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Secondhand Smoke: An Examination of the Public Health Issue in Marina

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Abstract

The Monterey County Tobacco Control Program is a public health organization that works to solve tobacco related issues in Monterey county. Secondhand smoke exposure is a major public health issue because of its dangerous effects on human health. This project is a research report on secondhand smoke in the city of Marina. The expected outcomes of this project were to educate readers, gain information, and find an effective policy for mitigating this public health issue. Components of this project include in depth research on secondhand smoke, survey conduction regarding Marina residents opinions about the issue, and data collection of tobacco use in multiunit housing areas. This project resulted in the achievement of all expected outcomes. Information was gained on public perception of the issue, data collection supported that many Marina residents face a risk of secondhand smoke exposure, and an effective policy suggestion was found; implement smoke free housing across the county.

Keywords: Monterey, secondhand smoke, tobacco, health, multiunit housing

Agency and Communities Served

The Monterey County Health Department Tobacco Control Program provides services to Monterey county which includes the cities of Salinas, Carmel, Monterey, Pacific Grove, Gonzales, Seaside, King City, and Soledad. This organization focuses on various aspects of tobacco including Tobacco Retailer License administration, the promotion of cessation services that are available for the community and individuals in need, and mitigation of major issues including youth vaping rates and secondhand smoke exposure in multi unit housing areas. The Tobacco Control Program’s mission statement is to “enhance, protect, and improve the health of Monterey County residents and environments”. This organization is faced with a large scope of work, with all activities and assignments needing to be met under certain deadlines and recurrences. This scope of work allows the agency to best serve the community and work towards all critical aspects of tobacco control.

Problem Model Background and Literature Review

Contributing Factors	Problem	Consequences
Not enough regulations to protect non-smokers	Secondhand smoke	Heart Disease
Lack of awareness about the dangers of secondhand smoke		Cancer
Non MUH costs are too expensive		Lower socioeconomic individuals are more affected

Problem Statement

My project addresses the issue of secondhand smoke, specifically in multi unit housing areas. A social problem is defined as any condition or behavior that has negative consequences for large numbers of people and is recognized as needing to be addressed. Two articles that identify and support this as a social issue include the CDC article, *Going Smokefree Matters: Multi Unit Housing*, along with an article by King, B et.al titled *Secondhand Smoke Transfer in Multiunit Housing: Nicotine & Tobacco Research*. The CDC article provides insight on the public health issue of secondhand smoke along with evidence to back up claims. A statistical value found in the beginning of this article that highlights the magnitude of the issue is “About 80 million (1 in 4) people in the US live in multiunit housing, such as apartments, including about 7 million living in government-subsidized housing...each year, an estimated 28 million multiunit housing residents are exposed to secondhand smoke in their home or apartment that came from somewhere else in their building like a nearby apartment” (CDC, 2021). This points out the issue of vulnerable populations being more at risk of being exposed to secondhand smoke which is one of the focuses of this project.

The article by King also supports evidence of this public health issue and will use a study conducted in 2010 that leads to more findings that secondhand smoke is indeed a huge concern. The authors present research methods and data of the study conducted that shows factors of secondhand smoke transfer in confined spaces and how fast the smoke moves from room to room.

Contributing Factors

There are several key contributing factors that directly contribute to the issue of secondhand smoke exposure. One of those contributing factors is a lack of regulations to prevent

the problem from happening. The CDC article *Smoke Free Policies Reduce Secondhand Smoke Exposure* supports this by providing evidence and data of secondhand smoke exposure rates before and after the implementation of smoke free policies. The data found in this article is from 3 studies that were conducted at workplaces, restaurants, and bars in New York and Minnesota. The studies assessed secondhand smoke exposure by measuring Cotinine levels in nonsmokers. “Cotinine is a byproduct the body creates when it breaks down nicotine, a major ingredient of tobacco smoke” (CDC, 2020). The first component of the studies included measuring the levels of cotinine found in nonsmokers that entered the public buildings. Next, the public areas implemented a smoke free policy and another set of data regarding cotinine was taken. The final results for all conducted studies found that smoke free policies reduced secondhand smoke rates by 80-85% in just one year.

