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Healthy Homes Neighbor to Neighbor Model

Completed in Partnership with Healthy Androscoggin

By: Kaelyn Woods, Emily Ausman, and Josh Klein

Program in Environmental Studies April 12th, 2019

Executive Summary

Ensuring the over health and well-being of a community is dependent not only on the healthcare professionals and resources in that community, but also the accessibility and reach of healthcare knowledge. Healthy Androscoggin established The Neighbor to Neighbor Healthy Homes Program in 2018 in order to spread awareness about environmental health risks in the homes of New Mainers by promoting community-held healthcare knowledge. The New Mainers working with Healthy Androscoggin are community members who have recently resettled in Maine from different African origin countries. The aim of the Neighbor to Neighbor Program, which is a branch of the Healthy Homes Initiative, is to identify and mitigate the most prevalent environmental health risks in the homes of New Mainers in Lewiston, Maine. Healthy Androscoggin collaborated with ambassadors from different African origin countries to educate their friends, families, and neighbors in order to share the Healthy Homes Education and behaviors that are affordable, attainable, and long-lasting.

Healthy Androscoggin created and administered two surveys over the course of three weeks in order to evaluate the initial transfer and retention of healthcare knowledge among participating neighbors. Through a partnership between Bates College Environmental Studies Program and Healthy Androscoggin, we developed a third survey that was conducted eight months after the initial Healthy Homes Education session. The third survey aimed to identify what Healthy Homes behaviors were difficult to maintain, if the neighbors remembered all of the information from the initial education session, and if participants noticed changes in their personal health. The surveys consisted of both ‘yes/no’ and narrative questions in which ambassadors followed-up with neighbors about their experience in the program.

The results from all three surveys were analyzed in order to recognize the current environmental health concerns among New Mainers, determine the overall success of the health education model, and inform future directions for the program. One major finding from the third survey was that 100 percent of the participants noticed changes in their overall health over the eight-month program period. In addition, 80 percent of the participating neighbors shared their Healthy Homes education with friends, family, and peers not formally enrolled in the program. This demonstrates that the program will continue to function even without the initial education provided by Healthy Androscoggin. Furthermore, this suggests that Healthy Androscoggin successfully promoted community-held healthcare knowledge about environmental health risks in Lewiston was established.

Survey 3 also identified a new health concern among New Mainers that had not been explicitly addressed by the program. Some participating neighbors were concerned that their homes were not equipped with carbon monoxide detectors or that the existing detectors were not

functioning properly. Perhaps the most noteworthy findings from the third survey was that the Healthy Homes information assisted participants as they searched for new homes, thus encouraging tenants to advocate for their health. One third of participants from Survey 3 moved to new homes over the course of the eight months and explained that their decision to move and criteria for a new home was informed by the Healthy Homes Education. Lastly, multiple neighbors expressed a need for additional support when communicating with landlords about hazards such as lead and radon exposure. This alludes to the broader, systematic barriers that prevent those who are disproportionately impacted by environmental hazards from gaining true autonomy and control over their health. It is clear from the survey results that individual and community actions were successful in promoting community held healthcare knowledge. However, these actions can only go so far without structural, social, and political support.

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Introduction

The United Nations defines refugees as individuals “who have been forced to flee his or her country because of persecution, war or violence.” As of 2006, the UN reported that there were approximately 33 million displaced individuals worldwide. Of those 9 million refugees, 844,000 were resettled in the United States (Morris et al., 2009). A central concern for individuals who are resettled in the United States is their access to healthcare. A survey conducted by the members of the San Diego Refugee Forum, a refugee services provider, showed that 56% of their members saw health or healthcare as the most important issue facing refugee communities (Morris et al., 2009). Within the field of public health, there has been increasing interest surrounding the effects of “non-medical” determinants on health. There are widely acknowledged connections between poor housing and poor health, and efforts have been made to move health outside of its traditional discourse and into discussions around the built environment (Thomson et al., 2009). Recently resettled individuals most often live in affordable housing, increasing their likelihood of in-home related health risks (Weine et al., 2011). In addition to such health risks, language and cultural differences present significant obstacles to receiving health services (Morris et al., 2009). The concept of *cultural safety* has been applied to systematic inequalities in the healthcare of ethnic minorities. *Cultural safety* moves beyond *cultural sensitivity* through “recognition of power imbalances, institutional discrimination, and the nature of interpersonal relationships among those persons identified as colonizers or colonized” (Ogilvie et al., 2008). A lack of cultural safety in health work means that individuals who are predisposed to discrimination are placed in a position in which their identity may be diminished or undermined. Public health work that promotes cultural competency and feelings of

safety through community networks is vital for promoting both community health and challenging power imbalances in healthcare.

Public health work that promotes cultural competency and feelings of safety through community networks are vital for promoting both community health and challenging power imbalances in healthcare. Programs that utilize community health workers are effective models for promoting a culturally appropriate setting in which health education can be provided. According to Ehiri et al., ten global refugee camps implemented health education programs for women and children that were successful in providing basic healthcare services in their communities (Ehiri et al., 2014). Similarly, a cohort of researchers investigated the benefit of a community health worker program in Kisumu, Kenya. Community health volunteers are defined as community members who possess a common understanding of community values and are qualified to “provide a defined package of health promotion and services at the community level, have formal links to the health system, and are recognized as part of the health workforce” (Aseyo et al., 2018). A program in Buffalo, New York uses this healthcare model in a Somali Bantu community in which basic health education was recognized to positively impact the lives of their refugee community members (Eisenhauer et al., 2012). The behavioral changes observed in these studies are the cornerstone of most community health worker programs and have the potential to significantly reduce environmental health risks in the home (Aseyo et al., 2018).

Healthy Androscoggin is a grassroots, community health organization located in downtown Lewiston, ME that aims to reduce environmental health risks in Androscoggin County. Their mission is to improve the overall health and well-being of Lewiston-Auburn residents by giving them the tools they need to support healthy lives. In 2014, Healthy Androscoggin developed partnerships with the U.S. Centers for Disease Control and Prevention,

the Maine State EPA, and The Harvard Center in order to launch a program that specifically addressed health concerns among New Mainers. According to Healthy Androscoggin's 2017 report, New Mainers account for 11% of the Lewiston-Auburn population (Healthy Androscoggin Annual Report, 2017). New Mainer communities are particularly susceptible to in-home health concerns. Currently, Lewiston has the highest rates of childhood lead poisoning in the state (Maine Department of Environmental Protection, 2019). In addition, one in three homes in Maine contain dangerous levels of radon gas, which is the second leading cause of lung cancer in the US (Farwell, Jackie, 2014; Radon and Cancer, 2019). Homes in Lewiston pose additional health risks related to indoor air quality, mold, and pest control. In recognizing the growth of new communities, it was necessary that Healthy Androscoggin develop culturally competent policies and practices to ensure equitable access to healthcare and a reduction of environmental hazards. In addition, Healthy Androscoggin made it a priority to not only reduce cultural and linguistic barriers in public health, but also increase participation and involvement of New Mainers in their work (Healthy Androscoggin, 2017).

