



Lake County Wellness Roadmap

**A Framework for Taking Action
to Create a Vibrant, Thriving, and
Resilient Community**

June 2017





VISION STATEMENT

The Wellness Roadmap lays out an **encompassing and mobilizing framework** to align purpose, priorities, partnership, policy and measurable action to **increase positive health outcomes** in Lake County.

Acknowledgments:

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**VIBRANT
THRIVING
RESILIENT**



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Executive Summary

Life in Lake County means being part of a strong community. It's having easy access to clean air, wide open spaces, and a friendly environment to call home. Yet, the wellness profile of the county is continuously ranked in the bottom of California counties for both health outcomes and life expectancy. Considering all the qualities that make Lake County a remarkable place to live, it's evident that residents across all communities and age groups are not currently meeting their full wellness potential.

The Wellness Roadmap is a framework for shifting Lake County's challenging health profile toward positive outcomes. It recognizes that individual and community "wellness" is a broad umbrella that covers all aspects of health and well-being, including physical, social, emotional and spiritual aspects of life. This is not an endeavor to move up on a ranking scale, it's to mobilize actions to result in people realizing their highest quality of life. As such, the Roadmap acts as a compass, pointing toward a more vibrant, thriving and resilient community.

A path for achieving this vision is found in the document that follows. It starts with decoding the county statistics and ends with a platform for mobilization. Sections include:

- ✓ **Lake County's Current Health Status:** Learn about the County Health Rankings assessment and the data behind the ranking.
- ✓ **The Roadmap Model for Improving Health Outcomes:** Understand the methodology and strategies used by the Wellness Roadmap to organize our health needs into the Impacts Areas.
- ✓ **Impact Areas for Partnership and Focus:** Dig into the details of each health measure and the opportunities for change.
- ✓ **Next Steps for Stakeholders:** Learn about collaborative action planning and get engaged in the process.

In all, the Roadmap is a springboard for unprecedented participation and a call-to-action for changes to take root. Every member of the community is called upon to contribute to this effort. From the public to private sectors, community organizations to citizens, it will take collective commitment and collaboration. Let's move forward together.



The Roadmap is a springboard for unprecedented participation and a call-to-action for changes to take root.

Lake County's Health Status

UNDERSTANDING THE COUNTY HEALTH RANKING

The *County Health Rankings* assessment provides an annual snapshot of health on a county level across the nation. Within each state, county data is compared to provide a statewide ranking. In California, 57 out of 58 counties currently participate in the ranking (Alpine County does not have enough data to be ranked). For the most recent ranking in 2017, Lake County's overall health outcomes placed 56 out of 57. As shown in the chart to the right, Lake County has been in the bottom five of California counties for overall health outcomes since the first statewide ranking in 2010.

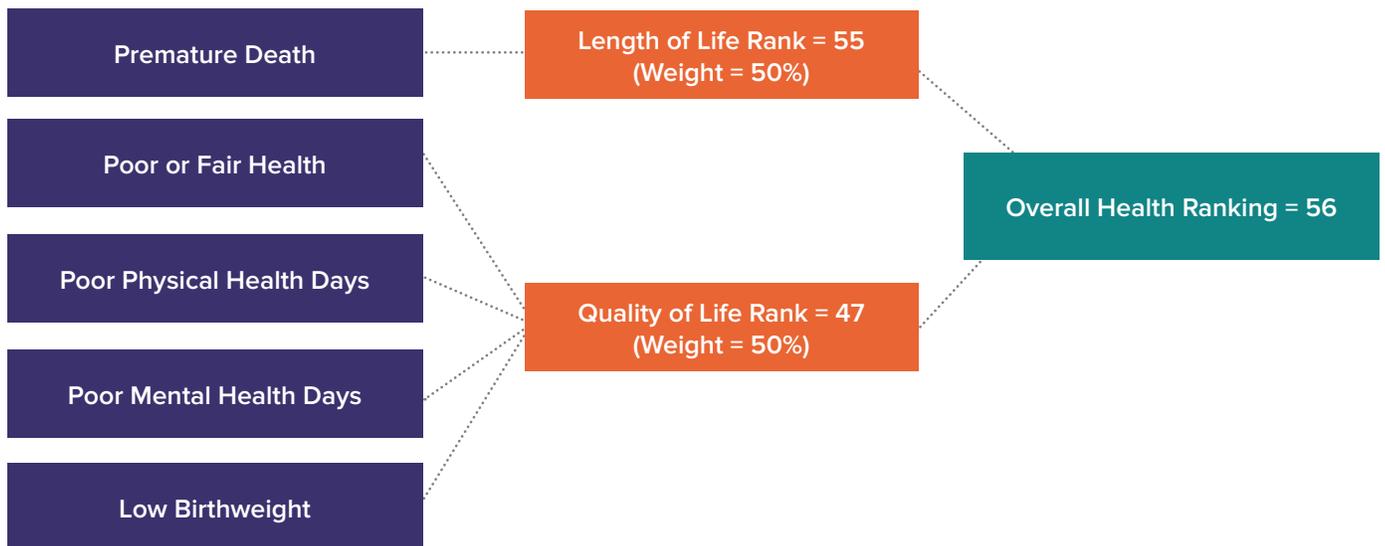
HOW THE OVERALL HEALTH OUTCOMES RANK IS DETERMINED

The measurement categories (and their primary-level weights) that determine the Overall Health Outcomes ranking are shown in the tree diagram below. Note the importance of Premature Death as the single measure that determines the Length of Life ranking, which is currently 55 out of 57.

LAKE COUNTY HEALTH OUTCOMES RANKING HISTORY

YEAR	RANK	OUT OF (n)
2017	56	57
2016	56	57
2015	56	57
2014	57	57
2013	57	57
2012	52	56
2011	53	56
2010	54	56

Health Outcomes Ranking Model with 2017 Ranking Status



Visit CountyHealthRankings.org for more information on County Health Rankings Methodology and Data.



FOCUS ON PREMATURE DEATH

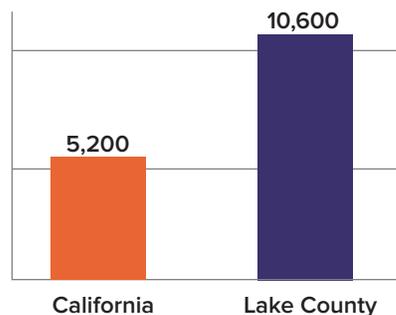
The Premature Death measure is the number of years of potential life lost before age 75. For example, a person dying at age 50 would contribute 25 years of life lost to the Premature Death index. It's a benchmark for community health because it provides an understanding of death that isn't due to "old age." In other words, it's an indicator of lives cut short due to preventable causes.

Lake County has the highest number of years of potential life lost among all other California counties. With an average of 10,600 total years of life lost annually (age-adjusted per 100,000 population), we have more than two times the state average of 5,200.

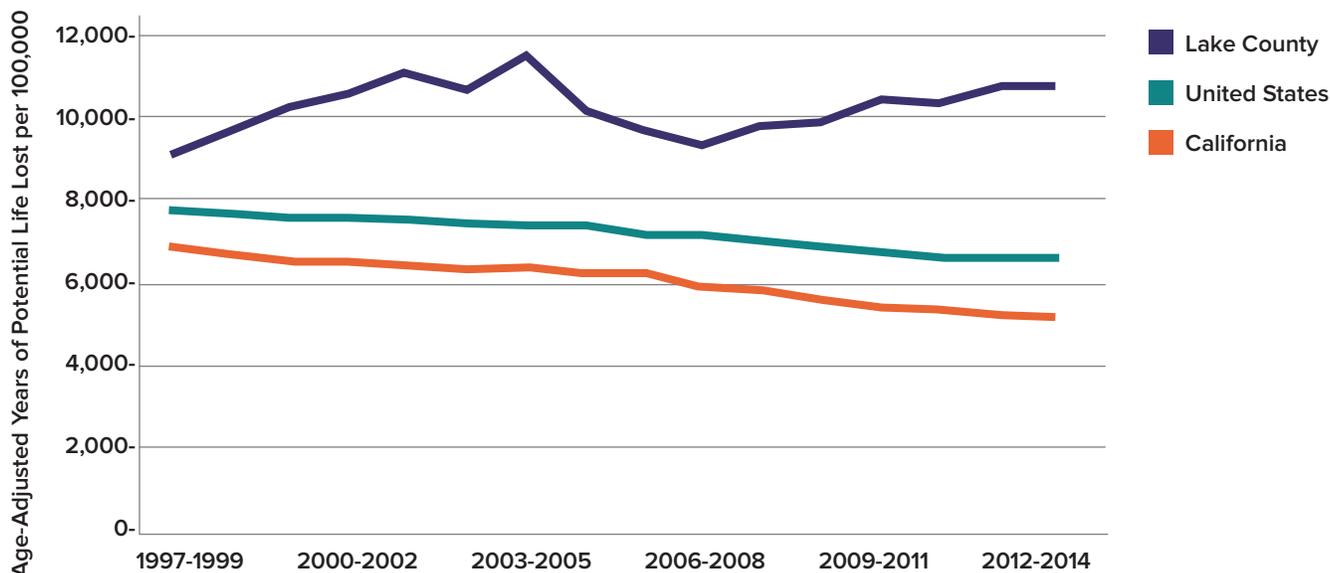
The significance of our Premature Death number is also shown by a trend comparison. While state and national numbers have seen a steady decline, Lake County's number has been on the rise. The Length of Life rank (55 out of 57) is directly tied to this widening gap. Thus, Premature Death is an important focal point. Even small gains in this measure translate to more people living longer, healthier lives.

PREMATURE DEATH 3-YEAR AVERAGE 2012-2014

Years of Potential Life Lost Before Age 75 per 100,000 (Age-Adjusted)



Trends for Premature Death (County, State, and National, 3-year Average 2012-2014)



Source: 2017 County Health Rankings: Lake County premature death trend data



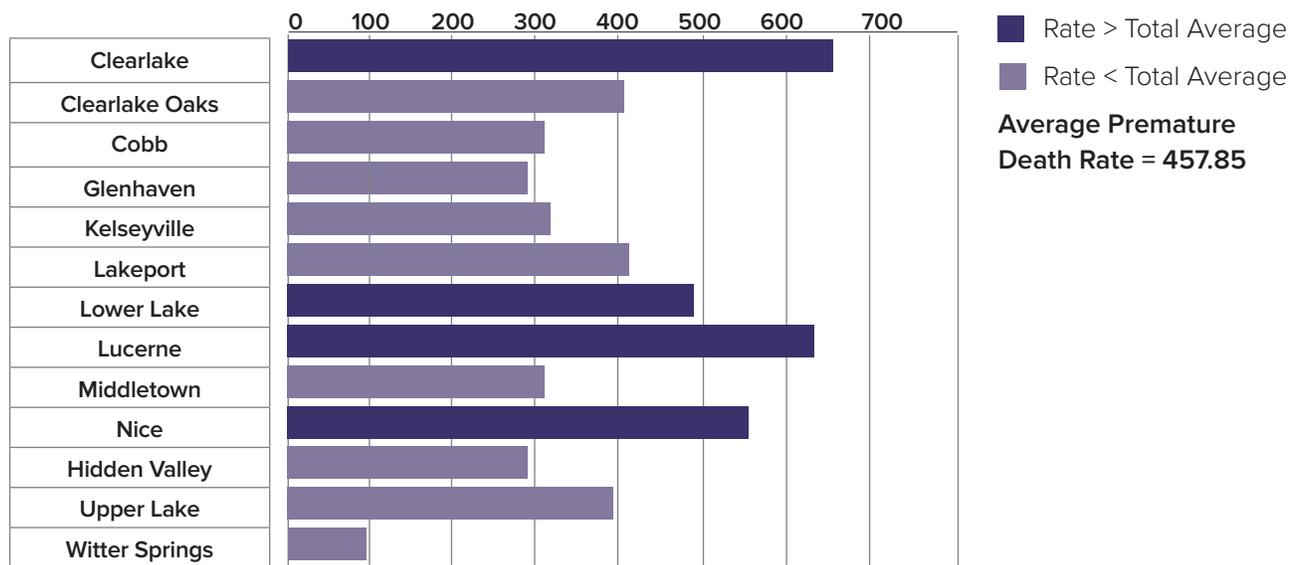
Premature Death is an indicator of lives cut short due to preventable causes.

Lake County's Health Status

PREMATURE DEATH RATE COMMUNITY-BY-COMMUNITY

Looking at the Premature Death rate by location and age reveals a potential for demographically-focused health improvements. It also offers a pointer for where more in-depth community-level analysis could be helpful.

Lake County Premature Death Rates: Zip Code Comparison Vs. County Average (2008-2013)



Lake County Premature Death Rates: Highest Levels of Death by Zip Code & Age Group (2008-2013)

Age Group	<1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74
Clearlake	12.7	2.1	1.2	13.7	36.4	66.6	145.2	171.9	216.3
Clearlake Oaks	0	0	0	14.9	17.8	33.1	92.2	110.6	142.9
Cobb	0	0	0	11.3	81.2	34.2	25.6	71.9	94.8
Glenhaven	0	0	0	0	0	0	39.4	129.3	104.8
Kelseyville	3.6	1.8	1.8	12.6	25.2	17.7	71.8	74.2	124.7
Lakeport	9.4	3.8	0	19.2	20.8	47.8	66.4	76.2	169.0
Lower Lake	19.9	0	8.9	17.5	23.2	61.0	78.8	70.9	202.4
Lucerne	19.6	0	0	34.3	13.8	79.7	139.1	184.5	180.0
Middletown	6.81	0	0	18.5	14.6	39.9	29.0	77.8	127.9
Nice	15.1	0	8.8	20.7	15.6	42.7	116.7	156.4	189.5
Hidden Valley	3.82	0	3.09	11.9	22.1	20.8	61.9	67.9	94.8
Upper Lake	7.9	0	0	7.94	32.2	18.8	103.6	68.7	141.1
Average Rate	9.19	1.58	1.62	15.6	27.03	43.55	90.94	106.75	161.57

Legend: Rate > Age Group Total Average (indicated by orange background in original image)

Source: "A Spatial Study of Mortality Rates in Lake County", Prepared by Ferron & Associates for Health Leadership Network, September 2016



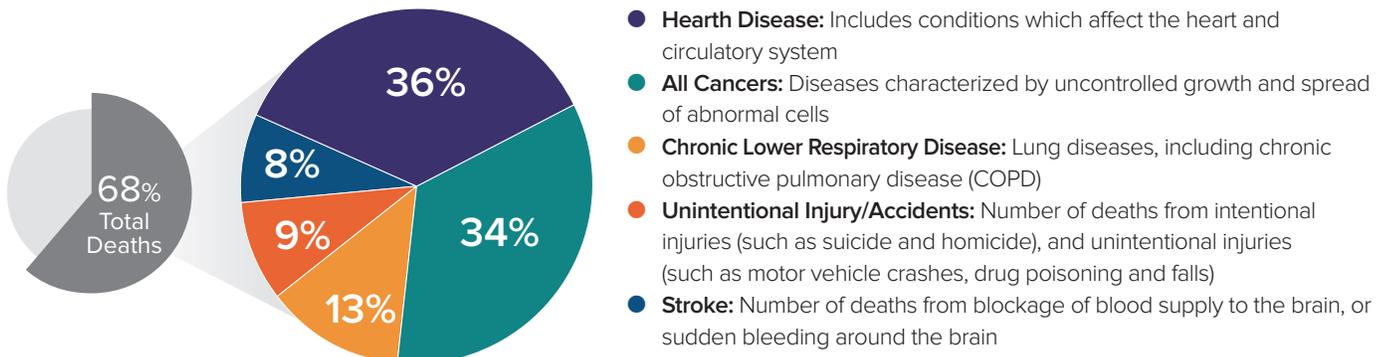
See Attachment E: A Spatial Study of Mortality Rates in Lake County for more community-level data.



