●**Public Support for Smoke-Free Section 8 Public Housing**

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**Abstract**

As of July 31, 2018, all Housing and Urban Development (HUD) designated Housing Authorities administering public housing must have ~~a~~ smoke-free policies, but this requirement does not extend to Section 8 housing. Section 8 public housing vouchers provide subsidies for private rental housing for low-income residents. This study examines support for smoke-free policy options in Section 8 housing. Using a nationally representative survey of adults, we asked 3,070 respondents to agree or disagree with two potential policies. The majority (71%) supported prohibiting indoor smoking everywhere inside buildings that have Section 8 housing units. Alternatively, respondents were less supportive (38%) of a policy to prohibit smoking only inside ~~of~~ units with Section 8 subsidies, and allowing smoking in non-subsidized units. Prohibiting smoking in all units in MUH buildings would help protect the health of both the 2.2 million households who receive Section 8 subsidies, and their neighbors.

*Keywords*: Secondhand Smoke, Public Housing, Smoking

In 2006, the Surgeon General concluded that there is no safe level of exposure

to tobacco smoke (U.S. Department of Health and Human Services, 2006). Passive exposure to secondhand smoke has multiple significant negative acute and chronic effects on health. These include higher rates of low birth weight and birth complications, asthma prevalence and severity, lower respiratory infections, sudden infant death syndrome, otitis media, lung cancer, and coronary heart disease (American Academy of Pediatrics Committee on Environmental Health 1997; Cook & Strachan, 1999; Institute of Medicine, 2010; National Cancer Institute, 1999; U.S. Environmental Protection Agency, 1992; U.S. Department of Health and Human Services, 2006; U.S. Department of Health and Human Services, 2014).

In recognition of these harms, eight of 10 U.S. households prohibit smoking inside of their homes (McMillen, Wilson, Tanski, Klein, & Winickoff, 2018). However, household smoke-free rules are less protective for people who live in multiunit housing. Smoke from cigarettes and other combustible tobacco products is able to pass through walls and floors, along electrical and plumbing routes, under doorways, and via ventilation systems (King, Travers, Cummings, Mahoney, & Hyland, 2010). Studies of multiunit housing residents have demonstrated substantial tobacco-smoke exposure among children and adults, even if they live in units where smoking is not permitted (Kraev, Adamkiewicz, Hammond, & Spengler, 2009; Levy, Adamkiewicz, Rigotti, Fang, & Winickoff, 2015; Levy, Rigotti, & Winickoff, 2013; Russo et al., 2014; Wilson, Klein, Blumkin, Gottlieb, & Winickoff, 2011). Research from the National Health and Nutrition Examination Study quantified exposure by measuring cotinine levels. Among children living in households with smoke-free rules, cotinine levels for children living in multiunit housing were 45% higher than those living in detached homes (Wilson et al., 2011).

**Smoke-Free Public Housing**

Addressing the health impacts of secondhand smoke in multiunit housing, the U.S. Department of Housing and Urban Development (HUD) released a rule requiring Public Housing Authorities (PHAs) to implement smoke-free policies for public housing by July 31, 2018 (U.S. Department of Housing and Urban Development, 2018a). These policies must prohibit the use of combustible tobacco products (including waterpipes) in all public housing living units, indoor common areas in public housing, and in PHA administrative office buildings; as well as in all outdoor areas up to 25 feet from ~~the~~ public housing and administrative office buildings (Federal Register, 2016). PHAs may choose to further restrict smoking in outdoor areas beyond this 25-foot zone and to include e-cigarettes as prohibited tobacco products. There are numerous potential benefits of this HUD rule, impacting over 700,000 units (Federal Register, 2016). Indoor air quality will improve in housing units; residents, visitors, and PHA staff will experience health benefits due to reduced exposure to secondhand smoke; fire-risk will decrease; and overall maintenance costs will decline (Centers for Disease Control and Prevention, 2018).

The HUD rule, however, does not apply to Section 8 housing dwelling units in buildings with both Section 8 voucher and non-subsidized rental units (Federal Register, 2016). Section 8 public housing vouchers are administered by the HUD to provide subsidies for low-income residents of private rental housing. There are approximately 2.2 million households are supported by these subsidies (Center on Budget and Policy Priorities, 2017) who are thus not protected from secondhand smoke within their homes by the current HUD rule. The inclusion of Section 8 housing in the smoke-free HUD rule would prevent substantial morbidity and mortality among these 2.2 million households. Public opinion about this policy is one factor influencing action by HUD. This study examines U.S. adults’ support for smoke-free policy options to protect occupants of Section 8 housing.