The Healthy Homes Initiative is a community-based health education program developed by Healthy Androscoggin. The Neighbor to Neighbor Healthy Homes Program was established to increase community-held knowledge of environmental health risks in the home. Six volunteer cultural brokers from different African origin countries were trained as Healthy Homes ambassadors to serve as health educators in their neighborhood communities. Many of the ambassadors are asylum seekers interested in health professions and community building. Since New Americans cannot work during the asylum application period, Healthy Androscoggin provides them with skill-building, meaningful work that can be emphasized during professional development. The ambassadors teach program participants basic preventative techniques to

reduce the threat of environmental hazards. Each ambassador equips participants with an educational flip-book, cleaning supplies, and a Smoke-Free Home Pledge to establish the standard for Healthy Home behaviors. A series of two surveys were created to evaluate the changes in such behaviors over the course of a three week period. The first survey was used to acknowledge prior knowledge of environmental health risks, understand the key takeaways from the ambassador educational visit, and develop a plan for implementing new Healthy Home behaviors. The second survey was administered one month after the initial visit to understand which behaviors changed and which behaviors the participants had trouble maintaining. It is hopeful that adopting such a culturally competent, comprehensive, and integrative model will be successful in reducing environmental health risks as well as improve the health and well-being among the New Mainer community in Lewiston.

Aims & Objectives

Aim - This project aims to evaluate the ability of Healthy Androscoggin's Neighbor to Neighbor program to effectively reduce environmental health risks in the homes of New Mainers.

Objective 1 - Evaluate the transfer of healthcare knowledge from ambassadors to participants in the Neighbor to Neighbor Healthy Homes Program.

Objective 2 - Assess the survey data collected over eight months to determine which Healthy Homes behaviors were maintained and which were not.

Objective 3 - Support the development of a culturally responsible Healthy Homes Initiative and identify strategies to ensure the sustainability of the program.

Methodology

Investigation

In order to better inform the work we were doing with Health Androscoggin, we needed to explore environmental health risks in the built environment through the peer-reviewed literature. We researched different health concerns among refugee populations both locally and nationally by using the Ethnomed database developed by the University of Washington. In our investigation we looked at Healthy Androscoggin's culturally responsive model for healthcare education by examining their guide to cultural competency. We lastly reviewed the materials that Healthy Androscoggin distributed to ambassadors during the health educator training. This included an educational flipbook, an ambassador training PowerPoint, and the past two surveys.

Create a Third Healthy Homes Educational Survey

In order to create a third survey for the Neighbor to Neighbor program, we used the first and second surveys that were developed by Healthy Androscoggin as models. In addition to the questions that participants were asked on the second survey, we added five questions in order to achieve our project objectives:

1. *What is the biggest health concern in your home?*
2. *Have you noticed changes in your own personal health and/or the health of people in your home since you were first educated about Healthy Homes information?*
3. *What healthy homes behaviors do you use regularly?*
4. *What healthy homes behaviors did you have trouble maintaining?*
5. *What support would help you to maintain healthy behaviors in your home?*

The second question was meant to address our first project objective. This question evaluated the program's ability to transfer healthcare knowledge from ambassador to neighbors. By asking

participants if they noticed changes to their health and the health of the people in their home, we were able to understand if the health knowledge was transformative for the health of the neighbors. In order to achieve our second objective, we asked the participants which behaviors they had trouble maintaining and which behaviors they still use regularly. This helped us to understand what behaviors participants were able to maintain over the course of eight months. Along with general suggestions and feedback, we asked the participants what support they needed to maintain a healthy home in order to complete our third objective. Both of these questions were meant to support the continued development of the Healthy Homes initiative through gathering feedback and recommendations from program participants. This feedback was meant to help support the program in moving forward by ensuring the sustainability of this model. Complete copies of all three surveys are attached in the appendix of this report.

The first and second surveys implemented by Healthy Androscoggin had 81 participants. For the third survey we decided along with Healthy Androscoggin that the ambassadors would complete 15 of the initial 81 home visits. The reason for the significant reduction in the participant pool was our timeline for completing the third survey. Along with Healthy Androscoggin, we decided that the surveys would be conducted starting in February of 2019 and would be completed by March 15th, 2019. We chose this schedule in order to allow us time to review the results once the data had been collected. This meant that approximately two surveys were to be conducted each week with the same Neighbor that had taken the first survey eight months prior. In order to accommodate the schedules of both the ambassadors and the Neighbors, we decided fifteen surveys could be completed in our six-week timeframe. While this number of participants may not be significant enough for representative quantitative data, we

primarily hoped to receive anecdotal data in order to prove that the program continued to benefit the target community.

Home Visits and Data Collection

For the data collection and home visits our main contact was ambassador and coordinator Heritier Nosso. Initially, we planned to work with three ambassadors who would each visit five homes to conduct the third survey. Every neighbor that was visited for the third survey had been taught the healthy homes information, given cleaning supplies, as well as having taken the first and second survey. The data that was collected from this first and second survey administration was recorded on a hard-copy of the survey and then transferred to SurveyMonkey at the Healthy Androscoggin office. Throughout the duration of our project, there was a change in the roles of some of the ambassadors so Hertier Nosso, completed twelve of the fifteen home visits and distributions of the third surveys. A total of fifteen surveys were distributed during the months of February and March. Our project members also attended at least one home visit in order to meet participants and to see the homes that we were collecting data about. When we attended home visits, we would read the survey question and Heritier would translate the question to the participant, and then the participant would answer. Heritier would then translate their answer to us so we could record it on a paper copy of the survey. The data that we collected from this third survey was then input into the online survey administration program, SurveyMonkey, so we could analyze the results.

Data Analysis

To fully understand the overall experience of the participating neighbors, data from the first and second surveys were analyzed in addition to the third survey. The responses from all three surveys were put into a SurveyMonkey template in order to organize the dataset. The data was then imported from SurveyMonkey into Microsoft Excel for further analysis.

Data analysis for Surveys 1 and 2 included information collected from the initial 81 participants. When applicable, the entire data set was used to analyze the data from Surveys 1 and 2. Survey 3 had a significantly smaller sample size, so data analysis was limited. However, the 15 participants from Survey 3 had also been surveyed during 1 and 2, so their responses could easily be cross-analyzed.

Results and Discussion

Although most of our work was grounded in creating a third survey to assess the effectiveness of the Neighbor to Neighbor Healthy Homes Program, it was essential to our interpretation of the third survey to analyze the data from the first and second surveys. The following section displays both quantitative and qualitative analyses of all three surveys conducted independently by and in partnership with Healthy Androscoggin.

