

HEALTH LAW, ETHICS, AND HUMAN RIGHTS

Regulation of Smoking in Public Housing

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Although the hazards of exposure to tobacco smoke are well established, and laws mandating smoke-free indoor air are widespread, private homes have long been considered spaces beyond the legitimate reach of regulation. Reflecting this view, the federal government has not required public-housing units to be smoke-free. Historically, the Department of Housing and Urban Development (HUD) has maintained that although local Public Housing Authorities (PHAs) may opt to ban smoking, they are not required to do so.

This policy choice has important public health implications, given the difficulty of containing smoke in multiunit housing. More than 7 million people live in public housing in the United States,¹ with 4 in 10 units occupied by families with children.² Residents have had little recourse when they are exposed to tobacco smoke; however, policy and practice in this area are changing.

Over the past few years, many private landlords have made their housing units smoke-free for reasons of consumer demand, health, reduced fire hazard, lower insurance costs, and decreased cleaning costs. A small number of local governments have gone further, banning smoking in multifamily residential buildings. In public housing, however, no-smoking policies are rare. To date, only about 140 PHAs across the country (about 4% of the total) have reported that they have voluntarily banned smoking in the public-housing units they manage.³

On July 17, 2009, a shift in federal policy occurred when a key department within HUD issued a memorandum that “strongly encourages Public Housing Authorities (PHAs) to implement nonsmoking policies in some or all of their public housing units.”⁴ This development makes it timely to critically examine the state of the law and policy in this area. In this article, we explore current law concerning residential smoking regulations and consider whether the implementa-

tion of a nationwide ban on smoking in public housing would be desirable.

HEALTH IMPLICATIONS OF EXPOSURE TO TOBACCO SMOKE IN RESIDENTIAL BUILDINGS

The National Toxicology Program has identified more than 250 poisonous gases, chemicals, and metals in tobacco smoke, 11 of which are class A carcinogens.⁵ Numerous epidemiologic studies show that exposure to tobacco smoke can cause lung cancer and cardiac disease in nonsmokers,⁶ and the Surgeon General’s report on involuntary smoking concluded that there is no safe level of exposure.⁵ Even brief exposures to tobacco smoke can adversely affect nonsmokers.⁷ Elderly or disabled persons with compromised cardiac or pulmonary function may be particularly susceptible. The rates and severity of asthma and other respiratory illnesses, as well as the rate of sudden infant death syndrome, are increased among children exposed to tobacco smoke.⁵

A resident who smokes in a single unit within a multiunit residential building puts the residents of the other units at risk.^{8,9} Tobacco smoke can move along air ducts, through cracks in the walls and floors, through elevator shafts, and along plumbing and electrical lines to affect units on other floors.^{5,10,11} High levels of tobacco toxins can persist in the indoor environment long after the period of active smoking — a phenomenon known as third-hand smoke.¹²⁻¹⁵ Tobacco toxins are distributed as volatile compounds and airborne particulate matter that are deposited on indoor surfaces and reemitted in the air over a period of days to years.^{16,17} In households in which one or more people smoke, the urine levels of the tobacco-specific carcinogen nicotine-derived nitrosamine ketone (NNK) are consistently higher in infants than in nonsmoking adults,

indicating either a differential response to the same toxin load or increased exposure of children through closer contact with smoke-contaminated rugs, furniture, clothing, and floors.¹⁸

Tobacco-smoke exposure in public housing is particularly troubling because it afflicts disadvantaged and vulnerable populations. In 2008–2009, 32% of households in public housing included elderly persons, 35% included disabled persons, and 41% included children.¹⁹ The mean annual income of households in public housing during this period was \$13,289. Adolescents who live in public housing are considered to be at high risk for early experimentation with cigarettes.²⁰

No-smoking rules in homes have been associated with substantially reduced levels of biochemical markers of tobacco exposure and lower health risks among nonsmokers.^{13,21–24} Such policies can also encourage smoking cessation among household members,^{25–30} discourage the initiation of smoking by adolescents,^{31–34} and decrease the incidence of house fires.³⁵

