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# Secondhand Smoke Exposure Among Hispanics/Latinos Living in Multiunit Housing: Exploring Barriers to New Policies

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## Abstract

**Purpose—**Despite a high prevalence of voluntary home smoking bans and laws protecting Californians from exposure to secondhand smoke (SHS) in the workplace, many Hispanic/Latino (H/L) residents of multiunit housing (MUH) are potentially exposed to SHS from neighboring apartments. An advocacy/policy intervention was implemented to reduce tobacco-related health disparities by encouraging H/L living in MUH to implement voluntary policies that reduce exposure to SHS. This article presents findings from qualitative and quantitative data collected during development of the intervention, as well as preliminary results of the intervention.



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**Design, Setting, and Subjects—**MUH residents in Southern California participated in focus groups (n = 48), door-to-door surveys (n = 142), and a telephone survey (n = 409).

**Measures—**Exposure to SHS, attitudes toward SHS, and attitudes toward policies restricting SHS in MUH were assessed.

**Results—**H/L MUH residents reported high levels of exposure to SHS and little ability to protect themselves and their families from SHS. Respondents expressed positive attitudes toward adopting antismoking policies in MUH, but they also feared retaliation by smokers. The cultural values of familismo, respeto, simpatía, and personalismo influenced their motivation to protect their families from SHS as well as their reluctance to ask their neighbors to refrain from smoking. Nonsmokers were more likely to favor complete indoor and outdoor smoking bans in MUH, whereas smokers were more likely to favor separate smoking areas. The Regale Salud advocacy/policy intervention, implemented to reduce SHS exposure, prompted the passage of seven voluntary policies in apartment complexes in Southern California to prevent smoking in MUH.

**Conclusions—**H/L in California support voluntary policies, local ordinances, and state laws that prevent exposure to SHS in MUH, especially those that are consistent with H/L cultural values and norms for interpersonal communication.

### Keywords

Tobacco; Secondhand Smoke; Hispanic; Latino; Multiunit Housing; Apartment; Prevention Research; Manuscript format: research; Research purpose: descriptive, program evaluation; Study design: nonexperimental; Outcome measure: cognitive, behavioral; Setting: local community; Health focus: smoking control; Strategy: policy; Target population age: adults; Target population circumstances: low income, Hispanic/Latino, California

## PURPOSE

California has been a natural laboratory and an exemplar for antismoking policies in the United States and around the world.[1-3] Although much progress has been made in the United States and California in reducing tobacco prevalence, exposure to secondhand smoke (SHS) still impacts more than 126 million nonsmoking Americans.[4] Disproportionate exposure to SHS among minority groups, including Hispanic(s)/Latino(s) (H/L), could exacerbate tobacco-related health disparities.

### SHS Exposure in the H/L Community

The H/L community is the largest minority population in the United States, and nearly one-third of U.S. H/L live in California.[5] Although the prevalence of smoking among H/L adults in California is relatively low compared with that of other ethnic groups,[6] H/L are disproportionately exposed to SHS in the workplace. California's Smoke-Free Workplace Law (Law 6404.5 of the California State Labor Code) prohibits smoking in all indoor workplaces with more than five employees.[7] However, many H/L workers are not covered by this law. A disproportionately high number of H/L have jobs in small-service occupations with only a few employees (e.g., automotive shops, employment within a private home), where California's smoke-free workplace laws do not apply. Between 1990 and 2008, H/L

nonsmokers have consistently reported the highest amount of exposure to SHS in indoor work areas, compared with other ethnic and racial groups.[8,9]

Because of their lower average socioeconomic status, H/L in California are more likely than non-Hispanics to live in multiunit housing complexes (MUH; 46% of H/L vs. 37% of non-Hispanics).[10] MUH are apartment buildings, townhouses, or condominiums that share common walls and/or common areas such as hallways, laundry rooms, parking garages, stairwells, or courtyards. Although most H/L households have complete or partial smoking bans to protect children from SHS exposure,[9,11] H/L residents living in MUH are at risk for exposure to SHS from neighboring units. California's Smoke-Free Workplace Law does apply to MUH complexes that employ five or more workers, including managers and maintenance workers. The law requires that all enclosed common areas, including lobbies, halls, laundry rooms, stairways, elevators, recreation rooms, and the manager's office, in a MUH complex be smoke-free.[12] However, the law does not protect the residents in MUH from being exposed to SHS from smoke drifting into their units from neighboring units or outdoor areas. The California Division of Occupational Safety and Health reported that "tobacco smoke travels from its point of generation in a building to all other areas of the building…through light fixtures, through ceiling crawl spaces, and into and out of doorways."[13] In California's warm climate, windows and doors are often open, allowing unimpeded flow of smoke. Although levels of exposure to SHS have decreased by 70% between the late 1980s and 2002,[14] protection from SHS in the H/L community remains a priority in California's H/L health agenda.

