strongly agree or agree that they know where to go if they were to need mental health services. Approximately 28% were neutral, and 37.5% disagreed or strongly disagreed. Over a third of the residents do not know where to find mental health support.

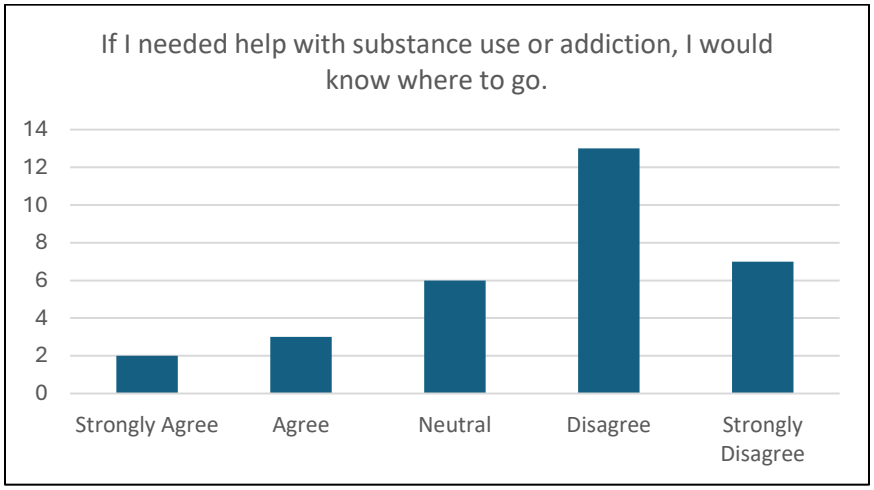


Source: HPSA Acumen, Community Survey.

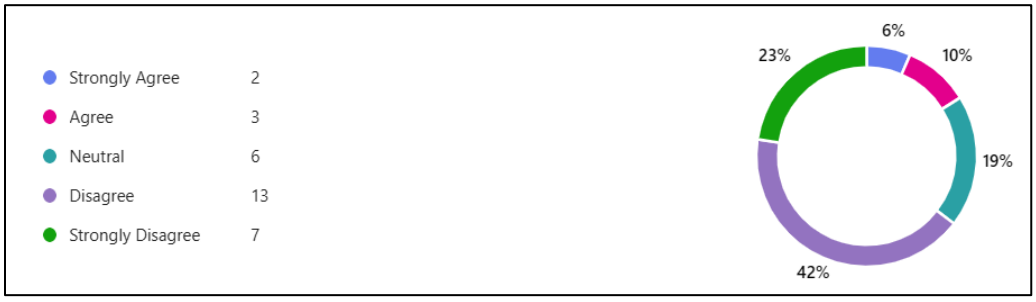


Source: HPSA Acumen, Community Survey.

For addiction/substance abuse services, only 16% of respondents strongly agree or agree that they know where to seek care. A significant 65% of respondents disagree or strongly disagree. This demonstrates that roughly two-thirds of the residents do not know where to find addiction support services.

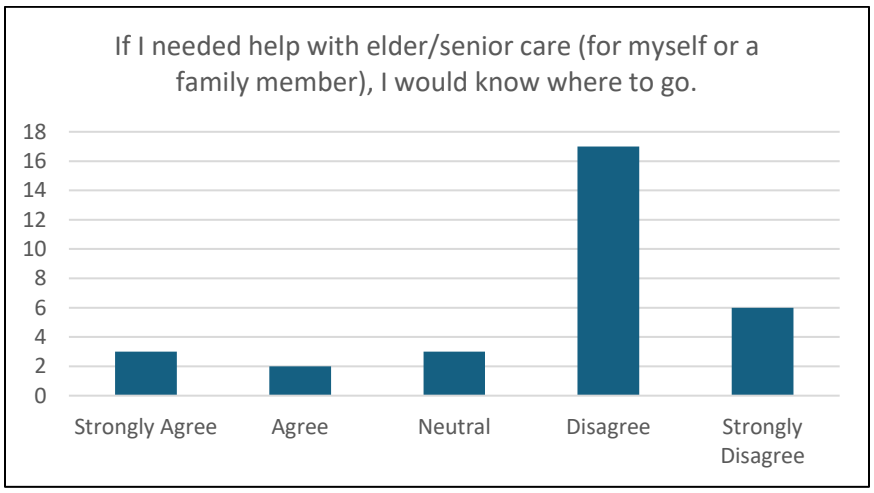


Source: HPSA Acumen, Community Survey.

