

The 1964 Surgeon General's Report: Communicating the Hazards of Smoking to the Public

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The seminal 1964 Surgeon General's report catalyzed the anti-smoking movement and transformed the social image of smoking. Surgeon General Luther Terry left a legacy with the diverse committee he led, reviewing 7,000 scientific articles from global studies and consolidating the findings into a cohesive document that commanded public attention in national news outlets. Amidst the seemingly contradictory scientific findings and confusion fueled by the tobacco industry's advertisements and "research," the Surgeon General's report alerted the nation to the multitude of adverse health effects. The landmark report shifted the public perception of smoking from a matter of personal choice and private risk to a choice that affects smokers and non-smokers alike due to secondhand smoke. Gradually, the newfound shared responsibility between the government, physicians, and individuals spurred legislative changes to combat the pressing public health issue. After decades of effective communication and policy reforms, smoking is at record lows today; however, tobacco companies are employing similar advertisement tactics to target the new generation of consumers.

Historical Context

During World War I, government-sponsored campaigns distributed daily supplies of cigarettes to soldiers as an alternative to more serious vices.^{1,2} Once a symbol of moral decay, smoking became a respectable patriotic act. Sharing a cigarette soon was "a new commodity of morale" and a symbol of "the camaraderie of war."^{3,4}

This newfound acceptance paved the way for the assimilation of cigarettes at home, assuming a central role in American consumer culture.⁵ Female factory workers and white-collar professionals also began smoking, leading to higher demand for cigarettes. From 1914 to 1920, the percentage of American tobacco consumption through cigarettes jumped from 7 percent to 20 percent.⁶ Spurred by the instant coast-to-coast success, in the 1920s, R.J. Reynolds was the first company to focus on communication through advertising to market their Camel Brand cigarettes. This marked the beginning of the relentless promotion of the glorified cigarette and intense

¹ "Ad Collections." SRITA, tobacco.stanford.edu/cigarettes/war-aviation/world-war-i/. Accessed 12 June 2023.

² Chandler, Graham. "The Smoke of War." *Legion Magazine*, 23 Feb. 2018, legionmagazine.com/en/2018/02/the-smoke-of-war/.

³ Allan M. Brandt, *The Cigarette Century: The Rise, Fall, and Deadly Persistence of the Product that Defined America* (New York: Basic Books, 2007), 53

⁴ "Chapter 2: A Historical Review of Efforts to Reduce Smoking in the United States." *Tobacco Data Statistics Report*, Center of Disease Control and Prevention, www.cdc.gov/tobacco/data_statistics/sgr/2000/complete_report/pdfs/chapter2.pdf.

⁵ Sarah Milov, *The Cigarette: A Political History* (Cambridge: Harvard University Press, 2019), 27

⁶ Scott Stern, "How War Made the Cigarette," *The New Republican*, September 25, 2019

economic competition. Other companies such as Camel, Lucky Strike and Chesterfield followed suit, spending millions on advertising and promotion to encourage smoking.⁷

Emotional dependency on smoking combined with the tobacco industry's aggressive tactics to cultivate a desirable image made smoking a quintessential part of daily life in the twentieth century. Successful cigarette advertising sold the smoker not only on a brand, but an identity.⁸ Slender, fashionable women portrayed smoking as a way to stay slim and a symbol of sophistication.⁹ The industry communicated the "health benefits" of smoking by curating cigarette advertisements that capitalized on trusted medical professionals' endorsements.^{10, 11} Hiring actors to pose as doctors, Big Tobacco company cigarette advertisements prescribed smoking as "soothing to the nerves" and claimed it was suitable for addressing throat irritation concerns, colds, and digestion among other health conditions.^{12, 13} Ads featuring cherished icons from the Statue of Liberty to Santa Claus and incorporating children and pets reinforced the "harmlessness" of the habit.¹⁴ To further dispel emerging health concerns, the "More Doctors Smoke Camels" campaign was created and free cigarettes were distributed at medical conventions to entice doctors to advocate for particular brands.

Early Scientific Findings

Lung cancer diagnosis constituted less than 1% of all cancers in the 19th century.¹⁵ Better record-keeping, the development of chest X-rays, and industrial pollution were cited for the surge in the 20th century. As deaths from lung cancer rose exponentially, researchers conducted epidemiologic studies to determine the cause.

With chronic disease studies in their infancy, scientific findings were largely dismissed. In 1939, Franz Herman Muller of Cologne, Germany performed the first case-control study. He used 86 lung cancer cases and 86 matched controls to demonstrate that smokers are far more likely to develop lung cancer than nonsmokers.¹⁶ Similar findings in the United States verified the link. Ernest Wynder and Evarts Graham assessed 605 lung cancer cases in American hospitals. They found that 96.5% of the 605 men with bronchogenic carcinoma were moderately heavy to chain

⁷ "1920 – 1939 the Golden Age." History of Tobacco Policy, tobaccoexhibits.musc.edu/?page_id=149. Accessed 12 June 2023.

