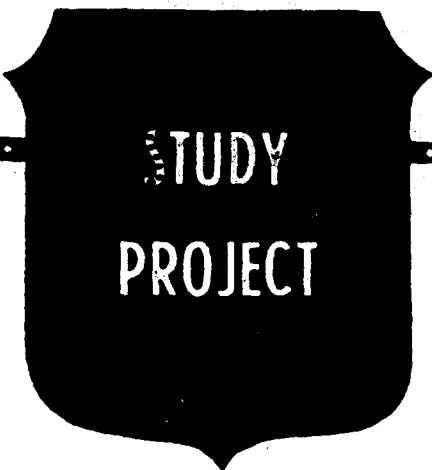
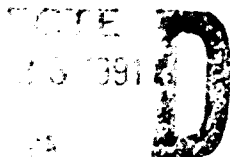


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SMOKING AND THE U.S. ARMY

BY

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U.S. Department of State

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SMOKING AND THE U.S. ARMY

by

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Abstract

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Smoking and related health problems have been given high attention since 1964 when the Surgeon General linked smoking with lung cancer. Evidence has been published proving that both smoking and passive smoking cause an extraordinary number of deaths from cancer, heart disease and other illnesses. This paper summarizes evidence and concerns associated with the smoking problem. It addresses the effects of smoking and examines Army smoking policy and programs. It also explores the effects of passive smoking and describes initiatives taken by some federal and private agencies to protect nonsmokers from the effects of airborne smoke in the work place. Pending federal actions regarding environmental tobacco smoke are outlined. The author concludes with specific recommendations concerning the Army smoking and health program.

Introduction

Early death, debilitating disease, increased health care and insurance costs, lost productivity and absenteeism in the work place; a national death rate equal to "two fully loaded jumbo jets crashing every day, 365 days a year, with no survivors...;"¹ a deadly illness affecting society in epidemic proportions. Smoking: "addiction to tobacco, a powerful force that often negates the best intentions of even the most independent, self-reliant, and self-disciplined of people".² Smoking has afflicted society since the discovery of the new world by early European explorers. It has resulted in massive human suffering and has taken an immeasurable toll on the economic well being of this Nation.

This paper will examine the impact of smoking on our society, concentrating on the U.S. Army. It will summarize current information about the adverse effects of smoking and discuss new evidence that indicates passive smoking is a larger and more grave problem than previously believed. It will outline actions by the Environmental Protection Agency, Occupational Safety and Health Agency, and Office of Management and Budget regarding future federal smoking policy and regulations. The paper will also discuss the impact the new smoking regulations are expected to have on the Army, and draw conclusions about the Army's smoking policy and programs.

Smoking - Its Impact

In 1964 the Surgeon General identified smoking as the single most important cause of preventable mortality.³ Since then, voluminous evidence continues to support the causal relationship between smoking and cancer.⁴ Research confirms that "cigarette smoking is the major cause of lung cancer, the most common cause of cancer death in the United States. Smoking is estimated to account for 87 percent of lung cancer deaths and 30 percent of all cancer deaths."⁵ The Federal Centers for

Disease Control (CDC) reported that in 1988 more than 434,000 Americans died from health problems directly related to smoking⁶.

Other proven health consequences of smoking include coronary heart disease and cardio-vascular diseases. Scientific studies also link smoking with peptic ulcers, cancers of the stomach, kidney, bladder, pancreas, esophagus, mouth and throat, and unsuccessful pregnancies and low birth weights. Children of parents who smoke have an increased frequency of respiratory infections.⁷ Recent studies by the National Institute of Environment Health Sciences show that smoking may damage sperm, resulting in an increased risk of bearing children with brain cancer and leukemia. This study found that women who smoke during pregnancy can contribute to increased incidence of other cancers in their children.⁸ The CDC estimates that about 10 percent of deaths in children under one year of age could be prevented if women did not smoke during pregnancy.⁹

