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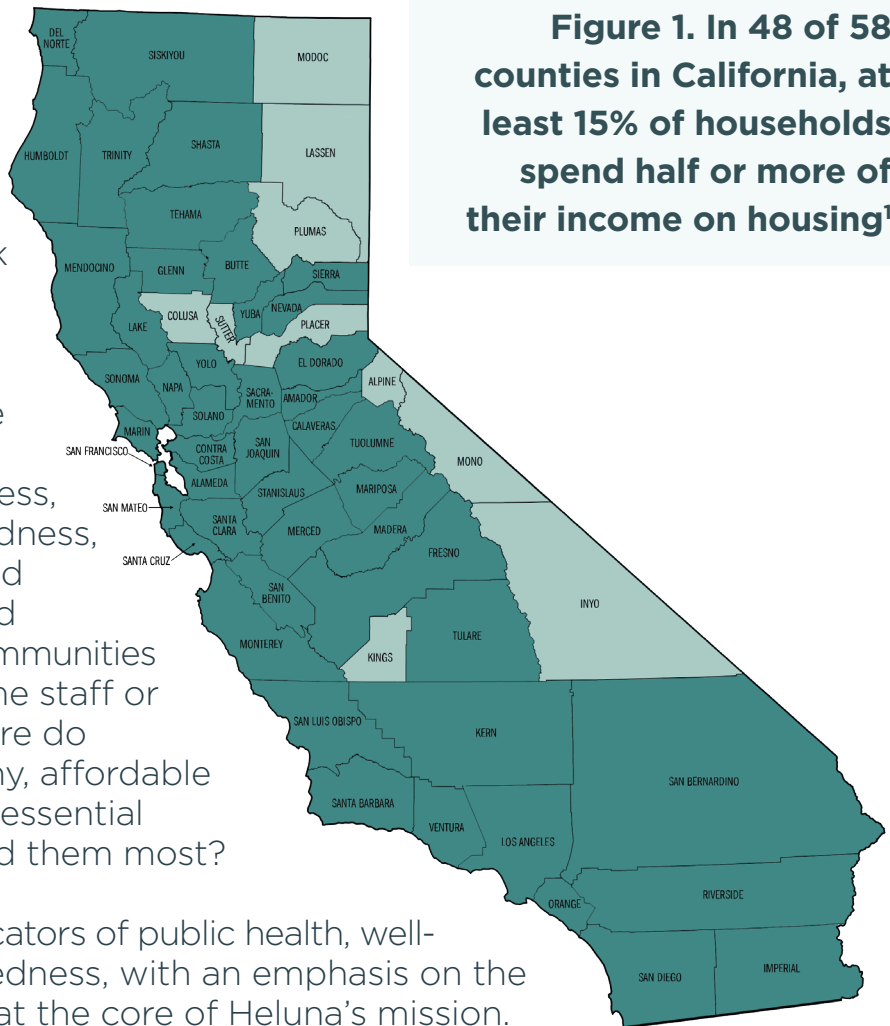
THE IMPACT OF HOUSING COST AND QUALITY ON OUTBREAK PREPAREDNESS

More than three years on since the outbreak of COVID-19, community leaders and public health officials continue to learn critical lessons about what we did right and what we could have done better.

While effective federal policy remains essential, it is the work of our local communities—nurses and doctors, along with teachers, social workers, and parents—that will stand on the frontlines of the next outbreak. Responding to future outbreaks requires community resilience: not only robust medical capabilities, but also access to preventive care, strong networks of social trust, and safe shelter.

As the first tool of its kind to assess health vulnerability at the local level, Heluna Health’s inaugural Community Outbreak Preparedness Index (COPI) examines a wide range of measures across California’s 58 counties. The measures are grouped into four domains: Healthcare System Preparedness, Public Health System Preparedness, Access to Health Insurance and Social Safety Net Services, and Community Factors. Which communities face shortages of nursing home staff or primary care physicians? Where do families struggle to find healthy, affordable food? How can leaders direct essential services to residents who need them most?

These are among 32 COPI indicators of public health, well-being and emergency preparedness, with an emphasis on the social determinants of health at the core of Heluna’s mission.

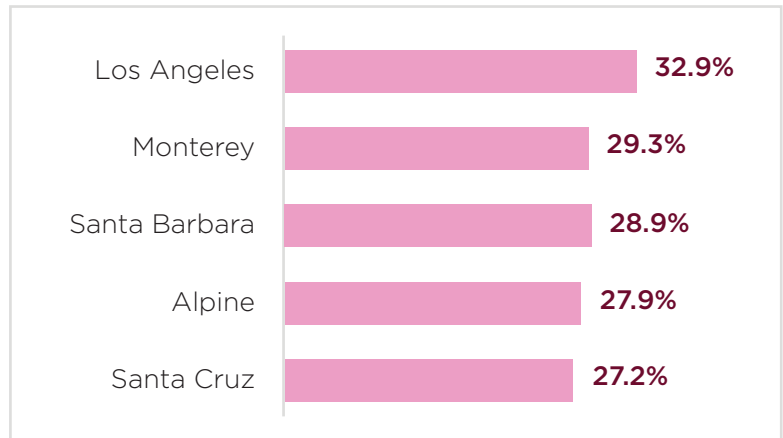




California's Housing Crisis

Of the many indicators included in COPI, perhaps none so greatly occupies Americans' attention as the crisis of housing costs. For Californians especially, the lack of affordable access to high-quality housing has become endemic. Far too many families struggle to pay for basic housing or face poor living conditions.

