

Smoke-Free Housing Policies, Smoking and Secondhand Smoke Exposure Among Public Housing Residents

AN EVALUATION OF STATEWIDE HEALTH IMPROVEMENT
PROGRAM (SHIP) SMOKE-FREE HOUSING WORK



Minnesota
Department of Health

OFFICE OF STATEWIDE HEALTH IMPROVEMENT INITIATIVES

**Smoke-Free Housing Policies, Smoking and Secondhand Smoke Exposure Among
Public Housing Residents**

Minnesota Department of Health
Office of Statewide Health Improvement Initiatives
P.O. Box 64882, Saint Paul, MN 55164
(651) 201-3663
<http://www.health.state.mn.us/divs/oshii/index.html>
July 2016

Upon request, this material will be made available in an alternative format such as large print, Braille or audio recording. Printed on recycled paper.

Contents

Executive Summary	4
Introduction	5
Methods.....	5
Results.....	8
Discussion	11
Conclusion.....	14
References	14
Appendix A: Participant Characteristics	16
Appendix B: Survey Instrument 1 (pre-test survey)	17
Appendix C: Survey Instrument 2 (post-test survey).....	23

Executive Summary

Smoking prevalence and secondhand smoke (SHS) exposure remain disproportionately high in low socioeconomic status (SES) groups, despite local and state policies that prohibit smoking in bars, restaurants, and other public areas. Smoke-free housing (SFH) policy has the potential to improve the quality of public housing and motivate smoking cessation, thereby decreasing the smoking prevalence and SHS exposure in low SES groups.

This report summarizes the results of a longitudinal survey that evaluates the effect of SFH policy on smoking behavior and SHS exposure among public housing residents. Participants were recruited from eight public housing properties in Minnesota that had agreed to implement SFH policies with the help of local public health agencies and the support of Statewide Health Improvement Program (SHIP) funds. Pre- and post-policy surveys were administered to 180 residents.

Survey results provided evidence that SFH policy can help reduce SHS exposure in public housing buildings. Additionally, results pointed to the significant effect of SFH policy in motivating a reduction in smoking. More comprehensive SFH policies ensure the greatest effect, as properties that did not prohibit outdoor smoking saw a slight increase in outdoor SHS exposure, potentially as a result of smoking residents going outside to comply with the policy.

With this report, we hope to inform local public health staff and public housing landlords of the effects that SFH policies have on indoor SHS exposure and the benefits of more comprehensive policies that include outdoors. Additionally, we hope to use this report to demonstrate that SFH policy can encourage a reduction in smoking among current smokers.

Introduction

Cigarette smoking continues to be the leading cause of preventable death in the U.S. Smoking causes 480,000 deaths each year among smokers, and an additional 50,000 deaths among nonsmokers due to secondhand smoke (SHS) exposure.¹ Local and state tobacco control laws, such as those that prohibit smoking in restaurants and bars, have helped reduce smoking prevalence by 40 percent, and nonsmokers' SHS exposure by 71 percent, over the past 30 years.²⁻⁵ Despite these declines, groups with low socioeconomic status (SES) experience a disproportionate burden of smoking harm.⁵⁻⁷ In Minnesota, the rate of smoking is 121 percent higher among those without a high school degree compared to those with more than a high school degree.⁸ In addition to higher smoking rates, lower SES groups are also more likely to be exposed to SHS. A primary contributor to the persistent disparity in SHS exposure is unequal access to quality housing, of which an essential factor is a smoke-free environment. Lower SES groups are more likely to live in buildings where smoking is permitted indoors, putting them at greater risk of SHS exposure in their homes.⁹

While smoking in Minnesota was prohibited from nearly all indoor public spaces in 2007 with the Freedom to Breathe provisions to the Minnesota Clean Indoor Air Act, these provisions did not include smoking in individual, multi-unit housing units. Smoke can easily pass from one unit to another through walls, doors, and shared ventilation systems, exposing other residents to SHS.¹⁰ Statewide Health Improvement Program (SHIP) staff seek to provide greater opportunity for quality housing by prohibiting indoor smoking — and in some cases outdoor smoking as well — by implementing SFH policy. Few studies have evaluated the effectiveness of SFH policies on SHS exposure, but studies looking at smoke-free workplaces have shown promise in making a significant impact.^{11, 12} In addition to reducing SHS with smoke-free workplace policies, there is evidence that those who are reached by these policies are more likely to have quit or reduced the amount of cigarettes that they smoke after implementation of the policy.¹³

In seeking to address this inequity in quality housing and SHS exposure, SHIP funds were used by grantees to assist with the implementation of smoke-free housing policy at public housing properties. SHIP grantees (i.e., local public health agencies) across Minnesota have worked to implement smoke-free policies at properties in their communities to ensure greater access to quality, smoke-free public housing. Using a pre- and post-test design, we sought to examine the effect that SFH policies have on residents' exposure to SHS, and the effect of SFH policy on smokers' quit attempts and smoking behavior.

Methods

Eight properties were recruited for this study from four distinct regions of Minnesota, composed of a mix of urban and rural communities. Participating properties had a high proportion of seniors as residents. The SFH policies that were implemented at all eight properties prohibited smoking in all indoor areas, and three properties also prohibited smoking

on all outdoor grounds. Sites were recruited with the help of the Association for Non-smokers, American Lung Association, and SHIP staff, who identified properties that had agreed to implement a SFH policy but had not yet implemented it. Residents were recruited via flyers posted on bulletin boards at each site.

Initial data collection (pretest) occurred one month prior to implementation of the SFH policy (between February 2014 and March 2015), and follow up data (posttest) were collected six months post-implementation (between September 2014 and October 2015). Pretest surveys, along with an information sheet that included details of the survey (e.g., only one adult per unit could participate), were distributed door-to-door to all residents in participating buildings. Posttest surveys were distributed only to pretest respondents who still lived at the property. Two compensation options were provided to participating properties. Five properties chose to have participants receive a \$15 gift card for completing the pretest survey, and a \$20 gift card for the posttest survey. The other three properties chose to do random drawings for several \$50 gift cards at both pretest and posttest. Cessation resources (e.g., pamphlets, fliers) were offered to residents at all properties at pretest and posttest.

