

HEALTHY HOMES AND SECONDHAND SMOKE EXPOSURE IN THE IMMIGRANT COMMUNITY

Maine Prevention Services

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EXECUTIVE SUMMARY

HEALTHY HOMES AND SECONDHAND SMOKE EXPOSURE IN THE IMMIGRANT COMMUNITY

Home Environments & Health

The physical environment where people live can have a significant impact on their overall health. Exposure to secondhand smoke and other environmental factors, such as pests, mold, moisture, and poor air quality are common issues for individuals living in rental housing. Upon migrating to Maine, many immigrants and refugees often receive some form of housing support and live in affordable rental housing. They often do not have a choice in selecting a home that meets their health needs, resulting in exposure to secondhand smoke from tobacco and marijuana, and other health triggers. However, the quality and healthiness of affordable rental housing in Maine, particularly among immigrant and refugee communities, is not well documented. This information could help inform public health initiatives aimed at improving home health and decreasing exposure to secondhand smoke within the home.

Evaluation Methodology

Partnerships For Health and the Maine Access Immigrant Network designed and implemented a formative, qualitative-focused Community-Based Participatory Action Research evaluation to answer:

- 1.) What do home environments in affordable rental housing look like within the immigrant and refugee community?
- 2.) How does the relationship between tenants, landlords, and town assistance programs impact tobacco-free / smoke-free policies?
- 3.) What are some solutions and/or recommendations for promoting healthy home environments?

Key informant interviews were conducted with members of the immigrant and refugee community and photographs of home environments were collected through a modified Photovoice process.

Results



Tenants in affordable rental housing experienced cockroaches, rodents, and mold/moisture within their homes, as well as poor air quality from a lack of ventilation. They were also exposed to secondhand smoke from neighbors who smoke tobacco and marijuana inside and outside the building.

Landlords of affordable rental housing effectively communicated the rules about smoking and tobacco use, but the policies were not well enforced.



Language barriers, fears of eviction, and worries of retaliation from disgruntled neighbors were among the reasons why tenants did not often address tobacco policy violations and other housing concerns with their landlords.

INTRODUCTION

Secondhand Smoke in the Home

Healthy Home Environments. The physical home environment where people live can impact their overall health. Poor air quality has been associated with increased rates of asthma and lung disease (University of Wisconsin Population Health Institute, 2020). Poor quality housing and home environments with factors such as water leaks, poor ventilation, secondhand smoke, unclean carpeting, and pests can increase mold, mites, and other allergens that have negative impacts on human health (Braveman, Dekker, Egerter, Sadegh-Nobari, & Pollack, 2011). Deteriorating buildings and unkempt housing can also increase environmental contaminants which can lead to chronic health issues for children and adults (Bailey, 2020).

Secondhand Smoke. Secondhand smoke (SHS) is the combination of smoke from burning tobacco¹ products and smoke exhaled by smokers (U.S. Environmental Protection Agency, 2018). There is no risk-free level of exposure to SHS, the negative effects of which are serious for both children and adults (U.S. Centers for Disease Control and Prevention, 2018). Among children, these effects can include more frequent and severe asthma attacks, respiratory infections, ear infections, and sudden infant death syndrome (ibid). Risks for adults include coronary heart disease, stroke, and lung cancer (ibid). About 1 in 4 (58 million) nonsmokers are exposed to SHS and about 33,000 nonsmokers die each year from coronary heart disease associated with SHS exposure (U.S. Centers for Disease Control and Prevention, 2019; U.S. Department of Health and Human Services, 2014).

Housing and Secondhand Smoke. The home is one of the most common sites where children and adults are exposed to SHS (U.S. Environmental Protection Agency, 2018). In multi-unit housing, smoke can move among units through doorways, cracks in walls, electrical lines, plumbing, and ventilation systems (American Lung Association, n.d.). Nonsmokers who live in rental housing are exposed to SHS at a higher rate than nonsmokers overall, with more than one in three nonsmokers who reside in rental housing experiencing exposure to SHS (U.S. Centers for Disease Control and Prevention, 2019). Even in housing properties with smoke-free and tobacco-free rules, tenants may not be fully protected from SHS exposure within the housing community and within their home (Pizacani et al., 2012).

Asthma Triggers. Exposure to SHS from tobacco is unhealthy for everyone, but particularly for adults and children with asthma. Studies have determined a link between SHS exposure and asthma, particularly in children (Asthma and Allergy Foundation of America, 2017). In addition to SHS, a number of factors within the home environment can negatively affect asthma, including dust mites; pests such as cockroaches, mice, and rats; pets; mold and moisture; wood smoke; and cleaning solutions and disinfectants (U.S. Centers for Disease Control and Prevention, 2020; State of Rhode Island Department of Health, 2020). In 2014, 20 to 30% of national asthma cases were linked to environmental factors within the home (Bailey, 2020).

