

tively weak musculature, particularly unsuited for controlling their relatively strong momentum in the tube. Problems in controlling momentum with increasing mass may also explain the fact that all cases were 10 years old or older although many children under age 10 could be seen using the slide during on-site inspection.

Tandem riding was a risk factor for spinal fractures within the population of injured riders. Perhaps holding a child between one's legs effectively increased one's weight and thereby increased the axial loading upon the spinal column.

A number of modifications were made in the slide in subsequent summers, including the removal of one 45-degree drop. These changes have reportedly reduced the frequency of injury. An existing rule prohibiting tandem riding is being strictly enforced. The extra risk experienced by the overweight reported in this study has not been addressed. However, this finding may convince slide designers that they should build slides with wider safety margins to

accommodate all types of users. It is probably easier, more effective, and more responsible to prevent injuries by aiming for a safe ride in the design phase than by aiming for a safe rider during the course of slide operation.

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Cigarette Smoking Behavior among Rhode Island Physicians, 1963-83

JAY S. BUECHNER, PhD, DONALD K. PERRY, BA, H. DENMAN SCOTT, MD, MPH

BEVERLY EHRICH FREEDMAN, MA, MEd, JOHN T. TIERNEY, MSW, AND WILLIAM J. WATERS, PhD

Abstract: A survey of practicing physicians in Rhode Island revealed a cigarette smoking rate of only 8.3 per cent in 1983. This represents a continuation of the consistent decrease seen in the percentage of physician smokers in each such survey since 1963. Under age 30, the rate was only 4.5 per cent. An exponential model suggests that the overall rate for Rhode Island physicians will be below 3 per cent by the year 2000. (*Am J Public Health* 1986; 76:285-286.)

Introduction

The Surgeon General of the United States recently challenged Americans to achieve a smoke-free society by the year 2000.* Physicians are one group in society that appear to be most likely to achieve very low cigarette smoking rates, since they are motivated both to protect their own health and to serve as exemplars and public health advocates.

The Surgeon General's Report on Smoking and Health¹ presented 20 reports of surveys of physicians' smoking patterns from 1949 to 1975. Over that time, the percentage of physician cigarette smokers fell from 40 per cent and higher to nearly 20 per cent. More recent surveys indicate that the smoking rates for some physician groups are as low as 10 per cent.²

*Koop CE: The Julia M. Jones Lecture, delivered before the Annual Meeting of the American Lung Association in Miami Beach, Florida May 20, 1984.

From the Rhode Island Department of Health. Address reprint requests to Jay S. Buechner, PhD, Chief, Office of Data Evaluation, Rhode Island Department of Health, 75 Davis Street, Providence, RI 02908. Mr. Perry is Supervising Health Planner, Office of Data Evaluation; Dr. Scott is Director of Health; Ms. Freedman is Health Planning Coordinator, Office of Health Planning; Mr. Tierney is Deputy Director; and Dr. Waters is Assistant Director for Health Policy. This paper, submitted to the *Journal* June 21, 1985, was revised and accepted for publication October 8, 1985.

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Smoking patterns among physicians in Rhode Island have been tracked since 1963 by means of surveys administered at five-year intervals.³⁻⁷ Results of the most recent survey, administered in December 1983, indicated that the percentage of Rhode Island physicians who smoke continues to decline. The 1983 survey obtained additional items of information that have allowed a detailed analysis of the smoking histories of physicians and of subgroups of physicians.

Methods

In conjunction with the annual relicensure process for all Rhode Island physicians (Doctors of Medicine and Doctors of Osteopathy), 1983 data on smoking behavior were obtained by the Rhode Island Department of Health from a self-administered questionnaire probing current and former smoking behavior, age at onset of smoking, current medical specialty, age, and sex. A total of 2,238 physicians received surveys, of which 1,837 were returned, for a response rate of 82.1 per cent. No attempt was made to confirm the validity of responses by more objective measures.

This paper is solely concerned with cigarette smoking. The rate of physician smoking for all tobacco products was 12.5 per cent in 1983. Only male physicians reported smoking tobacco products other than cigarettes.

Results

Self-reported cigarette smoking rates among Rhode Island physicians since 1963 are shown in Table 1. The 1983 cigarette smoking rate, 8.3 per cent, was approximately one-third lower than the 1978 rate of 12.7 per cent. This observed decrease was the greatest relative change from one survey to the next since the initial survey in 1963.

