

# *Evaluation*



# *Report*

OFFICE OF THE INSPECTOR GENERAL

**EVALUATION REPORT ON THE ECONOMIC IMPACT  
OF ALCOHOL MISUSE IN DOD**

**Report No. 97-150**

**June 2, 1997**

**DEPARTMENT OF DEFENSE**

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### **Acronyms**

AAFES  
MWR  
NEXCOM

Army and Air Force Exchange Service  
Morale, Welfare, and Recreation  
Navy Exchange Service Command



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June 2, 1997

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (FORCE  
MANAGEMENT POLICY)  
ASSISTANT SECRETARY OF DEFENSE (HEALTH  
AFFAIRS)

SUBJECT: Evaluation Report on the Economic Impact of Alcohol Misuse in DoD  
(Report No. 97-150)

We are providing this evaluation report for review and comment. We considered management comments on a draft of this report in preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. Therefore, we request that the Assistant Secretary of Defense (Force Management Policy) provide additional comments on unresolved Recommendation 1. and revised Recommendation 2. We request the comments by August 1, 1997.

We appreciate the courtesies extended to the evaluation staff. Questions on the evaluation should be directed to Mr. Michael A. Joseph, Audit Program Director, or Mr. Timothy J. Tonkovic, Audit Project Manager, at (757) 766-2703. See Appendix H for the report distribution. The evaluation team members are listed inside the back cover.

Robert J. Lieberman  
Assistant Inspector General  
for Auditing

## Office of the Inspector General, DoD

Report No. 97-150  
(Project No. 6LF-0050.01)

June 2, 1997

### Economic Impact of Alcohol Misuse in DoD

#### Executive Summary

**Introduction.** Disease attributed to alcoholic beverage misuse is the third leading cause of death in the United States, resulting in more than 100,000 deaths and 1 million years of potential life lost each year. On average, heavy consumption of alcoholic beverages shortens life by about 10 years. During the past 15 years, DoD has made progress in reducing alcoholic beverage misuse among active-duty personnel; however, heavy drinking remains a problem.

**Evaluation Objective.** The primary objective was to evaluate the economic impact of the misuse of alcohol in DoD.

**Evaluation Results.** The military retail system used pricing policies for alcoholic beverages that were inconsistent with DoD policies for a healthy active duty force, which discourage heavy drinking. As a result, in FY 1995, the military retail system generated alcoholic beverage sales of about \$600 million and realized gross profits of about \$164 million. However, DoD costs for health care associated with the detection, rehabilitation, and treatment of active duty, retiree, and dependent personnel with alcohol related diseases and injuries were about \$557 million. The lost productivity costs for active duty personnel hospitalized for alcohol attributable disease was approximately \$13 million for the same period. Non-DoD societal costs for alcohol related incidents attributable to active duty, retiree, and dependent personnel were roughly \$396 million for the same period.

**Summary of Recommendations.** We recommend that the Assistant Secretary of Defense (Force Management Policy) establish a pricing policy that requires alcoholic beverage products sold in continental United States military retail stores to be priced equivalent to the local civilian community. We also recommend establishing overseas alcoholic beverage prices within the range of prices established for continental United States locations.

**Management Comments.** The Executive Director, Morale, Welfare, Recreation and Resale Activities in the Office of the Assistant Secretary of Defense (Force Management Policy), partially concurred with the recommendation to establish a standard pricing policy for alcoholic beverage products sold in military retail system outlets located in the continental United States. He stated that alcoholic beverage prices should be set no lower than 15 percent (including sales tax) below the low price provider in the local retail community. He also stated that overseas alcoholic beverage prices should be set as low as 15 percent below the best local price.

The Assistant Secretary of Defense (Health Affairs) concurred with the finding and recommendations and stated that health care costs and productivity losses caused by the abuse of alcohol represent an unnecessary and unacceptable drain on limited DoD resources. He also stated that pricing alcohol in military retail outlets below those

found in civilian outlets encourages DoD personnel to use and abuse alcohol. See Part I for a summary of management comments and Part III for the complete text of management comments.

**Evaluation Response.** We consider the comments from the Executive Director, Morale, Welfare, Recreation and Resale Activities to be partially responsive to both recommendations. We believe that the establishment of a standard pricing policy on alcoholic beverages will help to equalize the significant variances in price discounts noted during the audit. However, the proposed policy of pricing alcoholic beverages as much as 15 percent (including sales taxes) below the local retail community still encourages consumption which is contrary to DoD health care goals, and may actually increase the discount.

Based on the Executive Director's comments, we revised the recommendation concerning the prices for alcoholic beverage products at overseas locations. The recommendation now provides for alcoholic beverage products sold overseas to be priced competitively with the local commercial market, when overseas prices are lower than prices in the United States. However, as with alcoholic beverage prices in the United States, we believe the proposed 15-percent discount is contrary to DoD health care policies.

We request that the Assistant Secretary of Defense (Force Management Policy) provide comments on the unresolved recommendation and the revised recommendation by August 1, 1997.

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## **Part I - Evaluation Results**

### Evaluation Background

**Risk of Alcohol Misuse.** In 1956, the American Medical Association designated alcoholism as a disease and established criteria to identify alcohol dependency and alcohol abuse. The National Council on Alcoholism and Drug Dependence and the American Society of Addiction Medicine define alcoholism as continuous or periodic impaired control over drinking, preoccupation with alcohol, the consumption of alcohol despite adverse consequences, and distortions in thinking. Alcohol abusers are those who do not meet the alcoholism criteria, but exhibit unacceptable behavior as a result of alcohol consumption.

In 1993, an article in *Alcohol, Health & Research World*, estimated that by 1995, 18.4 million people in the United States ages 18 and older would be alcohol abusers. The article further stated that the cost of alcohol abuse and dependence for 1990 was estimated at \$98.6 billion. Included in the estimate are directly related health care costs; non-health care costs; morbidity costs or the value of reduced or lost productivity due to illness; and mortality costs that are the loss of productive earning years from early death. The mortality risks associated with the misuse of alcoholic beverages are shown in Appendix C.

**Effects of Alcohol Misuse on Society.** Alcohol, when used excessively, is a major risk factor in injury and trauma, and is the third leading cause of death in the United States. Alcohol is widely recognized as a substance that causes congenital birth defects, growth retardation, learning disabilities, and other behavioral disturbances. Alcohol misuse is a contributing factor in about 68 percent of manslaughters; approximately 64 percent of all vehicular accidents; about 50 percent of homicides and serious assaults; as well as a high percentage of burglaries, domestic violence incidents, robberies, sex-related crimes, and suicides.

In the *Seventh Special Report to the U.S. Congress on Alcohol and Health*, January 1990, the Department of Health and Human Services stated that alcohol, more than any other drug, has been linked with a high incidence of aggression and violence.

**Military Retail System Alcoholic Beverage Sales.** During FY 1995, sales from beer, distilled spirits, and wine were about \$600 million. Table 1 shows the alcoholic beverage sales, by military retail system, and the gross profits on those sales.

**Table 1. FY 1995 Alcoholic Beverage Sales**  
(millions)

<u>Retail System</u>	<u>Total Sales</u>	<u>Gross Profit</u>
Army and Air Force Exchange Service	\$ 442	\$ 128
Navy Exchange Service Command	129	30
Marine Corps MWR* Support Activity	<u>29</u>	<u>6</u>
<b>Total</b>	<b>\$ 600</b>	<b>\$ 164</b>

\*MWR - Morale, Welfare, and Recreation

The above figures do not include and the evaluation did not address alcoholic beverage sales by the Service morale, welfare, and recreation (MWR) activities such as bowling alleys, golf courses, and military clubs. The majority of alcoholic beverage sales at those locations are primarily intended for consumption on the premises.