¹ For the purpose of this evaluation, secondhand smoke refers only to smoke from commercial tobacco, i.e., tobacco products that are manufactured and sold for periodic or habitual personal recreational use. For this evaluation, secondhand smoke does not refer to smoke from sacred and traditional ceremonial, religious, or medicinal tobacco use practiced in Maine's Tribal Communities.

Tobacco Prevention and Control through an Equity Lens

Identifying and eliminating tobacco-related disparities is a primary goal of the national Centers for Disease Control and Prevention and is echoed through state tobacco programs (U.S. Centers for Disease Control and Prevention, 2015). Achieving this goal requires knowledge of both the sequela of health inequities as well as the most effective, culturally appropriate strategies that enable all people to live a healthy, tobacco-free life, regardless of race, education, gender, income, residential neighborhood, employment status, or sexual orientation.

Immigrants are an emerging population with tobacco-related disparities. Recent studies have shown that smoking rates among immigrants living in the U.S. are lower than those among U.S.-born citizens (Pampel et al., 2020; Bosdriesz et al., 2013). However, immigrants often share many of the social determinants that affect U.S.-born citizens, such as economic stability, access to health care, and education but are often unable to advocate for themselves (due to language and cultural barriers). In the U.S., 46% of immigrants reported that they did not speak English well, classifying them as Limited English Proficient (Batalova et al., 2021). With around 45 million immigrants nationwide (ibid), understanding the complex cultural differences around tobacco use and SHS exposure can help inform successful smoke-free policy development and ensure culturally appropriate implementation of tobacco-free rules in housing.

Immigrants and Refugees Living in Affordable Rental Housing

Immigrant and Refugee Communities of Maine. In 2018, there were over 47,000 immigrants predominantly from countries in Asia, Africa, Europe, and other parts of North America that lived in Maine, making up 3.5% of the state population (Migration Policy Institute, 2018). Maine has also become a leader in the resettlement of refugees who have fled from their home countries based on fears of persecution over race, religion, nationality, political opinion, or other social differences (Refugee Council USA, n.d.). The majority of refugees in Maine come from Iraq, Somalia, Democratic Republic of Congo, and Syria (ibid). Upon migrating to Maine, many immigrants and refugees often receive some form of housing support, but they do not always have a choice in selecting a home that meets their health needs. This often resulting in exposure to SHS from tobacco and marijuana, and other health triggers, such as mold, moisture, lead paint, pests, and more.

Pathway to Affordable Rental Housing in Maine. For many people migrating to Maine from other countries, part of the immigration process involves navigating the rental housing system and determining eligibility for housing support. For people who live at or above the federal poverty line, the typical pathway to housing may include finding a market-rate rental, where the cost of rent is fixed and pre-determined by the landlord or property manager. Market rate rental housing properties typically do not accept and/or offer any type of housing assistance and tenants are expected to cover 100% of the rental costs. Given that many immigrants, refugees, and asylum seekers who have recently arrived in Maine are not immediately able to establish employment or a steady income, market rate rental housing is usually not a feasible option.

In Maine, the two predominant pathways to affordable rental housing, particularly for people who have recently immigrated to the state, are state and federal subsidized housing programs and General Assistance (GA) housing support options.

General Assistance (GA). GA is a program run by individual towns to support people without the resources to pay for necessities like rent, electricity, heat, food, medicine, etc. (Maine Equal Justice, n.d.). Based on the eligibility criteria, tenants apply to receive GA support through their town (ibid). If found to be eligible for assistance, the tenant provides monthly budgets and expenses. GA determines the amount of support the tenant is eligible to put towards their rent each month (Pine Tree Legal, 2017). After determining eligibility for rental support, GA will contact the landlord to complete the appropriate agreement paperwork and inspect the apartment (Maine Equal Justice, n.d.). Each month, GA will review the tenant’s budget and will provide the determined amount either directly to the landlord or to the tenant as a ‘voucher’ to pay their rent (Pine Tree Legal, 2017).

Subsidized Housing Options. If a person’s rent is determined by their income, the housing is considered ‘subsidized’. This includes housing that is owned by a landlord, management company, or the government (Pine Tree Legal, 2017). Typical subsidized housing options in Maine include subsidized apartments through the local housing authorities and/or Section 8 housing vouchers.