SMOKE-FREE HOUSING AND THE “RIGHT TO SMOKE”

Private owners of multiunit residential buildings are beginning to respond to market demand and the prospect of reduced costs by adopting no-smoking policies. Survey findings indicate that tenants are often bothered by tobacco smoke and that four out of five nonsmokers would prefer a smoke-free building policy.³⁶ A new, 440-unit high-rise building in Chicago is the first in that city to prohibit smoking in all units, common areas, and outside spaces.³⁷ In Oregon, a major property-management company has adopted no-smoking policies for about 8000 units.³⁸

In addition to private initiatives, some local governments have restricted smoking in multiunit dwellings. Three California cities recently enacted ordinances prohibiting smoking in some or all units of multiunit residential housing.³⁹ Since 2006, around a dozen diverse communities have debated whether to impose smoking restrictions that would affect multiunit dwellings.^{40–43} In 1997, the Utah legislature passed a law expressly permitting landlords to ban smoking in residential units.⁴⁴

Despite the documented risks of tobacco-smoke exposure, these initiatives are controversial.⁴⁵ Critics argue that neither governments nor landlords should interfere with residents’

liberty to smoke and that such restrictions violate privacy rights.⁴⁶ However, courts have held that the due-process clause of the Fifth and Fourteenth Amendments of the U.S. Constitution, which limits government interference in personal liberty and privacy, provides only the most minimal level of protection for smoking.^{47–49} Governments need only show a reasonable basis for restricting smoking. Courts evaluating privacy provisions in state constitutions have held similar views.^{47,50} Neither the federal Americans with Disabilities Act nor other disability discrimination laws protect smokers as “disabled” persons.⁵¹

According to HUD, the PHAs may adopt no-smoking policies in public housing at their discretion, as long as state and local laws permit such policies, because federal laws, including the Fair Housing Act and the Civil Rights Act of 1964, do not provide protection for a right to smoke.⁵² No-smoking policies may be applied to both incoming public-housing residents and current residents, as long as the application to current residents is delayed for a reasonable period of time — for example, until the lease is up for renewal.

To our knowledge, no state or local laws or judicial decisions prohibit property owners from restricting smoking in their rental properties.⁵³ In the absence of such laws, landlords are free to ban smoking in living units and common areas. Generally, this is accomplished with new leases, lease renewals, or written notification to month-to-month tenants.

SMOKE-FREE POLICIES FOR PUBLIC HOUSING

The decentralized nature of the ownership and administration of public housing creates challenges to those attempting to develop a cohesive smoke-free policy. Public housing takes a variety of forms, including publicly owned and subsidized apartment buildings, which currently house 2.1 million tenants, and voucher or so-called Section 8 programs, which currently provide 4.9 million tenants with a HUD subsidy to help cover their rent in private housing.² These programs are administered by separate departments within HUD, each of which sets its own policies. In addition, states may offer supplemental public-housing programs that operate without HUD funding.

This fragmented regulatory structure fosters inconsistency in the quality of programs and facilities provided, as well as the policy-making and enforcement practices across public-housing programs and local housing authorities. Reflecting such variation, no-smoking policies are at present the rare exception rather than the rule among PHAs.

Historically, HUD has made it clear that it neither requires PHAs to adopt nor precludes them from adopting smoke-free policies for their properties or programs.^{52,54} HUD's notice of July 17, 2009, signals an important change in its position on this issue.⁴ The notice stresses the health effects of tobacco-smoke exposure, particularly among children and the elderly, and the risk of fire-related deaths and injuries.⁴ HUD has directed PHAs that implement a smoking ban to formalize it by updating the annual plans that they are required to file with HUD, which will enable HUD to track the response to its notice, and has urged PHAs to provide residents with information about smoking-cessation resources and programs. The new policy applies only to publicly owned multiunit housing that is administered by the HUD Office of Public and Indian Housing.

It is difficult to gauge how PHAs will respond. Their market incentive to provide smoke-free housing is less than that for private landlords. Public-housing tenants are often in a position in which they cannot "vote with their feet" for smoke-free units as other tenants can. For the same reason, however, PHAs are well positioned to implement smoking restrictions, notwithstanding community resistance.