## Voluntary Policies

Although most California households have complete or partial smoking bans,[7,15] voluntary policies to protect MUH residents from SHS from neighboring units or outdoor areas are rare. Voluntary smoking bans in MUH could be useful not only in protecting nonsmokers from SHS exposure but also in supporting smokers in their quit attempts, helping them to continue refraining from smoking, and preventing youth from initiating smoking.[7,16,17] According to a statewide California survey in 2004 to 2005,[18] the majority of apartment residents and owner/managers favored a law requiring all apartment buildings to offer nonsmoking sections. Nearly one-half of the apartment owners and managers had received complaints from tenants about SHS exposure.

## *Regale Salud*—An Advocacy/Policy Intervention to Reduce Exposure to SHS in Predominantly H/L MUH

*Regale Salud* (Give the Gift of Health) is an intervention that uses the environmental change model to reduce tobacco-related health disparities by encouraging voluntary policies to control SHS exposure among H/L MUH residents. This intervention has been designated a model program by the Centers for Disease Control's National Latino Tobacco Control Network and is being implemented in California and several other states. To the authors' knowledge, it is the only SHS prevention program specifically targeted toward H/L MUH residents.

The *Regale Salud* intervention incorporates and addresses H/L cultural values, which have been described in detail elsewhere.[19,20] Some of these cultural values may make individuals reluctant to ask others not to smoke, such as *respeto*—a norm of treating others with respect or admiration and not interfering with their personal decisions; *personalismo*—relating to others on a personal, friendly level; and *simpatía*—maintaining agreeable social relationships and avoiding direct confrontation. These cultural values may make H/L residents feel that it is not appropriate to ask their neighbors to change their smoking habits or that doing so might jeopardize their relationships with neighbors who smoke. Other cultural values emphasize the importance of the immediate and extended family over the individual, which includes the responsibility to protect children from SHS. The most salient of these values is *familismo*—respect, loyalty, and unity within the immediate and extended family, including the responsibility to take care of family members. These cultural values are common to most H/L groups, but some are endorsed more strongly than others depending on acculturation, personality, and individual differences. The *Regale Salud* program attempts to educate all apartment residents, managers, and owners about the problem of SHS so that they can implement voluntary policies in a collectivist manner rather than waiting for individual residents to initiate confrontations.

*Regale Salud* calls for individuals in the H/L community to advocate for and adopt voluntary nonsmoking policies to protect workers, residents, and families beyond the parameters of the California Smoke-Free Workplace Law. The premise is that health is a gift that can be given by anyone, including smokers who want to protect others from the dangers of SHS. The intervention consists of multiple phases (outlined briefly in Table 1).

An essential element of *Regale Salud* involves convincing apartment owners that their tenants really are bothered by SHS and would support smoke-free policies. To gather evidence to support this claim, we conducted three phases of research, using mixed quantitative and qualitative methods. A community-based participatory research model was used, involving community members and local stakeholders throughout the process. The qualitative portion of the research consisted of focus groups to explore the issue of SHS in the home among H/L MUH tenants. The focus group findings were used to inform the development of a door-to door intercept survey and a telephone survey to assess attitudes toward implementing voluntary antismoking policies in MUH. These two survey methodologies were used to increase representativeness and generalizability of the sample; door-to-door intercept surveys are more expensive and typically cover more limited geographical areas, whereas telephone surveys can cover wider areas but are limited to residents who have landline telephones and are listed in telephone directories. After describing the findings from the three data collection phases, we present preliminary outcomes of the implementation of the *Regale Salud* intervention.

## METHODS

All data collection methods described below were approved by the institutional review board.

### Phase 1: Focus Groups

**Method—**In 2005 to 2007, five focus groups were conducted with H/L in Los Angeles County, Riverside County (southeast of Los Angeles), San Bernardino County (east of Los Angeles), and Fresno County (in central California, northwest of Los Angeles). These areas were selected because of their large and rapidly growing H/L populations and because they include urban and suburban areas. The apartment complexes selected consisted of at least 93% residents of Mexican origin and had no smoking restrictions currently in place.