⁸ "Selling Smoke: Tobacco Advertising and Anti-Smoking Campaigns," Yale University Library Online Exhibit

⁹ Stanford University Research into the Impact of Tobacco Advertising

¹⁰ TIRC, TOBACCO INDUSTRY RESEARCH COMM. "A Frank Statement to Cigarette Smokers." UCSF Truth Tobacco Industry Documents, 4 Jan. 1954.

¹¹ Curated by Alan Blum, MD. "The American Medical Association: The Unfiltered TRUTH...About Smoking and Health." University of Alabama Center for the Study of Tobacco and Society.

¹² Stanford University Research into the Impact of Tobacco Advertising (SRITA). Accessed January 2, 2021

¹³ Robert N. Proctor, *Golden Holocaust*, 67

¹⁴ "Camel invites you" (*New York State Journal of Medicine*, 1942)

¹⁵ Adler I. *Primary malignant growth of the lung and bronchi*. New York: Longman, Green, Company; 1912.

¹⁶ Otis W. Brawley MD, "The First Surgeon General's Report on Smoking and Health: The 50th anniversary," *American Cancer Society Journals*, November 18, 2013

smokers compared with 73.7% among the general male hospital population without cancer. They also noted that lung cancer in a nonsmoker or minimal smoker was rare. Subsequent studies from Sir Richard Doll and Sir Bradford Hill in 1950 and Hammond and Horn in 1954 found correlations between having a history of regular cigarette smoking and the prevalence and mortality rate of heart disease and cancers respectively.¹⁷ Dr. Alton Ochsner, an anti-smoking advocacy pioneer, faced ridicule from fellow physicians, more than two-thirds of whom smoked.¹⁸ He claimed that there is a “distinct parallelism” between cigarette sales and the “incidence of bronchogenic carcinoma.”¹⁹ In the March 1955 issue of the *American Journal of Public Health*, the reviewer stated that while Ochsner was an “outstanding surgeon,” the causal relationship between cigarettes and cancer was not proven through his 1954 book, *Smoking and Cancer: A Doctor’s Report*. The reviewer went on to add that he plans to “place this book in the nonscience section of his library.”²⁰

Cigarette companies emphasized that a conclusive statement could not be made since correlation does not necessarily imply causation. Unethical studies subjecting humans to carcinogenic substances would be the only way to prove a link. However, by the 1950s, lung cancer became the most common cancer diagnosed and the accumulated evidence of health detriment from each of these smoking studies became undeniable.

In response, the tobacco companies formed the Tobacco Industry Research Committee to dispel consumers’ fears and introduced safer cigarettes with filters “so safe, so pure, it’s used to filter the air in many hospitals.”^{21, 22} In 1952, filtered cigarettes accounted for less than 2% of sales, but by 1957, this had grown to 40% and would surpass 60% by 1966.²³ However, smokers of filtered brands often inhaled as much or more tar, nicotine, and noxious gasses as smokers of unfiltered cigarettes since they often take longer, deeper, or more frequent puffs. Furthermore, their sponsored TV programs, including cartoons, communicated the benefits of smoking.²⁴ Two out of three movie stars such as Lucille Ball and John Wayne smoked their favorite brand on screen.

¹⁷ Elizabeth Mendes, "The Study That Helped Spur the US Stop-smoking movement," American Cancer Society, January 9, 2014

¹⁸ Blum A. Alton Ochsner, MD, 1896-1981 Anti-Smoking Pioneer. Ochsner J. 1999 Jul;1(3):102-5. PMID: 21845126; PMCID: PMC3145444.

¹⁹ Ibid. Blum A. Alton Ochsner, MD, 1896-1981 Anti-Smoking Pioneer.

²⁰ Alan Blum, M.D., "Blowing Smoke: The Lost Legacy of the 1964 Surgeon General’s Report on Smoking and Health," *Oncology*, Volume 28, Issue 5, May 14, 2014

²¹ Blum A. Alton Ochsner, MD, 1896-1981 Anti-Smoking Pioneer

²² Consumers’ Preferences for Electronic Nicotine Delivery System Product Features: A Structured Content Analysis Christine Kistler, Trisha Crutchfield, Erin Sutfin, Leah Ranney, Micah Berman, Gary Zarkin, Adam Goldstein *International Journal of Environmental Research and Public Health*

²³ K. Michael Cummings, "The Changing Public Image of Smoking in the United States: 1964-2014," *Cancer Epidemiology, Biomarkers & Prevention*. Volume 23, Issue 1, 2014

²⁴ “Selling Smoke: Tobacco Advertising and Anti-Smoking Campaigns.” Yale University Library, onlineexhibits.library.yale.edu/s/sellingsmoke/page/antismoking.