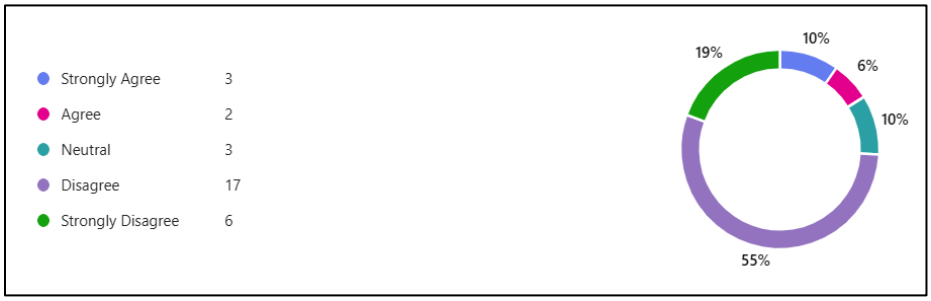


Source: HPSA Acumen, Community Survey.

Similarly, 16% of respondents strongly agree or agree they know where to find elder/senior care. Three-quarters of respondents did not know where to find senior care.

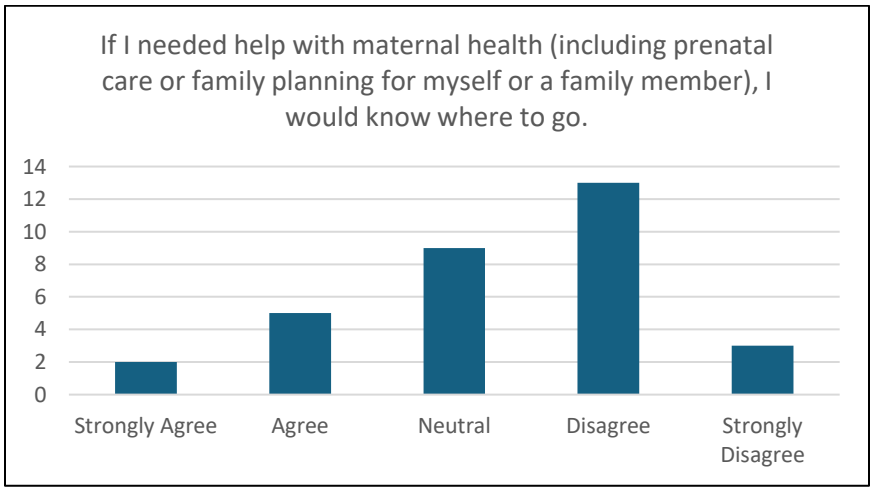


Source: HPSA Acumen, Community Survey.

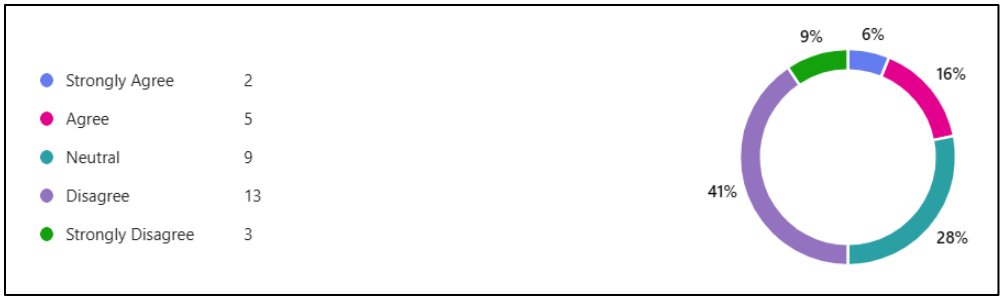


Source: HPSA Acumen, Community Survey.

For maternal healthcare, 21.9% of respondents strongly agree or agree that they know where to seek services. 50% disagree or strongly disagree. Strikingly, that half did not know where to find maternal health services.

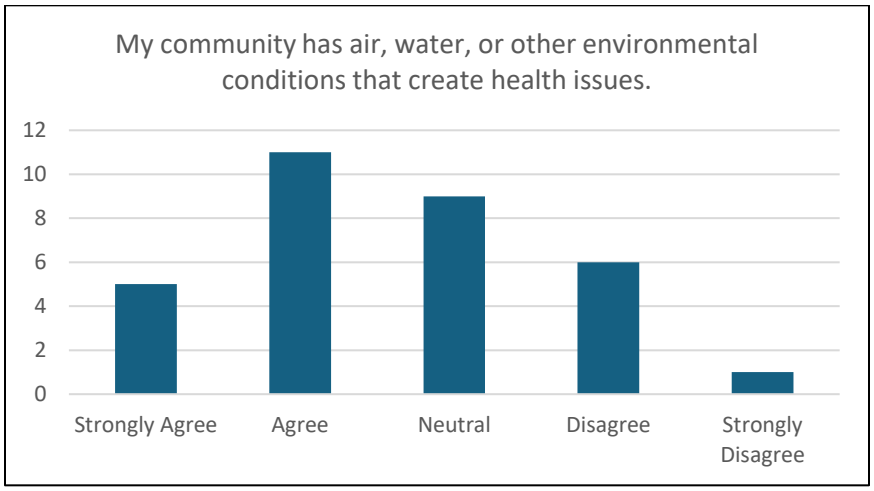


Source: HPSA Acumen, Community Survey.

