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Smoke-Free Multi-Unit Housing

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Abstract

The Monterey County Tobacco Control Program is working to pass smoke-free multi-unit housing (MUH) ordinances in the cities of Monterey, Salinas, and Seaside, to prevent exposure to secondhand and thirdhand smoke. Exposure to the toxins in smoke, including cannabis and electronic cigarettes, causes health risks to non-smoking residents. A sustainable program was developed to educate and increase tenant awareness of health risks associated with second and thirdhand smoke exposure and ways to create healthy home environments. The program consisted of training and building knowledge for Community Health Workers (CHWs) to effectively disperse information to MUH residents. Once the ordinances pass and the CHWs present the educational toolkit in MUH complexes, one can expect to see an increased awareness of smoke-free policies among tenants. With the prohibition of smoking in MUH complexes, one can expect in the long-term to see a reduction in health risks associated with exposure to secondhand and thirdhand smoke.

Keywords: secondhand smoke, thirdhand smoke, Community Health Workers, smoke-free multi-unit housing

Agency & Communities Served

The Monterey County Tobacco Control Program (MCTCP) is a division of the Monterey County Public Health Bureau. MCTCP promotes healthy environments for families and youth, and believes every individual has the right to a healthy life and environment regardless of their race, socioeconomic status, and sexual preference (2018). The MCTCP has three objectives that address three distinct categories of tobacco control; access to tobacco products, exposure to secondhand smoke, and community engagement. These three categories represent specific areas that MCTCP is addressing during the next few years; tobacco retail ordinance (access to tobacco), staff to the Monterey County Collaborates (community engagement), and smoke-free multi-unit housing (exposure to secondhand smoke).

Creating smoke-free MUH consists of passing and implementing ordinances in the cities of Monterey, Seaside, and Salinas. The ordinances will create 100% smoke-free MUH that includes common areas such as play areas and pools. With the implementation of such ordinances, tenants will be protected from the health risks associated with exposure of secondhand and thirdhand smoke.

Residents in Monterey County are 59% Hispanic/Latino and 30% White non-Hispanic (Census, 2017). The city of Monterey has a total population of 28,639, and 11% of those residents are living in poverty. The city of Seaside has a population of 34,150, and about 15% of the residents live in poverty. Furthermore, the city of Salinas has the largest population of the county with 157,596 residents; of those residents, 17% live in poverty (Census, 2017). Monterey

County houses 51% of its residents in renter-occupied MUH complexes. The majority of the 51% of residents living in MUH are considered to have low socioeconomic status (MCTCP, 2018, p. 16). As a result, all MUH residents, regardless of socioeconomic status, will be protected against exposure to SHS.

Problem Description

Exposure to secondhand (SHS) and thirdhand (THS) smoke causes adverse health risks to non-smoking residents of MUH. The Center for Disease Control and Prevention (CDC) (2018b) identifies SHS as “smoke from burning tobacco products, such as cigarettes, cigars, or pipes, smoke that has been exhaled, or breathed out, by the person smoking” (para. 7). The smoke contains more than 7,000 chemicals, including hundreds that are toxic and about 70 that are carcinogenic (CDC, 2018b). THS is the residual nicotine and other chemicals left on indoor surfaces by tobacco smoke and clings to clothes, furniture, drapes, walls, bedding, carpets, dust, vehicles, and other surfaces long after smoking has stopped (Hays, 2017, para. 1). The CDC (2018d) established that “Secondhand smoke can travel within multi-unit housing and common areas through doorways, cracks in walls, electrical lines, ventilation systems and plumbing.” In 2017, the MCTCP received many calls from tenants living in MUH complexes complaining about SHS drifting into their units. In addition, tenants and city officials have asked for assistance to address the issue (MCTCP, 2018, p. 16).

Furthermore, each year 40,000 Californians die due to smoking-related illnesses (CDC, 2018a). The California Department of Public Health reported that in 2016, the overall use of

tobacco products was 16%, of which included electronic cigarettes for adults 18 years and older (CDPH, 2018, p. 4). Although California strengthened AB 13 (smoke-free workplace law) in 2016 to prohibit smoking in hotel lobbies, small businesses, break rooms, and prohibited vaping wherever smoking is not allowed, the law failed to protect MUH residents from drifting SHS and THS into their units (CTCP, 2016).

