Delivering on the Promise of Smoke-Free Public Housing

On November 30, 2016, the US Department of Housing and Urban Development (HUD) published a final rule mandating that public housing authorities it supports prohibit all smoking on their residential premises, including within residents' apartments. The primary rationale for this action was to protect nonsmoking residents from the harms of tobacco smoke exposure.

Although the harms of secondhand smoke are clear and the potential for reducing nonsmoking residents' exposure is real, it will be no simple matter to successfully implement the policy requirements set down by HUD. Some challenges to policy implementation will apply to all public housing authorities, and others will be unique to specific settings.

By being aware of the benefits of smoke-free public housing as well as the challenges inherent in complying with HUD's rule, public housing authorities stand the best chance of fulfilling the potential of this major policy initiative to significantly improve public health in a vulnerable population. (*Am J Public Health.* 2017;107:380–383. doi:10.2105/AJPH.2016.303606)

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On November 30, 2016, the US Department of Housing and Urban Development (HUD) finalized a new rule that gives public housing authorities (PHAs) supported by HUD funding 18 months to go completely smoke-free, both in public spaces and, most importantly, within residents' units.[1] More than 700 000 housing units in more than 2900 public housing authorities (PHAs) will be newly affected by the rule.

Until recently, clean indoor air policies predominantly restricted tobacco use in public spaces—bars, restaurants, workplaces, and even parks and beaches.[2] Smoke-free policies in public housing have been comparatively rare. To date, roughly 500 public housing authorities throughout the country (< 14%) have initiated smoke-free policies that restrict smoking in residents' units, although many of these PHAs allow smoking at selected developments under the same jurisdiction.[1] HUD's smoke-free rule is a significant shift in public policy because it limits behavior in private residential spaces, albeit spaces within publicly owned housing, nationwide. The smoke-free rule does not prohibit smokers from living in public housing; however, smoking anywhere inside PHA buildings is expected to be considered a lease violation, for which individual housing authorities will determine appropriate penalties.

The potential public health benefits of smoke-free housing policies are supported by a formidable body of evidence. Exposure to secondhand smoke (SHS) causes lung cancer, heart disease, and stroke and exacerbates respiratory conditions such as asthma. Residential smoking is also a common cause of fire-related injuries.[3,4] The surgeon general has concluded that there is "no risk-free level of exposure to secondhand smoke (SHS)."[3(p11)] Low-income residents of multiunit housing are at particular risk for the harms of SHS exposure because of the higher prevalence of tobacco use in low-income populations[5–7] and the air exchange that takes place in connected living spaces.[8,9] Assessments of indoor air quality and residential ventilation by the American Society of Heating and Air-conditioning Engineers, a leading engineering organization, have concluded that "a total ban on indoor smoking is the only effective means" of controlling residential exposure to SHS and the associated health effects.[10] Eliminating smoking in public housing has the potential to substantially reduce morbidity and mortality.

Implicit in HUD's policy is an assessment that the health benefits of smoke-free housing rules and the right of nonsmokers to live in a healthy environment outweigh the loss of autonomy the rules impose on smokers and the penalties incurred by persistent violators of the rules. When the privilege of choice is taken away from individuals who already have diminished control over their lives, issues of fairness must be considered.[11] For public housing residents, who are in a vulnerable social position, smoking is often thought of as a coping mechanism. When other environmental threats such as mold and pests are present, preventing SHS exposure seems of lesser importance and may be perceived by residents as a misdirected priority. And although expected to be rare, the ultimate penalty for smoking in PHA buildings—eviction—is in direct opposition to the goals of public housing: promoting economic stability and preventing homelessness. Nevertheless, the vast majority of public housing residents are nonsmokers whose health may be put at risk by residential SHS exposure. Public health professionals and public policymakers have

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a responsibility to establish and communicate the benefits of smoke-free public housing and ensure that they are fully realized. They can further support the smoke-free policy by minimizing burdens on smokers where possible.

BENEFITS OF SMOKE-FREE PUBLIC HOUSING

In 2012, the Boston Housing Authority (BHA) in Boston, Massachusetts, became the largest public housing authority in the country at the time to adopt a smoke-free policy. The BHA has been a pioneer in smoke-free housing and has been studied extensively. Its experience provides support for the national policy while sounding important notes of caution. Studies of air quality and resident exposure before the 2012 smoke-free rule established that tobacco smoke pollution was a significant problem for residents.