Simple regression showed that an exponential model described a very large portion of the variation in percentage smokers ($r^2 = 0.98$) since 1963. This implies that the number of smokers decreased by a constant percentage of those

TABLE 1—Cigarette Smoking among Rhode Island Physicians by Medical Specialty and Year, 1963–83

Medical Specialty	(N) Per Cent Cigarette Smokers				
	1963 (N)	1968 (N)	1973 (N)	1978 (N)	1983 (N)
Internal Medicine	27.4 (113)	15.2 (158)	9.2 (229)	8.8 (352)	6.0 (496)
General and Family Practice	34.5 (171)	21.5 (274)	17.2 (215)	12.6 (167)	8.4 (227)
Surgery	32.0 (100)	25.4 (130)	25.3 (150)	14.0 (164)	8.4 (154)
Pediatrics	23.3 (60)	16.7 (78)	20.7 (92)	10.1 (119)	7.1 (140)
Psychiatry	35.7 (56)	25.9 (81)	20.7 (92)	17.1 (111)	8.0 (138)
Obstetrics and Gynecology	45.6 (57)	32.3 (65)	28.1 (82)	19.1 (94)	14.4 (111)
Radiology	22.2 (18)	23.3 (30)	16.1 (62)	14.9 (67)	4.7 (85)
Anesthesiology	35.5 (31)	31.8 (44)	14.0 (50)	17.5 (57)	8.1 (74)
Orthopedic Surgery	40.7 (27)	24.0 (50)	19.0 (58)	9.4 (64)	12.5 (72)
Pathology	25.0 (8)	20.7 (29)	18.0 (39)	12.2 (49)	10.4 (67)
Otolaryngology	25.0 (24)	25.0 (24)	16.7 (24)	19.2 (26)	3.8 (26)
All Respondents*	33.0 (752)	22.6 (1,026)	19.0 (1,234)	12.7 (1,399)	8.3 (1,837)

*Includes specialties not listed individually.

currently smoking in any given time period. For Rhode Island physicians, that percentage was 6.7 per cent of current smokers per year.

Cigarette smoking rates among specialties in 1983 ranged from 14.4 per cent for obstetrics/gynecology to 3.8 per cent for otolaryngology. All specialties showed decreases from 1978 rates with the sole exception of orthopedic surgeons.

The smoking rate increased from 6.3 per cent among physicians age 25 to 34 years to 12.3 per cent among those age 75 years and older. Conversely, the percentage of physicians who had never smoked decreased steadily with age. In the 25–34 year age group, almost 80 per cent of respondents reported never having smoked cigarettes; 91 per cent of physicians under age 30 had never smoked cigarettes, and an additional 4.5 per cent were former smokers, resulting in a smoking rate of only 4.5 per cent. In contrast, slightly more than 35 per cent of the 75 years and over age group reported never having smoked cigarettes. Overall, 60 per cent of physicians in all age groups reported never having smoked cigarettes.

Overall, 6.6 per cent of the 211 female physicians who responded smoked cigarettes, compared to 8.5 per cent of males. In all but two age categories (25–34 years, 65–74 years) the smoking percentage was greater for males than for females. For all age groups, 74.4 per cent of female physicians had never smoked cigarettes, compared with 58.2 per cent of male physicians.

Smoking cessation rates (the number of former smokers divided by the sum of current and former smokers, expressed as a percentage) was 78.7 per cent. These rates increased steadily by age from 68.7 per cent in the 25–34 age group to 87.3 per cent for the 65–74 age group.

Discussion

It is apparent that the percentage of cigarette smokers among physicians in Rhode Island is lower than for compa-

rable groups elsewhere and is continuing to decline at a steady rate.^{1,2} Younger physicians and female physicians who are entering practice in Rhode Island have lower smoking rates than the physicians they are replacing, and the quitting rate among physicians is very high. These effects do not yet appear to have reached their limits.

If the observed exponential decrease in the percentage of cigarette smokers were to continue, the smoking rate among Rhode Island physicians would be below 3 per cent by the year 2000. This would come close to fulfilling the goal of a smoke-free society for this subgroup. Whether such a decrease can occur in the general population depends on whether knowledge of the effects of smoking on health, coupled with social and economic incentives, can motivate others as they have motivated physicians.

Physicians can have an impact on their patients' smoking behavior. Considering that almost 70 per cent of Americans see a physician at least once a year,⁸ a smoke-free profession may be able to contribute to the reduction of smoking in the general population and ultimately the rate of morbidity and mortality due to smoking-related diseases.

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