Participants

A total of 289 residents completed a pretest survey (50 percent response rate). Of these residents, 25 had moved out prior to posttest data collection. Among pretest respondents, 180 also completed a posttest survey, yielding a 68.2 percent response rate for posttest, and a 62.3 percent retention rate from pretest to posttest.

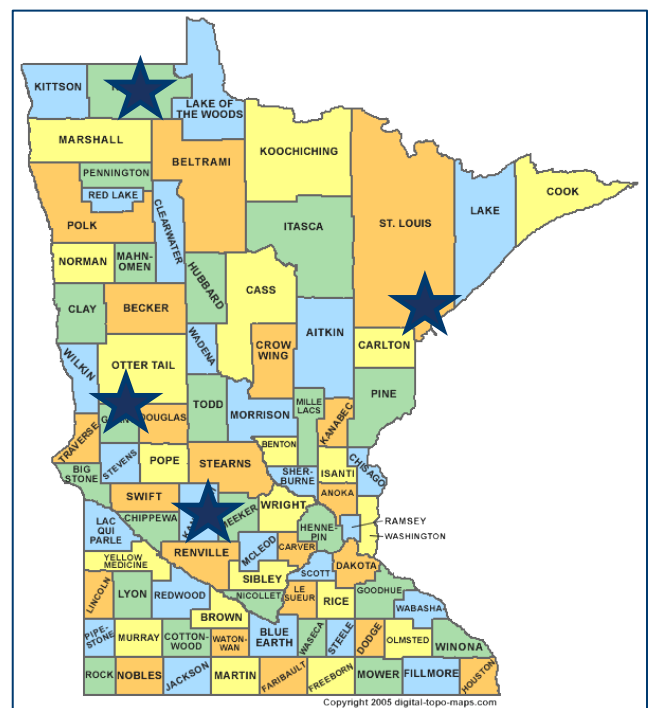
The sample was 68 percent female, 73 percent White, 23 percent Somali, and had a mean age of 63 years (range: 21-99). The proportion of current smokers at pretest was 15 percent. Three-fourths of the sample (82.2 percent) had less than a bachelor's degree, 3.4 percent had a Ph.D. or other professional degree, and 72.5 percent earned \$25,000 a year or less.

Analytical Methods

Analysis was completed according to the specific study aim:

- **To what extent was there a reduction in nonsmokers' indoor SHS exposure from before to after the SFH policy was implemented?**

Both pretest and posttest had two indoor items: frequency of smelling or breathing secondhand smoke in one's own apartment, and frequency of SHS exposure in shared areas (hallways, stairwells, community rooms or laundry rooms). Respondents were



asked to give an answer of 1 – 5, with “1 = Never” and “5 = Everyday.” For illustrative purposes, respondents were categorized into those who reported indoor SHS exposure a few times per month or more (“3 = A few times a month” through “5 = Everyday”) and those who reported SHS exposure less than a few times per month (“1 = Never” and “2 = Hardly Ever”). Average exposure at pretest was compared to exposure at posttest to test for a significant change.

- **To what extent was there a reduction in nonsmokers’ outdoor SHS exposure from before to after the SFH policy was implemented?**

Respondents were also asked about frequency of outdoor SHS exposure on both the pretest and the post-test. This included exposure in parking lots, lawns or playgrounds. Again responses were ordinal variables, from “1 = Never” to “5 = Everyday.” Significant differences were tested by comparing pretest and posttest average exposure. Again, for illustrative purposes, respondents were categorized into those reporting outdoor SHS exposure a few times per month or more, and those who did not. In addition, follow-up analyses were performed examining differences in outdoor SHS exposure among residents from properties that did *not* prohibit smoking on all grounds.

- **To what extent did smoking residents increase quit attempts from before to after the SFH policy was implemented?**

Participants were classified as current smokers if they reported smoking 100 cigarettes lifetime and currently used cigarettes “some days” or “every day.” To measure quit attempts, participants were asked “During the past 6 months, have you stopped smoking for one day or longer because you were trying to quit smoking?” (yes/no). The proportion of participants who were current smokers and who had made quit attempts at pretest was compared to those who made quit attempts at posttest.

- **To what extent did smoking residents reduce the amount they smoked from before to after the SFH policy was implemented?**

On posttest surveys, participants were asked if the amount that they smoke had changed in the past six months with the response options of “more / less / about the same / I quit.” Frequencies were used to examine the proportions of pretest smokers who had quit or reduced the amount that they were smoking at posttest.

- **Among smokers who quit, tried to quit, or reduced the amount that they smoked, what were their most common reasons for doing so?**

In addition to changes in smoking amounts, the survey also sought to measure what factors were motivating smokers to reduce their smoking or try to quit over the past six months. Response options for primary reasons for reducing or quitting smoking included “family / health / cost / inconvenience – can’t smoke in apartment.” Frequencies were used to examine the most commonly cited reasons for quitting, trying to quit or reducing smoking.