Nonsmokers also die as a direct result of working and living with smokers. There is clear evidence that involuntary or passive smoking -- exposure to environmental tobacco smoke (ETS) in the work place, public places and homes -- causes lung cancer and heart disease in nonsmokers. On December 15, 1990, The Environmental Protection Agency endorsed a draft report which concluded that environmental tobacco smoke is a carcinogen that causes 3,700 lung cancer deaths in nonsmokers each year, making it the third largest cause of lung cancer after smoking and radon.¹⁰ The CDC reported that in 1988, 3,825 cancer deaths were caused by ETS. CDC also estimates that heart-related deaths caused by ETS could increase this figure drastically.¹¹ The latest information comes from the American Heart Association, which reported in January 1991 that University of California-San Francisco research confirmed the link between passive smoke and development of heart disease. Dr. Stanton Glantz, staff member of the Cardiovascular Research Institute at UCSF, reported that his studies show 37,000

people die annually from heart disease contracted from ETS. Overall, he estimated that as many as 53,000 nonsmoking Americans die each year as a direct result of passive smoking. "The findings rank passive smoking as the third-leading cause of preventable death behind active smoking, which kills 400,000 per year, and alcohol, which kills an estimated 100,000."¹²

Other costs of smoking are also high. Health insurance rates and productivity are directly and adversely affected by smoking. Care for people afflicted by smoking-related diseases cause higher health insurance premiums. The Surgeon General estimates that the insurance industry must inflate its group health insurance rates by as much as 20 percent to compensate for the risks of insuring smokers.¹³ A 1987 study estimated that smoking costs American employers and employees billions of dollars annually.¹⁴ Employee time lost on the job due to smoking-related illness also diminishes organizational effectiveness. In 1987, smoking accounted for approximately \$43 billion in lost productivity.¹⁵

The adverse effects of smoking on people and organizations are universal. The military also pays a price. According to former Secretary of the Army, John O. Marsh, Jr., "tobacco usage impairs such critical military skills as night vision, hand-eye coordination, and resistance to cold weather injuries. Moreover, it increases susceptibility to disease. It has become a substantial threat to the well-being of our Army, and we must take immediate steps to eliminate its usage."¹⁶

Who Smokes?

Approximately 29 percent of the adult U.S. population are smokers. Fifty million Americans smoke on a regular basis¹⁷. This means that one in four persons smokes. Surveys and studies show that the highest numbers of smokers are men and women aged 45 to 54 who lack high school education. Younger persons, aged 18 to 24, with high school educations or above, rank second in numbers of smokers¹⁸. The data concerning the U.S. population generally hold true across most

organizations, including the military services. The largest numbers of smokers are found in organizations or disciplines with a prevalence of non-college educated personnel. Figures derived from a 1989 survey of U.S. Army personnel bore this out: 16.2 percent of officers (mostly college graduates) smoked, while 40 percent of enlisted personnel (the majority high school graduates) smoked cigarettes, pipes or cigars.¹⁹ As an example, the high percentage of smokers in the enlisted ranks is supported by data on students enrolled in the U.S. Army Sgt. Major's School at Ft. Bliss, Texas. Of the E-8s and -9s attending this school from July 88 to January 1991, 38.6 percent were cigarette smokers. It is also significant that the number of smokers per class did not decrease over that time period.²⁰

Why Do People Smoke?

Peer pressure: Most of today's smokers started when they were teenagers, or before. Each day more than 2,000 American adolescents try their first cigarette. The majority of them are still in junior high school (12 to 14 years old). Most start primarily due to peer pressure because smoking is one of the things they can do to conform to the norm, to be like their friends and classmates. Associated with this is their desire to look older and more sophisticated. Children of parents who smoke are also more likely to begin smoking. Additionally, a variety of studies link self-esteem issues with smoking, showing a definite relationship between smoking and social and economic status. Studies also show that young people from lower income families are more likely to smoke, while children who do well in school and have a high socio-economic status are less likely to smoke.²¹

Advertising: A major contributor to the reason people begin smoking is the tobacco industry (the industry) -- those who profit from the manufacture and sale of tobacco products. The industry, although prohibited from advertising on television, does advertise in publications, and spends millions of dollars annually sponsoring stock cars, national auto racing and tennis tournaments. They ensure that cigarette

ads appears in prominent places and in forms which are hard to ignore, such as hot air balloons which dominate the scene at sports events which attract young people. In 1985, cigarette advertising and promotion totalled \$2.5 billion, the most heavily advertised product in outdoor media, magazines and newspapers. Since that time cigarette marketing has shifted from traditional print advertising to promotional activities, such as free samples, coupons, and sponsorship of sporting events.²²

Representatives of the tobacco and advertising industries maintain that their advertising efforts are geared only towards promoting brand loyalty and brand switching. Others believe that advertising is designed to recruit new smokers, increase cigarette consumption, discourage quitting and to induce those who have quit to resume smoking.²³

Production and sale of tobacco products is big business. Companies engage in this business for one thing -- to make a profit. To do that they must sell tobacco products. They aggressively target the largest market, young people who may be influenced to start smoking, and attempt to keep the maximum number of people smoking their products.