Survey 1

Along with the first educational session, Healthy Homes ambassador conducted the first survey in order to collect demographic data, create an understanding of community held healthcare knowledge, and identify participants' in home health concerns. In order to understand the community that Healthy Androscoggin worked with, we analyzed the demographic data from

the initial 81 participants. In order to assess the program's ability to reach across a diverse New Mainer population, we looked at the African origin countries of the neighbors. Of the 81 participants, 30 % were from The Democratic Republic of the Congo, 26% from Angola, 17% from Burundi,

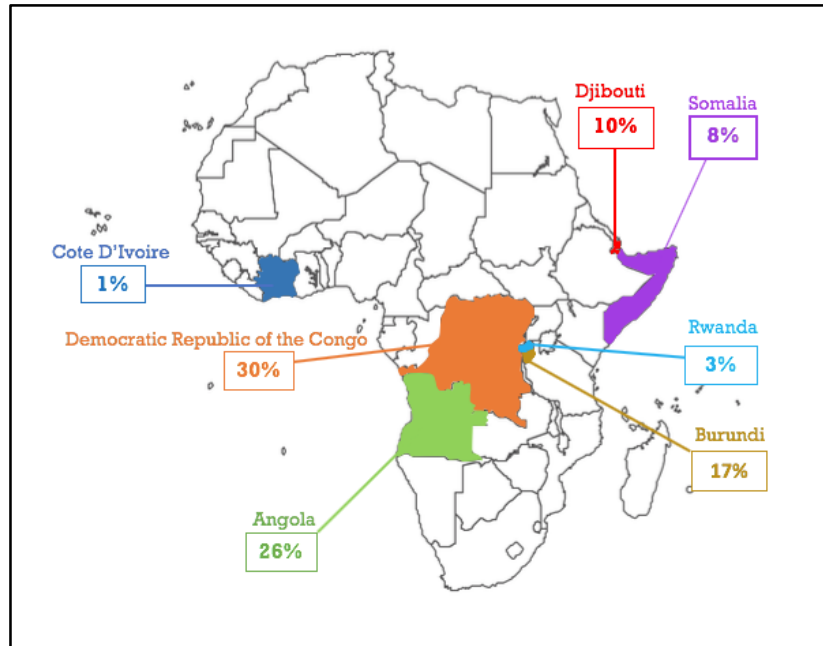


Figure 1. Percentage of participants from various African origin countries (n=81).

10% from Djibouti, 8% from Somalia, 3% from Rwanda, and 1% Cote D'Ivoire. This data shows the programs' ability to reach Lewiston community members from seven different African origin countries. Currently, Somali refugees and immigrants make up approximately 11% of Lewiston's total population (Healthy Androscoggin Annual Report, 2017). Somali and Somali Bantu are ethnic groups that live across country borders. With this, it is important to note that the data from the first survey looks at the country of origin rather than ethnicity. This means that the low percentage of participants from Somalia does not indicate that the program was not able to reach the Somali and Somali Bantu communities in Lewiston, ME. Without comprehensive data on the countries of origin of the entire Lewiston New Mainer population, we are unable to make

a decisive comparison between the communities reach in this survey and the communities living in Lewiston, ME. From here, more investigation into the countries of origin of the New Mainer population would aid in continuing to develop the Healthy Homes Neighbor to Neighbor program. From the data we have, it is still clear that the program successfully reached across a diverse community of New Mainers in Lewiston, ME.

It is important to note that these 81 participants, were representative of their entire household. This means that the Neighbor to Neighbor program was able to reach 81 households



Figure 2. Map of the reach of the Neighbor to Neighbor Program, including the streets with participant homes that received the Healthy Homes Education (n=81).

rather than individuals. Of the households that were visited, 14% were single person homes, 61% had 2-4 people in the home and 25% had 5-8 people in the home. Healthy Androscoggin was able to a total of 278 home members in its first and second educational sessions. In understanding the local, geographical reach of the program we looked at which streets in downtown Lewiston that were visited by ambassadors. Figure 2 displays each street that was

visited in the first visit educational session. It is clear that the program was able to reach a significant portion of downtown Lewiston, ME.

The demographic data from the first survey additionally helps us to understand the success of the Neighbor to Neighbor Health Homes program, by understanding the reach of the education. From this data, we were also able to analyze the different languages that were spoken in the home and throughout the administration of the surveys. Of the 81 participants, 32.7% of speak French in the home, 18.7% speak, 13.3% speak Portuguese, 10.7% speak Somali, 10.7% speak Lingala, 8.7% speak Kirundi, 4.0% speak Swahili, and 0.7% speak Kinyarwanda(fig. 3).

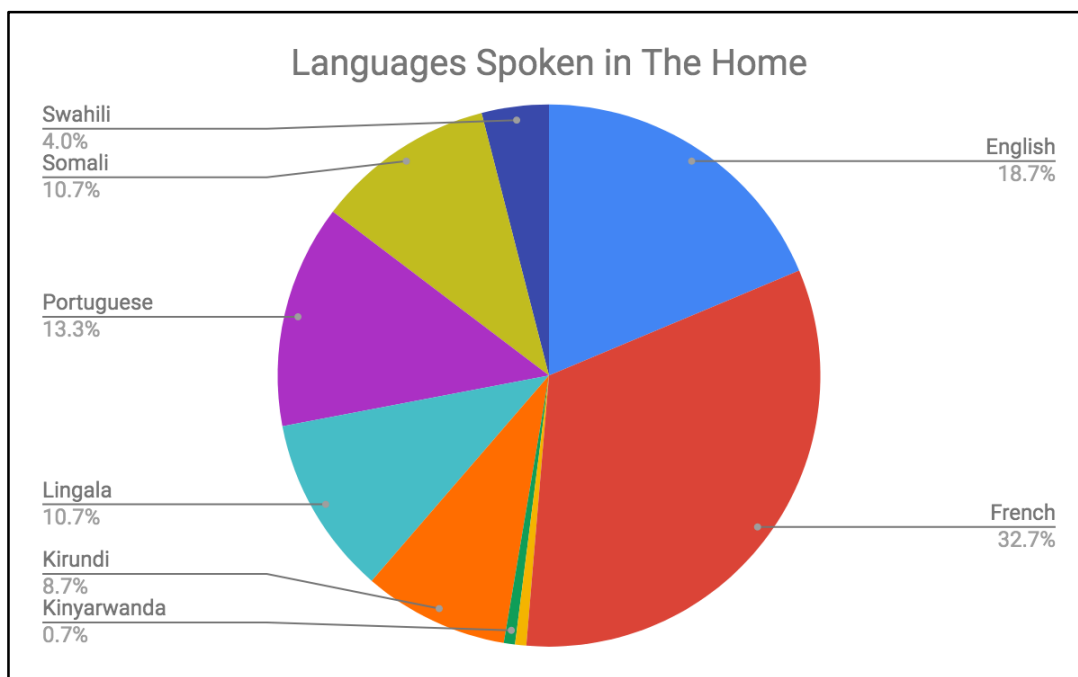


Figure 3. The languages spoken in the homes of neighbors participating in the Neighbor to Neighbor Program (n=81).

The first survey also asked participants to mark yes or no if their knowledge of health hazards in the home increased. The results that were collected, had very high rates of positive responses. The topic that received that most “YES” responses was lead, with 97% of participants saying that their knowledge of these topics had increased. Across the other Healthy Homes

topics there were very high rates of positive responses: 95% said “YES” to an increase in knowledge for asthma and asthma triggers, 94% for pest control, 92% for fuel burning appliances/chemicals and mold, 89% for pet dander, and 83% for radon.