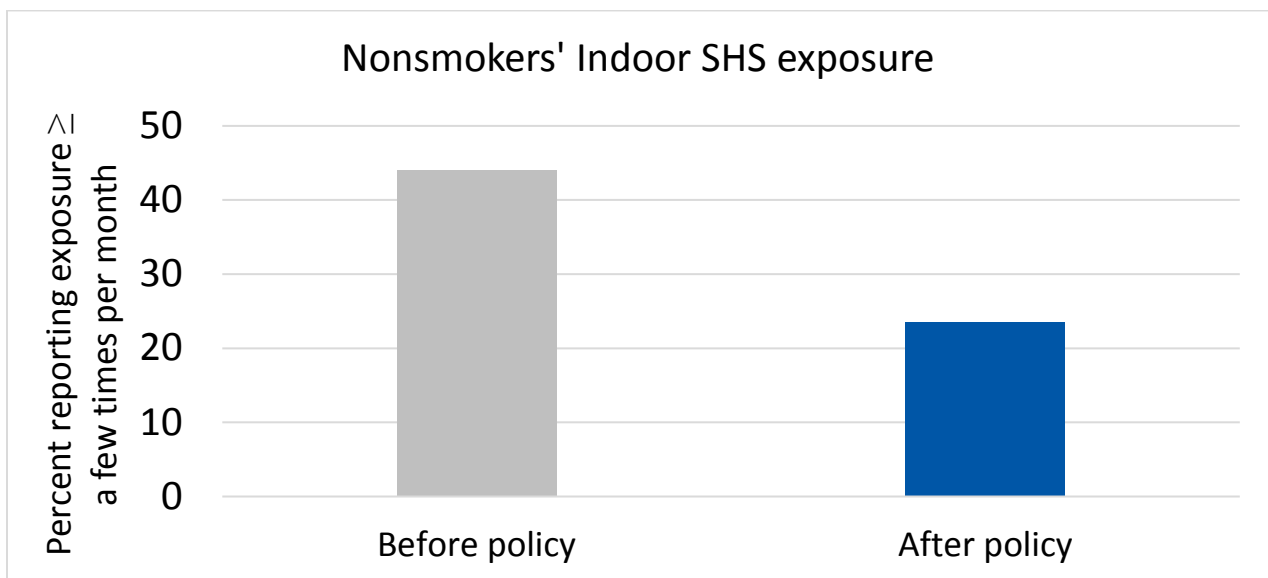
Results

Sample Characteristics

Participants retained at posttest were generally similar to those lost to follow-up. There were some differences in income, with the final sample having a greater proportion of individuals with an annual income of less than \$10,000 (38.8 percent) compared with those lost to follow up (20.8 percent). Additionally, the final sample had a greater proportion of individuals with less than a high school education (29.3 percent) compared with those who were lost to follow up (14.2 percent) (See Appendix A).

Indoor SHS Exposure

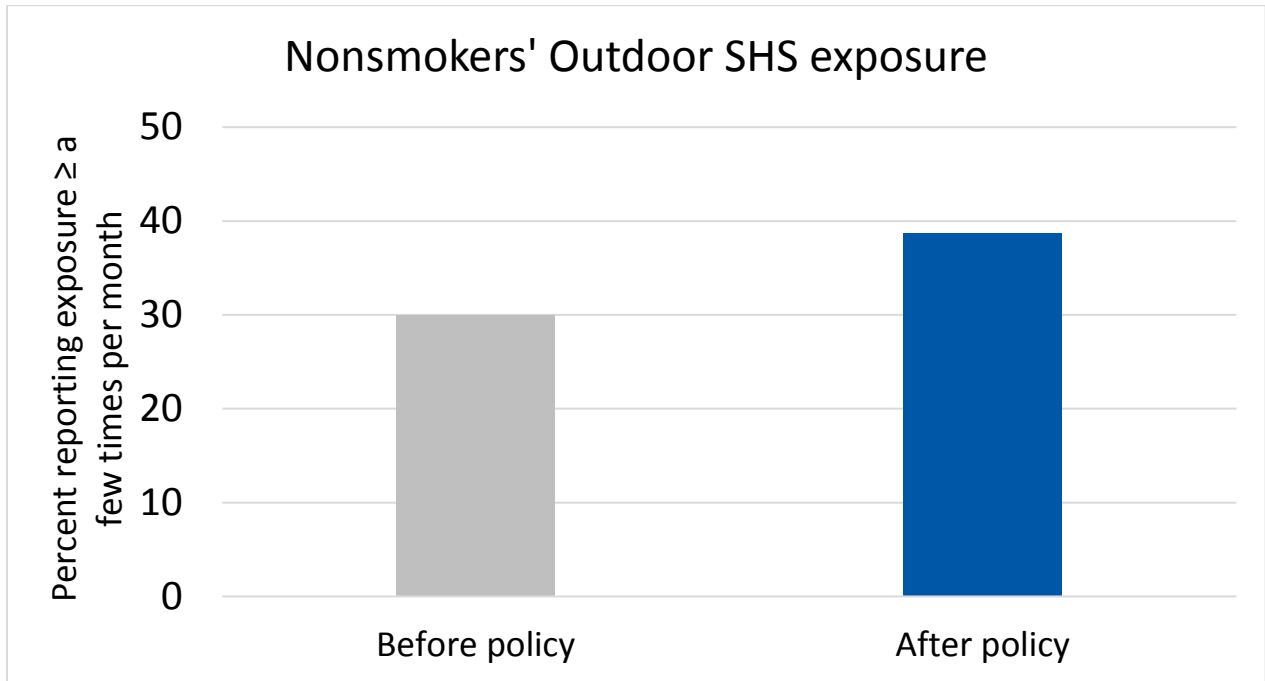
There was a significant decrease in reports of indoor SHS exposure at posttest compared to at pretest ($p < .001$). Participants were split into those who had been exposed a few times per month or more vs. less than a few times per month. Frequencies showed that 44 percent of respondents reported exposure to indoor SHS at pretest compared to 23.6 percent of respondents at posttest.