Even the Flintstones promoted Winston as the “best-selling, best-tasting” filter cigarette.²⁵ Flashy signs like the famous Camel Man on the billboard looming over Times Square that “blew endless perfect smoke rings into the neo-lit night sky” captured the attention of young and old alike.^{26, 27}

Government intervention became necessary as contradictory communication ensued. Despite the growing scientific awareness of major health harms from cigarettes, a 1960 American Cancer Society poll found that only a third of all physicians in the United States were convinced that smoking was “a major cause” of lung cancer.²⁸

Amid pressure from the American Cancer Society and the American Public Health Association leaders, President Kennedy requested that Surgeon General Luther Terry investigate “the widespread implications of the tobacco problem” in 1961.²⁹ Dr. Terry emphasized impartiality, open-mindedness, and analytical skills in a transparent selection process of the Advisory Committee on Smoking and Health. The experts on Surgeon Terry’s committee included representatives of the four voluntary medical organizations who had first proposed the commission, as well as the Food and Drug Administration (FDA), the Federal Trade Commission, the American Medical Association, and the Tobacco Institute (the lobbying arm of the tobacco industry).³⁰ In total, he was heading up a committee of 10 scientific experts, including five smokers and five non-smokers. This group analyzed 7,000 scientific and public health studies from 5 different countries over the two previous decades.^{31, 32}

Impacts of the 1964 Surgeon General’s Report

On January 11, the 387-page 1964 Surgeon General’s Report was published. It was the first document to communicate the gravity of the health consequences of smoking including lung cancer, laryngeal cancer, and chronic bronchitis, garnering widespread media attention. It

²⁵ Stanford Research into the Impact of Tobacco Advertising, tobacco.stanford.edu/tobacco_main/images.php?token2=fm_st014.php&token1=fm_img2905.php&theme_file=f.

²⁶ Allan M. Brandt, *The Cigarette Century*, 1

²⁷ Giles, Jeff. “When Neon Owned the Night.” *The New York Times*, *The New York Times*, 10 May 2019, www.nytimes.com/2019/05/10/multimedia/neon-signs-vintage-photos.html.

²⁸ Robert N. Proctor, *Golden Holocaust*, 309

²⁹ Brawley, O.W., et. al., "The first surgeon general's report on smoking and health: The 50th anniversary. *CA: A Cancer Journal for Clinicians*." *ACS Journals* Volume 64, no. 1 (2014) Accessed January 19, 2021. <https://doi.org/10.3322/caac.21210>.

³⁰ “The 1964 Report on Smoking and Health | Reports of the Surgeon General - Profiles in Science.” U.S. National Library of Medicine, National Institutes of Health, profiles.nlm.nih.gov/spotlight/nn/feature/smoking.

³¹ National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta (GA): Centers for Disease Control and Prevention (US); 2014. 3, Producing the Surgeon General's Report From 1964–2014: Process and Purpose. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK294311/>

³² Advisory Committee. “Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service.” U.S DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, 1 Jan. 1964.

declared that smokers were “70% more likely to die of a fatal heart attack than nonsmokers and that there was a strong association between cigarette smoking and cancer of the esophagus and bladder, emphysema, peptic ulcers, and premature babies.”³³ After the announcement, newspaper headlines across the country and lead stories on television newscasts focused on the hazards of smoking for several days.³⁴ It was ranked among the top news stories of 1964.^{35, 36} The document was a landmark first step in the decline of tobacco use, improving the health of the American people.³⁷ In 1958, before the release of the Surgeon General’s report, only 44 percent of smokers believed smoking causes cancer, compared to 78 percent by 1968, illustrating the wide-reaching effects of Dr. Luther Terry’s effective communication.³⁸

Prior to the public announcement, many studies had been conducted separately, but they had not been pulled together into one comprehensive report from a government-backed authoritative source: the Surgeon General of the United States. The individual reports also contained some contradictions and lacked unanimity, although that is common in medical research. Furthermore, the tobacco industry focused on attacking previous reports and funding research to challenge any previous findings of tobacco being harmful to health.

The Surgeon General’s report prompted the federal, state and local governments to pass tobacco control acts in the years to follow. With 42% of Americans smoking in the 1960s, understanding the danger was the first step, but breaking the addiction was a gradual process of communication between health authorities, Congress, and the public.³⁹

In response to the health hazards detailed in the Surgeon General's report, Congress passed the 1965 Federal Cigarette Labeling and Advertising Act mandating warning labels on cigarette packages.^{40, 41} Subsequently, the 1969 Federal Communications Commission Fairness Doctrine

³³ Dr. Howard Markel, "This surgeon general’s famous report alerted Americans to the deadly dangers of cigarettes," PBS, January 11, 2018

³⁴ Anthony Komaroff MD, "Surgeon General’s 1964 report: making smoking history," Harvard Health Letter, January 10, 2014

³⁵ "History of the Surgeon General's Reports on Smoking and Health," Centers for Disease Control and Prevention

³⁶ Center for the Study of Tobacco and Society, director. 1964 NBC Special Report on Surgeon General's Smoking Report, 6 Mar. 2017, www.youtube.com/watch?v=LxMxHQOSN_Q&feature=emb_title.