The second contributing factor of secondhand smoke is a lack of awareness regarding the dangers of secondhand smoke. This also includes a lack of knowledge or ability of how to avoid inhaling smoke. Cleveland Clinic’s article *Secondhand Smoke: Dangers* discusses environments and populations that secondhand smoke tends to be more prominent in. Several of these include infants, children, service industry workers, and pregnant women (Cleveland Clinic, 2023). It is important to note that children and infants cannot just choose to leave a room that is filled with smoke. Many smokers are unaware of the dangers they create for other people when they light up a cigarette.

The third contributing factor is a lack of affordable housing, which leads to increased numbers of people having to live in multiunit housing. In the article *General Information About Secondhand Smoke*, the CDC states “People are more likely to be exposed to secondhand smoke if they live in multi-unit housing... like apartment buildings with many homes next to one

another in the same place. Even when no one in the home smokes, secondhand smoke can drift from other units including via hallways, stairwells, and ventilation systems” (CDC, 2022). With California housing prices drastically increasing, more people will have no other choice than to reside in multiunit housing which is a major inequality for lower socioeconomic individuals and families.

Consequences

Secondhand smoke exposure unfortunately leads to many consequences. Two of these include heart disease and cancer. CDC Tobacco Free has included plenty of information regarding these life threatening consequences. Secondhand smoke causes nearly 34,000 premature deaths of non-smokers each year in the U.S. These secondhand smoke exposed adults have a 25-30% higher chance of developing coronary heart disease than those who have not been exposed to secondhand smoke (CDC Tobacco Free).

Cancer rates in non smokers are similar with 7,300 deaths occurring in the U.S each year from lung cancer. Essentially, non-smokers who are exposed to secondhand smoke suffer the same health effect risks as smokers. This risk increases with more frequent occurrences of being around smokers.

The third consequence of secondhand smoke are the inequalities that many people face due to factors such as being unable to live in secluded and smoke free homes, work locations that feature higher rates of smoking, and parents and family members that choose to smoke around their children or relatives.

Project Proposal

I have chosen to conduct a research project on the issue of secondhand smoke, specifically in multi-unit housing complexes. This research project will feature three main

components including researching and presenting professional data on the issue, conducting a public opinion survey to find out how local residents feel about this issue, and conducting my own data on tobacco use and litter on the premises of local multi-unit housing complexes. I have chosen to focus solely on the city of Marina for this research project.

Justification and Benefits

This project should be implemented because it researches a public health issue that causes health disparities for many people; a large majority being lower socioeconomic individuals and families that have no other choice but to live in multi-unit and shared housing complexes. My internship organization will greatly benefit from this project because it will allow them to better understand the problem and potentially use the information when advocating for new ordinances and laws. The gained benefits for this capstone project include addressing a major public health problem, a social inequity, and allowing my organization to use my findings to better carry out their goal of eliminating secondhand smoke exposure in the community.

Expected Outcomes

The data I collected from tobacco public opinion surveys and multi unit housing observations will suggest that secondhand smoke is a public health issue that Marina residents feel they are at risk from or already affected by. After my project is completed, I expect that the Monterey County Health Department will see an increase in success in regards to pushing for ordinances to reduce secondhand smoke exposure in the county due to having more data to present to city council. After presenting my project, I expect that 75% of listeners will understand this public health issue more and will have an increased chance of voting for the passing of laws to protect those living in multi unit housing.

Assessment Plan

The Monterey County Health Department will have access to my finished project and will be able to use and reference the data when presenting proposals to city council on why regulations need to be made to improve and ensure that Marina residents are less likely to be exposed to secondhand smoke. To assess the effectiveness of my project the health department can compare multiple variables including the secondhand smoke data available before and after my project, the knowledge of public opinion before and after, and if any changes are present when addressing concerns to city council. Future additions to my research can be made by undergoing methods such as annual surveys, tobacco data observation in multi unit housing areas, along with implementation of changes such as sample size and the survey formats.