- **Subsidized Apartments.** Subsidized apartments are rental apartments administered and financially subsidized by state and/or local housing agencies or federal programs, such as the U.S. Department of Housing and Urban Development (HUD) and the U.S. Department of Agriculture Rural Development (RD) (Maine State Housing Authority, 2018). Tenants must meet the eligibility requirements that vary by housing property and must apply to be considered for subsidized apartments. However, the waiting list for such housing is long and tenants are encouraged to also apply for other housing assistance programs (ibid). If approved for a subsidized apartment, the tenant will typically pay a portion of their income towards rent, usually around 30% (Maine State Housing Authority, 2021; Pine Tree Legal, 2017).
- **Section 8.** Through federal funds, the Section 8 Housing Choice Voucher Program provides rental assistance to eligible people by subsidizing a portion of their monthly rent and utilities (Maine State Housing Authority, 2021; Maine DHHS, n.d.). Tenants apply for Section 8 through the Maine State Housing Authority or local housing authorities and often sit on a waiting list (Maine State Housing Authority, 2021). Once approved for a voucher, the tenant must first find a home that accepts the subsidy. Next, the local housing authority inspects the home and approves the unit and lease. The local housing authority then administers the voucher to the landlord for rent based on a percentage of the tenant’s income. The tenant pays the difference between the rent and voucher amount, which typically accounts for 30 – 40% of their household income (Maine DHHS, n.d.; Maine State Housing Authority, 2021). Each year, the tenant’s income is reevaluated to determine the percentage of rent that will be covered by the voucher.

Table 1. Affordable Rental Housing in Maine – Eligibility Requirements for Immigrants

TYPE OF HOUSING SUPPORT	ELIGIBILITY CRITERIA FOR IMMIGRANTS
General Assistance (GA)	<ul style="list-style-type: none"> Immigrants, refugees, asylum seekers, and asylees are eligible to apply for GA if they show they have a financial need for support. Asylum applicants waiting for a decision on their status need to include a notice of receipt of their asylum application or the first page of their asylum application with their GA application.¹ Asylum seekers who have not yet completed their asylum application need to show proof of pursuing the immigration process (e.g., affidavit, notice to appear in immigration court, alien number, etc.).¹ Asylum seekers eligible for GA will not have monthly reevaluations of their budgets until they have a work permit.
Subsidized Housing Options <i>Subsidized Apartments</i>	<ul style="list-style-type: none"> Eligibility requirements and restrictions vary by housing property, landlord, and/or management agency.² Eligibility is predominately based on gross household income.² Asylees, refugees, and immigrants with permanent U.S. resident status are eligible to apply.
<i>Section 8</i>	<ul style="list-style-type: none"> Eligibility is based on location, income, and household size.³ Asylees, refugees, and immigrants with permanent U.S. resident status are eligible to apply.
<p>Sources: ¹Maine Equal Justice (n.d.) ²Maine State Housing Authority (2018) ³Maine State Housing Authority (2021)</p>	

For the purposes of this evaluation, the term ‘affordable rental housing’ will be used to encompass all types of rental housing properties that are part of rental assistance programs with the goal of alleviating housing costs and expenses for people and families with low incomes. This includes Section 8, subsidized housing through local housing authorities, and General Assistance. The availability, quality, and sustainability of housing can vary based on the type of affordable rental housing people are able to obtain.

Affordable Rental Housing. Individuals and families living in affordable rental housing often face unsafe and overcrowded conditions, which are also associated with higher poverty rates and limited access to resources to maintain health and wellness (Braveman et al., 2011). As such, affordable rental housing, often located in lower-income neighborhoods with multiple units, increases the likelihood of exposure to SHS and other environmental toxins that can trigger asthma (Suglia, 2018). Similarly, the higher smoking prevalence in lower-income populations who live in affordable rental housing additionally increases risk of exposure to SHS from tobacco and/or marijuana (Pizacani et al., 2012).

Need for Evaluation

The quality and healthiness of affordable rental housing in Maine, particularly for the immigrant and refugee communities, is not well documented. The information from this evaluation may help inform:

- Future public health interventions.
- Initiatives focused on populations with health disparities, such as immigrant and refugee communities.
- The modification of existing outreach, collaboration, and technical assistance strategies for rental housing property managers.
- Future efforts for implementing targeted interventions within Maine's immigrant and refugee communities.

METHODOLOGY

Evaluation Framework

Community-based Participatory Action Research. The evaluation followed a Community-based Participatory Action Research (CBPAR) approach. CBPAR is an applied, collaborative approach to research and evaluation. It promotes the full involvement of partners and community members throughout all phases of the evaluation, from establishing the overarching evaluation concepts and questions to drafting the final report. At its core, CBPAR aims to address community concerns and shift the traditional roles of the evaluator and evaluation participants. Setting itself apart from other community-based approaches, CBPAR is also guided by several principles:

- Community knowledge cannot be replaced and provides invaluable insight needed to ground the data.
- Researchers alone cannot act as “experts” to understand or solve complex social issues.
- Interventions external to the community can often have disappointing results.
- Community members should have an equal level of participation and inclusion in research and evaluation activities addressing community issues.