Contributing Factors

MUH residents face exposure to the dangers of SHS and THS for multiple reasons. Currently, there is not an ordinance in place prohibiting smoking and vaping in MUH, which is essential to preventing health disparities. California's Clean Air Laws recognized that electronic cigarettes used to vape are prohibited anywhere cigarette smoking is also prohibited. In 2011, former governor Jerry Brown signed Senate Bill 332 (SB 332) that gave property owners the right to make their rentals smoke-free (American Lung Association, 2011). SB 332 gave property owners the right to make their rentals smoke-free, but was not a mandate. This allowed voluntary transitions to smoke-free housing, making it insufficient to prevent health risks.

If a current lease agreement does not specify that the rental complex is smoke-free, the tenants are excused and allowed smoke or vape inside their units. Unless the property owners have the tenants sign an addendum to the lease stating that the complex is smoke-free, the tenant is allowed to smoke or vape inside the unit, making it difficult to make a complex 100% smoke-free. One must remember that not all lease agreements expire at the same time, so the implementation of a smoke-free policy may take time.

The lack of tenant information regarding MUH smoke-free policy implementation within their cities and complexes is a contributing factor to exposure to SHS and THS. In 2014, the American Lung Association in California (ALAC) conducted a telephone survey of voters in five California cities where smoke-free MUH laws were implemented. The survey measured awareness of, and attitudes of the laws implemented in their cities. The results of the surveys showed that lower-income non-white renters were not receiving information about the new law.

33% of the least affluent renters compared to 43% of the most affluent received information from their landlord regarding the law... 49% of white apartment renters compared to 38% of African-American renters and just 26% of Latino apartment renters received information from their landlord regarding the law. (ALAC, 2014, para. 12 & 13)

When looking at Monterey County, the majority of its residents are Hispanic/Latino, and 11% of the population live in poverty. The survey indicates that it is critical and essential for all MUH renters to receive proper educational information to prevent health disparities associated with SHS and THS.

The CDC (2018b) found that “Secondhand smoke exposure is higher among people with low incomes. During 2011–2012, more than 2 out of every 5 (43.2%) nonsmokers who lived below the poverty level were exposed to secondhand smoke” (para. 16). The CDC (2018b) also found that children who live in homes where no one smokes indoors and live in MUH have 45% higher cotinine (a product formed after the chemical nicotine enters the body) levels compared to the children that live in single-family homes. The demographics of Monterey County show there

is a high rate of poverty. Also, there is 51% of the residents who live in MUH, which indicates that many of the 51% may be exposed to higher levels of cotinine as a result of SHS exposure. With a high percentage of low-income families in the cities of Monterey, Seaside, and Salinas, home ownership becomes difficult for families forcing them to live in MUH and placing them at a higher risk to SHS and THS exposure.

Consequences

Being a victim of SHS can cause premature death. The CDC (2018c) established that exposure to SHS causes about 41,000 adult deaths annually in the United States. The CDC (2018c) also indicated that SHS is the cause of about 7,400 annual deaths due to lung cancer and about 34,000 annual deaths from heart disease. Health Data (2016) in 2014, reported that in Monterey County 29.7 females per 100,000 and 40.8 males per 100,000 people died due to tracheal, bronchus, and lung cancer. Not to mention that smoking cigarettes is the number one preventable death in the United States (CDC, 2018c). If cigarette smoke kills so many adults in the U.S, it is not a surprise to know that SHS affects so many people.

Living in MUH, where SHS drifts through doorways, cracks in walls, electrical lines, ventilation systems, and plumbing poses for asthma triggers. Monterey County has an active prevalence rate of asthma of 8.8%, higher than the state's rate of 8.7% (CDPH, 2018). The CDC made it clear that SHS is a trigger to asthma, and the American Lung Association (ALA) (2019) recommends quitting smoking as a way to improve indoor air quality and prevent asthma

triggers. With the recommendations of the CDC and the ALA plus the rate of active asthma in Monterey County, it is clear to see that SHS is a preventable trigger to asthma.