Throughout this report we use the phrase *military retail system* to refer to Army and Air Force Exchange Service (AAFES) class VI stores, and Navy Exchange Service Command (NEXCOM) and Marine Corps MWR Support Activity package stores. Also included in the phrase are shoppettes and AAFES and NEXCOM exchanges selling alcoholic beverages that are not near a class VI or package store. All of the military retail system stores sell alcoholic beverages for consumption off the premises.

## Evaluation Objectives

The primary evaluation objective was to evaluate the economic impact of the misuse of alcohol and use of tobacco in DoD. The objective relating to the impact of tobacco use in DoD was discussed in Inspector General, DoD, Report No. 97-060, "Economic Impact of the Use of Tobacco in DoD," December 31, 1996.

Another announced evaluation objective was to review the adequacy of the management control program applicable to the primary evaluation objective. We did not pursue that objective because the majority of information used in the evaluation was developed and prepared by sources outside DoD and concerned policy decisions rather than control techniques. See Appendix A for a discussion of the evaluation scope and methodology. See Appendix B for a summary of prior coverage related to the evaluation objective. See Appendix D for a summary of articles and reports related to the evaluation objective.

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## Economic Impact of Alcohol Misuse in DoD

The military retail system used pricing policies for alcoholic beverages that were inconsistent with DoD policies for a healthy active duty force. This inconsistency occurred because pricing policies and health care goals were developed independently and because the pricing policies emphasized low cost to military retail system patrons. As a result, in FY 1995, the military retail system generated alcoholic beverage sales of about \$600 million and realized gross profits of about \$164 million. In contrast, DoD costs for health care associated with the detection, rehabilitation, and treatment of active duty, retiree, and dependent personnel with alcohol related diseases and injuries were about \$557 million for the same period. Additional lost productivity costs for active duty personnel during the same period were approximately \$13 million and non-DoD societal costs for alcohol related incidents were roughly \$396 million.

### Criteria

Guidance issued by the Assistant Secretary of Defense (Health Affairs) establishes health promotion policies to improve and maintain military readiness and the quality of life of DoD personnel.

DoD Directive 1010.10, "Health Promotion," March 11, 1986, establishes a health promotion policy within DoD to improve and maintain military readiness and the quality of life of DoD active duty personnel and other DoD beneficiaries. The policy includes alcohol and drug abuse prevention, and smoking cessation and prevention. Specifically, the Directive requires the Services to establish alcohol and drug abuse prevention programs and provide counseling or rehabilitation assistance.

### Pricing Policies for Alcoholic Beverages

Military retail system pricing policies for alcoholic beverages were inconsistent with DoD policies for a healthy active duty force that discourage heavy drinking.

**Retail Pricing Policies.** Pricing policies of the military retail system enabled DoD to sell alcoholic beverages at prices considerably below the commercial retail market. Prices within the military retail system were set below local civilian markets to ensure profitability.

**Army and Air Force Exchange Service Pricing Policy.** Alcoholic beverage products sold in AAFES retail system stores in the continental United States were priced in two ways, depending on the location of the retail outlet. In the 18 states and one county in the state of Maryland with alcohol beverage control boards (see Appendix E), prices were set at 10 percent below the state selling price, exclusive of sales taxes. In states without alcohol beverage control boards, local market price surveys were conducted, and AAFES set prices at 5 percent below the lowest local price, exclusive of sales taxes.

**Navy Exchange Service Command.** The NEXCOM Instruction 1700.6D, "Packaged Alcoholic Beverage Sales at Navy Installations," March 15, 1996, requires that price surveys be conducted among local competitors. Based on the results, distilled spirits and wine were to be priced so that patrons could achieve a 10-percent or better savings at all NEXCOM retail system stores, exclusive of sales taxes.

**Marine Corps MWR Support Activity.** Alcoholic beverages in Marine Corps MWR Support Activity retail stores were priced using policies established by the installation Marine Corps exchange, exclusive of sales taxes.

**Overseas.** Alcoholic beverage pricing policies for overseas military retail system stores were based on MWR funding requirements. Consideration was also given to competition with other military retail system or commercial stores in the market area.

**Effect of Taxes on Patron Savings.** In addition to alcoholic beverage pricing policies in the military retail system, varying discounts and exemptions from state alcohol revenue charges resulted in additional patron savings.

**State Alcohol Revenue Charges.** The military retail system received varying discounts, exemptions, or both, from state alcohol revenue charges. The discounts and exemptions enabled it to increase profits, pass additional savings on to its patrons, or both.

State alcohol revenue charges levied on commercial alcoholic beverage stores include administrative fees, license fees, markups, sales taxes, and specific taxes. Conversely, alcohol revenue charges assessed on military retail system stores reflected discounts and/or exemptions from state imposed administrative, licensing, markup, and specific tax fees. For example, markups were often reduced for state alcohol beverage control board sales to military retail system stores. Alcoholic beverage sales made to military retail system stores in the 18 alcohol beverage control board states included a discount that was not provided to other non-military licensed retailers. See Appendix F for an explanation of state alcohol revenue charges and a summary of the charges, per gallon, of distilled spirits; wine; and beer.

In commercial retail stores, sales taxes are an additional cost added to the alcoholic beverage product price at the point of sale to the consumer. The military retail system was exempt from sales taxes and provided the military retail system patron a direct savings on the cost of alcoholic beverages.

## Economic Impact of Alcohol Misuse in DoD

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State sales tax rates often included a percentage of the state tax as a local tax. State and local sales taxes ranged from none in Delaware and four other states to as much as 12 percent in Alabama. In states with high sales tax rates, patron savings could be considerable. For example, the California sales tax rate of 8.5 percent combined with the NEXCOM pricing policy enabled patrons in California to achieve minimum savings of at least 17.1 percent on the purchase of alcoholic beverages. Appendix F shows the state and local sales tax rate, as a percentage, charged by each state.

**Federal Excise Taxes.** Overseas military retail system stores are exempt from federal excise taxes on alcoholic beverages and as a result, additional savings may be passed on to overseas patrons. Federal excise taxes on alcoholic beverages sold in the United States were \$13.50 a gallon for distilled spirits, \$2.50 a gallon for wine, and \$0.58 a gallon for beer. All military retail system stores in the continental United States and commercial stores paid federal excise taxes on alcoholic beverages.

**Patron Savings.** Pricing policies, sales tax exemptions, and the varying amount of other alcohol revenue charge discounts or exemptions, resulted in a significant variance in savings to military retail system patrons in the four geographic areas we visited, and the two overseas locations we contacted.

In a market basket survey conducted in the Virginia Tidewater area, price savings on 21 distilled spirit products sold at AAFES military retail system stores, ranged from 9 percent to 27 percent when compared to state alcohol beverage control board stores. Average savings at NEXCOM retail stores in the Virginia Tidewater area, for the same 21 items, ranged from 6 percent to 27 percent. Additional savings of 4.5 percent resulted because of the exemption from Virginia state sales taxes.

**Market Basket Survey.** We visited nine military retail system stores in Illinois; Montgomery County, Maryland; Virginia; and Washington. Montgomery County, Virginia, and Washington have alcohol beverage control boards. At those locations, we compared individual product prices to the lowest observed price in alcohol beverage control board stores or commercial stores. Table 2 shows examples of individual alcoholic beverage product savings that were available to military retail system store patrons, exclusive of sales taxes. We recognize that alcoholic beverage merchandising, different degrees of commercial competition, and seasonal promotions would probably cause patron savings to vary at different times during the year.

**Table 2. Examples of Alcoholic Beverage Savings, Exclusive of Sales Taxes**

<u>Geographic Area</u>	<u>Alcoholic Beverage Product Name</u>	<u>Lowest Observed Commercial Bottle Price</u>	<u>Lowest Observed AAFES/NEXCOM Bottle Price</u>	<u>Percent Savings</u>
Illinois <sup>1</sup> Montgomery County, Maryland Tidewater Virginia Washington	Tanqueray Gin <sup>2</sup>	\$ 12.99	\$ 12.99	0
	"	13.19	11.95	9
	"	15.90	11.99	25
	"	17.10	15.39	10
Illinois <sup>1</sup> Tidewater, Virginia Washington	Jack Daniels Black <sup>2</sup>	12.99	11.25	13
	"	14.95	10.99	26
	"	15.15	13.99	9
Illinois <sup>1</sup> Montgomery County, Maryland Tidewater, Virginia Washington	Jim Beam Bourbon <sup>3</sup>	14.99	16.99	(13)
	"	18.49	14.65	21
	"	19.45	17.50	10
	"	24.95	22.45	10

<sup>1</sup>Illinois is not an alcohol beverage control board state.  
<sup>2</sup>750 milliliter bottle.  
<sup>3</sup>1.75 liter bottle.