As a framework, CBPAR guided the evaluation to be grounded in community needs, concerns, and issues; engaged with the community voice and inclusive of community knowledge; and based in actionable strategies that lead to community and social change (Healthy City, 2011).

Community Engagement. Partnerships For Health (PFH) subcontracted with the Maine Access Immigrant Network (MAIN) on the evaluation development, design, and implementation. MAIN is a trusted ethnic community-based organization that uses a community health worker (CHW) model to assist immigrants and refugees in the Greater Portland area in accessing health and social services. This model provided the CHWs with invaluable expertise and insight into the perspectives of the immigrant community that they are both part of and work closely with. For this evaluation, the CHWs were integral in prioritizing the overall evaluation focus, developing the evaluation questions, determining the study design, constructing the interview protocol, collecting data, analyzing data, and sharing the results. In addition, PFH and MAIN met continuously throughout the evaluation to check in on evaluation progress, lessons learned, and next steps, which was aided by PFH and MAIN’s long history of collaboration.

Photovoice. Photovoice is a participatory process that engages community members to identify and represent aspects of their community through a photographic medium. This evidence-based process allows participants to identify issues and solutions confronting their communities. The Photovoice process has three main goals: enable community members to identify and reflect on their community’s needs and strengths; promote dialogue and knowledge on community issues and concerns; and reach policymakers and change agents (Burriss & Wang, 1997). This evaluation followed a modified Photovoice framework to allow for virtual implementation during COVID-19, where photographs were still submitted by evaluation participants, but the collaborative codification of the photos was completed only by MAIN and PFH on a virtual platform.

Study Design

A formative, qualitative CBPAR approach to the evaluation was developed to answer the following questions:

1. What do home environments in affordable rental housing look like within the immigrant and refugee community?
2. How does the relationship between tenants, landlords, and town assistance programs impact tobacco-free / smoke-free policies?
3. What are some solutions and/or recommendations for promoting healthy home environments?

Through this study design and approach, the evaluation aimed to document the health of the home and community environments among the Maine immigrant and refugee communities living in affordable rental housing, particularly relating to SHS exposure. The evaluation also sought to identify recommendations to promote healthier environments that keep residents from being exposed to SHS and other unhealthy environmental factors.

The evaluation design and associated tools were submitted for Institutional Review Board determination to the University of Southern Maine's Office of Research Integrity and Outreach. The evaluation was determined not to be human subjects research (Protocol #122120-02).

Tools and Instruments

The evaluation was implemented using a stepwise engagement approach allowing community members to determine the extent to which they wished to participate. This approach included three opportunities for community engagement:

1. Structured key informant interviews with community members about their home and the factors that enhance or negate a healthy environment.
2. Photographs.
3. Reflections Workshop.

Key Informant Interview Protocol. A structured, key informant interview protocol was developed collaboratively between PFH and MAIN. The interview asked community members about their home environments; factors that keep their homes healthy and unhealthy and the impact on their health; exposure to SHS; tobacco and smoke-free policies in and around their homes; and any advice and/or recommendations they have on keeping their homes and community environments healthy.

Online Photograph Group. After the interview, participants were invited to share non-identifiable photographs of their home and community environments with the aim of identifying and representing their homes through a photographic outlet. All photographs collected were stored in an online repository that was shared only with members of the evaluation team.

Reflections Workshop Annotated Agenda. Participants were invited to attend a virtual workshop to reflect on the findings of the evaluation and share any additional contextualizations.

Sampling and Recruitment

All evaluation participants were recruited by the MAIN CHWs through a convenience sampling process. The CHWs identified participants based on the inclusion and exclusion criteria detailed in Table 2.

Table 2: Inclusion and Exclusion Criteria

INCLUSION CRITERIA	EXCLUSION CRITERIA
<ul style="list-style-type: none"> • Received MAIN services within the last 5 years. • Live in southern Maine. • At least 18 years old. • Live in affordable rental housing and/or receive housing assistance. • Able to provide informed consent to participate. • Not born in the USA. 	<ul style="list-style-type: none"> • Under 18 years old. • Own their home; do not live in affordable rental housing and/or do not receive housing assistance. • Unable to provide informed consent to participate. • U.S.-born citizen. • Does not reside in southern Maine.