MAJOR CAUSES OF MORTALITY IN LAKE COUNTY

Premature Death is closely linked to the major causes of mortality (also referred to as cause of death) for a community. In Lake County, five main causes of mortality account for 68% of total deaths for all ages. Among those, two stand out as leaders: heart disease and cancer.

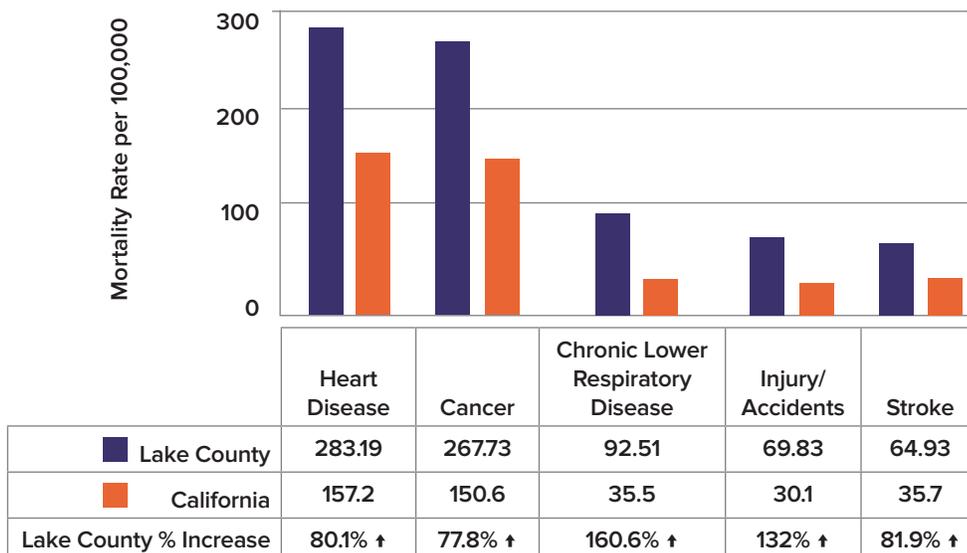
Five Major Causes of Mortality (Account for 68% of Total Deaths)



Source: California Department of Public Health, Death and Birth Records, Death Profiles by ZIP Code.

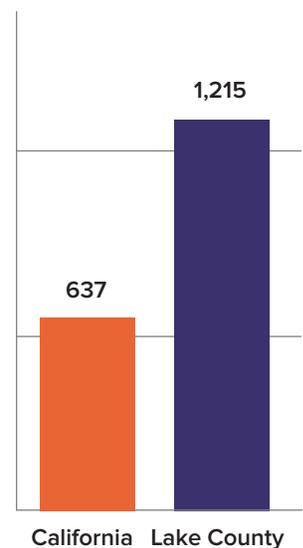
Note: This data includes persons of all ages, including those over age 75.

Lake County Vs. California Comparison of Major Causes of Mortality (2008-2013)



Source: California Department of Public Health, Death and Birth Records, Death Profiles by ZIP Code.

Total Mortality Rate (Includes All Causes)



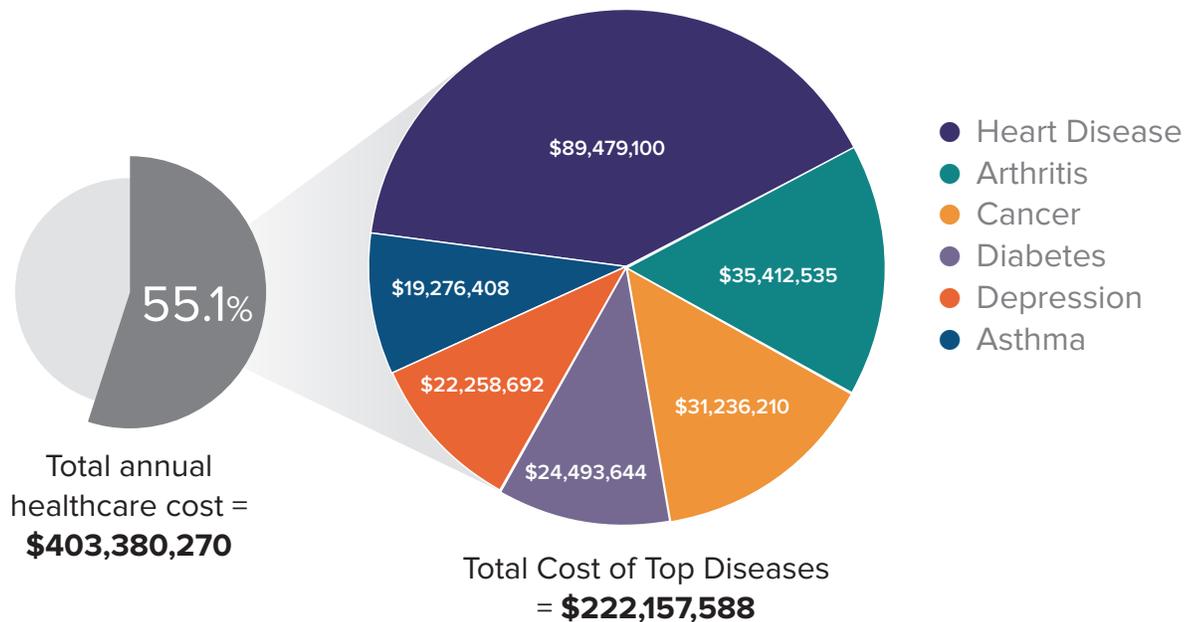
The mortality rate in Lake County (from all causes) is nearly 2x the California state average.

Lake County's Health Status

ECONOMIC BURDEN OF DISEASE

Considering that most of the factors that lead to the top six conditions are preventable, there is tremendous opportunity for reducing the burden of disease on Lake County's economy. (Note that heart disease and cancers are significant contributors to both premature death and economic cost.) The figure below shows the annual costs for these conditions from 2015.

Economic Burden of Disease in Lake County



Source: *Economic Burden of Chronic Disease in California 2015*

RETURNS ON INVESTMENT IN PUBLIC HEALTH

Studies in the economics of public health point to another promising opportunity for addressing the cost burden of disease in Lake County. Results from the study *Returns on Investment in California County Departments of Public Health* found that there is an estimated return of \$67.07 to \$88.21 for every dollar invested in county departments of public health in California. This suggests that even modest investment increases in the public health system could produce a significant reduction in local health care costs.



Every \$1 invested in county public health prevention can return \$67.07 to \$88.21 of value for improved health outcomes.



WHAT CONDITIONS INFLUENCE HEALTH?

Genetics and risky behavior are not the only factors that contribute to premature death. Wages, literacy, education, stress and other socioeconomic and demographic factors can affect our health as much as heredity and behavior. The County Health Rankings categorize and weigh these factors as part of a holistic picture of health.

County Health Ranking Factors and Weights That Determine Overall Health Ranking

WELLNESS IMPACT FACTORS	WEIGHT	LAKE COUNTY RANK OF 57
Social/Economic	40%	47
Health Behaviors	30%	57
Physical Environment	10%	13
Clinical Care	10%	44
Genes and Biology	10%	—

While social/economic and clinical care factors are notable contributors to Lake County's overall low health ranking, health behaviors stand out as the most significant factor with a rank of 57 out of 57. Here are the key health measures that make up Health Behaviors.

Health Behaviors of Focus for Lake County

Percent of adults smokers	15%
Percent of adults with BMI ≥ 30	27%
Percent of adults who are physically inactive	22%
Percentage of adults reporting binge or heavy drinking	17%
Percentage of driving deaths with alcohol involvement	38%

Health Behaviors in Lake County stand out as the most significant factor with a rank of **57 out of 57**.

ADVERSE CHILDHOOD EXPERIENCES (ACES) & SUBSTANCE ABUSE (NATIONAL STATISTICS)

2 of 3 adults in Substance Use Disorder treatment **report child abuse and neglect**

7 of 10 adolescents in Substance Use treatment had **history of trauma exposure**

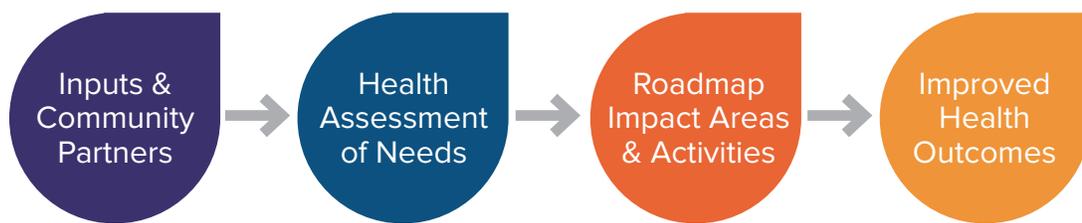


Learn More in Attachment D: Underlying Conditions Influencing Health.

Roadmap Model For Improving Health Outcomes

THE WELLNESS ROADMAP MODEL FOR CHANGE

The Wellness Roadmap follows the general theory of change methodology, which defines longterm goals and the outcomes pathway to achieve them. How this method has guided the Wellness Roadmap is modeled below.



TRACKING WITH SHARED MEASURES AND DATA COLLECTION

LAKE COUNTY HEALTH NEEDS ASSESSMENT

In addition to the County Health Ranking, a County Health Needs Assessment is conducted every three years. The County Health Needs Assessment is generally spearheaded by one of the local hospitals and uses a collaborative approach to gather community input and develop priority recommendations. The Needs Assessment draws from state and local data, as well as the County Health Ranking, to produce an overview of health related needs and trends in the county. Both assessments provide complementary information and derive their statistics from similar sources, but the data is compiled differently. The County Health Needs Assessment includes local input from residential surveys, community focus groups, interviews with local decision makers, and insights from service providers. As a result of combining local input with the statistical information, the 2016 County Health Needs Assessment identified the following priority recommendations for improving overall health and wellness.

2016 HEALTH NEEDS ASSESSMENT PRIORITY RECOMMENDATIONS

- ✓ Increase access to preventive mental health services and support for emotional well-being
- ✓ Decrease substance use
- ✓ Increase access to programs, services and activities that promote health and well-being
- ✓ Address homelessness

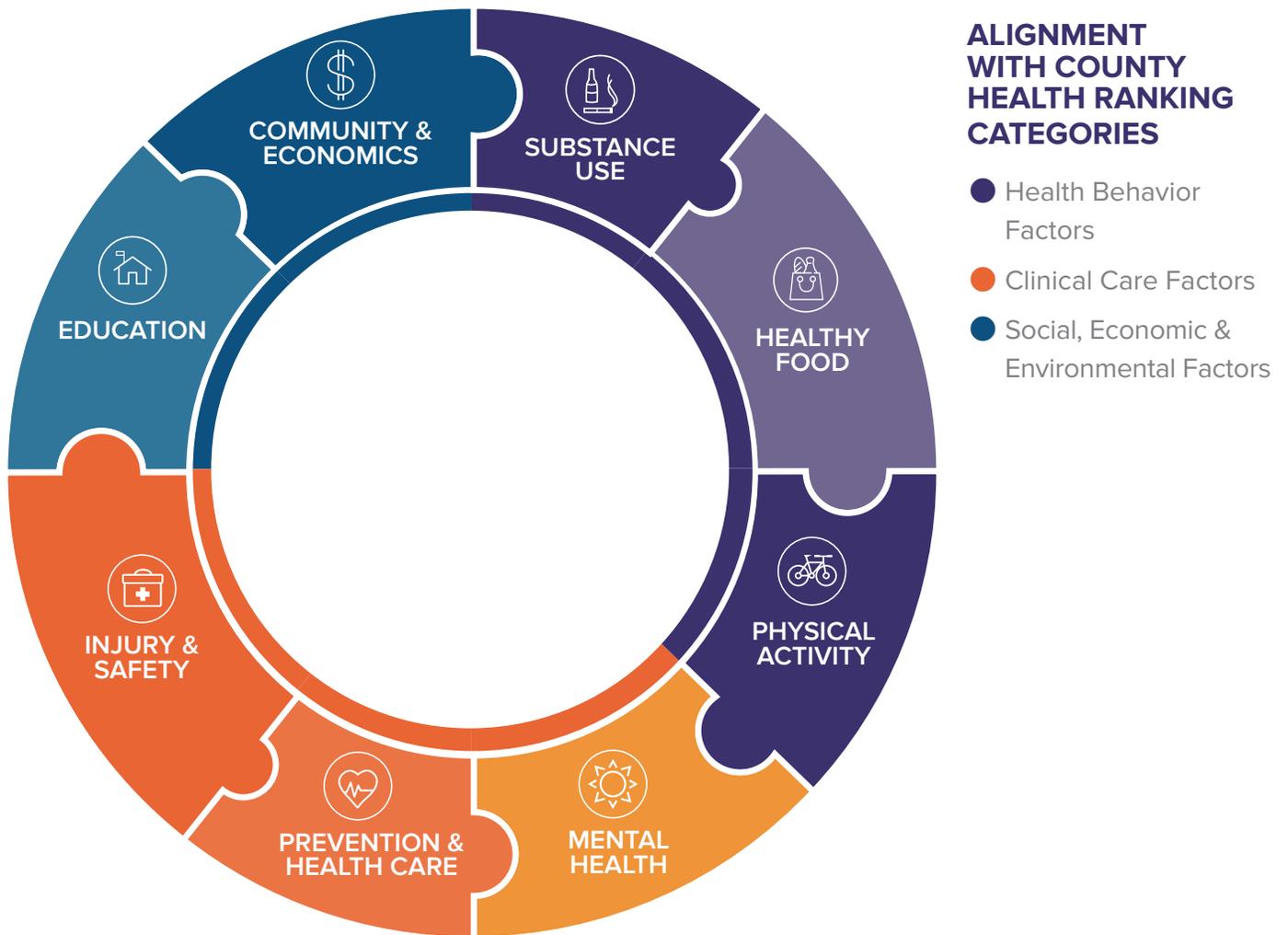


The Theory of Change model, County Health Rankings and Health Needs Assessment priorities informed the strategic process that identified the Wellness Roadmap's eight Impact Areas. These Impact Areas are presented in the following section.



WELLNESS ROADMAP IMPACT AREAS MODEL

The Impact Area model puts the County Health Ranking measures into familiar categories to help clarify, organize and create a platform for stakeholders to work together. The Wheel of Wellness below shows how each Impact Area is an important contributor to overall health and well-being, and how health conditions are interconnected within a “whole person” understanding of wellness. The Impact Areas also offer opportunities for expanding partnerships to increase the reach and scale of current efforts, which will amplify collective work and lead to long-lasting positive health outcomes.



See Attachment A: Wellness Roadmap Model for Collaboration and Collective Impact.



Substance Use

Residents use alcohol and prescription drugs responsibly, do not use illicit drugs, and live tobacco-free.

