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Tobacco use policy in military housing

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INTRODUCTION

Secondhand smoke is known to pose health hazards; those exposed to it have higher risks of cardiovascular disease.¹ Although the science is less well-developed for third-hand smoke (e.g., smoke residues found on walls, floors, clothing and upholstery after active smoking has ceased), it appears likely that significant exposures from this source may also be hazardous.² In response, some landlords have established smokefree policies for their housing units, and some cities have established such policies for all multi-unit housing within their jurisdictions.³

The military is in effect the largest landlord in the U.S., with control over approximately 630,000 units of housing, including about 134,000 family units, and barracks space (for single enlisted personnel) for 500,000, with locations in all 50 states, as well as in numerous countries around the world. Military personnel who live in such housing frequently have little or no control over whether to stay there. Junior enlisted personnel are required to live in barracks; some installations are located in remote areas where other housing is not available, and others may be located in regions where housing costs are too high for many military personnel to afford. To determine whether personnel living in military housing are protected from second-hand and third-hand smoke exposure, we conducted a review of military policies relating to smoking in military housing.

METHODS

We reviewed the service-level tobacco control policies of the Army, the Air Force, and the Navy and Marine Corps (which share a policy) for references to housing, including family housing, housing for single personnel, temporary housing (lodging; hotels), and other situations requiring long-term residence, such as on submarines or surface ships. These

policies are: Air Force Instruction 40-102, *Tobacco Use in the Air Force*, 26 March 2012; Army Regulation 600-63, *Army Health Promotion*, 07 May 2007; and Secretary of the Navy Instruction 5100.13E, *Navy and Marine Corps Tobacco Policy*, 31 July 2008.

RESULTS

Findings are summarized in the Table.

Overall, the general principle in military policy appears to be that smoking is not allowed in housing units that share a ventilation system with other units. However, there are exceptions to this rule, for example, in the Air Force, where smoking can be allowed in designated rooms unless the installation commander determines otherwise. Overall, family housing, lodging/hotels, and submarines are the best protected spaces. This means that young enlisted personnel (who are likelier to be single) are the least well-protected by these policies. However, it should also be noted that the family housing rules of all the services leave the families of smokers unprotected from second- and third-hand smoke exposure. In addition, if a smoker occupies living quarters where smoking is permitted, subsequent, non-smoking occupants may be exposed to third-hand smoke residues; the health implications of such exposure remain understudied.

DISCUSSION

Policies covering most family housing and all housing for single enlisted personnel fail to fully protect residents from second or third-hand smoke. Most policies constitute a “floor”, allowing commanding officers to require stronger policies if they deem it necessary; however, some policies also allow commanding officers to allow smoking in areas where it would otherwise be prohibited. How often this happens is unknown.

The Army (see Table note a) and Navy/Marine Corps (see Table notes f and g) policies rely on an outdated American Society of Heating, Refrigeration, and Air-Conditioning Engineers standard that suggests that ventilation can be an effective solution to pollution caused by indoor smoking. Current ASHRAE policy specifies that although ventilation may mitigate *odors* stemming from indoor smoking, it is inadequate from a health and safety perspective.⁴

Smoke-free housing confers multiple benefits, including cost savings of an average of \$820 in cleaning costs when the unit is vacated and reoccupied.⁵ Prohibiting smoking in family quarters also has substantial health benefits to children, including reducing exposure to lead⁶ and Sudden Infant Death Syndrome.⁷ Most municipal policies are restricted to multiunit housing; however, landlords frequently impose their own restrictions for cost-saving reasons and from personal preference. Such policies, whether private or governmental, are generally well-accepted; indeed, as many as 83% of U.S. homes have a smokefree rule, including 46% of homes with smokers,⁸ suggesting that smokefree indoor air, even in private residences, is increasingly the norm in civilian life.

CONCLUSION

The military has a special relationship to its “tenants”; the health of military personnel is of primary importance to its mission, and poor health among military families contributes to its health care costs. A strong, consistent smokefree housing policy would save money, protect the health of personnel and their families, and contribute to the ultimate goal of a tobacco-free military by further denormalizing tobacco use. Tobacco control policy is currently under review at the Department of Defense, at the instigation of Secretary of Defense Chuck Hagel. This review should address the current gaps in protection from second- and third-hand smoke exposure for military personnel and their families, eliminate exceptions, and recommend a consistent policy of tobacco free living quarters.

