



**A Need for Fresh Air Housing:
Movement of Secondhand Tobacco Smoke
in Multifamily Residences in Pierce and Kitsap Counties**

March 2003



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Fresh Air Housing Executive Summary

Objectives

This survey was completed as part of a project examining secondhand smoke in multifamily rental residences, which include apartment buildings, town homes, condominiums and duplexes/triplexes that are rented. Renters in Pierce and Kitsap Counties, who comprise 35.5% of total households in those counties¹, have no guarantee of a smoke-free place to live. As a result, they are sometimes exposed to secondhand smoke entering their homes from other apartments or units, from common areas such as hallways or recreational rooms in apartment complexes or from balconies or patios (called “movement of secondhand smoke” in this report). The goal of the project as a whole is to reduce exposure to secondhand smoke among children and adults in Kitsap and Pierce Counties by increasing the number of voluntary smoke-free policies implemented in multifamily rental residences. Funding for this project is provided by the Washington State Department of Health, Tobacco Prevention and Control Program.

Methods

In January 2003, 1,106 adult residents of Pierce and Kitsap Counties (age 18 and older) who lived in a multifamily rental residence completed the 10-minute telephone survey. A multifamily rental residence was defined as a rented home, apartment, or townhouse in a multifamily building with at least two units. This included duplexes and triplexes.

Pacific Market Research of Renton, Washington conducted the telephone survey. The sample was drawn using random digit dialing, and the survey was conducted using computer-assisted telephone interviewing from January 10 to 20, 2003. Interviewing was conducted in English language only.

The Tacoma-Pierce County Health Department conducted the analysis of the survey data using STATA 6.0 and SPSS 7.0 statistical software. The data were age- and gender-adjusted to correct for participation biases so that the survey sample represented the true distribution of residents in Pierce and Kitsap Counties.

¹ U.S. Census 2000 Summary File 3 (SF 3).

Overview

The Environmental Protection Agency has clearly established that secondhand tobacco smoke (SHS) causes cancer in humans and that there is no safe level of exposure. In children exposure is linked to increased rates of pneumonia, bronchitis, other respiratory illnesses, chronic ear infections and asthma.² Adult impacts include lung and nasal sinus cancer and cardiovascular effects. In addition, secondhand smoke acts as an irritant, affecting the eyes and the mucus membranes of the nose, throat and lower respiratory tract. This irritation may exacerbate chronic conditions such as asthma, bronchitis, and other respiratory illnesses.

As the increased understanding of the serious health effects of SHS has continued to grow, so has the concern over the unwanted exposure to SHS traveling between multifamily residences through ventilation systems, cracks, and doorways. Most tenants find SHS that enters their residence from their neighbors to be an annoyance and a discomfort, but for some it can be a cause of serious illness or contribute to an existing health condition.

Key findings include:

- Rental housing is not isolating residents from contaminants generated outside of their own homes. Almost half (42%) of respondents report that SHS gets into their rental residence from somewhere else in or around the building.
- Seventy-two percent of residents who encounter the movement of SHS into their homes say that it bothers them and 7% report that they are so bothered that they are thinking about moving.
- More than one-third of the respondents have a chronic illness that makes them particularly vulnerable to SHS. In addition, about one-fifth of the respondents live with someone else who has a chronic illness.
- Young children, the elderly, and people with chronic illnesses are at particular risk because of the negative impacts on immature or compromised lungs. Almost half of the households with these “vulnerable populations” experience movement of SHS into their homes.
- Minorities, low-income housing tenants and young children are more likely to suffer. Multifamily rental residents who live in low-income housing, non-whites, or children under the age of five are more likely to encounter the seepage of SHS into their homes.
- Most tenants want to breathe clean air in their homes. Two-thirds of multifamily rental residents are interested in living in smoke-free housing.
- A demand for smoke-free housing exists in the community. More than three-quarters say they are likely to choose a non-smoking building over a similar building that allows smoking.
- Almost half of the renters (43.6%) would pay more rent to live in a multifamily rental residence where smoking was not allowed.

Secondhand tobacco smoke seeping into residences from neighboring units poses both a health risk and a significant nuisance. Exposure to SHS produced by neighbors in multifamily rental residences in Pierce and Kitsap Counties is a very common occurrence and there appears to be interest in living in smoke-free buildings. Local Health Jurisdictions should work with the owners and managers of multifamily rental residences to encourage designation of smoke-free buildings for the health as well as enjoyment of their residents.

² U.S. Environmental Protection Agency. *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders*. 1992.

Smoking Prevalence Among Multifamily Rental Households

More than three-fourths of multifamily rental residents do not smoke, while 23.1% smoke either every day or some days (see Figure 1). Survey participants were also asked if anyone else who lives in their household currently smokes cigarettes every day or some days. Responses to both questions show that 68.8% of rental households in multifamily buildings in Pierce and Kitsap Counties have no smokers living there, while 31.0% have one or more smokers.

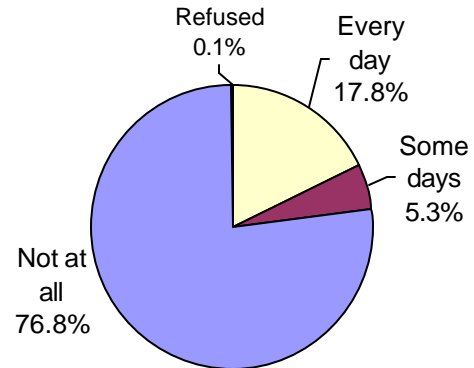


Figure 1: Do you currently smoke every day, some days or not at all?

Landlords do not allow smoking inside 22.4% of multifamily rental residences. Smoking bans inside rental residences are significantly more common in complexes with 2 to 5 units (29.8%) than in complexes with more than 5 units (20.9%), suggesting more duplexes and triplexes have this rule versus apartment complexes. One study suggests that these figures are overestimates—people tend to report that their landlords limit smoking inside residences when they actually do not.⁴ Of those residences where the landlord allows smoking, 77.4% of residents themselves ban smoking inside their homes. A total of 70.9% of all multifamily rental units do not allow smoking inside them.

Movement of Secondhand Smoke in Multifamily Buildings

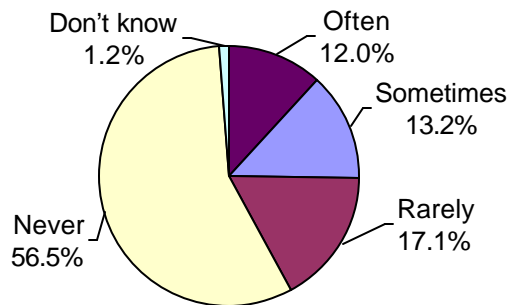


Figure 2: How often does the smell of tobacco smoke get into your home from somewhere else in or around the building?

Forty-two percent of rental household in multifamily buildings in Pierce and Kitsap Counties report that the smell of secondhand smoke gets into their home from somewhere else in or around the building—also called movement of secondhand smoke (see Figure 2). About one in four people (25.2%) say movement of secondhand smoke happens often or sometimes.

⁴ Center for Energy and Environment. *Survey of Minnesota Renters Regarding Secondhand Smoke Movement in Apartment Buildings and Interest in Smoke-Free Buildings*. October 2001. Minneapolis, MN.