³⁷ “Surgeon General’s Reports on Smoking and Tobacco Use.” Centers for Disease Control and Prevention, 3 May 2022, www.cdc.gov/tobacco/sgr/index.htm.

³⁸ “The 1964 Report on Smoking and Health | Reports of the Surgeon General - Profiles in Science.” U.S. National Library of Medicine, profiles.nlm.nih.gov/spotlight/nn/feature/smoking. Accessed 13 June 2023.

³⁹ United States. Public Health Service. Office of the Surgeon General. "The Health consequences of smoking—50 years of progress : a report of the Surgeon General : executive summary" , 2014

⁴⁰ Mientka, Matthew. “Surgeon General's Iconic Cigarette Warning Turns 50: How Has Smoking In America Changed Since?” Medical Daily, 11 Jan. 2014, www.medicaldaily.com/surgeon-generals-iconic-cigarette-warning-turns-50-how-has-smoking-america-changed-266904.

⁴¹ National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General. Atlanta (GA): Centers for Disease Control and Prevention (US); 2012. Figure 6.5, Health warnings on cigarette packages in the United States. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK99240/figure/ch6.f5/>.

required contrasting views on controversial matters to be broadcasted. Thus, anti-smoking advertisements were aired to counteract the tobacco industry's deceptive advertising strategies. With the passing of the Public Health Cigarette Smoking Act of 1971, all cigarette packages were required to have sterner warnings on all cigarette packages and cigarette advertising was banned on television and radio. These steps began to change the public image of smoking to one of social stigmatization, decreasing cigarette consumption rates.

To regain their market share and assuage consumer fears, tobacco companies used similar tactics to those used when lung cancer first became prevalent. They introduced “low-tar” and “light” cigarettes in the 1960s to 1970s and continued to print magazine advertisements after the ban on television.^{42, 43, 44} Compensatory smoking often occurs with low-yield cigarettes negating any intended reduction of tar intake. Their public relations campaign sowed seeds of doubt and undermined scientific evidence.⁴⁵ While the 1964 Surgeon General’s report had a large and immediate effect on Americans’ perspectives on smoking, these tactics created controversy and delayed policy implementation.⁴⁶

Evidence of the harmful effects of secondhand smoke sparked activism in the groundbreaking 1975 Minnesota Indoor Clean Air Act which separated “No Smoking” and “Smoking Permitted” public areas.^{47, 48} Anti-smoking rights movements communicated the true dangers of smoking. Using the same aggressive advertising tactics, they effectively reversed the message leading to state laws that require all workplaces, bars and restaurants to be smoke-free.⁴⁹ To deter teens from smoking, leading health organizations proposed higher cigarette taxes and R-ratings for movies with smoking scenes.

⁴² Brandt, Allan M. “Comment Submitted by Dr. Allan M. Brandt.” Federal Trade Commission (FTC).

⁴³ Cummings, Michael K., and Robert N. Proctor. “The changing public image of smoking in the United States: 1964-2014.” *Cancer epidemiology, biomarkers & prevention: a publication of the American Association for Cancer Research*, cosponsored by the American Society of Preventive Oncology vol. 23,1 (2014): 32-6. doi:10.1158/1055-9965.EPI-13-0798

⁴⁴ Calfee, John E. “Cigarette Advertising, Health Information and Regulation Before 1970.” US Federal Trade Commission, Bureau of Economics, Dec. 1985.

⁴⁵ Bates, Clive. *Tobacco Explained: The truth about the tobacco industry ...in its own words* [PDF]. WHO. <https://www.who.int/tobacco/media/en/TobaccoExplained.pdf>

⁴⁶ Marshall, Thomas R. “The 1964 Surgeon General's report and Americans' beliefs about smoking.” *Journal of the history of medicine and allied sciences* vol. 70,2 (2015): 250-78. doi:10.1093/jhmas/jrt057

⁴⁷ “New York Implements Tobacco-Free Campus Policies.” Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 6 June 2018, www.cdc.gov/tobacco/disparities/promising-policies-and-practices/new-york-implements-tobacco-free-campus-policies.html.

⁴⁸ Institute of Medicine (US) Committee on Secondhand Smoke Exposure and Acute Coronary Events. *Secondhand Smoke Exposure and Cardiovascular Effects: Making Sense of the Evidence*. Washington (DC): National Academies Press (US); 2010. 5, The Background of Smoking Bans. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK219563/>.

