

Community Health Report - Executive Summary

Willow Ayres, Anna Huber, Jen Javelet, and Erica Stansfield

School of Nursing, University of California, Davis

NRS: 427 Fostering Healthy Communities

Professor Edwards

September 11, 2023

INTRODUCTION

Placer County in California encompasses 1,400 square miles of diverse geographical regions stretching from urban South Placer through the historic Gold Country Foothills, into the High Sierras of North Lake Tahoe. The city of Rocklin is nestled at the base of the Sierra Foothills just off Interstate 80 in Placer County and is home to individuals residing in small-town single-family or multi-family homes, as well as mobile homes. This executive summary provides an overview of data involving Rocklin housing cost and age, public amenities and assets of Rocklin including public transportation need and accessibility, as well as Placer's fast food restaurant density, prevalence of obesity, and ratings of air quality by the American Lung Association (2021). Based on findings involving factors of air pollution and air quality ratings, as well as fast food usage and rates of obesity, community interventions involving nutritional and cooking support for targeted populations who do not meet recommended nutrient intake, and home air filters for the general population of Placer County are addressed.

OVERVIEW OF THE COMMUNITY

Both Rocklin and Placer County were included in the community overview. A rental survey performed by the city of Rocklin in April 2021 displayed average costs for rent for market-rate studio apartments (\$1,300/ month), one-bedroom apartments (\$950-\$1,990/ month), and two-bedroom apartments (\$1,200-\$2,275/month). Percentage of Rocklin Homes which are less than 30 years old was 68%, and 40% of these homes are less than 20 years old (California Department of Housing and Community Development, 2021). Peter Hill Park, Monte Verde Park, Sasaki Park, Corral Alva park, Quarry City Park, Woodside Park, Rocklin Park, Joe Hernandez Park, False Ravine Park, David Uribe Park, and Harry Crabb Park are among the public facilities and recreational areas offered in this region. Church 180 (Part of the foursquare gospel international) and Old Saint Mary's Church (a Catholic Church) were included as areas individuals can practice faith. A Sutter Medical Center with neighboring outpatient services (i.e. outpatient oncology center, imaging) were also identified in a community windshield survey.

Healthy People (HP) 2030 is an multi-domain encompassing disease prevention and health promotion goals. These health objectives allow communities to assess health status and build a strategic plan for community health improvements. Rocklin's community use of public transportation was 1.1% in 2017-2021, compared to the HP 2030 target (5.3 %). Adults who smoked or used tobacco in 2020 was 10.2%, compared to the HP 2030 target (6.1%). Within Placer County, 66.2 % of adults are overweight or obese (Be Well Placer, 2023). Placer County's Fast Food Restaurant Density is 0.88 per 1,000 persons, within the worst 25% of all California Counties, and has seen an upward trend from 2011-2016 (most recent data) (Be Well Placer, 2023). Placer County has an annual Air Particle Pollution has a rating of a 5, equivalent to an F letter grade on the American Lung Association letter rating scale. This is seen as a steady rating from 2016-2018 to 2019-2021 (Be Well Placer). The American Lung Association assigned Placer County a letter F grade Annual Ozone Air Quality "based on the average annual number of days that ozone levels exceeded US standards" (Be Well Placer, 2023). Rocklin has an average walk score of 34 (100 being the best and 0 being the worst score), indicating residents rely on a private vehicle for a primary mode of transportation and running errands. This poses a challenge for individuals unable to obtain a private vehicle (walkscore.com, 2023). The percentage of individuals without access to a large grocery store was 31.9% (US News.com. Healthiest Communities California).

SUMMARY OF KEY PRIORITIZED NEEDS

Based on the assessment of secondary data at a sub-county level, the following were identified as significant health needs in southeast Rocklin. Two of the highest-priority concerns in this community are the need for air filters due to poor air quality and the obesity rates resulting in the need for nutrition education. Placer County received a letter F grade in an effort to explain the concern of air pollution (Be Well Placer). Research has discovered poor air quality can lead to extremely harmful health concerns. These conditions include various types of cancer, chronic lung disease, cardiovascular diseases, and chronic bronchitis (Gouvernement du Québec, 2022). In addition, those who have comorbidities or are at higher risk of developing these health conditions are pregnant women, those with asthma, seniors, children under 5, those with diabetes, and individuals who have other respiratory conditions. The community of Rocklin is in need of assistance to reduce their risks of further health conditions which can be achieved by providing free air filters for their homes. Secondly, to address the concern of obesity prevalence, we suggest the community of Rocklin will benefit from resources such as a local community kitchen and nutrition/cooking classes. Studies have found that of those who reside in Placer County, 66.2 % of adults are reported to be overweight or obese. This is further explained to be most prevalent in those who are between 18-44 years old (Be Well Placer). Offering a shared community kitchen where individuals can gather to share knowledge and resources, cook/prepare foods, and consume food has been shown to increase healthy food consumption, improve social skills, and decrease food insecurity (County Health Rankings & Roadmaps, 2018). In conclusion, the concern of air pollution and obesity prevalence can be addressed by the following suggested interventions.