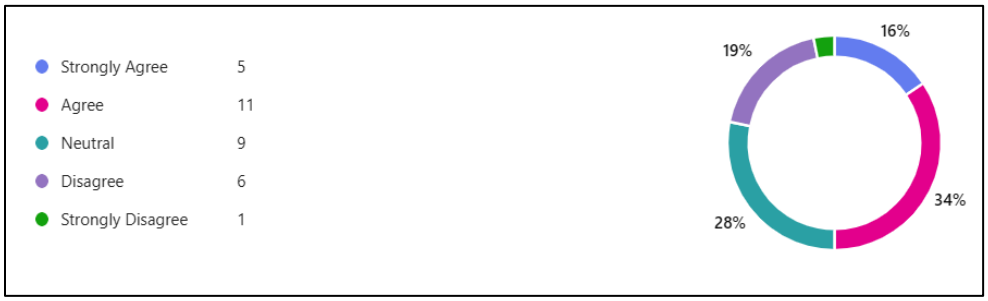


Source: HPSA Acumen, Community Survey.

The survey revealed that 50% of respondents believe that environmental factors are contributing to the health issues of the service area. Meanwhile, 28.1% were neutral, and 21.9% disagreed or strongly disagreed with this view. Healthcare providers also expressed neutrality regarding environmental health concerns, and the analysis did not pinpoint any specific environmental health issue. However, the perception of environmental impact remains prevalent among the community. Given that half of respondents identified environmental factors as a concern, further investigation is needed to explore and address this perception.

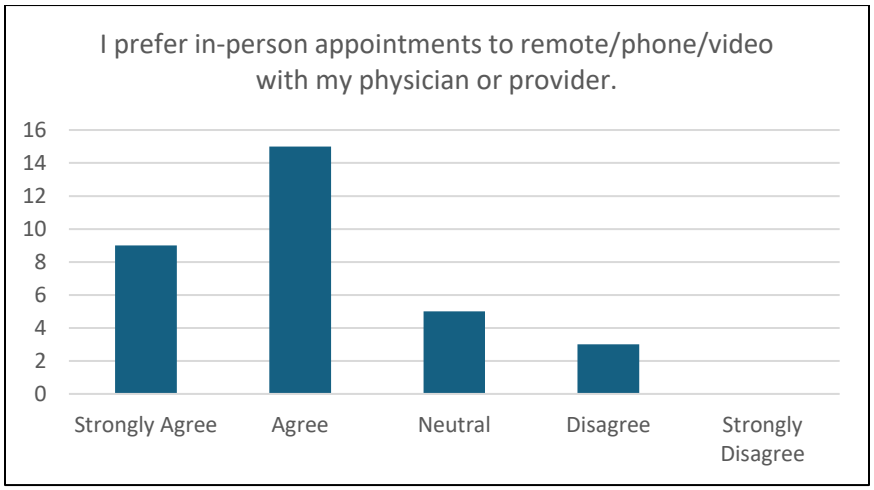


Source: HPSA Acumen, Community Survey.

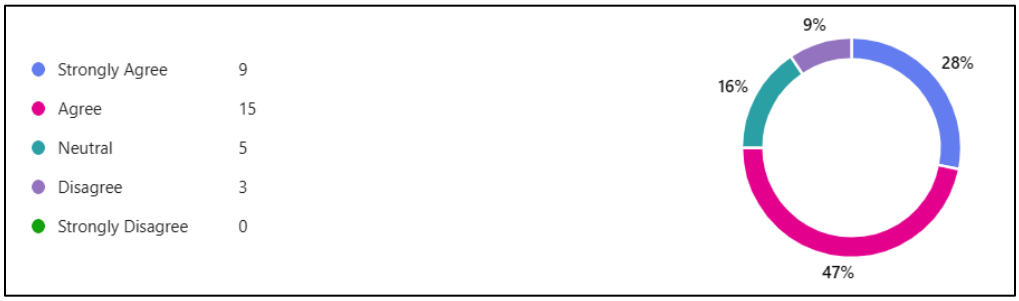


Source: HPSA Acumen, Community Survey.

When asked about their preference for in-person appointments, 75% of respondents strongly agree or agree. Notably, only 9.4% of respondents disagree, with none strongly disagreeing. The fact that three-quarters of respondents were open to virtual appointments sets the stage for non-local healthcare service solutions.