⁴⁹ Andrew Hyland, et. al., "Smoke-free air policies: past, present and future," *BMJ Journal* Volume 21 Issue 2, March 21, 2012

While the anti-smoking movement has made impressive strides, the tobacco industry's political influence and financial incentives for medical professionals and government officials hindered the passage of more restrictive tobacco control for decades. Being long-time recipients of largesse from the tobacco giants, members of Congress, the mass media, organized medicine, and academia were reluctant "to bite the hand that fed them."⁵⁰ Leading otolaryngologists went so far as taking public positions exculpating tobacco well after the definitive findings in the Surgeon General's report.⁵¹

It was not until 1998 that tobacco companies were forced by the courts to reimburse tobacco-related health care costs in the Master Settlement Agreement.⁵² In the case *U.S. v. Philip Morris* in 2006, they were convicted of communicating fraudulent information regarding their products and marketing their products to children. The tobacco companies were liable for violating the Racketeer Influenced and Corrupt Organizations Act (RICO). The Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) was signed into law giving the FDA authority to regulate the manufacture, distribution, and marketing of tobacco products in 2009.⁵³

While the FDA proposed graphic labels on cigarette packages such as a child with an oxygen mask or a woman with a huge bump on her neck a decade ago, litigation by Big Tobacco has delayed the implementation. If the warnings had been printed on cigarette boxes in 2012, researchers estimate about 365,000 to 1,060,000 deaths might have been prevented, and 5.7 million to 16.6 million life-years could have been gained, roughly 40% higher.⁵⁴

Similar graphic health warnings on cigarette packs required in over 120 countries including Canada and Australia have already been saving lives. The U.S. has been lagging behind the rest of the world when it comes to this issue.⁵⁵ The repulsive negative consequence warnings should be used to deter adults from smoking instead of allowing e-cigarettes as a substitute. E-cigarette ads on social media target youth with appealing flavors using themes of romance, freedom, and rebellion, reminiscent of cigarette ads. Nearly 70% of middle and high school students have been exposed to e-cigarette ads in some form and studies show that nicotine is more dangerous for

⁵⁰ Alan Blum MD, "Blowing smoke: The lost legacy of the 1964 surgeon general's report on smoking and health," Center for the Study of Tobacco and Society, January 9, 2014

⁵¹ Robert Jackler, "Big Tobacco led throat doctors to blow smoke," Stanford School of Medicine

⁵² "Executive Summary," Campaign for Tobacco-Free Kids Resources, 2018

⁵³ Brandt, Allan M., et al. "FDA Regulation of Tobacco - Pitfalls and Possibilities: NEJM." *New England Journal of Medicine*, 6 Nov. 2008, www.nejm.org/doi/full/10.1056/NEJMp0803729.

⁵⁴ "Graphic Warning Labels on Cigarettes Could Have Prevented Hundreds of Thousands of Deaths." *University of Michigan News*, 24 September, 2021, <https://news.umich.edu/graphic-warning-labels-on-cigarettes-could-have-prevented-hundreds-of-thousands-of-deaths/>.

⁵⁵ "Graphic Warning Labels on Cigarettes Could Have Prevented Hundreds of Thousands of Deaths." *University of Michigan News*, 24 September, 2021, <https://news.umich.edu/graphic-warning-labels-on-cigarettes-could-have-prevented-hundreds-of-thousands-of-deaths/>.

teens whose brains are still developing.⁵⁶ The addiction increases the likelihood of them trying conventional cigarettes. Many e-cigarette users get even more nicotine than they would from a tobacco product since there are extra-strength cartridges, which have a higher concentration of nicotine or users can increase the voltage on the e-cigarette to get a greater “hit” of the substance.⁵⁷ Moreover, there is a greater prevalence of vaping among the younger population with less education from lower-income families.

Conclusion

In the last century, effective communication was responsible for the rise and fall of the cigarette. The 1964 Surgeon General’s Report communicated the health hazards and galvanized legislation and grass-roots movements to reverse the smoking trend.⁵⁸ The methodological rigor Dr. Terry employed in the review process laid the foundation for subsequent reports and evidence-based studies to define disease causation for public health.⁵⁹ Today, E-cigarettes are marketed as dietary supplements and healthy alternatives, endorsed by respected and cherished cultural icons reminiscent of past cigarette advertisements. The American Lung Association has been a strong advocate of removing all “high-nicotine products” and flavored e-cigarette products like menthol from the market to end the youth vaping epidemic.⁶⁰ It was hailed as a victory that the FDA has recently banned Juul and two of the Vuse menthol products from the U.S. markets although tobacco companies have appealed the decisions. Continued anti-smoking campaigns and governmental regulations are crucial to ensure policies today are protecting the most vulnerable groups.

⁵⁶ “E-Cigarette Ads and Youth.” Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 23 Mar. 2017, <https://www.cdc.gov/vitalsigns/ecigarette-ads/index.html>.

