

Cancer Screening Awareness

Identify Communities with Low Cancer Screening Rates & Raise Awareness



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INTRODUCTION

Cancer is one of the leading causes for deaths in America, with thousands of patients dying everyday. However, it poses a higher threat to Alameda County since it is the leading cause of mortality countywide. Many residents, especially low income families and minorities, are diagnosed with Cancer at late stages, when treatment is less effective and survival rates drop . Cancer screenings can mitigate this problem by identifying cancerous cells in the early stages, which would help increase the treatment's effectiveness and give the patient a higher chance at survival. This report identifies areas in Alameda County with the lowest screening participation and examines why those gaps exist.

RESEARCH

Since there are over hundreds of types of cancers, each variation has their own cancer screening procedure. The most common and standardized cancer screenings were chosen for the research process to evaluate: mammograms for breast cancer, colonoscopy and the Fecal Immunochemical Test (FIT) for colorectal cancer, and the HPV test and pap test/smear for cervical cancer screening. In order to understand what communities in Alameda County were participating the least in cancer screenings, research was conducted using the California Health Maps, a credible dataset that uses official data from the California Cancer Registry and CDC's PLACES Project. My research process included analyzing the 23 health zones in Alameda county's annual checkup, mammogram, cervical cancer screening, colorectal cancer screening, preventive care in men over 65, and preventive care in women over 65 rates. Preventive care for seniors above 65 years old essentially means that they are up to date on core set of clinical preventive services: Flu shot past year, Pneumococcal vaccination (PPV) shot ever, Colorectal cancer screening, and a Mammogram in the past 2 years (California Health Maps). Compared to statewide levels, overall Alameda County fared well with similar percentages that ranged from around a 5% difference.

However, a 5% gap at the county level says nothing about how wide the gap gets between individual health zones, where rates can fall well below both the county and state averages. Additionally, interviews were held with the Alameda County Public Health Department staff to get their insight into the disparity and understand what the data means.

From comparing all the data from the health zones, the following five zones frequently scored the lowest across all screenings compared to state percentages: Alameda County 16 (A0586), Alameda 9 (A0311), Alameda 7 (A0512), Alameda 13 (A1000), and Alameda 17 (A0382). Alameda 16 (A0586) in Hayward performs the worst in the county with a mammogram rate of 71.7%, the lowest in the county, a cervical screening rate of 76.7%, the second lowest in the county, and a colorectal cancer screening rate of 55.9%, tied for third lowest (California Health Maps: Alameda 16 (A0586)). Regarding annual checkups, Alameda 16 has a lower percentage of 58.9% compared to state average of 62%, an uninsured rate of 5.5%, and preventive care for seniors above 65 years old is slightly below state average with 34.8% for men and 28% for women (California Health Maps: Alameda 16 (A0586)). Alameda 16 doesn't have one isolated weakness, rather it consistently shows low participation across breast, cervical, and colorectal screenings, making it a main priority.

The zone with strongest healthcare access concerns is the zone Alameda 9 (A0311) in the Elmhurst district of Oakland. It has the lowest colorectal screening rate throughout the county with a 53.6%, and uninsured rate of 13.3%, the highest of all the zones, and lowest preventive care for men and women levels with only 25.8% for men and 21.1% for women (California Health Maps: Alameda 9 (A0311)). Its cervical screening and annual check up percentages are lower than the state with 78.0% for cervical cancer screening and 59.5% for annual checkups (California Health Maps: Alameda 9 (A0311)). However, this zone is relatively strong with mammograms with a rate of 76.1%, which is above the state average of 73%, meaning that this area doesn't have a major breast screening gap (California Health Maps: Alameda 9 (A0311)). Alameda 9 is especially important for colorectal cancer screening and

general healthcare access. Its unusually high uninsured rate and very low preventive-care participation suggest that residents may have difficulty accessing routine healthcare and follow-up services.

Alameda 7 (A0512), the Brookfield and East Oakland area in Oakland, has several overlapping barriers. It has the second lowest colorectal screening rate of 54.7%, and the second highest level of uninsured residents with 8.6% (California Health Maps: Alameda 7 (A0512)). It has lower than state average cervical screenings, annual check ups, and preventive care for both genders, with their percentage respectively being 77.7%, 59.5%, 30.8%, and 24.9% (California Health Maps: Alameda 7 (A0512)). . Additionally, it has a slightly higher than state average level of mammography with a percentage of 74.5% (California Health Maps: Alameda 7 (A0512)). . Alameda 7 combines low cervical and colorectal screening with a relatively high uninsured rate and weak preventive care participation. This suggests both a screening gap and a broader healthcare-access problem.

The zone that has consistently low screening rates is Alameda 13 (A1000) in San Leandro. Alameda 13 has the second lowest mammography rate of 72.1%, and is tied for the third lowest for colorectal screening of 55.9% (California Health Maps: Alameda 13 (A1000)). They also have the low annual check up rates, 59.7% and cervical cancer screenings, 77.8% (California Health Maps: Alameda 13 (A1000)). Insurance is less severe than in zones 9 and 7 with a rate of 4.7%, and has a slightly lower level of preventive care for both genders with 35.9% for men and 27.4% for women (California Health Maps: Alameda 13 (A1000)). This means that Alameda 13 is one of the few zones that performs poorly across all three major screening categories. Insurance does not seem to be the main issue, so the barriers may involve awareness, language, transportation, provider access, or appointment availability.