Project Implementation Plan

I am conducting a research project that focuses on the health issues of secondhand smoke in the city of Marina, specifically in shared and multi unit housing settings. The goal of this project is to present the project findings and data to city council and other local government officials to advocate for increased local laws and regulations to mitigate this major public health issue. This project features four diverse components to ensure that the goals are achieved.

The first component includes extensive research and writing regarding the properties and health effects of tobacco smoke, methods of smoke travel, and data on nationwide mortality rates from secondhand smoke. This component will also feature evidence that this public health issue is more susceptible to lower socioeconomic individuals and families who have no other option than to live in shared or multi unit housing complexes due to costs. The second component of this project includes data from a large survey distribution that I collected in October 2022.

Myself and another intern collected 131 responses from a public opinion survey we distributed to Marina residents that featured questions on topics including secondhand smoke and local

regulations regarding tobacco. This component will present data on how these select Marina residents feel about this public health issue and what they would like to see a change of. The third component of this project will feature results from a data collection I conducted in November 2022. I went to 6 multi unit housing complexes in Marina and recorded tobacco data including the amount of tobacco products found on the ground by each complex, the areas where most tobacco products were found, and any activity observed of residents and guests smoking in the complex area. This component will serve as evidence that the city Marina features a high risk of secondhand smoke in the apartment complex areas. The fourth component of this problem will be a detailed explanation on how the previous components are linked to each other and why there needs to be action taken. I will implement suggestions to the current policies regarding secondhand smoke along with changes that myself and professionals at the Monterey County Tobacco Control Program believe would improve the health of the community.

Results

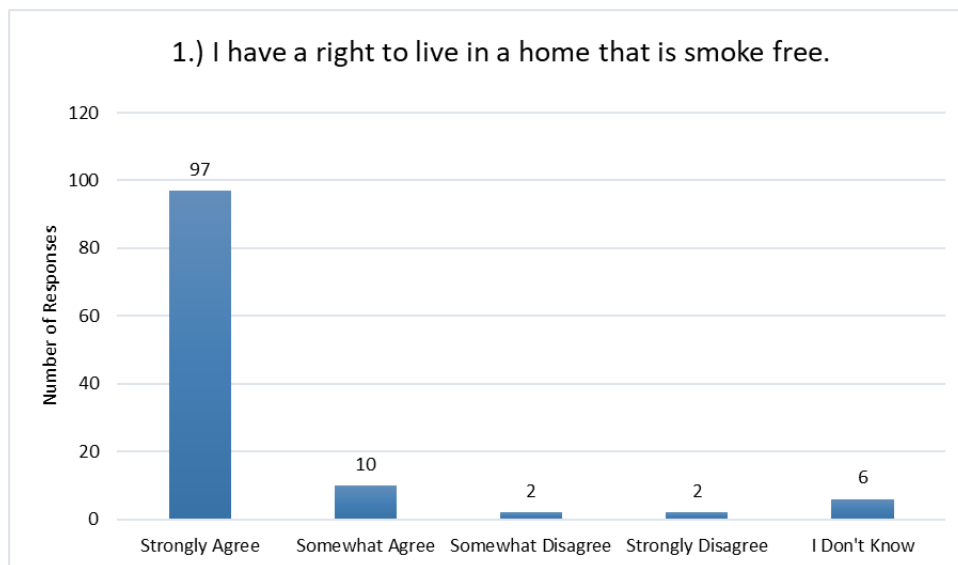
Before initiating this project, my expected outcomes included increasing readers and listeners' knowledge of secondhand smoke aspects, gaining information about the issue on a local level, and using all components to find the most effective policy for mitigating this public health issue. In order to assess the overall success of this project, I focused on the benefits that the tobacco control program will gain from my research and results. I also determined that if the data I found proved that tobacco is indeed an issue in Marina, then my project was successful. This project will be very useful for them when addressing secondhand smoke issues and advocating for policy implementation. However it will take more time to be able to fully determine the extent of the benefits and success, mainly because there have been no changes to smoke free policies at the time of this project being complete.