⁵⁷ Michael Joseph Blaha, MD, “5 Vaping Facts You Need to Know,” Johns Hopkins Medicine

⁵⁸ “50 Years of Anti-Smoking Efforts Save 8 Million Lives.” American Medical Association, 9 Jan. 2014, <https://www.ama-assn.org/delivering-care/public-health/50-years-anti-smoking-efforts-save-8-million-lives>.

⁵⁹ King, Brian A et al. “Surgeon General’s Reports on Tobacco: A Continued Legacy of Unbiased and Rigorous Synthesis of the Scientific Evidence.” *Nicotine & tobacco research: official journal of the Society for Research on Nicotine and Tobacco* vol. 20,8 (2018): 1033-1036. doi:10.1093/ntr/ntx266.

⁶⁰ FDA Ignores Its Own Data Showing Threat to Kids by Allowing Highly Addictive Vuse to Remain on the Market.” American Lung Association, 12 October, 2021, <https://www.lung.org/media/press-releases/fda-vuse-pmta-statement>.

Annotated Bibliography

Primary Sources

Books

Brandt, Allan M. *The Cigarette Century: The Rise, Fall, and Deadly Persistence of the Product That Defined America*. New York: Basic Books, 2009.

Professor Allan Brandt begins this book with an anecdote of his trip to New York as a seven-year old and being captivated by the Camel Man in Times Square. Throughout the book, he presents the detailed evolution of the cigarettes in the American culture and the role of science and politics. As an expert witness in the Big Tobacco trial, he provided extensive research which I quoted from several parts of this invaluable primary source.

Proctor, Robert N. *Golden Holocaust: Origins of the Cigarette Catastrophe and the Case for Abolition*. Berkeley: University of California Press, 2011.

Drawing from his in-depth research and expert witness experience in tobacco litigation cases, Professor Proctor conveyed the significance of the mechanization of cigarette making, the symbiotic relationship between war and tobacco, and the ingenious marketing that the tobacco companies pioneered. I gained a greater understanding of these influences that propelled the cigarette from a marginalized object to one of the most widely glamorized consumer products in the world. I incorporated several quotes from this book in my website.

Documents

**“Bill Text.” *Bill Text - SB-793 Flavored Tobacco Products.*,
leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200SB793.**

This is the official document for the SB-793 bill in California that would prohibit the sale of flavored tobacco products including mint and menthol flavors where each violation would be fined \$250. While it was a victory for this bill to be passed and set to take effect

January 2021, tobacco companies obtained a referendum to put it on the November 2022 ballot. I read about this current legislation for the Conclusion page.

Brandt, Allan M. “Comment Submitted by Dr. Allan M. Brandt.” Federal Trade Commission (FTC).

This document showed Dr. Allan M. Brandt’s comments urging the FTC to withdraw its understated guidance on low tar and light cigarettes. This would help more people realize that the low yield cigarettes are no less harmful.

Calfee, John E. “Cigarette Advertising, Health Information and Regulation Before 1970.” US Federal Trade Commission, Bureau of Economics, Dec. 1985.

This official document explained the advertisements employed in the 1900s and the FTC’s role before and after the 1964 Surgeon General’s Report. While FTC had been monitoring the advertisements of cigarettes since the beginning of their campaigns, they had not placed strong regulations until after the Surgeon General’s report in 1964. The FTC placed regulations on health claims by tobacco companies on medical benefits and later “low tar” and “filtered cigarettes.”

Rockville. “The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General Executive Summary.” U.S. Department of Health and Human Services, 2014.

This is the official document from the U.S. Department of Health and Human Services celebrates the 1964 Surgeon General’s Report as one of the seminal studies in public health. The report evaluates the progress made since that landmark report.

TIRC, TOBACCO INDUSTRY RESEARCH COMM. “A Frank Statement to Cigarette Smokers.” UCSF Truth Tobacco Industry Documents, 4 Jan. 1954.

As the scientific evidence linking lung cancer to smoking mounted, the tobacco companies formed the Tobacco Industry Research Committee in 1953. Their first act was to publish “A Frank Statement to Cigarette Smokers,” to dispel the fears of the consumers. They claimed that there was no proof or consensus among scientists for the

cause of lung cancer. I used this document image in the Scientific Findings page to show the tobacco industry's reaction to the scientific studies.

Images

“1920 – 1939 The Golden Age.” *History of Tobacco Policy*, Medical University of North Carolina, www.tobaccoexhibits.musc.edu/?page_id=149.

The Medical University of North Carolina provided some ads from different decades.

Though this is a smaller collection, I found an ad enticing women to smoke in the 1920s. I used it on my Historical Context page.

Chandler, Graham. “The Smoke of War.” *Legion Magazine*, 23 Feb. 2018, legionmagazine.com/en/2018/02/the-smoke-of-war/.