On the first survey, Healthy Homes ambassador asked neighbors where they currently receive their healthcare information. Figure 4 displays the range of answers that were provided. Each neighbor put at least one answer, but most had more than one response to this question. Formal paths for receiving healthcare knowledge were dominant in the data. These formal paths include healthcare institutions like St. Mary’s Regional Medical Center and Central Maine Medical Center. Among the 81 participating neighbors, 33.33% of answered that they

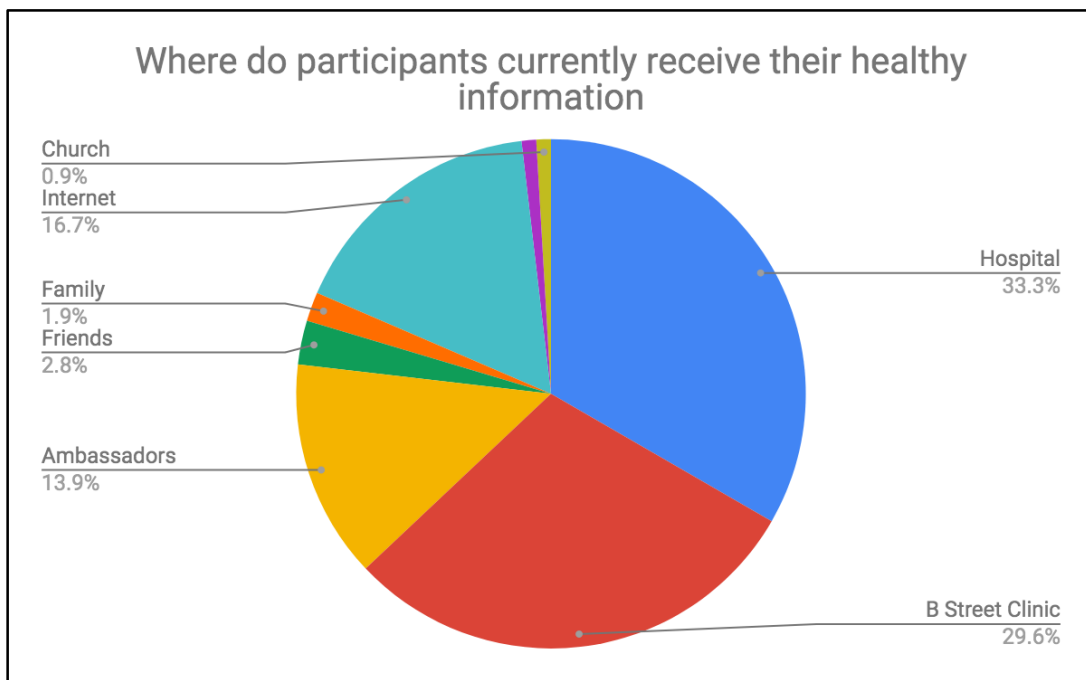


Figure 4. Proportion of formal and informal pathways for receiving healthcare information among participating neighbor population (n=81).

receive their healthcare information from the hospital and 29.6% receive their healthcare information from the Birch Street Clinic (B Street Clinic). Some of the informal paths in which neighbors receive their healthcare information included the internet, with 16.7% of the responses, as well as family and friends that had a combined percentage of 4.7%.

From the first survey, we were also able to analyze the different places in which the neighbors were acquiring much of their healthcare and healthy lifestyle information. A high rate of neighbors, 40%, responded that they were getting their healthcare information from the hospitals. About 25% of the participants were getting their information from the B Street Clinic.

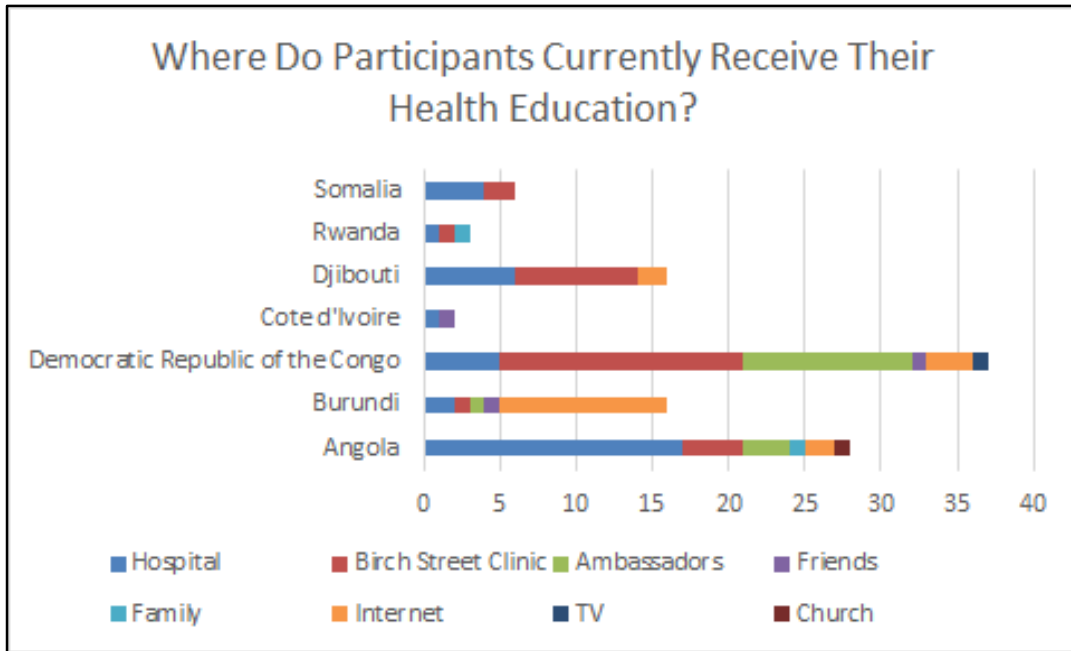


Figure 5. Bar graph displaying where participants from the same origin country received their health care information prior to the first ambassador visit (n=81).

The responses were categorized by origin country in order to identify common trends among neighbors with similar backgrounds. The most notable commonalities in the figure above are the differences between neighbors from Burundi and neighbors from Angola. The neighbors from Burundi primarily receive their healthcare information from the internet while neighbors from Angola receive their healthcare information from the Hospital (Fig. 5). In addition, neighbors from the Democratic Republic of the Congo received a majority of their healthcare information from the B Street Clinic and Healthy Homes ambassador.

The disparities observed in the data could be the result of various structural, political, and cultural factors. Literacy and fluency in English present a significant barrier to neighbors trying to get their healthcare information online or through informational pamphlets at healthcare institutions such as the B Street Clinic and Hospitals. Furthermore, formal methods of healthcare communication through such institutions often uphold systematic power imbalances between the provider and patient that challenge the concept of cultural safety in healthcare. The path by which neighbors receive this information can also be divided into oral/audible versus visual communication methods. Neighbors from certain origin countries may receive their information more audibly or orally through conversation with peers and healthcare providers, while others might experience written communication through medical writing. The length of time in which a neighbor has been in Maine might also influence where they receive their healthcare information. Those neighbors who have been in the Lewiston for longer periods of time might be more familiar with Healthy Androscoggin and other healthcare organizations that provide accessible resources and education.