Data Collection

Key Informant Interviews. The CHWs conducted 17 virtual interviews with community members in February and March of 2021. Each interview was conducted in the language the participant was most comfortable with (e.g., English, French, Arabic, or Somali). PFH maintained a repository of all interview data. As an acknowledgement for their contribution to the evaluation, each interviewee received a \$15 gift card.

Photovoice. During each interview, participants were invited to share photos of their home and community environments, which the CHWs uploaded to a private online repository of photos. In total, 50 anonymous photographs were collected in February and March 2021. Recognizing the community-level knowledge of the CHWs and as an additional measure to ensure participants’ anonymity, the CHWs were also able to submit photographs.

Reflections Workshop. In June 2021, five evaluation participants attended the virtual Reflections Workshop to confirm the proper identification of evaluation themes and to provide additional insight on the findings. Workshop participants received a \$40 gift card as an acknowledgment of their contribution to the evaluation.

Data Analysis

Data analysis occurred in three distinct phases.

Codification. The first phase of data analysis was codification, which refers to the inductive thematic analysis of the interviews and photographs. PFH and MAIN participated in a virtual workshop to collaboratively review and codify the interviews and photographs. The result was an evaluation storyboard depicting common themes and concepts that emerged to answer the evaluation questions. These themes were used as the foundation for community confirmation and contextualization.

Confirmation and Contextualization. During the Reflections Workshop, the emerging themes were shared with participants to confirm the identified themes (confirmation) and obtain additional insight on the themes (contextualization). In addition, PFH and MAIN facilitated a discussion on recommendations to promote healthy affordable rental housing and limit tenants' exposure to SHS. Detailed notes were taken on these discussions.

Triangulation. The final phase of data analysis was integrating the results from the interviews, photographs, and Reflections Workshop. These findings represent the overall evaluation results and reveal the varying dimensions on the topic and contribute towards a comprehensive, rich understanding of affordable rental housing and SHS exposure within immigrant and refugee communities in Maine.

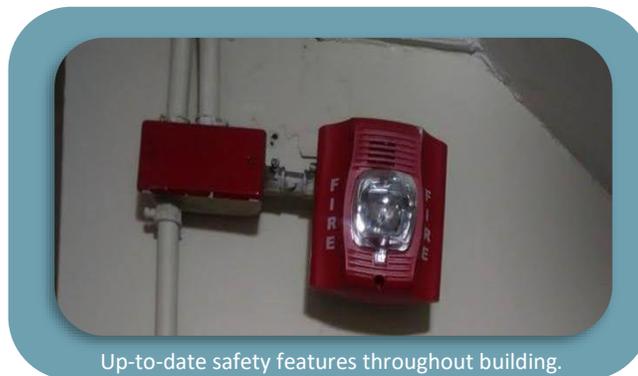
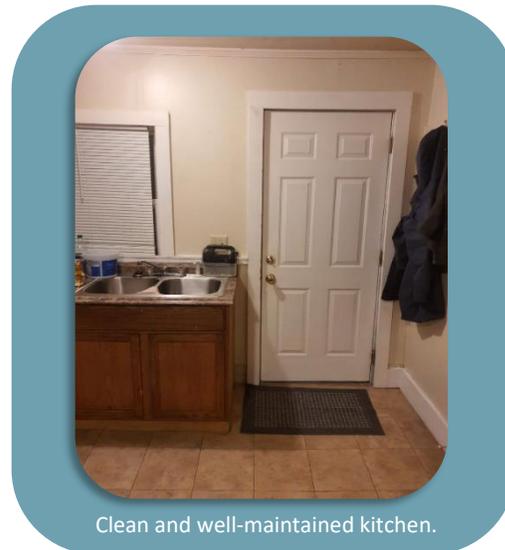
RESULTS

Housing Descriptions²

Based on the evaluation inclusion criteria, all tenants who participated in the evaluation received some form of housing assistance to help pay their rent. Most participants lived in old and outdated multi-unit apartment buildings. Many other tenants lived in the building, making the neighborhood and housing community crowded. Typical residents usually included families with 2 to 3 children, single mothers, and young women living with one or more female roommates.

Healthy Housing

Tenants described healthy housing as being clean and well-maintained, with landlords who took care of the buildings and kept them as up to date as possible. In addition, healthy homes were characterized as being smoke-free in and around the building, helping to limit tenants' exposure to unhealthy SHS from tobacco and/or marijuana. In individual apartment units, tenants shared that healthy homes were pest-free and had adequate ventilation in the kitchen and bathrooms to support air flow and humidity control. Overall, healthy housing was described as providing safe spaces for children and families to live and play.



² All photos shared in the *Results* section were submitted by community members who participated in the evaluation.