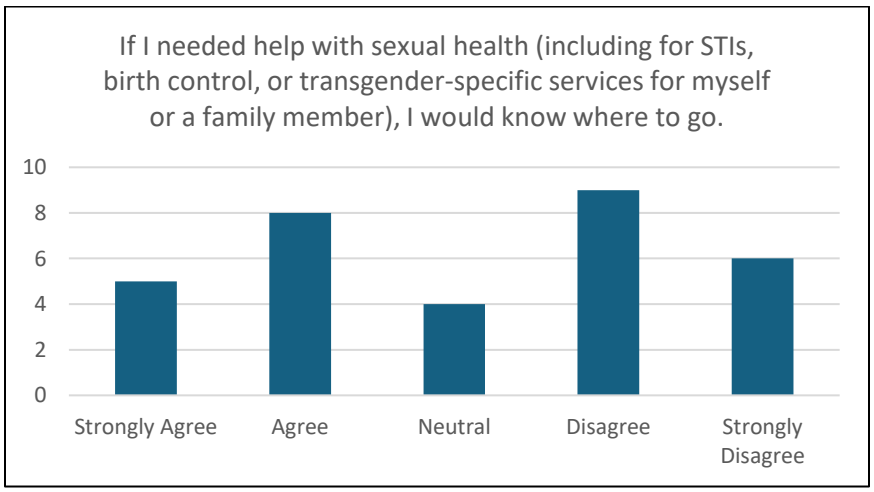


Source: HPSA Acumen, Community Survey.

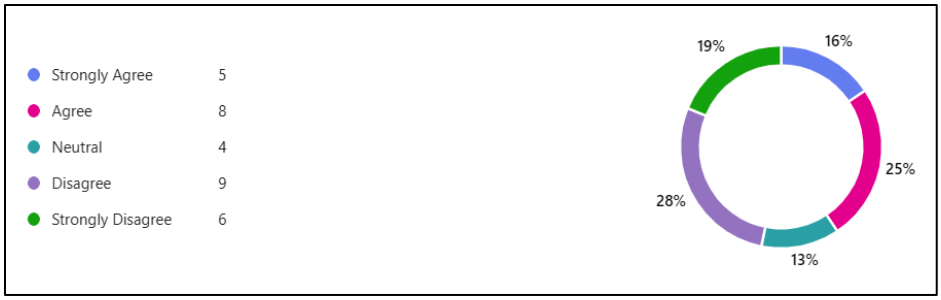


Source: HPSA Acumen, Community Survey.

When asked whether they know where to find help regarding sexual health, the results varied. Approximately 46.9% of respondents disagree or strongly disagree, while 40.6% of respondents agree or strongly agree. Given that the providers who responded to the survey knew where to direct patients, primary care providers could play a key role in bridging these knowledge gaps.

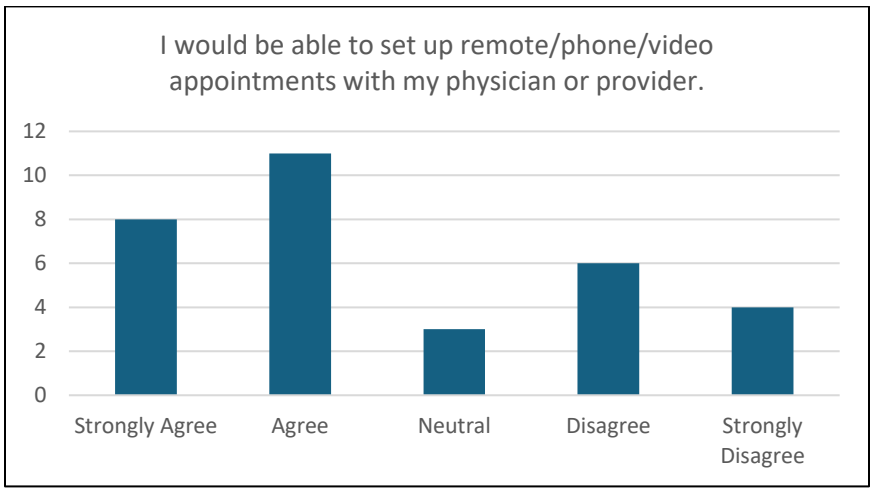


Source: HPSA Acumen, Community Survey.

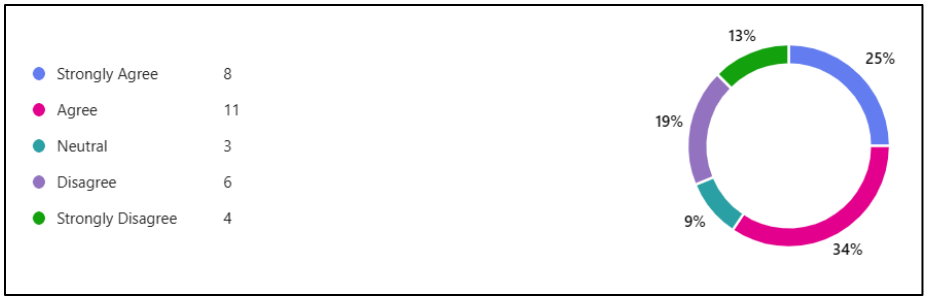


Source: HPSA Acumen, Community Survey.