Outdoor SHS Exposure

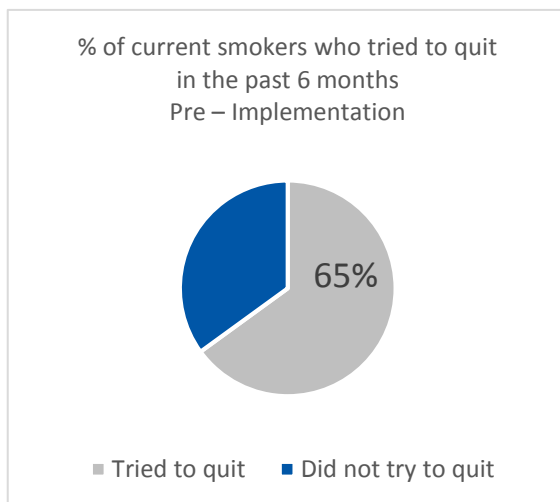
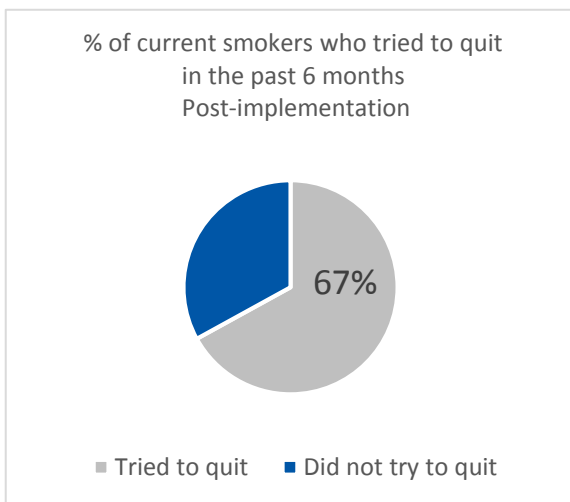
There was no significant difference in outdoor exposure to SHS from pretest to posttest when residents from all properties were considered. Because some properties prohibited smoking on all property grounds while others did not, additional analyses were conducted to examine changes in outdoor SHS among properties that did *not* prohibit smoking on all property grounds. Residents were split into those who reported exposure a few times per month or more and those who reported exposure less than a few times per month. Results pointed to a

marginally significant *increase* in outdoor SHS exposure from pretest (30%) to posttest (38%). See Figure below.



Did Smoke-Free Housing Policies influence quit attempts?

Quit attempts from pretest to posttest were essentially equal, with 67 percent of smokers indicating quit attempts in pretest, and 65 percent reporting quit attempts on posttest. Analyses showed no significant difference.



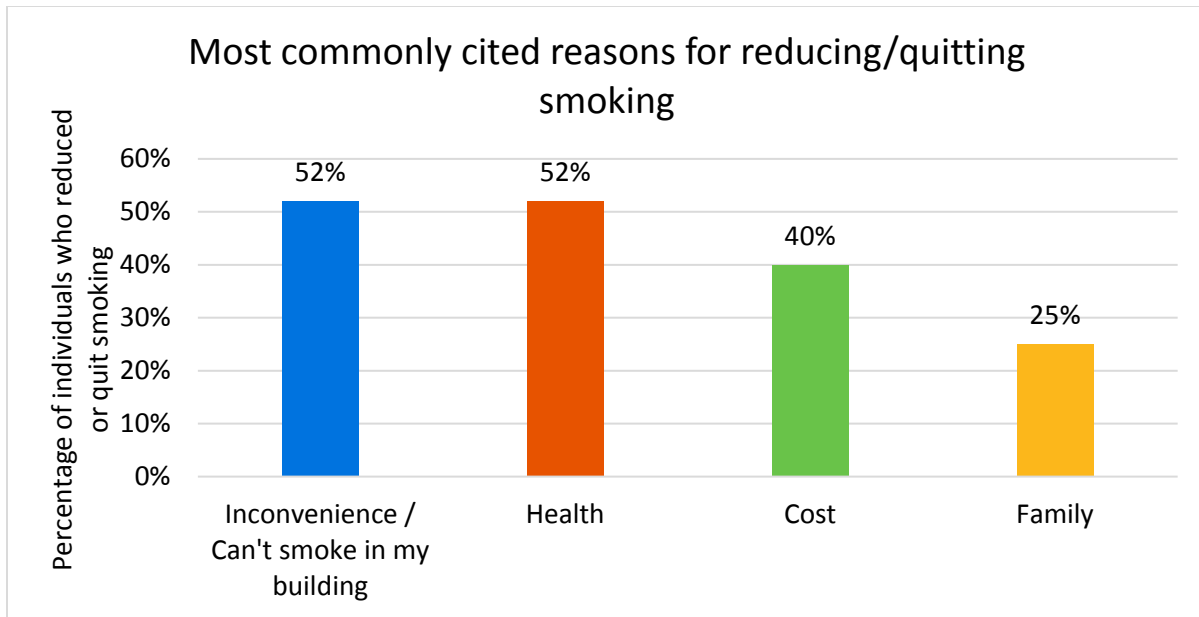
Smoking Reduction

The proportion of residents who had quit at posttest (5 percent) was not significantly different than annual quit rates in the general population in the absence of an intervention (2.6 percent). At posttest, 77 percent of smokers reported that they had reduced the amount that they had smoked in the past six months, and an additional 5 percent reported that they had quit.

Posttest - How has the amount you smoke changed in the past 6 months?		
	Frequency	Percent
I'm smoking about the same	4	18%
I'm smoking less	17	77%
I quit smoking in the past 6 months	1	5%
TOTAL	22	100%

Reasons for smoking reduction

Respondents who reported quitting or reducing the amount that they smoke were also asked about their reasons for doing so at posttest. The two most commonly-cited reasons for quitting or reducing smoking were not being able to smoke in the building and health, both of which were cited by 52 percent of those smokers. The next most commonly-cited reasons were cost (40 percent) and family (25 percent).



Discussion

Secondhand Smoke Exposure

As expected, results from this evaluation point to a significant decrease in indoor SHS exposure at public housing properties after implementation of SFH policies. These policies have the potential to decrease the disproportionate burden of SHS among low SES groups by improving the quality of public housing. Despite the significant decrease in indoor SHS exposure in this study, it is important to note that 23.6 percent of residents continued to report indoor SHS exposure at least a few times per month, a full six months after the SFH policy had been implemented. This suggests enforcement and compliance issues. Without full compliance, continued SHS exposure undermines health benefits of smoke-free housing policy.