HEALTH RANKING DATA COMPARISON:

HEALTH MEASURE	LAKE COUNTY	CALIFORNIA AVERAGE
Adults Smoking: Percentage of the adult population that currently smokes every day or most days and has smoked at least 100 cigarettes in their lifetime.	15%	13%
Excessive Drinking: Percentage of adults that report either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average.	17%	17%
Alcohol-Impaired Driving Deaths: Percentage of motor vehicle crash deaths with alcohol involvement.	38%	30%
Drug Overdose Deaths: Number of deaths due to drug poisoning per 100,000 population. (Large group of drugs, most notably narcotics/opioids and sedatives).	46	11

OBJECTIVES

- Increase responsible use of alcohol
- Reduce tobacco use
- Reduce opioid and sedative abuse
- Decrease number of adolescents and adults using alcohol or illicit drugs
- Decrease opioid prescriptions
- Increase reach and scale of stakeholder programs across Impact Areas

POTENTIAL POLICIES

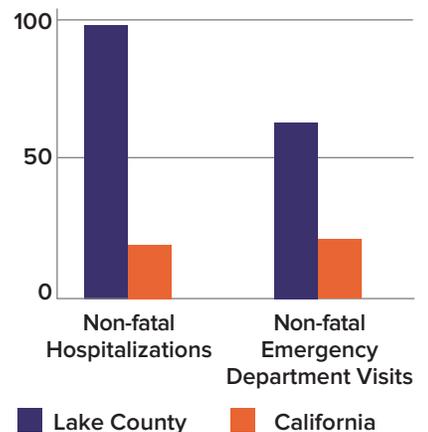
- Restrictions on youth tobacco marketing and sales
- E-cigarette regulations
- Tobacco retail outlet density restrictions
- Smoke-free policies for indoor and outdoor public spaces
- Smoke-free policies for multi-unit housing
- Local policy support for Tobacco 21 legislation
- Alcohol sales control

WHAT WE CAN DO

- Increase efforts and programs to address adolescent alcohol and drug use
- Build on collaborative efforts such as local trauma-informed practices and resiliency building
- Formalize cross-sector approach to strengthen protective factors within families
- Increase screening (such as 4P's Plus©) and formal follow-up by obstetricians of their patients for tobacco, alcohol, or illicit drug use
- Increase access to support activities, smoking cessation programs and helplines (i.e. QuitNet, 1-800-NoButts, and QUIT RIGHT® mobile app)
- Deliver tobacco cessation advice and motivational messaging via text or video message
- Support proper use of pain medication
- Reduce exposure to second-hand smoke
- Support Tobacco 21 policies
- Utilize Trauma-Informed Practice Protocol to address Adverse Childhood Experiences (ACE) factors
- Encourage hospital/clinics to provide smoking cessation programs

Opioids Poisoning

Crude Rate per 100,000 Population (2012-2014)



Looking at both drug overdose deaths and the number of nonfatal hospitalizations for opioids poisoning provides a more complete view of the prevalence of opioid abuse.



Substance Use

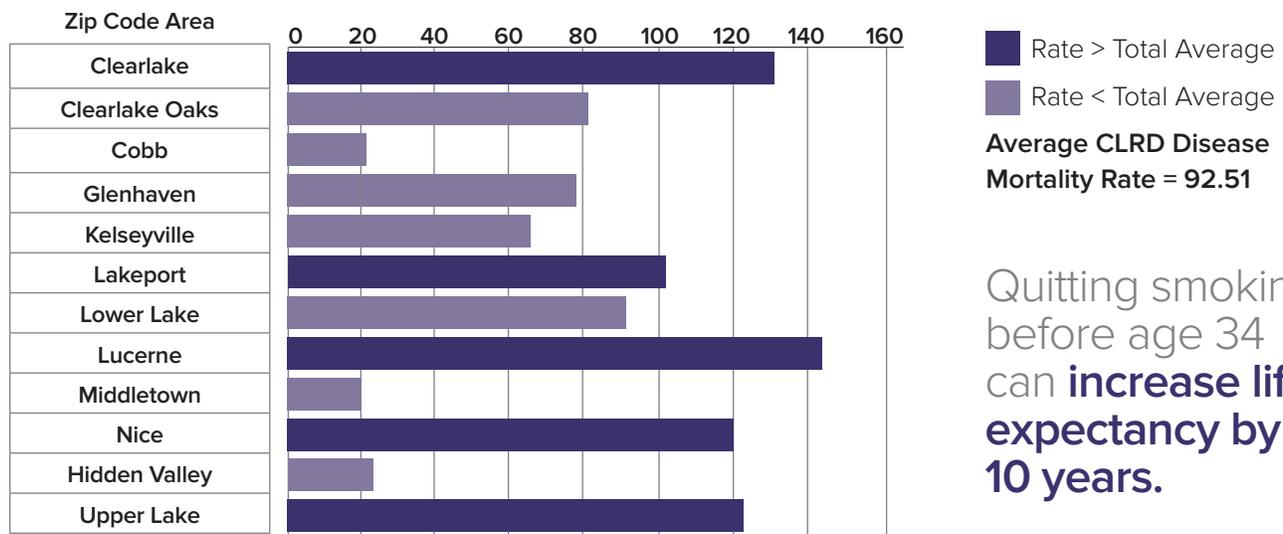
Residents use alcohol and prescription drugs responsibly, do not use illicit drugs, and live tobacco-free.

SNAPSHOT OF WHAT'S WORKING

- Multi-component community interventions against alcohol-impaired driving
- Ignition interlock devices that prevent operation by a driver with a high blood alcohol concentration
- Breath testing check-points
- Enhanced enforcement of laws prohibiting alcohol sales to minors
- Alcohol availability restrictions in public spaces
- Local Safe Schools Programs address student drug use
- Local Opioid Coalition partnership across healthcare, behavioral health and county organizations is reducing use of opioid medications
- Local Tribal Health is implementing a robust program to decrease substance use during pregnancy
- Local Maternal, Adolescent, Child Health Advisory partners have prioritized a focus on decreased substance use during pregnancy
- Local Trauma Guide Team working across sectors to align, identify and implement evidence-based resiliency practices



Chronic Lower Respiratory Disease Mortality Rate per 100,000 (2008-2013) Comparison By Area



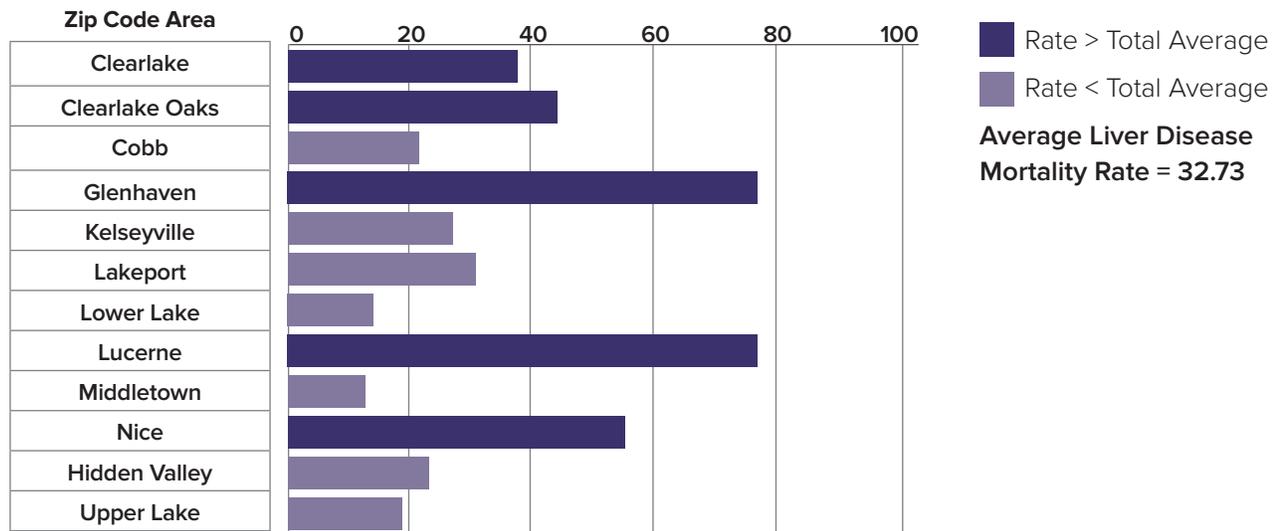
Source: "A Spatial Study of Mortality Rates in Lake County", Prepared by Ferron & Associates for Health Leadership Network, September 2016



Substance Use

Residents use alcohol and prescription drugs responsibly, do not use illicit drugs, and live tobacco-free.

Liver Disease Mortality Rate per 100,000 (2008-2013) Comparison by Area



Source: "A Spatial Study of Mortality Rates in Lake County", Prepared by Ferron & Associates for Health Leadership Network, September 2016

WHO'S INVOLVED

County Behavioral Health, Behavioral Health Solutions, Redwood Community Services, Mendocino Community Health Clinics—Lakeview Center, Adventist Health Clear Lake, Sutter Lakeside Hospital, School Districts, Children's Council, Partnership Health Plan, Lake County Public Health Department, Tribal Health, Lake Transit, Planned Parenthood, County Department of Social Services

DISCLAIMER

The programs, policies, what's working, what we can do, and organizations involved represented in the Impact Areas are not meant to be exhaustive listings, but are examples and snapshots of information. This programmatic information may change over time.



Mental Health

Residents maintain mental, social, emotional and spiritual well-being.

HEALTH RANKING DATA COMPARISON:

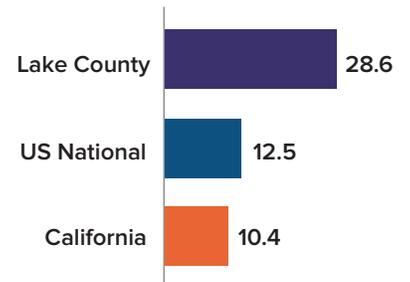
HEALTH MEASURE	LAKE COUNTY	CALIFORNIA AVERAGE
Poor Mental Health Days: Survey responses reporting stress, depression, and problems with emotions during the past 30 days.	4.2	3.6
Mental Health Providers: Ratio of the county population to the number of mental health providers.	300:1	360:1
Insufficient Sleep: Percentage of adults who reported sleeping less than 7 hours per night.	33%	34%

OBJECTIVES

- Cross-sector vision, agenda, assessment and implementation strategies that focus on cultivating well-being and resiliency
- Increase opportunities to build social capital and decrease social isolation
- Increase opportunities to strengthen parent-child attachment and bonding across the service continuum
- Build on existing efforts to more fully develop a universal screening and follow-up system for addressing Adverse Childhood Experiences (ACE) prevalence and other forms of trauma
- Increase opportunities to assist residents with various levels of stress management strategies/activities

Suicide Mortality Rate (2008-2013)

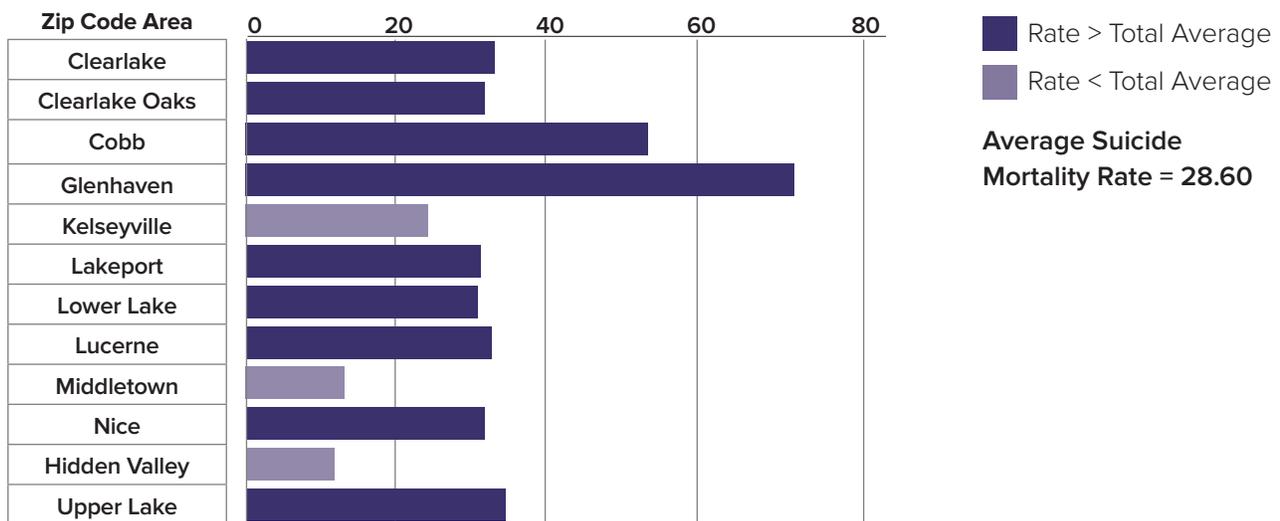
of Deaths Per 100,000 People



POTENTIAL POLICIES

- Establish a formal policy and protocol for prevention and intervention regarding toxic stress exposure

Suicide Mortality Rate per 100,000 (2008-2013) Comparison By Area



Source: "A Spatial Study of Mortality Rates in Lake County", Prepared by Ferron & Associates for Health Leadership Network, September 2016



Mental Health

Residents maintain mental, social, emotional and spiritual well-being.

WHAT WE CAN DO

- Encourage all providers to use trauma-informed approach
- Increase integration among mental health services, substance abuse services and wellness services
- Establish strategic plan for cross-sector promotion of stress reduction to:
 - Encourage social connections
 - Strengthen protective factors
 - Include ACE screening
 - Include PHQ2 and PHQ9 depression screenings
- Create a communications campaign for county-wide well-being and resiliency messaging
- Implement Network of Care closed-loop referral system
- Build upon on-site wellness and resiliency services on school campuses
- Invite more cross sector collaboration to expand and strengthen School HUBS (small-scale Family Resource Centers) for early intervention and prevention
- Consider Gallup Well-Being index (or other tool) for countywide assessment

SNAPSHOT OF WHAT'S WORKING

- A local countywide emphasis on resiliency building
 - Schools are increasing access to resiliency building efforts and creating positive school climate through programs such as PBIS (Positive Behavioral Interventions and Supports)
 - Healthcare and non-medical organizations are implementing trauma-informed best practices
- Multiple agencies are collaborating on parenting and family support programs, incorporating the Nurturing Families approach
- Local workshops and trainings are provided to increase providers and public awareness of the impact of exposure to trauma and how to promote well-being
- Local suicide prevention training and Life Is Sacred Alliance (Suicide Prevention)
- Local Trauma Guide Team is developing a public health approach to address trauma exposure and resiliency building
- Lake County Tribal Health Consortium Kwa Xho Community Garden is a resource for stress reduction and mental health benefits

WHO'S INVOLVED

County Behavioral Health, Behavioral Health Solutions, County Health Services, Redwood Community Services, Child Welfare, First 5 Lake County, Lake County Office of Education, Mother Wise, Tribal Health, Partnership Health Plan, School Districts, Children's Council, Senior Support Services, North Coast Opportunities, Lake Transit, Cultural Wellness Center, Maternal Child Adolescent Health Advisory, Mendocino Community Health Clinics—Lakeview Center, Adventist Health Clear Lake, Sutter Lakeside Hospital, Lake Family Resource Center, Planned Parenthood.



The Protective Factors Framework





Community & Economic Security

Residents have meaningful social connections, a positive perception of the community, and sustainable income.

HEALTH RANKING DATA COMPARISON:

HEALTH MEASURE	LAKE COUNTY	CALIFORNIA AVERAGE
Children in Poverty: Percentage of children under age 18 living in poverty.	32%	23%
Unemployment: Percentage of the civilian labor force, age 16 and older, that is unemployed but seeking work.	8.9%	7.5%
Median Household Income: Income at which half the households earn more and half the households earn less.	\$36,300	\$61,900
Severe Housing Problems: Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities.	28%	29%
Children in Single-Parent Households: Percentage of children that live in a household headed by a single parent (no spouse present).	42%	32%
Social Associations: Number of associations or memberships in social, sports, religious, political or professional organizations per 10,000 population.	6.9	5.8
Children Eligible for Free Lunch: Percentage of children enrolled in public schools eligible for free lunch.	62%	48%

OBJECTIVES

- Increase employment opportunities for transitional, flexible and/or subsidized jobs that can lead to unsubsidized employment
- Increase housing accessibility to address various income levels and homelessness
- Achieve a wide-spread positive perception of Lake County, both locally and regionally
- Increase civic engagement opportunities through volunteerism and voter participation
- Increase access to cultural activities
- Increase awareness of local resources
- Establish transportation services for areas with low population densities, using publicly funded buses and vans on a set schedule, dial-a-ride transit, and volunteer ridesharing
- Increase business development opportunities
- Increase awareness of the connection between health, social conditions and economics

POTENTIAL POLICIES

- Living wage policies and affordable housing measures
- Health In All Policies identified by the Public Health Institute
- Increased investment in early childhood education
- Protect access to waterways
- Healthy home environment assessments (policy)
- Promote measures to address vitality of Clear Lake (monitoring cyanotoxin blooms and drinking water supplies)

Housing Affordability Rule

No more than 30% of family income goes toward housing



70% For food, clothes, health care, transportation and other things.