Unhealthy Housing

Three main environmental factors related to unhealthy housing were identified: pests, poor air and ventilation, and mold/moisture.

Pests. Nearly all participants experienced issues with pests in their homes. This included mice and other rodents, cockroaches, bedbugs, and ants, among others. Tenants reported that there were often holes in the walls between apartments and cracks along the baseboards within apartments, allowing for pests to enter their homes and travel between units. To mitigate the pest issues, tenants reported having tried to use at-home poisons and pesticides, as well as keeping all food completely covered. One tenant shared that despite her best efforts to control the cockroaches in her apartment each day, new pests would enter her unit at night. In some cases, tenants reported the issues to their landlords, but the problems were not addressed. Overall, tenants were concerned about the general health of their children and family members from being in close quarters with pests that may carry diseases. In addition, tenants worried about the health effects of using at-home poisons and sprays.



Coffee pot with cockroaches.



Cockroaches.

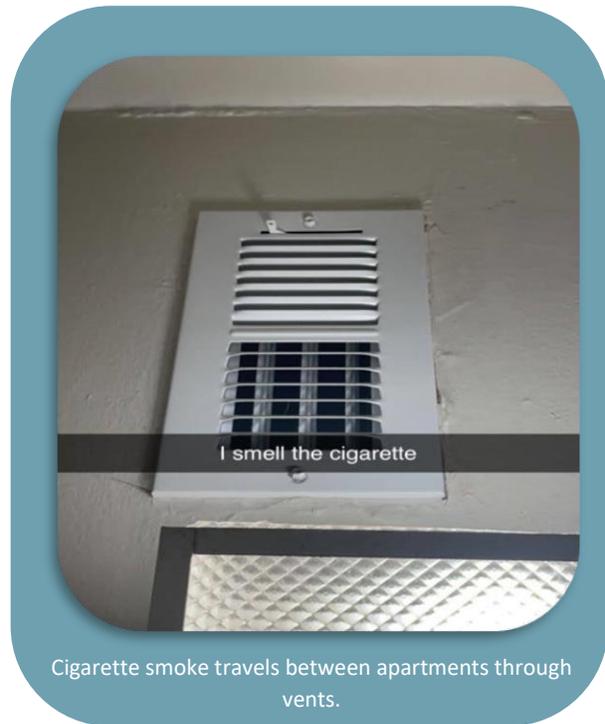


Cockroaches on food.



Dead rodent.

Poor Air. A lack of clean and circulating air within apartment units was a health issue for many tenants. In the kitchen, smoke and smells from cooking would build up because many apartments did not have vents and/or fans above the stove to circulate air and remove smoke. In addition, tenants shared that neighboring tenants often smoke tobacco and/or marijuana in the hallways or in other apartments and the smoke travels through air vents into their unit. Tenants tried to bring clean, fresh air into their homes by opening windows, but they would face a fine for doing so as there are typically building rules against having the windows open, particularly in the winter. Other tenants tried to cook foods in the oven rather than on the stovetop to minimize food smells and smoke. The use of air sprays and candles only helped to cover the smells from cooking and cigarette/marijuana smoke. Even through these efforts to increase air flow and reduce exposure to cigarette/marijuana smoke from neighbors, tenants were concerned that their families did not have clean air to breathe within their homes, particularly if any family members had existing breathing issues.



Mold and Moisture. Minimal air flow and ventilation also contributed to the buildup of mold and moisture within the home, particularly in the bathrooms. Without air vents and fans to circulate the air, tenants shared that moisture from the bath tended to build up on the ceiling and walls, causing mold to form. Even when trying to keep their homes as clean and dry as possible, tenants were concerned about the effects that exposure to mold may have on the health of their children.

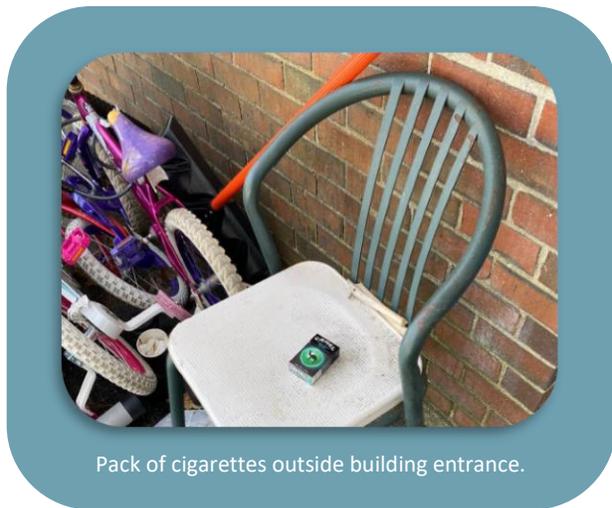


Community/Neighborhood. Outside of individual apartments and indoor living spaces, tenants also had concerns about the health of the general housing community/neighborhood. Tenants shared that there were homeless people, sex workers, and intimidating/threatening neighbors within the community. In some instances, drug paraphernalia were found within the communal living areas. In addition, some tenants reported that building utilities, like fire escapes and elevators, were not always well-maintained and some had expired inspections. Even in outdoor spaces, many people within the neighborhood smoke tobacco and marijuana, exposing tenants to SHS. Overall, tenants were concerned about the general safety for children and families in the housing community and in communal areas.