This figure does not include a time scale, so it is unclear how often individual neighbors are seeking new information about individual, community, and environmental health. The neighbors who typically get their information from the hospital may be going frequently or as little as once a year or even once every two years. Those who are receiving their healthcare information from the internet might be updating their knowledge base more frequently. Lastly, there are biases embedded in the survey results, and neighbors might have answered ‘hospital’ or ‘doctor’ because it is known that medical professionals hold this knowledge.

Survey 2:

The second survey occurred 2-3 weeks after the first educational session. It was developed in order to determine; which topics participants remembered from the first visit; if the flipbook and cleaning supplies were still being used in the homes visited; if Healthy Homes behavior changes were implemented; and if participants had shared the Healthy Homes information with their friends and family. The survey involved the same 81 participants as the first, and each participating neighbor was visited by the same ambassadors they worked with before.

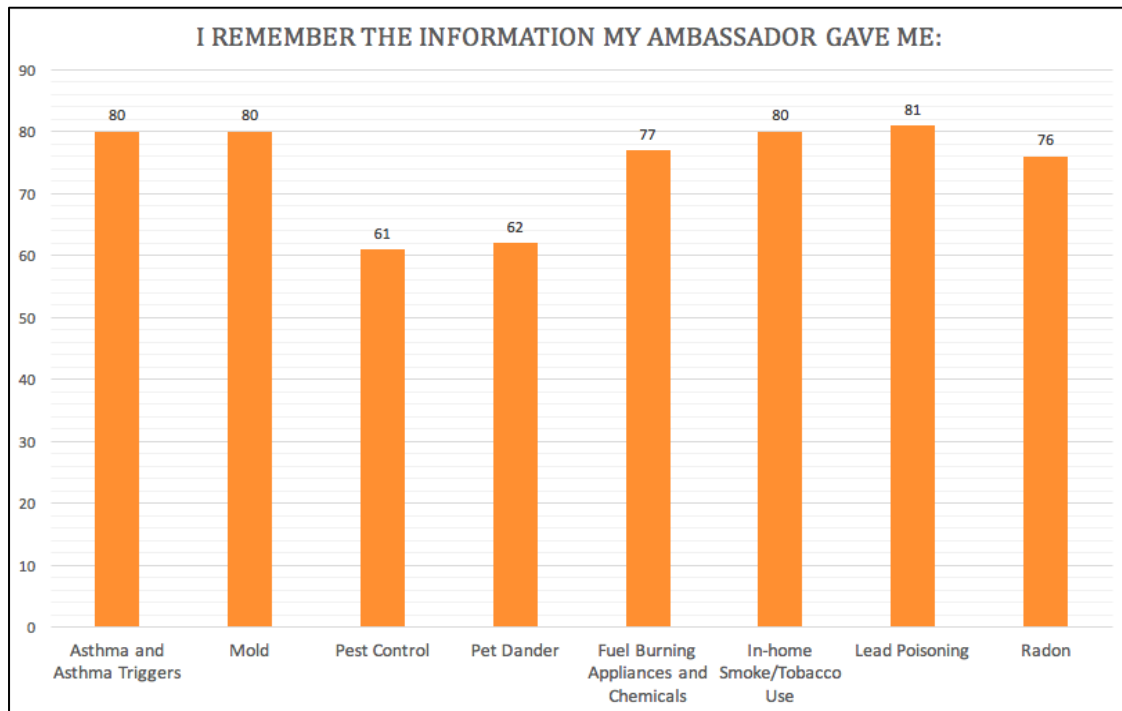


Figure 6. Bar graph depicting the frequency of participants who responded 'YES' to the questions regarding the information remembered from the initial Healthy Homes visit (n=81).

In order to determine if participants remembered information from their first visit, the ambassador asked them to check 'YES' or 'NO' whether or not they remembered the eight health topics that they learned about with the visiting ambassador. The responses that were collected in the first survey suggested that most participants remembered all of the topics that they discussed with their ambassadors. Figure 6 displays the number participants who responded

‘YES’ to the question “I remember the information my ambassador gave me about.” For example, these data show that 100% of participants remembered the information they learned about lead poisoning 2-3 weeks after the first visit. The topics that were remembered less among participants included pest control, pet dander, and radon. In the feedback we received from the participants, many stated that they did not have pets in the home, which may explain why the topic had lower retention. This lower remembrance rate may be connected to the lack of information provided in the education flipbook. The flipbook teaches participants how to identify cockroaches and bedbugs, but does not teach them how about rodents. Many participants talked about having issues with mice, which is a topic that is not covered in the flipbook. It was clear that pest control was a topic that needed more support from ambassadors and Healthy Androscoggin.

Furthermore, it is possible that information about radon gas was forgotten because there is no direct translation for radon in most of the languages spoken during the educational sessions. Lastly, knowledge of pet dander decreased over time because most of the participants didn’t have pets. Overall, the responses that were received in the second survey were very positive. In the feedback from the second survey, one participant stated that “I am now aware of lead poisoning and how it affects children if us parents didn’t pay attention to the apartment’s we rent.” These type of anecdotal responses show the program’s ability to both educate community members and allow for them to claim agency in their in-home health.

Survey 3:

The third survey incorporated a combination of questions that focused on following-up with question previously asked in Survey 2 as well as new questions to evaluate the program as a whole. One of the first questions asked in the survey was what the greatest health concerns were in their home. Of the fifteen participants, 40% answered lead poisoning and 33.3% answered pest control. With that being said, 26.7% sated that they no longer had any health concerns in their home. While these concerns were still prevalent in many of the neighbor’s homes, 100% of participants marked ‘YES,’ when asked if they noticed changed in their own health and/or the health of their home.

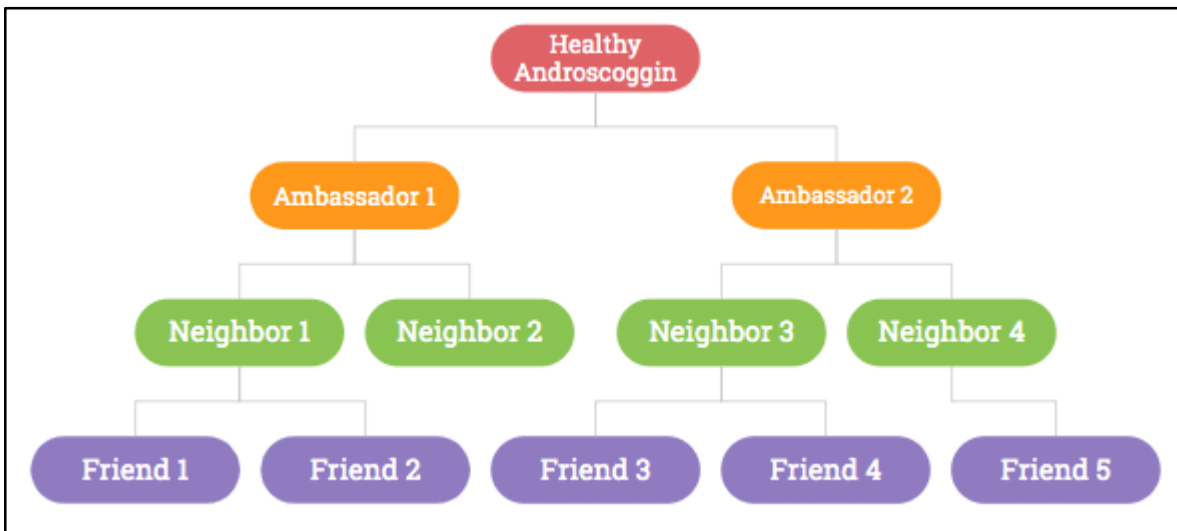


Figure 7. Schematic depicting the distribution of Healthy Homes knowledge throughout the New Mainer community in Lewiston, Maine.