Lake County Renter Burden
(Based on 30% criteria)

\$891/Month =
Median Gross Rent

69 hours/week of work at \$10 per hour to afford median rent

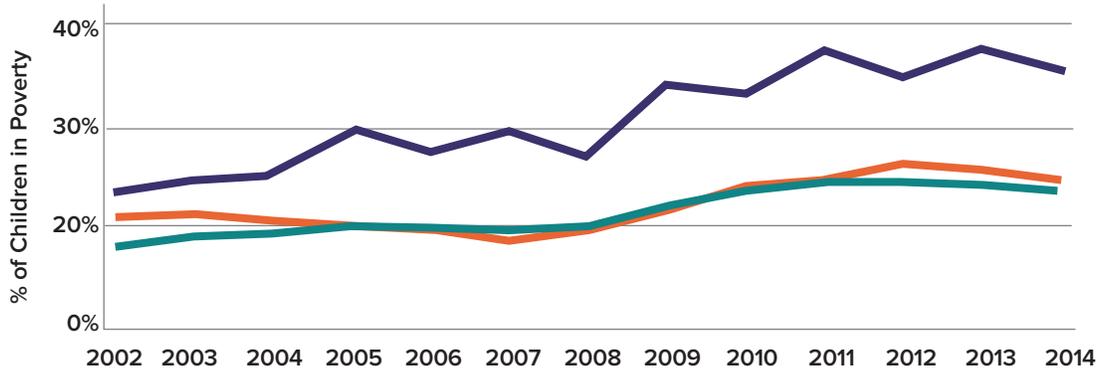


Community & Economic Security

Residents have meaningful social connections, a positive perception of the community, and sustainable income.

Trends for Children in Poverty Rate (County, State, and National)

■ Lake County ■ California ■ United States



Source: County Health Rankings: Children in Poverty trend data.

WHAT WE CAN DO

- Expand and sustain Town Hall-style activities to engage citizens in on-going dialog and action steps
- Enhance programs and interagency connections for resources and services:
 - o Basic needs
 - o Employment security
 - o Childcare assistance
- Increase collaborative efforts to address housing including:
 - o Solutions for homelessness
 - o Housing accessibility and stressed housing
- Enhance job training programs to develop workforce
- Build on collaborative plans to increase access to transportation
- Build on Lake County marketing campaigns that bolster community pride, nurture a shared identity, and promote volunteerism
- Develop a plan and tracking study to measure:
 - o Volunteerism, Philanthropic giving and community service
 - o Percent of registered voters that voted in last election



SNAPSHOT OF WHAT'S WORKING

- Promotion efforts that showcase Lake County as community-focused and offering a beautiful natural environment
- The percent of population ages 16 and older unemployed and seeking work has decreased
- Cross-sector efforts have identified economic development as a priority focus
- Lake County Tourism Ambassadors Program
- Chamber of Commerce efforts supporting local business
- Lake County Economic Development is expanding local business opportunities
- Local housing needs are being addressed by cross-sector partnerships that provide resources within a “whole person” health approach
- Housing Trust Funds that help create or maintain low-income housing, etc
- Weather Assistance Program for low income families to increase home energy efficiency and reduce energy bills

WHO'S INVOLVED

Lake County Economic Development, North Coast Opportunities, Department of Social Services, Job Training, Business Community, City Councils, County Board of Supervisors, Lakeport Economic Development Advisory Committee, Lake Transit, Citizens, Community Leaders



Healthy Food

Residents have affordable access to and choose healthy food.

HEALTH RANKING DATA COMPARISON:

HEALTH MEASURE	LAKE COUNTY	CALIFORNIA AVERAGE
Food Environment Index: The Food Environment Index ranges from 0 (worst) to 10 (best) and equally weighs two indicators of the food environment.	6.0	7.7
Food Insecurity: Percentage of the population who did not have access to a reliable source of food during the past year.	20%	15%

OBJECTIVES

- Increase food sufficiency and security by reliable access to enough quality and affordable food for a healthy and active life
- Increase % of Adults and Children who maintain healthy weight
- Increase cross-sector promotion of healthful, affordable food options in schools, grocery stores, restaurants, civic centers and public events
- Increase efficiency and accessibility of Local Food System

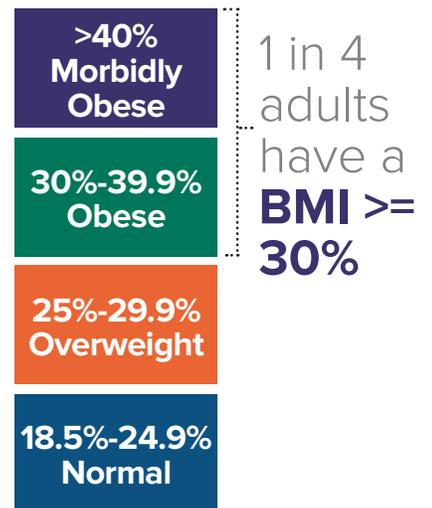
POTENTIAL POLICIES

- Measures to increase/sustain production of local, affordable food; cultivation tillage practices
- Measures to fully develop local Food Hub
- Measures to institutionalize Farm to School and concomitant school menu improvements within all school districts
- Measures to ensure healthy food in convenience stores
- Measures to incorporate food security questions within assessments across the service delivery system
- Measures to restrict child-focused advertising for unhealthy foods and beverages
- Measures to support Mobile Markets for fresh food carts or vehicles that travel to neighborhoods on a set schedule to sell fresh fruits and vegetables

WHAT WE CAN DO

- Develop a cross-sector approach that utilizes best practices from successful efforts like Blue Zones Project that work to make healthy food habits easy through tactics such as:
 - Making wholesome foods more available and less costly than junk foods
 - Partnering with stakeholders in the community including restaurants, work sites, schools and grocery stores with the collective goal of promoting healthy choices
- Implement an integrated food distribution system that coordinates public funding, farming, retail grocery stores and restaurants
- Broaden efforts to increase the number of local community gardens, linking Food Hub to local community gardens and increasing efficiency of healthy food distribution
- Establish a Community-Supported Agriculture (CSA) box program

Body Mass Index (Lake County)

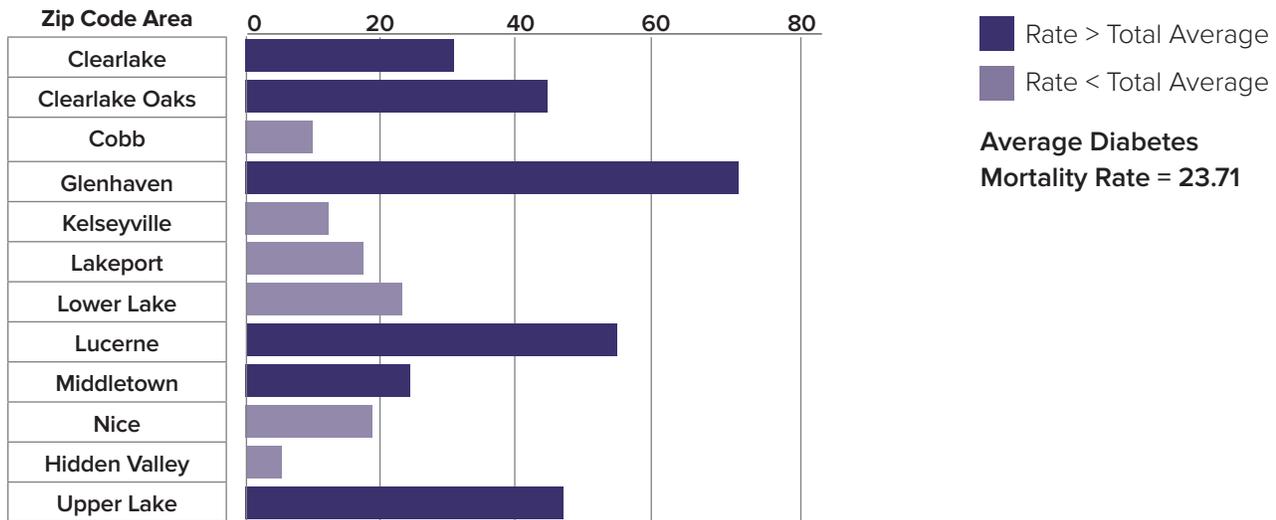




Healthy Food

Residents have affordable access to and choose healthy food.

Diabetes Mortality Rate per 100,000 (2008-2013) Comparison By Area

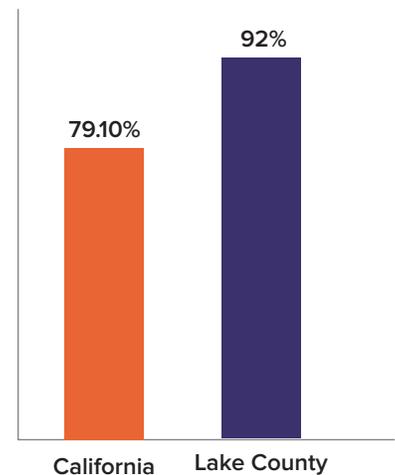


Source: "A Spatial Study of Mortality Rates in Lake County", Prepared by Ferron & Associates for Health Leadership Network, September 2016

SNAPSHOT OF WHAT'S WORKING

- Established network of organizations among: schools, community organizations, hunger task force, grocery stores, restaurants, farmers, tribal health and others collaborate to increase access to healthy foods
- Farm to School in all but one school district, resulting in each school district purchasing up to 8% of their produce locally
- 13 schools, 8 preschools, and 7 afterschool programs using Harvest of the Month (HOTM) curriculum to increase student exposure to healthy foods; about 160 teachers participating with impact on 4,200 students. Organizations such as North Coast Opportunities, Lake FRC, E-Center WIC, grocery stores, Public Health are HOM partners; Health Education Coalition focus on HOTM in schools and elsewhere
- Local school breakfast programs; free/reduced school lunch and summer food programs
- Local Farmers' markets/stands
- Local produce being distributed in local food banks; hunger relief efforts are combined with nutrition information and healthy eating opportunities
- Local Rate of low birth weight babies is lower than state average
- Hunger Task Force creates community and school gardens countywide; works to fill food sufficiency gaps
- Community cooking classes are offered by faith-based organizations

WIC Coverage Rate





Healthy Food

Residents have affordable access to and choose healthy food.

The Four Main Components of Food Security

FOOD SECURITY AND NUTRITION

Availability:

There is reliable and consistent source of quality food.

Access:

People have sufficient resources to produce and/or purchase food.

Utilization:

People have the knowledge and conditions to chose, prepare and distribute food.

Stability:

People's ability to access and utilize food that remains stable and sustainable.

WHO'S INVOLVED

School Districts, North Coast Opportunities, Tribal Health, Mendocino Community Health Clinics—Lakeview Center, Adventist Health Clear Lake, Sutter Lakeside Hospital, Lake Family Resource Center, Senior Support Services, County Social Services, Planned Parenthood, Lake County Public Health Department, County Behavioral Health, Lake Transit, Hunger Task Force, E-Center WIC Program



Physical Activity

Residents enjoy and participate in an active lifestyle.

HEALTH RANKING DATA COMPARISON:

HEALTH MEASURE	LAKE COUNTY	CALIFORNIA AVERAGE
Physical Inactivity: Percentage of adults aged 20 and over reporting no leisure-time physical activity.	20%	22%
Access to Exercise Opportunities: Percentage of population with adequate access to parks or recreational facilities.	87%	72%

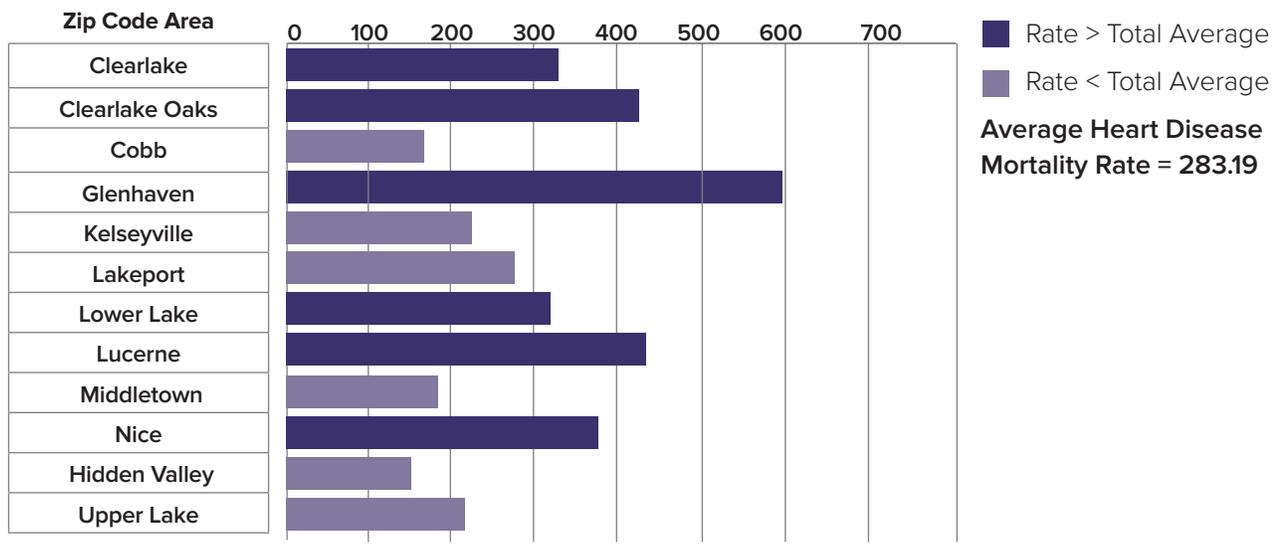
OBJECTIVES

- Community partners/stakeholders develop a shared vision, agenda, measures and messaging to increase opportunities for physical activity among all age groups: children, students, adults and seniors
- Increase opportunities for physical activity in the workplace, along with reporting to document benefits to employees and employers
- Improve access to recreational activities within the built environment, including walkable and complete streets
- Ensure safe routes to school and efforts to increase walking/biking to school
- Prepare students for school physical fitness testing
- Increase reach and scale of cross-sector endeavors

POTENTIAL POLICIES

- Measures to increase access to local recreation opportunities, community walkability and complete streets
- Support public transit measures that improve alternate options to single vehicle transportation, such as walking, cycling and public transit

Heart Disease Mortality Rate per 100,000 (2008-2013) Comparison By Area



Source: "A Spatial Study of Mortality Rates in Lake County", Prepared by Ferron & Associates for Health Leadership Network, September 2016



Physical Activity

Residents enjoy and participate in an active lifestyle.

