50 Years of Surgeon Generals’ Reports on Smoking and Health

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Bethesda, February 27, 2014
50 years and only 20 minutes!!
BEFORE 1964
1950: Key Case-Control Studies

Morton Levin publishes a study linking smoking and lung cancer in JAMA.

Ernst L. Wynder and Evarts A. Graham publish study in JAMA which 96.5% of lung cancer patients interviewed were smokers.

Richard Doll and Bradford Hill publish study in BMJ finding that heavy smokers are 50 times more likely to get lung cancer; follow-up in 1954.
The relationship between smoking and lung cancer. An analysis of information now available indicates that the over-all death rate, the death rate from cancer of the lung, and the death rate from coronary disease are all increased among smokers as compared with non-smokers of the same age. Although the studies of Doll and Hill on lung cancer are not so complete as those of Wynder et al., the collected data are sufficient to demonstrate the importance of smoking as a cause of lung cancer. Although the study of the occurrence of cancer of the esophagus, although not so complete as that of the lung, the evidence of increased incidence of cancer of the esophagus is equally convincing.

Hammond and Horn. JAMA 1954;155:1316-28
A Frank Statement to Cigarette 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."
Burney's two statements:

**STATEMENT BY SURGEON GENERAL JEROY E. BURNEY**

**Excessive Cigarette Smoking**

The Public Health Service is, of course, concerned with broad factors which substantially affect the health of the American people. The Service also has a responsibility to bring health facts to the attention of the health professions and the public.

In June 1956, units of the Public Health Service joined with two private voluntary health organizations to establish a scientific Study Group to appraise the available data on smoking and health.

We have now reviewed the report of this Study Group and other recent data, including the report of Dr. E. C. Hammond and Dr. David Horn on June 5, 1959, in the American Medical Association in New York.

In the light of these studies, it is clear that there is an increasing and consistent body of evidence that excessive cigarette smoking is one of the causative factors in lung cancer.

The Study Group, appraising 18 independent studies, reported that lung cancer occurs much more frequently among cigarette smokers than among nonsmokers, and there is a direct relationship between the incidence of lung cancer and the amount smoked.

Many independent studies have confirmed beyond reasonable doubt that there is a high degree of statistical association between lung cancer and heavy and prolonged cigarette smoking.

Such evidence of cause, is, largely epidemiological in nature. It should be noted, however, that many important public health advances in the past have been due to the analysis of statistical and epidemiological data.

The Study Group also reported that in laboratory studies on animals at least five independent investigations have produced malignant tumors by tobacco: smoke condensates. It also reported that biological changes similar to those which take place in the genomes of cancer have been observed in the lungs of heavy smokers.

In some laboratory and biological data provide contributory evidence to support the concept that excessive smoking is not the only cause of lung cancer.

Lung cancer occurs among nonsmokers, and the incidence of lung cancer among various population groups does not always coincide with the amount of cigarette smoking.

The precise nature of the factors in heavy and prolonged cigarette smoking which can lead to lung cancer is not known. The Public Health Service supports the recommendation that more research is needed to identify, isolate, and try to eliminate the factors in excessive cigarette smoking which can cause cancer.

The Service also supports the recommendation that more research is needed into the role of air pollution and other factors which may also be causes of lung cancer in man.

To help disseminate the facts, the Public Health Service is sending copies of this study, the Study Group report, and the report of Dr. Hammond and Dr. Horn to state health officers and to the American Medical Association with the request that they consider distributing copies to local health officers, medical societies, and other health groups.

While there are naturally differences in opinion in interpreting the data on lung cancer and cigarette smoking, the Public Health Service feels the weight of the evidence is increasingly pointing in one direction: that excessive smoking is one of the causative factors in lung cancer.

The Service notes that the Study Group found that more research is needed to determine the meaning and significance of any alleged association between smoking and heart disease. The Study Group reports that the Service has found that more research is needed to determine the meaning and significance of any alleged association between smoking and heart disease.

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In their classic study in 1923, Loward and Doseing noted an association between heavy smoking and cancer deaths. Later, evaluation of time trends in mortality showed that the death rate from lung cancer was rapidly increasing. This finding led to a reevaluation of the question of a possible association of smoking with bronchial malignancy. Many studies in different countries showed a higher proportion of smokers in lung cancer groups than in control groups.

**SPECIAL ARTICLE**

**SMOKING AND LUNG CANCER**

A Statement of the Public Health Service

Leroy E. Burney, M.D., Washington, D. C.