We also obtained alcoholic beverage prices from AAFES locations in Puerto Rico and Germany and compared the prices to those charged by military retail system stores in the continental United States. Because of the sizing differences in alcoholic beverage products at the different locations, we converted the prices to liter bottle equivalents. We recognize that prices vary, depending on the size bottle used to package the product and that our converted prices may not reflect price advantages often associated with larger sizes.

For example, a liter bottle equivalent of Bacardi rum sold for \$10.95 at an AAFES location in New Hampshire, \$4.10 in Puerto Rico, and \$7.75 in Germany. Conversely, a liter bottle equivalent of Chivas Regal scotch sold for \$26.70 in a Virginia NEXCOM retail store, \$19.40 in Puerto Rico, and \$32.75 in Germany.

Appendix A contains a description of the methods used to select the alcoholic beverage products in the market basket survey. Appendix G provides other examples of savings for alcoholic beverages available to military retail system patrons.

### DoD Health Care Policies

The Assistant Secretary of Defense (Health Affairs) develops the health promotion policies within DoD. Health promotion policies are established to improve and maintain military readiness and the quality of life of DoD personnel and other beneficiaries. AAFES, NEXCOM, and the Marine Corps MWR Support Activity pricing policies for alcoholic beverages are developed independent of health promotion policies.

DoD has established clear policies for alcohol and drug abuse prevention. DoD Directive 1010.10 requires that DoD health promotion plans and programs address alcohol and drug abuse, nutrition, physical fitness, smoking prevention and cessation, and stress management. The Directive also requires the Services to establish alcohol and drug abuse prevention programs and to provide counseling or rehabilitation assistance.

**Alcohol Consumption in DoD.** At the direction of the Assistant Secretary of Defense (Health Affairs), the Research Triangle Institute, Raleigh, North Carolina, published six surveys since 1980 that investigated the prevalence of alcohol, illicit drugs, and tobacco use among active duty personnel. The *1995 Department of Defense Survey of Health Related Behaviors Among Military Personnel* (the *Survey*), December 1995, reported that 17 percent of active duty personnel engage in heavy drinking. The *Survey* showed that heavy consumption of alcoholic beverages by active duty personnel is significantly higher (42 percent) than the 12 percent rate for civilians (DoD and non-DoD civilians). Heavy drinking is defined as the consumption of five or more drinks per typical drinking occasion at least once a week. Table 3 shows the prevalence of heavy drinking within the Services and within the civilian population.

**Table 3. Prevalence of Heavy Drinking**  
(in percent)

<u>Sex/Age Group</u>	<u>Active Duty Personnel</u>				<u>Combined DoD</u>	<u>Civilian Population*</u>
	<u>Army</u>	<u>Navy</u>	<u>Marine Corps</u>	<u>Air Force</u>		
<b><u>Males</u></b>						
18-25	28.1	30.4	38.2	17.6	28.5	18.6
26-55	11.9	13.7	13.5	6.9	11.1	8.9
18-55	19.7	20.2	28.8	10.6	18.7	13.1
<b><u>Females</u></b>						
18-25	7.7	10.0	9.0	5.0	7.5	4.9
26-55	2.6	5.4	4.7	1.6	3.0	2.7
18-55	5.1	7.6	7.3	3.1	5.2	3.8
<b><u>Combined</u></b>						
18-25	25.3	27.7	36.9	15.0	25.7	16.8
26-55	10.7	12.9	13.1	6.2	10.2	8.2
18-55	17.7	18.9	27.8	9.4	17.0	12.0

\*Civilian data has been standardized to the U.S.-based DoD data by age, education, marital status, race/ethnicity, and sex. The table shows that after adjusting for sociodemographic differences, active duty personnel overall were significantly more likely to drink heavily than were their civilian counterparts.

**Declines in Alcohol Consumption.** Although active duty personnel continue to have a higher rate of heavy drinking than civilians, their overall consumption of alcohol has decreased. The *Survey* reported that the active duty personnel average daily consumption of alcohol decreased by 44 percent in the last 15 years. Additionally, the number of individuals who abstained from alcohol or who were infrequent drinkers increased from 26 percent in 1980 to 40 percent in 1995.

The *Survey* also reported significant declines in the number of active duty personnel experiencing alcohol-related dependence, productivity losses, and serious consequences for a 12-month period (see Table 4). Signs of alcohol dependence include blackouts, impaired control, and tremors. Productivity losses include being drunk at work, being late for work, and working below normal productivity levels. Serious consequences include an arrest, a fight, an incarceration, or a Uniform Code of Military Justice violation resulting from alcohol abuse.

## Economic Impact of Alcohol Misuse in DoD

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**Table 4. Percentage of Active Duty Personnel Experiencing Alcohol Use Negative Effects from 1980 to 1995**

<u>Alcohol Incident</u>	<u>1980</u>	<u>1995</u>
Alcohol dependence	8	6
Lost productivity	27	16
Serious consequence	17	8

The *Survey* showed no significant decline in the rate of heavy drinking between 1980 and 1995 and reported that heavy drinking by male active duty personnel in 1995 was 1.5 times higher than the rate for male civilians. Further, heavy drinking for Navy active duty personnel increased from 13.8 percent in 1992 to 18.8 percent in 1995.

## Economic Costs of Alcohol Use

DoD realized gross profits of about \$164 million from \$600 million in alcoholic beverage sales in FY 1995. DoD health care and lost productivity costs were \$570 million for FY 1995. Other societal costs for alcohol related incidents attributable to active duty, retiree, and dependent personnel that may not be paid by DoD were an additional \$396 million for the same period. Gross profits to the military retail system from the sale of alcoholic beverages were about 17 percent of the health care, lost productivity, and societal costs for FY 1995.

**DoD Health Care Cost.** Personnel from the Air Force 81st Medical Group Clinical Research Laboratory (the Laboratory), Keesler Air Force Base, Mississippi, estimated health care costs for DoD. They applied health care costs and demographic information from the DoD data bases to a computer model developed for the Centers for Disease Control to estimate DoD FY 1995 alcohol related health care costs. A discussion of the demographic information and health care costs that the Laboratory used is in Appendix A.

Personnel from the Laboratory estimated the economic impact of alcohol use for DoD in terms of alcohol-attributable morbidity, excess disability, excess medical care, and mortality. They attributed about \$557 million of direct health care costs to using alcohol. Health care costs attributable to alcohol use include short-stay hospitalization, physicians fees, nursing homes, and other professional services. Table 5 shows the alcohol attributable health care costs for FY 1995.

**Table 5. FY 1995 DoD Health Care Costs  
Attributable to Alcohol Use**

<u>Direct Medical</u>	<u>Amount</u>
Hospitalization*	\$ 524,054,296
Nursing homes	3,093,915
Other	12,190,182
Physician fees	<u>17,392,037</u>
<b>Total</b>	<b>\$ 556,730,430</b>

\*Includes medical rehabilitation costs and operating costs for three Navy alcohol rehabilitation centers that are not funded as part of the Defense Health Program.

The DoD health care population consists of about 8.3 million beneficiaries. The majority of the beneficiaries are active duty personnel and their dependents and retirees and their dependents. Information on the use of alcoholic beverage was not available for retirees and dependents. Therefore, national civilian rates on alcoholic beverage consumption were used to estimate DoD health care costs. Use of the national civilian rates resulted in a lower estimate of the alcohol-attributable health care costs for DoD.