In the second survey, neighbors were asked if they shared the Healthy Homes information with their friends, families, peers, and neighbors. After analyzing the responses from all 15 participants contacted for the third survey, 100% answered that they shared this information with others. The responses from the third survey showed only 80% of the survey participants answered that they continued to share the Healthy Homes information after the second visit. While this number is still very high, the drop in participants could be due to the

length of time that elapsed between the first and second survey (2-3 weeks) versus the time that elapsed between the second and third survey (8-9 months). Furthermore, anecdotal evidence collected from Survey 3 provided some explanation as to why participants were reluctant to share the Healthy Homes Education. One neighbor stated, “Most of my friends already knew this information already through the ambassador and Healthy Androscoggin workshops.” Some neighbors expressed not having enough time to share the information with their peers. Overall, the program satisfied one of its main goals which was to create and maintain a model for community-held healthcare knowledge that is accessible to all.

Participants were asked again which behaviors, if any, they had trouble maintaining over the course of eight months. Three participants voiced that maintaining pest control was the most challenging. Although these participants were not asked to say why they had trouble maintaining these behaviors, previous answers lead us to believe it was because of the lack of cleaning supplies as well as the lack of pest control information in the flipbook. The flipbook does address some individual behaviors one could take to remove these pests, but most neighbors expressed more structural concerns that required assistance from a landlord. In addition, mice came up again as a concern among neighbors. Lastly, very few participants expressed concerns with maintaining behaviors related to fuel burning appliances and chemicals, asthma and asthma triggers, and radon. Radon is a difficult behavior to maintain in many cases because neighbors will ask their landlord to test for radon gas, but their landlord often does not respond. As a result, the neighbors are left unsure about the status of radon exposure in their home.

After understanding which behaviors were difficult to maintain, participants were asked what support would help them better maintain Healthy Homes behaviors. The main suggestion that participants selected was ‘New cleaning supplies/Funding.’ 87% of respondents noted that

their cleaning supplies had run out. 73.3% of the respondents also said that they would like more frequent visits from ambassadors. This doesn't have to be a formal visit each time, but rather an informal check-up from ambassadors who refresh the neighbor's memory about the Healthy Homes behaviors.

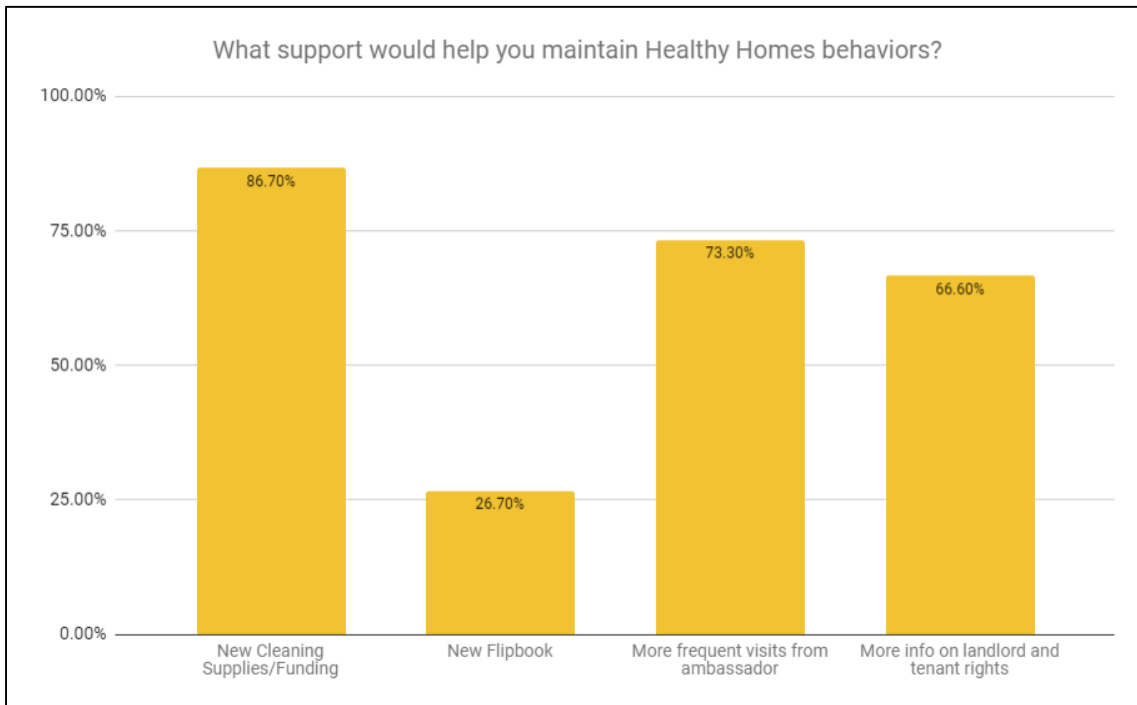


Figure 8. Bar graph displaying the proportion of participants who marked one or more multiple choice answers to receive additional support for maintaining Healthy Homes behaviors (n=15).

Landlord and tenant rights are something that the neighbors have continually voiced as a great concern. 66.6% of the respondents said that they would like more information about tenant rights and most of this included following up with their landlord about how to address certain health concerns in their home. Finally, 26.7% of the respondents wanted a new flipbook because they misplaced their copy over the eight month program (Fig. 8).