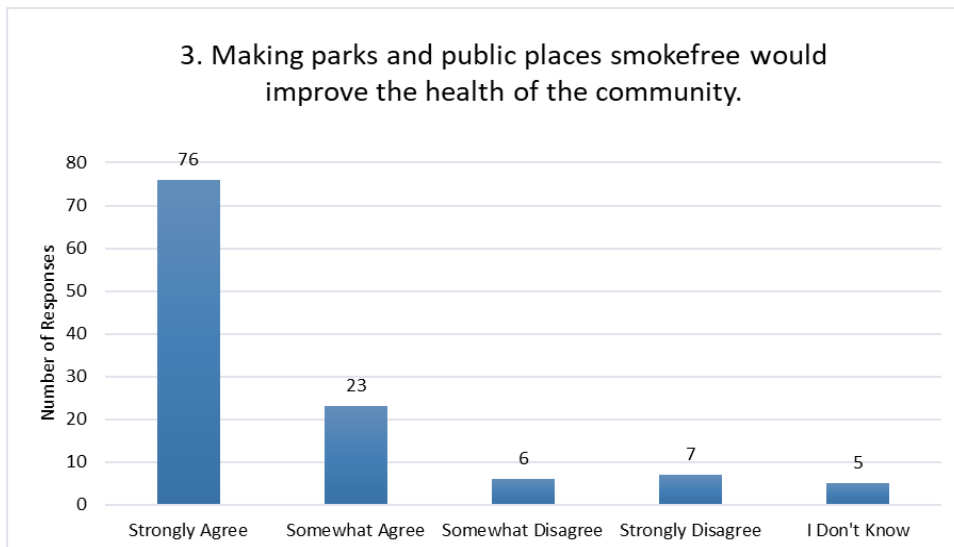
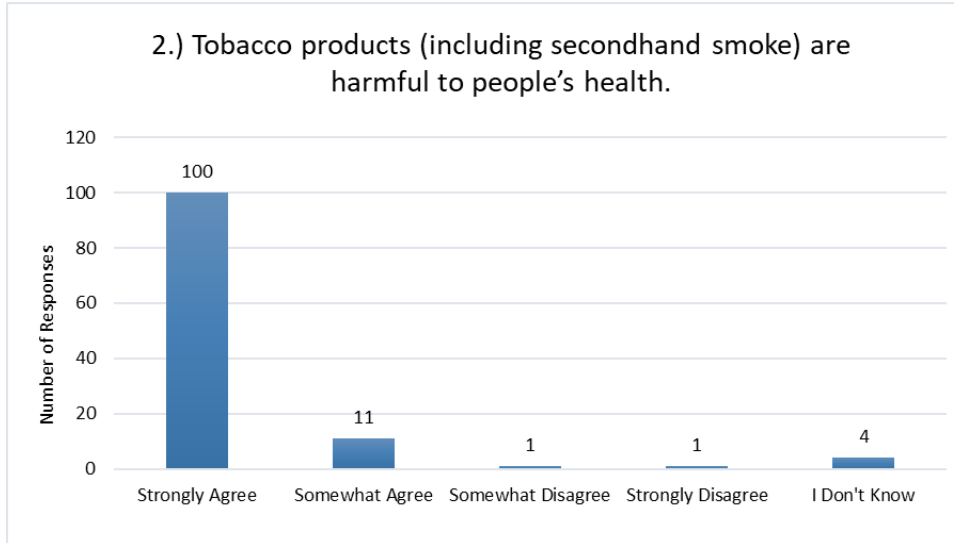
Data and Findings