Additionally, it is important to understand the factors that affect resident compliance with SFH policy. In a 2016 companion report from the Minnesota Department of Health (“Implementing Smoke-free Policies in Public Housing”), public housing landlords and local public health staff provided key informant interviews regarding barriers and strategies for SFH policy enforcement. This qualitative report discussed difficulties proving policy violations, limited staff capacity, and inconsistency in enforcement, particularly due to grandfathering long-time smoking residents and limited staff capacity. These factors may have played a role at the properties surveyed in this study, resulting in the continued reports of SHS exposure six months post implementation. Continued efforts to create better enforcement strategies will help ensure that SFH policies provide optimal benefits to residents.

Results also show important changes in outdoor SHS exposure. While there was not a significant difference in outdoor SHS exposure when comparing residents from all properties at pretest and posttest, there was a marginal increase in resident reports of outdoor SHS exposure

when focusing on properties that did not prohibit smoking on all property grounds. These findings suggest that, following implementation of a smoke-free policy, there may be unintended increases in SHS exposure in outdoor locations not covered by the smoke-free policy. The observed increase in outdoor SHS exposure may be due to smoking residents complying with the smoke-free policy, but electing to smoke in locations that are unavoidable by non-smoking residents (e.g., outside the front entryway, in the parking lot). These findings highlight the benefits of implementing comprehensive smoke-free policies that cover *all* property grounds. Designated smoking areas, particularly those that provide partially enclosed areas for smoking, may help decrease outdoor SHS exposure by prohibiting smoking in areas that are unavoidable by nonsmoking residents. Limitations such as funding for a designated smoking structure or having small grounds that do not provide adequate space for a designated smoking area may benefit from a more comprehensive policy to ensure reduction in outdoor SHS exposure.

Changes in Smoking Behaviors

Survey results from this study showed no change in quit attempts in the past six months from pretest to posttest. Because residents were informed that SFH policy would be going into effect well in advance of the implementation date — six months or more, in most cases — it is possible that residents made quit attempts prior to the implementation date in anticipation of the policy going into effect. This may have resulted in an inflated number of baseline quit attempts. Consistent with this explanation, the proportion of smokers who made a quit attempt in the six months prior to implementation (67 percent) was substantially greater than the proportion of smokers in the general population (and in this age group) who made a quit attempt in the past *twelve* months (38.8 percent¹). Future evaluations should assess quit attempts prior to the announcement of the SFH policy to establish a valid baseline for quit attempts.

The low percentage of residents who successfully quit after the implementation of the policy is comparable to the annual quit rate for smokers in the general population in the absence of an intervention (2.6 percent¹⁴), suggesting that the policy alone did not substantially increase quitting. These findings are inconsistent with a recent evaluation of SFH policies among low income residents which found a quit rate of 22.1 percent post implementation; however, this quit rate was observed 18 months following implementation of the SFH policy, a follow-up period three times as long as in the current study.¹⁴ It is possible that 12 or 18 month follow-up surveys would have detected larger quit rates.

In the qualitative companion report referenced previously, public housing landlords frequently cited smoking cessation as an under-emphasized strategy for SFH. Property managers and local public health staff reported disappointment in smoking cessation materials and outcomes that accompanied efforts to implement SFH policy. Those reports, along with the low percentage of residents who successfully quit as measured in this report indicate a need for greater cessation support in conjunction with SFH policy implementation. Expanding cessation support beyond brochures and referrals may amplify the effect of SFH policies at public housing properties on individual smoking behaviors.

While there was no increase in quitting in the current study, a vast majority of smokers — 77 percent — did report reducing the amount that they smoked at the 6-month follow up, a figure that is substantially greater than that found in a similar evaluation of SFH policies at public housing properties (i.e., 49 percent¹⁴). This suggests that, while residents were not more apt to make a quit attempt or successfully quit smoking, they did change their smoking behavior in the desired direction. While successful quitting is the ideal outcome, the potential of SFH policy to encourage a reduction in smoking is itself a positive outcome, especially when considering implications for future quit attempts. Previous research has found that reducing smoking is predictive of later cessation among smokers who are motivated to quit,¹⁵ so it is conceivable that many smoking residents were in the early stages of quitting at the posttest assessment.

Reasons for quitting, trying to quit or reducing smoking

Among pretest smokers who had quit, tried to quit or reduced the amount that they smoked at posttest, one of the most commonly-cited reasons for changing their smoking behavior was “inconvenience.” Having to go outside or off property grounds to smoke — a direct result of a smoke-free housing policy — may have been enough of a deterrent that residents reported smoking less after the policy was implemented. This finding has implications for cessation interventions, as inconvenience was cited as frequently as health, and more so than other frequently-targeted cessations motivations, such as familial concerns and the high cost of smoking. Inconvenience may be an important factor to help smokers quit, as it may deter them from smoking as frequently. Reduction is an important step towards cessation. It also provides further evidence for more comprehensive smoke-free policies, as policies that include limitations on smoking outdoors may add additional inconveniences that could encourage residents to reduce and/or quit smoking.

Limitations

While this evaluation provides evidence of the beneficial effects of SFH policy, there were some limitations. This evaluation did not include a measure of number of cigarettes smoked at pretest and posttest. Rather, reduction was measured by resident self-report. It would be useful in future studies to use a more objective measure, such as blood cotinine levels, which would provide more concrete evidence of smoking reduction.

Additionally, there was no control group (e.g., a public housing property that was not implementing a SFH policy) in this evaluation, which limits inferences about causality. Third, the sample comprised primarily senior residents so results may not generalize to other public housing populations. Seniors have been shown to have lower quit rates when compared to young adults¹⁵, which may have influenced the low quit rate that was reported at posttest in this study. Compared to young people, seniors tend to have higher nicotine dependence and are less influenced by social norms¹⁵ — which, for smoking, are now generally negative. These factors may have contributed to the relatively limited effect of SFH policy on quit rates among elderly populations.