Addiction to nicotine: Regardless of the reasons people begin to smoke, most find themselves unable to stop due to a physical addiction to nicotine. In 1964, the Surgeon General identified tobacco use as habituating: "A substantial body of evidence accumulated since then, and summarized in the 1988 Surgeon General's Report, has established that cigarettes and other forms of tobacco are addicting. Given the prevalence of smoking, tobacco use is the Nation's most widespread form of drug dependency".²⁴

Nicotine withdrawal symptoms are profound and discourage the strongest willed from quitting smoking. Nicotine stimulates the release of adrenalin, dopamine, and hormones which positively affect the pleasure senses. Stopping smoking causes serious negative changes in a person's nervous system and sense of

well being. Measured in the laboratory, the symptoms of withdrawal include a decrease in heart rate, lack of ability to concentrate, severe irritability, and an overwhelming craving. The Scientific editor of a 1988 surgeon general's report said that "nicotine withdrawal can be compared biologically to withdrawal from cocaine -- except that it is worse."²⁵

Culture: In the Army, other influences come into play: the availability of cheap cigarettes, the example set by leading NCO's, and the military culture itself.

Tobacco products are sold through military commissaries and exchanges. In the case of the commissary system, congressionally-appropriated funds defray overhead and operating costs, resulting in an attractive 25 percent reduction in the price of food, household items, and cigarettes. Although the exchange system does not receive appropriated funds it operates on a self-sustaining basis and produces a 20-25 percent savings in the goods and tobacco products it offers to military purchasers. The bottom line is that active duty and retired U.S. Army personnel can buy tobacco products at a substantially reduced cost at exchanges and commissaries.²⁶

The predominance of military smokers are in the enlisted ranks, with a large proportion in leadership positions. Coupled with the availability of cheap cigarettes and a "fall out, smoke 'em if you got 'em" tradition, the Army environment does not discourage smoking in the ranks.

Programs and Policy

In a December 1988 letter to President George Bush and Speaker of the House, Jim Wright, Secretary of Health and Human Services, Otis R. Bowen, M.D. stated that "to maintain our momentum toward a smoke-free society, we must focus our efforts on preventing smoking initiation and encouraging smoking cessation among high-risk populations. Increased public information activities, smoking prevention and cessation programs, and policies that encourage nonsmoking

behavior should be pursued. Unless we meet this challenge successfully, smoking-related mortality will remain high well into the 21st Century."²⁷

In March 1986, a DoD health promotion directive established military smoking policy. In April 1986, Defense Secretary Weinberger issued a memorandum to the secretaries of the military departments directing an intense DoD-wide anti-smoking campaign to reduce smoking among active-duty personnel to levels significantly below civilian rates. He included the goal of reducing smoking rates by at least 10 percent per year following initiation of the program. He directed that each service conduct periodic surveys to gauge the success of the campaign. An integral part of this program was to associate and coordinate with voluntary and federal agencies, including the American Cancer Society, National Cancer Institute, American Heart Association and various activities under Public Health Services.²⁸

The Army's current smoking policy became effective on July 7, 1986. Under this policy tobacco products are banned during basic training. Their use is restricted during other military training courses, and smoking is limited to designated areas in most facilities. The program emphasizes voluntary cessation through education, and stresses the dangers of tobacco and benefits of quitting. Medical facilities are tasked to query patients about tobacco use, make them aware of the dangers of smoking and advise them of programs available to help them quit. Individuals who wish to quit are offered cessation programs. The Army is also working with the American Cancer Society to provide free cessation clinics to units in Korea and Germany.²⁹

AR 600-63, the current Army Health Promotion Regulation dated December 1987, addresses smoking in chapter 4. It reaffirms the above policy and invokes the following restriction:

" Smoking is prohibited in DA-occupied space, except for designated

smoking areas necessary to avoid undue inconvenience to persons who desire to smoke. Supervisors may designate smoking areas for persons who desire to smoke. Supervisors may designate smoking areas only where they have determined that the secondhand smoke from tobacco usage can be sufficiently isolated to protect nonsmokers from its effects."

Ar 600-63 also gives nonsmokers preference in Army-provided accommodations, bans smoking in all official vehicles, aircraft, auditoriums, conference rooms, classrooms, restrooms, gymnasiums, fitness centers, elevators, child development centers and in all areas where safety is of concern.