WHAT WE CAN DO

- Develop a cross-sector approach that utilizes best practices from successful efforts like Blue Zones Project that integrate physical activity into lifestyles, such as:
 - Walking groups across sectors
 - Adoption of a bicycle or walking master plan
- Support Lake County Marketing & Economic Development efforts to promote local recreational activities
- Continue developing physical activity programs at senior living facilities
- Support physical education activities at schools including:
 - Preparing for national physical fitness testing
 - Work with Lake County Office of Education to integrate physical activity information, resources and recreation-focused community partners in the HUB program

SNAPSHOT OF WHAT'S WORKING:

- Modify local environments to support physical activity, increase access to new or existing facilities for physical activity
- Encourage children to spend time away from TV and other screen media, often as part of a multi-faceted effort to increase physical activity and improve nutrition
- Locally, the number of adults with an unhealthy BMI is not increasing
- Local access to physical exercise opportunities is increasing
- Local School Wellness Councils are promoting physical activity as a priority
- The school HUB programs in Lower Lake and Upper Lake are working to increase student access to physical activities
- Employee wellness programs in county departments, in healthcare, and other community organizations are promoting physical activity in the workplace
- Wellness Prescriptions for healthy food and active living are being included in local healthcare, behavioral health and other organization client case plans

Outdoor Recreation Opportunities

- **600,000 acres** of public land
- **100+ miles** of hiking trails



Inputs to Outputs for Workplace Wellness Programs



SAMPLE OF WHO'S INVOLVED:

School Districts, North Coast Opportunities, Tribal Health, Mendocino Community Health Clinics—Lakeview Center, Adventist Health Clear Lake, Sutter Lakeside Hospital, Lake Family Resource Center, Senior Support Services, People Services, Planned Parenthood, Lake County Public Health Department, Lake Transit, Clearlake City Council



Education

Youth graduate from high school and are prepared to succeed.
Children are ready for kindergarten.

HEALTH RANKING DATA COMPARISON:

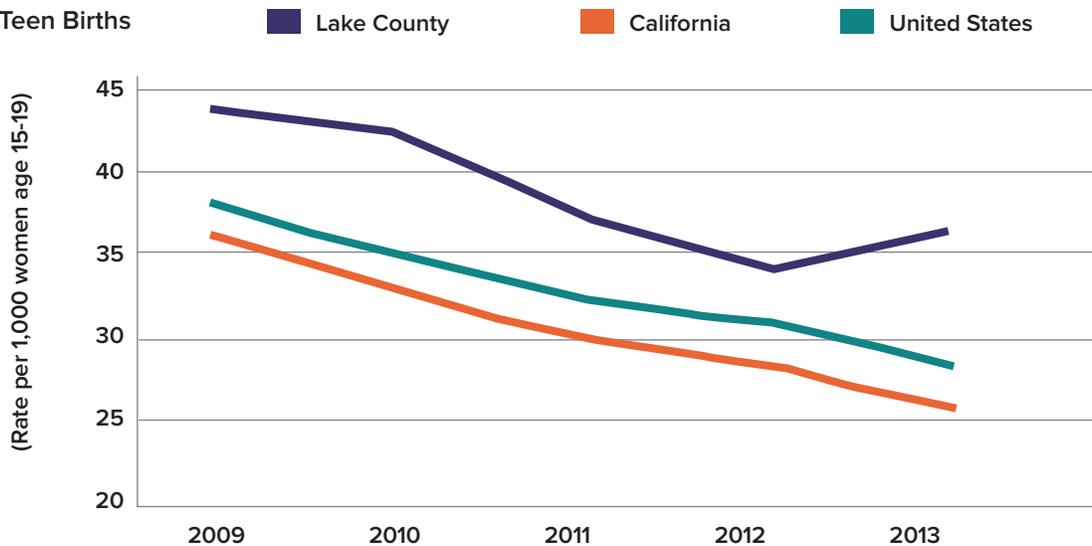
HEALTH MEASURE	LAKE COUNTY	CALIFORNIA AVERAGE
High School Graduation: Percentage of ninth-grade cohort that graduates in four years.	88%	85%
Some College: Percentage of adults ages 25-44 with some post-secondary education, such as enrollment in vocational/technical schools, junior colleges, or four-year colleges.	53%	62%
Teen Births: Number of births per 1,000 female population, ages 15-19.	43	32

OBJECTIVES

- Develop positive school outcomes and wellness culture through preschool programs, parenting support, educational programs, and youth development activities
- Increase school attendance
- Increase High School graduation rates with UC/CSU required courses
- Promote positive school climate
- Promote early reading fluency
- Decrease teen pregnancy
- Increase reach and scale of successful school-based and cross-sector endeavors



Teen Births



Source: California Dept. of Finance, Race/Ethnic Population with Age and Sex Detail

Note: Different data source than the County Health Ranking data. Data reflect the mother's county of residence, not the county in which the birth occurred.



Education

Youth graduate from high school and are prepared to succeed.
Children are ready for kindergarten.

POTENTIAL POLICIES

- Sustain wellness activities in School HUB menu of services
- Encourage school districts to define elements that contribute to a school wellness culture and develop an action plan with formal implementation strategies and evaluation methods
- Support investments in quality early childhood education and child development programs

WHAT CAN WE DO

- Support school Health Magnet programs to:
 - Foster a wellness mindset among the next generation
 - Increase access to health career pathways
- Focus on reading and math fluency by grade 3
- Focus on teen pregnancy prevention through Lake Family Resource programs and other partners
- Support preschool program focus on kindergarten readiness
- Strengthen partnerships (such as the Youth Coalition) between schools and other community resources to develop a common vision, agenda, objectives and assessments that increase opportunity for youth development, leadership and engagement with community wellness action
- Formalize use of resources among Youth Coalition (and other collaborative partners) to ensure sustainability of youth engagement with wellness activities
- Implement integrated approaches that include academics, all aspects of wellness, community development and family strengthening (Two-Generation Approach)
- Bolster parental access to high-quality parenting education and support

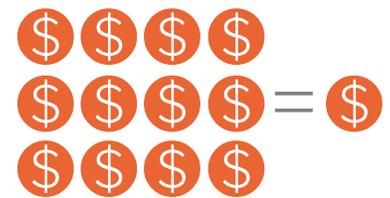
SNAPSHOT OF WHAT'S WORKING:

- Dropout prevention programs through mentoring, counseling, vocational training or environmental changes that help students complete high school
- Career Academies: small learning communities in high schools focused on fields such as healthcare, finance, technology, communications, and public service (i.e. local health magnet schools)
- College access programs that help underrepresented students prepare academically for college
- School based social and emotional instruction; also called social emotional learning, such as Americorps
- A local increase in the percentage of ninth-graders that graduated in four years
- A local increase in adults ages 25-44 with some post-secondary education
- Local School HUBs within school districts as vehicles to increase access to wellness activities
- The School Wellness Center in Lower Lake
- Mutual reinforcement of positive, safe, healthy school environment via programs such as Safe Schools, school HUB activities, Healthy Start, School Wellness Center, Hero Project, Student Reach, and PBIS School Climate best practice curriculum

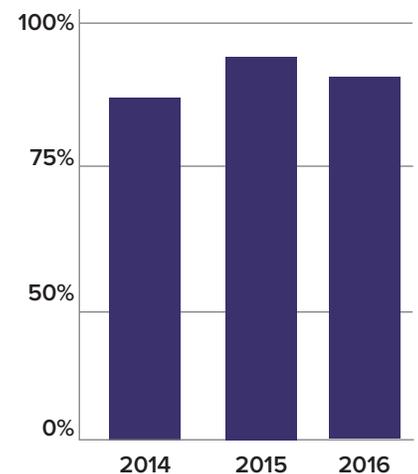
WHO'S INVOLVED:

All School Districts, Planned Parenthood, First 5 Lake County, North Coast Opportunities, Senior Support Services, County Organizations

Investments in early childhood education have an **ROI of 12:1**



Percentage of Lake County 9th Graders Who Graduate in Four Years





Prevention & Health Care

Residents are connected to and engaged in preventative primary care and are physically healthy.

HEALTH RANKING DATA COMPARISON:

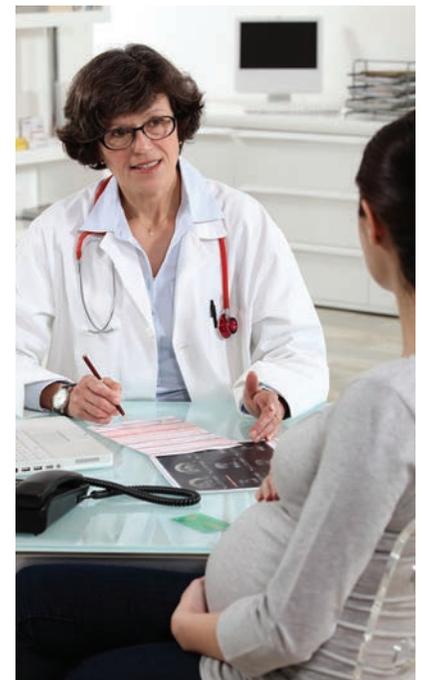
HEALTH MEASURE	LAKE COUNTY	CALIFORNIA AVERAGE
Uninsured: Percentage of the population under age 65 that has no health insurance coverage.	20%	21%
Adult Obesity: Percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m2.	27%	23%
Poor or Fair Health: Percentage of adults reporting fair or poor health (age-adjusted).	18%	18%
Poor Physical Health Days: Average number of physically unhealthy days reported in past 30 days (age-adjusted).	4.3	4.0
Mammography Screening: Percentage of female fee-for-service Medicare enrollees age 67-69 that had at least one mammogram over a two-year period.	54%	59%
Diabetic Monitoring: Percentage of diabetic fee-for-service Medicare patients ages 65-75 whose blood sugar control was monitored in the past year.	80%	81%
Preventable Hospital Stays: Is the hospital discharge rate for ambulatory care-sensitive conditions per 1,000 fee-for-service Medicare enrollees.	50	41
Primary Care Physicians: Ratio of the population to total primary care physicians.	1,640:1	1,270:1
Dentists: Ratio of the county population to total dentists in the county.	2,290:1	1,260:1

OBJECTIVES

- Decrease chronic health conditions
- Promote and increase access to smoking cessation
- Increase insurance coverage and medical home care
- Increase use of coordinated care and care teams
- Increase use of preventive screenings and assessment
- Improve early access to prenatal care
- Increase development of data systems that enable information sharing and allow measurement of cross-sector (organizational) screening, assessment, impact, scale, gaps, and duplication
- Increase reach and scale of cross-sector endeavors

POTENTIAL POLICIES

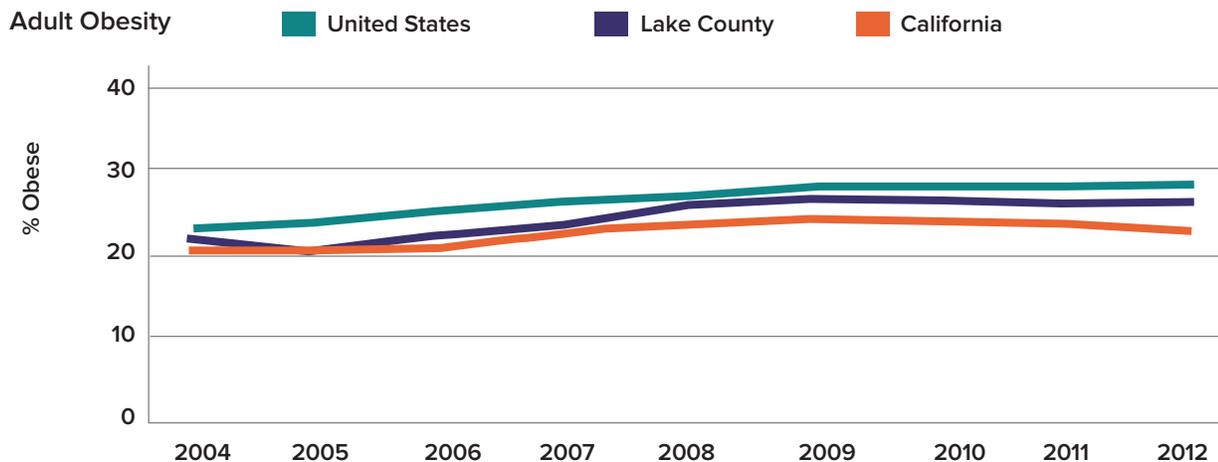
- Formalize structures that connect medical and non-medical providers for integrated, coordinated care
- Implement shared data collection and data repository utilizing SHA (Staying Healthy Assessment) and other survey and assessment tools
- Paid sick leave





Prevention & Health Care

Residents are connected to and engaged in preventative primary care and are physically healthy.



WHAT WE CAN DO

- Focus on prenatal care and early childhood development services and resources to strengthen families, promote resiliency and set a positive life trajectory
- Enhance substance (legal and illegal) use screening during pregnancy (4Ps or CPSP)
- Proliferate routine patient intake screening and assessment to identify health conditions; ensure follow-up is provided as needed and that social determinants are addressed
- Continue clinical programs and services aimed at reducing chronic disease to benefit patients; such as Live Well and Tribal Health's diabetes program
- Promote insurance enrollment and identification of medical home
- Coordinate anti-tobacco efforts; St. Helena Hospital and Public Health Education Coalition currently working to spearhead coordination efforts
- Encourage worksite wellness programs to increase morale, productivity and healthy habits
- Continue Wellness Rx effort that works to shift medical prescriptions from pills only to support for developing healthy habits
- Integrate practices to address exposure to toxic stress, prevention and management of chronic health conditions and successful aging in place
- Continue prenatal support for healthy child development and bonding through Partnership Health Plan and other programs
- Use ASQ in well child visits, developmental screening services and home visitation
- Promote mammography screening
- Increase diabetes education and screening; increase monitoring of A1C tests
- Promote counseling on tobacco use and referral to helplines or smoking cessation programs
- Improve access to reproductive health services for teens
- Develop and implement common assessment tools for
- Encourage health care providers to offer evening and weekend appointments
- Work with transportation services to enhance transit options to providers





Prevention & Health Care

Residents are connected to and engaged in preventative primary care and are physically healthy.

SNAPSHOT OF WHAT'S WORKING:

- Increase use of Community Health Workers
- Rural training in medical education
- Higher education financial incentives for health professionals serving in underserved areas
- School dental programs (such as local partnership among public health, Healthy Start, schools, and First 5)
- Utilize telemedicine and telemental health services
- Local Healthcare providers are prioritizing patient satisfaction
- Local Healthcare providers are developing holistic approaches, inclusive of social determinants
- The percentage of local diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring has increased
- Local cross sector entities are increasing access to diabetes disease management programs
- Local anti-tobacco efforts are being coordinated across stakeholder groups
- Local worksite wellness programs are increasing morale, productivity and healthy habits

SAMPLE OF WHO'S INVOLVED:

Mendocino Community Health Clinics—Lakeview Center, Adventist Health Clear Lake, Sutter Lakeside Hospital, Tribal Health, Partnership Health Plan, County Behavioral Health, Behavioral Health Solutions, Lower Lake School Wellness Center, Lake Transit, E-Center WIC Program, First 5 Lake County, Lake County Public Health Department

Patient + Access to Transportation



Timely Care, Medication & Wellness Prescriptions

- Clinician Visit
- Medication refills
- New prescriptions/treatments
- Engagement in wellness services



Improved Health Outcomes

- Improved care based on clinical guidelines
- Appropriate changes to medication regimen
- Prevention of chronic disease and their complications



Injury & Safety

Residents make safe choices that improve safety of community and prevent violence and injuries.