**Lost Productivity Costs.** The estimated lost productivity costs for FY 1995 was \$12.74 million for active duty personnel hospitalized for alcohol-attributable diseases. Personnel at the Laboratory calculated the costs based on the number of active duty personnel receiving inpatient care and the number of inpatient treatment days. We recognize that this estimate is understated because it does not include outpatient alcohol treatment or time off from work before or after inpatient treatment. Also, the estimate does not include the cost of lost productivity for DoD civilians because inpatient care and the number of inpatient treatment days were not available.

**Alcohol Rehabilitation in DoD.** The *Survey* estimated that about 14 percent (36,000) of heavy alcohol users within DoD received prior alcohol treatment. During FY 1995, DoD reported that only 1,464 active duty personnel were discharged for alcohol related problems. Complete DoD alcohol rehabilitation costs were not available because of data reporting differences and incomplete and incompatible cost information.

**Other Alcohol Related Costs.** In addition to health care and lost productivity costs, the Laboratory calculated estimates of societal costs as a result of alcohol related incidents involving DoD personnel for FY 1995. Societal costs consist of non-health care costs, such as costs associated with criminal activities; fire destruction; and motor vehicle accidents. Societal costs for alcohol related incidents attributable to active duty, retiree, and dependent personnel, that may not be paid by DoD, were \$396 million as shown in Table 6.

## Economic Impact of Alcohol Misuse in DoD

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**Table 6. FY 1995 Non-Health Care Costs Related to Alcohol Use**

<u>Event</u>	<u>Amount</u>
Crime expenditures	\$ 159,771,844
Fire destruction	17,176,131
Incarceration	101,515,820
Motor vehicle crashes	97,118,430
Social welfare administration	3,307,439
Victims of crime	<u>17,476,807</u>
<b>Total</b>	<b>\$ 396,366,471</b>

## Conclusion

The DoD policy regarding discounted alcoholic beverages is not consistent with its policy of maintaining a healthy active duty force. The military retail system encourages the sale and use of alcoholic beverages through pricing policies that provide alcoholic beverages at significant savings.

The Research Triangle Institute found, that although there have been declines in overall alcoholic beverage use, heavy drinking by military personnel remains a problem. The number of heavy drinkers is significantly higher among active duty personnel than among civilians. Nearly one in six active duty personnel engages in heavy drinking.

On August 23, 1996, the Assistant Secretary of Defense (Force Management Policy) announced that tobacco products in commissaries would be sold at higher prevailing military exchange outlet prices. The purpose of the price increase was to discourage consumption of tobacco products. Inspector General, DoD, Report No. 97-060, recommended raising tobacco product prices to prevailing commercial retail outlet levels. Although the alcoholic beverage price discounts were not as large as the tobacco discounts, we believe a corresponding price increase for alcoholic beverages would reinforce the DoD commitment to reduce the effects of alcohol misuse on the active duty force and its beneficiary population.

## Recommendations, Management Comments, and Audit Response

**1. We recommend that the Assistant Secretary of Defense (Force Management Policy) establish policy requiring prices for alcoholic beverages sold in military retail system stores in the continental United States to be equivalent to prices in the commercial retail market.**

**Assistant Secretary of Defense (Force Management Policy) Comments.** The Executive Director, Morale, Welfare, Recreation and Resale Activities partially concurred, stating DoD agrees with establishing a standard policy for alcoholic beverage product pricing in military retail system outlets located within the continental United States. He stated that the price in military retail outlets should be set no lower than 15 percent (including sales tax) below the low price provider in the local retail community (exclusive of other local military retail outlets). He also stated that the 15-percent target discount complies with the spirit of the recommendation to avoid drastic price variation and deep discounting of alcoholic products.

**Assistant Secretary of Defense (Health Affairs) Comments.** The Assistant Secretary concurred with the finding and recommendation. He stated that pricing alcohol in military retail outlets at rates below those found in civilian outlets encourages DoD members to use and abuse alcohol. He also stated that the DoD pricing policy is inconsistent with other DoD initiatives which promote a healthy lifestyle and discourage the use of addictive substances.

**Evaluation Response.** We consider the Executive Director's decision to establish a uniform pricing policy to be responsive to the recommendation. However, we disagree with the proposed pricing policy that enables patrons to achieve greater savings than are available under current AAFES and NEXCOM pricing policies. We request that the Executive Director reconsider his position and provide additional comments in his response to the final report. We also request an implementation date for his planned actions.

We recognize that one of the objectives of the military retail system is to maximize profits from the sale of merchandise to authorized patrons. However, we disagree with the Executive Director's position that prices in military retail outlets should be set no lower than 15 percent (including sales tax) below the low price provider in the local retail community (other local military retail facilities excluded). We believe the proposed policy provides the military retail system the opportunity to provide patrons additional discounts on purchases of alcoholic beverage products beyond the discounts intended by the current policy. We also believe that the proposed pricing policy is contrary to DoD health care goals.

Current AAFES and NEXCOM alcoholic beverage pricing policies require that alcoholic beverage product prices be established exclusive of sales taxes. For AAFES, patrons save 10 percent on purchases in alcohol control board states and 5 percent on purchases in non-alcohol control board states. The current NEXCOM policy enables patrons to save 10 percent or more on their purchases.

## Economic Impact of Alcohol Misuse in DoD

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As shown in Appendix G, market basket price surveys on a selected number of popular brands showed that patrons savings often exceeded 10 percent in AAFES and NEXCOM locations.

The proposed pricing policy requires alcoholic beverage product prices to be established, inclusive of sales taxes. Depending on the state, the proposed policy can result in further discounts for the military retail system patron.

We prepared a price comparison of an alcoholic beverage product using a \$10.00 bottle of distilled spirits to illustrate the potential savings available to military retail system patrons in eight states as a result of the proposed policy. We used the eight states because they account for 55 percent of the AAFES distilled spirits sales. NEXCOM distilled spirits sales figures in those states were not available because NEXCOM combines distilled spirits and wine sales. Table 7 shows the additional savings that would be available to military patrons in eight states if prices were established using the full 15 percent pricing policy. The proposed pricing policy would provide an increase in savings in five of the eight states for AAFES and one of the eight states for NEXCOM. Because the current NEXCOM pricing policy requires a discount of at least 10 percent, we used a 10-percent discount factor in calculating the NEXCOM prices.

**Table 7. Effect of Proposed 15 Percent Discount on Alcoholic Beverage Product Prices**

Military Retail System and State	Commercial Retail Price Including Tax	Product Price	
		Current Policy	Proposed Policy
<b>AAFES</b>			
Alabama <sup>1</sup>	\$ 11.20	\$ 9.00	\$ 9.52
California <sup>2</sup>	10.85	9.50	9.22
Florida <sup>2</sup>	10.70	9.50	9.10
Georgia <sup>2</sup>	10.60	9.50	9.01
North Carolina <sup>1</sup>	10.60	9.00	9.01
Texas <sup>2</sup>	10.83	9.50	9.20
Virginia <sup>1</sup>	10.45	9.00	8.88
Washington <sup>1</sup>	10.82	9.00	9.20
<b>NEXCOM</b>			
Alabama <sup>1</sup>	\$ 11.20	\$ 9.00	\$ 9.52
California <sup>2</sup>	10.85	9.00	9.22
Florida <sup>2</sup>	10.70	9.00	9.10
Georgia <sup>2</sup>	10.60	9.00	9.01
North Carolina <sup>1</sup>	10.60	9.00	9.01
Texas <sup>2</sup>	10.83	9.00	9.20
Virginia <sup>1</sup>	10.45	9.00	8.88
Washington <sup>1</sup>	10.82	9.00	9.20

<sup>1</sup>Alcohol control board state  
<sup>2</sup>Non-Alcohol control board state

Accordingly we believe the recommendation is valid and that DoD should not establish an alcoholic beverage pricing policy that is inconsistent with DoD policies for a healthy active duty force.