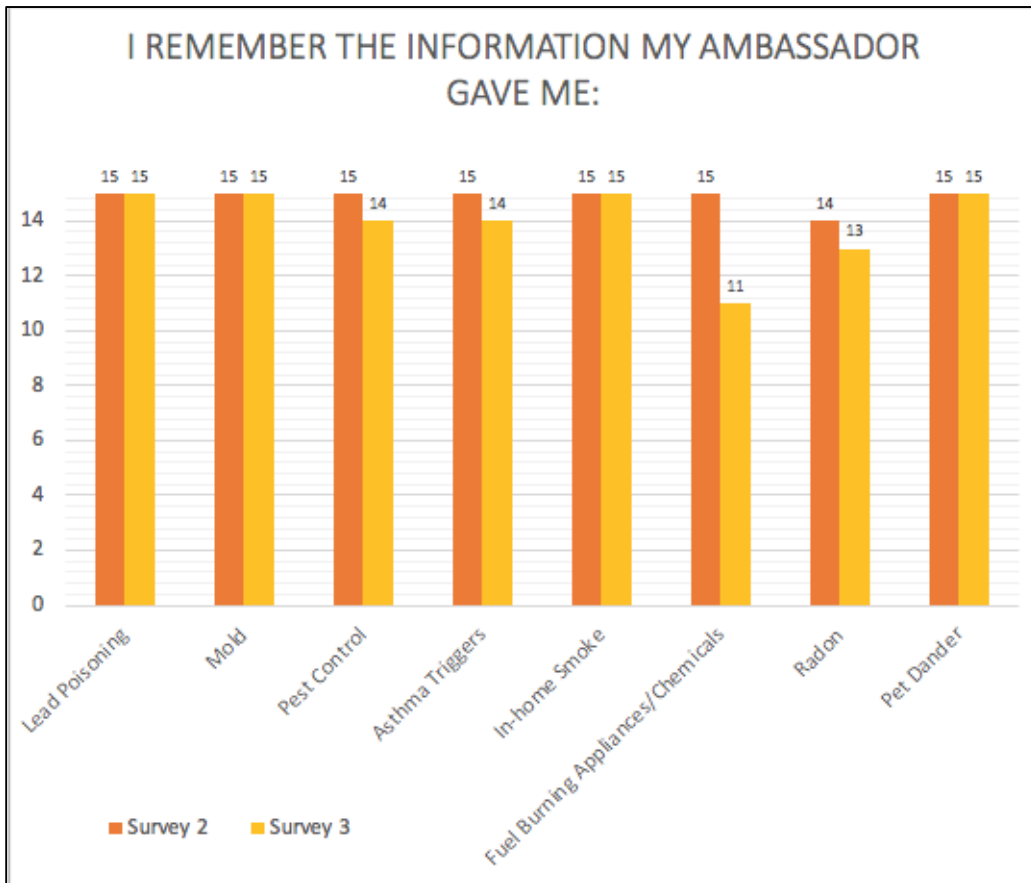


Figure 9. Bar graph depicting the frequency of participants who responded ‘YES’ to questions regarding the information remembered from the initial Healthy Homes visit. The data above is taken from the second survey (administered 2-3 weeks after initial home visit) and the third survey (administered 8 months after initial visit) (n=15).

In order to track the retention of healthcare knowledge among the fifteen participants from Survey 3, we compared survey responses from Survey 2 and 3. To do this, we looked at the

‘YES’ or ‘NO’ responses to the question: “I remember the information my ambassador gave me” from both the second and third survey. In the responses to the second survey, almost 100% of the participants remembered the topics that were discussed in the first educational session (fig. 9). One participant marked that they did not remember the information about radon, which could be connected to the lack of a direct translation. Eight months later, the fifteen participants responded “YES” to the same question in Survey 3. The only Healthy Homes topic that demonstrated a significant drop in information retention was fuel burning appliances and chemicals. Four participants marked that they had forgotten the Healthy Homes information about this topic; however, anecdotal evidence suggested that these participants were in the process of acquiring carbon monoxide detectors.

Key Findings

After completing an analysis of all three surveys, we outlined four key findings. The first finding was that the program’s model was successful in its transfer of knowledge. There were very high rates of knowledge retention and sharing even after the meetings with ambassadors had ended. This means that the program continues to function and spread healthcare information throughout the community even after formal educational sessions are completed. Secondly, we found that the cleaning supplies that were provided by ambassadors were being used by the neighbors. This means that it is essential to continue to support participants by providing cleaning supplies, as many of the neighbors used them up in the eight month period. We additionally found that participants needed more support and resources in order to protect their rights as tenants. Many neighbors reported that they had tried to address issues with lead, pest control and other Healthy Homes topics, but their landlords did not to action to address these

issues. In our anecdotal evidence, we additionally found that five of the fifteen participants from the third survey had moved to new homes. These participants stated that they used the information they received from Healthy Androscoggin to inform which homes they rented. Overall, the anecdotal responses that were collected in all three surveys were extremely positive. These recorded responses can be reviewed in appendix 5.

Recommendations

In order to support the continued implementation of the Neighbor to Neighbor model as a means of sharing healthcare information, we distinguished four core recommendations for the program. These recommendation are informed not only by the data analyzed but also the anecdotal evidence collected throughout the survey period. Even though the evidence collected over the eight months is small, we hope that it could be used for to supplement grant applications for future funding to support the Neighbor to Neighbor Program and Healthy Androscoggin as a community organization.

Tenant Advocacy Support

Our first recommendation in moving forward with the Neighbor to Neighbor model is to implement programs and/or establish resources that provide health advocacy support for renters. We recommend Healthy Androscoggin do this by further developing their partnership with Pine Tree Legal as a part of the Healthy Homes Initiative. Currently, Healthy Androscoggin helps to connect tenants with Pine Tree Legal in order to hold landlords accountable. By training ambassadors to assist in this connection between neighbors and legal support, we believe that the Healthy Homes Program can help address the structural barriers to a healthy home. With the educational sessions provided by Healthy Androscoggin, participants are able to take agency in

their in-home health by educating themselves and their communities on in-home health risks and preventative behaviors. Unfortunately, these personal behavioral changes can only address part of the barriers that New Mainers face in protecting their health. There are larger structural barriers that can create an unhealthy home, and tenants who come from marginalized backgrounds often need support in advocating for their rights. Many of the participants we spoke with discussed what they learned through the Healthy Homes Program and how it helped them to make changes in their personal life. Often, the conversations with neighbors developed into concerns about landlords who were unwilling to address structural issues in the home that were putting renters at risk. One neighbor expressed “I have trouble maintaining the behaviors my landlord doesn't care about.” Another neighbor stated, “I have trouble eliminating bedbugs and my landlord does not care about the cockroaches.” Various stories from neighbors described landlords who knew about the existing health risks in their rental properties and did not care to address them. In the third survey, we also saw that eleven of the fifteen participants marked that they wanted support with tenant rights and advocacy. With this, we propose that Healthy Androscoggin train their ambassadors to connect neighbors to Pine Tree Legal and/or run workshops that help community members understand their rights as renters. This work to promote tenant advocacy could also be done in partnership with Amy Smith's Property Health Report. The Property Health Report is an online database that is meant to document and publish the current condition of homes in Lewiston, Maine allowing renters to identify which properties are unsafe living environments.

Integrate Findings from Past Surveys

As Healthy Androscoggin moves forward in implementing this model for knowledge sharing, we suggest that they integrate the findings from the past surveys to inform the questions asked in future surveys. The third survey was modeled after the second survey, and previous questions were used as template. Instead, it would have been more beneficial to the program to utilize the responses from the first and second surveys. The questions asked in Survey 3 could have been directed toward following-up with concerns from neighbors. The most common concerns among neighbors after analyzing the results from Survey 2 had to do with pest control and obtaining a functional carbon monoxide detector. Moving forward, we recommend that Healthy Androscoggin conduct preliminary data analysis before determining which questions to ask in subsequent surveys.

Updating the Healthy Homes Education Flipbook

After analyzing the data from Survey 1, we determined that there were nine languages spoken among the participating neighbor community. Currently, the flipbooks distributed during the initial home visit is written in English. It is clear that the community could benefit from alternate versions of the flipbook written in languages more commonly spoken among neighbor communities. For many of the neighbors, English is their third or fourth language, so reading English can present a significant barrier. In furthering the success of the Neighbor to Neighbor model, we recommend that Healthy Androscoggin write flipbooks in more than one language, such as French, Portuguese, and Lingala, to better accommodate the needs of the community.