When looking at Army smoking policy, an important consideration is that top management went on record against smoking. This, in itself, had an impact on the numbers of smokers in the Army. Within a tight hierarchical organization a number of employees quit or reduced smoking for no other reason than to appear compliant and supportive of organizational policy. When Secretary of Defense Weinberger made the policy announcement regarding smoking in 1986, there was a marked increase in the number of officers and civilians working in the Pentagon who quit smoking or sought assistance through smoking cessation programs.³⁰

Although the subject was reviewed by the Army Staff in 1990, no action has been taken to reduce or eliminate the availability of relatively cheap cigarettes through commissaries and exchanges.³¹

Government Actions

The onus has always been on the employer to provide a work environment that is as safe and healthy as possible. When airborne asbestos was proven to be a health risk, organizations, including the federal government, spent millions of

dollars to remove or contain the threat. When radon or other hazardous materials are found in buildings, the problem must be remedied. The Environmental Protection Agency (EPA) is now in the process of classifying environmental tobacco smoke (ETS) in the same category as asbestos and radon. The EPA's Scientific Advisory Board (SRB) endorsed a draft report on 15 December 1990 which classified ETS as a class A carcinogen, placing it in the most dangerous category, along with asbestos, radon and benzene. The ETS report, with its risk assessment and scientific portion of its work place policy guide, are under final review at the EPA and will be published during the summer of 1991.³²

In a related action, the Occupational Safety and Health Administration (OSHA) is moving toward regulating smoking in the work place. Responding to a legal challenge by "Action on Smoking and Health," an anti-smoking advocacy group, OSHA will issue a "request for information" as their first step to promulgate a federal safety standard similar to the one that regulates exposure to asbestos and radon. To write a federal policy banning smoking in federal buildings and work places, OSHA needs a formal EPA finding declaring that ETS is a class A carcinogen.³³

In addition to these protracted efforts the Office of Management and Budget (OMB), at the request of the Health and Human Services, has solicited comments from all federal agencies and the military services regarding a proposed executive order which will prohibit smoking in federal buildings. Comments on the proposal were due back to OMB by 5 March 1991. The Office of the Assistant Secretary of Defense for Health Promotion and Disease Prevention, has advised OMB that the DoD wishes the uniformed services to be included under the executive order. Once signed by the President this executive order will probably eliminate smoking in DoD buildings where employees must enter in the performance of their duties.³⁴

EPA, OMB and/or OSHA actions regarding ETS will lead to a legislated policy or an executive order designed to protect private sector and federal workers. Even if no such action is taken, once the EPA finding is published, any organization, if challenged, can be found liable in proven cases of illness, disability, or death proved to be attributed to failure to protect its employees from the effects of ETS.

Smoking Bans

It is now proven, without a doubt, that airborne tobacco smoke can cause premature death in nonsmokers. Individual organizations and agencies are recognizing the danger and are taking action. A trend among government and private institutions -- total bans on smoking in buildings and public places -- lends new credibility to smoking cessation campaigns and reflects a concern for the well being of employees. In a prominent action the FAA eliminated smoking on all domestic airline flights. The FAA recognized the risks of passive smoking and believed that the majority of Americans support the right of nonsmokers to breathe smoke-free air. The program's success is attributed to the fact that smoking is becoming increasingly socially unacceptable and that a majority of people favor restrictions or total prohibitions on smoking in public and work places.³⁵

A number of other federal agencies have taken similar actions. In 1986, the Department of Health and Human Services banned smoking in all of its buildings and facilities. The facilities and employees affected include:

- Alcohol Drug Abuse and Mental Health
- Food and Drug Administration
- Health Resources and Services Administration
- Indian Health Services
- National Institutes of Health

Social Security Administration
Centers for Disease Control

In 1987, the Department of Energy's Morgantown Energy Technology Center, the Peace Corps (Washington Office), the Merit System Protection Board, and the National Security Agency followed suit. On January 1, 1991, the Central Intelligence Agency banned smoking in its buildings.³⁶