Problem Model

Contributing Factors	Problem	Consequences
Not having local level ordinances in place prohibiting smoking and vaping in MUH	Exposure to secondhand (SHS) and thirdhand (THS) smoke causes health risks to non-smoking residents of MUH in the cities of Monterey, Salinas, and Seaside	Preventable premature death
Lack of tenant information regarding MUH smoke-free policies implementation within their cities		Asthma trigger
Having a lower socioeconomic status or low income		

Capstone Project Description and Justification

Project Purpose

Preventing health disparities due to tenant's lack of awareness regarding MUH smoke-free policies implementation within their cities is crucial. If a law protects residents from potential health disparities, it is a civil rights obligation to inform and educate tenants of those risks. Furthermore, having an awareness of the health dangers associated with SHS, THS, and vaping in MUH, tenants will promote positive lifestyle changes to those who are exposing others to health risks.

Project Justification

When preventing chronic disease through a smoke-free MUH ordinance, awareness of the change in policy is crucial so that residents can prevent further exposure to health risks. The faster the residents receive the tenant *Healthy Homes Toolkit* training, the sooner they will be aware of what a healthy home environment looks like, and they can start making changes to create healthy homes and prevent health disparities.

The CDC's Healthy Homes Initiative, which focuses on improving living conditions, is a great tool to use in the implementation of healthy homes training. The Healthy Homes Initiative's goal is to "build capacity and competency among public health, environmental health, and housing professionals, and others who work in the community, to develop and manage comprehensive and effective healthy homes programs" (CDC, 2006e. para. 4). Also, the CDC has recommended and supported the Training of Trainers (ToT) model as a way to prevent chronic disease in communities through fast and effective information delivery.

Project Implementation

As the MCTCP works to develop an ordinance to support smoke-free MUH in the cities of Monterey, Salinas, and Seaside, information regarding the ordinance and city changes has to be shared with the residents. To address the lack of awareness of risks associated with SHS and THS, volunteers were trained to educate tenants about creating healthy homes through informative presentations in MUH complexes. The volunteers were identified as "Community Health Workers (CHWs)" also known as "Promotores de Salud."

In preparation for implementation of the training of CHWs, a set of materials were created. The *Healthy Homes Toolkit*, which will be used to educate tenants, was designed as an

easy to read, understandable way to create a healthy home and improve indoor air quality (IAQ). The *Breathing Easier Curriculum* was designed to educate CHWs with information regarding the respiratory system, asthma triggers, SHS, THS, vaping, cannabis, mold, and other issues surrounding IAQ.

The toolkit along with the curriculum were submitted, as part of the progress report for the smoke-free MUH objective, to California Tobacco Control Program. After approval by the state, the toolkit and curriculum were ready to be used. The recruitment process of CHWs began with contacting different community organizations to inspire interest in the work. In collaboration with the Salinas Adult School CHWs program, a cohort of fourteen were recruited.

On September 21, 2019 the *Breathing Easier Curriculum* was used to conduct the ToT. During the curriculum training, a set of activities were designed to engage the trainees. The first part of the training was based on presenting and doing an overall review of all the health topics related to the MUH tenant toolkit and in depth explanation of the health risks associated with smoke.

For the second half of the training, the trainees were separated into five groups of three. Each group was assigned a topic from the toolkit, and were asked to do a three to five minute presentation of that topic with information from the curriculum. After each group presented, the class was given the opportunity to ask any final questions.

The end of the training was to take a six question survey about the training. The survey contained four open ended questions, one three word description of their experience, and a checkbox question asking their readiness level to conduct a tenant *Healthy Home Toolkit* training. After the curriculum training, it was expected to have at least three to five CHWs ready

to conduct a tenant training, as well as to create capacity in acquired knowledge for CHWs of public health issues and create sustainability. Eventually the hope is to see a reduction of exposure to SHS in MUH. The Scope of Work in Appendix A provides a detailed implementation plan and timeline.