The protocol and focus group guide were developed by staff from the H/L Tobacco Education Network and pilot tested with one group of H/L MUH residents. Questions assessed residents' self-reported SHS exposure, opinions about the extent of the problem of SHS, perceptions of the effects of SHS, willingness to take action in favor of voluntary policies, and perceptions of potential advantages and disadvantages of voluntary policies. Verbal assent was received from each participant. The focus groups were audio-recorded, and a Spanish-speaking staff member recorded notes. Participants received educational pamphlets about tobacco and small token gifts worth approximately $5 (e.g., hats, tote bags, writing pads, water bottles imprinted with the *Regale Salud* logo).

**Analyses—**Audio-recordings were transcribed verbatim by a trained Spanish-speaking staff member. Two bilingual staff members translated the Spanish text into English independently, compared their translations, and agreed on a final English version. Focus group data were coded and analyzed thematically using Nud*ist qualitative software, and responses were collapsed accordingly by two senior researchers who served as focus group raters.

### Phase 2: Door-to-Door Intercept Surveys

**Method—**To obtain a broader understanding of the feasibility of implementing voluntary policies in MUH, we conducted a door-to-door intercept survey of 142 apartment residents in Los Angeles and Riverside Counties in 2007. Apartment complexes were selected based on their high proportions of low-income H/L residents. Of the 18 apartment complexes approached, 7 agreed to participate. Surveys were conducted on weekends to maximize participation. The survey was conducted by three pairs of bilingual data collectors, who knocked on every other door of the selected complexes. The data collectors delivered an introductory script, obtained consent, and administered the 12-minute survey in the respondent's preferred language. Participants received educational pamphlets about tobacco and small token gifts worth approximately $5 (e.g., hats, tote bags, writing pads, water bottles imprinted with the *Regale Salud* logo).

Survey questions were developed from the focus group findings and from existent surveys endorsed by California's Clean Air Project of the American Lung Association and other materials available through the California Tobacco Control Program evaluation technical assistance provider. Two bilingual staff members independently translated the survey into Spanish and then compared their translations to create a final Spanish version of the survey. The Spanish survey was pilot-tested with several Spanish-speaking adults in Los Angeles to identify any ambiguous wording or unfamiliar idioms. Questions assessed residents'

perceived harm of SHS, whether and where they had been exposed to SHS, and how much SHS bothered them. We also asked about their support for voluntary smoking bans in their apartment complex.

**Analyses—**Frequencies were calculated and compared with the focus group findings to detect similarities and differences.

### Phase 3: Telephone Survey

**Method—**In partnership with the Center for Policy and Organizing, we conducted a telephone survey to assess knowledge and attitudes about smoke-free MUH among H/L MUH residents in 2006. The sample was obtained from a commercially available listing of apartment renters with H/L surnames who were listed in the telephone directory. Because some people with H/L surnames are not H/L, the interviewer verified that the participants self-identified as H/L before proceeding with the survey. Questions focused on living conditions, type of dwelling, household composition, SHS exposure, and attitudes about policies to prohibit smoking in MUH. Two bilingual staff members independently translated the survey into Spanish and then compared their translations to create a final Spanish version of the survey. The Spanish survey was pilot-tested with several Spanish-speaking adults in Los Angeles to identify any ambiguous wording or unfamiliar idioms. The 30-minute survey was administered by a bilingual call center. Respondents were not compensated for their participation.

**Analyses—**Frequencies and univariate statistics were calculated. Attitudes toward SHS and smoking bans were compared between smokers and non-smokers with $\chi^2$ tests.

## RESULTS

### Phase 1: Focus Groups

A total of 48 participants attended the focus groups, with six to eight participants per group. More than half of the participants (53.6%) were from Riverside County. Sixty-five percent of the participants were female, and 35% were male. Almost half of the participants (46%) were between the ages of 26 and 40 years, and almost one-third (29%) of the participants were 55 years and older. All participants were monolingual Spanish speakers.

All participants knew that SHS had harmful health effects. Most of the participants (71%) reported being exposed to SHS at home or work, and 65% felt that SHS was a problem where they lived. Participants reported being exposed to SHS from neighbors smoking in their units or in common areas. Some were exposed to the smell of cigarette smoke when family members came home after smoking or being with smokers. Participants expressed concern about the effects of SHS on children. Most (85%) did not have a written or verbal policy prohibiting smoking in their building, but 71% believed that it would be possible to obtain support for a written voluntary policy prohibiting smoking in common areas. Participants, including smokers, expressed support for the establishment of smoke-free policies in common areas, with appropriate signage.