Figure 2. The five counties with the greatest share of households facing one or more core housing problems: overcrowding, high costs, lack of kitchen facilities or lack of plumbing facilities



The most obvious consequences are financial strain and increased homelessness, but the crisis also takes a profound toll on the wellness of California families, and their preparedness for outbreaks and other emergencies. Housing underlies almost every aspect of well-being: from physical to mental health, as well as access to healthcare and exposure to harmful toxins.

COPI includes two direct measures of housing in California—Housing Quality and Housing Affordability—to assess how these issues now affect outbreak preparedness across the state.

Housing Quality

Low-quality housing, including overcrowded residences and those with a lack of plumbing, can increase the risks of disease transmission. In a November 2020 study, researchers found that across 3,135 U.S. counties, “with each 5% increase in households with poor housing conditions, there was a 50% higher risk of COVID-19 incidence and a 42% higher risk of COVID-19 mortality.”²

The authors accounted for factors including population density, comorbidities and socioeconomic status. The prevalence of mold, pests, and inadequate ventilation can also contribute to respiratory illnesses, such as asthma and COPD, making the public more susceptible to infectious diseases and impeding recovery. And adequate kitchens are essential for good nutrition.





Incorporating data from the County Health Rankings and Roadmaps and the U.S. Department of Housing and Urban Development (HUD), COPI shows the percentage of California households in each county facing at least one of several core housing problems: overcrowding, high costs, lack of kitchen facilities, and lack of plumbing facilities.

Los Angeles County tops the list, with 33% of households facing such challenges, followed by Monterey (29%), Santa Barbara (29%), Alpine (28%) and Santa Cruz (27%).

In 50 of California’s 58 counties, at least 20% of households faced one of these four issues. In 15 counties, the share is 25% or more. 13 of the state’s most populous 15 counties are in the bottom half of Housing Quality.

Housing Affordability

Even when families have access to high-quality housing, millions of Californians struggle to make their monthly rent or mortgage payments. Families facing high housing costs have less to spend on their own care. They may be forced to work through illnesses, and to treat essential preventive care as a luxury.

Including data from the County Health Rankings and Roadmaps and the American Community Survey, COPI shows the percentage of California households in each county that spend more than 50% of their household income on housing. Los Angeles County again ranks lowest in the state on housing affordability, with about 24% of households spending near half of their income on housing.

Figure 3. Percentages of residents facing at least one core housing challenge in California’s 15 most populous counties

	County	Housing Affordability [†]	Housing Quality [†]
1.	Los Angeles	23.8%	32.9%
2.	San Diego	20.4%	25.0%
3.	Orange	19.7%	26.8%
4.	Riverside	19.9%	25.4%
5.	San Bernardino	18.9%	26.3%
6.	Santa Clara	16.1%	22.9%
7.	Alameda	17.1%	23.5%
8.	Sacramento	17.9%	22.1%
9.	Contra Costa	16.5%	20.5%
10.	Fresno	19.5%	26.8%
11.	Kern	17.4%	24.3%
12.	San Francisco	16.1%	23.9%
13.	Ventura	18.1%	23.3%
14.	San Mateo	17.4%	23.5%
15.	San Joaquin	18.1%	24.5%
Average of all CA counties		17.3%	22.5%

[†]Housing Affordability (inverted) measures the share of a county’s households spending half or more of their income on housing. Housing Quality (inverted) measures the share of households facing at least one of four core housing problems: overcrowding, high costs, lack of kitchen facilities, and lack of plumbing facilities. See the full technical report [here](#) on the COPI site.





In 48 of California's 58 counties, at least 15% of households spend half or more of their income on housing.

The least affordable counties on this measure includes most of the state's largest, including Los Angeles, San Diego, Orange, Riverside, San Bernardino, Sacramento, Fresno, Ventura, Kern, San Mateo and San Joaquin.

Populous counties with particularly concerning Housing Affordability data include San Diego (20%), Riverside (20%), Orange (20%), San Bernardino (19%) and Sacramento (18%).

Even the state's best-performing counties are home to substantial numbers of rent-burdened families. In only one county (Mono) do fewer than 10% of households spend more than half of their income on housing.

While these numbers are worrying enough in themselves, they tend to understate the magnitude of California's housing crisis. HUD considers housing to be affordable when it costs 30% or less of a household's income—meaning that many more families across the state, particularly in large urban areas, face financial strains affecting their broader healthcare and outbreak preparedness.

Looking Ahead

Preparing California for its next emergency is a highly complex task, encompassing more than just medical capabilities. Making high-quality affordable housing available to every Californian is an essential step to building a healthier state, in which communities are prepared to deal with whatever health challenges lie ahead.

In future COPI Data Briefs, Heluna Health will explore other elements of community-level outbreak preparedness, such as food insecurity, social trust, nursing home quality, and care capacity in rural areas.

1. Housing Affordability is a measure of access to affordable housing. This indicator, here inverted from the COPI Technical Report, shows the percentage of households that spend more than 50% of their household income on housing. The underlying source is the County Health Rankings 2021 (based on American Community Survey 5-Year Data, 2019).

2. Ahmad K, Erqou S, Shah N, Nazir U, Morrison AR, Choudhary G, Wu WC. Association of poor housing conditions with COVID-19 incidence and mortality across US counties. PLoS One. 2020 Nov 2;15(11):e0241327