Lastly, Alameda 17 (A0382) in Union City has particularly weak women's cancer screening indicators. It has the lowest cervical screening rate of 75.3% and the third lowest mammography rate of 72.8% (California Health Maps: Alameda 17 (A0382)). Additionally, it has a lower than state average colorectal screening rate of 57.8% and annual checkups of 60.1% (California Health Maps: Alameda 17

(A0382)). However, Alameda 17 performs better than the state for preventive care for both genders with 37.6% for men and 30.9% for women, as well as a low uninsured rate of 2.4% (California Health Maps:Alameda 17 (A0382)). This zone appears especially relevant for breast and cervical cancer outreach. Because the uninsured rate is low, insurance may not be the main barrier. Factors such as language, awareness, cultural beliefs, transportation, or access to women's healthcare providers could be the issue.

After identifying and analyzing the areas in Alameda County that need to have the lowest levels of cancer screenings, I dug deeper to understand the potential barriers. I evaluated each zone's poverty rate, poverty rate above 65, medicaid assistance, foreign born, distance to cervical screening, distance to colorectal screening, distance to mammogram facility, and population over 65. Regarding insurance, it explains part of the disparity but not the whole pattern. Alameda 9 and Alameda 7 have the two highest uninsured rates in the county at 13.3% and 8.6%, alongside the lowest colorectal and preventive care numbers, so insurance could possibly play a role there. But Alameda 17 has the lowest uninsured rate of the five at 2.4% and still has the county's lowest cervical screening rate. In three of the five zones, residents are insured and still not screened, which alludes that the barrier lies somewhere else.

Similarly, distance doesn't explain the cancer screening gap. There are cervical and colorectal screening sites within one to four miles in every zone, while mammography is consistently farther, reaching four to six miles in Hayward and six to eight in Union City. This essentially means that distance is not the barrier because there are medical facilities near residents in close proximity. However, proximity shouldn't just be taken at first glance. Just because a medical center is nearby does not ensure that it is available to the public. An uninsured patient can't walk into a hospital no matter how close it is, and a patient may have a medical provider in another facility whose hospital is much farther away. Also, certain medical providers or plans wouldn't cover for a cancer screening performed outside of their contracted sites. The distance that matters is the distance to a facility a resident is eligible to use, which

would be hard to analyze since residents have different providers.

The demographic data points to two different problems. Alameda 7 and 9 in Oakland have the highest poverty rates, the most residents on Medicaid, and the most residents without insurance, but the fewest foreign born residents. Alameda 16, 13, and 17 are the opposite: almost everyone has coverage, but between 38% and 49% of residents were born outside the United States. In Oakland, the problem looks financial, since residents cannot afford care or do not have insurance to pay for it. In the other three zones, residents can afford screening and live close to clinics, so the more likely issue is that information about screening is not reaching them, whether because of language, unfamiliarity with preventive care, or a lack of targeted outreach.

CONCLUSION

In conclusion, the biggest finding from the research was not what was the biggest barrier to screening, but what screening is consistently screened the least. Colorectal cancer screening rates fall between 53.6% and 57.8% in all five zones, which are twenty points below cervical and mammography rates in the same areas. The same disparity occurs in all the zones, regardless if there is an uninsured rate of 13.3% or of 2.4%, high or low poverty rate, and foreign born population. Essentially, this alludes that the screening process may be the problem rather than people in the zones. A colonoscopy requires a referral, preparation, a day off work, and someone to drive the patient home. All these additional steps may deter potential people from getting screened or completing the colonoscopy process.

The research wasn't able to find one definitive answer to why some people weren't inclined to get screened since the five zones did not share one barrier. Alameda 7 and 9 in Oakland have high poverty, high Medicaid enrollment, and the highest uninsured rates in the county, so cost and coverage are the main obstacles there. Alameda 16, 13, and 17 have low uninsured rates and clinics within a few miles, but

between 38% and 49% of their residents were born outside the United States, so the more likely obstacles are language, unfamiliarity with preventive screening, and outreach that has not reached them. An approach built for one of these zones would not work in the other.

After consulting the Alameda County Public Health Department's Director of Community Health, Jenny Wang and her team, she revealed some of her own discoveries. While insurance, poverty, and distance all play a role in less participation, the person's mentality plays the largest role. Many people are overconfident in their health, and believe that it isn't possible that they could have cancer, so they don't see the worth in getting screened and doing those steps if the result would come out "negative". Others wouldn't want to get screened because of their fear of it coming positive, so they would rather delay it, have a lack of knowledge about the procedures, or don't think it's worth disrupting their daily routine since many screenings cost money and require the day off. However, the people who are the least likely to get screened are those who are caregivers. Caregivers are people who look after a sick, disabled, or elderly family member, usually without pay and on top of their own jobs. According to Wang, "A screening appointment can always be pushed back, but the person they care for cannot be left alone". Going to the appointments would mean that the caregiver would have to find someone to cover for them, which is often expensive or simply not possible. This piece of information explains what the data shows since caregiving usually falls upon middle aged and older adults, which is the target audience that most cancer screenings are meant to reach. Caregiving is also especially common in low income households and immigrant families, where hiring help usually isn't an option and there is an elder relative living in the home. Those are exactly the conditions found in these five zones, where there are high amounts of poverty and foreign born residents.

The five zones identified do not share a single cause, but they share a pattern. In order to promote more screenings, there must be stronger cancer screening awareness campaigns that also primarily

promote colorectal cancer screening. Additionally, assistance programs to take care of the people that a caregiver is looking over for would also help increase the amount of people getting screened. Cancer screening can only save lives when it is completed, and in Alameda County the gap between a postponed appointment and a completed one could prevent more deaths.

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