Lombard and Swingle – The latest paper in the Massachusetts studies on lung cancer and smoking describes particular association. The documenting of each case is uncommonly thorough, covering a wide range of factors. An extensive series of controls was subjected to the same scrutiny. In a series of persons known to have died of lung cancer, four variables showed significant correlation and association: frequent or chronic respiratory conditions, heavy cigarette smoking, heavy consumption of alcohol, and outdoor work. Of these four variables, heavy cigarette smoking had by far the strongest relationship to lung cancer. Among four-fifths of the persons with lung cancer were heavy cigarette smokers (more than 20.10 packets per month) or had frequent or chronic respiratory conditions, about one-sixth were engaged in smoking occupations, and about one-fourth were users of alcohol in excessive amounts.

There was controversy concerning the different methods used in this study, some of which were too strict, and others not strict enough.

One of the factors that has been considered in the past is the possible association between smoking and heart disease. The Service notes that the Study Group found that more research is needed to determine the meaning and significance of any alleged association between smoking and heart disease.

In their classic study in 1923, Loward and Doseing noted an association between heavy smoking and cancer deaths. Later, evaluation of time trends in mortality showed that the death rate from lung cancer was rapidly increasing. This finding led to a reevaluation of the question of a possible association of smoking with bronchial malignancy. Many studies in different countries showed a higher proportion of smokers in lung cancer groups than in control groups.

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**Source:** Public Health Rep. 1957 September

**Source:** JAMA. 1959 November
1964
Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012
1964 Surgeon General’s Report
Three of the members smoked cigarettes, and two others smoked pipes or cigars. Terry, himself a smoker, served as the nominal Chairman of the group, but it was agreed that he would not participate in any of its deliberations or conclusions.
Statement on Methods

- “A plan was adopted at the first meeting…”
- “…a major general requirement was that of making the information available…”
- “…made decisions or judgments at three levels…”: 1) validity of a publication or report; 2) validity of interpretations and conclusions of authors; and 3) conclusions of the committee.
- Criteria for causal inference
Causal Criteria

Statistical methods cannot establish proof of a causal relationship in an association. The causal significance of an association is a matter of judgment which goes beyond any statement of statistical probability. To judge or evaluate the causal significance of the association between the attribute or agent and the disease, or effect upon health, a number of criteria must be utilized, no one of which is an all-sufficient basis for judgment. These criteria include:

a) The consistency of the association
b) The strength of the association
c) The specificity of the association
d) The temporal relationship of the association
e) The coherence of the association
## Smoking and Mortality, 1964

**Table 2.** Expected and observed deaths for smokers of cigarettes only and mortality ratios in seven prospective studies

<table>
<thead>
<tr>
<th>Underlying cause of death</th>
<th>Expected deaths</th>
<th>Observed deaths</th>
<th>Mortality ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer of lung (162-3)</td>
<td>170.3</td>
<td>1,833</td>
<td>10.8</td>
</tr>
<tr>
<td>Bronchitis and emphysema (502, 521.1)</td>
<td>89.5</td>
<td>546</td>
<td>6.1</td>
</tr>
<tr>
<td>Cancer of larynx (161)</td>
<td>14.0</td>
<td>75</td>
<td>5.4</td>
</tr>
<tr>
<td>Oral cancer (140-8)</td>
<td>37.0</td>
<td>152</td>
<td>4.1</td>
</tr>
<tr>
<td>Cancer of esophagus (150)</td>
<td>33.7</td>
<td>113</td>
<td>3.4</td>
</tr>
<tr>
<td>Stomach and duodenal ulcers (540, 541)</td>
<td>105.1</td>
<td>294</td>
<td>2.8</td>
</tr>
<tr>
<td>Other circulatory diseases (451-68)</td>
<td>254.0</td>
<td>649</td>
<td>2.6</td>
</tr>
<tr>
<td>Cirrhosis of liver (581)</td>
<td>169.2</td>
<td>379</td>
<td>2.2</td>
</tr>
<tr>
<td>Cancer of bladder (181)</td>
<td>111.6</td>
<td>216</td>
<td>1.9</td>
</tr>
<tr>
<td>Coronary artery disease (420)</td>
<td></td>
<td>6,430.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Other heart diseases (421-2, 430-4)</td>
<td>526.0</td>
<td>868</td>
<td>1.7</td>
</tr>
<tr>
<td>Hypertensive heart (440-3)</td>
<td>409.2</td>
<td>631</td>
<td>1.5</td>
</tr>
<tr>
<td>General arteriosclerosis (450)</td>
<td>210.7</td>
<td>310</td>
<td>1.5</td>
</tr>
<tr>
<td>Cancer of kidney (180)</td>
<td>79.0</td>
<td>120</td>
<td>1.5</td>
</tr>
<tr>
<td>All causes</td>
<td>15,653.9</td>
<td>23,223</td>
<td>1.68</td>
</tr>
</tbody>
</table>