Using a 10-percent discount target (including sales tax), we recomputed the potential savings available to military retail system patrons using the same \$10.00 bottle of distilled spirits. Table 8 shows that a 10-percent discount instead of a 15-percent discount would raise prices above the level allowed by current pricing policies in all 8 states. However, it would still provide the patron with a savings when compared to commercial locations.

## Economic Impact of Alcohol Misuse in DoD

**Table 8. Effect of 10 Percent Discount  
on Alcoholic Beverage Product Prices**

Military Retail System and State	Commercial Retail Price Including Tax	Product Price	
		Current Policy	Proposed Policy
<u>AAFES</u>			
Alabama <sup>1</sup>	\$ 11.20	\$ 9.00	\$ 10.08
California <sup>2</sup>	10.85	9.50	9.76
Florida <sup>2</sup>	10.70	9.50	9.63
Georgia <sup>2</sup>	10.60	9.50	9.54
North Carolina <sup>1</sup>	10.60	9.00	9.54
Texas <sup>2</sup>	10.83	9.50	9.75
Virginia <sup>1</sup>	10.45	9.00	9.40
Washington <sup>1</sup>	10.82	9.00	9.74
<u>NEXCOM</u>			
Alabama <sup>1</sup>	\$ 11.20	\$ 9.00	\$ 10.08
California <sup>2</sup>	10.85	9.00	9.76
Florida <sup>2</sup>	10.70	9.00	9.63
Georgia <sup>2</sup>	10.60	9.00	9.54
North Carolina <sup>1</sup>	10.60	9.00	9.54
Texas <sup>2</sup>	10.83	9.00	9.75
Virginia <sup>1</sup>	10.45	9.00	9.40
Washington <sup>1</sup>	10.82	9.00	9.74

<sup>1</sup>Alcohol control board state

<sup>2</sup>Non-Alcohol control board state

**Revised Recommendation.** As a result of management comments, we revised draft Recommendation 2., to provide for alcoholic beverages sold overseas to be priced competitively with the local commercial market.

**2. We recommend that the Assistant Secretary of Defense (Force Management Policy) establish policy requiring prices for alcoholic beverages sold in overseas military retail system stores to be within the range of prices established for military retail system stores located in the continental United States, unless comparable alcoholic beverages are sold locally for less.**

**Assistant Secretary of Defense (Force Management Policy) Comments.** The Executive Director, Morale, Welfare, Recreation and Resale Activities partially concurred and stated that some alcoholic products in overseas markets are priced below the levels established in the continental United States. He stated that the military retail system should be able to provide those same products at a cost savings to the patron, if cost-effective. He suggested that overseas military resale outlets set alcoholic beverage product prices as low as 15 percent below the best local price, including all local tax.

**Evaluation Response.** The comments were partially responsive to the intent of the recommendation, and we revised the recommendation to reflect the Executive Director's comments. However, we continue to disagree with the position that prices be set as low as 15 percent below the local market for the same reasons discussed above.

In his response to the final report, we request that the Assistant Secretary provide additional comments on Recommendation 2. We also request an implementation date for his planned actions.

## **Part II - Additional Information**

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## Appendix A. Evaluation Process

### Scope

We obtained and reviewed articles and reports published between 1987 and 1995 that were related to the use of alcohol. Appendix D summarizes the significant articles that relate to the economic and health impact of alcohol use.

We obtained FY 1995 alcohol sales and gross profit information from AAFES, NEXCOM, the Marine Corps MWR Support Activity, and the Services MWR organizations. Information included alcoholic beverage sales from military retail system stores, clubs, and shopettes. We also received information from personal interviews and various research institutes, and obtained limited information from the Services on alcohol rehabilitation programs and alcohol related accidents.

**Evaluation Period and Standards.** This economy and efficiency evaluation was performed from April through December 1996 in accordance with standards implemented by the Inspector General, DoD.

### Methodology

**Use of Computer-Processed Data.** We relied on computer-processed data contained in four DoD data bases. The Defense Medical Information Summary System contains summary level data concerning expense, medical utilization, and work load information as reported by military medical treatment facilities. International Classification of Diseases, 9th Revision (ICD-9) codes and lengths of patient stay were obtained from the Retrospective Case-Mix Analysis System for an Open System Environment. The Retrospective Case-Mix Analysis System is a data base providing information on cost, utilization, and workload.

The Medical Expense Performance Reporting System data base provides monthly expense and workload information for military medical treatment facilities.

The Civilian Health and Medical Program for Uniformed Services pays the health care cost of active duty dependents, retirees under age 65, retirees' dependents, and dependents of deceased active duty personnel when treated by civilian providers. The Civilian Health and Medical Program of the Uniformed Services data base provides claim level information for care provided outside the military medical treatment facilities. We did not validate the four data bases because of the evaluation resources that would have been required to accomplish that effort.

**Alcohol-Related Disease Impact.** Health care cost and demographic information from the DoD data bases were applied to a computerized model developed for the Centers for Disease Control and Prevention. The alcohol-related disease impact (ARDI) model estimates the economic impact of alcohol use on a population.

The ARDI computer software was developed in 1989 by the Park Nicollett Medical Foundation, Minneapolis, Minnesota. It is a nationally accepted method of estimating the economic costs associated with alcohol-related illness and abuse for large segments of a population. Epidemiologists and health economists have estimated the disease impact of alcohol use and abuse for the United States. Their findings indicate that alcohol use is associated with excess morbidity, significant premature mortality throughout the life span, and large decrements in national output and productivity.

The Laboratory used the ARDI computer software model to produce estimates of direct health care costs, indirect mortality costs, morbidity and mortality costs, and years of potential life lost costs associated with alcohol use and misuse. ARDI estimates the number of alcohol related deaths, for persons 35 years old and older, by using formulas based on alcohol attributable risks for certain conditions among current and former drinkers. Mortality risk factors associated with the use of alcohol are listed in Appendix C. The alcohol attributable risk factors from ARDI were also applied to the number of occupied bed days for each alcohol-related ICD-9 code to determine the alcohol attributable length of stay in military medical treatment facilities. We did not consider the effect that premature deaths from the consumption of alcoholic beverages or from a longer living elderly population would have on health care costs.

**Price Comparisons.** In four states, the District of Columbia, and Montgomery County, Maryland, we performed market basket pricing surveys of up to 21 alcoholic beverage products to determine an approximate average percentage of savings available to military retail system patrons. The items represented brand name products listed in a nationwide marketing report and identified by store managers as brand leaders. We performed price surveys at commercial retail stores located near military installations in the Washington, D.C., and northern Chicago, Illinois, area. For the alcohol beverage control board states of New Hampshire, Virginia, and Washington and Montgomery County in the state of Maryland, we obtained current alcoholic beverage price information and compared the prices to military retail system stores.

**Contacts During the Evaluation.** We visited or contacted 40 organizations within DoD. We also visited or contacted six other Government organizations and eight non-Government organizations. Further details are available on request.

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## **Appendix B. Summary of Prior Audits and Other Reviews**

General Accounting Office Report No. HEHS-97-12, "Drug and Alcohol Abuse: Billions Spent Annually for Treatment and Prevention Activities," October 1996, states that the Federal Government provided \$4.4 billion in FY 1994 budget authority for alcohol and illegal substance abuse treatment and prevention activities. The report did not contain recommendations but provided a broad picture of the financial support provided for treatment and prevention activities. The report stated that DoD received a budget authority of \$82.4 million in FY 1994 for prevention activities and \$6.2 million for treatment activities.

Naval Audit Service Report No. 033-96, "Excessive Retention of Alcohol Abusers," April 17, 1996, reported the Navy was not achieving its zero tolerance of alcohol abuse policy objective. In 1995, 2,080 active duty enlisted personnel were treated for inpatient alcohol rehabilitation. Of the 2,080 personnel, 25 percent were repeat offenders. The Naval Audit Service recommended separating alcohol abusers from the Navy after one in-patient rehabilitation and estimated that \$44.6 million in Military Personnel, Navy funds could be put to better use (through FY 1999). Navy management concurred with the recommendations.