The effect of smoke on indoor air quality was the driver behind the total bans. These agencies recognized that the only way to control the quality of indoor air is to control the source of pollutants. Smoke, generated by tobacco products, is the primary source of indoor air pollution, even in buildings where smoking is limited to designated areas. James L. Repace, a physicist in the EPA's indoor air program, is an expert on this subject and states that increasing the ventilation in typical buildings will not reduce tobacco smoke to acceptable levels. To achieve the desired effect, ventilation has to be increased to the level of a "virtual windstorm indoors". While it is possible to isolate portions of a building environmentally (separate air systems) it is generally too expensive in existing buildings. Desk top air cleaners and area air filtration systems must process room air many times each hour to be at all effective. Also, desk top and large filters in building environmental systems remove dust and ash particles from the air, but are not effective for gases, which constitute the harmful components of tobacco smoke. The bottom line is that smoking causes indoor air pollution. "The only viable approach is source control: restricting smoking to separately-ventilated smoking areas or banning smoking inside of buildings entirely."³⁷

The Johns Hopkins Medical Institutions did just that. They banned smoking in their 24 buildings as of 1 July 1988. They also documented the results of their effort with scientific evaluations and surveys both before and after the ban. They tracked the effect of their action on air quality by measuring airborne gases. They

also documented employee smoking habits. The ban was preceded by a program to inform employees of the dangers of ETS and need to take action to prohibit indoor smoking. Programs were also established to help employees who wished to quit smoking. The Johns Hopkins experience showed that the implementation of a smoke-free environment dramatically improved indoor air quality, and reduced smoking among employees. In the year following the ban, air quality monitoring showed a one- to two-order of magnitude decrease in nicotine vapor in all buildings. A follow-up employee survey conducted a year after the ban took effect showed a 20.4 percent reduction in the number of employees who smoked.

Johns Hopkins summarizes their experience as follows: "These findings suggest that institutions that have failed to adopt smoke-free environments, citing the probability of failure or of intense resistance, can achieve success in markedly reducing visible and active smoking with an organized, strongly sanctioned, implementation program that includes health promotion activities for all employees, supportive activities for smokers, and education for nonsmokers. Exposure to smoke was reduced significantly, which can ultimately be accompanied by a decrement in smoke exposure morbidity in hospital employees."³⁸

A 1985 Gallup Organization nation-wide survey reinforced the idea that a work force will accept an indoor smoking ban. The survey showed that 64 percent of current smokers and 84 percent of nonsmokers believed that smoking was hazardous to the health of nonsmokers in the work place. Even more important, 75 percent of smokers and 87 percent of nonsmokers favored either designated smoking areas or a total prohibition of smoking.³⁹

The public concern appears to be reflected by the U.S. Congress. It is important to note that, as far as can be determined, the tobacco lobby has been unsuccessful in efforts to involve congress in blocking EPA action to raise the hazard classification level of ETS. There is also no evidence that congress has

taken exception to any of the smoking bans already implemented by various government agencies and departments. In face of public desire for the right to clean air, and the evidence of the harmful effects of smoking and smoke, the days of congressional protection of the tobacco industry may be in the past.

The Army

Army management has taken a responsible approach to the problem of smoking in its work force. However, because no starting data or baseline was established when the Army's anti-smoking program began, its effectiveness cannot be exactly quantified. It is probably safe to assume that the number of personnel who have quit smoking at least parallels the national norm, and that the Army has achieved some success each year since 1986. Even so, and in spite of the anti-smoking program, the incidence of smoking in Army enlisted ranks remains well above the national average.

It is clear that federal regulation or public law will eventually be enacted to eliminate smoking in the federal work place, probably before the end of 1991. Smoking will no longer be permitted in any building, shelter or enclosed area where work must be performed or the public must visit. It will then be the legally mandated responsibility of organizations, including the military services, to ensure that employees are not exposed to ETS.

The Army can make the transition easier and smother by beginning now to assess the impact of an indoor smoking ban, determine what needs to be done to pave the way for the ban to be successful, and decide how existing smoking and health programs can support the ban's implementation.

It will be a challenge to implement and enforce an indoor smoking ban. Many smokers will resent what they see as an infringement on their rights. Some will actively resist policy which forces change in their style of conducting daily business. When looking at the reasons which keep people smoking, we can

surmise that people who have smoked the longest -- those most strongly addicted to nicotine -- will be most resistant to new smoking policy. They are the people whose smoking habits have been supported by the culture and life style of the Army. In the case of senior NCO's, for instance, this amounts to fifteen or more years of inexpensive tobacco products, association with a large number of peers who smoke, and an organization that did not aggressively discourage their habit. This same group exerts direct influence over the majority of Army personnel. They write and review subordinate evaluations, set the example for the lower ranks, and are the connection between their subordinates and officers. Changing behavior and gaining compliance within this group will be key to achieving a successful new smoking program.