INTERVENTIONS

Poor air quality is a significant health concern in southeast Rocklin and Placer County, with an annual air particle pollution rating of 5, which is equivalent to an F letter grade on the American Lung Association letter rating scale. This rating has remained steady from 2016-2018 to 2019-2021. (Be Well Placer, 2023) Research has shown that high levels of air pollution contribute to public health concerns, such as cancer, cardiovascular disease, respiratory diseases, diabetes mellitus, obesity, and reproductive, neurological, and immune system disorders. (U.S. Department of Health and Human Services, n.d.) To prevent these problems from affecting community members, a top priority intervention is to improve air quality within our residents' homes. Air filters can help keep indoor air clean during wildfires and times when fine particulate matter levels are high. Particulate matter is a complex mixture that may contain soot, smoke, metals, nitrates, sulfates, dust, water, and tire rubber. It can be directly emitted, as in smoke from a fire, or it can form in the atmosphere from reactions of gasses such as nitrogen oxides. (Air Quality Monitoring, n.d.) Currently implemented are 350 Air filters workshops, which are funded by the Sacramento Air Quality Management District as part of the Supplemental Environmental Projects program. 350 Sacramento has distributed over 500 air filters to local low-income families who speak more than a dozen different first languages. 350 Sacramento hosts distribution and construction events for air filters, where community members are given the raw materials to build their own air filters and educated on air quality and how to protect their family's health. (Air Filter Project, 2023) Partnering with 350 Sacramento and bringing the 350-air filter project to Placer county would allow community members to regain control over their health. Providing free air filters for homes is an evidence-based intervention to improve indoor air quality and reduce the risk

of health problems caused by air pollution. Research has shown that air filters can effectively reduce indoor air pollution levels and improve respiratory health outcomes (Kanchongkittiphon et al., 2015). As expenses pose a problem for community members, educating them on assembling low-cost air filters with affordable materials is an ideal solution. After assembling the filters, community members are taught how to monitor air quality levels and determine when it is best to stay indoors for preventative health reasons.

Obesity prevalence is another significant health concern in the community, with 66.2% of adults in Placer County reported to be overweight or obese. Being overweight or obese increases the risk for various health problems, including coronary heart disease, type 2 diabetes, asthma, high cholesterol, osteoarthritis, high blood pressure, sleep apnea, and certain types of cancer. (Overview of Obesity, 2019) An intervention to educate community members on how to eat healthier and how to cook is a priority intervention. A study found that culinary interventions, such as cooking classes, were not linked to significant changes in cardiometabolic risk factors but were associated with improved attitudes, self-efficacy, and healthier dietary intake in both adults and children.(Hasan et al, 2019) Another study concluded that adding hands-on cooking classes to a weight management intervention may improve weight loss outcomes and diet quality. (Apaugh et al, 2020) Partnering with Sacramento Food Bank and Family Services (SFBFS) would be beneficial as they already hold nutritional cooking classes for the community at both SFBFS campuses and partner sites throughout Sacramento. Classes are taught in English and Spanish, which would especially benefit Placer County and East Rocklin. SFBFS can also provide nutritious food for classes, as well as food donations for class members to take home. (Health and nutrition Classes, n.d.) Collaborating with Sutter Health to have dietitians and nurses to implement these programs would be ideal. Sutter Health has a team of registered dietitians who offer evidence-based information on nutrition, healthy eating habits, and the safety of new diets, products, and supplements. They also offer nutrition classes to prevent and treat disease and improve health for people of all ages. (Sutter Health, n.d.) Because these classes will be taught on a volunteer basis, a problem that might be encountered is a lack of trained staff to implement this program. Sacramento's food literacy program is a nonprofit organization that promotes cooking, nutrition, and gardening to improve the community's health, environment, and economy. The organization also hosts a food literacy training program that trains volunteers to become food literacy educators. This program helps volunteers develop teaching skills to extend food literacy knowledge to low-income communities in the Sacramento region (Food Literacy Academy, n.d.). Volunteers can become proficient in nutrition through this organization and then teach community classes in Placer county. Cooking classes can be held at the Rocklin community center, as well as various other faith-based and communal kitchens. This intervention has the potential to increase healthy food consumption and may also lead to increased food security and improved social skills (County Health Rankings & Roadmaps, 2018).This program provides a low- to no-cost solution to obesity, making it an appealing option for this specific community. By providing food and establishing a shared community kitchen, individuals can gather to cook and prepare healthy meals, which addresses the priority need of reducing obesity prevalence.

