

CURRENT SMOKING AMONG TEENAGERS

Daniel Horn, Ph.D.

THE SURVEY on which I am reporting was done for the Public Health Service from late December 1967 through early February 1968 by the Chilton Research Services of Philadelphia. The figures are based on telephone interviews conducted as a representative sample of the 85 percent of the U.S. households which have telephone service. These figures are being augmented by personal interviews in households without telephones. Households without telephones tend to be either in rural areas or impoverished sections of the central city.

I believe levels of smoking are lower than average in the country and higher than average in the central city. It is, therefore, unlikely that adding the personal interview sample, which is now being carried out, will alter the figures by more than 1 or 2 percentage points.

The telephone sample consisted of 4,414 interviews conducted among approximately 315 boys and 315 girls at each single year of age from 12 through 18 (see table). A random selection of teenagers was made from a computer that was fed information on area codes, exchanges, and banks of numbers in use in households throughout the United States. Since any possible number could be selected, even unlisted numbers fall into the sample with their appropriate frequency.

Observations

The proportion of smokers among teenagers appears to have declined appreciably from levels which have been reported in numerous studies over the past 10 years. Defining "regular" smoking among teenagers as smoking regularly either daily or weekly, one boy in seven and one girl in 12 is so characterized for the entire group between the ages of 12 and

18. This frequency varies from only 1.3 percent of the 12-year-old boys and 0.3 percent of the 12-year-old girls to 35.5 percent of the 18-year-old boys and 21.3 percent of the 18-year-old girls. In 1957, 34.7 percent of the 17-year-old boys studied in Portland, Oreg. (1), were smoking at this level compared with 25.6 percent in our present sample; 25.5 percent of the 17-year-old girls compared with 15.7 percent in the present sample—a drop of about 9 or 10 percentage points in each group.

In the national sample studied by Eugene Gilbert and Company and described in an unpublished report for the American Cancer Society in 1959, all teenage groups had a consistently higher proportion of smokers than their counterparts in the Oregon study. Variations in definitions of what constitutes a smoker make it difficult to compare different studies, but even the study conducted during 1967 in San Diego and another 3-year study completed a year and a half ago by the University of Illinois show significantly higher smoking than has been found in this more recent study.

Expectations about smoking in the future are remarkably low. Salber's studies have shown that statements by children in junior and senior high school as to whether they expect to become smokers are accurate predictors of whether they actually do so (2). Only 2.6 percent of the entire sample say they definitely expect to be smokers 5 years from now, but 45.1 percent say

Dr. Horn is director, National Clearinghouse for Smoking and Health, National Center for Chronic Disease Control, Public Health Service. This paper was presented at the American Cancer Society's Science Writers' Seminar, San Diego, Calif., March 25, 1968.

they definitely do not expect to be cigarette smokers in 5 years. Another 12.3 percent say they probably will be smokers then, and 34.2 percent say they will probably not become smokers. Even including the 5.9 percent who do not know what they expect with those who say they definitely or probably will be smokers in 5 years, the expectation is 20.8 percent will be smokers (23.1 percent for boys, 18.4 percent for girls) when this group is aged 17-23, in contrast to rates about twice as high for comparable age groups in recent years. If these expectations are indeed accurate predictors of the future, we have every right to be optimistic about the eventual downturn of lung cancer death rates.

There is an overwhelming awareness among youth at each year of age from 12 through 18 that cigarette smoking is a health hazard. For this group as a whole, 91 percent answered "yes" to the question "Would you say smoking is harmful to health?" Four percent said smoking was not harmful, and 5 percent did not know one way or the other. There was no significant difference between boys and girls on this question. There was a slight tendency for more of the younger children to accept this fact and for slightly fewer of them to express uncertainty than among the 17 and 18 year olds.

The same factors which distinguished teenagers who took up smoking by the time they were of high school age from those who did not in our study of Portland school children in 1957 also characterize the smoking children of 1968.

1. Smoking is more common among children who come from families in which there is smoking. Parental smoking is still an important factor although smoking among older brothers and sisters may be even more predictive.

2. A group of characteristics identify the out-group in the school setting. Children who have slipped behind their agemates in school and those who do not expect to go on to college are more likely to smoke than the other children in the population.