Cost is also a consideration for PHAs, since the price for complete decontamination of a two-bedroom unit can exceed \$15,000⁵⁵; even the simple cleaning of a unit in which one or more residents have smoked may cost two to three times as much as the cleaning of a unit in which there has been no smoking.⁵⁶ After the policy is initially implemented, long-term cost savings may be realized through reductions in cleaning costs and the risk of fire, as well as other smoke-related costs.

The greatest disincentive for PHAs to implement smoke-free policies may be the challenge of enforcement. Effective mechanisms for monitoring and for reporting noncompliance would need to be established, along with sanctions for residents who do not comply. The threat of evic-

tion cannot be wielded lightly, both because the process is legally onerous and because eviction undermines the purpose of public-housing programs — that is, protecting vulnerable populations from homelessness. Although daunting, these challenges to enforcement are not unlike those faced in attempts to enforce other rules relating to public housing, such as sanitary codes and antidrug provisions.⁵⁷ For example, HUD has included a Tenancy Addendum for Section 8 leases that permits property owners to evict tenants who engage in drug use, crime, or alcohol abuse in the dwelling.⁵⁸ Notwithstanding such mechanisms, the complexities of proving a violation as well as the burdens associated with enforcement may dissuade PHAs from acting on HUD's recommendation to adopt smoke-free policies.

IS A FEDERAL BAN DESIRABLE?

Exposure to tobacco smoke in the home can be avoided fully only through the implementation of a complete smoking ban.¹¹ Mitigation measures such as the use of fans, air filters, and separate smoking rooms are ineffective.⁵⁹ Ridding public housing of tobacco smoke would keep such settings in step with the trend toward no-smoking policies in workplaces, private housing, and even private vehicles.⁶⁰

Tenants in multiunit housing have few alternative legal remedies for the problem of tobacco-smoke exposure. They can sue their landlords, claiming that tobacco smoke constitutes a nuisance or violates the warranty of habitability and the covenant of quiet enjoyment of housing,^{53,61} but litigation is an unreliable and arduous strategy.⁶² Tenants with medical sensitivities to tobacco smoke may also be able to obtain legal relief (through litigation or HUD's complaints process⁶³) under the federal Fair Housing Act, the Americans with Disabilities Act, the Rehabilitation Act, and state disability discrimination laws, but only if they can show that their reaction to the smoke substantially limits a major life activity and that the requested accommodation is not unduly burdensome to the landlord.^{62,64,65} Because other legal remedies are so limited and market remedies are unavailable to very-low-income tenants, the onus arguably is on public-housing regulators to ensure adequate protection from tobacco smoke for these residents.

Several policy alternatives are available to HUD (Table 1). First, HUD could take no further ac-

Table 1. Policy Options for HUD Regulation of Smoking in Public Housing.

Policy Option	Advantages	Drawbacks
No further HUD action; PHA policies remain discretionary	Preserves local control and flexibility (e.g., during phase-in period); puts relatively few families with persons who smoke at risk for displacement; does not necessitate HUD monitoring of PHAs' compliance with smoke-free policy	Allows PHAs to continue to permit smoking, which most PHAs are likely to do, resulting in continued exposure and harm to residents
Formal interpretation of existing HUD air-quality requirements to include tobacco smoke	Encourages PHAs to respond by prohibiting smoking, which some PHAs may do, resulting in reduced tobacco-smoke exposure and harm to residents; empowers residents to pressure PHAs for smoke-free policies; impels PHAs to respond to residents' complaints concerning air-quality problems caused by tobacco smoke	In the absence of a clear directive to make housing smoke-free, allows PHAs to continue to permit smoking, which many PHAs are likely to do; could require PHAs and Section 8 private landlords to evict tenants who smoke on the premises, including market-rate tenants; may dissuade private landlords from participating in Section 8 program; may increase monitoring costs for HUD relative to existing costs of enforcing air-quality requirements
HUD funding made conditional on implementation of smoke-free policies	Strongly encourages PHAs to comply, resulting in dramatic reduction in tobacco-smoke exposure and harm to residents	Reduces local control and flexibility; may require PHAs and Section 8 private landlords to evict tenants who smoke on the premises, including market-rate tenants; may dissuade private landlords from participating in Section 8 program; necessitates HUD monitoring of PHAs' compliance with smoke-free policy