## Appendix C. Mortality Risks Attributable to Alcohol Use

Alcohol attributable factors are deaths, disease cases, or injury events that are causally related to alcohol use and misuse.

Alcohol attributable factors are expressed as 100 percent for alcohol defined diagnoses that are alcohol related by definition. For those diagnoses, deaths at any age are attributed to alcohol.

For chronic diseases indirectly attributable to alcohol use and misuse (such as neoplasms and digestive diseases that are not alcohol-defined), alcohol attributable factors are expressed as a percentage for deaths occurring after age 34, assuming that prolonged exposure to alcohol is necessary to produce fatal disease outcomes. For some of the injury fatalities, alcohol attributable factors are applied to ages 15 and older, assuming that problem drinking behavior is rare prior to this age.

### Mortality Ratios Attributable to Alcohol Use

#### Directly Attributable

<u>ICD-9 Code</u>	<u>Diagnoses</u>	<u>Alcohol Attributable Factors</u>	<u>Age Range</u>
291	Alcoholic psychoses	100	15-85+
303	Alcohol dependence syndrome	100	15-85+
305.0	Nondependent use of alcohol	100	15-85+
357.5	Alcoholic polyneuropathy	100	15-85+
425.5	Alcoholic cardiomyopathy	100	15-85+
535.3	Alcoholic gastritis	100	15-85+
571.0	Alcoholic fatty liver	100	15-85+
571.1	Acute alcoholic hepatitis	100	15-85+
571.2	Alcoholic cirrhosis of liver	100	15-85+
571.3	Alcoholic liver damage, unspecified	100	15-85+
790.3	Excessive blood level of alcohol	100	15-85+
E860.0-.1	Accidental poisoning by ethyl alcohol, not specified elsewhere	100	15-85+

## Appendix C. Mortality Risks Attributable to Alcohol Use

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### Mortality Ratios Attributable to Alcohol Use (cont'd)

#### Indirectly Attributable

011-012	Respiratory tuberculosis	25	35-85+
250	Diabetes mellitus	5	35-85+

#### Cardiovascular Diseases

401-404	Essential hypertension	7.6	35-85+
430-438	Cerebrovascular disease	6.5	35-85+
480-487	Pneumonia and influenza	5	35-85+
530-537	Diseases of esophagus, stomach, and duodenum	10	35-85+
571.5	Other cirrhosis		
571.6	Biliary cirrhosis	50	35-85+
577.0	Acute pancreatitis	42	35-85+
577.1	Chronic pancreatitis	60	35-85+

#### Neoplasms

140-149	Lip, oral cavity, pharynx	50M*, 40F*	35-85+
150	Esophagus	75	35-85+
151	Stomach	20	35-85+
155	Liver and intrahepatic bile ducts	15	35-85+
157	Pancreas		
161	Larynx	50M, 40F	35-85+

\*M = Male, \*F = Female

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## Appendix D. Alcohol Articles and Reports

"The Demand for Alcohol: The Differential Response to Price," Willard G. Manning, Linda Blumberg, and Lawrence Moulton, *The Journal of Health Economics*, 1995, Vol. 14. The article discusses the demand response to changes in price, such as an increase in excise taxes, for light, moderate, and heavy alcohol drinkers. The study used data on alcohol consumption in the 1983 National Health Interview Survey. The results indicate that both light and heavy drinkers are much less price elastic than moderate drinkers. The study found that, statistically, the price elasticity for the upper fifth percentile of drinkers was not significantly different from zero. However, the lower end of the heavy consumption spectrum has a price response that is significantly different from zero.

"Trends in Alcohol, Illicit Drug, and Cigarette Use Among U.S. Military Personnel: 1980-1992," Robert M. Bray, Larry A. Kroutil, and Mary Ellen Marsden, *Armed Forces & Society*, Winter 1995, Vol. 21, No. 2. The authors used the Worldwide Surveys on Substance Abuse among Military Personnel to evaluate the trends for 1980 through 1992. The evaluation showed a steady and notable reduction in alcohol consumption and cigarette use, but less of a decline in heavy drinking. Further reductions of smoking and heavy drinking remain the major substance use challenges for the military in the 1990s.

"Preliminary Estimates From the 1994 National Household Survey on Drug Abuse", Advance Report Number 10, September 1995, produced by the Substance Abuse and Mental Health Services Administration Office of Applied Studies. The survey is the primary source of statistical information on the use of illegal drugs in the United States. It is based on a nationally representative sample of the civilian noninstitutionalized population age 12 and older. Each year, the survey produces estimates of the prevalence of use of various substances, including a variety of illicit drugs, alcohol, and tobacco.

"Financial Toll of Substance Abuse Studied," *Modern Healthcare*, February 20, 1995. The article references a study performed by the National Center on Addiction and Substance Abuse at Columbia University, New York. The study found that smoking, drinking and drug addiction will cost the federal government \$77.6 billion in fiscal year 1995, 20 percent of the amount that will be spent on entitlement and welfare programs.

"The Potential Costs and Benefits of Selected Components of Comprehensive School Health Education Programs," Rothman, Ehreth, Palmer, Collins, Reblando, and Luce, for Battelle, April 15, 1994. The study estimated the potential individual and combined costs and benefits of selected components of a comprehensive school health education program. The study cited that the total cost of all alcohol-related motor vehicle accidents in the United States was \$149.3 billion in 1992 dollars.

"The Economic Cost of Alcohol Abuse and Alcohol Dependence: 1990," Dorothy P. Rice, Sc.D. (Hon), *Alcohol Health & Research World*, 1993, Vol. 17. The author estimated the total economic costs of alcohol abuse and

## Appendix D. Alcohol Articles and Reports

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dependence for 1990 at \$98.6 billion, a 40-percent rise during the 5 year period 1985 through 1990. Medical care costs are estimated at \$10.5 billion and account for 10.7 percent of the total alcohol abuse costs in 1990.

"Alcohol-Related Mortality in the U.S. Air Force, 1990," Ronald W. Stout, Michael D. Parkinson, and William H. Wolfe, *American Journal of Preventive Medicine*, 1993, Vol. 9, No. 4. The article contains an explanation of the ARDI program. It states that ARDI is a computer software program used for both national and state estimates of alcohol-related disease impacting the public health sector. The authors used ARDI and applied it to the Air Force active duty population in 1990. The article states that it is likely that ARDI underestimates the true impact of alcohol-related deaths in the Air Force population of active duty personnel because the software uses civilian population estimates that reflect civilian alcohol consumption patterns.

"The Effects of Alcohol and Tobacco Use on Troop Readiness," V. Zadoo, S. Fengler, and M. Catterson, *Military Medicine*, 1993, Vol. 158. The study examined the effects of alcohol and tobacco use on soldier readiness (performance on Army physical fitness test, sick call visits, and time away from duty). The authors concluded that alcohol consumption and cigarette smoking did not have a measurable effect on soldiers sick call or on time away from duty.

"Actual Causes of Death in the United States," J. Michael McGinnis, MD, MPP, William H. Foege, MD, MPH,. *The Journal of the American Medical Association*, November 1993, Vol. 270. The authors identify and quantify the major external (nongenetic) factors that contribute to death in the United States. The misuse of alcohol is the third leading cause of death in the United States, with tobacco and diet and activity patterns as first and second. The authors found that approximately 5 percent of deaths are caused by the misuse of alcohol.

"An Overview of Alcohol Use, Abuse, and Alcoholism," Commander A. J. Eidson, U.S. Navy, *The Industrial College of the Armed Forces*, April 1993. This paper provides a history of alcohol use and abuse, discusses the characteristics of alcohol, and examines the economic costs to American society. The process of abuser identification and treatment programs available in the military and civilian workforce are reviewed.