Because of the continued importance of parental smoking as a factor in smoking by youth, it is interesting to note that at the time of our Portland study 55 percent of the parents of high school children were reported as cigarette smokers. In our present sample slightly less than 50 percent of the parents of the high school children are reported as cigarette smokers. This finding supports one of the basic premises of recent educational efforts to control smoking, that one must work to reduce both adult and teenage smoking simultaneously and with equally vigorous efforts, since they strongly influence each other.

Related Findings

The findings in this survey are supported by the recent reports from the Internal Revenue Service which show an absolute decrease both in manufacturing of cigarettes and the removal of cigarettes from warehouses for distribution to the consumer markets. The 3 consecutive months from November 1967 to January 1968 each shows an absolute reduction over the corresponding months 1 year earlier. This is the first time since shortly after the Surgeon General's report of 1964 that such a continuing reduction has taken place. The size of the reduction is such as to suggest that there may be about 1½ million fewer cigarette smokers now than there were a year ago, although there are about 3 million more people in the U.S. popula-

Percentage of 4,414 adolescents interviewed by telephone who smoked regularly, by age, 1968

Age	Boys			Girls		
	Weekly	Daily	Combined	Weekly	Daily	Combined
12-----	1.0	0.3	1.3	0.3	0	0.3
13-----	.6	1.0	1.6	0	.6	.6
14-----	1.2	4.4	5.6	.3	.6	.9
15-----	2.9	10.7	13.6	1.8	5.6	7.4
16-----	2.9	17.4	20.3	3.6	8.3	11.9
17-----	6.0	19.6	25.6	3.9	11.8	15.7
18-----	4.1	31.4	35.5	3.9	17.4	21.3
Average-----	2.7	12.0	14.7	2.0	6.4	8.4

tion. Of course, it is possible that this has only been a temporary phenomenon and that the months to come will show a return to previous levels. Yet, in the absence of any spectacular single event to account for this downturn, we may very well be on the way to success in bringing cigarette smoking under some kind of control.

REFERENCES

- (1) Horn, D., Courts, F. A., Taylor, R. M., and Solomon, E. S.: Cigarette smoking among high school students. *Amer J Public Health* 49: 1497-1511 (1959).
- (2) Salber, E.: What the Newton study bodes for future research. *In Proceedings of the Third National Behavioral Conference on Smoking and Health, Madison, Wis., May 1967. In press.*

Harvard Anesthesia Center

A 5-year grant of \$3,326,365 from the National Institute of General Medical Sciences, Public Health Service, has been awarded to Harvard University Medical School for the establishment of an anesthesia center directed toward improved, scientific patient care. The need for concern with the quality of anesthetic care is stressed by the fact that an estimated 10,000 persons die each year in the United States from causes related to anesthesia.

This grant for an anesthesiology center is the second of its kind to be awarded by the Institute. The first, awarded in June 1967, was used to establish an anesthesiology center at the University of Pennsylvania. These two large-scale, multidisciplinary centers are part of the Institute's nationwide effort authorized 2 years ago by the Congress to expand research and increase the number of physician-scientists in anesthesiology patient care, research, and teaching.

The grant to Harvard will support coordinated activities at the Beth Israel Hospital, the Boston City Hospital, the Children's Hospital Medical Center, the Massachusetts General Hospital, and the Peter Bent Brigham Hospital. The objective is to establish at Harvard Medi-

cal School a center of excellence in anesthesiology training and research.

This center will be based on the facilities of the participating Harvard teaching hospitals and on expanded multidisciplinary cooperation. Research and training will receive equal emphasis, and all efforts will be directed toward improved, scientific patient care.

The research effort will emphasize studies relevant to anesthesia and the sciences on which anesthesiology is based, to pain problems, and to circulatory and respiratory care. This effort will take the fullest advantage of advanced technology and interdisciplinary cooperation, involving internists, surgeons, pharmacologists, physiologists, chemists, psychologists, statisticians, engineers, and systems analysts. Through all its activities the center hopes to identify, define, and remove obstacles to broader application of advanced care to patients.

Anesthesiology, as is all medicine, is faced with a shortage of physicians as well as other health personnel. In addition to training more workers, the center will provide scientific means for the continuous evaluation of the quality of care and the optimum use of physician and other manpower.