Boston-based studies found high levels of tobacco smoke pollution in public housing[12] and confirmed the long-appreciated transfer of SHS within multifamily housing.[9,13] One small study of nonsmoking BHA residents found 88% had detectable tobacco smoke exposure compared with at most 56% in the national population.[14] Comparisons of objectively measured air quality at smoking-allowed versus smoke-free sites in the BHA before the introduction of the housing authority-wide smoke-free policy, as well as assessments before and after the introduction of the 2012 smoke-free policy, showed that smoke-free rules are associated with attenuated levels of tobacco smoke pollution.[9,12,15,16]

Outside the Boston area, a study in Portland, Oregon, found public housing residents self-reported reductions in tobacco smoke exposure and tobacco use following the introduction of a smoke-free policy there.[17] Nevertheless, to date, reductions in nonsmoking residents' tobacco smoke exposure have not been documented using objective measures outside Boston.

Although in general these initial studies support smoke-free policies in public housing, the success of such policies is neither instantaneous nor guaranteed. Nine months after the BHA's policy was implemented, television news crews observed tobacco use in violation of the smoke-free policy at numerous public housing developments across the city, and residents were quoted saying the policy was not being enforced.[18] Survey data collected from residents around the same time indicated that 51% of nonsmoking respondents thought smokers rarely or never complied with the smoke-free rule, and 41% said they were dissatisfied with enforcement.[19] Qualitative interviews conducted in three BHA developments for the elderly and disabled found that two years after the policy went into effect, the overwhelming majority of interviewees who were smokers reported smoking in their apartments.[20]

Full and immediate compliance is perhaps an unrealistic goal. Consistent with some of these observations, studies focused on measures of air quality following the institution of the BHA's smoke-free rule found there was not complete elimination of airborne markers of SHS in common areas, suggesting some degree of noncompliance. Despite these apparent shortcomings, there were reductions in mean SHS levels and more pronounced changes in peak levels.[16] Because of the difficulties associated with changing smoking-related behaviors, these air quality data are an encouraging sign of risk reduction consistent with the policy's motivation.

Being on the vanguard of smoke-free public housing, the BHA has had to adapt by trial and error. Over time, the BHA has taken steps to improve enforcement by making it easier for residents to report violations when they see them (e.g., by hotline, e-mail) and by streamlining the adjudication process. HUD has recommended escalating penalty structures for tenants violating the smoke-free policy with the expectation that eviction will be a rarely used penalty of last resort. It will be up to individual PHAs to balance the application of penalties that give smoke-free rules meaning and the goal of preventing homelessness.

THE ROAD TO SUCCESSFUL IMPLEMENTATION

Although the rationale for HUD's smoke-free policy can be clearly summarized and the terms for resident compliance are simple to describe, successful implementation will not be simple. Each PHA and each housing site must consider how its unique characteristics may shape the path to compliance. These include PHA attributes, such as physical infrastructure, staffing, and resident population, as well as aspects of the larger environment, such as weather and safety. PHAs with physical and policy structures that make compliance easy will have the greatest success with their smoke-free rules.

Physical Infrastructure

HUD's smoke-free policy states that the smoke-free zone must extend a minimum of 25 feet from buildings. This will pose a significant challenge for some PHAs, particularly those in dense urban environments where PHA property boundaries may be less than 25 feet from their apartment buildings. The HUD rule does allow PHAs to create designated locations on the premises where residents can smoke. It may be the case that PHAs will resist creating such spaces because they will not want to promote smoking. However, in Duluth, Minnesota, the housing authority built gazebos at the time that they implemented their smoke-free policy. The gazebos were not built as smoking shelters, although many residents went there to smoke, along with nonsmokers who used the space to socialize. Effectively, the Duluth PHA provided residents with something new and beautiful, which greatly facilitated smokers' compliance with the policy (S. Saucedo of Duluth Housing and Redevelopment Authority, written communication, August 2016). PHAs and public health professionals will need to consider the potential unintended consequences of redefining acceptable smoking locations. Smokers moving beyond PHA smoke-free buffer zones may expose new populations of bystanders. At the same time, highly visible and appealing designated smoking areas on PHA property may destigmatize smoking in the eyes of young people or create

new social structures built around and reinforcing smoking.

The smoke-free policy's ability to protect residents from the harms of tobacco smoke may also be affected by physical structures and materials. Absent accompanying refurbishment or renovation, "thirdhand smoke" (residue of tobacco smoke that adheres to surfaces) presents a source of carcinogens and other toxicants that will not be mitigated instantly by smoke-free policies.[21] Thirdhand smoke may have built up over years. Depending on building materials, renovations, and cleaning efforts, detrimental effects may not go away altogether.[22] Evidence on effective mitigation strategies for thirdhand smoke buildup is lacking; however, the best practical solutions are likely thorough cleaning and repainting.

Staffing

Where staffing is limited, it will be difficult for PHAs to adequately monitor and pursue compliance efforts. Physical layout may further influence staff's ability to monitor compliance. Where properties are large and buildings are widely dispersed, it may be difficult for staff to intervene in or concretely document noncompliance with smoke-free policies.