Looking at households with “vulnerable populations” (defined as children younger than five years, adults older than 65 years, and people with chronic illnesses⁵), 42.5% experience movement of secondhand smoke in their homes (see Figure 3). About one in four people (27.8%) say movement of secondhand smoke happens often or sometimes.

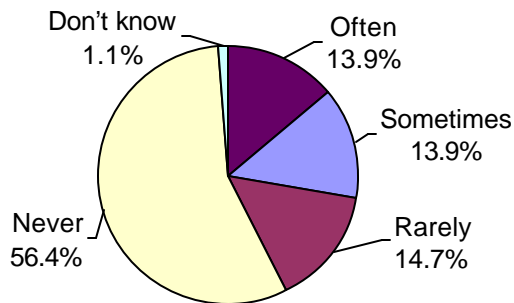


Figure 3: Exposure to movement of secondhand smoke in vulnerable households

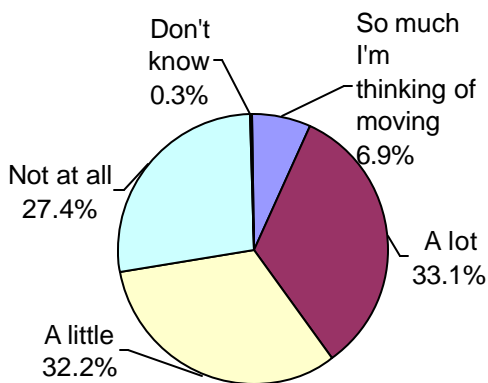


Figure 4: When the smell of tobacco smoke gets into your home, how much does it bother you?

Most multifamily rental residents (72.2%) who encounter movement of secondhand smoke in their homes say that it bothers them (see Figure 4). Forty percent are either bothered a lot or so bothered that they are thinking about moving.

The most common way movement of secondhand smoke occurs in the home is by a window or door—either open or closed. Among those who encounter movement of secondhand smoke, 47.6% say that the most common way tobacco smoke gets into their home is by a window or door, 10.4% say from the hallway or stairs, 10.3% say on smoker’s clothes or breath and 7.4% say air leaks or holes between dwellings.

⁵ For the purposes of this report, chronic illnesses were defined as emphysema or other lung diseases, asthma, heart disease or allergies to airborne irritants such as pollen or smoke.

Interest in Smoke-Free Rental Units

Two-thirds (66.5%) of multifamily rental residents are interested in living in smoke-free housing (see Figure 5).

Survey respondents were asked how likely they would be to choose a non-smoking building over a similar building where smoking was allowed. More than three-fourths (77.0%) of renters said they would be likely to choose the non-smoking building.

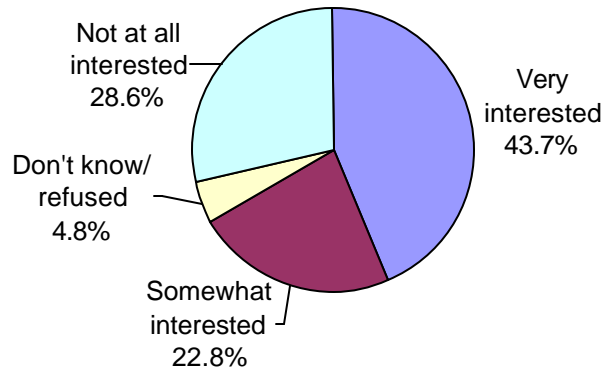


Figure 5: How interested would you be in living in an apartment complex or other rental residence where smoking is not allowed anywhere?

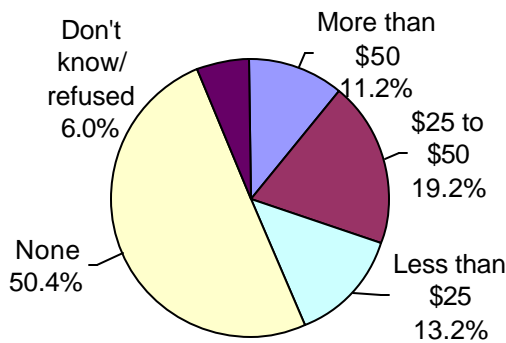


Figure 6: How much more rent would you be willing to pay per month to live in a smoke-free building?

Almost half of renters (43.6%) would pay more rent to live in a multifamily residence where smoking was not allowed (see Figure 6). About a third of renters (30.4%) would be willing to pay \$25 or more a month to live in a smoke-free residence.

Contact Information

For more information about this survey or the Environmental Tobacco Smoke prevention program, please contact:

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Introduction

In Pierce and Kitsap Counties, 35.5% of total households are renters.⁶ Most often, these families have no guarantee of a smoke-free place to live. They are often exposed to secondhand smoke entering their homes from other apartments or units, from common areas such as hallways or recreational rooms in apartment complexes, from balconies or patios or through ventilation systems—this experience is called “movement of secondhand smoke” in this report.

This report presents the results from a telephone survey of 1,016 adults age 18 or older living in multifamily rental housing—including apartment buildings, town homes, condominiums and duplexes/triplexes that are rented—in Kitsap and Pierce Counties. The survey included questions about exposure to and opinions of secondhand smoke. It was conducted by Pacific Market Research on behalf of the Tacoma-Pierce County Health Department and the Kitsap County Health District and funded by the Washington State Department of Health, Tobacco Prevention and Control Program.

The sample was drawn using random digit dialing techniques to include a sample of both listed and unlisted residential telephone households. The survey was conducted using computer-assisted telephone interviewing from January 10 to 20, 2003. Professionally trained interviewers calling from Pacific Market Research’s center in Renton, Washington conducted the interviewing.

This survey was completed as part of an on-going project funded by the Washington State Department of Health Tobacco Prevention and Control Program. Grant funding makes possible the first such survey of tenants of multifamily rental residences in Washington State, measures their exposure to secondhand smoke, and documents the desire for smoke-free living. The goal of the project as a whole is to reduce exposure to secondhand smoke among children and adults in Kitsap and Pierce Counties by increasing the number of voluntary smoke-free policies implemented in multifamily rental residences.

On-going project activities will include sharing survey results, cataloging available smoke-free housing and providing local technical support for voluntary smoke-free policies. By encouraging smoke-free rentals in a free marketplace, tenant exposure to the harmful effects of environmental tobacco smoke will be reduced, including a substantial percentage of young children and adults with health conditions exacerbated by secondhand smoke.

The current geographic areas of impact are specifically Kitsap and Pierce Counties. However, these two counties are a microcosm of the Puget Sound region as a whole, including concentrations of urban suburban and rural rental housing. Their populations are mobile, commuting to neighboring counties for attractive job or housing opportunities. While it is economical to gather data for this two-county area, follow-up can have an impact on the Puget Sound region as a whole. Using baseline numbers from Pierce and Kitsap, surrounding counties are likely to follow suit with educational campaigns for landlords and tenants, and increase the potential of participating in a regional Smoke-Free Housing Registry.

⁶ U.S. Census 2000 Summary File 3 (SF 3).

How to Read This Report

The results of the telephone survey are shown in the next section called “Report Findings”. The following information is meant to facilitate the reading of many of the graphs found in this section. Please also refer to Appendix B for a complete description of survey methods.

