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Costs of Smoking in Alaska - 1991

**It is estimated that each day 1,100 Americans will die from tobacco use; 3,000 children will smoke their first cigarette. In all, 419,000 smokers died and 1.5 million smokers quit in 1990. They are replaced by new smokers, 90% of whom start to smoke before age 18.<sup>1</sup>**

Cigarette smoking has substantial impact on mortality in Alaska. **Every day an Alaskan dies due to smoking-attributable causes.**

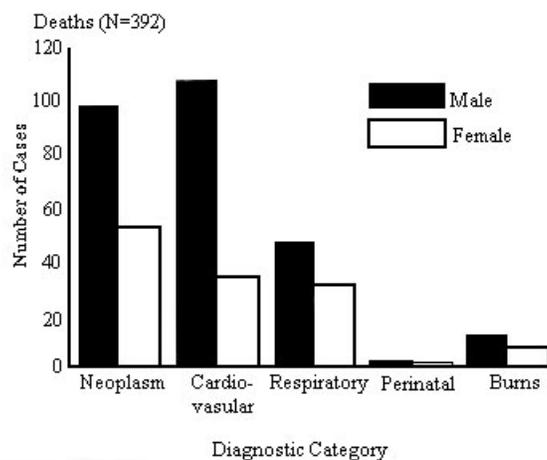
To estimate the impact of cigarette smoking in Alaska in 1991, we used the Smoking-Attributable Mortality, Morbidity, and Economic Cost (SAMMEC) software<sup>2</sup> distributed by the Centers for Disease Control and Prevention, and data from:

- the 1991 Behavioral Risk Factor Surveillance Survey
- health-care expenditure data (from the Office on Smoking and Health, CDC)
- population estimates by age and sex (Alaska Dept. of Labor) and,
- deaths by age, sex and smoking related diagnostic category (Section of Epidemiology).

## RESULTS:

**Smoking Attributable Mortality – 19% of the 2,076 Alaskan deaths in 1991 were smoking related.** The proportion of all deaths attributable to smoking was higher for males (20%) than for females (16%). For males 40% of the smoking attributable deaths were due to cardiovascular diseases and 37% to neoplasms, whereas for females, 27% of smoking attributable deaths were due to cardiovascular diseases and 42% to neoplasms (Figure 1). **Among Alaskans  $\geq 35$  years of age, 23% of deaths (372/1643) were attributed to cigarette smoking.**

Figure 1 - Smoking Attributable Mortality by Diagnostic Category and Gender - Alaska, 1991



**Smoking Attributable Years of Potential Life Lost (YPLL) --** YPLL are the number of years that the person died prior to their 65th birthday. An average of 4.5 years of life were lost for each person 35 to 65 who died from a smoking related death in 1991.

**Smoking Attributable Direct Costs --** Direct health-care costs are the costs for the prevention, detection and treatment of smoking-related diseases as well as the cost for rehabilitating smokers suffering from smoking related illnesses. Costs of hospitalization, physicians' services, medications, nursing home care, and other professional services are included. **The estimated total for direct costs in 1991 was \$45.6 million for persons  $\geq 35$  years of age.** This is equivalent to \$220 per Alaskan  $\geq 35$  years of age or \$941 per current smoker  $\geq 35$  years of age.

**Smoking Attributable Indirect Mortality Costs --** These costs are calculated as the wages and salaries forfeited by persons who die prematurely from smoking-related causes. **An estimated \$67.9 million was lost due to the indirect costs caused by smoking deaths.**

**Smoking Attributable Indirect Morbidity Costs --** These costs include lost earnings and productivity for persons disabled by smoking-related chronic diseases. **The estimated cost for indirect morbidity due to smoking was \$14.1 million.**

**The total estimated smoking attributable cost for Alaskans  $\geq 35$  years of age in 1991 was \$127.6 million.**

## DISCUSSION:

Smoking causes substantial mortality, morbidity and economic costs in Alaska. Total estimated smoking attributable costs have increased by 53% since 1989.<sup>3</sup> These estimates are conservative since 1989 U.S. Labor Force and earnings data were used to calculate economic costs, which are lower than Alaska annual mean earnings. If Alaska specific health-care costs<sup>4</sup> are used (instead of OSH health-care national estimates), total costs are greater - \$134 million.

SAMMEC underestimates the impact of smoking for several other reasons: 1) Estimates are based on cigarette smoking prevalence for 1991 which are lower in recent years than in the previous 30 years. The current burden of most chronic diseases linked to smoking reflects previous decades of higher smoking prevalence. 2) Estimates do not include deaths from other conditions (e.g., such as leukemia, and peptic ulcer disease) that may also be associated with smoking, nor do they include mortality caused by other forms of tobacco use (pipes, cigars, and smokeless tobacco) or exposure to environmental tobacco smoke.

**To reduce the adverse health impacts of tobacco use, continued progress must be made in reducing tobacco use, especially smoking.**

Vigorous efforts are needed to prevent the initiation of smoking, encourage smoking cessation at any age, and protect nonsmokers from the adverse effects of environmental tobacco smoke. Because many factors affect smoking initiation and cessation, multiple approaches are necessary including:

- increasing educational efforts
- reducing minors' access to tobacco products
- increasing tobacco excise taxes
- implementing more extensive and intensive counseling by health-care providers on smoking prevention and cessation
- developing and enacting strong policies and laws for clean indoor air
- eliminating advertising, especially advertising targeted toward persons less than 18 years of age.

References:

1. CDC. Smoking attributable mortality and years of potential life lost -- United States, 1990. MMWR 1993;42:645-649.
2. Schultz JM, Novotny TE, Rice DP. SAMMEC II: computer software and documentation. Rockville, Md.: US Dept. of Health and Human Services, Public Health Service, CDC, April 1990.
3. Perham K. State of Alaska Epidemiology Bulletin, July 6, 1991.
4. "State of Alaska Health Resources and Access Task Force Final Report, January 1993.

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