HUD denotes Department of Housing and Urban Development, and PHA Public Housing Authority.

tion other than to monitor the PHAs' response to its recent exhortation to adopt smoke-free policies. It seems unlikely that such an approach will significantly accelerate the pace of local policy adoption, given that it is not accompanied by financial incentives or other mechanisms that might influence PHAs' decision making. This approach would minimize the number of tenants potentially displaced through the enforcement of smoke-free policies but would leave most residents at risk for injury caused by tobacco-smoke exposure.

Second, HUD could take the simple step of formally interpreting its existing regulatory standard for air quality to include tobacco smoke. HUD regulations for all public housing and Section 8 programs provide that "HUD housing must be decent, safe, sanitary and in good repair" and specifically state, "All areas and components of the housing must be free of health and safety hazards. These areas include, but are not limited to, air quality."⁶⁶ The regulations list a number of specific hazards that are prohibited, such as garbage, lead paint, mice, vermin, mold,

and "odor (e.g., propane, natural gas, methane gas)." The omission of tobacco smoke from this list may have been deliberate, but the "odor" and "air quality" provisions may be broad enough as written for HUD to construe them as including tobacco smoke, should it so choose. To send a clearer signal, HUD could amend the regulations to expressly list tobacco smoke as a prohibited hazard. This approach would reduce exposure and empower residents of public housing to press for smoke-free policies to achieve compliance with these HUD standards, but it could also lead to the displacement of residents who refused to comply with smoking restrictions.

Third, HUD could include stipulations on future grants to PHAs that make full funding for all programs, including Section 8, conditional on the submission of an acceptable plan to implement smoke-free policies over some defined time period. HUD used a variant of this approach in 2009 in connection with a funding opportunity under the federal economic stimulus package. PHAs that applied for stimulus funds were awarded one point in the competitive application

process if they agreed to make proposed projects smoke-free as part of a Green Communities program incentive.⁶⁷ Although the award of a substantial amount of grant funds on the condition that the applicant implement smoke-free policies would not constitute a federal ban on smoking in public housing, it would be likely to have the same practical effect as a ban because PHAs can ill afford to lose program funds.

Such an outcome would protect the greatest number of residents from the harms caused by tobacco-smoke exposure but would constitute a heavy burden on residents and prospective residents who are addicted to nicotine. On balance, this burden can be justified.⁶⁸ In other areas, the law allows burdens to be imposed on persons who smoke for reasons less important than the preservation of the health of others. For instance, under federal law and the laws of many states, employers may fire employees or refuse to hire job applicants because they smoke, and federal law allows health insurers to charge higher premiums for policyholders who habitually smoke and to levy financial penalties if smokers decline to participate in smoking-cessation programs.⁶⁸ These actions by employers and insurers are motivated by the desire to maximize worker productivity and contain costs. Arguably, the objective of protecting public-housing residents, particularly children and the elderly, is sufficiently important to justify even more burdensome policies. When children's health is at risk, courts have permitted much heavier burdens to be imposed on people who smoke than the loss of public housing, such as loss of child custody.⁶⁹

Applying smoking bans to multiunit housing in the Section 8 program raises special concerns. Because such a ban would apply to market-rate tenants as well as to Section 8 tenants in this mixed-housing situation, it could result in long-time, market-rate residents being prohibited from smoking in their buildings if a Section 8 tenant moved in. Some state and local laws prohibit landlords from discriminating against prospective tenants because they receive Section 8 assistance, but private landlords in most jurisdictions can opt not to participate in the Section 8 program. By making apartments less marketable to private tenants who smoke, a smoking ban might lead some landlords to leave the program, reducing the supply of public housing. However, the growing demand for smoke-free buildings in the

private market suggests that this might not be a significant problem. Providing a longer phase-in period for Section 8 housing would help address the problem.