What

n=1016

 Means

Next to each graph—whether it’s a pie chart or bar graph—is a box with the notation “n = ” and a number. “N” denotes the sample size of respondents for that particular question in the telephone survey. In some cases, respondents are not eligible to answer certain questions. For example, if respondents answered “never” to the question “*How often does the smell of tobacco smoke get into your home from somewhere else in or around the building?*” they then skipped the question “*When the smell of tobacco smoke gets into your home from somewhere else, how much does it bother you?*” since that question would not make sense for someone who has never smelled secondhand tobacco smoke.

What “Significantly” Means

In this report, the words “significant” or “significantly different”—when used to compare two or more groups—means statistical significance. Statistical significance is a mathematical way to determine whether a difference in some factor between two (or more) groups is due to random variation or chance or whether there really is a “true” difference between the groups.

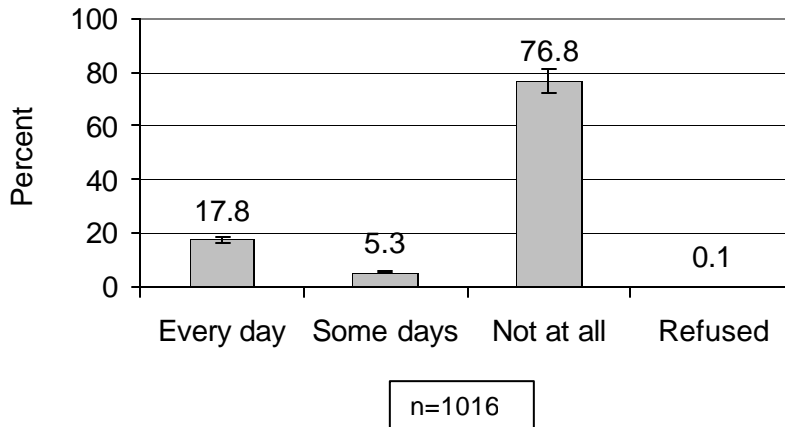
The “barbell” error lines on the graphs in this report illustrate the upper and lower bounds of 95% confidence intervals. A confidence interval includes a high and low value around a point estimate (e.g., a percentage) to give an indication of how much variability is included in that estimate. Confidence intervals at the 95% level are used in this survey. When comparing percentages between two groups, if the confidence intervals for the two values overlap, then the difference between the two values is generally not statistically significant at that confidence level. This means that random variation or chance could be causing the difference. Two values with confidence intervals that do not overlap suggest that the values are statistically significant and that random variation or chance is not likely to be the reason for the difference.

Report Findings

Prevalence of Smoking Among Multifamily Rental Households

More than three-fourths of multifamily rental residents do not smoke, while 23.1% smoke either every day or some days (see Figure 7).

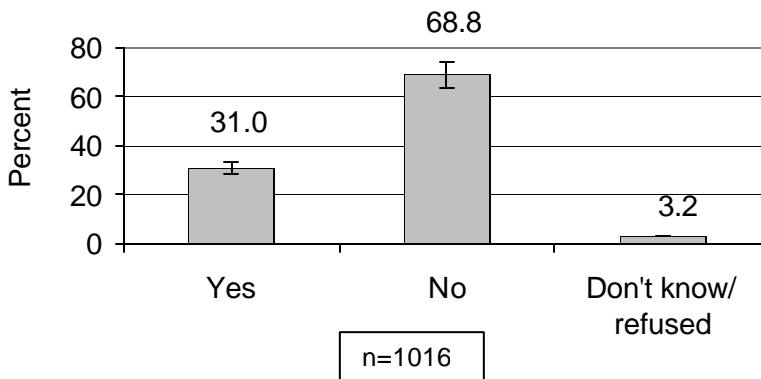
Figure 7: Smoking Prevalence of Multifamily Residence Renters



Note: The “barbell” error lines illustrate the upper and lower bounds of 95% confidence intervals. See Appendix B for more information about confidence intervals.

Survey participants were also asked if anyone else who lives in their household currently smokes cigarettes every day or some days. One in six respondents report that there is someone else in their household who smokes cigarettes every day (12.8%) or some days (3.9%). In total, more than two-thirds of rental households in multifamily buildings in Pierce and Kitsap Counties do not include any smokers. (see Figure 8).

Figure 8: Multifamily Rental Households with at Least One Smoker



Note: The “barbell” error lines illustrate the upper and lower bounds of 95% confidence intervals. See Appendix B for more information about confidence intervals.

Most multifamily rental households are not in smoke-free residences (see Figure 9). Landlords do not allow smoking inside almost a fourth of multifamily rental units. Smoking bans inside rental residences are significantly more common in complexes with 2 to 5 units (29.8%) than in complexes with more than 5 units (20.9%), suggesting more duplexes and triplexes have this rule versus apartment complexes. One study suggests that these figures are overestimated—people tend to report that their landlords limit smoking inside residences when they actually do not.⁷

More than half of multifamily rental households are located in buildings or complexes where the landlord already limits smoking in shared or common areas of the building or complex, such as hallways, laundry room, lobby or recreation room.

Figure 9: Is Smoking Allowed by Landlord?

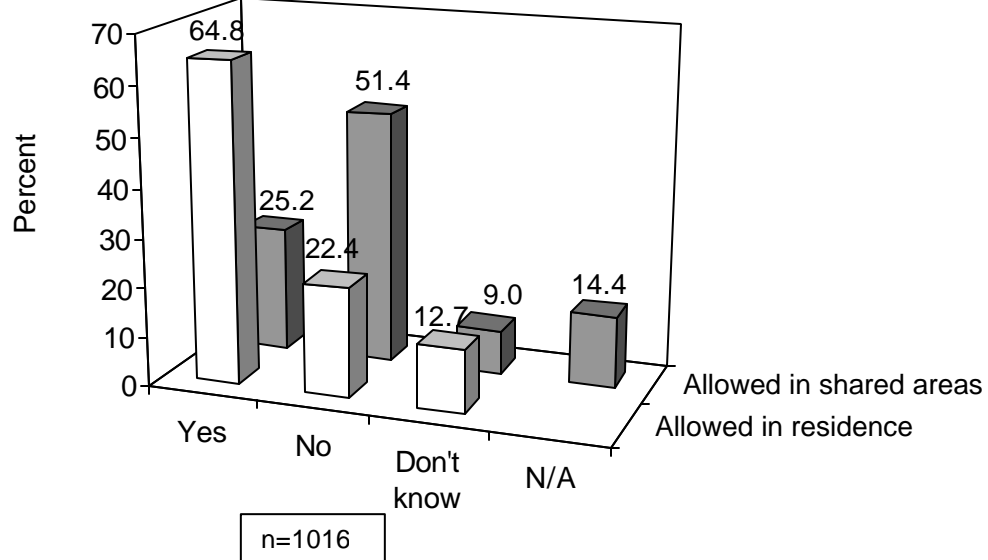
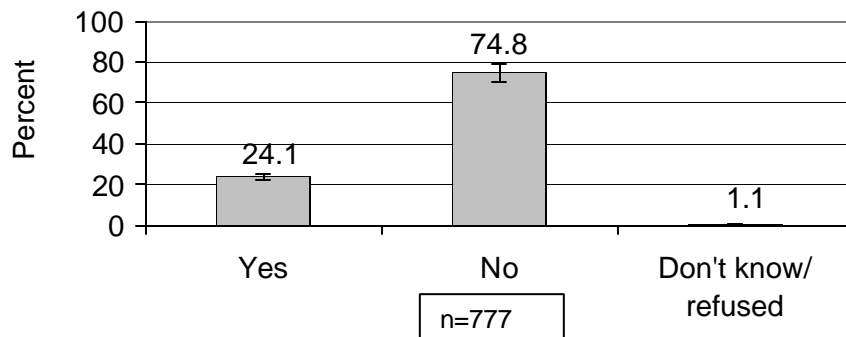


Figure 10: Do You Allow Smoking in Your Residence?