1 Abridged from Table 25, Chapter 8. Mortality.

*International Statistical Classification numbers in parentheses.

*Includes all other causes of death as well as those listed above.

Source: USDHEW 1964
## Smoking and Mortality, reconstructed in 2014

### A  Death from Any Cause

<table>
<thead>
<tr>
<th>Study</th>
<th>Weight (fixed)</th>
<th>Weight (random)</th>
<th>Incidence Rate Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Doctors</td>
<td>7.5</td>
<td>14.8</td>
<td>1.44 (1.32–1.56)</td>
</tr>
<tr>
<td>Men in 9 States</td>
<td>19.6</td>
<td>18.5</td>
<td>1.70 (1.61–1.79)</td>
</tr>
<tr>
<td>U.S. Veterans</td>
<td>40.2</td>
<td>20.1</td>
<td>1.79 (1.73–1.86)</td>
</tr>
<tr>
<td>California Occupational</td>
<td>1.0</td>
<td>4.6</td>
<td>1.78 (1.41–2.25)</td>
</tr>
<tr>
<td>California Legion</td>
<td>1.6</td>
<td>6.6</td>
<td>1.58 (1.32–1.90)</td>
</tr>
<tr>
<td>Canadian Veterans</td>
<td>14.6</td>
<td>17.6</td>
<td>1.65 (1.56–1.76)</td>
</tr>
<tr>
<td>Men in 25 States</td>
<td>15.6</td>
<td>17.8</td>
<td>1.63 (1.54–1.73)</td>
</tr>
<tr>
<td>Fixed-effects model</td>
<td>100.0</td>
<td>—</td>
<td>1.69 (1.66–1.73)</td>
</tr>
<tr>
<td>Random-effects model</td>
<td>—</td>
<td>100.0</td>
<td>1.65 (1.56–1.75)</td>
</tr>
</tbody>
</table>

Source: Schumacher et al. NEJM 2014;370(2):186-8
The Committee’s judgment in brief:
Cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action.

- Cigarette smoking is **causally related to lung cancer in men**; the magnitude of the effect of cigarette smoking far outweighs all other factors. The data for women, though less extensive, point in the same direction.
- Cigarette smoking is the most important of the causes of **chronic bronchitis** in the United States, and increases the risk of dying from chronic bronchitis.
- Male cigarette smokers have a **higher death rate from coronary artery disease** than non-smoking males, but it is not clear that the association has causal significance.
- Cigarette smoking is associated with a 70 percent increase in the age-specific death rates of males, and to a lesser extent with increased death rates of females. The total number of excess deaths causally related to cigarette smoking in the U.S. population cannot be accurately estimated. In view of the continuing and mounting evidence from many sources, it is the judgment of the Committee that **cigarette smoking contributes substantially to mortality from certain specific diseases and to the overall death rate**.
KEY REPORTS SINCE 1964
Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012
Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012

- 1900: U.S. entry into WWI
- 1920: Great Depression begins
- 1939: U.S. entry into WWII
- 1964: Surgeon General’s report on smoking and health
- 1979: Reassurance campaign begins
- 1979: Broadcast ad ban
- 1986: Surgeon General’s report on secondhand smoke
- 1986: Master Settlement Agreement
- 2006: Surgeon General’s report on secondhand smoke (an update)
- 2006: Cigarette price drop
- 2006: FDA proposed rule
- 2006: Synar Amendment enacted
- 2006: Nicotine medications available over-the-counter
- 2006: Family Smoking Prevention and Tobacco Control Act
- 2006: Federal $1.01 tax increase

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Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012
The House of Koop-1986

Bill Lynn (OSH), Dave Burns (Senior Editor), and Don Shopland (OSH)–Part of the 1986 SG Report team – in front of Dr. Koop’s house on the NIH campus.