While most respondents prefer in-person appointments, 59.4% of respondents strongly agree or agree that they were able to set up virtual or other alternative appointments.

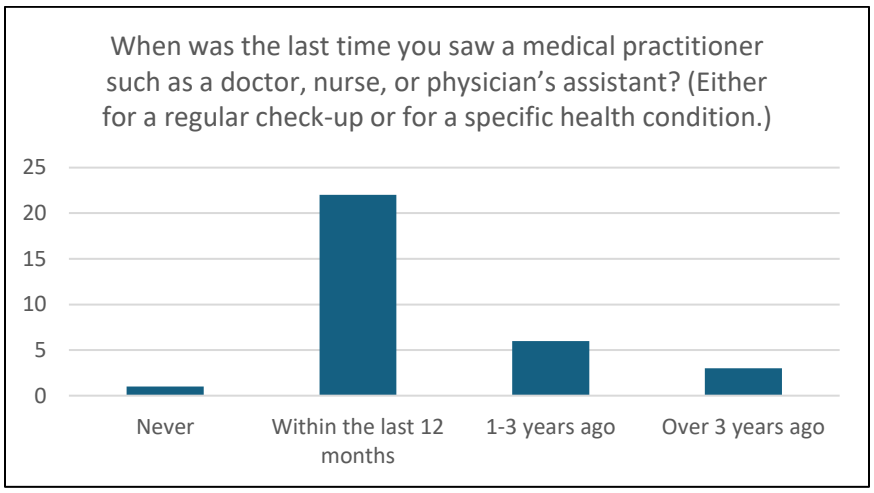


Source: HPSA Acumen, Community Survey.

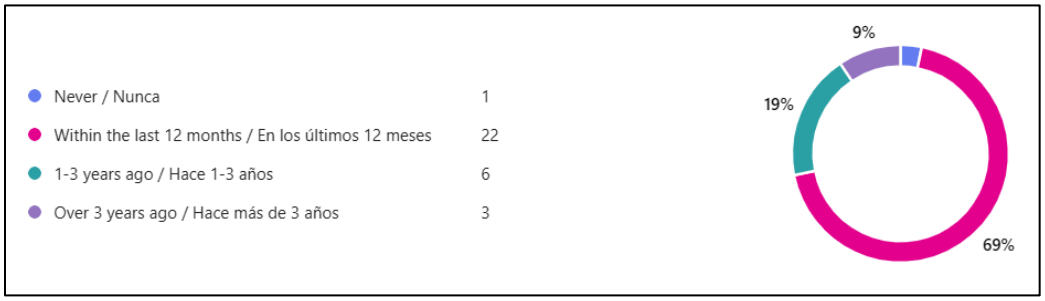


Source: HPSA Acumen, Community Survey.

Most respondents, approximately 69%, have seen a medical practitioner within the last year. That means around 30% have not seen a medical practitioner in the past year.

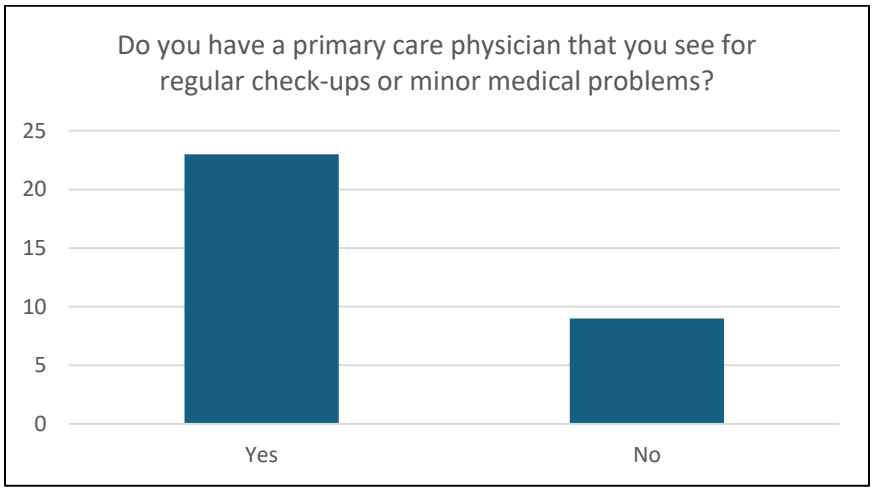


Source: HPSA Acumen, Community Survey.