Data Collection Training for Ambassadors

In the continuation of this Neighbor to Neighbor model, we are suggesting that Healthy Androscoggin create a training program that educates ambassadors on basic data collection techniques to ensure consistency in recording survey responses. One obstacle that we frequently confronted while analyzing the data was inconsistent information entered into SurveyMonkey. It was challenging to accurately assess the survey responses when different ambassadors had unique shorthand responses for the same survey questions. Not only were multiple ambassadors entering data into SurveyMonkey, the survey responses being translated to and from multiple languages. Consequently, the responses were not uniform and difficult to organize for interpretation. It is possible that potential findings were overlooked in the data analysis due to inconsistencies in the recorded responses.

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Appendices

Appendix 1: Project Contributors

Thank you to Healthy Androscoggin, Heritier Nosso, Holly Lasagna, Saleh Ahmed, Healthy Homes participants, The Harvard Center for Community Partnerships, Bates College Program for Environmental Studies, Professor Karen Palin and Professor Francis Eanes.

We would especially like to thank Heritier Nosso for all the time and hard work he put into this project. Heritier conducted twelve of the fifteen home visits during the Survey 3 period. He was an invaluable source of support throughout this project and will continue to be fundamental to the success of this program.

Appendix 2: Survey 1



**Healthy Homes
Neighbor Survey- 1st Visit**

Directions: Survey for Ambassador to complete with Neighbor at the 1st visit

Neighbor Demographics:

Name	
Contact information (phone or email)	
Self-reported race, cultural identity or ethnicity/country of origin	
Male/Female/Other	
Number of people in the home	
Languages spoken in the home	
Location (street and city)	
Where do you get health care information?	
Best way to get health information (flyer, friend, TV, Facebook etc.)	

1. My knowledge of these health topics has increased:	YES	NO
Asthma and Asthma Triggers		
Mold		
Pest Control		
Pet Dander		
Fuel Burning Appliances and Chemicals		
In-home Smoke/Tobacco Use		
Lead Poisoning		
Radon		

2. What health topics are important to you and your family? Select all that apply:

- Asthma and Asthma Triggers
- Mold
- Pest Control
- Pet Dander
- Fuel Burning Appliances and Chemicals
- In-home Smoke/Tobacco Use
- Lead Poisoning
- Radon

3. The following tools increased my Healthy Homes knowledge. Select all that apply:

- Flipbook
- Ambassador discussions
- Cleaning materials
- Smoke Free Home Pledge
- Other:

4. This helped me participate in the Healthy Homes program. Select all that apply:

- Contact/connection with my Ambassador
- Important topics
- Appointment reminders
- Incentives/supplies
- Other:

Follow up appointment date:

Smoke Free Home Pledge Completed: YES NO

If no, why not:

Other comments:

What changes do you plan on making in your home?

Asthma and Asthma Triggers	
Mold	
Pest Control	
Pet Dander	
Fuel Burning Appliances and Chemicals	
In-home Smoke/Tobacco Use	
Lead Poisoning	
Radon	

Appendix 3: Survey 2



**Healthy Homes
Neighbor Survey- 2nd Visit**

Directions: Survey for Ambassador to complete with Neighbor at the 2nd visit

Neighbor's Name:

5. I remember the information my Ambassador gave me about:	YES	NO
Asthma and Asthma Triggers		
Mold		
Pest Control		
Pet Dander		
Fuel Burning Appliances and Chemicals		
In-home Smoke/Tobacco Use		
Lead Poisoning		
Radon		

6. The flipbook and/or cleaning supplies were used since my 1st Ambassador visit:

YES NO

If yes, how did you use the flipbook/cleaning supplies?

7. I have shared Healthy Homes information with my friends/family/neighbors about what I learned from my Ambassador.

YES NO

8. Smoke Free Home Pledge Completed: YES NO

If no, why not:

Other comments:

Please describe changes made after your 1st Ambassador visit:

Asthma and Asthma Triggers	
Mold	
Pest Control	
Pet Dander	
Fuel Burning Appliances and Chemicals	
In-home Smoke/Tobacco Use	
Lead Poisoning	
Radon	

Appendix 4: Survey 3



**Healthy Homes
Neighbor Survey- 3rd Visit**

Directions: Survey for Ambassador to complete with Neighbor at the 3rd visit
Neighbor's Name:

9. I remember the information my Ambassador gave me about:	YES	NO
Lead Poisoning		
Mold		
Pest Control		
Asthma and Asthma Triggers		
In-home Smoke/Tobacco Use		
Fuel Burning Appliances and Chemicals		
Radon		
Pet Dander		

2. What is the biggest health concern in your home?

3. Have you noticed changes in your own personal health and/or the health of people in your home since you were first educated about Health Homes information?

YES NO

4. What Healthy Homes do you continue to use regularly?

5. The flipbook and/or cleaning supplies were used since my 2nd Ambassador visit:

YES NO

If yes, how did you use the flipbook/cleaning supplies?

6. What Healthy Homes behaviors did you have trouble maintaining?

If you had trouble keeping up with certain behaviors, what prevented you from do so?

7. I have shared Healthy Homes information with my friends/family/neighbors about what I learned from my Ambassador.

YES NO

If yes, how do you talk about this with your friends/family/neighbors?

- A. Sharing the flipbook
- B. Noticed health concern when visiting home
- C. Interesting information to share
- D. Sharing the Flipbook

If no, why not?

8. Have you completed the Smoke Free Home Pledge & received a smoke-free home kit?

YES NO

9. What support would help you maintain healthy behaviors in your home?

- A. New Cleaning Supplies/Funding
- B. New Flipbook
- C. More frequent visits from ambassador
- D. More info on landlord and tenant rights

Please describe changes made after your 2nd Ambassador visit:

Lead Poisoning	
Mold	
Pest Control	
Asthma and Asthma Trigger	
In-home Smoke/Tobacco Use	
Fuel Burning Appliances and Chemicals	
Radon	
Pet Dander	

Other comments/suggestions:

Appendix 5: Feedback from participants

1. “These topics were very helpful for me and my family. And the ambassador has explained the topics to me in a very good, understandable way.”
2. “It is important to know such topics because some people can become ill at a certain time with the lack of knowledge.”
3. “I enjoyed speaking with the ambassador. The topics were interesting and helpful for me and my family because I know how to protect myself and my house from asthma.”
4. “It was a pleasure meeting with the ambassador who helped me to understand how someone can contract asthma without knowing its triggers, also the cleaning supplies will help me to have a safer home.”
5. “All of the information gave me motivation to keep my family and home clean.”
6. “I thank Healthy Androscoggin for helping and teaching the community about the Healthy Homes information.”
7. “I used the cleaning supplies to make my place look clean and healthier because I have small children.”
8. “I hope this work can continue.”
9. “I live in a brand new apartment and not having lead was one of criteria!”
10. “I learned about making sure that the children do not touch the lead dust, knowing whether or not there is radon in the house, the general condition of the apartment and talking to landlords about making the conditions of the apartment safer.”