Of those residences where the landlord allows smoking, about three-fourths of residents impose their own restrictions and do not allow smoking in their homes (see Figure 10). This equals 48.5% of all rental residences.

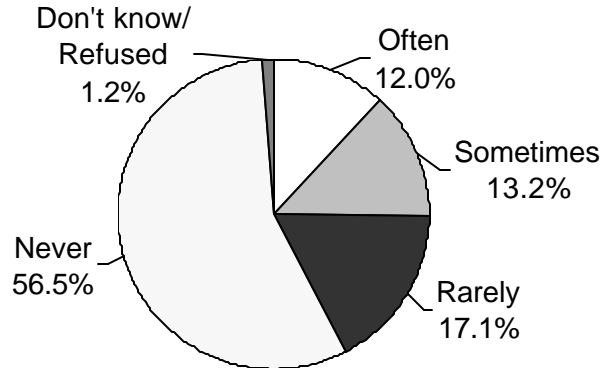
Note: The “barbell” error lines illustrate the upper and lower bounds of 95% confidence intervals. See Appendix B for more information about confidence intervals.

⁷ Center for Energy and Environment. *Survey of Minnesota Renters Regarding Secondhand Smoke Movement in Apartment Buildings and Interest in Smoke-Free Buildings*. October 2001. Minneapolis, MN.

Movement of Secondhand Smoke in Multifamily Buildings

Many multifamily rental households are exposed to movement of secondhand smoke. Forty-two percent of rental household in multifamily buildings in Pierce and Kitsap Counties report that the smell of secondhand smoke gets into their home from somewhere else in or around the building (see Figure 11). About one in four people (25.2%) say movement of secondhand smoke happens often or sometimes.

Figure 11: Frequency of Exposure to Movement of Secondhand Smoke at Multifamily Rental Residences



Multifamily rental residents with the following characteristics are significantly more likely to be exposed to movement of secondhand smoke:

- Living in households with children younger than five years (51.6% compared to 40.4% of households without children younger than five years).
- Younger than 65 years (45.2% compared to 23.9% of people age 65 and older).
- Non-whites (50.0% compared to 40.5% for whites).
- Living in households with less than \$50,000 income a year (45.8% compared to 32.7% of people earning \$50,000 or more).
- Living in low-income housing (55.7% compared to 40.1% not living in low-income housing).

Other factors such as having someone with a chronic illness (emphysema or other lung diseases, asthma, heart disease or allergies to airborne irritants such as pollen or smoke) living in the home, being Hispanic, gender and living in military housing do not significantly influence exposure to movement of secondhand smoke in multifamily rental households.

Looking at households with “vulnerable populations” (defined as children younger than five years, adults older than 65 years, and people with chronic illnesses), 42.5% experience movement of secondhand smoke in their homes (see Figure 12). About one in four people (27.8%) say movement of secondhand smoke happens often or sometimes.

Figure 12: Frequency of Exposure to Movement of Secondhand Smoke in Vulnerable Households

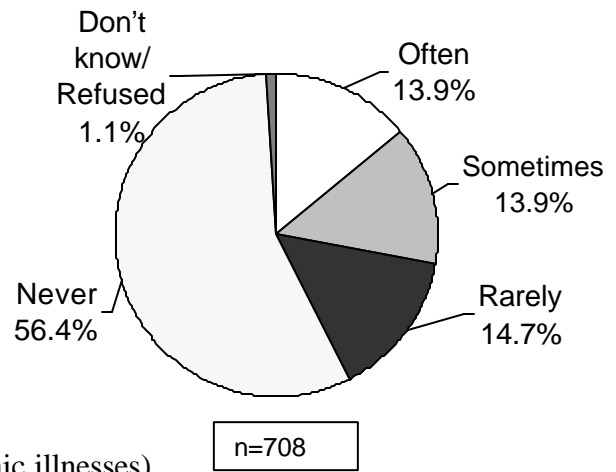
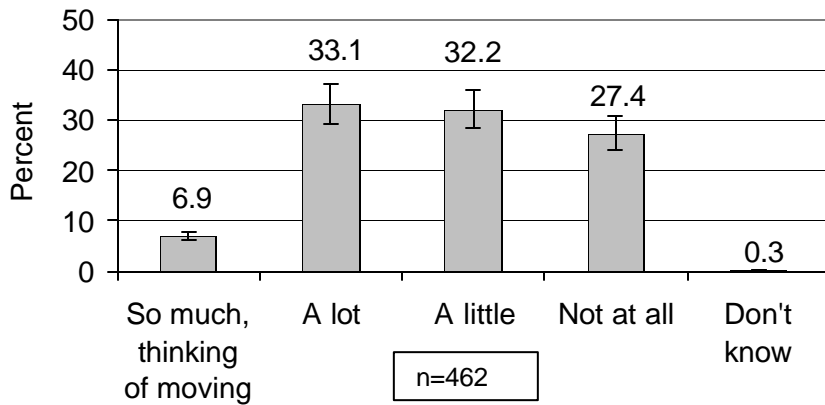


Figure 13: How Much Movement of Secondhand Smoke Bothers Residents

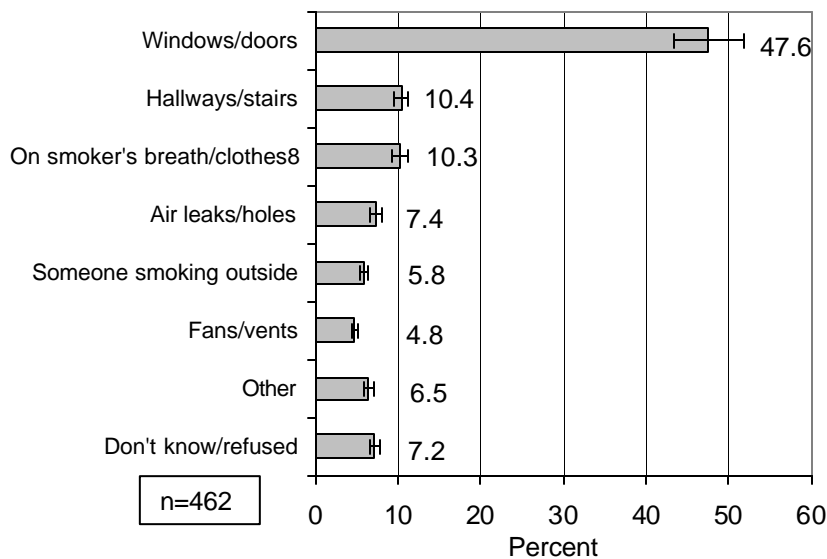


Most multifamily rental residents (72.2%) who encounter movement of secondhand smoke in their homes say that it bothers them (see Figure 13). Forty percent are either bothered a lot or so bothered that they are thinking about moving.

Note: The “barbell” error lines illustrate the upper and lower bounds of 95% confidence intervals. See Appendix B for more information about confidence intervals.