KEY STAKEHOLDERS

In order to implement these interventions it would require help from four key stakeholders. The first stakeholder is Sutter Roseville Hospital. Partnering with Sutter Roseville would allow access to

healthcare personnel. This would include using their nutrition and dietitians to help teach our cooking classes as part of our patient education classes. They would be able to recommend recipes for attendees to practice at home. The second partnership would be with Rocklin Community Center. By partnering with the community center it would allow for a solidified location to host the education and cooking classes. By being at a community center there would be access to both kitchen resources and open classroom or event spaces to hold the patient education classes. The third partnership would be with the Placer Food Bank. The Food Bank would look for fresh fruits and vegetables along with canned goods to be easily accessible to participants in our education classes. It would also allow for the necessary ingredients to be obtained for the cooking classes. In order to implement the distribution of air filters to combat poor air quality a partnership with the Bay Area Air Quality Management District would be needed. Having the Bay Area Air Quality Management District as a key stakeholder would allow them to educate us on their air filtration program so that we can implement that same program in Placer County. In Placer County, they have the Placer County Air Pollution Control District which would be a final key stakeholder to partner with to help with the implementation of this program into the community.

CONCLUSION

Overall, the community of Rocklin, California would greatly benefit from the efforts to address the poor air quality and increasing obesity rates. We are concerned about the community health that is negatively affected by air pollution and the lack of resources to make healthy food choices. It is crucial to take action to combat the negative effects of air pollution and the lack of access to healthy food choices, which are both contributing factors to the community's declining health. By implementing air filters in low-income family homes, we can help reduce the amount of pollutants that residents are exposed to on a daily basis, thereby improving their respiratory health. By providing an inviting and accessible space for nutrition education and demonstrations, we can empower the community with knowledge and resources to make healthier food choices. This will not only improve the physical health of community members but also have a positive impact on their mental health by promoting a sense of community and well-being.

References

Air Filter Project. 350 Sacramento. (2023, April 27) <https://350sacramento.org/air-filter-project/#>

Air Quality Monitoring. Air Quality Monitoring | Placer County, CA. (n.d.).

<https://www.placer.ca.gov/8082/Air-Quality-Monitoring>

Alpaugh, M., Pope, L., Trubek, A., Skelly, J., & Harvey, J. (2020, November 28). *Cooking as a health behavior: Examining the role of cooking classes in a weight loss intervention*. *Nutrients*.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7761020/>

Centers for Disease Control and Prevention: National Health and Nutrition Examination Survey (NHANES). Retrieved from www.cdc.gov/nchs/nhanes/index.htm.

Clean Air Filtration Program. Bay Area Air Quality Management District A Healthy Breathing Environment For Every Bay Area Resident. (n.d.).

<https://www.baaqmd.gov/about-air-quality/wildfire-air-quality-response-program/clean-air-filtration-program>

Community Kitchens for Nutrition Education. County Health Rankings & Roadmaps. (n.d.).

<https://www.countyhealthrankings.org/take-action-to-improve-health/what-works-for-health/strategies/community-kitchens-for-nutrition-education>

Food Literacy Academy. Food Literacy Center. (n.d.).

<https://www.foodliteracycenter.org/food-literacy-academy>

Hasan, B., Thompson, W. G., Almasri, J., Wang, Z., Lakis, S., Prokop, L. J., Hensrud, D. D., Frie, K. S., Wirtz, M. J., Murad, A. L., Ewoldt, J. S., & Murad, M. H. (2019, May 10). *The effect of*

culinary interventions (cooking classes) on Dietary Intake and behavioral change: A systematic review and Evidence Map - BMC Nutrition. BioMed Central.

<https://bmcnutr.biomedcentral.com/articles/10.1186/s40795-019-0293-8>

Health and Nutrition Classes. Sacramento Food Bank & Family Services. (n.d.).

<https://www.sacramentofoodbank.org/nutrition-classes>

How healthy is placer county, california? | us news healthiest communities. (n.d.-a).

<https://www.usnews.com/news/healthiest-communities/california/placer-county>

Placer, B. W. (2023). *Be well placer.* Be Well Placer :: Indicators :: Healthy People 2030 Progress Tracker.

<https://www.placerdashboard.org/indicators/index/dashboard?module=indicators&controller=ind+ex&action=dashboard&id=214122914258501475&card=0&localeId=153879>

Overview of obesity. Johns Hopkins Medicine. (2019, November 19).

<https://www.hopkinsmedicine.org/health/conditions-and-diseases/obesity/overview-of-obesity>

Placerdashboard.org - be well placer. (2023). <https://www.placerdashboard.org/>

Rocklin neighborhoods on Walk Score. Walk Score. (2023).

<https://www.walkscore.com/CA/Rocklin#:~:text=Rocklin%20has%20an%20average%20Walk,Rocklin%20is%20somewhat%20bikeable.>

Sutter Health. *Nutrition* (n.d.). <https://www.sutterhealth.org/services/nutrition>

The health effects of Air Pollution. Gouvernement du Québec. (n.d.).

<https://www.quebec.ca/en/health/advice-and-prevention/health-and-environment/the-health-eff>

ects-of-air-pollution#:~:text=People%20who%20breathe%20polluted%20air%20regularly%20over%20several%20years%20can,Lung%20cancer

U.S. Department of Health and Human Services. (n.d.). *Air pollution and your health*. National Institute of Environmental Health Sciences.

<https://www.niehs.nih.gov/health/topics/agents/air-pollution/index.cfm>