Three broad themes emerged: (1) impact of SHS exposure in MUH, 2) protection of themselves and their families from SHS exposure, and (3) attitudes toward the implementation of voluntary policies that protect residents from SHS exposure.

**Theme 1: Impact of Exposure to SHS—**Several questions focused on how SHS affected MUH residents. Participants' responses centered on how the smoke penetrated the apartment units, regardless of whether the smoker was indoors or outdoors. They also expressed hesitancy about asking people not to smoke because they value their friendship. The value of *simpatía* was evident. One participant expressed her conflict between disliking smoke and not wanting to offend her neighbors:

> "It affects me a lot because I don't smoke. When I open the door I can smell the cigarette. The smoker is always happy, but I'm not. See, there are three neighbors that are always smoking, but they are good people, and I like them very much. But they smoke too much. Although they are smoking outdoors the smell still comes inside my apartment."

**Theme 2: Protecting Themselves and Their Families From SHS Exposure—**When asked about what they have done to avoid exposure to SHS, respondents mentioned several strategies. However, these strategies were not sufficient to protect them completely:

> "We close the doors. We place towels or a cloth under the doors. But it doesn't matter; it is as if we had not done anything."

> "Sometimes we need to sleep with our windows open. Every night my husband opens all the windows so we can get some air because that is the only time that we can get some clean air so keep the windows open all night."

> "Whatever comes in stays in and it does not leave. Not even with the air conditioner."

Respondents believed that it would be beneficial to educate smokers and others about SHS, but they also believed that the smokers really did not care. Respondents were reluctant to ask their neighbors not to smoke because the neighbors were paying to live there and they did not want to interfere with their decisions. Therefore, they felt disempowered and hopeless. Although the nonsmokers had tried to use the value of *familismo* to convince smokers not to smoke near children, these efforts had not been effective. Participants believed that these efforts need to be supported by something more formal, such as a clause in the rental contract and signs on the property:

> "It should be in the contract before you move in."

> "Put up signs to remind people about the dangers of smoking."

**Theme 3: Attitudes Toward Voluntary Policies—**Most respondents had never heard of voluntary policies to regulate SHS exposure in common living areas. Some expressed doubts about whether such a policy would be legal and whether it would be discriminatory. After we explained that voluntary policies were legal and that smoking was not a

fundamental right, the participants were positive about the potential benefits of such a policy, highlighting the collective benefits:

> "There would be benefits for everyone…and also for the children because I was going to let my child go outside and instead we went back inside because they were smoking outside."

Although respondents generally favored voluntary policies, some residents were reluctant to challenge the status quo because of their *respeto* values:

> "Even for the older people that don't listen this would be good, but they are older and who am I to tell them what to do?"

> "We need to educate everyone in a respectful way."

> "There is an apartment available next door. I am glad that person left because it was a smoker but I hope I don't get another smoker. Depending on who he/she is I don't know if I can ask them not to smoke."

Respondents listed some potential barriers to a voluntary policy. They were concerned about angering the smokers:

> "Those that smoke might get angry."

> "We would be lost if the owner smoked because they might attack us."

Some respondents were also concerned that owners would not support the policy because it would make it more difficult to fill their vacant apartments, although others disagreed:

> "Many of the owners don't have those rules because they rent the places more easily…all the owners care is to have money and they don't want to lose anything."

> "I think it would be the opposite because people would then see that the place does not smell bad and it is much cleaner so people would be much happier in living in a clean area. The building would not look dirty."

Respondents had mixed views about the extent to which their fellow residents would support a policy. In general, they believed that nonsmokers would support the policy, but smokers would not:

> "Although they would like to be helpful they can't because they love cigarettes."

> "I think there would not (be much support)…because they smoke all over the place…in the garage, outside, inside, everywhere."

Respondents believed that it would be easier to pass a voluntary policy for common areas such as patios and laundry rooms, but that this would not solve the SHS problem completely:

> "Common areas, because I would feel bad if someone came to tell me you can't smoke in your apartment."

> "It does not matter if it is indoors or outdoors. The smoke still comes in either way."

When asked if they would be willing to write a note to tell the owner about their concerns regarding SHS exposure and a possible voluntary policy as a solution, respondents were not yet ready to take action:

> "It would not matter because we are the minority; they only listen to the majority."

> "At least now I don't think many would speak up. Look at this group, it is small compared to all the people that live here."

### Phase 2: Door-to-Door Intercept Surveys

A total of 142 residents participated in the survey, with an 86% participation rate. Slightly more than one-half (56%) of the respondents were female; and 29% were aged 18 to 30 years, 27% were 31 to 40 years, 33% were 41 to 64 years, and 11% were 65 years or older.