One tenant shared that the main entrance to her building was not well lit, and people often lingered around the door at night, making her feel unsafe entering and exiting the building. This has caused her to use the rear building entrance to get to and from her apartment. Other tenants reported that they don't feel that the neighborhood is safe enough to let their children play outside alone. Some shared that they attempt to make the housing community safer and smoke-free by asking community members to stop smoking around others, even outside, and by bringing their safety concerns to the landlord.



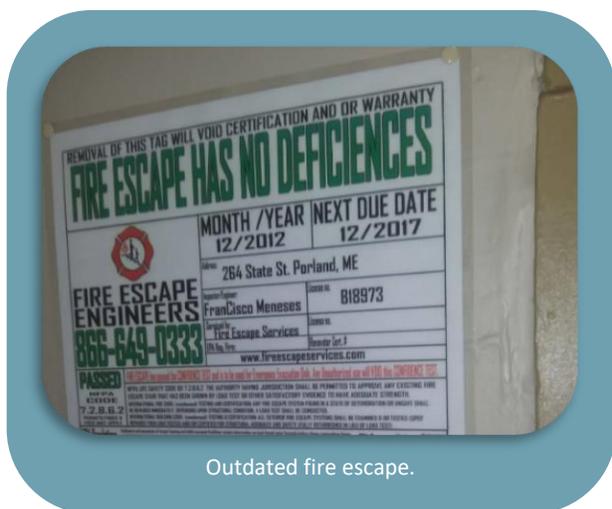
Cigarette butts in outdoor community area.



Pack of cigarettes outside building entrance.



Old and chipping building structures.



Outdated fire escape.

Landlord-Tenant Relationship

Few tenants reported positive interactions and/or relationships with their landlords and/or housing property managers. In most cases, participants reported that tenants were often left waiting months for minor repairs within their apartment. Tenants shared that landlords often ignored maintenance requests or housing complaints and only responded to critical housing issues such as heating or electrical concerns. In many instances, when landlords did respond to maintenance requests, the issue was masked with a quick fix, rather than addressing the root cause.

For several reasons, tenants did not feel comfortable bringing housing concerns to their landlord. First, some tenants are not aware of their rights as a tenant and the responsibilities of the landlord. Second, tenants were not sure if their concerns should be shared with the landlord or with the program through which they receive their housing assistance. Third, many tenants were concerned that sharing their housing concerns or requesting home maintenance and repairs may be grounds for eviction. The latter was based on past experience of their landlord threatening to evict them and the knowledge that finding affordable rental housing can be a challenge.

Smoke-Free and Tobacco-Free Policies

Tenants were generally aware that their buildings had rules about smoking tobacco and marijuana. They reported that the rules were communicated in their lease when they moved into the apartment and that they also saw signs in and around their building. Though tenants knew smoking is against the rules, they often hesitated to share these violations with the landlord. Some landlords used tobacco themselves, making it difficult for tenants to breach the topic and lodge a complaint. Tenants also experienced language and communication barriers with their landlords. In addition, some tenants were afraid their neighbors may retaliate if their tobacco policy violations were brought to the landlord's attention.



Smoke-free sign outside the building.



Smoke-free sign inside the building.

Recommendations for Improved Affordable Rental Housing

Tenants had many innovative suggestions and recommendations for ways in which the overall health and conditions of affordable rental housing in Maine could be improved. These recommendations are summarized by their intended audience in Table 3.