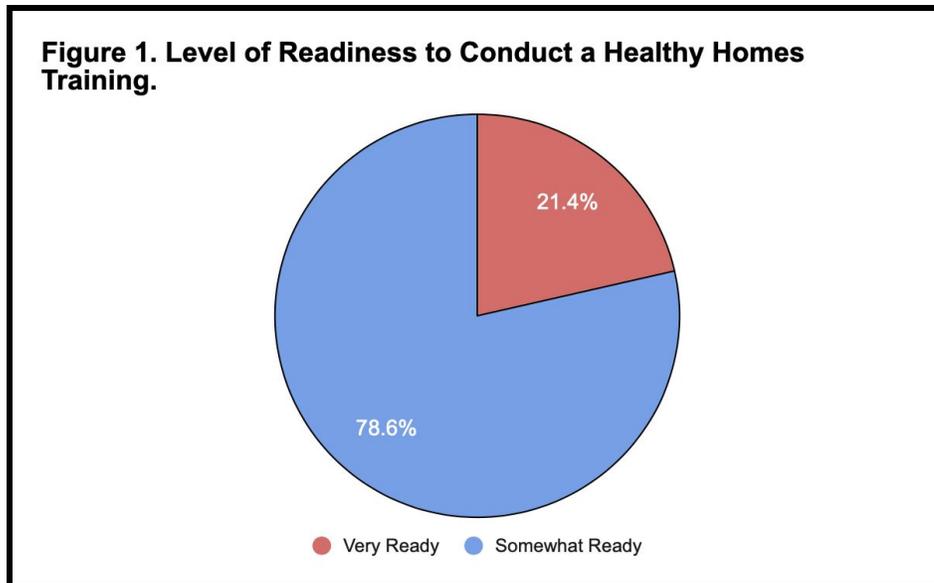
Expected Outcomes

By using the Healthy Homes Initiative and the ToT model, it was expected to increase tenant awareness of health risks and ways to create healthy home environments. The ToT was expected to build capacity in acquired knowledge of public health issues. The Community Health Workers/Promotores will continue to educate the community about health disparities in MUH. Most important, with continued tenant awareness, it is expected to see a sustainable reduction in health disparities due to SHS exposure and a decrease in smoking and vaping in the cities of Monterey, Salinas, and Seaside.

Project Results

After the implementation of the curriculum training, the trainees took a survey to measure their level of readiness to conduct a *Healthy Homes Toolkit* tenant training. The survey also contained open ended questions that described what they like best from the training, what they liked least, and what they would change from the program. A common theme found for what they liked best about the program was the learning of the information. A common theme for what they liked the least about the training was that they felt it was a short time. The survey also showed that nine out of the fourteen would not change anything from the training. The most valuable information collected from the survey was the readiness to conduct a *Healthy Homes Toolkit* presentation. The survey discovered that 21.4 percent of trainees were very ready to

conduct a *Healthy Homes Toolkit* presentation. 78.6 percent of the trainees were somewhat ready to present a *Healthy Homes Toolkit* training, as seen in Figure 1.



Only immediate expected outcomes were achieved after the curriculum training. With the 21.4 percent of trainees feeling very ready to conduct a *Healthy Homes Toolkit* training it was a great start to getting closer to the long term outcomes.

Conclusion & Recommendations

Based on the results of the *Breathing Easier Curriculum* CHW training, it is concluded that the project was successful in getting CHWs educated to do the tenant trainings. The findings from the evaluation also concluded that the information provided was beneficial to the learning of the trainees. Due to only having three CHWs who were very ready to conduct a tenant training after the ToT, it is crucial for the project to continue. The program should also continue to build capacity to target all the MUH complexes in the cities on Monterey, Salinas, and Seaside.

The greatest recommendation for the program to improve its effectiveness is to change the post surveys to a Likert scale survey and minimize the amount of open ended questions. With a Likert scale survey, the evaluation process will better target the areas in which the trainer can improve and will allow better measurement of the knowledge acquired after the training. Also with a Likert scale survey, the results obtained will yield more accurate statistics of the readiness of trainees to conduct the *Healthy Homes Toolkit* tenant training.

Another recommendation is to break down the *Breathing Easier Curriculum* training for CHWs into a two section training. The first section should be a two hour lecture explaining all the information in the curriculum. Incorporated in the first section, the trainees should have time for a group activity that allows them to pull information from the curriculum and present it back to the class. The second section should consist of a two hour discussion of the *Healthy Homes Toolkit*. In the second section, the instructor should also teach the trainees how to conduct the tenant trainings and conduct a simulation tenant training. The recommendations arise from reviewing the post-surveys from the *Breathing Easier Curriculum* training conducted on September 21, 2019 where trainees stated they would have liked more time or they felt the training was short time, even though it was a three hour training.

Personal Reflection

Learning how SHS and THS affect tenants residing in MUH was incredibly shocking. Before interning at the MCTCP, the idea of what someone does behind the closed doors of their apartment and how it affects others was something that never came to mind. After researching the health risks associated with smoking and vaping and how it affects people in MUH, it has triggered the advocacy part of professional development. What was most shocking was learning

how many are affected by SHS in MUH and how it triggers asthma or other respiratory conditions. Learning how changes and implementation of policy have a major impact on a person's overall well being has impacted and broadened the concepts of policy implementation.