Nearly all respondents (97%) believed that SHS is harmful, and the majority (68%) believed that SHS can drift into their units from the outside. Respondents reported that SHS had drifted into their units from outside (35%) or from other units (20%). Respondents were asked if they had been exposed to SHS in specific indoor and outdoor common areas. The most specific locations of SHS exposure were the lobby/entrance (24%), balcony/patio (23%), and stairs/hallway (20%). Other areas included recreational areas and the garage/parking structure. Two-thirds of the respondents (66%) stated that they had been "somewhat" bothered or bothered "a lot" by SHS in their apartments.

Only 35% said they had taken action to address the issue of SHS. These actions included moving away from the person, asking the person to stop smoking or move away, and closing doors and windows. Among those who did not take action, reasons for not taking action included issues of disempowerment ("Because I cannot do anything," "I did not know that I can do something about it," "I can't control other's actions") and discomfort with confrontation ("I didn't feel comfortable telling them," "I don't want to look for trouble or problems," "People might get mad," "Too scared").

We also asked about preferences for smoke-free MUH. Most respondents stated that they would like to live in a nonsmoking section of an apartment building (82%) or in a completely smoke-free building (80%). The majority (63%) believed that a tenant should be required to move if they continue to smoke after signing a nonsmoking agreement.

### Phase 3: Telephone Survey

A total of 409 H/L adult renters in California participated in the telephone survey. Table 2 shows the demographic characteristics of the respondents. Participants ranged in age from 18 to 89 years (mean, 38.7 years; SD, 14.6 years). The median number of people living in their units (including the respondent) was 5, and the median number of bedrooms was 2. Most lived in small- to medium-sized apartment buildings: 40% lived in buildings with 10 or fewer units, and 24% lived in buildings with 11 to 50 units. Only 8% of the respondents had smoked in the past week (13% of the men and 4% of the women), but 17% had a smoker in the household. Nearly all (95%) had banned smoking inside their own units. Only 26% reported that their current apartment buildings restricted smoking in indoor common areas, and only 19% reported smoking restrictions in outdoor common areas.

Table 3 compares attitudes toward SHS and smoke-free policies between smokers and nonsmokers. In general, nonsmokers had stronger beliefs about the negative effects of SHS and its ability to drift into apartments, but these differences were not statistically significant. Nonsmokers were significantly more likely than smokers to believe that there is a need to protect nonsmokers in apartments from SHS (85% of nonsmokers vs. 56% of smokers; $\chi^2$ = 21.69; $p < .0001$). Nonsmokers were also more likely to favor a complete smoking ban in all indoor and outdoor areas (37% of nonsmokers vs. 18% of smokers; $\chi^2 = 4.89$; $p < .05$), whereas smokers were more likely to favor separate smoking and non-smoking areas (79% of smokers vs. 58% of nonsmokers; $\chi^2 = 5.74$; $p < .05$). Nonsmokers were significantly more likely than smokers to state that tenants who repeatedly violate non-smoking policies should be evicted (78% of nonsmokers vs. 52% of smokers; $\chi^2 = 9.10$; $p < .005$).

### Implementation of *Regale Salud*

After collecting the data described above, we presented the findings to apartment owners and managers as part of the *Regale Salud* intervention. We reviewed the benefits of smoke-free MUH, including improved health, quality of life, and economic benefits (e.g., lower cleaning costs, decreased fire hazards, and possible tax breaks). We used the findings from the qualitative and quantitative data to demonstrate that most tenants were in favor of smoke-free MUH.

One of the managers' main concerns was whether smoking bans were illegal or discriminatory. They were also concerned that smoking residents would be upset, and this would stir controversy among residents and create difficult situations for managers, who would have to enforce the new policies. Like the residents, the managers were influenced by the cultural values of *simpatía*, *respeto*, and *personalismo*; they were reluctant to cause controversy or interfere with others' lives. However, they agreed that managers, rather than individual tenants, should speak with smoking residents and that the discussions should be done in person in a respectful way. The managers felt that this approach would minimize conflicts among neighbors.

As a possible solution, managers and residents also suggested purchasing air filters for their apartments. We did not support that because previous research has established that SHS cannot be controlled by ventilation, air cleaning, or spatial separation of smokers from nonsmokers.[21] Smoke-free buildings are the only remedy for reducing SHS-related morbidity and mortality; thus, the establishment of completely smoke-free living environments is the ultimate goal.