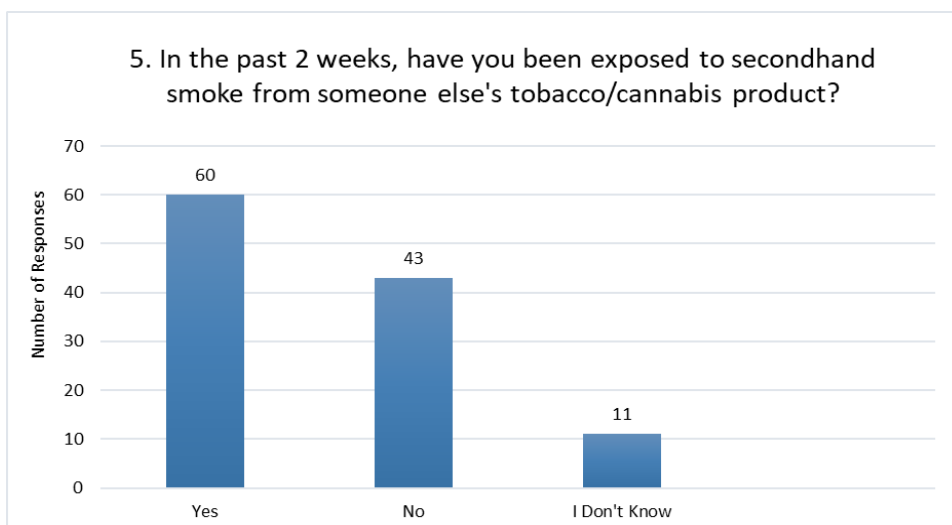
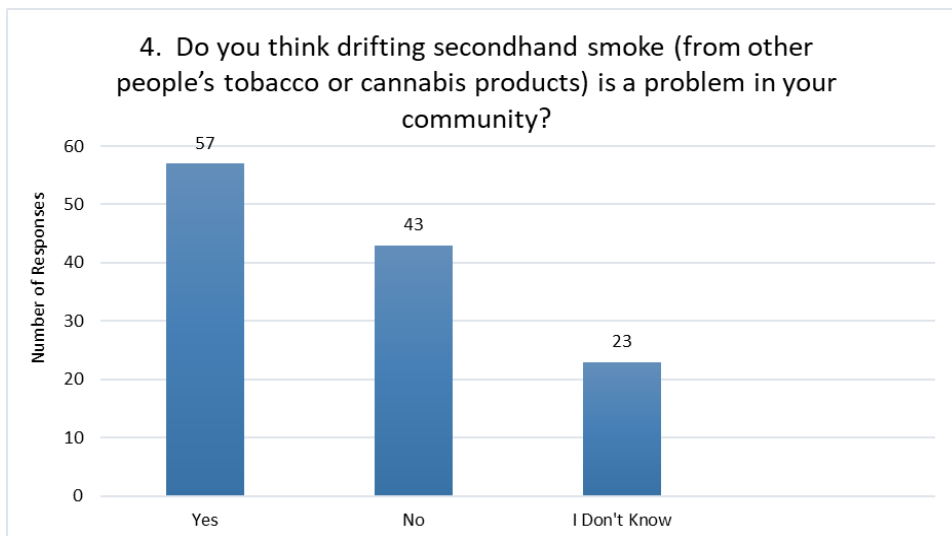
The first component of research was a public opinion survey for Marina residents which features topics such as flavored tobacco products, smoking in multi-unit housing areas, tobacco retail licensing, litter produced by tobacco products, and tobacco and e-cigarette use among the youth. The surveys were distributed to Marina residents at locations such as Walmart, Grocery Outlet, Walgreens, and the Marina local farmer's market. For the sake of this project, the survey responses that were unrelated to secondhand smoke were filtered out. The modified survey features five questions including three likert scale questions and 2 yes or no questions.