What is morally offensive to some about smoking restrictions in public housing is that they affect only the poorest persons. Indeed, laws that disproportionately burden the most vulnerable segments of the population require strong justification. It should be recognized that public housing and other government benefit programs already impose many restrictions on the personal liberty of recipients (in the context of their use of the government benefits) that nonrecipients do not have to bear: for example, Women, Infants, and Children (WIC) vouchers cannot be used to purchase certain unhealthful foods, and public-housing tenants must abide by "house rules" that may be more restrictive than those contained in private leases. A smoking ban is harsher than these restrictions because the prohibited conduct cannot easily be avoided by tenants who are addicted to nicotine, but this problem is mitigated somewhat by the availability of other forms of nicotine, which permit smoke-free maintenance and treatment of the addiction.

Although it would burden a vulnerable population, a smoking ban in public housing would also promote social justice for this tenant group. Tobacco marketing and availability tend to be especially dense in low-income communities,⁶⁹ and Americans living below the federal poverty level are 1.6 times as likely to smoke as are persons at or above this level.⁷⁰ A permissive smoking policy perpetuates such disparities and also increases the tobacco-smoke exposure of non-smokers in public housing, a group that has few alternative housing options available. No-smoking policies also advance social justice for children in public housing by addressing one aspect of their social disadvantage.⁶⁹

It is critical that no-smoking policies be accompanied by the provision of evidence-based smoking-cessation resources to public-housing residents, particularly since most state Medicaid programs currently do not cover comprehensive tobacco-dependence treatments.⁷¹ In addition, ethical concerns can be minimized by prohibiting the act of smoking on the premises rather than prohibiting the occupation of public-housing units by people who smoke. Such a policy would also maximize incentives for smoking

cessation, since people who smoke would not be required to move out unless they continued to smoke at home.

CONCLUSIONS

The use of federal regulatory or contractual mechanisms to ensure that PHAs implement no-smoking policies in public housing raises ethical concerns and practical challenges; however, it is justified in light of the harms resulting from exposure to tobacco smoke, the lack of other avenues of legal redress for nonsmoking residents of public housing, and the languid pace at which PHAs have voluntarily implemented no-smoking policies. The same legal, practical, and health issues that have driven successful efforts to make workplaces, private vehicles, and private housing smoke-free militate in favor of extending similar protection to the vulnerable public-housing population.

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1. A portrait of public housing residents. Washington, DC: Council of Large Public Housing Authorities, 2004. (Accessed May 28, 2010, at <http://www.clpha.org/page.cfm?pageID=126>.)
2. Department of Housing and Urban Development. Current statistics, 2010. (Accessed May 28, 2010, at <https://pic.hud.gov/pic/RCRPublic/rcrmain.asp>.)
3. Smoke-free Environments Law Project. Housing authorities/commissions which have adopted smoke-free policies. April 2010. (Accessed May 28, 2010, at <http://www.tcsg.org/sfelp/SFHousingAuthorities.pdf>.)
4. Department of Housing and Urban Development, Office of Public and Indian Housing. Non-smoking policies in public housing. July 17, 2009 (memorandum). (Accessed May 28, 2010, at <http://www.hud.gov/offices/pih/publications/notices/09/pih2009-21.pdf>.)
5. Office of the Surgeon General. The health consequences of involuntary tobacco smoke: a report of the Surgeon General. Washington, DC: Department of Health and Human Services, 2006.