**Methods**

**Design**

  Data are from the 2015 Social Climate Survey of Tobacco Control, a cross-sectional dual-frame survey administered to national probability samples of U.S. adults. The Social Climate Survey of Tobacco Control is a national survey that contains items pertaining to normative beliefs, practices and/or policies, and knowledge regarding tobacco control. We have administered this annual cross-sectional survey to

representative samples of US adults since 2000. A Random Digit Dialing (RDD) frame includes households with listed and unlisted landline telephones; five attempts were made to contact those selected adults who were not home. The Survey Research Laboratory at Mississippi State University’s Social Science Research Center administered surveys via computer-assisted telephone interviews to respondents in this frame. The probability-based panel frame included an online survey administered to a randomly selected sample from a nationally representative research panel (GfK 2013, 2014). This panel was recruited from a sampling frame which includes both listed and unlisted numbers, and households without a landline telephone. The panel does not accept self-selected volunteers (GfK 2013, 2014) and provides sample coverage for 99% of US households. (Dennis, 2010) Data for this study were collected from both frames from September to December 2015. The Institutional Review Board (IRB) at Mississippi State University approved this study. Data were weighted to adjust for age, race, gender and region, as well as frame overlap among internet panel respondents who also had a landline telephone and were therefore also eligible for the RDD frame. Overall weights were computed in two steps. First, the two frames were weighted based on 2014 U.S. Census estimates to be representative of the US population. Second, adjustments to these initial weights were computed to account for the overlap in the two samples. In the final adjustment, a re-standardized weight was computed so that the weighted sample size matched the sum for effective sample size for both independent frames. Specific details of the weighting of the merged frames have been in previously reported (McMillen, Winickoff, Wilson, Tanski, & Klein, 2013).

**Attitudes about Potential Policies for Section 8 Housing**

Respondents were presented with the following statement, ‘Some people get government help to help lower the cost of renting an apartment. These are known as Section 8 subsidies.’ and were then asked two questions, “Smoking should not be allowed anywhere inside buildings that have Section 8 housing units,” and “Smoking should not be allowed only in those units with Section 8 subsidies.” Respondents were asked to strongly agree, agree, disagree, or strongly disagree with each statement. To simplify interpretation of results, respondents who reported strongly agree or agree were coded as supportive of these policies; those who reported disagree or strongly disagree were coded as unsupportive.

**Demographic Characteristics**

**Cigarette smoking.** Respondents were asked, “Have you smoked at least 100 cigarettes in your entire life?” Respondents who reported that they had were then asked, “Do you now smoke cigarettes every day, some days, or not at all?” Respondents who reported that they have smoked at least 100 cigarettes and now smoke every day or some days were categorized as current smokers.

**Housing***.* Respondents were asked the following questions, “Do you receive any government assistance to pay for your rent or housing?” and “Which of the following best describes ***the building in which*** you live? Would you say: a mobile home, a one-family house detached from any other house, a one-family house attached to one or more houses, or an apartment/condominium building?” Those who responded with the latter two response options were categorized as living in multi-unit housing.

**Analyses**

Frequency analyses provided the sample characteristics. Chi-square analyses compared support for each potential Section 8 policy across demographics groups, multiunit housing (MUH) residency, and housing subsidy status. Non-responses to specific items were treated as system missing data and excluded from analyses. One percent or less of respondents did not provide data for the predictor variables; and fewer than five percent did not provide data for the two potential Section 8 policy questions.

**Results**

**Sample Characteristics**

Table 1 shows the demographic characteristics of the overall sample. In the RDD frame, of 4,368 eligible respondents contacted, 1,536 completed surveys (completion rate, 35.2%). For the internet panel frame, 2,945 panelists were randomly drawn from the probability panel; 1,534 responded to the invitation, yielding a final stage completion rate of 52.1%. (Callegaro & Disogra, 2008) The total sample consisted of 3,070 US adults. Length of time on the panel for the internet panel frame ranged from 0.12 to 13.97 years, with a median length of time on the panel of 2.16 years.

**Support for smoke-free policies in Section 8 Public Housing**

The majority (71%) supported prohibiting indoor smoking everywhere inside buildings that have Section 8 housing units, with similar support among adults in both MUH (71%) and in detached housing (70%). Adults who received housing subsidies were not significantly less supportive (65%) than those who do not (71%) (p=.09). Although a majority were supportive, current smokers were less supportive (50.8%) than former smokers (69.9%) and never smokers (75.6%), p<.001; and adults with less than a high school education were less supportive (61.6%) than other adults who had completed high school (72.6%), adults who had completed some college (71.6%), and adults with a college degree (71.2%), p=.015. Support also varied by race, age, and sex (see Table 2).

Overall, adults were less supportive of a Section 8 policy to prohibit smoking only inside of units with subsidies, but allow smoking in non-subsidized units.  Only 38% supporting such partial smoking bans, with MUH residents (33%) less supportive than non-MUH residents (40%) (p=.001). Support also varied by smoking status race, age, sex, and education. There were no differences between adults who receive housing subsidies and those who do not.