Some PHAs have closed-circuit video cameras in public hallways for security, which may aid enforcement of the smoke-free policy. Emerging technologies such as real-time airborne nicotine monitors equipped with Wi-Fi connectivity could also help building managers more objectively and consistently identify policy violations as they occur. However, the invasiveness and expense of these technologies will likely limit their use.

Demographics

The demographic profiles of PHAs may affect the potential for smoke-free policy success. For example, developments devoted to family housing may experience greater compliance because the adults feel a sense of obligation to protect young residents. Alternatively, if personal safety surrounding a public housing residence is an issue, parents may avoid going outside to smoke if it means they have to take their children with them. In such cases, residents may conclude that smoking out of open windows is a sensible way to comply with the spirit of the policy.

In housing devoted to elderly and disabled residents, different challenges exist. Attitudes may be a barrier, with some smokers believing that they are too old to change behaviors fixed by addiction. Interviews conducted by our team in the BHA indicate that some elderly and disabled residents who smoke have modified their indoor smoking behaviors to contain their smoke in attempts to avoid detection and as an act of compromise. For these and other residents, providing safe and accessible spaces to smoke away from living spaces will do the most to promote compliance and protect nonsmokers. Residents disabled by mental illness, addiction, or physical impairment, will benefit from additional assistance and accommodations, such as specialized counseling or cessation resources[23] or apartment units closer to building exits. All these strategies are designed to ease resident adaptation to the smoke-free rules and maximize policy adherence.

Macroenvironment

Local PHAs should try to match the timing of smoke-free policy implementation with external circumstances favoring compliance. For example, spring and summer months may be ideal for beginning the policy in cold weather areas.

In Boston, BHA residents reported spending more time outside in the summer. Consequently, their outside smoking increased because they were socializing outside. Aligning smoke-free policies with circumstances that naturally facilitate compliance will help cement behavior changes and improve the odds they will be sustained over time.

SOCIAL CONCERNS

Ultimately, the best way to ensure that the smoke-free policy achieves its goals is to garner strong resident support. Although HUD's policy is top-down rather than grassroots, local policies may be most effective with a resident champion. In Boston, it was one resident and her grandson, who suffered from asthma, who catalyzed the smoke-free policy. Neighborhood events and community engagement tools such as "photovoice" can also provide meaningful springboards to garner support and promote change. Enlisting input from tenant and community organizations during policy development, including whether and where designated smoking areas are created and how violations are determined and reported, will ensure that residents can be active participants in making their buildings smoke-free.

PHAs should understand that residents may refrain from reporting policy violations for a variety of reasons, including fear of retaliation, violation of social norms, risk of adversely affecting neighbors' housing, or even sympathy for the challenges of smoking cessation. It is critical for PHAs to work closely with residents to communicate about, understand, and directly address these concerns.

HELPING SMOKERS INTERESTED IN QUITTING

HUD and individual PHAs have been clear that policies making buildings smoke-free should not be interpreted as an effort to rid public housing of residents who smoke. However, the smoke-free policies may provide an inflection point that motivates some smokers to quit. Previous research has shown that most smokers want to quit and each year more than half make at least one quit attempt.[24] Providing smokers interested in quitting with resources to help them do so will aid the success of smoke-free policies.

Just before the implementation of their smoke-free policies, the BHA and other housing authorities in the Boston area offered on-site smoking cessation counseling groups as well as a starter supply of nicotine replacement therapy. However, these resources were underused, prompting them to be abandoned. A strategy that could prove successful is the use of resident health advisors to promote cessation. Initial findings from a trial in the BHA found that resident smokers receiving cessation assistance from peers had higher cessation rates than did those receiving only referral to the state quitline.[25] Ultimately, to be successful smoking cessation resources should be well publicized, easily accessible, and inexpensive or free.

Furthermore, the availability of resources should not be limited to the period immediately before policy implementation because some smokers may decide to quit only after experiencing difficulties complying with the smoke-free policies. Lastly, public health and housing authorities should also consider encouraging harm reduction strategies, such as the use of noncombustible sources of nicotine while at home (ideally pharmaceutical), even if not specifically for cessation.

CONCLUSIONS

The primary charge of public housing is to prevent homelessness and the physical, social, and economic harms associated with it. At the same time, residents are entitled to safe and healthy housing. Thoughtful and site-specific implementation planning can catalyze compliance with PHA smoke-free policies and thereby balance the tension between these two guiding principles. All relevant stakeholders need to be involved in this process: residents, PHA staff, and PHA management. Fair and effective implementation of the smoke-free housing policy will be challenging but has the potential to make meaningful improvements to the health and well-being of PHA residents. AJPH

CONTRIBUTORS

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HUMAN PARTICIPANT PROTECTION

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