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References

1. 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.
2. Martins-Green M, Adhami N, Frankos M, et al. Cigarette smoke toxins deposited on surfaces: implications for human health. PLoS One. 2014; 9(1):e86391. [PubMed: 24489722]
3. Satterlund TD, Treiber J, Cassady D. Navigating local smoke-free multi-unit housing policy adoption. J Drug Educ. 2013; 43(1):33–47. [PubMed: 24855882]
4. Samet, JM.; Bohanon, HR.; Coultas, DB., et al. ASHRAE Position Document on Environmental Tobacco Smoke. Jul 28. 2014 https://www.ashrae.org/File%20Library/docLib/About%20Us/PositionDocuments/ASHRAE_PD_Environmental_Tobacco_Smoke_2013.pdf
5. King BA, Peck RM, Babb SD. Cost Savings Associated with Prohibiting Smoking in U.S. Subsidized Housing. Am J Prev Med. 44(6):631–634. [PubMed: 23683981]
6. Apostolou A, Garcia-Esquinas E, Fadrowski JJ, McLain P, Weaver VM, Navas-Acien A. Secondhand tobacco smoke: a source of lead exposure in US children and adolescents. Am J Public Health. Apr; 2012 102(4):714–722. [PubMed: 21852639]
7. Behm I, Kabir Z, Connolly GN, Alpert HR. Increasing prevalence of smoke-free homes and decreasing rates of sudden infant death syndrome in the United States: an ecological association study. Tob Control. Jan; 2012 21(1):6–11. [PubMed: 21474502]
8. King BA, Patel R, Babb SD. Prevalence of smokefree home rules - United States, 1992–1993 and 2010–2011. MMWR Morb Mortal Wkly Rep. Sep 5; 2014 63(35):765–769. [PubMed: 25188494]

Table 1

Tobacco control policy in military housing

	Army	Air Force	Navy/Marine Corps
Family Housing with shared air ventilation system	X (<i>O^d</i>)	X	X
Family Housing <i>without</i> shared air ventilation system	O	O (<i>X^c</i>)	O
Unaccompanied housing (UH)/Bachelor's Quarters (BQ) with shared air ventilation system	X (<i>O^d</i>)	O (<i>X^d</i>)	X
Unaccompanied housing (UH)/Bachelor's Quarters (BQ) <i>without</i> shared air ventilation system	O	O	O (<i>X^e</i>)
Two or more individuals in one room	O^b	n/a	n/a
Lodging, Hotels, or recreational facilities with shared ventilation system	n/a	X	X
Lodging, Hotels, or recreational facilities <i>without</i> shared ventilation system	n/a	X	X (<i>O^f</i>)
Surface Ships	n/a	n/a	O (<i>X^g</i>)
Submarines	n/a	n/a	X
Common areas of all housing/lodging facilities	X	X	X

O: Tobacco use Permitted (exceptions noted in parentheses)

X: Tobacco-use Prohibited (exceptions noted in parentheses)

n/a: not mentioned in policy

^a“Smoking will be allowed in quarters with common HVAC [heating, ventilation and air conditioning] systems only if an air quality survey can establish that the indoor air quality protects nonsmokers from environmental tobacco smoke. The American Society of Heating, Refrigeration, and Air Conditioning Engineers have established that 20 cubic feet per minute per person of outside fresh air is required. The carbon dioxide level should not exceed 1000 parts per million.” Army Regulation 600-63, *Army Health Promotion*, 07 May 2007.

^b“When individual living quarters are not required or are not available, and two or more individuals are assigned to one room, smoking preferences will be a determining factor during the assignment of rooms. The installation commander will provide affirmative procedures to reassign nonsmokers to living space that is not occupied by a smoker and if necessary, reassign smokers to living space where they may smoke without inflicting harm or inconveniencing those who do not smoke.” Army Regulation 600-63, *Army Health Promotion*, 07 May 2007.

^c“For family housing units with separate air-handling units, if STS [secondhand tobacco smoke] seeps from a smoking unit to a non-smoking unit, the Installation Commander is authorized to designate the involved units as smoke-free, but other forms of tobacco not including smoking would continue to be permitted.” Air Force Instruction 40-102, *Tobacco Use in the Air Force*, 26 March 2012.

^d“Tobacco use is authorized in UH designated smoking rooms; however, Installation Commanders have the authority to designate the entire UH facility as non-smoking in order to minimize the health risks from tobacco use and STS, and promote a culture of health and wellness. If UH facilities are designated as non-smoking, smoking shall occur outside the facility in a [designated tobacco-use area]” Air Force Instruction 40-102, *Tobacco Use in the Air Force*, 26 March 2012.

^e“If tobacco use areas are designated in housing units, Commanding Officers (COs) must designate sufficient tobacco-free quarters for tobacco-free Service members to prevent involuntary exposure to ETS [environmental tobacco smoke] and residue.” Secretary of the Navy Instruction 5100.13E, *Navy and Marine Corps Tobacco Policy*, 31 July 2008.

^f“Where HVAC is separate, tobacco use is prohibited unless explicitly authorized by the CO, after consideration of base environmental engineer recommendations following a review of base the ventilation systems plans and site. ... Indoor designated tobacco-use areas ... must exhaust directly to the outside (away from air intakes) and maintained at a negative pressure sufficient to contain tobacco smoke in designated areas.” Secretary of the Navy Instruction 5100.13E, *Navy and Marine Corps Tobacco Policy*, 31 July 2008.

^g“As safety and operational requirements permit, COs may designate one or more weather deck spaces of surface ships as tobacco use areas. If weather deck spaces are not available due to ship configuration or operational considerations, the CO may designate one or more normally unmanned spaces within the skin of the ship as tobacco use areas, provided the spaces are designed to vent directly to the outside atmosphere.” Secretary of the Navy Instruction 5100.13E, *Navy and Marine Corps Tobacco Policy*, 31 July 2008.