Movement of secondhand smoke enters residences in a variety of ways. Among those who encounter movement of secondhand smoke, almost half of people say it comes into their homes through windows or doors—both open and closed (see Figure 14). This pathway for movement of secondhand smoke is significantly more common than any other pathway.

Figure 14: How Movement of Secondhand Smoke Gets Into the Home



Other common pathways for secondhand smoke to get into a home is from the hallway or stairs, on smoker’s clothes or breath⁸, through air leaks or holes between dwellings, from someone smoking someplace outside and through fans or vents, such as those found in kitchens or bathrooms. Other less frequent ways that movement of secondhand smoke enters the home include from the garage or in other unspecified places.

Note: The “barbell” error lines illustrate the upper and lower bounds of 95% confidence intervals. See Appendix B for more information about confidence intervals.

⁸ This category was not provided as a possible response; people who gave this answer chose the response “another way” and then specified in what way. Please see Appendix C for the wording of this question.

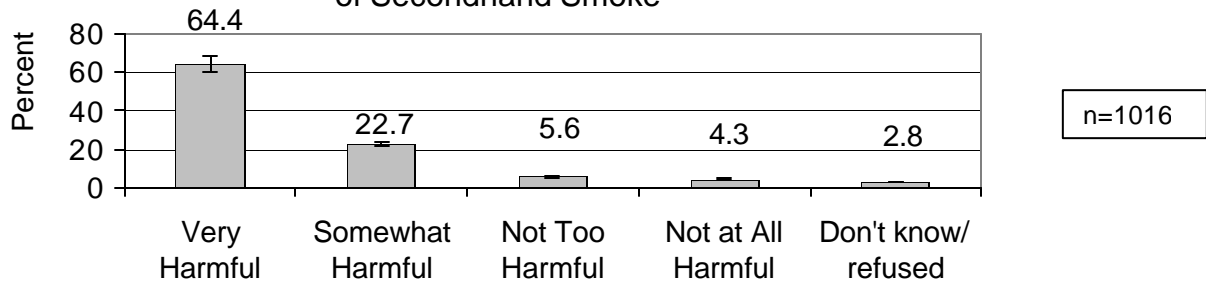
Interest in Smoke-Free Rental Units

The great majority of people believe secondhand smoke is harmful (see Figure 15). Multifamily rental residents with the following characteristics are significantly more likely to believe secondhand smoke is either very or somewhat harmful:

- Women (93.5% compared to 80.6% of men).
- Living in households with children under five years (93.9% compared to 85.7% of households without children under five years).
- Living in households with a person with a chronic illness (92.3% compared to 81.4% of households without a person with a chronic illness)⁹.

Other factors such as age, race or Hispanic ethnicity, income and living in military housing or low-income housing do not significantly influence opinions about the harmfulness of secondhand smoke.

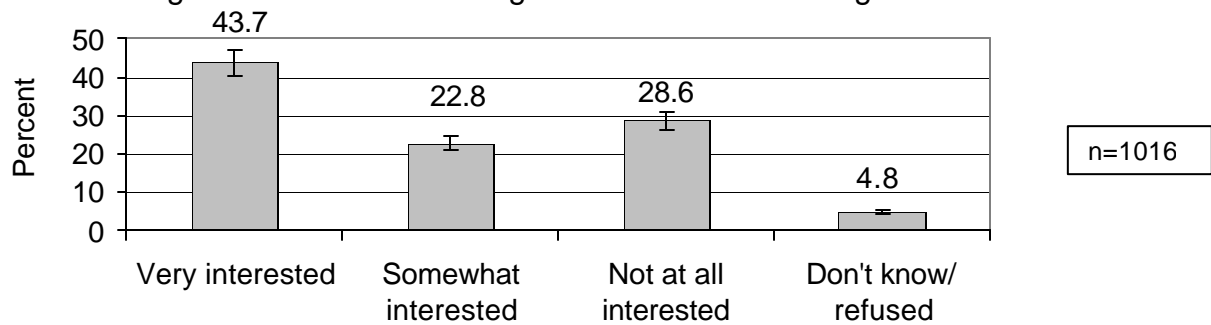
Figure 15: Attitudes About Harmfulness of Secondhand Smoke



Note: The “barbell” error lines illustrate the upper and lower bounds of 95% confidence intervals. See Appendix B for more information about confidence intervals.

Most people would like to live in a multifamily rental residence where smoking was not allowed (see Figure 16). About two-thirds of respondents are very or somewhat interested in living in smoke-free housing.

Figure 16: Interest in Living in Smoke-Free Housing

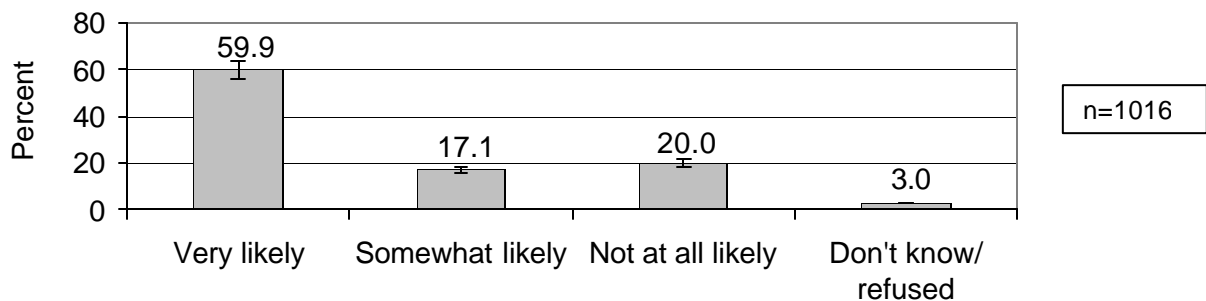


Note: The “barbell” error lines illustrate the upper and lower bounds of 95% confidence intervals. See Appendix B for more information about confidence intervals.

⁹ For the purposes of this report, chronic illnesses were defined as emphysema or other lung diseases, asthma, heart disease or allergies to airborne irritants such as pollen or smoke. See Appendix C for wording of the survey questions.

Survey respondents were asked the question, “If two apartment buildings were the same in every way including rent, except that one did not allow smoking anywhere, how likely would you be to choose the non-smoking building over the building where smoking was allowed?” More than three-fourths of people would be very or somewhat likely to choose the non-smoking building (see Figure 17). Nine of ten (89.6%) non-smoking households would be very or somewhat likely to choose the non-smoking building, while about half (49.2%) of smoking households would be very or somewhat likely to choose it.