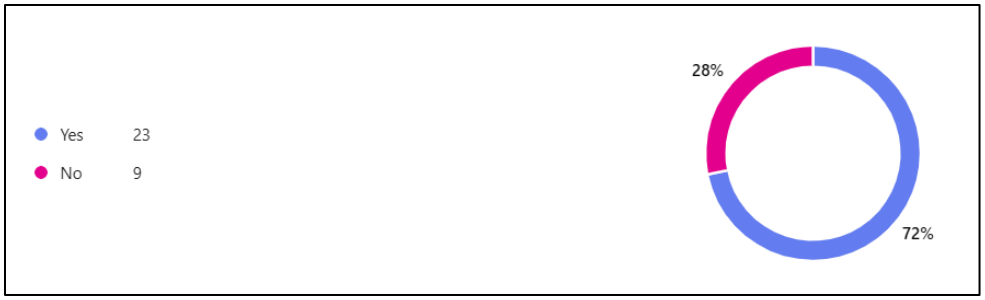


Source: HPSA Acumen, Community Survey.

Similarly, approximately 72% of respondents have a primary care physician that they regularly see for routine care. That means almost 30% do not have a primary care physician.



Source: HPSA Acumen, Community Survey.

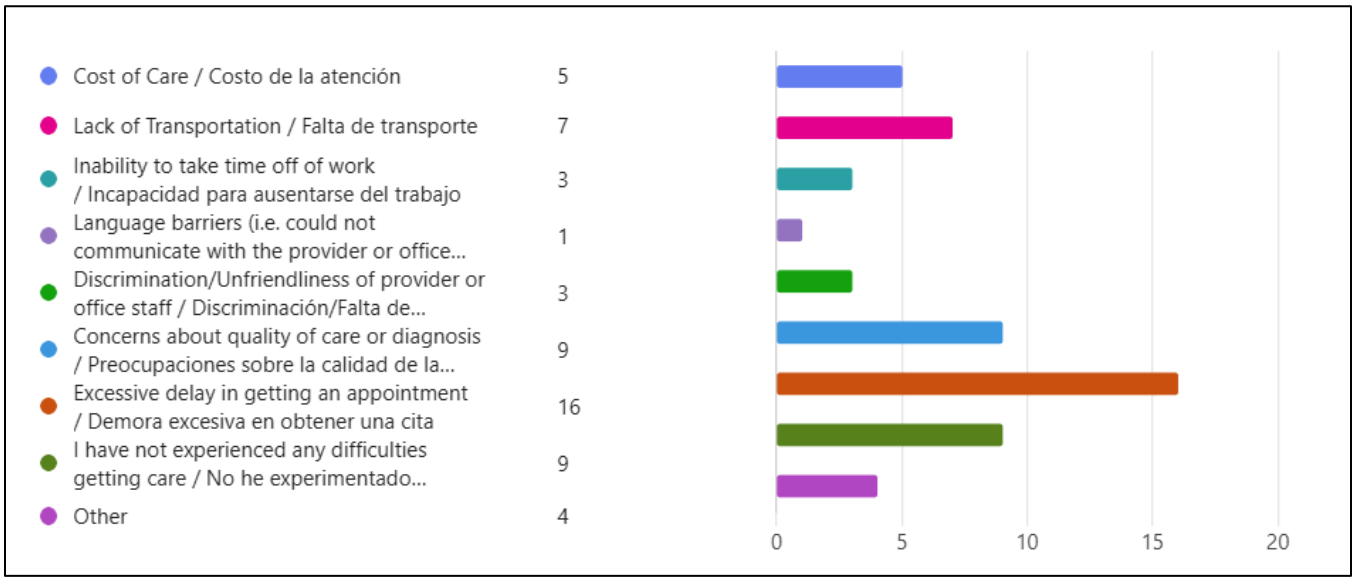


Source: HPSA Acumen, Community Survey.

Given these last two statistics: 30% have not seen a provider in a year and 30% have no primary care provider, helping residents find providers would make leaps on the path towards prevention.