Source: Jon Samet’s personal collection
Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012

- Great Depression begins
- U.S. entry into WWI
- U.S. entry into WWII
- Confluence evidence linking smoking and
- Reassurance campaign begins
- 1964 Surgeon General’s report on smoking and health
- Broadcast ad ban
- Nonsmokers’ rights movement begins
- 1986 Surgeon General’s report on secondhand smoke
- 1988
- 2006 Surgeon General’s report on secondhand smoke (an update)
- Federal $1.01 tax increase
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- Family Smoking Prevention and Tobacco Control Act
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- FDA proposed rule
Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012

- U.S. entry into WWI
- Great Depression begins
- U.S. entry into WWII
- Confusion evident on smoking begins
- Reassurance campaign begins
- 1964 Surgeon General’s report on smoking and health
- Broadcast ad ban
- Nonsmokers’ rights
- Synar Amendment enacted
- Nicotine medications available over-the-counter
- Master Settlement Agreement
- Family Smoking Prevention and Tobacco Control Act
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- Cigarette price drop
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Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012
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- **1964 Surgeon General’s report on smoking and health**
- **Broadcast ad ban**
- **Reassurance campaign begins**
- **Confluence of evidence linking smoking and cancer**
- **U.S. entry into WWII**
- **Great Depression begins**
- **1964 Surgeon General’s report on smoking and health**
- **Nonsmokers’ rights movement begins**
- **Broadcast ad ban**
- **Synar Amendment enacted**
- **Nicotine medications available over-the-counter**
- **Master Settlement Agreement**
- **Family Smoking Prevention and Tobacco Control Act**
- **Department of Health and Human Services**
- **Surgeon General’s report on secondhand smoke (an update)**
- **Federal $1.01 tax increase**
The 2004 SGR: It Takes a Village....
Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012

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- Family Smoking Prevention and Tobacco Control Act
- Cigarette drop
- FDA proposed rule
- Surgeon General’s report on secondhand smoke (an update)
- Federal $1.01 tax increase

The Health Consequences of Involuntary Exposure to Tobacco Smoke
A Report of the Surgeon General

Year

Number of cigarettes


0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000
The 2006 SGR: The Release, June 27, 2006
Conclusions: 2006 Report

4. The scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke

5. Many millions of Americans, both children and adults, are still exposed to secondhand smoke in their homes and workplaces, despite substantial progress in tobacco control

6. Eliminating smoking in indoor spaces fully protects nonsmokers from exposure to secondhand smoke (separating smokers from nonsmokers, cleaning the air, and ventilating buildings cannot eliminate exposure of nonsmokers to secondhand smoke)
Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012

- U.S. entry into WWI
- Great Depression begins
- U.S. entry into WWII
- Confluence of evidence linking smoking and cancer
- 1964 Surgeon General’s report on smoking and health
- Broadcast ad ban
- Reassurance campaign begins
- Nonsmokers’ rights movement begins
- 2010 Federal cigarette

How Tobacco Smoke Causes Disease
The Biology and Behavioral Basis for Smoking-Attributable Disease
A Report of the Surgeon General
U.S. Department of Health and Human Services

- Synar Amendment enacted
- Nicotine medications available over-the-counter
- Master Settlement Agreement
- Family Smoking Prevention and Tobacco Control Act
- FDA proposed rule
- Federal $1.01 tax increase

Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012
The scientific evidence supports the following major conclusions:

1. The evidence on the mechanisms by which smoking causes disease indicates that there is no risk-free level of exposure to tobacco smoke.

2. Inhaling the complex chemical mixture of combustion compounds in tobacco smoke causes adverse health outcomes, particularly cancer and cardiovascular and pulmonary diseases, through mechanisms that include DNA damage, inflammation, and oxidative stress.

3. Through multiple defined mechanisms, the risk and severity of many adverse health outcomes caused by smoking are directly related to the duration and level of exposure to tobacco smoke.

4. Sustained use and long-term exposures to tobacco smoke are due to the powerfully addicting effects of tobacco products, which are mediated by diverse actions of nicotine and perhaps other compounds, at multiple types of nicotinic receptors in the brain.

5. Low levels of exposure, including exposures to secondhand tobacco smoke, lead to a rapid and sharp increase in endothelial dysfunction and inflammation, which are implicated in acute cardiovascular events and thrombosis.