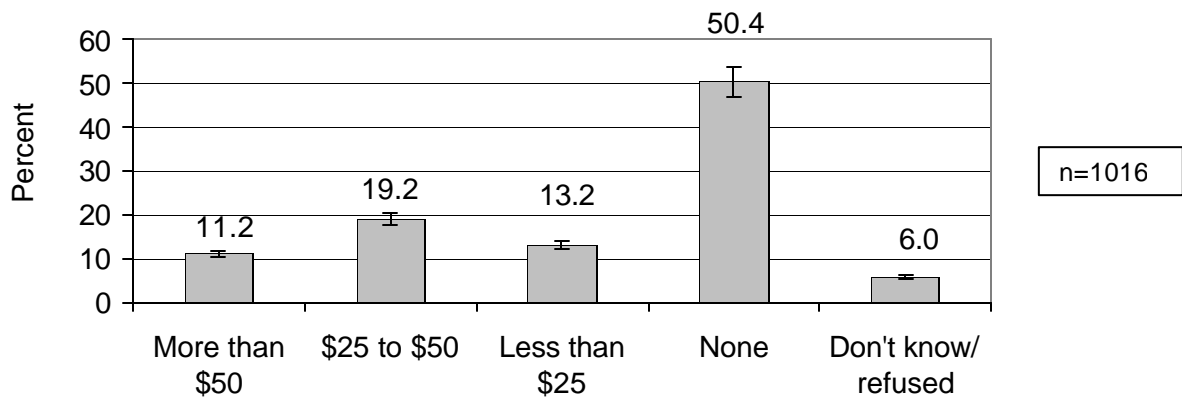
Figure 17: Interest in Living in Non-Smoking Building Vs. Smoking Building



Note: The “barbell” error lines illustrate the upper and lower bounds of 95% confidence intervals. See Appendix B for more information about confidence intervals.

Almost half of renters (43.6%) would pay more rent to live in a multifamily residence where smoking was not allowed (see Figure 18). About a third of renters (30.4%) would be willing to pay \$25 or more a month to live in a smoke-free residence.

Figure 18: Amount of Extra Rent Would Pay to Live in Smoke-Free Residence



Note: The “barbell” error lines illustrate the upper and lower bounds of 95% confidence intervals. See Appendix B for more information about confidence intervals.

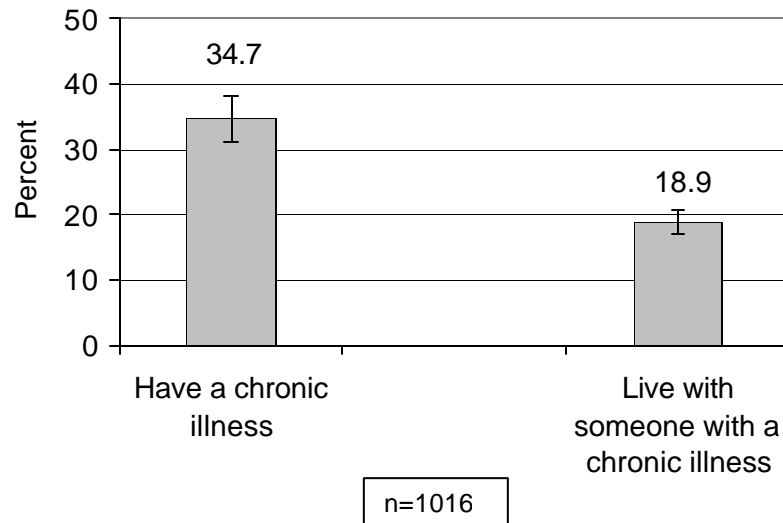
Characteristics of Multifamily Rental Residences

A majority (69.7%) of survey respondents have at least one person living with them (including themselves) who is especially vulnerable to secondhand smoke. These vulnerable populations include children 5 years and younger, adults age 65 and older and anyone with a chronic illness, such as emphysema or other lung diseases, asthma, heart disease, or allergies to airborne irritants such as pollen or smoke¹⁰.

- About one-sixth (16.9%) of households surveyed have at least one child under age five living there.
- About one-fifth (20.8%) of households have at least one person age 65 or older living there.

More than one-third of respondents have a chronic illness that made them vulnerable to secondhand smoke. About one-fifth of respondents have at least one person living with them who had a similar chronic illness (see Figure 19).

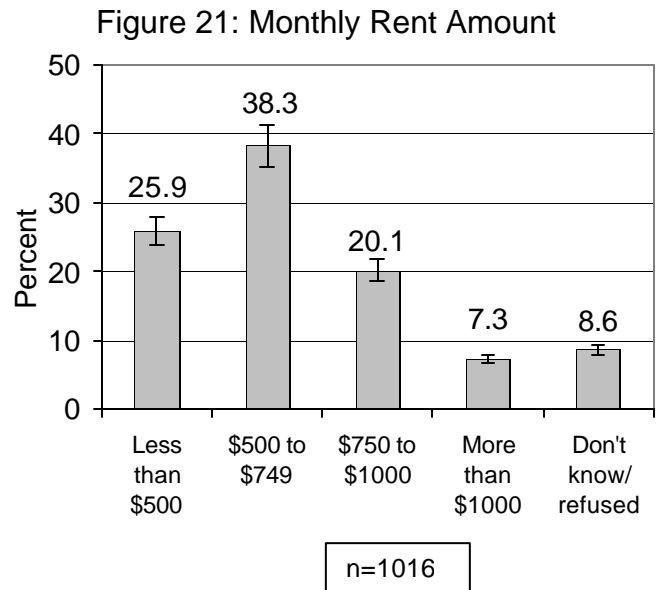
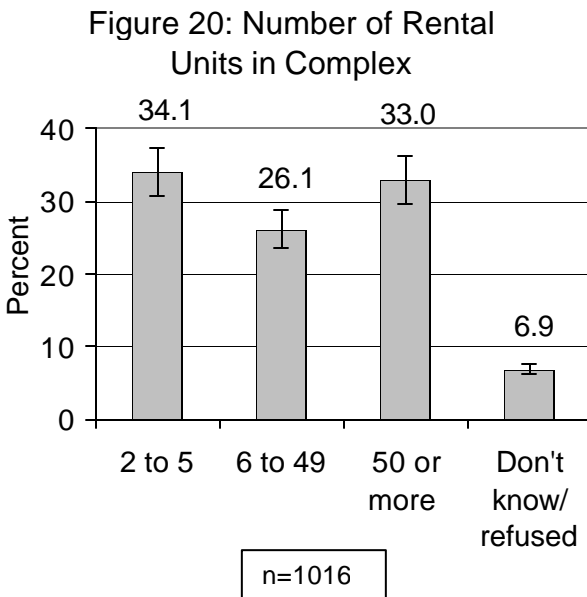
Figure 20: Prevalence of Chronic Illnesses



Notes: These two categories are not mutually exclusive and may double count the same households. The “barbell” error lines illustrate the upper and lower bounds of 95% confidence intervals. See Appendix B for more information about confidence intervals.

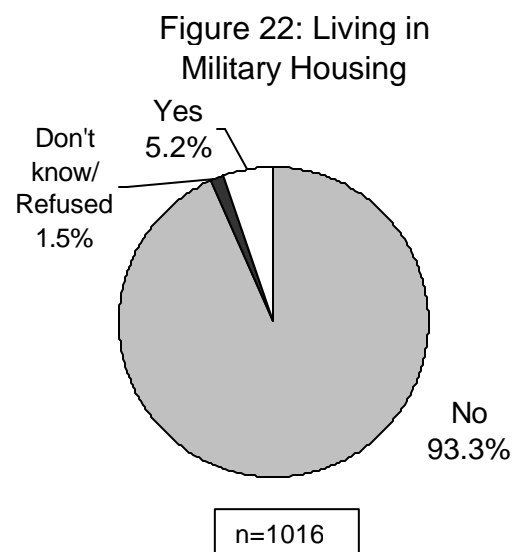
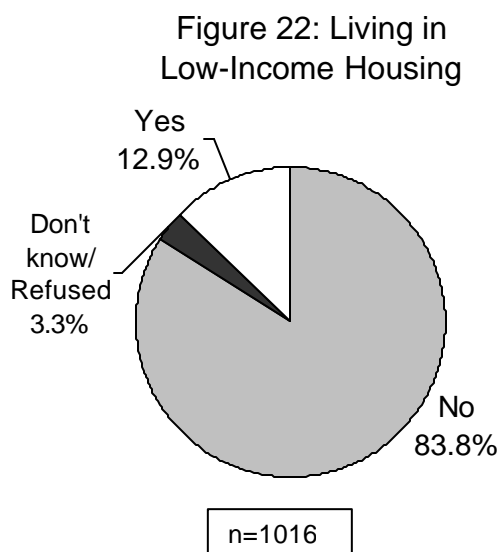
¹⁰ For the purposes of this report, chronic illnesses were defined as emphysema or other lung diseases, asthma, heart disease or allergies to airborne irritants such as pollen or smoke. See Appendix C for wording of the survey questions.