6. Institute of Medicine, Committee on Secondhand Smoke Exposure and Acute Coronary Events. Secondhand smoke exposure and cardiovascular effects: making sense of the evidence. Washington, DC: National Academies Press, 2010.
7. Otsuka R, Watanabe H, Hirata K, et al. Acute effects of passive smoking on the coronary circulation in healthy young adults. *JAMA* 2001;286:436-41.
8. Office of the Surgeon General. The Surgeon General's call to action to promote healthy homes. Washington, DC: Department of Health and Human Services, 2009.
9. Public Health Service, Office of the Surgeon General. Children and secondhand smoke exposure: excerpts from The Health Consequences of Involuntary Exposure to Tobacco Smoke: a report of the Surgeon General. 2007. (Accessed May 28, 2010, at <http://www.surgeongeneral.gov/library/smokeexposure/report/fullreport.pdf>.)
10. Spengler JD. Building operations and ETS exposure. *Environ Health Perspect* 1999;107:Suppl 2:313-7.
11. Kraev TA, Adamkiewicz S, Hammond SK, Spengler JD. Indoor concentrations of nicotine in low-income, multi-unit housing: associations with smoking behaviors and housing characteristics. *Tob Control* 2009;18:438-44.
12. Singer BC, Hodgson AT, Nazaroff WW. Gas-phase organics in environmental tobacco smoke: 2. Exposure-relevant emission factors and indirect exposures from habitual smoking. *Atmos Environ* 2003;37:5551-61.
13. Matt GE, Quintana PJ, Hovell MF, et al. Households contaminated by environmental tobacco smoke: sources of infant exposures. *Tob Control* 2004;13:29-37.
14. Whitehead T, Metayer C, Ward MH, et al. Is house-dust nicotine a good surrogate for household smoking? *Am J Epidemiol* 2009;169:1113-23.
15. Winickoff JP, Friebely J, Tanski SE, et al. Beliefs about the health effects of "thirdhand" smoke and home smoking bans. *Pediatrics* 2009;123(1):e74-e79.
16. Singer BC, Hodgson AT, Guevarra KS, Hawley EL, Nazaroff WW. Gas-phase organics in environmental tobacco smoke. 1. Effects of smoking rate, ventilation, and furnishing level on emission factors. *Environ Sci Technol* 2002;36:846-53.
17. Weschler CJ, Nazaroff WW. Semivolatile organic compounds in indoor environments. *Atmos Environ* 2008;42:9018-40.
18. Hecht SS, Carmella SG, Le KA, et al. 4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanol and its glucuronides in the urine of infants exposed to environmental tobacco smoke. *Cancer Epidemiol Biomarkers Prev* 2006;15:988-92.
19. Department of Housing and Urban Development. Multi-family tenant characteristics system. 2010. (Accessed May 28, 2010, at <https://pic.hud.gov/pic/RCRPublic/rcrmain.asp>.)
20. Epstein JA, Williams C, Botvin GJ, Diaz T, Ifill-Williams M. Psychosocial predictors of cigarette smoking among adolescents living in public housing developments. *Tob Control* 1999;8:45-52.
21. Hill SC, Liang L. Smoking in the home and children's health. *Tob Control* 2008;17:32-7.
22. Johansson A, Hermansson G, Ludvigsson J. How should parents protect their children from environmental tobacco-smoke exposure in the home? *Pediatrics* 2004;113(4):e291-e295.
23. Blackburn C, Spencer N, Bonas S, Coe C, Dolan A, Moy R. Effect of strategies to reduce exposure of infants to environmental tobacco smoke in the home: cross sectional survey. *BMJ* 2003;327:257.
24. Leung GM, Ho LM, Lam TH. Secondhand smoke exposure, smoking hygiene, and hospitalization in the first 18 months of life. *Arch Pediatr Adolesc Med* 2004;158:687-93.
25. Gilpin EA, Messer K, Pierce JP. Population effectiveness of pharmaceutical aids for smoking cessation: what is associated with increased success? *Nicotine Tob Res* 2006;8:661-9.
26. Pizacani BA, Martin DP, Stark MJ, Koepsell TD, Thompson B, Diehr P. Household smoking bans: which households have them and do they work? *Prev Med* 2003;36:99-107.