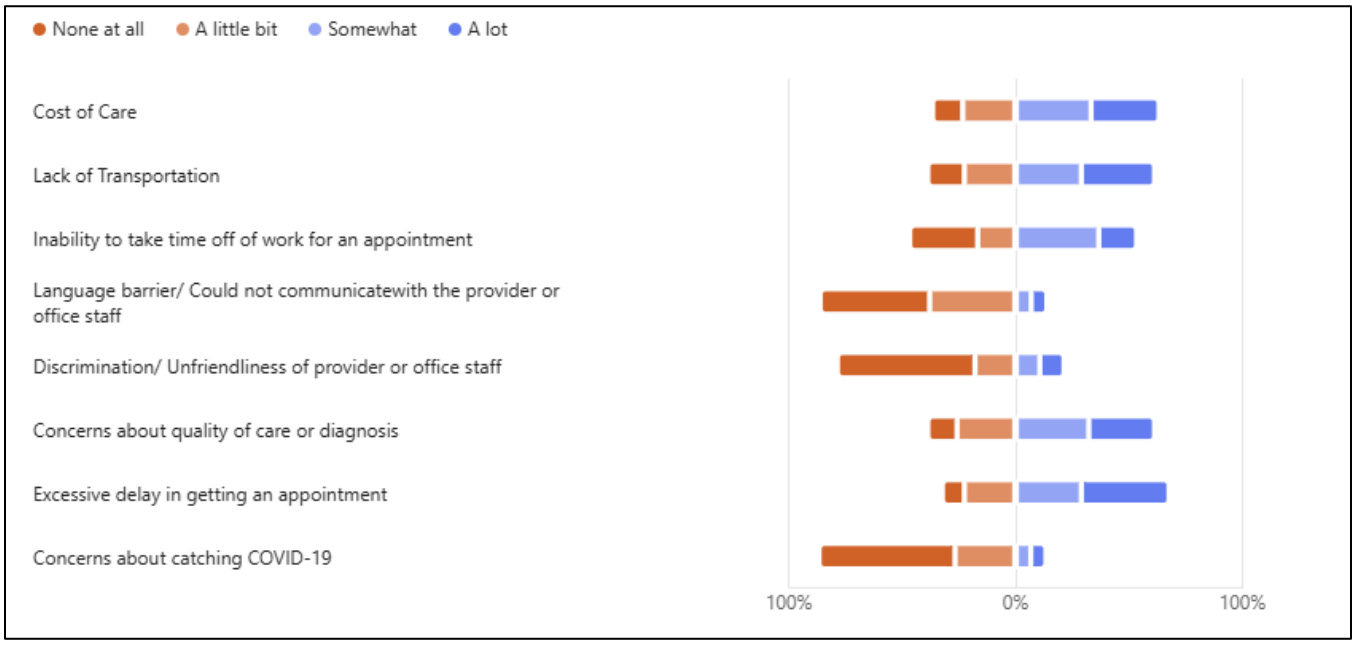
The following two tables present two different views of the key problems that create barriers to care. The first table assesses experientially the issues residents face in accessing medical care, while the second table evaluates the severity of these issues. In both cases, excessive wait times for appointments were shown as a clear indication of insufficient capacity of local healthcare services.

In the past 2 years, have any of these issues ever made it more difficult for you to get the medical care that you needed?



Source: HPSA Acumen, Community Survey.

In your experience, how much do the following barriers impact individuals accessing the care they need?



Source: HPSA Acumen, Community Survey.

The main barriers identified by respondents were the cost of care, lack of transportation, concerns about quality of care, and excessive delays in getting appointments. These barriers highlight the insufficient volume of local healthcare services and suggest systemic challenges that need to be addressed. The prolonged wait times are indicative of a limited healthcare capacity, which is further exacerbated by a growing distrust of the quality of care, likely due to inconsistent service delivery. Moreover, the high cost of care is exacerbated by the area's elevated poverty rates, which prevents many residents from accessing the care they need.

To address these critical barriers, it is recommended that efforts focus on increasing the volume of services available to the uninsured and underinsured populations, ensuring that more individuals have access to necessary medical care. This could include expanding transportation options to healthcare facilities, improving the quality of care through training and support for healthcare providers, and reducing wait times for appointments through increased staffing and resource allocation. Targeted outreach and education programs are essential to build trust in healthcare providers and ensure all residents are aware of available services, helping to move toward a more just healthcare system.

Summary of Healthcare Findings and Community Needs

The Study

Our study of the east fourth of the county, a region characterized by its high-desert terrain, has identified significant healthcare challenges and needs. The western part of the region contains several mountain health care districts with their own hospitals. Beyond the mountains, and into the desert, the population becomes very remote along with the healthcare services. The East Kern Health Care District is central to that east fourth of the county with no hospital but has a neighboring hospital in that same desert strip just to the north. This study included that entire desert strip and breaks down data into two parts: the central and southern section of East Kern Health Care District and to the north Ridgecrest which is not currently included in any planning district.

Demographic Picture

This summary highlights the critical socio-economic and health challenges faced by the population in the east fourth of Kern County, emphasizing the need for improved healthcare access and preventive care initiatives.