The planning of the project was easily done in collaboration with the mentor, Michelle House and co-mentor Maggie Barrera. Their expertise and knowledge enhanced the planning and projection of the project. Planning of the project was the topic for the weekly one-on-one thirty minute meetings. Ideas of how to gather information for the *Breathing Easier Curriculum* were discussed and every week a check in was established. The planning of the project enhanced the ability to professionally discuss and question others' thoughts, as well as giving a better explanation of the ideas that might have been unclear to others.

Through the implementation of the project it was apparent that there are more people interested in making a change for communities to become smoke-free. Also, implementing the project made it clear that like with any other planning of events there are many things out of one's control and adjusting to the unexpected is ideal. By implementing the ToT, capacity to educate tenants was achieved. What was difficult was finding and connecting with volunteers who were willing to take the training. It was difficult due to time constraints and schedule availability. Due to the increased CHWs capacity to educate tenants in MUH, the project was beneficial to the MCTCP's goal to reduce exposure to SHS.

Having strong research about health disparities associated with SHS, THS, and other topics related to creating a healthy home is a strength of the project. Without strong information the CHWs would not have accurate information to train tenants in MUH. Also, during the ToT the activity where the trainees were separated into groups allowed them to find information in

the curriculum and then present to the class, is a strength because it encourages the CHWs to become familiar and comfortable talking about the topics presented.

Time is one of the constraints that was a constant limitation. As an intern, the time spent at the agency was limiting the advances in the implementation of the project. Having limited time to gather volunteers and working out a schedule were all parties could meet was another challenge. Also, having to wait for the state's approval of the materials used in the training was a limiting factor.

By the creation of this project the MCTCP has more capacity to educate tenants residing in MUH in the policy changes and in what it consists of creating healthy homes. As the cities pass smoke-free MUH policies, the CHWs will quickly and effectively deliver information regarding exposure to toxins in smoke, to eventually reduce chronic diseases associated with exposure to smoke. To support the work done by the project implementation, residents residing in MUH who are affected and exposed to smoke should go to city council and ask for the elected officials to pass a smoke-free MUH ordinance. Also, interested community members and organizations of protecting youth, should advocate for a ban on electronic cigarettes.

Recommendations to future interns working for with the MCTCP or working in a project like ToT, is to not be afraid to ask questions. Interns should also prepare themselves on the information they present; they should do this to feel more at ease when presenting. Interns should work on having adequate time management skills; as it will help them keep track of all activities needed to complete the project on time.

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Appendix A**Scope of Work**

Activities	Timeline/Deadlines	Supporting Staff
Researched Tobacco Related Health Disparities	September 2018-May, 2019	Michelle House Margarita Barrera
Researched asthma triggers	September 2018-May, 2019	Michelle House
Attended a Midwest Strategic Planning training	October 13, 2018	Margarita Barrera
Created <i>Healthy Homes Toolkit</i> (English & Spanish)	January, 2019	Michelle House Margarita Barrera
Formulated a list of all MUH in the City of Monterey, Salinas, and Seaside	April, 2019	Michelle House Margarita Barrera
Created the Breathing Easier Curriculum for the ToT	April, 2019	Michelle House Margarita Barrera
Training on how to administer KII Informant interviews	April, 2019	Michelle House
Conducted 15 KII informant interviews (tenants, property owners, property managers, and city council)	April 2019-June, 2019	Michelle House Margarita Barrera
Received training on how to administer post-test surveys for curriculum and healthy home trainings	May, 2019	Michelle House
Recruited 14 CHW	June 2019-July, 2019	Michelle House Margarita Barrera

Conducted the Breathing Easier Curriculum training (ToT)	September 21, 2019	Michelle House Margarita Barrera
Secured date, location, and time for the Breathing Easier Curriculum training (ToT)	September 18, 2019	Margarita Barrera
Administered surveys for the Breathing Easier Curriculum training to 14 CHW	September 18, 2019	Margarita Barrera
Created a step by step guide for the CHW to use for reference when conducting a Healthy Homes Tenant training	October 9, 2019	Maggie Barrera
Conducted 60 minute "Healthy Home" educational session for MUH tenants	June 2019-December, 2019	Michelle House
Administer post surveys for "Healthy Home" tenant training	June 2019-December, 2019	Michelle House Margarita Barrera