This website showed the soldiers smoking in World War I. Photographs depicted camaraderie as they lit up a cigarette for a fellow wounded soldier. I chose one to use on the Historical Context of my website to convey how cigarettes became a morale booster.

Farnworth, Carolyn. “Buck Duke, Roller Skates, and Cigarettes - How One Machine Transformed an Entire Industry.” *Foundation for a Smoke-Free World, Public Health Innovation Blog*, 10 Sept. 2020, www.smokefreeworld.org/buck-duke-roller-skates-and-cigarettes-how-one-machine-transformed-an-entire-industry/.

This article described the cigarette rolling that was done by immigrant girls in the late 1800s and the impact of the Bonsack machine on the business. I used the image of girls manually rolling cigarettes in factories on my Historical Context page.

Giles, Jeff. “When Neon Owned the Night.” *The New York Times*, The New York Times, 10 May 2019, www.nytimes.com/2019/05/10/multimedia/neon-signs-vintage-photos.html.

This image of the Camel Man blowing perfect circular rings was the one depicted in the firsthand account by the author of *The Cigarette Century*. Cigarette Companies used clever marketing tactics to lure old and young alike as Professor Allan Brandt was fascinated by this billboard as a seven-year old. I included this picture along with his quote to illustrate the power of tobacco advertising.

Library of Virginia. “THIS DAY IN VIRGINIA HISTORY.” *Virginia Memory - This Day in Virginia History*, 2016,

www.virginiamemory.com/reading_room/this_day_in_virginia_history/march/08.

The Library of Virginia website contained a clear picture of the Bonsack Cigarette Rolling machine. This innovation, created by a teen and bought by Duke, transformed the production of cigarettes in the late 1800s. I incorporated it on the Historical Context page on my website.

Mientka, Matthew. “Surgeon General's Iconic Cigarette Warning Turns 50: How Has Smoking In America Changed Since?” *Medical Daily*, 11 Jan. 2014,

www.medicaldaily.com/surgeon-generals-iconic-cigarette-warning-turns-50-how-has-smoking-america-changed-266904.

This website contained the iconic warning labels on cigarette packages required by the Federal Cigarette Labeling and Advertising Act of 1965. This act was the first legislation passed after the 1964 Surgeon General’s Report to communicate smoking hazards to the public. I used the images to show examples of the changes in the labels over the years on my website.

National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General. Atlanta (GA): Centers for Disease Control and Prevention (US); 2012. Figure 6.5, Health warnings on cigarette packages in the United States. Available from:

<https://www.ncbi.nlm.nih.gov/books/NBK99240/figure/ch6.f5/>.

This article contained the text of the various Surgeon General warnings on cigarette boxes sold in the United States. I used these images on the Impact page of my website to show the warning labels implemented after the 1964 Surgeon General’s Report.

“New York Implements Tobacco-Free Campus Policies.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 6 June 2018,

www.cdc.gov/tobacco/disparities/promising-policies-and-practices/new-york-implements-tobacco-free-campus-policies.html.

This website contained a photo of a “No Smoking Beyond this Point” sign after the secondhand smoke campaigns enacted smokefree laws. While separate areas for smoking is taken for granted nowadays, these were legislation that anti-smoking movements had to fight for. I used the photo on my Impact page of my website.

Stanford Research into the Impact of Tobacco Advertising,

tobacco.stanford.edu/tobacco_main/images.php?token2=fm_st014.php&token1=fm_img2905.php&theme_file=f.

This collection of tobacco related media is the most complete set I could find. Categorized by types of endorsements and campaigns, these ads clearly demonstrate the ingenious marketing strategies that followed the sentiment and trends of each time period including patriotism, family life, elections, and independence. Many of the ads and the Flintstones cartoon video on my website come from this incredible library of tobacco advertising.

“Selling Smoke: Tobacco Advertising and Anti-Smoking Campaigns.” *Yale University Library*, onlineexhibits.library.yale.edu/s/sellingsmoke/page/antismoking.

The Yale library online exhibit of tobacco ads was another good collection. Though not as extensive, the explanations were excellent. I used the 1957 Luckies Calendar on the Advertising Tactics page as this clever advertisement illustrated the lifestyle the tobacco industry was selling to the public.

“The Landmark 1964 Surgeon General's Report on Smoking and Health.” *The Center for the Study of Tobacco and Society*, csts.ua.edu/ama/1964-surgeon-generals-report/.

This website part of the Unfiltered Truth contained a wealth of newspaper articles, political cartoons and the video of the Surgeon General Terry’s speech following the release of the 1964 Surgeon General’s Report. They provided evidence of the public understanding from the press point of view. I used many of them on 1964 Surgeon General’s Report’s page.

Interview

Komaroff, Anthony MD. Harvard Medical School, email interview to Tang, 10 Jan. 2021.