About one-third of the households surveyed are situated in a small rental complex with five or fewer units, while another third live in large complexes with 50 or more units (see Figure 20). About one-fourth of households are in small to medium-sized complexes with six to 49 units. Most people surveyed pay less than \$750 in rent per month (see Figure 21).



Note: The “barbell” error lines illustrate the upper and lower bounds of 95% confidence intervals. See Appendix B for more information about confidence intervals.

About one of eight survey respondents live in low-income housing, such as Section 8 or HUD housing complexes (see Figure 22). About one in twenty people surveyed live in military housing (see Figure 23).



Discussion

The Environmental Protection Agency has clearly established that secondhand tobacco smoke (SHS) causes cancer in humans and that there is no safe level of exposure. In children exposure is linked to increased rates of pneumonia, bronchitis, other respiratory illnesses, chronic ear infections and asthma.¹¹ Adult impacts include lung and nasal sinus cancer and cardiovascular effects. In addition, secondhand smoke acts as an irritant, affecting the eyes and the mucus membranes of the nose, throat and lower respiratory tract. This irritation may exacerbate chronic conditions such as asthma, bronchitis, and other respiratory illnesses.

As the increased understanding of the serious health effects of SHS has continued to grow, so has the concern over the unwanted exposure to SHS traveling between multifamily residences through ventilation systems, cracks, and doorways. Most tenants find SHS that enters their residence from their neighbors to be an annoyance and a discomfort, but for some it can be a cause of serious illness or contribute to an existing health condition.

Key Findings

- Rental housing is not isolating residents from contaminants generated outside of their own homes. Almost half (42%) of respondents report that SHS gets into their rental residence from somewhere else in or around the building.
- Seventy-two percent of residents who encounter the movement of SHS into their homes say that it bothers them and 7% report that they are so bothered that they are thinking about moving.
- More than one-third of the respondents have a chronic illness that makes them particularly vulnerable to SHS. In addition, about one-fifth of the respondents live with someone else who has a chronic illness.
- Young children, the elderly, and people with chronic illnesses are at particular risk because of the negative impacts on immature or compromised lungs. Almost half of the households with these “vulnerable populations” experience movement of SHS into their homes.
- Minorities, low-income housing tenants and young children are more likely to suffer. Multifamily rental residents who live in low-income housing, non-whites, or children under the age of five are more likely to encounter the seepage of SHS into their homes.
- Most tenants want to breathe clean air in their homes. Two-thirds of multifamily rental residents are interested in living in smoke-free housing.
- A demand for smoke-free housing exists in the community. More than three-quarters say they are likely to choose a non-smoking building over a similar building that allows smoking.
- Almost half of the renters (43.6%) would pay more rent to live in a multifamily rental residence where smoking was not allowed.

Secondhand tobacco smoke seeping into residences from neighboring units poses both a health risk and a significant nuisance. Exposure to SHS produced by neighbors in multifamily rental residences in Pierce and Kitsap Counties is a very common occurrence and there appears to be interest in living in smoke-free buildings. Local Health Jurisdictions should work with the owners and managers of multifamily rental residences to encourage designation of smoke-free buildings for the health as well as enjoyment of their residents.

¹¹ U.S. Environmental Protection Agency. *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders*. 1992.

Appendices

Appendix A: Respondent Demographics

Demographics of Respondents

Table 1: Characteristics of Survey Respondents (Unweighted) Compared to Adult Residents (Age 18+) of Pierce and Kitsap Counties

Characteristic	Survey Respondents	Adult Residents of Pierce and Kitsap Counties
	Percent	Percent
Sex		
Male	37.7	49.3
Female	62.2	50.7
Don't know/refused	0.1	N/A
Age		
18 to 24	22.8	13.1
25 to 34	25.0	19.2
35 to 54	29.4	42.6
55 to 64	9.0	11.0
65 or older	11.4	14.1
Don't know/refused	2.4	N/A
Race		
African American/Black	4.5	5.4
American Indian/Alaska Native	2.9	1.3
Asian American	3.1	5.1
Pacific Islander/Native Hawaiian	1.5	0.7
White/Caucasian	76.3	82.2
Other	0.7	1.8
Multiple race	4.9	3.4
Don't know/refused	6.1	N/A
Hispanic		
Yes	7.6	4.3
No	91.0	95.7
Don't know/refused	1.4	N/A
Household Income*		
Less than \$20,000	28.0	17.7
\$20,000 to \$49,999	42.2	37.1
\$50,000 or more	14.1	45.2
Don't know/refused	15.7	N/A

Note: Pierce and Kitsap County data come from the U.S. Census 2000.

* Household income collected by the 2000 U.S. Census is per household, while household income collected from survey respondent is per person. So the data from survey respondents cannot be directly compared to data from Pierce and Kitsap Counties for this characteristic.

¹² U.S. Environmental Protection Agency. *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders*. 1992.

Appendix B: Survey Methods

The Tacoma-Pierce County Health Department (TPCHD) and Kitsap County Health District commissioned Pacific Market Research to conduct a telephone survey of 1,106 adults age 18 and older in January 2003. The survey's purpose was to collect information on the presence of secondhand smoke in multifamily rental residences and attitudes toward secondhand smoke by residents living there. A multifamily rental residence was defined as a home, apartment, or townhouse in a multifamily building with at least two units (included duplex and triplex houses) that was rented.

The sample was drawn using random digit dialing techniques to include a sample of both listed and unlisted residential telephone households. The survey was conducted using computer-assisted telephone interviewing from January 10 to 20, 2003. Professionally trained interviewers calling from Pacific Market Research's center in Renton, Washington conducted the interviewing. The survey was conducted in English language only. The data are age- and gender-adjusted to correct for participation biases so that the survey sample represents the true distribution of residents in Pierce and Kitsap Counties.

Analyses were conducted using STATA 6.0 and SPSS 7.0.

Data Limitations

Since these data were collected over a two-week period in the winter, they may be influenced by seasonal changes in behaviors and attitudes.

Estimates may not represent the true population values, because individuals without telephones and/or non-English speaking persons would not be able to participate. In addition, some demographic factors, culture and economic barriers can influence whether a person chooses to participate in a telephone survey. These factors can cause under-representation of some demographic groups in the survey.

Weighting data to account for the different likelihood of selection of different gender and age groups can compensate for some of the under representation (see Weighting Method below), but not all. Weighting also cannot account for response bias by survey participants. Sources of such bias may vary depending on the topic being surveyed, the beliefs of the respondent and other factors.