Finally, this study did not assess whether smokers changed where they smoke post implementation. Smoking location data would have provided more insight into the observed effects on indoor and outdoor SHS exposure. It may also have provided further information regarding resident compliance of the policy by determining what proportion of smoking residents continued to smoke in their units after implementation of the policy. This information could better inform property managers and local public health agencies as they strive to design more effective enforcement strategies.

Conclusion

Low SES populations are disproportionately affected by tobacco, as evidenced by high rates of tobacco use and SHS exposure.^{3, 5, 6} Results from this study suggest that SFH policies in public housing properties have the potential to reduce indoor SHS exposure and cigarette consumption among low-income populations. The purpose of this report is to inform property managers and local public health agencies of the beneficial effects of SFH for public housing residents. While some gaps remain in our understanding of SFH policy implementation and enforcement and the impact that policies can have on smoking behaviors, implementing SFH policies in public housing appears to be a promising step toward eliminating tobacco-related disparities.

References

1. The Health Consequences of Smoking-50 Years of Progress: A Report of the Surgeon General. Atlanta (GA) 2014. <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>. Accessed Nov 3, 2015.
2. Hopkins DP, Razi S, Leeks KD, et al. Smokefree policies to reduce tobacco use. A systematic review. *Am J Prev Med.* 2010;38(2 Suppl):S275-289. doi:10.1016/j.amepre.2009.10.029
3. Centers for Disease Control and Prevention. National Health Interview Survey. 1965-2011. http://www.cdc.gov/tobacco/data_statistics/tables/trends/cig_smoking/. Accessed Nov 3, 2015.
4. Centers for Disease Control and Prevention. Vital signs: Nonsmokers' exposure to secondhand smoke -- United States, 1999-2008. *MMWR Morb Mortal Wkly Rep.* 2010;59(35):1141-1146. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5935a4.htm>. Accessed Nov 3, 2015.
5. Homa DM, Neff LJ, King BA, et al. Vital signs: Disparities in nonsmokers' exposure to secondhand smoke--United States, 1999-2012. *MMWR Morb Mortal Wkly Rep.* 2015;64(4):103-108. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6404a7.htm?s_cid=mm6404a7_w. Accessed Nov 3, 2015.

6. Gan WQ, Mannino DM, Jemal A. Socioeconomic disparities in secondhand smoke exposure among US never-smoking adults: The National Health and Nutrition Examination Survey 1988-2010. *Tob Control*. 2015;24(6):568-573. doi:10.1136/tobaccocontrol-2014-051660
7. Jamal A, Homa DM, O'Connor E, et al. Current Cigarette Smoking Among Adults - United States, 2005-2014. *MMWR Morb Mortal Wkly Rep*. 2015;64(44):1233-1240. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6444a2.htm> Accessed Nov 16, 2015.
8. Centers for Disease Control and Prevention. Adult current cigarette/smokeless tobacco use. 2011. http://www.cdc.gov/tobacco/data_statistics/state_data/state_highlights/2012/states/minnesota/index.htm. Accessed Nov 3, 2015.
9. Berg CJ, Haardorfer R, Windle M, et al. Smoke-free policies in multiunit housing: Smoking behavior and reactions to messaging strategies in support or in opposition. *Prev Chronic Dis*. 2015;12:E98. doi: 10.5888/pcd12.140479
10. Kraev TA, Adamkiewicz G, Hammond SK, et al. Indoor concentrations of nicotine in low-income, multi-unit housing: Associations with smoking behaviours and housing characteristics. *Tob Control*. 2009;18(6):438-444. doi:10.1136/tc.2009.029728
11. Hahn EJ, Rayens MK, York N, et al. Effects of a smoke-free law on hair nicotine and respiratory symptoms of restaurant and bar workers. *J Occup Environ Med*. 2006;48(9):906-913. doi: 10.1097/01.jom.0000215709.09305.01
12. Haw SJ, Gruer L. Changes in exposure of adult non-smokers to secondhand smoke after implementation of smoke-free legislation in Scotland: National Cross Sectional Survey. *BMJ*. 2007;335(7619):549. doi: <http://dx.doi.org/10.1136/bmj.39315.670208.47>
13. Bauer JE, Hyland A, Li Q, et al. A longitudinal assessment of the impact of smoke-free worksite policies on tobacco use. *Am J Public Health*. 2005;95(6):1024-1029. doi: 10.2105/AJPH.2004.048678
14. Pizacani BA, Maher JE, Rohde K, et al. Implementation of a smoke-free policy in subsidized multiunit housing: Effects on smoking cessation and secondhand smoke exposure. *Nicotine Tob Res*. 2012;14(9):1027-1034. doi: 10.1093/ntr/ntr334
15. Messer K, Trinidad DR, Al-Delaimy WK, Pierce JP. Smoking Cessation Rates in the United States: A Comparison of Young Adult and Older Smokers. 2008;98(2):317-322. doi: [10.2105/AJPH.2007.112060](http://dx.doi.org/10.2105/AJPH.2007.112060)

Appendix A: Participant Characteristics

	Final sample (n = 180)		Lost to follow-up (n = 109)	
	n (%)		n (%)	
Gender				
Male	58 (32.2)		27 (24.8)	
Female	122 (67.8)		82 (75.2)	
Race				
White	130 (72.6)		90 (87.4)*	
Black or African American	42 (23.5)		8 (7.8)	
Other	7 (4.0)		5 (4.8)	
Mean age	62.9		62.4	
Annual income				
< 10k	62 (38.8)		20 (20.8)***	
10 – 20k	54 (33.8)		31 (32.3)	
> 20k	44 (27.5)		45 (46.9)	
Education				
< HS	51 (29.3)		15 (14.2)***	
HS grad or GED	49 (28.2)		20 (18.9)	
Some college or Associate's degree	43 (24.7)		35 (33.0)	
Bachelor's degree or higher	31 (17.8)		36 (34.0)	
Smoking status				
Not a current smoker	153 (85.0)		87 (79.8)	
Current smoker	27 (15.0)		22 (20.2)	
Note. * $p < .01$, *** $p < .001$.				