HEALTH RANKING DATA COMPARISON:

HEALTH MEASURE	LAKE COUNTY	CALIFORNIA AVERAGE
Motor Vehicle Crash Deaths: Number of deaths due to traffic accidents involving a motor vehicle per 100,000 population.	25	9
Violent Crime: Number of offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, forcible rape, robbery, and aggravated assault per 100,000 population.	512	425
Homicides: Number of deaths from assaults, defined injuries inflicted by another person with intent to injure or kill (by any means), per 100,000 population.	8	5
Injury Deaths: Number of deaths from injuries per 100,000 population. Includes deaths from intentional injuries (such as suicide and homicide), and unintentional injuries (such as motor vehicle crashes, drug poisoning and falls).	133	46

OBJECTIVES

- Reduce rates of violent crime
- Increase safe driving
- Improve elderly home safety
- Improve child safety and welfare
- Increase environmental hazard remediation
- Increase reach and scale of cross-sector endeavors

POTENTIAL POLICIES

- Measures to reduce injuries
- Infrastructure for disaster preparedness
- Measures for walkability infrastructure and complete streets

WHAT CAN WE DO

- Enhance domestic violence screening and follow-up with development of safety plans
- Create a culture of safety where residents feel responsible for safety
- Continue efforts to better understand and address environmental conditions and health behaviors that factor into injury deaths
- Promote walkability infrastructure and work to implement complete streets
- Shared messaging and strategies to reduce intentional and unintentional injuries
- Develop specific cross-sector strategies to address safety needs for:
 - o Domestic violence
 - o Drinking and driving
 - o Use of firearms
 - o Distracted driving

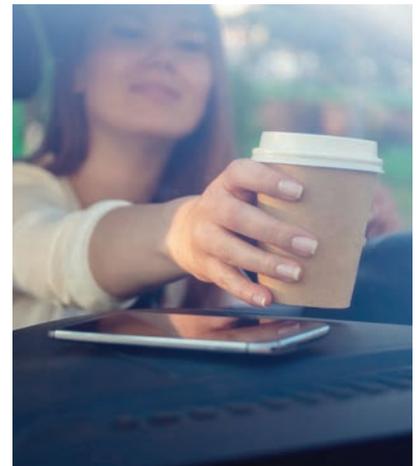
SNAPSHOT OF WHAT'S WORKING

- Law enforcement implements breath testing, sobriety checkpoints
- Enhanced seat belt programs (such as local support for new parents in properly installing car seats);
 - o Work with hospitals to offer a car seat installation check after newborn discharge

38% of driving deaths in Lake County involved alcohol

Leading Causes of Car Crashes

- Distracted Driving
- Speeding
- Impaired Driving





Injury & Safety

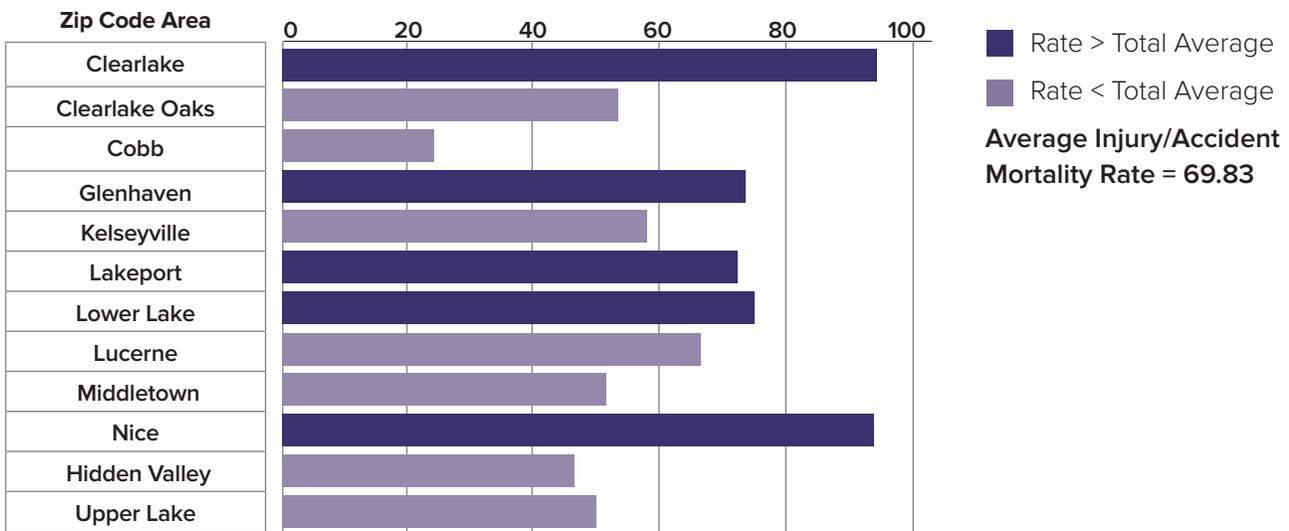
Residents make safe choices that improve safety of community and prevent violence and injuries.

- Provide a fixed, multi-component set of fall prevention interventions to older adults, usually in community settings
- Conduct assessments that gauge older adults' risk of falling and develop personalized approaches to prevent falls
- Naloxone Access
- Local Child Welfare is implementing Differential Response to decrease risk of child abuse/neglect
- Local Children's Council is working across partnerships to decrease exposure to toxic stress and adverse early childhood experiences
- A Local Guide Team has been formed to address trauma-informed practice, organizational policy, and to increase public awareness of ACE factors
- Local Law Enforcement is partnering with community organizations to address violence, crime, and drug use
- Local opportunities for dialog with law/safety enforcement such as "Lunch/Breakfast with a Cop"
- Local Heroes of Health and Safety Fair annually

Injury Deaths = preventable deaths from:

- drug poisoning
- vehicle crashes
- suicide
- homicide

Injury/Accident Mortality Rate per 100,000 (2008-2013) Comparison By Area



Source: "A Spatial Study of Mortality Rates in Lake County", Prepared by Ferron & Associates for Health Leadership Network, September 2016

SAMPLE OF WHO'S INVOLVED:

County Behavioral Health, Behavioral Health Solutions, Redwood Community Services, Mendocino Community Health Clinics—Lakeview Center, Adventist Health Clear Lake, Sutter Lakeside Hospital, Lake County Public Health Department, Lake Transit, Law Enforcement, Public Safety Coalition, Children's Council, Lake County Tribal Health

Next Steps For Stakeholders

A PATH TO ACTION & NEW OUTCOMES

The Wellness Roadmap provides a framework to identify and address Lake County's challenging health profile. It is a tool to bolster community wellness potential and promote positive health outcomes. For too many years, heart disease, cancers, and addictions have been cutting lives short. This takes a significant toll on all aspects of quality of life.

Many of these conditions are preventable and solvable. The Roadmap proposes a vision for a shared countywide agenda that aligns purpose, priorities, partnerships, policy and measurable actions. This will take an intentional, focused, and steady investment of time, resources, and unprecedented cross-sector collective effort. It is a journey that is well on its way as shown by the many community conversations, programs, and partnerships already in motion. The Roadmap is a means to build upon and ramp-up these efforts for irrepressible impact. Following are examples of ways to use this document:

- ✓ Connect with other organizations to leverage resources, create a common vision, and combine efforts for specific outcomes.
- ✓ Identify the most critical health needs city-by-city and set priorities accordingly.
- ✓ Develop and implement Health-In-All policies.
- ✓ Development of a Community Health Improvement Plan.
- ✓ Engagement of the public in shared values around wellness.

WHO ARE THE WELLNESS ROADMAP STAKEHOLDERS?

The stakeholders who make up the cross-sector need for engagement include all entities that anchor our community: local government, educators, health care providers, transportation, the community of faith, law enforcement, emergency services, community organizations, non-profits, business, investors, large employers and the public. Everyone has an important contribution to make.

ADVOCATE FOR POLICIES THAT WORK

Nine evidence-based policy solutions have been identified by the CityHealth initiative for their impact on making measurable and lasting community health improvements. They are:

- Paid Sick Leave
- Quality Preschool
- Affordable Housing
- Complete Streets
- Alcohol Sales Control
- Tobacco Use Among Youth
- Clean, Smoke-Free Indoor Air
- Food Safety & Restaurant Inspection Rating
- Healthy Food
- Procurement



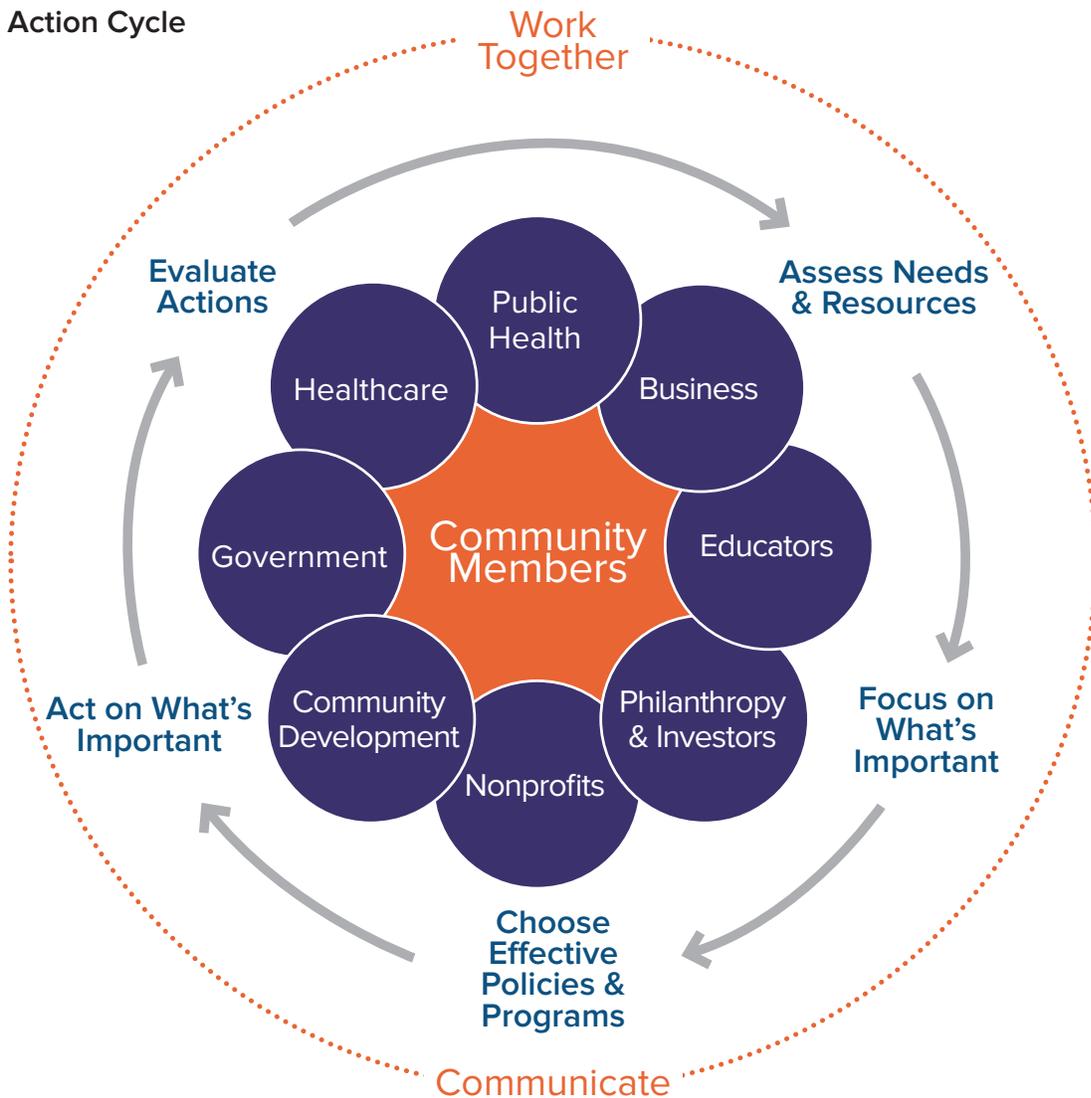
The Roadmap is a tool to build upon and ramp-up our efforts for irrepressible impact.

Next Steps For Stakeholders

COLLABORATIVE ACTION PLAN

The next step beyond the Roadmap is to develop a strategic action plan to carry the collective effort forward. The County Health Rankings offers action planning resources, including an Action Cycle model. The benefit of this Action Cycle is that it provides specific steps and engagement points for stakeholders to jump right into, including partnership building and accountability measures.

Action Cycle



See Attachment A: Wellness Roadmap Model for Collaboration and Collective Impact.



HERE'S WHAT YOU CAN DO:

Now is the time to take a mental inventory of organizational systems and individual choices that promote or inhibit wellness. It's the time for community decision makers to harness momentum and align successful strategies and initiatives for measured change. And it's the time for grass roots community efforts to take hold and flourish.

Join the initiative and contribute to helping make Lake County a more vibrant, thriving, and resilient community.

✓ ACTION CHECKLIST

- Plan a local Town Hall event** to encourage local engagement regarding the health needs specific to your community.
- Share plans and information** on projects that could be expanded through partnerships.
- Contribute to a local data exchange** effort by sharing your data and results with other stakeholders.
- Reach out across collaboratives, decision makers, stakeholders, and the public** to get engaged in the Action Cycle steps.

✓ CONNECT & LEARN MORE

Websites:

health.co.lake.ca.us
healthleadershipnetwork.org



The Wellness Roadmap is the result of a broad-based strategic planning process, and the objectives, policy and collaboration opportunities provide many examples of activities currently underway. Activities and programs may have changed since this document was published May 2017.



THE LAKE COUNTY WELLNESS ROADMAP - PARTING THOUGHTS

To cast an encompassing and mobilizing vision has implications regarding structures and systems that promote processes, organizing, coordinating and agreements needed to bring the vision to fruition. The Wellness Roadmap offers a framework for fresh thinking and innovative structures, promoting unprecedented participation to effect change.

A few considerations:

1. Strategic Action Plan

- Would there be benefit in development of a countywide strategic action plan to move forward a common vision, alignment of purpose, priorities, policy and measurable action?
- What kind of structure would be necessary to support that process, to ensure an inclusive opportunity to make a contribution to the plan, and sustain accountability throughout implementation?

2. Cross-Sector Communication Structure

- How might a structure/system be developed to promote communication across organizations, across civic entities, across existing collaboratives and coalitions to create synergy, avoid duplication of effort, fill gaps, and promote a few common objectives and measures?
 - How would the communication structure promote public participation?
 - How do we promote a shared mindset that enables us to take a positive approach in tackling our challenges?

3. Grassroots Participation

- What kind of structures (existing and/or new) would be best most effective to mobilize and expand grassroots participation in this encompassing effort?
- How do we organize grassroots participation into a sustainable network of contributors who strengthen efforts to increase quality of life and foster a thriving community?



The Wellness Roadmap Reference & Source Materials

ATTACHMENTS TABLE OF CONTENTS:

Attachment A: Wellness Roadmap Model for Collaboration and Collective Impact

Attachment B: How the County Health Rankings are Weighted

Attachment C: County Health Rankings Dashboard: 2010 –2016

Attachment D: Underlying Conditions Influencing Health

Attachment E: A Spatial Study of Mortality Rates in Lake County



The Wellness Roadmap Attachment A

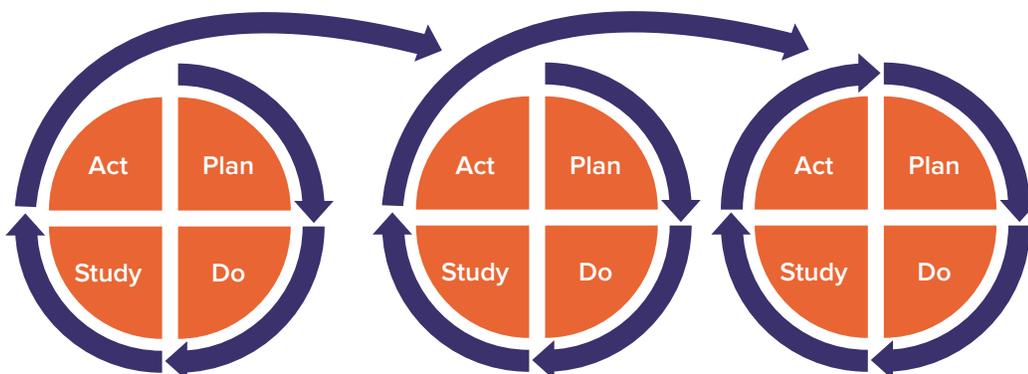
WELLNESS ROADMAP MODEL FOR COLLABORATION AND COLLECTIVE IMPACT

Lake County has a strong collaborative history and continues to build on this strength as it engages in more structured forms of collaboration, such as collective impact. Each area included in the Wellness Roadmap is referred to as an Impact Area as a means to invite cross-sector partnerships that meet the five conditions of collective impact in tackling a particular challenge. These conditions are:

- **A Common Agenda:** a shared vision for change, a common understanding of the problem and a joint approach to solving it through agreed upon actions
- **Shared Measurement:** agreement on how success will be measured and reported
- **Mutually Reinforcing Activities:** partners undertake a specific set of differentiated activities that are coordinated through a mutually reinforcing action plan
- **Continuous Communication:** creating a common vocabulary and ensuring communication flows smoothly among and between networks
- **Backbone Support:** organizations provide staff and resources to support the initiative

This model also creates the opportunity for partners to increase the reach and scale of endeavors that otherwise would fall short of the magnitude necessary to bend the arc toward wellness. There are numerous collaboratives, coalitions, networks, teams, advisories, councils and other bodies in the community that address wellness-related topics. For instance, the Healthy Start Collaborative is focused on school-based wellness that supports academic performance; the Children’s Council is focused on child abuse prevention; the Maternal Child Adolescent Health Advisory is focused on supporting the health of mothers and their children, especially healthy attachment and bonding between children and parents; the Public Health Education Coalition is focused on nutrition, physical activity, and decreasing retail tobacco marketing to youth; the Clearlake Collaborative is addressing wellness in the Clearlake area; Hope Rising convenes a leadership team to address the social determinants of health; and the Health Leadership Network works through partnerships to address various population health issues. Representatives from these collaborations have been involved with informing the approach to the County Health Needs Assessment conducted every three years. The County Health Needs Assessment has become the common impetus for strategic action and collective impact. The Wellness Roadmap creates a framework in which we can all view our work as “one work.”