6. There is insufficient evidence that product modification strategies to lower emissions of specific toxicants in tobacco smoke reduce risk for the major adverse health outcomes.
Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012
Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012
Conclusion #1: The century-long epidemic of cigarette smoking has caused an enormous avoidable public health tragedy. Since the first Surgeon General’s report in 1964 more than 20 million premature deaths can be attributed to cigarette smoking.
Major Conclusions from the Report

1. The century-long epidemic of cigarette smoking has caused an enormous avoidable public health tragedy. Since the first Surgeon General's report in 1964 more than 20 million premature deaths can be attributed to cigarette smoking.

2. The tobacco epidemic initiated and has been sustained by the aggressive strategies of the tobacco industry, which has deliberately misled the public on the risks of smoking cigarettes.

3. Since the first Surgeon General's report, smoking has become an international problem, with all of the diseases caused by smoking seen in every country, and the hazards of smoking, including use by women, have increased significantly.

4. Exposures to secondhand smoke cause diseases, and to adverse effects on the health of infants and children.

5. The disease risks from smoking by women have risen sharply over the last 50 years and are now equal to those for men for lung cancer, chronic obstructive pulmonary disease, and cardiovascular diseases.

6. In addition to causing multiple diseases, cigarette smoking has many other adverse effects on the body, such as causing inflammation and impairing immune function.

7. Tobacco use in all corners of the world has increased rapidly, and tobacco use is now known to be associated with all of the diseases caused by smoking.

8. Tobacco control policies have proven effective, and rapid tobacco control policies have proven effective, and rapid"}

9. For 50 years the Surgeon General's reports on smoking and health have provided a critical scientific foundation for public health action directed at reducing tobacco use and preventing tobacco-related disease and premature death.
Conclusions #3-6:

Since the 1964 Surgeon General’s report, cigarette smoking has been causally linked to diseases of nearly all organs of the body, to diminished health status, and to harm to the fetus. Even 50 years after the first Surgeon General’s report, research continues to newly identify diseases caused by smoking, including such common diseases as diabetes mellitus, rheumatoid arthritis, and colorectal cancer.

Exposure secondhand tobacco smoke has been causally linked to cancer, respiratory, and cardiovascular diseases, and to adverse effects on the health of infants and children.

The disease risks from smoking by women have risen sharply over the last 50 years and are now equal to those for men for lung cancer, chronic obstructive pulmonary disease, and cardiovascular diseases.

In addition to causing multiple diseases, cigarette smoking has many other adverse effects on the body, such as causing inflammation and impairing immune function.
Active Smoking

Cancers

- Oropharynx
- Larynx
- Esophagus
- Trachea, bronchus, and lung
- Acute myeloid leukemia
- Stomach
- Liver
- Pancreas
- Kidney and ureter
- Cervix
- Bladder
- Colorectal

Chronic Diseases

- Stroke
- Blindness, cataracts, age-related macular degeneration
- Congenital defects—maternal smoking: orofacial clefts
- Periodontitis
- Aortic aneurysm, early abdominal aortic atherosclerosis in young adults
- Coronary heart disease
- Pneumonia
- Atherosclerotic peripheral vascular disease
- Chronic obstructive pulmonary disease, tuberculosis, asthma, and other respiratory effects
- Diabetes
- Reproductive effects in women (including reduced fertility)
- Hip fractures
- Ectopic pregnancy
- Male sexual function—erectile dysfunction
- Rheumatoid arthritis
- Immune function

Overall diminished health

Source: USDHHS 2014
Passive Smoking

Children
- Middle ear disease
- Respiratory symptoms, impaired lung function
- Sudden infant death syndrome

Adults
- Stroke
- Nasal irritation
- Lung cancer
- Coronary heart disease
- Lower respiratory illness
- Reproductive effects in women: low birth weight

Source: USDHHS 2014
Conclusions #7-9:
Although cigarette smoking has declined significantly since 1964, very large disparities in tobacco use remain across groups defined by race, ethnicity, educational level, and socioeconomic status and across regions of the country.

Since the 1964 Surgeon General’s report, comprehensive tobacco control programs and policies have been proven effective for controlling tobacco use. Further gains can be made with the full, forceful, and sustained use of these measures.