Questions 1-3: Rate your level of agreement or disagreement with the following statements.

Questions 4-5: Answer "yes" or "no" for the following questions.







Analyzing the survey responses above, it is shown that the majority of respondents believe that humans should have rights towards living in a smoke free home. In fact, 107 of respondents selected that they lean towards agreement on this topic while only 2 respondents selected that they disagree. This is an extensive difference. Similar results are shown regarding the respondents' opinions on tobacco being harmful with 111 responses being a level of agreement with just 2 responses being a level of disagreement. For the third question, 84% of the 117 respondents selected that they strongly or somewhat agree that making public places smoke

free would improve the health of the community. 48% of survey respondents answered that they have been exposed to some sort of secondhand smoke in the past two weeks. This is in contrast to the 34% selecting “no” and 9% selecting that they did not know if they had.

Data and Findings (Part 2)

The second research component in this project was a tobacco litter observation report. This activity involved a data collector (myself) visiting six multi unit housing complexes in Marina to observe any smoking behaviors in these settings. The methods I used to gather data included carefully walking around the premises of the housing complexes and counting tobacco litter found on each complex, acts or signs of smoking seen, and noting any other secondhand smoke related observations. I collected all data on a paper rubric before transferring it electronically. The main intention of conducting this observation was to find out if Marina residents living in multi unit housing complexes are at risk for being exposed to secondhand smoke. All data from the 6 different housing locations were combined below to see the total amounts of tobacco related findings.

Cigarette Butts	Other Tobacco Litter	E-Cigarette/ Cannabis Litter	Acts of Smoking Observed
110	12	10	5

A factor that may have affected this data collection was the storm that had hit Marina a few days prior to this observation. The ground was very wet and partially flooded in several areas, making it difficult to achieve a fully accurate count of all of the litter being looked for.

However the data that was obtained shows that smoking is still an issue at multi unit housing complexes in Marina and residents living here are at risk for being exposed to secondhand smoke. While conducting this observation, the majority of these complexes were found to not feature any “no smoking” signs or designated smoking areas. There were also minimum places to properly discard tobacco litter at all of the complexes. With the data collected above showing relatively modest amounts of litter, this still detrimentally affects children and families in Marina.

Conclusions and Recommendations

Using my data findings, information and data from national health and science organizations, and research that the Monterey County Tobacco Control Program has found throughout current and past work, I can state a recommendation that I believe would be most effective for reducing secondhand smoke exposure rates in Marina; the implementation of a smoke free housing policy. This recommended policy would be for the entire Marina area and would strictly prohibit any residents or guests smoking in the premises of their shared housing complexes. To implement this effectively I would suggest that landlords of multi unit housing complexes provide strict guidelines of the policy for current and new residents. In order to keep everybody safe and protected from the health effects of tobacco smoke, acts of residents disregarding this policy and continuing to smoke on the housing premises should face consequences such as eviction. For residents in these homes that do smoke, they can smoke at least 30 feet away from the building and residents. To better implement this policy, there also needs to be installments of signs in smoke free areas within the housing grounds. This is the most effective policy because it looks to completely eliminate secondhand smoke exposure, while

providing smokers the opportunity to smoke without causing harm for other people. In order to eliminate secondhand smoke exposure rates in Marina, there needs to be action taken now.

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Appendix

Implementation Table

Task	Timeline	Parties Involved	Materials/ Services Needed	Deliverables
Receive survey data excel sheet from Michelle for Tobacco Opinion Survey and MUH Observations.	By March 1st, 2023	Michelle and Gonzalo	Computer and access to all documents	Excel sheets, printed survey copies
Receive feedback on my excel rough drafts	March 15th for public opinion data, April 1st for MUH Observation data	Mentor, Raider, Michelle (Supervisor)	Computer, office space	N/A
Receive feedback on final draft from all Tobacco Control members	April 21st, 2023	Michelle, Gonzalo, Raider	Computer, office space	Printed version of capstone project report