- **Population**:
  - East fourth of Kern County: ~64,000 residents
  - North (Ridgecrest): 27,000 residents
  - South (EKHCD+): 37,000 residents
  - EKHCD+: 1/3 Hispanic, one-third White (non-Hispanic), 17% Black
- **Socio-economic Challenges**: (numbers below are for EKHCD+)
  - High poverty rate: 22%
  - Low-income residents: 23%
  - High unemployment: 14%
  - Educational disparities: 13% have a bachelor's degree or higher
  - Food insecurity: 1/3 higher than state average
  - Lack of reliable transportation: 38% higher
  - High percentage receiving food stamps: 2/3 higher
  - Frequent utility shut-offs: 40% higher
- **Health Concerns**:
  - Obesity: Over 35% of the population
  - Diabetes: 14% of the population
  - Asthma: 11%
  - COPD: 11%
- **Key Causes of Death**:
  - Heart disease: 40% higher than state
  - Diabetes: 54% higher
  - Lung disease:70% higher
  - Liver disease and accidents: 76% higher than in the state
- **Violence and Accidents**:

    - Assault, suicide, and accidents are notable concerns
    - Accidents: 49% higher than state. 269% higher for men
    - Violence as a cause of death: 450% higher
- **Contributing Factors to Health Outcomes**:
    - Poor diet, smoking, and alcohol abuse
    - Hispanics: Relatively better health outcomes
    - Black and White populations: Significantly affected by lung disease, diabetes, and heart disease
- **Barriers to Healthcare Access**:
    - One-fifth unaware of where to find medical care
    - Over one-third unaware of mental health services
    - Approximately two-thirds are unaware of addiction support services
    - Three-quarters unaware of senior care services
    - 30% have not seen a healthcare provider in the past year
    - 30% do not have a primary care provider
- **Community Sentiments**:
    - Elevated disability rates
    - Significant mental and physical distress
    - Preventive measures concerning
    - Crime rates: California City: 25% higher than national average | Ridgecrest: 50% higher
    - Opioid crisis disproportionately affecting Black men
- **Potential Solutions**:
    - High openness to virtual appointments: Three-quarters of respondents
    - Addressing barriers such as cost, lack of transportation, quality concerns, and, especially, long wait times for routine medical visits.

Transformative Action: Paving the Path to Healthier Communities

The critical questions remain: What can be changed? What must be changed? And where are the immediate opportunities for improvement? The next stage of this community health initiative will explore these questions in depth, using this report as a foundation to develop targeted solutions.

We flagged key health issues such as diabetes, heart disease, liver conditions, lung problems, and accidents. Among these, lung conditions, diabetes, and heart disease are prevalent in Ridgecrest as well. Ridgecrest has made strides in developing new outreach initiatives to grow a healthier community and, in the case of this overlap, may have opportunities to drive services into their southern market.

Many of these health conditions (obesity, diabetes, lung, liver, heart, etc.) can potentially be alleviated, or at least mitigated, with proper diet, lifestyle changes, and healthcare safety nets. There is a clear need for primary care services, initiatives to boost awareness about medical and mental services, and initiatives to bring about a change in the food culture.

It is particularly important to reach the third of the population that does not have a primary care provider. Excessive wait times for routine medical visits are a more significant barrier than the cost of care or transportation. The clear need for additional services, especially for those below the low-income line, is evident.

Recommendations to address these issues include:

1. Expanding services to the uninsured and underinsured populations. Consider establishing sites that have federal incentives to boost care for the uninsured and underinsured. Both FQHCs and RHCs receive enhanced payments for seeing Medicaid patients which would help cover the financial burden of heavy Medicaid and uninsured patient loads. This would also open the door for student loan repayment for nurses, advanced practitioners, and physicians at those locations – a valuable recruitment incentive. EKHCD+ already has an FQHC present, however it is a small satellite office location of an FQHC from a southern county, but their footprint could grow to approach this unmet need. Some FQHCs are the size of hospitals. Regardless, the focus should be to develop a general platform of services locally, even if the community needs to supplement with telehealth from outside the area. Leave specialty services for the trauma centers but work towards a sustainable platform of primary care locally.
2. Develop a community initiative to address food culture and lifestyle. The obesity and diabetes rates are affecting so many of the other morbidities and mortalities. Thirty years ago, this was not the standard, and just because obesity and diabetes are rampant across America does not mean it is normal. The initiative can be customized to the community and based on the skill set of the community stakeholders. Here are a few ideas: cooking classes in community centers, programs to promote healthy eating and cooking in schools, and fitness initiatives like bike paths, swimming pools, or walking groups. Ultimately, you need a cultural shift that aligns with your climate conditions.
3. Another type of initiative could be with STI awareness or support services. Kern County has the high rates of STIs, second only to San Francisco, placing in the top decile for such conditions. This underscores the need to boost awareness of services for chlamydia, gonorrhea, and early syphilis.
4. As you develop services, run an initiative to find every resident a primary care provider.
5. Work with Ridgecrest to address some of the shared problems. It may be possible for them to roll out initiatives in both communities.

Addressing these issues is essential to improving access to care and overall health outcomes for the residents of East Kern Health Care District and the high desert of Kern County. By implementing these solutions, we can pave the way toward a healthier future for all residents.

"He who has health has hope; and he who has hope, has everything." — Thomas Carlyle