



JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

History Lesson

State and Federal Litigation against the Tobacco Industry

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- ▶ 1950, BMJ paper by Doll and Hill on link between smoking and lung cancer
- ▶ 1954, British Doctors Study
- ▶ 1964, first US Surgeon General Report to include data/discussion of smoking -> cancer

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SMOKING AND CARCINOMA OF THE LUNG PRELIMINARY REPORT

BY

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AND

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In England and Wales the phenomenal increase in the number of deaths attributed to cancer of the lung provides one of the most striking changes in the pattern of mortality recorded by the Registrar-General. For example, in the quarter of a century between 1922 and 1947 the annual number of deaths recorded increased from 612 to 9,287, or roughly fifteenfold. This remarkable increase is, of course, out of all proportion to the increase of population—both in total and, particularly, in its older age groups. Stocks (1947), using standardized death rates to allow for these population changes, shows the following trend: rate per 100,000 in 1901–20, males 1.1, females 0.7; rate per 100,000 in 1936–9, males 10.6, females 2.5. The rise seems to have been particularly rapid since the end of the first world war: between 1921–30 and 1940–4 the death rate of

whole explanation, although no one would deny that it may well have been contributory. As a corollary, it is right and proper to seek for other causes.

Possible Causes of the Increase

Two main causes have from time to time been put forward: (1) a general atmospheric pollution from the exhaust fumes of cars, from the surface dust of tarred roads, and from gas-works, industrial plants, and coal fires; and (2) the smoking of tobacco. Some characteristics of the former have certainly become more prevalent in the last 50 years, and there is also no doubt that the smoking of cigarettes has greatly increased. Such associated changes in time can, however, be no more than suggestive, and until recently there has been singularly little more direct evi-

History: meanwhile a frank statement to smokers

- ▶ The tobacco industry published “A frank statement to smokers” on Jan 4, 1954
- ▶ 400 newspapers, estimated to have reached 43 million people

A FRANK STATEMENT TO CIGARETTE SMOKERS¹

Recent reports on experiments with mice have given wide publicity to the theory that cigarette smoking is in some way linked with lung cancer in human beings.

Although conducted by doctors of professional standing, these experiments are not regarded as conclusive in the field of cancer research. However, we do not believe that any serious medical research, even though its results are inconclusive, should be disregarded or lightly dismissed.

At the same time, we feel it is in the public interest to call attention to the fact that eminent doctors and research scientists have publicly questioned the claimed significance of these experiments.

Distinguished authorities point out:

1. That medical research of recent years indicates many possible causes of lung cancer.
2. That there is no agreement among the authorities regarding what the cause is.
3. That there is no proof that cigarette smoking is one of the causes.
4. That statistics purporting to link cigarette smoking with the disease could apply with equal force to any one of many other aspects of modern life. Indeed, the validity of the statistics themselves is questioned by numerous scientists.

A frank statement to smokers

We accept an interest in people's health as a basic responsibility, paramount to every other consideration in our business.

We believe the products we make are not injurious to health.

We always have and always will cooperate closely with those whose task it is to safeguard the public health.

For more than 300 years tobacco has given solace, relaxation and enjoyment to mankind. At one time or another during those years critics have held it responsible for practically every disease of the human body. One by one these charges have been abandoned for lack of evidence.

Regardless of the record of the past, the fact that cigarette smoking today should even be suspected as a cause of serious disease is a matter of deep concern to us.

Many people have asked us what we are doing to meet the public's concern aroused by recent reports. Here is the answer:

1. We are pledging aid and assistance to the research effort into all phases of tobacco use and health. This joint financial aid will of course be in addition to what is already being contributed by individual companies.



A frank statement to smokers

2. For this purpose we are establishing a joint industry group consisting initially of the undersigned. This group will be known as TOBACCO INDUSTRY RESEARCH COMMITTEE.

3. In charge of the research activities of the Committee will be a scientist of unimpeachable integrity and national repute. In addition there will be an Advisory Board of scientists disinterested in the cigarette industry. A group of distinguished men from medicine, science and education will be invited to serve on this Board. These scientists will advise the Committee on its research activities.

This statement is being issued because we believe the people are entitled to know where we stand on this matter and what we intend to do about it.

TOBACCO INDUSTRY RESEARCH COMMITTEE

5400 Empire State Building, New York 1, New York

Sponsors:

The American Tobacco Company, Inc.
Paul M. Hahn, President

Benson & Hedges
Joseph F. Cullman, Jr., President

P. Lorillard Company
Herbert A. Kent, Chairman

Maryland Tobacco Growers Association
Samuel C. Linton, General Manager

Litigation

- ▶ Individual litigation against the tobacco industry started in mid 1950s
 - ▶ 800 individual claims
 - ▶ 2 won but then lost on appeal by the tobacco industry

- ▶ State's suit
 - ▶ By mid 1990s, 40 states were suing the tobacco industry for costs paid out through Medicaid services for individuals with smoking related diseases
 - ▶ Mississippi was first to file in 1994
 - ▶ In 1997, Global Settlement Agreement or Master Settlement Agreement with 46 states
 - Roughly 370 billion dollars paid to states

- ▶ Federal suit
 - ▶ Filed in 1999
 - ▶ Original goal was to recover Medicare dollars spent to treat smoking related diseases
 - Relied on the Medicare Recovery Act
 - ▶ Racketeer Influenced and Corrupt Organizations Act (RICO)
 - ▶ 2006: Judge Kessler: As set forth in these Final Proposed Findings of Fact, substantial evidence establishes that Defendants have engaged in and executed – and continue to engage in and execute – a massive 50-year scheme to defraud the public, including consumers of cigarettes, in violation of RICO, ~ 1700 page decision

Hopkins Biostat role

- ▶ One part of the expert witness team:
 - ▶ Jon Samet, former chair of Epi, now dean of Univ of Colorado School of Public Health
 - ▶ Len Miller, UC Berkely Economics
 - ▶ Tim Wyant, Hopkins Biostat alumni
 - ▶ Scott Zeger, chair of Biostat
 - ▶ Me!

- ▶ Medicare recovery act
 - ▶ 10 million Medicare claims
 - ▶ Estimate the
 - Attributable fraction of disease
 - Attributable fraction of expenditures
 - Apply these fractions to disease cases and dollars spent to treat smoking related diseases
 - SAF: smoking attributable fraction of disease cases
 - SAFE: smoking attributable fraction of medical expenditures



SAF and SAFE within 1987 NMES survey



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Journal of Econometrics 112 (2003) 135–151

JOURNAL OF
Econometrics

www.elsevier.com/locate/econbase

Disease cases and their medical costs attributable to smoking: an analysis of the national medical expenditure survey

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Scott L. Zeger

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SAF and SAFE within 1987 NMES survey

$$\text{SAF} = \left(\sum_{i=1}^n D_i \times w_i \times AF_i \right) / \left(\sum_{i=1}^n D_i \times w_i \right),$$

$$\text{SAFE} = \left(\sum_{i=1}^n D_i \times C_i \times w_i \times AFE_i \times AF_i \right) / \left(\sum_{i=1}^n D_i \times C_i \times w_i \right)$$

▶ SAF:

- ▶ Denominator: total number of disease cases
- ▶ Numerator: total number of disease cases attributed to smoking

▶ SAFE:

- ▶ Denominator: Total expenditures from disease cases
- ▶ Numerator: total expenditures from disease cases that are attributed to smoking



Expert testimony

- ▶ Written testimony
- ▶ Tim Wyatt testified in the federal courthouse in DC
 - ▶ The surgeon general followed
 - ▶ I knew one of the tobacco industry lawyers!