After these meetings, five apartment complexes in Coachella Valley and two complexes in the Los Angeles area passed voluntary policies. The new policies banned smoking in common areas, playgrounds, and balconies of apartments that face each other. The H/L Tobacco Education Partnership/Network placed a congratulatory advertisement in Spanish in a local newspaper, spoke at the official policy signing, and presented awards to all parties responsible for the development and implementation of the policy. The final outcome of the program was that seven policies were passed out of the 12 attempted.

## DISCUSSION

As the size and voting power of the H/L population in the United States continues to increase, the issue of SHS exposure among H/L in MUH is becoming more salient. Other states are already following California's lead in implementing smoke-free apartment initiatives. Support for such policies needs to be supplemented with local action and incentives for building owners to implement smoke-free policies.

### Overcoming Barriers to Smoke-Free Environments in MUH

This study identified some potential barriers to implementing smoke-free housing policies. The cultural values of *respeto, personalismo,* and *simpatía* made some residents hesitant to ask their neighbors not to smoke. Many respondents empathized with the smokers, mentioning how inconvenient it would be for the smokers to be forced to refrain from smoking in common areas. Respondents also stated that it would be inappropriate and difficult for a younger person to ask an elderly person not to smoke. This indicates that voluntary policies initiated by tenants might be difficult to enforce. However, if apartment owners or managers initiated the policy and reinforced it with signage, residents would feel more empowered to ask people not to smoke. This indicates that smoke-free policies should be initiated and enforced by authority figures such as managers, apartment owners, or city ordinances.

Although some cultural values could be barriers to enforcement of voluntary policies, other cultural values may empower residents to protect their families from SHS. For example, the value of *familismo* made residents quite concerned about the effects of SHS on their family members. *Familismo* may empower residents to insist on smoke-free environments for the entire family, especially the children, the elderly, and those with chronic illnesses. Residents also could reframe the roles of *respeto* and *simpatía* to shift the focus from protecting the smokers from inconvenience to protecting the health of the whole community.

The owners' and managers' barriers to implementing policies were their concerns that nonsmoking policies might be discriminatory or illegal and that they would be unable to fill their vacant apartments. It is important to educate landlords that smoke-free policies are legal and that the majority of tenants actually favor smoke-free apartments. The present findings indicate that once landlords understand that their own tenants favor nonsmoking policies, they are more receptive to the idea. We recommend collecting data from the residents of the landlords' own apartment complexes to convince landlords that their tenants support nonsmoking policies. Our experience suggests that landlords and tenants each have unique roles in creating and maintaining smoke-free MUH: the tenants need to voice their preference for smoke-free MUH and the landlords need to create an environment where tenants feel safe and empowered to voice their preferences without fear of reprisal. As a result, tenants and landlords will be more satisfied and healthy.

The current findings in the California H/L community are consistent with findings from previous studies in other demographic groups in other states. Surveys of MUH residents in Minnesota[22-24] found that substantial proportions of residents were bothered by SHS entering their units. Most of these respondents reported that their current buildings did not

have smoke-free policies, but they would prefer to live in a building with smoke-free policies. Moreover, although residents were bothered by SHS, very few had talked to owners, managers, or the smokers about their concerns. This is very similar to our findings from the door-to-door intercept survey. A study of low-income MUH residents in subsidized housing in Oregon[25] found strong support for smoke-free MUH policies among nonsmokers but much weaker support among smokers. This is consistent with the results from our telephone survey, although we found that the vast majority of residents (smokers and nonsmokers) were in favor of some type of policy to protect nonsmokers from SHS. The main difference between the smokers and nonsmokers in our study was that the nonsmokers favored a complete indoor and outdoor smoking ban, whereas the smokers favored separate smoking areas. The consistency of these findings across states with diverse demographic characteristics suggests that there is widespread support for smoke-free MUH.

Our findings from apartment owners and managers are also consistent with those documented in other states. A survey of apartment owners and managers in New York[26] found that few owners and managers had implemented smoke-free policies, but most were receptive to the idea. Their main perceived barrier to implementation was concern about vacancy rates. In a Minnesota study,[23] owners and managers were aware of SHS, but they were reluctant to implement smoke-free policies because they were concerned about increasing their vacancy rates, being accused of discriminating against smokers, or incurring additional responsibilities to enforce the policies. However, owners who had already implemented smoke-free policies reported neutral or positive effects on vacancies, apartment turnover, and management workload. It is understandable that apartment owners and managers are worried about the effect of smoke-free policies on their ability to rent out their apartments, but the evidence suggests that these policies in fact will not adversely affect their occupancy rates and are not overly burdensome.