"The Taxes of Sin - Do Smokers and Drinkers Pay Their Way?", Willard G. Manning, Emmett B. Keeler, Joseph P. Newhouse, Elizabeth M. Sloss, Jeffrey Wasserman, Prepared for The National Center for Health Services Research and Health Care Technology Assessment, March 1989. The article presents the results of a study to determine the external cost of smoking and alcohol consumption. The external costs are the costs that are borne by society. Using information from 1986, the authors determined that the external cost of alcohol consumption (in excess of two drinks per day) is \$1.19 per excess ounce of alcohol consumed. The study showed that smokers pay their way, but drinkers do not.

## Appendix D. Alcohol Articles and Reports

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"Some Thoughts on Health Promotion in the United States Army," Joseph M. Rothberg, Ph.D., prepared for the Inter-University Seminar on Armed Forces and Society Biennial Conference, Chicago, Illinois, October 8-10, 1987. The paper discusses the Army health promotion program called "Fit to Win." The program includes anti-tobacco and alcohol and drug abuse prevention and control components. "Fit to Win" was designed to modify individual behaviors that keep the group from being maximally fit.

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## **Appendix E. List of States With Alcohol Beverage Control Boards**

The National Alcohol Beverage Control Association is the national association representing those jurisdictions that directly control the sale and distribution of alcoholic beverages within their borders. Alcohol beverage control boards govern 18 states and 1 county. In the 18 states and 1 county, distilled spirits sales accounted for nearly 25 percent of all distilled spirit sales in the United States.

Alabama  
Idaho  
Iowa  
Maine  
Michigan  
Mississippi  
Montana  
Montgomery County, Maryland  
New Hampshire  
North Carolina  
Ohio  
Oregon  
Pennsylvania  
Utah  
Vermont  
Virginia  
Washington  
West Virginia  
Wyoming

## Appendix F. Summary of State Alcohol Revenue Charges

*Tax Briefs 1995*, compiled and prepared by the Distilled Spirits Council of the United States, Inc., summarizes state imposed alcohol revenue charges for distilled spirits, wine, and beer. The charges are derived from administrative fees, license fees, markups, sales taxes, and specific taxes.

Administrative fees include revenue from administrative fines and penalties imposed by the states. License fees are charges levied upon businesses that distribute or sell alcoholic beverages at the retail or wholesale level. Markups are the levels of profit desired by the states, and vary depending on the "proof" and type of distilled spirits, wine, or beer that are sold. Sales taxes include local, municipality, and state sales taxes. Specific taxes may include bottle, excise, licensing, purchasing, spirits retail, or surcharge taxes, depending on the state.

The following table shows the state alcohol revenue charges on a "proof gallon" of alcoholic beverage product as of FY 1994. A "100 proof gallon" is a standard United States gallon containing 50 percent ethyl alcohol, by volume. The charges per gallon are for those alcoholic beverage products that are purchased for off premises consumption. The table also summarizes state sales tax rates.

State Imposed Revenues and Sales Taxes

<u>Locality or State</u>	<u>State Revenue Per 100 Proof Gallon*</u>			<u>State and Local Sales Tax (percent)</u>
	<u>Spirits</u>	<u>Wine</u>	<u>Beer</u>	
Alabama	\$ 25.23	\$ 11.49	\$ 15.38	12.0
Alaska	8.76	5.98	5.77	8.0
Arizona	8.10	7.09	5.79	8.5
Arkansas	7.79	6.28	6.03	7.5
California	7.03	3.06	4.88	8.5
Colorado	7.85	4.39	5.22	8.5
Connecticut	9.83	6.11	6.24	6.0
Delaware	6.57	4.67	1.96	None
District of Columbia	11.72	7.97	9.55	8.0
Florida	16.72	17.10	13.56	7.0
Georgia	10.95	12.49	15.50	6.0
Hawaii	18.69	15.31	20.71	4.0
Idaho	19.64	5.37	5.17	7.0
Illinois	9.44	5.87	6.34	9.0
Indiana	6.61	4.51	4.32	5.0
Iowa	17.29	10.62	6.00	6.0
Kansas	11.16	9.41	8.78	7.4
Kentucky	8.76	5.55	5.24	6.0

## Appendix F. Summary of State Alcohol Revenue Charges

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### State Imposed Revenues and Sales Taxes (cont'd)

<u>Locality or State</u>	<u>State Revenue Per 100 Proof Gallon*</u>			<u>State and Local Sales Tax (percent)</u>
	<u>Spirits</u>	<u>Wine</u>	<u>Beer</u>	
Louisiana	5.97	3.33	6.59	9.5
Maine	22.34	8.58	9.30	6.0
Maryland	5.17	4.42	4.08	5.0
Massachusetts	5.83	3.32	2.11	5.0
Michigan	19.68	5.15	5.91	6.0
Minnesota	11.89	6.38	7.14	7.5
Mississippi	17.47	16.05	8.16	7.25
Missouri	6.19	4.23	3.98	7.725
Montana	17.49	5.75	1.89	None
Nebraska	7.91	6.78	6.42	6.5
Nevada	9.76	7.68	8.13	7.0
New Hampshire	12.68	11.77	7.16	None
New Jersey	11.69	7.81	7.49	6.0
New Mexico	11.41	11.12	7.50	6.875
New York	13.98	5.20	8.26	8.5
North Carolina	19.94	7.85	9.04	6.0
North Dakota	8.71	6.66	6.76	2.0
Ohio	18.58	5.38	5.87	7.0
Oklahoma	14.33	10.59	7.06	10.5
Oregon	23.71	3.03	1.17	None
Pennsylvania	21.22	20.83	2.96	7.0
Rhode Island	11.84	9.79	7.98	7.0
South Carolina	15.94	9.06	11.44	6.0
South Dakota	12.29	10.80	9.76	7.0
Tennessee	11.77	10.49	15.26	8.75
Texas	12.93	6.37	7.66	8.25
Utah	24.76	25.98	9.45	7.0
Vermont	20.13	8.62	8.54	None
Virginia	24.20	9.74	6.86	4.5
Washington	29.03	10.53	6.21	8.2
West Virginia	11.60	9.44	5.99	11.0
Wisconsin	7.51	3.88	3.93	5.5
Wyoming	11.38	10.41	4.14	6.0

\*Includes revenue from sales tax collections

## Appendix G. Comparison of Distilled Spirit Prices

We performed market basket price surveys on a selected number of popular brands of alcoholic beverages to determine the approximate savings offered in military retail system stores. At each location, we surveyed up to 21 alcoholic beverage products that represented top selling brands. In some cases, the average savings percentage included special promotional prices that were offered at the time of our survey.

**District of Columbia.** For purposes of this report, the District of Columbia (the District) includes military and commercially operated retail stores located in the District and Maryland. We visited three commercial retail stores in the District, two AAFES stores in the District, and one NEXCOM retail system store in Maryland. Table G-1 shows the average alcoholic beverage savings that we found were available to military patrons compared to the two District locations and the Maryland location.

<u>Commercial Outlet Location*</u>	<u>Fort McNair</u>	<u>Naval Communication Detachment (Cheltenham)</u>	<u>Bolling Air Force Base</u>
District outlet #1	15.0	28.6	24.4
District outlet #2	12.2	26.2	22.0
Maryland outlet #3	(-8.1)	9.2	4.0

\*The District sales tax of 8 percent is included in District outlet 1. and 2. Maryland state sales tax of 5 percent is included in Maryland outlet 3.

**Montgomery County, Maryland.** Sales of distilled spirits in Maryland are not controlled by the state government except in Montgomery County. The Montgomery County alcohol control board determines the price of spirits sold in the county. We visited the NEXCOM retail system store located in Montgomery County and compared prices with those established by the Montgomery County alcohol beverage control board. The average market basket savings for NEXCOM retail system store patrons was 13.5 percent exclusive of sales taxes, and 17.6 percent inclusive of sales taxes.