27. Siahpush M, Borland R, Scollo M. Factors associated with smoking cessation in a national sample of Australians. *Nicotine Tob Res* 2003;5:597-602.
28. Gilpin EA, White MM, Farkas AJ, Pierce JP. Home smoking restrictions: which smokers have them and how they are associated with smoking behavior. *Nicotine Tob Res* 1999;1:153-62.
29. Ditte JW, Coraggio JT, Herzog TA. Associations between parental smoking restrictions and adolescent smoking. *Nicotine Tob Res* 2008;10:975-83.
30. Pizacani BA, Martin DP, Stark MJ, Koepsell TD, Thompson B, Diehr P. Longitudinal study of household smoking ban adoption among households with at least one smoker: associated factors, barriers, and smoker support. *Nicotine Tob Res* 2008;10:533-40.
31. Farkas AJ, Gilpin EA, White MM, Pierce JP. Association between household and workplace smoking restrictions and adolescent smoking. *JAMA* 2000;284:717-22.
32. Proescholdbell RJ, Chassin L, MacKinnon DP. Home smoking restrictions and adolescent smoking. *Nicotine Tob Res* 2000;2:159-67.
33. Szabo E, White V, Hayman J. Can home smoking restrictions influence adolescents' smoking behaviors if their parents and friends smoke? *Addict Behav* 2006;31:2298-303.
34. Wakefield MA, Chaloupka FJ, Kaufman NJ, Orleans CT, Barker DC, Ruel EE. Effect of restrictions on smoking at home, at school, and in public places on teenage smoking: cross sectional study. *BMJ* 2000;321:333-7. [Erratum, *BMJ* 2000;31:623.]
35. Aligne CA, Stoddard JJ. Tobacco and children: an economic evaluation of the medical effects of parental smoking. *Arch Pediatr Adolesc Med* 1997;151:648-53.
36. Hennrikus D, Pentel PR, Sandell SD. Preferences and practices among renters regarding smoking restrictions in apartment buildings. *Tob Control* 2003;12:189-94.
37. Busk C. Smoke alarm: no-smoking policy means renters can breathe easy in South Loop high-rise. *Chicago Sun-Times*. April 26, 2009:E1.
38. Koch W. Neighbor tenants tangle over tobacco. *USA Today*. October 3, 2007:3A.
39. Semrad S. A new arena in the fight over smoking: the home. *New York Times*. November 5, 2007:A18.
40. Garcia C. Ban stamps out smoking in city Aug. 1. *Augusta Chronicle*. July 22, 2008:A01.
41. Urie H. County housing may ban smoking. *Boulder Daily Camera*. March 20, 2008. (Accessed May 28, 2010, at http://www.dailycamera.com/ci_13138985?IADID=Search-www.dailycamera.com-www.dailycamera.com#axzzOniwgbfod.)
42. Larson J. Smoking ban in rental housing examined. *Tacoma Weekly*. (Accessed May 28, 2010, at <http://www.tacomaweekly.com/article/2942>.)
43. Cooper K. Public smoking may be snuffed. *Wyoming Tribune-Eagle* (Cheyenne). May 8, 2006:A1.
44. Utah Code Ann. § 78B-6-1101(3) (1997).
45. McDonald J. Smoke-free effort is homing in on apartments, condominiums. *San Diego Union Tribune*. February 9, 2009:A1.
46. Schneider P. Housing authority mulls smoking ban for new Allied Drive Apartments. *Capital Times* (Madison, WI). March 9, 2009. (Accessed May 28, 2010 at <http://www.madison.com/tct/news/stories/442223>.)
47. Coalition for Equal Rights, Inc. v. Owens, 458 F. Supp. 2d 1251 (D. Colo. 2006).
48. Beatie v. City of New York, 123 F.3d 707 (2d Cir. 1997).
49. Grusendorf v. City of Oklahoma City, 816 F.2d 539 (10th Cir. 1987).
50. City of North Miami v. Kurtz, 653 So.2d 1025 (Fla. 1995).
51. Brashear v. Simms, 138 F. Supp. 2d 693 (D. Md. 2001).
52. Walker SY. Letter to James A. Bergman re: no smoking policies at HUD assisted housing developments. July 18, 2003. (Accessed May 28, 2010 at http://www.tcsg.org/images/HUD_01.jpg; and http://www.tcsg.org/images/HUD_02.jpg.)