## Limitations

Although *Regale Salud* focuses on voluntary policy development, the H/L Tobacco Education Partnership/Network also collaborated with smoke-free housing coalitions in California to encourage the passage of city-level ordinances to give priority to developers who would build smoke-free affordable housing. This could have influenced support for smoke-free housing. Another limitation of this study is that encouraging the passage of policies for smoke-free common areas (indoors and outdoors) does not address the problem of smoke drifting from neighboring units because such a policy would drive smokers back into their homes and expose their families and neighbors to SHS. Therefore, we favor total smoking bans rather than partial bans. The *Regale Salud* intervention needs to evolve its advocacy and policy work further to reflect and acknowledge the disadvantages of partial vs. complete voluntary policies. Also, it is important to work with apartment owners in addition to managers and residents. Owners can establish permanent policies that can survive after managers and resident advocates leave.

Although we attempted to obtain the most comprehensive and representative data possible by using mixed qualitative and quantitative methods and using two different sampling methodologies for the quantitative surveys, our method does have several limitations.

Sampling for the focus group portion of the project was only performed with two MUH facilities; thus, generalizability to other MUH facilities is limited. The door-to-door intercept surveys were limited to residents who were at home and agreed to participate. Thus, residents who spend much of their time away from home were likely underrepresented. The telephone survey was limited to people with Hispanic surnames who had landline phones and were listed in the telephone directory. Thus, cell phone–only households and Hispanics without obvious Hispanic surnames were underrepresented. Although each methodology has inherent limitations, we believe that the similar findings across the three phases of data collection support the validity of the findings.

Because we did not ask participants to divulge their smoking status in the focus group and door-to-door intercept surveys, we were unable to analyze differences between smokers and non-smokers. The telephone survey results revealed some similarities and some differences between smokers and non-smokers; respondents generally agreed that SHS smoke was harmful and should be avoided, but nonsmokers favored more restrictions on smoking. In future studies, it would be useful to ascertain all participants' smoking status, if this can be done without compromising participation rates.

Because of budgetary constraints, this project was unable to collect data on the sustainability of the *Regale Salud* intervention or its long-term effects on SHS exposure among MUH residents. Longitudinal studies are needed to assess these important outcomes.

## Recommendations

Based on the three phases of data gathering described in this article and the preliminary outcomes of the *Regale Salud* intervention, we offer several recommendations to promote smoke-free choices in MUH. At the policy level, we encourage municipalities to pass ordinances that prohibit smoking in all new and existing residences that share walls or common areas. Outdoor common areas should be smoke-free except for designated smoking areas. Rental clauses should specify where smoking is allowed and the consequences of smoking in units or common areas. Involuntary exposure to SHS in residential housing should be declared a public nuisance, especially when it impacts children and the elderly.

Until such policies are widespread, we encourage individual apartment owners and managers to implement and enforce policies to protect their residents from SHS. The findings of this study indicate that most residents, even smokers, acknowledge the harm associated with SHS and favor at least minimal restrictions. If apartment owners are unsure about their tenants' preferences, we encourage them to ask the tenants, confidentially or anonymously if possible. We expect that they will find that protecting their residents from SHS will actually result in more satisfied, loyal, long-term tenants, rather than increased vacancies.

Although some MUH residents may feel powerless to avoid SHS, they can become empowered. MUH residents can form partnerships with community-based organizations involved in the housing industry (e.g., affordable housing); health organizations; and city, county, or state agencies that promote smoke-free housing. Coalitions of residents can educate their landlords about the hazards of SHS and the health, safety, and economic

benefits of smoke-free housing. If a critical mass of tenants demands smoke-free environments, voluntary and formal policies will follow.

## CONCLUSIONS

In California, apartment residents, managers, and owners are passing voluntary policies to prohibit smoking indoors and in outdoor communal areas of MUH complexes. Policies that prohibit smoking in communal areas are capable of surviving most legal challenges because smoking is not considered a fundamental right. As state and local ordinances and voluntary policies in MUH gain momentum, it is our hope that the option to choose to live in smoke-free environments will become the norm.

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**SO WHAT? Implications for Health Promotion Practitioners and Researchers**

### What is already known on this topic?

Many Hispanic/Latino residents of multiunit housing in California are potentially exposed to secondhand smoke from neighboring apartments.