Weighting Method

Weights for processing the data were calculated using the methodology adopted in the CDC's Behavioral Risk Factor Surveillance System (BRFSS). It should be noted that the number of responses in the three age/gender categories (males 55-64, females 55-64, and males 65+) was less than 30, which can reduce the reliability of calculation.

Confidence Intervals

A confidence interval includes a high and low value around a point estimate (e.g., a percentage or rate) to give an indication of how much variability is included in that estimate. Confidence intervals at the 95 percent level are used in this survey. When comparing percentages or rates between two groups, if the confidence intervals for the two values overlap, then the difference between the two values is generally not “statistically significant” at that confidence level. This means that random variation or chance could be causing the difference. Two values with confidence intervals that do not overlap suggest that the values are “statistically significant” and that random variation or chance is not likely to be the reason for the difference. In this report, the word “significant”—when used to compare two or more groups—means statistical significance.

Appendix C: Questionnaire

Secondhand Tobacco Smoke in Multifamily Buildings: Telephone Survey

In order to determine if you're eligible to be included in the survey, I need to ask you a couple of questions:

First, do you rent the home you're now living in?

- 1 Yes
- 2 No
- 3 Don't know/Not sure
- 9 Refused

Do you rent a home, apartment, or townhouse in a multifamily building with at least two units, including duplex and triplex houses? (IF NO, TERMINATE)

- 1 Yes
- 2 No
- 3 Don't know/Not sure
- 9 Refused

These first questions are about the home where you are now living. For this survey, the word "home" means your rented unit in a multifamily building, such as a townhouse, condominium, apartment, duplex or triplex.

1. How often does the smell of tobacco smoke get into your home from somewhere else in or around the building?
 - 1 Never (SKIP TO QUESTION 4)
 - 2 Rarely
 - 3 Sometimes
 - 4 Often
 - 7 Don't know/Not sure
 - 9 Refused

2. When the smell of tobacco smoke gets into your home from somewhere else, how much does it bother you?
 - 1 Not at all
 - 2 A little
 - 3 A lot
 - 4 So much you're thinking of moving
 - 7 Don't know/Not sure
 - 9 Refused

3. What is the most common way the smell of tobacco smoke gets into your home from somewhere else?
 - 1 Through open windows in my home
 - 2 From the hallway
 - 3 Through air leaks from other homes into mine
 - 4 Through bathroom or kitchen fans
 - 5 Another way (ASK TO SPECIFY)
 - 7 Don't know/Not sure
 - 9 Refused

4. Does the landlord allow smoking in your rental unit?
 - 1 Yes
 - 2 No → (SKIP TO QUESTION 6)
 - 7 Don't know/Not sure
 - 9 Refused

5. Do you allow smoking in your rental unit?
 - 1 Yes
 - 2 No
 - 7 Don't know/Not sure
 - 9 Refused

6. Is smoking allowed inside your building in any of the common areas such as hallways, laundry room, lobby, or recreation room?
 - 1 Yes
 - 2 No
 - 3 Not applicable/Don't have common areas
 - 7 Don't know/Not sure
 - 9 Refused

7. How many rental units does your complex have?
 - 1 0 to 5
 - 2 6 to 49
 - 3 50 or more
 - 7 Don't know/Not sure
 - 9 Refused

The next questions ask your opinion about secondhand smoke and smoke-free housing.

8. Do you think that breathing secondhand smoke is harmful?
 - 1 Very harmful
 - 2 Somewhat harmful
 - 3 Not too harmful
 - 4 not at all harmful
 - 7 Don't know/Not sure
 - 9 Refused

9. How interested would you be in living in an apartment complex or other rental residence where smoking is not allowed anywhere?
 - 1 Very interested
 - 2 Somewhat interested
 - 3 Not at all interested
 - 7 No opinion/Don't know/Not sure
 - 9 Refused

10. If two apartment buildings were the same in every way including rent, except that one did not allow smoking anywhere, how likely would you be to choose the non-smoking building over the building where smoking was allowed?
 - 1 Very likely
 - 2 Somewhat likely
 - 3 Not at all likely
 - 7 Don't know/Not sure
 - 9 Refused

11. How much more rent would you be willing to pay per month to live in a smoke-free building?
 - 1 None
 - 2 Less than \$25
 - 3 \$25 to \$50
 - 4 More than \$50
 - 7 Don't know/Not sure
 - 9 Refused

Now I have a few questions about you and your household.

12. How many children under age five live in your home now?

77 Don't know/Not sure

99 Refused

13. How many children age five through 18 live in your home now?

77 Don't know/Not sure

99 Refused

14. How many adults age 65 and older live in your home now?

77 Don't know/Not sure

99 Refused

15. Do you currently smoke cigarettes every day, some days, or not at all?

1 Every day

2 Some days

3 Not at all

7 Don't know/Not sure

9 Refused

16. Does anyone else who lives in your household currently smoke cigarettes every day, some days or not at all?

1 Every day

2 Some days

3 Not at all

4 No other people live in my unit

7 Don't know/Not sure

9 Refused

17. Do you have any of the following chronic illnesses: emphysema or other lung diseases, asthma, heart disease, or allergies to airborne irritants such as pollen or smoke?

1 Yes

2 No

7 Don't know/Not sure

9 Refused

18. Does anyone else who lives in your home have any of the following chronic illnesses: emphysema or other lung diseases, asthma, heart disease, or allergies to airborne irritants such as pollen or smoke?

- 1 Yes
- 2 No
- 3 No other people live in my unit
- 7 Don't know/Not sure
- 9 Refused

19. How old are you?

- 777 Don't know/Not sure
- 999 Refused

20. Are you Spanish, Hispanic or Latino?

- 1 Yes
- 2 No
- 7 Don't know/Not sure
- 9 Refused

21. Which race best describes you? You can have more than one answer. Are you (READ LIST)?

- 1 American Indian or Alaska Native
- 2 Asian or Asian American
- 3 Black or African American
- 4 Pacific Islander or Hawaiian Native
- 5 White or Caucasian
- 6 Other (ASK TO SPECIFY)
- 9 Refused

22. (RECORD GENDER)

- 1 Male
- 2 Female
- 9 Refused

23. How much is your yearly household income before taxes? Is it (READ LIST)?

- 1 Less than \$20,000
- 2 \$20,000 to less than \$50,000
- 3 \$50,000 or more
- 7 Don't know/Not sure
- 9 Refused

24. How much do you pay each month for rent?

- 1 Less than \$500
- 2 \$500 to \$749
- 3 \$750 to \$1000
- 4 More than \$1000
- 7 Don't know/Not sure
- 9 Refused

25. Do you live in low-income housing, such as HUD or Section 8?

- 1 Yes
- 2 No
- 7 Don't know/Not sure
- 9 Refused

26. Do you live in military housing (housing for active or retired military personnel and their families)?

- 1 Yes
- 2 No
- 7 Don't know/Not sure
- 9 Refused

Appendix D: Acknowledgements and Contact Information

Pacific Market Research of Renton, Washington conducted the telephone survey. Survey design was developed by the Tacoma-Pierce County Health Department and Kitsap County Health District, reviewed by the Washington State Department of Health, Tobacco Prevention and Control Program and based in part on a previous telephone survey conducted by the Minnesota Department of Health.

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