Appendix B: Survey Instrument 1 (pre-test survey)

Minnesota Department of Health

Resident Survey on Smoking and Health

Instructions:

In the survey, when we say “apartment building” we mean a building that has many apartments in it. When we say “apartment” we mean the one apartment unit that you live in.

The Apartment Building That You Live In

These first questions ask about the type of building you live in and how long you have lived there.

1. In total, how long have you lived in your current apartment building?

Year(s) Month(s)

2. On a scale of 1-10, how would you rate your apartment building as a place to live?

(select one number)

The Worst The Best
 1 2 3 4 5 6 7 8 9 10

Smoke-free Rules Inside Your Apartment

The following questions ask about the rules you have regarding smoking tobacco inside your own apartment (do not include electronic cigarettes, or e-cigarettes).

3. Which of the following statements best describes the rules you have about smoking tobacco inside your own apartment? (Do not include attached decks, porches, patios, or garages)

- Smoking is NOT allowed anywhere inside my apartment
- Smoking IS allowed in some places or at some times inside my apartment
- Smoking IS allowed anywhere inside my apartment.

SMOKE-FREE HOUSING POLICIES, SMOKING AND SECONDHAND SMOKE EXPOSURE
AMONG PUBLIC HOUSING RESIDENTS

Don't know / not sure

4. How often does anybody smoke tobacco inside your apartment?

Everyday

A few times a week

A few times a month

A few times a year

Never

Don't know / not sure

5. Do you allow smoking on your attached balcony, patio, porch, or deck?

Yes

No

I do not have an attached balcony, patio, porch, or deck

Exposure to Secondhand Smoke

The following questions ask about secondhand smoke exposure in your apartment and your apartment building.
Secondhand smoke is defined as, "smoke that comes from tobacco that is smoked by others."

6. When inside your own apartment, how often do you smell or breathe secondhand smoke that comes from hallways or someone else's apartment?

Everyday

A few times a week

A few times a month

Hardly ever

Never

7. How often do you smell or breathe secondhand smoke in shared areas, like hallways, stairwells, community rooms, or laundry rooms?

Everyday

SMOKE-FREE HOUSING POLICIES, SMOKING AND SECONDHAND SMOKE EXPOSURE
AMONG PUBLIC HOUSING RESIDENTS

- A few times a week
- A few times a month
- Hardly ever
- Never

8. How often do you smell or breathe secondhand smoke when you are outside of your apartment, like on attached balconies, porches, patios, or decks?

- Everyday
- A few times a week
- A few times a month
- Hardly ever
- Never
- I do not have an attached balcony, patio, porch, or deck

9. How often do you smell or breathe secondhand smoke when you are in other outdoor areas on your apartment building's property, like parking lots, lawns, or playgrounds?

- Everyday
- A few times a week
- A few times a month
- Hardly ever
- Never

Cigarettes and Other Tobacco Use

These next questions are about your own use of tobacco products.

10. Have you smoked at least 100 cigarettes in your entire life?

(Note: 1 pack = 20 cigarettes; 5 packs = 100 cigarettes)

- Yes
- No

SMOKE-FREE HOUSING POLICIES, SMOKING AND SECONDHAND SMOKE EXPOSURE
AMONG PUBLIC HOUSING RESIDENTS

11. How often do you currently smoke cigarettes?

- Every day
- Some days
- Not at all

12. During the past 6 months, have you stopped smoking for one day or longer because you were trying to quit smoking?

- Yes
- No
- I have not smoked in the past 6 months

These next questions ask about your current use of electronic cigarettes, or e-cigarettes, which are battery-powered, nicotine-delivery devices that generally look like cigarettes.

13. How often do you currently use e-cigarettes?

- Everyday
- A few times a week
- A few times a month
- Hardly ever
- Never

14. How often do you currently use e-cigarettes inside your apartment?

- Everyday
- A few times a week
- A few times a month
- Hardly ever
- Never

SMOKE-FREE HOUSING POLICIES, SMOKING AND SECONDHAND SMOKE EXPOSURE
AMONG PUBLIC HOUSING RESIDENTS

You and the People Who Live in Your Apartment

These next questions ask about the number of people living in your apartment and some basic questions about you. Remember that all of your answers are confidential.

15. Of the people living in your apartment (including yourself), write in how many are . . .

Children age 0 – 5

Children age 6 - 17

Adults age 18 - 59

Adults age 60 and older

16. How do you identify yourself?

Male

Female

Other: _____

17. What is your age?

years old

18. Do you consider yourself to be Hispanic or Latino?

Yes

No

19. Which one or more of the following would you say is your race? (check all that apply)

Asian or Asian American

Black or African American

White

American Indian or Alaska Native

Native Hawaiian or Pacific Islander

Other: _____

SMOKE-FREE HOUSING POLICIES, SMOKING AND SECONDHAND SMOKE EXPOSURE
AMONG PUBLIC HOUSING RESIDENTS

20. Which one or more of the following would you say is your cultural or ethnic group? (check all that apply)

- Hmong
- Vietnamese
- Somali
- Oromo
- Other, please specify _____
- None

21. What is the highest grade or year of school you have completed?

- Less than high school
- High school graduate or GED
- Some college, associate degree or vocational / technical / business school
- Bachelor degree or higher
- PhD, MD, JD, or other professional degree

22. What was your last year's household income? This was your total income before taxes, or gross income, of all persons in your household combined for last year.

- \$10,000 or less
- \$10,001 — \$20,000
- \$20,001 — \$25,000
- \$25,001 — \$35,000
- \$35,001 — \$50,000
- \$50,001 — \$75,000
- More than \$75,000

23. Do you have any comments that you would like to add?

Appendix C: Survey Instrument 2 (post-test survey)

Minnesota Department of Health

Resident Survey on Smoking and Health

Instructions:

In the survey, when we say “apartment building” we mean a building that has many apartments in it. When we say “apartment” we mean the one apartment unit that you live in.