One of the most difficult groups to deal with in establishing and enforcing indoor smoking bans will be Army leaders. Smokers who are in influential or command positions may be reluctant to adhere to or support an indoor smoking ban. It will be difficult for an officer or senior civilian to accept that he or she must stand outside with the enlisted ranks in order to smoke. Fortunately, the numbers of officers who continue to smoke are growing fewer. Officers, who typically have a higher education level, should more readily see the logic behind a smoking ban. And, as was evidenced in 1986, following Secretary Weinberger's smoking policy announcement, a renewed emphasis on the smoking problem may prompt a significant number within this group to quit smoking rather than to appear unsupportive of company policy.

The group which will offer the least potential resistance to a more restrictive smoking policy are the younger members of the service, especially new recruits. These soldiers are in the forming mode, inclined to follow and obey regulations, and can be influenced to conform to their environment. Although there is little evidence that younger smokers are less addicted to nicotine, because they are

young, their smoking habits may be less ingrained and easier to change. The large number of smokers in this group should be a prime target of an expanded smoking health program.

The Johns Hopkins experience can serve as a model to help increase the potential for a successful Army smoking program and indoor smoking ban. One of the key ingredients in the Johns Hopkins program was a concerted lead-in educational effort. The first step should be an Army-wide education program which builds on existing smoking health programs, and educates both smokers and nonsmokers about the dangers of ETS. The program should begin with an intensive media campaign, including placement of articles and advertisements in periodicals and publications, and a new poster campaign emphasizing the ETS problem. An important element of the program is to make it clear that smoking is killing both smokers *and* nonsmokers, and that the Army intends to aggressively protect all employees from ETS.

The new Army anti-smoking campaign should stress that an important objective of the indoor smoking ban is to encourage people to quit smoking.

The next step will be to declare all business-related buildings and facilities as no smoking areas. This should include office buildings, shelters, shops, labs, technical facilities, warehouses, clubs, indoor recreation areas, and all other areas which employees, uniformed and civilian, regardless of rank or position, might enter in the performance of their duties or while on an Army installation. Quarters having a common environmental system should be included. Only individual quarters or housing with separate environmental systems should be exempt from the ban.

As a part of a new smoking health program, the Army needs to address the availability of inexpensive tobacco products in PX's and commissaries. Removing

the source of cheap cigarettes will help reduce the numbers of service members who smoke.

An integral part of the new Army smoking and health program should be a means to determine its effectiveness, and an audit capability to ensure compliance. It is important for the Army to reduce the number of smokers in its ranks. To measure progress in this direction, cessation programs must have a valid feedback mechanism. This mechanism should begin with a survey of smokers to form an accurate and current baseline. The initial survey should be followed by yearly updates which will show trends and provide a valid basis for program strategy changes. Also, to be successful, indoor smoking bans will require oversight and enforcement at the highest levels. The new Army smoking health regulation must make commanders accountable for the implementation and maintenance of indoor smoking bans and associated smoking health programs.

Conclusions

People who must work in buildings where smoking is permitted are being exposed to harmful airborne substances: *Some will die as a result.*

Smoking is the prime cause of indoor air pollution. All employees in a building served by a single environmental control system will be adversely affected by smoke, even if smokers and nonsmokers are segregated. A number of concerned federal agencies and private organizations have declared a total prohibition on indoor smoking. Experiences of the FAA, other government agencies, and the Johns Hopkins Institution, show that indoor smoking bans are effective and acceptable to the work force. Indoor smoking bans will protect all employees from ETS and can encourage smokers to quit.

The Army will eventually be required to enact a total smoking ban in its facilities. The transition from a work environment where smoking is tolerated in designated areas, to a total ban on indoor smoking, will be a challenge for the Army

at all levels. To ease the transition, and avoid last-minute chaos, the Army needs to begin planning now. With a solid education program in place, an up-front approach to the reasons for implementing an indoor smoking ban, and cessation help available, the impact on the Army can be successfully managed.

An expanded smoking health program, an indoor smoking ban, and elimination of inexpensive tobacco products on installations, will all contribute to the goal of significantly reducing the number of smokers in the ranks. With smoking and ETS causing preventable deaths in the Army family, can any lesser course of action be acceptable?

This paper is dedicated to my father, Elmer J. McManus, who died at the age of 57, from lung cancer attributed to smoking.

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