The burden of death and disease from tobacco use in the United States is overwhelmingly caused by cigarettes and other combusted tobacco products; rapid elimination of their use will dramatically reduce this burden.
Chapter 15
The Changing Landscape of Tobacco Control—Current Status and Future Directions

Introduction 845

The Tobacco Control Landscape: Over a Hundred Years and Counting 845


Looking to the Future 851

Potential End Game Strategies 852

Additional Concepts that Complement National Tobacco Control Efforts 855

Ending the Tobacco Epidemic in the United States 856

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Implications for Ending the Tobacco Epidemic 859

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Chapter Conclusions:

1. Together, experience since 1964 and results from models exploring future scenarios of tobacco control indicate that the decline in tobacco use over coming decades will not be sufficiently rapid to meet targets. The goal of ending the tragic burden of avoidable disease and premature death will not be met quickly enough without additional action.

2. Evidence-based tobacco control interventions that are effective continue to be underutilized and implemented at far below funding levels recommended by the Centers for Disease Control and Prevention. Implementing tobacco control policies and programs as recommended by Ending the Tobacco Epidemic: A Tobacco Control Strategic Plan by the U.S. Department of Health and Human Services and the Ending the Tobacco Problem: A Blueprint for the Nation by the Institute of Medicine on a sustained basis at high intensity would accelerate the decline of tobacco use in youth and adults, and also accelerate progress toward the goal of ending the tobacco epidemic.

3. New “end game” strategies have been proposed with the goal of eliminating tobacco smoking. Some of these strategies may prove useful for the United States, particularly reduction of the nicotine content of tobacco products and greater restrictions on sales (including bans on entire categories of tobacco products).
Chapter 16

A Vision for Ending the Tobacco Epidemic: Toward a Society Free of Tobacco-caused Death and Disease

A Vision for Ending the Tobacco Epidemic  867
Historical Perspective  867
Health Consequences  870
Ending the Tobacco Epidemic  870

Accelerating the National Movement to Reduce Tobacco Use  875

References  876
Key policy messages:

- Counteracting industry marketing by sustaining high impact national media campaigns like the CDC’s Tips from Former Smokers campaign and FDA’s youth prevention campaigns at a high frequency level and exposure for 12 months a year for a decade or more;
- Raising the average excise cigarette taxes to prevent youth from starting smoking and encouraging smokers to quit;
- Fulfilling the opportunity of the Affordable Care Act to provide access to barrier-free proven tobacco use cessation treatment including counseling and medication to all smokers, especially those with significant mental and physical comorbidities;
- Expanding smoking cessation for all smokers in primary and specialty care settings by having health care providers and systems examine how they can establish a strong standard of care for these effective treatments;
- Effective implementation of FDA’s authority for tobacco product regulation in order to reduce tobacco product addictiveness and harmfulness;
- Expanding tobacco control and prevention research efforts to increase understanding of the ever changing tobacco control landscape;
- Fully funding comprehensive statewide tobacco control programs at CDC recommended levels; and
- Extending comprehensive smokefree indoor protections to 100% of the U.S. population.
Looking Ahead: Chapter 16

• Rapid reduction of combustible products
• Reduction of nicotine content in cigarettes
• Role of non-combustible products
  – Under Tobacco Control Act
  – Individual harm reduction vs. Population risk
• Using all strategies better and in concert
LET'S MAKE THE NEXT GENERATION
TOBACCO-FREE
Your Guide to the 50th Anniversary Surgeon General's Report on Smoking and Health

U.S. Department of Health and Human Services
THE NEXT 50 YEARS

IF WE COULD HELP EVERY SMOKER TO QUIT SMOKING AND KEEP YOUNG PEOPLE FROM STARTING IN THE FIRST PLACE, THE RESULTS WOULD BE STAGGERING.

1/2 MILLION PREMATURE DEATHS
could be prevented every year.

AT LEAST $130 BILLION
in direct medical costs for adults
could be saved every year.

AT LEAST 88 MILLION AMERICANS
who continue to be exposed to the dangerous chemicals in secondhand smoke could breathe freely.

5.6 MILLION CHILDREN
alive today who ultimately will die early because of smoking could live to a normal life expectancy.

MORE THAN 16 MILLION PEOPLE
already have at least one disease from smoking.
We could prevent that number from growing more.

1 OUT OF 3 CANCER DEATHS
in this country could be prevented.

AT LEAST $156 BILLION
in losses to our economy—caused when people get sick and die early from smoking—could be prevented.

Despite all our progress, there is more work to be done. Every day 3,200 youth under 18 smoke their first cigarette, and another 2,100 youth and young adults who have been occasional smokers become daily smokers.

Saving Millions of Lives
There are many ways to reduce smoking rates quickly and dramatically.