**Discussion**

Most U.S. adults support prohibiting smoking in all units in MUH buildings with any Section 8 subsidies. Although support for a comprehensive smoke-free policy for all units varied across demographic groups, the majority of all groups (including current smokers) supported this potential policy. There was substantially less support for a weaker policy that only applied to units supported by rent subsidies. In particular, adults who would be directly impacted by a smoke-free policy, those who live in MUH buildings, were less supportive of this weaker policy.

Resistance to prohibiting smoking in all units in MUH buildings with any Section 8 subsidies might be expected from adults who are smokers or those with lower levels of education, a group with higher smoking prevalence (U.S. Department of Health and Human Services, 2018). However, slightly more than half of smokers supported a policy that would extend the HUD rule to all Section 8 housing, and more than 60 percent of adults with less than a high school education supported this policy.

The inclusion of all units in MUH buildings with any Section 8 subsidies in the HUD rule would have a substantial impact on public health, due to the large number of households that would be impacted. In a public comment (Public Health Advocacy Institute, 2016) to HUD Secretary Castro, the Public Health Advocacy Institute provided the rationale for expanding the PHA smoke-free rule to cover all HUD funded affordable housing, not just property managed by public housing authorities. Less than a third of housing supported by HUD, approximately 1.1 million households (U.S. Department of Housing and Urban Development, 2016), are managed by PHAs and smoke-free due to the current 2018 HUD rule. HUD also provides Section 8 Tenant-Based Rental Assistance to help pay the housing costs of 2.2 million households, according to 2014 estimates (U.S. Department of Housing and Urban Development, 2016). Expanding the smoke-free rule to also include buildings that receive this Section 8 assistance would cause approximately 700,000 landlords to implement smoke-free policies (U.S. Department of Housing and Urban Development, 2016). This change would benefit all residents at these properties, not just Section 8 voucher holders.

Although this policy would protect millions of Americans from SHS, it would have the greatest impact on people of low income, those with less education, and racial minorities. These are populations who are more likely to live in government subsidized MUH (U.S. Department of Housing and Urban Development, 2012), and more likely to be exposed to SHS (Tsai, Homa, Gentzke, et al., 2018). Moreover, these populations also endure higher levels of SHS-attributable diseases such as asthma and cardiovascular disease (U.S. Department of Housing and Urban Development, 2012). Expanding the HUD rule to all MUH with Section 8 subsidies could help to eliminate these disparities. Residents in government-subsidized housing are also more likely to experience SHS incursion in to their housing (Wilson, Torok, McMillen, Tanski, Klein, & Winickoff, 2014), yet may not be able to afford to change their housing situation, even if they or their families are experiencing negative health effects from tobacco smoke.

Despite strong public support for including Section 8 housing in the HUD rule, there are some potential barriers. HUD owns and manages the PHAs that have implemented smoke-free policies, but does not own Tenant-Based Rental Assistance properties. However, HUD requires the housing that it supports through public-private partnerships to meet certain standards, and can hold landlords accountable for policies to protect the health and safety of residents (U.S. Department of Housing and Urban Development, 2001; U.S. Department of Housing and Urban Development, 2018b). The same contractual processes that allow HUD to prohibit marijuana use in all financed housing (both PHA and Section 8) could be used to require a smoke-free environment, too (Kanovsky, 2011). This requirement might raise concerns about the rights of smoking residents. However, Winickoff and his colleagues have provided a strong legal rationale for the restriction of smoking in multiunit housing (Winickoff, Gottlieb, & Mello, 2010), based on the numerous harms resulting from SHS exposure and the lack of other avenues for legal redress by nonsmoking residents of public housing.

A final concern is that landlords might opt to stop accepting Section 8 vouchers, if forced to implement smoke-free policies in order to do so. This potential withdrawal could exacerbate affordable housing shortages. If HUD were to expand their smoke-free rule to also include Section 8 housing, educational campaigns to landlords should emphasize the health benefits, and particularly the lower maintenance costs and fire risk of smoke-free housing. Educational efforts should also emphasize the strong public support, even among cigarette smokers, for this policy.