The collective impact model, as well as the County Health Ranking Action Cycle are both complimented by the Plan-Do-Study-Act cycle. Applying this method to the Wellness Roadmap next steps could be an asset for integrating a process for continual learning and improvement of the actions being taken.





The Wellness Roadmap Attachment B

HOW THE COUNTY HEALTH RANKINGS ARE WEIGHTED

Outcome	Focus Area	Measure
Length of Life (50%)	Premature Death	Years of potential life lost before age 75 (50%)
Quality of Life (50%)	Quality of Life	Poor or fair health (10%) Poor physical health days (10%) Poor mental health days (10%)
	Poor Birth Outcomes	Low birthweight (20%)

Outcome	Focus Area	Measure
Health Behaviors (30%)	Smoking (10%)	Adult Smoking (10%)
	Diet and Exercise (10%)	Adult Obesity (5%) Food Environment Index (2%) Physical Inactivity (2%) Access to exercise opportunities (1%)
	Alcohol and Drug Use	Excessive Drinking (2.5%) Alcohol Impaired Driving Deaths (2.5%)
	Sexual Activity	Sexually Transmitted Infections (2.5%) Teen Births (2.5%)
Clinical Care (20%)	Access to Care	Uninsured (5%) Primary Care Physicians (3%) Dentists (1%) Mental Health Providers (1%)
	Quality of Care	Preventable hospital Stays (5%) Diabetic Monitoring (2.5%) Mammography Screening (2.5%)
Social & Economic Factors (40%)	Education (10%)	High School Graduation (5%) Some College (5%)
	Employment (10%)	Unemployment (10%)
	Income (10%)	Children in Poverty (7.5%) Income inequality (2.5%)
	Family and Social Support (5%)	Children in Single Parent Households (2.5%) Social Associations (2.5%)
	Community Safety (5%)	Violent Crime (2.5%) Injury Deaths (2.5%)
Physical Environment (10%)	Air and Water Quality (5%)	Air Pollution—particulate matter (2.5%) Drinking water violations (2.5%)
	Housing and Transit (5%)	Severe housing problems (2%) Driving alone to work (2%) Long commute- driving alone (1%)



The Wellness Roadmap Attachment C



COUNTY HEALTH RANKINGS DASHBOARD: 2010 – 2016 COMPARISON

KEY: implies indicator moving in positive direction; implies indicator moving in negative direction; and implies no change.

Out of total counties in CA reporting	2016 (out of 57)		2015 (out of 57)		2014 (out of 57)		2013 (out of 57)		2012 (out of 56)		2011 (out of 56)		2010 (out of 56)	
County Health Outcomes Ranking		56		56		57		57		52		53		54
Mortality Ranking		57		57		57		57		54		54		55
# of Premature Deaths		10,600		10,269		9,804		9,804		9,583		10,040		10,287
Morbidity (Quality of Life) Ranking		40		41		41		38		38		43		45
% of Adults with poor or fair health		18%		20%		20%		18%		22%		19%		19%
# of poor physical health days		4.3		4.9		4.9		4.4		4.4		4.8		3.6
# of poor mental health days		4.2		4.5		4.5		4.1		3.9		4.1		3.6
% Low birthweight		6.0%		6.0%		6.0%		5.9%		6.2%		6.3%		6.3%
Health Behaviors Ranking		50		57		55		57		48		52		46
% of Current Adult Smokers**	15%	NA		25%		25%		23%		20%		23%		22%
% of Adults with BMI >= 30		27%		27%		27%		27%		27%		26%		24%
% of Adults who are physically inactive, i.e. adults who during past month, other than regular job, did not participate in physical activities or exercises		22%		22%		20%		18%	NA	18%	NA	NA	NA	NA
Access to exercise opportunities		87%		87%		72%	NA	NA	NA	NA	NA	NA	NA	NA
Percentage of adults reporting binge or heavy drinking		17%		21%		21%		22%		19%		21%		15%
Percentage of driving deaths with alcohol involvement		38%		38%		32%	NA	NA	NA	NA	NA	NA	NA	NA
Sexually transmitted infections		243.8		266		286		285		202		134	NA	NA
# of births per 1,000 female population ages 15-19		43		44		44		44		42		44		46

**Change in definition *As of 2016, smoking definition changed from “% Adults who have smoked at least 100 cigarettes in lifetime”



KEY: implies indicator moving in positive direction; implies indicator moving in negative direction; and implies no change.

Out of total counties in CA reporting	2016 (out of 57)		2015 (out of 57)		2014 (out of 57)		2013 (out of 57)		2012 (out of 56)		2011 (out of 56)		2010 (out of 56)	
Clinical Care		44		44		45		45		38		31		31
% of population under age 65 without health insurance		20%		21%		20%		20%		20%	NA	NA	NA	NA
Ratio of population to primary care physicians		1,640:1		1,777:1		1,693:1		1,799:1		1,627:1		1,627:1	NA	NA
Ratio of population to dentists		2,290:1		2,456:1		2,559:1		2,590:1	NA	NA	NA	NA	NA	NA
Ratio of population to mental health providers		300:1		324:1		640:1	NA	NA	NA	NA	NA	NA	NA	NA
# of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees		50		54		62		67		58		57		59
% of diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring		80%		81%		79%		81%		81%		81%		78%
% of female Medicare enrollees ages 67-69 that receive mammography screening		54%		54.5%		55.8%		57.9%		62.6%		58.6%	NA	NA
Social & Economic Factors		47		47		50		49		46		46		47
% of ninth-grade cohort that graduates in four years		88%		91%		83%		82%**		77%		65%		64%
% of adults ages 25-44 with some post-secondary education		53%		55.2%		54.7%		52.3%		50.0%		48.3%	NA	NA
% of population ages 16 and older unemployed but seeking work		8.9%		11.9%		15.0%		16.7%		18.1%		15.6%		11%
% of children under age 18 in poverty		32%		34%		32%		34%		30%		25%		27%
% of children that live in a household headed by single parent		42%		42%		35%		33%		32%		33%	NA	NA
# of reported violent crime offenses per 100,000 population		512		512		460		444		407		440		418
# of deaths due to injury per 100,000		133		128		122	NA	NA	NA	NA	NA	NA		NA
Physical Environment		30		13		15		20		21		26		2
% of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities		28%		26%		26%	NA	NA	NA	NA	NA	NA	NA	NA

Based on data from University of Wisconsin, County Health Rankings & Roadmaps, <http://www.countyhealthrankings.org/app/california/2015/lake/county/outcomes/overall/snapshot/by-rank>



The Wellness Roadmap Attachment D



GUIDE TO UNDERSTANDING A SIGNIFICANT UNDERLYING CONDITION INFLUENCING POPULATION HEALTH: EXPOSURE TO ADVERSE CHILDHOOD EXPERIENCES (ACE FACTORS) AND TOXIC STRESS

The following table illustrates ACE research in terms of Population Attributable Risk (WA State Family Policy Council). Population Attributable Risk (PAR) is the difference in rate of a condition (proportion of disease) between an exposed and unexposed population.

NO ACE Factors	1 – 3 ACE Factors	7+ ACE Factors
1 in 16 smokers	1 in 9 smokers	1 in 6 smokers
1 in 69 alcoholics	1 in 9 alcoholics	1 in 6 alcoholics
1 in 480 I-V drug users	1 in 43 I-V drug users	1 in 30 I-V drug users
1 in 14 with heart disease	1 in 7 with heart disease	1 in 6 with heart disease
1 in 96 suicides	1 in 10 suicides	1 in 5 suicides
% Not proficient in English	3%	4%
% Females	50.0%	50.2%

Looking at Population Attributable Risk for women only, if it were possible to remove ACEs, this would be the impact on women’s health based on ACE research (WA State Family Policy Council ACE online curriculum):

- 54% reduction in Depression
- 41% reduction in Chronic Depression
- 58% reduction in Suicide Attempts
- 65% reduction in Alcoholism
- 94% reduction in I-V Drug Use

The financial return on investment for reducing ACE factors as it relates to these health improvements for women has not been calculated, but this makes a compelling case for increasing coordinated community effort and policies that lead to reduction of trauma and toxic stress in our community as well as the general population. Consider the potential positive impact on parenting, attachment, healthcare costs, quality of life, and the county’s overall health profile that would result from an intentional collective impact on reducing exposure to ACE factors and other forms of toxic stress.

The negative impacts on health and well-being resulting from exposure to ACE factors in early childhood was first reported in studies conducted by Vincent Felitti, MD and Robert Anda, at Kaiser Permanente in San Diego, California. They discovered that ACE factors were common and that the greater number of ACE factors an individual experienced, the greater the impact on poor life-long health and diminished well-being. The Kaiser study along with seminal trauma research by Dr. Bruce Perry and prenatal exposure to substances by Dr. Ira Chasnoff, created context for an interest in better understanding the prevalence of exposure to ACE factors in Lake County. About 5 years ago, the Lake County Children’s Council conducted an online and paper survey that was completed by about 500 residents county-wide. The results were compiled and summarized by Ferron and Associates. They are compared to the San Diego Kaiser Study of about 17,000 residents in the table on the following page. The Lake County survey was not a randomized sample or research based, therefore it may over represent the prevalence of ACE in the community. However, it was an effort to inform local efforts with regard to trauma-exposure and the role it may play as an underlying factor in our county health profile. Learn more at <http://www.cdc.gov/violenceprevention/acestudy/prevalence.html>.



ACE Survey Response: San Diego Kaiser vs. Lake County

ABUSE	INITIAL ACE STUDY: KAISER SAN DIEGO	LAKE COUNTY SURVEY
Sexual	28.3%	35%
Physical	20.7%	41%
Emotional	10.6%	48%
Physical Neglect	9.9%	24%
Household Substance Use	26.9%	53%
Parental Divorce	23.3%	52%
Household Mental Illness	19.4%	36%
Mother Treated Violently	12.7%	27%
Incarcerated Household Member	4.7%	19%

Other research reinforces/ the ACE study findings. The majority of adults and children in inpatient psychiatric and substance use disorder treatment settings have trauma histories (Lipschitz et al, 1999; Suarez, 2008; Gillece, 2010); 43% - 80% of individuals in psychiatric hospitals have experienced physical or sexual abuse; 51% - 90% public mental health clients have been exposed to trauma (Goodman et al, 1997; Mueser et al 2004); 2/3 of adults in SUD (Substance Use Disorder) treatment report child abuse and neglect (SAMHSA, CSAT 2000) and a survey of adolescents in Substance Use treatment showed that more than 70% had history of trauma exposure (Suarez, 2008). The Substance Abuse and Mental Health Services Administration (SAMHSA) expands on the listing of adverse experiences identified in the ACE study to include neglect or abandonment related to food insufficiency, lack of money to meet basic needs, homelessness, death of a parent, rape, serious medical illnesses or disease, combat related trauma, terrorism, refugee/torture/ civil unrest, and catastrophic loss related to natural disasters.

Resiliency - the ACE antidote:

The prevalence of ACE in our community affords an opportunity to formalize action around collective impact aimed at reducing and preventing ACE exposure, while at the same time increasing opportunities to strengthen resiliency. Too often, exposure to ACE factors results in turning to unhealthy coping strategies such as abuse of legal and illegal drugs, pain medications and tobacco use that manifest in addictions and/or chronic health conditions. Social and emotional supports are potent contributors to creating a path away from toxic stress to a fulfilling and productive life. Resiliency information outlined in the following three points is based on an online ACE curriculum available for Continuing Education Units from Washington State's Family Policy Council. For a decade, Washington State has been a pioneer in building statewide systems to address ACE factors with support from ACE researchers, Dr. Vincent Felitti and Dr. Robert Anda. According to Dr. Ann Masten, when we nurture the healthy development of these three core protective systems, we take the most direct route to help people overcome potential threats and adversities. The three systems are:

- 1. Community, Spiritual and Cultural Beliefs** regarded as nourishment for positive individual experiences. It taps into values, rituals, traditions that nurture personhood and hold potential to shift community norms. The way we live with each other in community is of ultimate importance.



2. Attachment and Belonging is regarded as protection for positive relationship building, such as supportive friends at all ages; children forming attachment to caring adults—parents, teachers, coaches, mentors; and adults finding meaningful companionship and marriage relationships. A pivotal resiliency factor for children is having at least one person who offers unconditional acceptance and engages the child’s potential. Washington’s Policy Council notes that child well-being is significantly improved for each additional person that the mother feels she can count on. Increasing support for the mother is equivalent to a \$15,000 increase in income in terms of benefit to the child.

3. Individual Capability centers on personal growth, especially as related to developing capacity for self-regulation and skills that build self-efficacy. These contribute to having a sense of control over what happens in one’s life and having a positive view of one’s self. An often overlooked benefit of making positive health choices is the impact on developing self-efficacy and selfmastery. A key protective factor and capacity for adults is the ability to find positive ways to cope with life’s ups and downs. In children, capacities can be developed through providing choices when appropriate, giving them chores with a purpose, and working on complex tasks that require time to develop. A crucial key for resiliency in all children is having the capacity to read fluently by age 10.

In Washington State, ACE factors and resiliency questions have been added to their Behavioral Risk Factor Surveillance System (BRFSS). Their resiliency indicators include: (1) social and emotional support; (2) feeling fortunate in life; and (3) hope. An example of a resiliency question is: How often do you get your social/emotional needs met. They have discovered that the answer to this question has a bearing on rates of diabetes, heart disease, and especially mental health. High resiliency scores benefit all ages and all domains of life experience. For instance, BRFSS results indicate that people with high ACE scores and high resilience are as likely as the general population to be employed. However, people with very low resilience scores are 4 times more likely to be unemployed than those with high resilience scores. Only 10% of the factors that influence health are contained in the formal health care system. Research shows that one’s experience has the most potent impact on health. This is also true regarding one’s experience related to ACE exposure. People can be exposed to the same ACE factors and respond quite differently based on their perception of the experience and their access to buffers. Social support helps people heal faster (Sheldon Cohen). Most important to health and well-being is the way we live together day by day.

In Lake County family support organizations have taken a strength-based approach in working through complex issues with the children and families they serve. The majority of these organizations also promote the development of protective factors and resiliency among those they serve. Ground work has been put in place for becoming identified as a “protective factor community”. This protocol recommends that protective factors be incorporated throughout the service continuum. Protective factors are rooted in prevention of child maltreatment and abuse.