Among the strategies proven to work are:

- Affordable smoking cessation treatments that are easily available to people who want to quit;
- Comprehensive smokefree and tobacco-free policies in public places that protect nonsmokers and make smoking the exception rather than the norm;
- Higher prices on cigarettes and other tobacco products that discourage young people from starting in the first place and that encourage adult smokers to quit;
- Continued mass media campaigns that inform people of the dangers of smoking and tell them about resources to help them quit; and
- State and community programs that help integrate tobacco control into medical, retail, education, and public health environments that reach groups of people who might not otherwise be exposed to tobacco control initiatives.
List of Smoking-Related Illnesses Grows Significantly in U.S., Report

By SABRINA TAVERNISE

WASHINGTON — In a broad review of scientific literature, the nation’s top doctor has concluded that cigarette smoking — long known to cause lung cancer and heart disease — also causes diabetes, colorectal and liver cancers, erectile dysfunction and ectopic pregnancy.

In a report to the nation to be released on Friday, the acting surgeon general, Dr. Boris D. Lushniak, significantly expanded the list of illnesses that cigarette smoking has been scientifically proved to cause.

The other health problems the report names are vision loss, tuberculosis, rheumatoid arthritis, impaired immune function and cleft palates in children of women who smoke.

Smoking has been known to be associated with these illnesses, but the report was the first time the federal government concluded that smoking causes them.

The finding does not mean that smoking causes all cases of the health problems and diseases listed in the report, but that some of the cases would not have happened without smoking. The surgeon general has added to the list of smoking-related diseases before. Bladder cancer was added in 1990 and cervical cancer in 2004.

The report is not legally binding, but is broadly held as a standard for scientific evidence among researchers and policy makers.

Experts not involved in writing the report said the findings were a comprehensive summary of the most current scientific evidence, and while they might not be surprising to researchers, they were intended to inform the public as well as doctors and other medical professionals about the newest proven risks of smoking.

“I thought the science was very well done and up to date,” said Dr. Robert Wallace, a professor of epidemiology and internal medicine at the University of Iowa, who helped review the report.

The report comes 50 years after the pivotal 1964 surgeon general’s report in which the government concluded for the first time that smoking caused lung cancer. That report was credited with starting to change public attitudes toward smoking, which has declined sharply. In 1965, about 43 percent of adults were smokers; in 2012, about 18 percent were.

But that decline has slowed in recent years, and the new report calls for stronger action in combating smoking. Smoking is the largest cause of premature death in the country, killing more than 400,000 people a year. The report notes that far more Americans have died prematurely from cigarette smoking than in all the wars ever fought by the United States.

The report concluded that the evidence was insufficient to say that smoking causes prostate cancer. The evidence was suggestive, but not definite, that smoking causes breast cancer.

The document also celebrates the public health success of smoking’s decline since Dr. Luther Terry, the surgeon general in 1964, released his landmark finding. Smoking was deeply embedded in American culture at the time. Half of adult men were smokers, and a third of women. Even doctors smoked.

That report was so controversial that it was released on a Saturday when Congress was on recess to minimize the political repercussions, said Dr. Richard D. Hurt, a professor of medicine at the Mayo Clinic.

Dr. Judith Fradkin, a diabetes scientist at the National Institutes of Health, who was not involved in the report, said the evidence that smoking increases the risk of Type 2 diabetes had been gathering for about 20 years.

While smoking causes most cases of lung cancer, it causes only a small fraction of liver and colorectal cancers. A current smoker is 25 times as likely to develop lung cancer as someone who has never smoked, and by 2010, the additional risk had jumped nearly tenfold. For men, the risk doubled over the same period. The report said changes in cigarettes’ design, namely to the filter, contributed to the increased deadliness.

“It is stunning that the risk of a premature death from smoking is greater than it was 50 years ago,” said Matthew Myers, head of the Campaign for Tobacco-Free Kids, an advocacy group.
Cigarettes are deadlier and linked to more diseases than previously thought, according to a new report from the U.S. surgeon general being released 50 years after the government first warned that smoking kills.

In the report to be released Friday, the nation's top doctor warned that smoking is linked to the deaths of about 480,000 Americans annually. That's a substantial increase over the government's previous estimate of 443,000 deaths, despite the fact that fewer Americans are lighting up and those who do smoke are lighting up less often.