### What does this article add?

Secondhand smoke exposure is prevalent among Hispanic/Latinos in multiunit housing. There is high support for policies to reduce secondhand smoke exposure, but certain traditional cultural values made residents hesitant to ask their neighbors not to smoke. Apartment owners and managers were also concerned about negative consequences of implementing policies. The *Regale Salud* intervention prompted the passage of several anti-smoking policies in housing units.

### What are the implications for health promotion practice or research?

Municipalities should pass ordinances to prohibit smoking in multiunit housing and common areas. In the meantime, it is important to continue to educate landlords and managers about secondhand smoke and encourage them to implement voluntary policies. This could reduce health disparities in secondhand smoke exposure among Hispanic/Latinos.

**Table 1**

Phases of the *Regale Salud* Intervention

| Phase | Objective | Specific Activities |
|---|---|---|
| 1 | Establish objectives and gather baseline data | Survey residents of specific apartment complexes |
| | | Determine extent of problem and level of support |
| 2 | Determine level of capacity building necessary to implement program | Identify leaders in community; identify people, organizations, coalitions, and other groups that could be involved; assess their capacity and readiness to act |
| 3 | Identify allies and opposing forces | Determine level of support for advocacy/policy campaign |
| | | Partner with other service providers such as California Smokers' Helpline |
| | | Offer to provide information and technical assistance |
| 4 | Identify participants and develop materials | Form committees of residents, managers, owners, and business patrons |
| | | Establish framework of mutual respect and equity |
| | | Develop materials that are culturally acceptable and language appropriate |
| | | Pilot-test the materials |
| 5 | Implement intervention | Establish effective communication systems, acknowledging culture, language, and educational levels |
| | | Educate residents, managers, and owners about voluntary policies |
| | | Encourage policy adoption and enforcement |
| 6 | Recognize efforts | Capitalize on local media opportunities to publicize program and acknowledge participants |
| | | Place ads in local media |
| | | Document results with formal evaluation |

**Table 2**

Demographic Characteristics of Telephone Survey Respondents

| Characteristic | Percent of Participants* |
|---|---|
| Age, y | |
| 18–24 | 15 |
| 25–34 | 30 |
| 35–44 | 21 |
| 45–54 | 7 |
| 55–64 | 17 |
| ≥65 | 7 |
| Gender | |
| Female | 49 |
| Male | 51 |
| Public housing | |
| Yes | 19 |
| No | 74 |
| Country of origin | |
| Mexico | 71 |
| Central America | 23 |
| South America | 6 |
| Caribbean (including Cuba and Dominican Republic) | 2 |
| Language spoken at home | |
| Primarily Spanish | 73 |
| Spanish and English equally | 23 |
| Primarily English | 3 |
| Education | |
| Less than high school | 46 |
| High school | 32 |
| Some college | 10 |
| College graduate | 7 |
| Postgraduate work or professional school | 2 |
| Smoking status | |
| Current | 8 |
| Former | 17 |
| Never | 74 |

* The sum of the percentages is less than 100% because some respondents declined to answer some questions.

## Table 3

Comparison of Attitudes Toward SHS and No-Smoking Policies Between Smokers and Nonsmokers[†]

| Attitude/Belief | Percent Who Agreed | | | $\chi^2$ |
|---|---|---|---|---|
| | Overall Sample (N = 409) | Nonsmokers (n = 375) | Smokers (n = 34) | |
| SHS is harmful | 98 | 98 | 97 | 5.02 |
| SHS can drift from one apartment to another | 86 | 86 | 79 | 1.97 |
| SHS can drift from outside an apartment building into an apartment | 82 | 83 | 76 | 2.86 |
| Have experienced SHS drifting into your apartment | 63 | 64 | 53 | 1.79 |
| There is need for laws to protect nonsmokers in apartments from SHS | 82 | 85 | 56 | 21.69*** |
| Strongly favor law limiting smoking in outdoor common areas of apartment buildings | 78 | 79 | 68 | 5.56 |
| Favor a complete smoking ban in all indoor and outdoor areas | 35 | 37 | 18 | 4.89* |
| Favor separate smoking and nonsmoking areas | 60 | 58 | 79 | 5.74* |
| Favor law requiring all apartment buildings to offer sections that are completely nonsmoking | 86 | 86 | 85 | 3.64 |
| Tenants should be evicted for repeat violations of no-smoking policies | 76 | 78 | 52 | 9.10** |

[†]SHS indicates secondhand smoke; Smoker, smoked in the past week; and nonsmoker, did not smoke in the past week.

*$p < 0.05$.

**$p < 0.005$.

***$p < 0.0005$.