**New Hampshire, Virginia, and Washington.** In 18 states, alcohol control boards set prices and control distilled spirit sales for the entire state. New Hampshire, Virginia, and Washington are 3 of the 18 states with alcohol beverage control boards. A complete list of the 18 states is in Appendix E.

## Appendix G. Comparison of Distilled Spirit Prices

Table G-2 shows the military retail system locations and states that we visited and the results of our pricing surveys. The table shows the average savings available to military retail system patrons after comparing military alcoholic beverage prices to state alcohol beverage control board prices.

**Table G-2. Military Retail System Average Market Basket Savings on Distilled Spirits**

<u>Location</u>	<u>Number of Items Surveyed</u>	<u>Average Savings (percent)</u>
<b>New Hampshire</b>		
NEXCOM Naval Shipyard Portsmouth	13	8.0*
AAFES Hanscom Air Force Base	13	11.0*
<b>Virginia</b>		
Without sales tax		
NEXCOM Naval Air Station Oceana	21	15.2
NEXCOM Naval Base Norfolk	21	15.6
NEXCOM Naval Amphibious Base Little Creek	21	14.6
AAFES Langley Air Force Base	21	10.4
AAFES Fort Eustis	21	10.4
With Virginia sales tax of 4.5 percent		
NEXCOM Naval Air Station Oceana	21	18.8
NEXCOM Naval Base Norfolk	21	19.1
NEXCOM Naval Amphibious Base Little Creek	21	18.3
AAFES Langley Air Force Base	21	14.3
AAFES Fort Eustis	21	14.3
<b>Washington</b>		
Without sales tax		
Fort Lewis	18	4.4
Naval Air Station Whidbey Island	18	10.0
With Washington sales tax of 8.2 percent		
Fort Lewis	18	11.7
Naval Air Station Whidbey Island	18	16.9

\*New Hampshire does not impose a state sales tax.

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## **Appendix H. Report Distribution**

### **Office of the Secretary of Defense**

Under Secretary of Defense (Comptroller)  
    Deputy Chief Financial Officer  
    Deputy Comptroller (Program/Budget)  
Assistant Secretary of Defense (Force Management Policy)  
    Executive Director of Morale, Welfare, and Recreation and Resale Activities  
Assistant Secretary of Defense (Health Affairs)  
Assistant Secretary of Defense (Public Affairs)  
Director, Defense Logistics Studies Information Exchange

### **Department of the Army**

Auditor General, Department of the Army  
Surgeon General of the Army

### **Department of the Navy**

Assistant Secretary of the Navy (Financial Management and Comptroller)  
Chief, Bureau of Medicine and Surgery  
Auditor General, Department of the Navy  
Director, Navy Exchange Service Command  
Superintendent, Naval Post Graduate School  
Director, Marine Corps Morale, Welfare and Recreation Support Activity

### **Department of the Air Force**

Assistant Secretary of the Air Force (Financial Management and Comptroller)  
Surgeon General of the Air Force  
Auditor General, Department of the Air Force

### **Other Defense Organizations**

Director, Defense Contract Audit Agency  
Director, Defense Logistics Agency  
Director, National Security Agency  
    Inspector General, National Security Agency  
Inspector General, Defense Intelligence Agency  
Commander, Army and Air Force Exchange Service

## **Non-Defense Federal Organizations and Individuals**

Office of Management and Budget

General Accounting Office

National Security and International Affairs Division,

Technical Information Center

Health, Education, and Human Services

Chairman and ranking minority member of each of the following congressional committees and subcommittees

Senate Committee on Agriculture, Nutrition, and Forestry

Senate Subcommittee on Marketing, Inspection, and Product Promotion, Committee on Agriculture

Senate Committee on Appropriations

Senate Subcommittee on Defense, Committee on Appropriations

Senate Subcommittee on Labor, Health and Human Services, and Education, Committee on Appropriations

Senate Committee on Armed Services

Senate Subcommittee on Personnel, Committee on Armed Services

Senate Committee on Governmental Affairs

Senate Committee on Finance

Senate Subcommittee on Medicare, Long-Term Care and Health Insurance, Committee on Finance

Senate Committee on Labor and Human Resources

House Committee on Appropriations

House Subcommittee on Labor, Health and Human Services, and Education, Committee on Appropriations

House Subcommittee on National Security, Committee on Appropriations

House Committee on Commerce

House Subcommittee on Health, Committee on Commerce

House Committee on Government Reform and Oversight

Subcommittee on Government Management, Information and Technology, Committee on Government Reform and Oversight

House Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight

House Committee on National Security

House Subcommittee on Military Personnel, Committee on National Security

House Committee on Veterans Affairs

House Subcommittee on Hospitals and Health Care, Committee on Veterans Affairs

House Committee on Ways and Means

House Subcommittee on Health, Committee on Ways and Means

## **Part III - Management Comments**

# Assistant Secretary of Defense (Force Management Policy) Comments



OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
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WASHINGTON, D.C. 20301-4000

APR 18 1997



## MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING

**SUBJECT:** Draft Evaluation Report on the "Economic Impact of the Alcohol Use in DoD"  
(Project No. 6LF-0050.01)

This report and the research behind it will be invaluable in setting appropriate policy on alcohol pricing within the Department of Defense. In support of this endeavor and in response to your request, the following comments are provided:

- **Recommendation 1.** Establish policy requiring prices for alcoholic beverages sold in military retail system stores in the continental United States to be equivalent to prices in the commercial retail market.

**DoD Response.** Partially concur. The Department agrees with establishing a standard policy on alcohol pricing in military retail system stores located within the continental United States. The price in the military retail stores should be set no lower than 15% (including sales tax) below the low price provider in the local retail community (other local military retail facilities excluded). By using a maximum 15% discount target at all stores, the military exchange benefit is maintained yet patron savings are normalized across the country. In this way, all patrons will realize similar savings, regardless of where they are stationed.

We believe this maximum 15% target discount on alcoholic products complies with the spirit of the draft report's recommendation to avoid drastic price variation and deep discounting of alcoholic products.

Recommendation 1 should be changed to: "Establish policy requiring military retail facilities to set alcoholic beverage prices sold in the continental United States no lower than 15% below the local best price."

- **Recommendation 2.** Establish policy requiring prices for alcoholic beverages sold in overseas military retail system stores to be within the range of prices established for military retail system stores located in the continental United States.

**DoD Response.** Partially Concur. Some alcoholic products are sold in the local retail community overseas for less than the price in the continental United States. The exchanges should be able to provide those same products at a cost savings to the patron if cost effective.



Recommendation 2 should be changed to: "Establish policy requiring prices for alcoholic beverages sold in overseas military retail system stores to be within the range of prices established for military retail system stores located in the continental United States unless comparable alcoholic beverages are sold locally for less. In this case, the exchange may set the price as low as 15% below the best local price including all local tax.

Revised



Stephen O Rossetti, Jr.  
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# Assistant Secretary of Defense (Health Affairs) Comments



HEALTH AFFAIRS

THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D. C. 20301-1200

MAR 3 1997

MEMORANDUM FOR DIRECTOR, LOGISTICS SUPPORT DIRECTORATE, OFFICE OF  
THE INSPECTOR GENERAL

SUBJECT: Evaluation Report on the Economic Impact of Alcohol Use in DoD (Project No.  
6LF-0050.01)

We concur with the findings and recommendations in this report. Health care costs and productivity losses caused by the abuse of alcohol represent an unnecessary and unacceptable drain on limited DoD resources. Pricing alcohol in military retail outlets at rates below those found in civilian outlets encourages our members to use (and abuse) alcohol. This pricing policy is inconsistent with other Department initiatives which promote a healthy lifestyle and discourage the use of addictive substances.

We support the subject report, pending inclusion of minor editorial changes contained in the attachments.

  
Stephen C. Joseph, M.D., M.P.H.

Attachment:  
As stated

Attachments  
Deleted

## **Evaluation Team Members**

This report was prepared by the Logistics Support Directorate, Office of the Assistant Inspector General for Auditing, DoD.

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