This study has several limitations. First, we designed our dual frame methodology to reduce the potential for sample bias associated with either RDD or internet panel samples alone, but we still cannot eliminate the potential for non-coverage bias. Second, the use of the internet panel raises some concern about the representativeness of the sample. However, several studies demonstrate that this probability-based panel can produce results similar to well-designed RDD surveys (Chang & Krosnick, 2009; Yeager et al., 2011) and our use of this dual frame methodology produced estimates for current smoking that did not differ from those of several large, government surveys of US adults. We examined the validity of this dual-frame approach to reduce non-coverage bias in tobacco surveys in a previous study (McMillen et al., 2013) comparing self-reported smoking prevalence estimates from our 2010 dual-frame survey with the 2010 National Health Interview Survey (NHIS) and the 2009–2010 National Health and Nutrition Examination Survey (NHANES). Our overall estimates and those for gender, race and age for self-reported smoking were all within the confidence intervals for estimates from both these large-scale national. Third, few respondents reported living in subsidized housing, and thus analyses comparing support among those who did and did not receive subsidies may have been under-powered. Finally, these data are from a survey administered in late 2015 and attitudes may have changed with implementation of the HUD rule. To date, no studies have assessed attitudes toward this rule after implementation. However, a more recent survey also found strong support for smoke-free public housing (Wang, Lemos, McNabb, & King, 2017).

**Conclusions**

This study of a nationally representative sample of U.S. adults demonstrates substantial support for broadening the HUD guidelines to include all units that are in building in which one or more units are subsidized with HUD funding. Secondhand smoke exposure presents a clear health threat to nonsmokers, particularly the very young and the very old (American Academy of Pediatrics Committee on Environmental Health 1997; Cook & Strachan, 1999; Institute of Medicine, 2010; National Cancer Institute, 1999; U.S. Environmental Protection Agency, 1992; U.S. Department of Health and Human Services, 2006; U.S. Department of Health and Human Services, 2014). In recognition of these harms, HUD recently required PHAs to implement smoke-free policies; but this requirement did not apply to the 2.2 million households that receive HUD Section 8 housing subsidies. Extending this policy to include Section 8 housing would not only protecting the health of all of these households, it would also protect all of their neighbors. Our study demonstrates strong support for this policy, including among both people who live in MUH and those who receive housing subsidies.

Table 1

Weighted Sample Characteristics

|  |  |
| --- | --- |
| Variable | 2015Unweighted N = 3,070 |
| Smoking Status  Never Smokers  Former Smokers  Current Smokers  | 60.7%26.1%13.2% |
| Region  Northeast  Midwest  South  West  | 18.1%21.4%37.0%23.5% |
| Race  White  Black  Other  | 65.0%11.8%23.3% |
| Age  18-24  25-44  45-64  65+  | 13.1%34.0%35.5%17.4% |
| Sex Males  Females  | 48.3%51.7% |
| Education  Less than HS  High School Some College  College Degree  |  7.4%19.7%29.0%44.0% |
| Housing Lives in Multiunit Housing Lives in Detached Housing | 26.3%73.7% |
| Lives in Subsidized Housing Yes No |  3.6%96.4% |

Table 2

Percent of Adults who Supported Prohibiting Indoor Smoking Everywhere Inside Buildings that Have Section 8 Housing Units

|  |  |  |
| --- | --- | --- |
|  | Percent of Adults Who Support this Policy t | p |
| Overall | 70.8% |  |
| Housing Lives in Multiunit Housing Lives in Detached Housing | 70.4%71.0% | ns |
| Lives in Subsidized Housing Yes No | 64.5%71.1% | p=.088 |
| Smoking Status  Never Smokers  Former Smokers  Current Smokers  | 75.6%69.9%50.8% | p<.001 |
| Region  Northeast  Midwest  South  West  | 70.6%69.7%71.3%70.9% | ns |
| Race  White  Black  Other  | 69.7%61.9%78.4% | p<.001 |
| Age  18-24  25-44  45-64  65+  | 74.4%72.4%65.5%75.3% | p<.001 |
| Sex Males  Females  | 68.1%73.3% | p=.002 |
| Education  Less than HS  High School Some College  College Degree  | 61.6%72.6%71.6%71.2% | p=.015 |

Table 3

Percent Of Adults a Section 8 Policy to Prohibit Smoking Only Inside of Units With Subsidies, but Allow Smoking in Non-Subsidized Units

|  |  |  |
| --- | --- | --- |
|  | Percent of Adults Who Support this Policy | p |
| Overall | 38.2% |  |
| Housing Lives in Multiunit Housing Lives in Detached Housing | 33.3%40.0% | p=.001 |
| Lives in Subsidized Housing Yes No | 37.4%38.4% | ns |
| Smoking Status  Never Smokers  Former Smokers  Current Smokers  | 40.2%36.2%34.5% | p=.041 |
| Region  Northeast  Midwest  South  West  | 31.0%39.7%40.6%38.5% | p=.002 |
| Race  White  Black  Other  | 36.0%36.2%45.6% | p<.001 |
| Age  18-24  25-44  45-64  65+  | 48.8%41.1%31.9%36.9% | p<.001 |
| Sex Males  Females  | 42.5%34.2% | p<.001 |
| Education  Less than HS  High School Some College  College Degree  | 37.8%42.4%37.1%37.2% | ns |

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