Five Protective Factors

1. Parental capacity to cope with the ups and downs of life—resiliency
2. Social Support
3. Parental understanding of ages and stages of healthy child development
4. Concrete supports in time of need
5. Social-Emotional competence of children



PERCENT OF LAKE COUNTY RESPONDENTS REPORTING 3 OR MORE ACE FACTORS





The Wellness Roadmap Attachment E



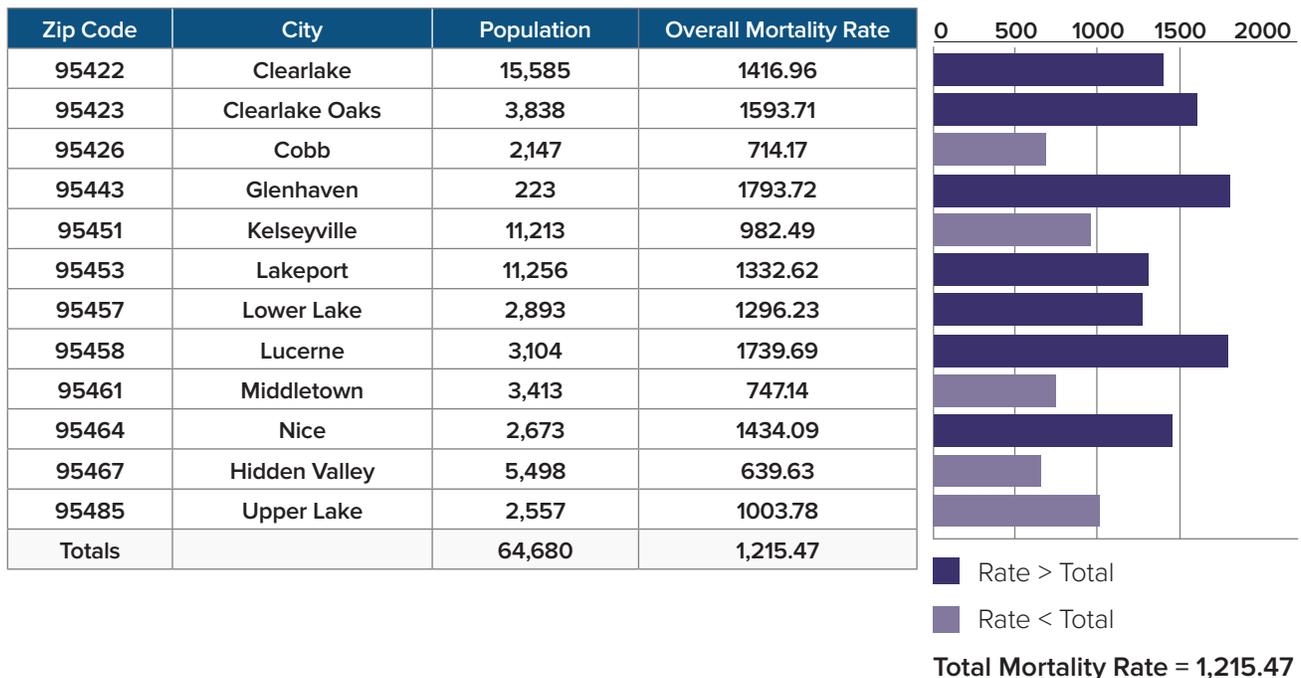
A SPATIAL STUDY OF MORTALITY RATES IN LAKE COUNTY

Ferron & Associates has conducted a study of length of life, premature death and mortality rates in Lake County to provide analysis and mapping for a more in-depth understanding of mortality and premature death data available at the time of the report. The maps and data tables on mortality rates and the top causes on death from this report are valuable tools for targeting efforts and aligning organizations on a hyper-local level to address top health challenges. These maps and tables are excerpted and provided in this Appendix for easy reference, but a full read of the study is recommended for stakeholders, community leaders and decision-makers as a companion document to the Wellness Roadmap.

What are the Mortality Rates in Lake County?

The map that follows displays the overall mortality rate by zip code per 100,000 people around Lake County based on the data chart below. The highest mortality rates for all causes and all ages occurred in Glenhaven, Lucerne, Clearlake Oaks, Nice, Clearlake, Lakeport and Lower Lake.

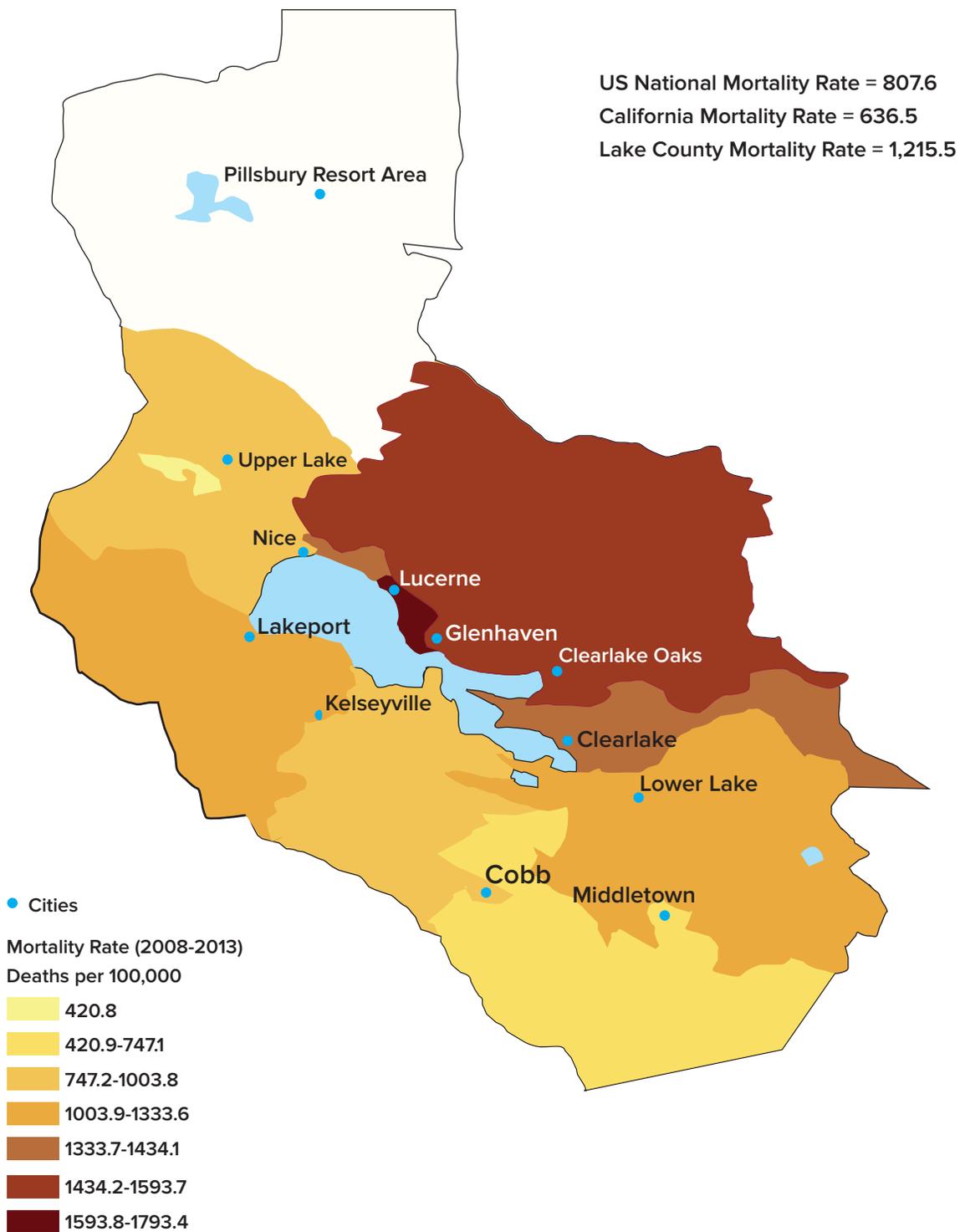
Lake County Mortality Rate (Averaged 2008-2013) By Cause and Zip Code per 100,000



Source: Ferron, Cathy and Reifsnyder, Emery. (2016) A Spatial Study of Mortality Rates in Lake County, San Rafael, CA: Ferron & Associates.



MORTALITY RATE IN LAKE COUNTY (2008-2013)





WHAT ARE THE MAJOR CAUSES OF MORTALITY IN LAKE COUNTY?

The 11 major causes of mortality for which data is collected and reported by the California Department of Public Health (CDPH) are shown in the table below. Because of the county's small population, the year-to-year mortality data for Lake County has a lot of variation; as a result, in this analysis, a 6-year average of mortality data from 2008-2013 was utilized to smooth out these variations. Please note this is a different approach than an analysis looking at the most recent years' data for benchmarking to a specific target level.

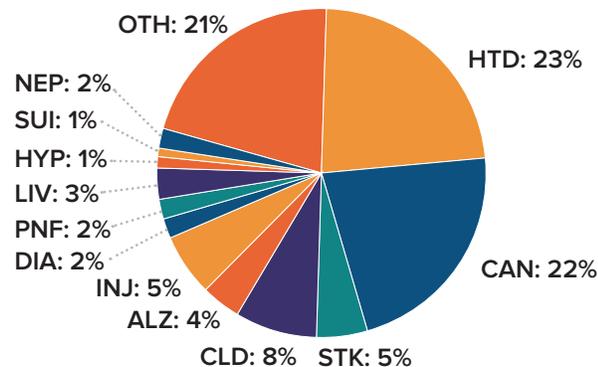
Mortality Rates by Cause per 100,000 (6-year Average 2008-2013)

Cause of death	Lake County	California Statewide	National
Heart Disease (HTD)	283.19	157.2	193.3
Cancer (CAN)	267.73	150.6	185.5
Chronic Lower Respiratory Disease (CLD)	92.51	35.5	47.2
Injury/Accidents (INJ)	69.83	30.1	41.3
Stroke (STK)	64.93	35.7	40.8
Pneumonia and Flu (PNF)	47.6	17.3	17.25
Chronic Liver Disease (LIV)	33	11.9	10.6
Alzheimer's	32	19.3	26.8
Suicide (SUI)	28.6	10.4	12.5
Diabetes (DIA)	23.7	20.0	23.2
Nephritis (NEP)	14.6	7.7	15.2
Total (including ALL OTHERS)	1,215.47	636.5	807.6

Source: California Department of Public Health, Death and Birth Records, Death Profiles by ZIP Code.

The top five major causes of death in Lake County (based on the above 6-year averaged crude death rate) comprise an estimated 68% of the total deaths, including heart disease (HTD, 23%), all cancers (CAN, 22%), chronic lower respiratory disease (CLD, 8%), unintentional injury/accidents (INJ, 6%), and stroke (STK, 5%). This data includes persons of all ages, including those over age 75.

Lake County Percentage of Total Deaths by Cause Average 2008-2013 per 100,000





Drug-related deaths are also one of the major causes in the county; the 2016 County Health Status Profile ranked the county at 58th out of 58 counties in the state for these deaths with a crude death rate of 46.3 based on a three year average of 2012-2014. In addition, homicide (ranked 56th) and firearms-related deaths (52nd) are also at high levels compared with the state levels; however, state published rates were deemed unreliable due to the small number of data elements. In addition, the detailed data needed to conduct a spatial analysis was not available at this time for these causes of death; as a result, these causes of death were not included in this study.

2016 County Rank Order (out of 58 counties in California)

County Ranking	Health Status Indicator
58th	All Causes of Death
58th	Drug-Induced Deaths
58th	Lung Cancer
57th	All Cancers
57th	Chronic Liver Disease & Cirrhosis
57th	Accidents/Unintentional Injuries
56th	Chronic Lower Respiratory Disease (CLRD)
56th	Homicide
55th	Coronary Heart Disease

County Ranking	Health Status Indicator
55th	Suicide
54th	Motor Vehicle Traffic Crashes
52th	Firearms-Related Deaths
50th	Prostate Cancer
50th	Female Breast Cancer
49th	Cerebrovascular Disease (Stroke)
49th	Influenza/Pneumonia
36th	Alzheimer’s Disease
25th	Diabetes

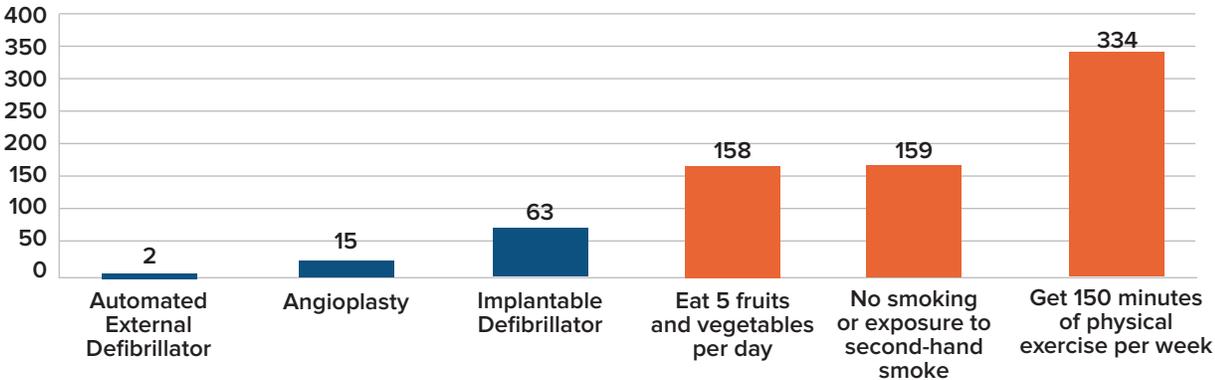
Source: CA Department of Public Health, County Health Status Profile



SUMMARY OF FINDINGS, LIMITATIONS & RECOMMENDATIONS

Research studies have shown that implementing healthy behaviors can have an effect on preventing or postponing death. The chart below shows the number of deaths that could be postponed or prevented by consistently using heart-related medical approaches vs. implementing a positive health behavior.

ESTIMATED NUMBER OF DEATHS POSTPONED OR PREVENTED IN A YEAR PER 100,000 PEOPLE



Source: *Improving Population Health by Working With Communities: Action Guide 3.0, National Quality Forum, August 2016*

This study of the mortality rates was conducted with the purpose of demonstrating the use of data for a spatial analysis of health conditions in Lake County. The data was pulled from publicly available sources to conduct this work. It has limitations due to the restricted amount of data available with a geographic unit for this purpose. However, it provides healthy “food for thought” for potential targeting of community-level work toward improving population health.

The Health Leadership Network (HLN) has been pursuing discussions among medical and non-medical agencies and organizations in the county around sharing data for the purpose of conducting this and other types of data analysis to use in developing strategies for improving population health. Understanding the who, what and where of health issues in the county can significantly contribute to developing a basis for policy, system, and environmental changes that will impact health status in the county.

Sharing population health data has recognized value and can contribute to this work being done around the county to improve the health and well-being of residents. This needs to be a collaborative effort. HLN, working with a group of its members, recently developed the Wellness Roadmap that includes eight impact areas where work is being done for this purpose. County-level data measures were identified for tracking progress over time. If de-identified, aggregate data at the sub-county level with a geographic unit for analysis such as by zip code, census tract, school district, etc., could be made available, it would greatly enhance the potential for tracking change over time at the community-level, not just in aggregate across the county.

With increased availability of this type of detailed data, and a shared commitment to improving population health, HLN and other collaborators can continue to make progress toward providing value to its network of member organizations, learning about and applying best practices to help overcome challenges to improving population health in Lake County.

Wellness Roadmap Stakeholders

The Roadmap was developed through a facilitated, community strategic planning process. We acknowledge and appreciate the stakeholders below for their participation and contributions to the process. The Roadmap is supported in many areas of their work.