53. Schoenmarklin S. Infiltration of secondhand smoke into condominiums, apartments and other multi-unit dwellings. April 2004. (Accessed May 28, 2010, at <http://www.wmitchell.edu/tobaccolaw/resources/SchoenmarklinWeb.pdf>.)
54. Gronewold SJ. Letter to Warren H. Ortland re: interpretation of implementation of smoke-free policies for housing subsidized by the Department of Housing and Urban Development in Minnesota, August 1, 2007. (Accessed May 28, 2010, at http://www.alamm.org/smokefreehousing/Minneapolis_HUD_Letter1.pdf.)
55. Live Smoke Free. Restoring a smoke-damaged apartment. 2009. (Accessed May 28, 2010, at http://www.mnsmokefreehousing.org/documents/Restoring_apartment.pdf.)
56. Smoke-Free Housing Coalition of Maine. How much does secondhand smoke cost a landlord? Sanford Housing Authority case study, 2004–2005 (presentation). (Accessed May 28, 2010, at http://www.smokefreeforme.org/presentation/maintenance_cost.pdf.)
57. Dep't Hous. & Urban Dev. v. Rucker, 535 U.S. 125 (2002).
58. Department of Housing and Urban Development. Tenancy addendum: Section 8 project-based voucher program. (Accessed May 28, 2010, at <http://www.hud.gov/offices/adm/hudclips/forms/files/52530c.pdf>.)
59. American Society of Heating, Refrigerating and Air-Conditioning Engineers. Environmental tobacco smoke: position document approved by ASHRAE Board of Directors. June 2005. (Accessed May 28, 2010, at http://www.ashrae.org/doclib/20058211239_347.pdf.)
60. Jarvie JA, Malone RE. Children's secondhand smoke exposure in private homes and cars: an ethical analysis. *Am J Public Health* 2008;98:2140-5.
61. Strande MF. Smoke-free multi-unit housing: is it right for you? *October* 2007. (Accessed May 28, 2010, at http://www.law.umaryland.edu/programs/tobacco/documents/Smoke-Free_Multi-Unit_Housing.pps.)
62. Donnelley v. Cohasset Hous. Auth., 16 Mass. L. Rep. 318 (Mass. Super. Ct. 2003).
63. Smoke-Free Environments Law Project. The federal Fair Housing Act and the protection of persons who are disabled by secondhand smoke in most private and public housing. September 2002. (Accessed May 28, 2010, at http://www.tcsg.org/sfelp/fha_01.pdf.)
64. Schoenmarklin S. Analysis of the authority of Housing Authorities and Section 8 multiunit housing owners to adopt smoke-free policies in their residential units. May 2005. (Accessed May 28, 2010, at http://www.tcsg.org/sfelp/public_housing24E577.pdf.)
65. Department of Justice, Office of the Attorney General. Non-discrimination on the basis of disability in state and local government services, 28 C.F.R. 35 (1992).
66. Physical condition standards for HUD housing that is decent, safe, sanitary and in good repair, 24 C.F.R. 5.703 (1998).
67. Department of Housing and Urban Development. HUD's fiscal year (FY) 2009 notice of funding availability (NOFA) for the Capital Fund Recovery Competition grants: revised to incorporate changes, corrections, and clarifications. June 3, 2009. (Accessed May 28, 2010, at <http://www.hud.gov/offices/pih/programs/ph/capfund/ocir/recoverynofa.pdf>.)
68. Mello MM, Rosenthal MB. Wellness programs and lifestyle discrimination — the legal limits. *N Engl J Med* 2008;359:192-9.
69. Laws MB, Whitman J, Bowser D, Krech L. Tobacco availability and point of sale marketing in demographically contrasting districts of Massachusetts. *Tob Control* 2002;11:Suppl 2:ii71-ii73.
70. Cigarette smoking among adults and trends in smoking cessation — United States, 2008. *MMWR Morb Mortal Wkly Rep* 2009;58:1227-32.
71. State Medicaid coverage for tobacco-dependence treatments — United States, 2007. *MMWR Morb Mortal Wkly Rep* 2009;58:1199-204.

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