Table 3. Recommendations Summary

AUDIENCE	RECOMMENDATION
For Tenants	<ul style="list-style-type: none"> • Follow all housing rules. • Work with the landlord to implement building-level projects to promote healthy environments (e.g., recycling programs). • Collaborate with landlords and property managers to update existing rules and establish new housing rules (e.g., rules about opening apartment windows).
For Landlords and Property Managers	<ul style="list-style-type: none"> • Consider accepting various types of housing assistance to provide more options for affordable rental housing. • Provide written materials (such as the lease, signage, and tobacco policies) in multiple languages to promote a shared understandings of housing rules. • Be more present at housing properties to communicate and enforce tobacco rules. • Couple tobacco-free and smoke-free policy communication with educational materials on the dangers of tobacco use and exposure to SHS. • Treat all tenants with respect. • Address the root causes of issues within housing properties.
For the State of Maine and Town Housing Assistance Programs	<ul style="list-style-type: none"> • Consider options for additional legislation, regulations, and financing for new housing to accommodate the increasing need for affordable rental housing. • Establish programs to provide tenants with social workers, case managers, community health workers, and housing advocates to help them understand their rights and responsibilities. • Ensure landlords and property managers are meeting minimum federal, state, and town/city codes and rules for rental housing. • Work with landlords and property managers to develop educational messaging around safe and healthy homes.

DISCUSSION

What do home environments in affordable rental housing look like within the immigrant and refugee community?

Overall, tenants within the immigrant/refugee community reported that their housing conditions did not meet their general health needs. While some tenants lived in up-to-date apartments with little health concerns, most reported having issues with pests, mold and moisture, unsafe neighborhoods, and a lack of ventilation and air circulation. These issues left tenants concerned about the health, wellbeing, and general safety of their children and families within their home and housing community. These findings suggest that there may be room for Maine landlords and property management agencies to improve their compliance with state and/or town building codes and regulations for affordable rental housing.

How does the relationship between tenants, landlords, and town assistance programs impact tobacco-free / smoke-free policies?

Tobacco-free and smoke-free rules were effectively communicated with tenants through their lease/rental agreement and with signage in and around the building. Despite this, many community members continued to smoke cigarettes/marijuana inside the building and outside in communal spaces. This suggests that tobacco policies are not well-enforced by landlords and property managers.

Without an understanding of their rights, many tenants did not feel comfortable communicating with their landlord about housing issues and tobacco policy violations. However, tenants felt that working to improve the relationship and communication between landlords and tenants may help to establish trust and make tenants feel more comfortable advocating for themselves and their right to be protected from SHS in the home. These findings suggest that tenants may benefit from culturally and linguistically appropriate resources and support on navigating their rights and responsibilities as tenants within affordable rental housing.

What are some solutions and/or recommendations for promoting healthy home environments?

As many of the affordable rental housing options in Maine are federally financed, tenants suggested that housing improvements should start nationally. Improvement to the national-level processes and systems may trickle down to the state-level and help make affordable rental housing healthier in Maine. On a state-level, tenants had many innovative ideas for Maine. Improving relationships between landlords and tenants, addressing the root causes of housing issues, and emphasizing the concept that housing is part of individuals' health were among key suggestions.

These recommendations suggest that tenant and landlord relationships may benefit from facilitated discussions to help each group understand the other's perspectives and to build trust. Landlords may not be aware of the realities of living in affordable rental housing and tenants may not understand the responsibilities of the landlord. Enabling these discussions may promote a shared understanding and foster improved communication between landlords and tenants. In addition, landlords, property managers, town housing assistance programs, and housing coalitions may not be aware of the current state of affordable rental housing in Maine and the impact that housing can have on individuals' health. Open and transparent discussions between these groups may help to keep housing partners informed of current conditions and promote solutions to the roots causes of housing issues within affordable rental housing in Maine.

Limitations

Reliance on Technology. Given the influence of the COVID-19 pandemic on the evaluation, all evaluation activities were conducted virtually through web-based platforms. This approach assumed that all community participants had reliable access to and working knowledge of these platforms. To mitigate the limitations this presented to the evaluation, the MAIN CHWs accommodated all participants' technology needs by conducting interviews through whichever virtual platform each participant was most comfortable with.

Language and Translation. An abundance of qualitative information was collected throughout the evaluation. The community participants were invited to share their thoughts in whatever language they were most comfortable speaking, which resulted in data being collected in multiple languages. Given the time and resource constraints of the evaluation, the qualitative interview data was not translated verbatim, limiting the evaluation results to summaries rather than quotes.

Influence of Stay-Home Restrictions. As a result of the COVID-19 pandemic, Maine residents were encouraged to stay home. This caused many residents to be within their home and community environments more frequently than normal. With a focus on the health of the home and community environments, the evaluation results may have been influenced by these effects of COVID-19. Certain home factors existed pre-COVID-19, but the pandemic and stay-at-home restrictions may have exacerbated the effects on tenants' health.

Inherent Complexity. Affordable rental housing in Maine is a complex system that is influenced by local, state, and national policies, political agendas, social needs, and economic factors. Housing conditions may differ based on the type of affordable rental housing offered. The results of the evaluation reflect the perspectives of a small sample of tenants who receive varying types of housing assistance.

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