Cigarettes are a causal factor in 10 diseases and conditions they hadn't previously been definitively linked to, including diabetes, colorectal cancer, arthritis and erectile dysfunction, the report said—bringing the total number to more than 30.

In 1964, a landmark surgeon general report pinpointed smoking as a cause of lung and laryngeal cancers as well as bronchitis. That report precipitated health warnings on cigarette packs, advertising bans and other regulations. Since then, such restrictions have contributed to a decline in U.S. smoking rates, though the pace has slowed in recent years. An estimated 18.1% of U.S. adults, or 42 million people, smoked in 2012, down from 42% in 1965.

Friday's report suggests the design and composition of today's cigarette is more dangerous than the 1950s equivalent because of the introduction of ventilated filters and rising levels of cancer-causing chemicals in recent decades. Cigarettes with ventilated filters were initially marketed as safer, though smokers tend to cover up the filters and inhale more deeply, pushing toxins farther into the lungs.

"I think they are more harmful today. We're certainly worried," Surgeon General Boris Lushniak said in an interview.
Surgeon General’s Report on Tobacco Has a New Target: E-Cigarettes

They’re popular, but public health agencies have yet to rule on whether they’re a safe alternative to traditional cigarettes.

By Alexandra Sifferlin @acsifferlin | Jan. 17, 2014 | 23 Comments

Fifty years after the first Surgeon General’s report on tobacco in 1964, the latest report highlights improvements in American’s smoking habits, as well as a potentially new hazard for Americans’ health.

Smoking cigarettes kills about half a million Americans every year, and 16 million Americans are living with smoking-related health problems. These are costing the nation more than $289 billion each year in medical care and related costs.

The report acknowledged a new way of smoking — with electronic cigarettes or e-cigarettes, which are tobacco products with lower nicotine levels. More young people are using these products; the number of middle school and high school students who use e-cigarettes doubled from 2011 to 2012.

“Those need to monitor patterns of use of an increasingly wide array of tobacco products across all of the diverse segments of our society, particularly because the tobacco industry continues to introduce and market new products that establish and maintain nicotine addiction,” Dr. Thomas R. Frieden, the director of the CDC writes in the foreword of the report.
Surgeon general urges new resolve to end smoking as landmark report turns 50
This month, the U.S. Surgeon General's report on The Health Consequences of Smoking reminded us just how far we've come over the last 50 years in our efforts to control tobacco use and prevent our youth from smoking. Smoking rates are dramatically lower than in 1964 when the first Surgeon General's report about the dangers of smoking was released (42 percent compared to 18 percent in 2012).

Tobacco control and prevention efforts have saved eight million Americans.

Despite these significant gains, our fight to reduce tobacco use is far from won, and the Surgeon General's report tells us just how much is at stake. Despite tremendous progress, cigarette smoking kills even more Americans than previously estimated (about 480,000 a year, up from 443,000) and causes more deadly cancers and chronic diseases than we thought 50 years ago. Because of changes in how they are made and what chemicals are added to them, cigarettes are even deadlier and more addictive now than when they were first introduced. The risk of developing the most common type of lung cancer has increased substantially since we first learned that smoking causes lung cancer.
The cigarette industry

Running out of puff

Big tobacco firms are maintaining their poise, but quietly wheezing

Jan 25th 2014 | From the print edition

"CIGARETTE smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action." It was 50 years ago this month that America’s surgeon-general sounded that warning, marking the beginning of the end of cigarette manufacturing—and of smoking itself—as a respectable activity. Some 20m Americans have died from the habit since then. But advertising restrictions, smoking bans and stigma have had their effect: the proportion of American adults who smoke has dropped from 43% to 18%; smoking rates among teenagers are at a record low. In many other countries the trends are similar.

The current surgeon-general, Boris Lushniak, marked the half-century with a report on January 17th, declaring smoking even deadlier than previously thought. He added diabetes, colorectal cancer and other ailments to the list of ills it causes, and promised "end-game strategies" to stamp out cigarettes altogether.

Were that to happen America’s three big tobacco firms, Altria, Reynolds and Lorillard, could be snuffed out, too. Public-health officials plot the same fate for multinationals that supply other markets. The hit list includes Philip Morris International (PMI), which along with Altria makes Marlboro, the top-selling global brand; Japan Tobacco; and British American Tobacco and Imperial Tobacco of Britain.
The Health Benefits of Never Smoking—100 Years of Knowledge

A Report of the Surgeon General

U.S. Department of Health and Human Services