The Apartment Building That You Live In

These first questions ask about the type of building you live in and how long you have lived there.

1. In total, how long have you lived in your current apartment building?

Year(s) Month(s)

2. On a scale of 1-10, how would you rate your apartment building as a place to live?

(select one number)

The Worst The Best
 1 2 3 4 5 6 7 8 9 10

Smoke-free Rules Inside Your Apartment

The following questions ask about the rules you have regarding smoking tobacco inside your own apartment (do not include electronic cigarettes, or e-cigarettes).

3. How often does anybody smoke tobacco inside your apartment?

Everyday

A few times a week

SMOKE-FREE HOUSING POLICIES, SMOKING AND SECONDHAND SMOKE EXPOSURE
AMONG PUBLIC HOUSING RESIDENTS

- A few times a month
- A few times a year
- Never
- Don't know / not sure

4. Do you allow smoking on the balcony, patio, porch, or deck attached to your apartment?

- Yes
- No
- I do not have a balcony, patio, porch, or deck attached to my apartment

Exposure to Secondhand Smoke

The following questions ask about secondhand smoke exposure in your apartment and your apartment building.
Secondhand smoke is defined as, "smoke that comes from tobacco that is smoked by others."

5. When inside your own apartment, how often do you smell or breathe secondhand smoke that comes from hallways or someone else's apartment?

- Everyday
- A few times a week
- A few times a month
- Hardly ever
- Never

6. How often do you smell or breathe secondhand smoke in shared areas, like hallways, stairwells, community rooms, or laundry rooms?

- Everyday
- A few times a week
- A few times a month
- Hardly ever
- Never

SMOKE-FREE HOUSING POLICIES, SMOKING AND SECONDHAND SMOKE EXPOSURE
AMONG PUBLIC HOUSING RESIDENTS

7. How often do you smell or breathe secondhand smoke when you are outside of your apartment, like on attached balconies, porches, patios, or decks?

- Everyday
- A few times a week
- A few times a month
- Hardly ever
- Never
- I do not have an attached balcony, patio, porch, or deck

8. How often do you smell or breathe secondhand smoke when you are in other outdoor areas on your apartment building's property, like parking lots, lawns, or playgrounds?

- Everyday
- A few times a week
- A few times a month
- Hardly ever
- Never

Cigarettes and Other Tobacco Use

These next questions are about your own use of tobacco products (do not include electronic cigarettes, or e-cigarettes).

9. Have you smoked at least 100 cigarettes in your entire life?

(Note: 1 pack = 20 cigarettes; 5 packs = 100 cigarettes)

- Yes
- No

10. How often do you currently smoke cigarettes?

- Every day

SMOKE-FREE HOUSING POLICIES, SMOKING AND SECONDHAND SMOKE EXPOSURE
AMONG PUBLIC HOUSING RESIDENTS

Some days

Not at all

11. How has the amount you smoke changed in the past 6 months?

I have not smoked in the past 6 months

I'm smoking more

I'm smoking less

I'm smoking about the same

I quit smoking in the past 6 months

Don't know/ not sure

12. During the past 6 months, have you stopped smoking for one day or longer because you were trying to quit smoking?

I have not smoked in the past 6 months

Yes

No

13. In the past 6 months, have you tried any of the following products or programs to help you quit smoking?

[Check all that apply]

I have not smoked in the past 6 months

A telephone program (quit line) to help you quit smoking

An in-person or group quit-smoking program

The nicotine patch, nicotine gum or nicotine lozenge

A prescription medicine to help you quit smoking, such as Zyban or Chantix

Electronic cigarette or electronic hookah

Other (please specify) _____

I have not tried to quit in the past 6 months

14. If you have smoked less, tried to quit, or have quit smoking in the past 6 months, what are the main reasons?

[Check all that apply]

I have not smoked in the past 6 months

For my health

For my family

It costs too much

Help to quit is available in my apartment building

Inconvenience- I can't smoke inside my apartment building

Other, please specify _____

I haven't smoked less, tried to quit, or quit smoking in the past 6 months

SMOKE-FREE HOUSING POLICIES, SMOKING AND SECONDHAND SMOKE EXPOSURE
AMONG PUBLIC HOUSING RESIDENTS

15. In the past 6 months, have you engaged in any of the following activities to help a friend, family member, or fellow resident quit smoking? [Check all that apply]

- Talked to a doctor or other healthcare provider
- Talked with family, friends, or other residents
- Searched the internet for information about quitting smoking
- Other, please specify _____
- No, I have not engaged in any of these activities

16. In the past 6 months, have you engaged in any of the following activities to help yourself quit smoking? [Check all that apply]

- have not smoked in the past 6 months
- Talked to a doctor or other healthcare provider
- Talked with family, friends, or other residents
- Searched the internet for information about quitting smoking
- Other, please specify _____
- No, I have not engaged in any of these activities

These next questions ask about your current use of electronic cigarettes, or e-cigarettes, which are battery-powered, nicotine-delivery devices that often look like cigarettes.

17. How often do you currently use e-cigarettes?

- Everyday
- A few times a week
- A few times a month
- Hardly ever
- Never

18. How often do you currently use e-cigarettes inside your apartment?

- Everyday
- A few times a week
- A few times a month
- Hardly ever
- Never

SMOKE-FREE HOUSING POLICIES, SMOKING AND SECONDHAND SMOKE EXPOSURE
AMONG PUBLIC HOUSING RESIDENTS

You and the People Who Live in Your Apartment

These next questions ask some basic questions about you. Remember that all of your answers will be kept private.

19. How do you identify yourself?

- Male
- Female
- Other: _____

20. What is your age?

years old

21. Do you have any comments that you would like to add?

Thank you very much for completing the survey!