After reading Dr. Komaroff's article in the Harvard Health Newsletter about his personal reaction to the 1964 Surgeon General's Report, I decided to email him since he is a primary source. Dr. Komaroff graciously responded promptly and answered all my questions. I put the most insightful responses as quotes on my website.

Journal Articles

Brandt, Allan M., et al. "FDA Regulation of Tobacco - Pitfalls and Possibilities: NEJM." *New England Journal of Medicine*, 6 Nov. 2008, www.nejm.org/doi/full/10.1056/NEJMp0803729.

In this article, Professor Brandt discusses how the cigarette is the only legal product that causes harm but has evaded federal regulations. At the time of this article, Congress was finally passing the Family Smoking Prevention and Tobacco Control Act which authorizes the Food and Drug Administration to monitor and restrict additives to cigarettes.

Brawley, O.W., Glynn, T.J., Khuri, F.R., Wender, R.C. and Seffrin, J.R. (2014), The first surgeon general's report on smoking and health: The 50th anniversary. CA: A Cancer Journal for Clinicians, 64: 5-8. <https://doi.org/10.3322/caac.21210>

This article provided concise information on the scientific studies that were conducted in the 1930s-1950s prior to the 1964 Surgeon General's Report. These studies were instrumental in the push for further investigation. I included some of the studies in my Scientific Findings page of my website.

Cataldo, Janine K, and Ruth E Malone. “False promises: the tobacco industry, "low tar" cigarettes, and older smokers.” *Journal of the American Geriatrics Society* vol. 56,9 (2008): 1716-23. doi:10.1111/j.1532-5415.2008.01850.x

This article explained how the tobacco industry marketed “low tar” or “light” cigarettes to older smokers to encourage them to smoke this “safer” cigarette instead of quitting. The tobacco companies knew these “low tar” cigarettes made it more difficult for them to stop smoking.

Cummings, Michael K., and Robert N. Proctor. “The changing public image of smoking in the United States: 1964-2014.” *Cancer epidemiology, biomarkers & prevention: a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology* vol. 23,1 (2014): 32-6. doi:10.1158/1055-9965.EPI-13-0798

As evidence of lung cancer being associated with smoking emerged more frequently in the 1950s, tobacco companies quickly introduced the filtered cigarettes to counteract their falling sales. This article also discussed the role of the public relations campaign in suppressing scientific findings as “merely statistical” or “animal science.” I used a quote from this article in the Scientific Findings page of my website.

Institute of Medicine (US) Committee on Secondhand Smoke Exposure and Acute Coronary Events. *Secondhand Smoke Exposure and Cardiovascular Effects: Making Sense of the Evidence*. Washington (DC): National Academies Press (US); 2010. 5, The Background of Smoking Bans. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK219563/>.

This article discussed the smoke free laws that came after the 1972 Surgeon General’s Report, resulting in restrictions on smoking in public places and government buildings. It also stated that the first report showing the association between cardiovascular risk and secondhand smoke was published in 1985. It was helpful to for me to understand the legislations associated with secondhand smoke.

King, Brian A et al. “Surgeon General's Reports on Tobacco: A Continued Legacy of Unbiased and Rigorous Synthesis of the Scientific Evidence.” *Nicotine & tobacco research: official journal of the Society for Research on Nicotine and Tobacco* vol. 20,8 (2018): 1033-1036. doi:10.1093/ntr/ntx266.

This journal article explained the legacy of the methodology used in the 1964 Surgeon General’s Report. Since the reports are used to inform the government in determining policies, the “balanced, comprehensive, and peer-reviewed process” employed is very important. Because of this impartial process in determining the causal relationships between adverse outcomes and tobacco-related factors, the framework set by the 1964 Surgeon General’s Report for the subsequent reports have maintained the rigor and value.

Marshall TR. The 1964 Surgeon General's report and Americans' beliefs about smoking. *J Hist Med Allied Sci.* 2015 Apr;70(2):250-78. doi: 10.1093/jhmas/jrt057. Epub 2014 Feb 6. PMID: 25862749.

This paper abstract explained the public’s reaction to the 1964 Surgeon General’s report. I used a quote stating that the report had a greater effect on the people’s beliefs on the hazards of smoking than the government implementing policies. I used this quote on the Impact page of my website.

National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Atlanta (GA): Centers for Disease Control and Prevention (US); 2014. 3, Producing the Surgeon General's Report From 1964–2014: Process and Purpose. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK294311/>

This paper explained the set of criteria adopted by the Advisory Committee headed by Dr. Terry was from Hill’s criteria. Presenting these criteria was pivotal in the acceptance of the definition of disease causation. The 1964 Surgeon General’s Report laid the foundation for future reports and methods for disease prevention and education of the public.

“The 1964 Report on Smoking and Health | Reports of the Surgeon General - Profiles in Science.” *U.S. National Library of Medicine, National Institutes of Health, profiles.nlm.nih.gov/spotlight/nn/feature/smoking.*

This website explained the 1964 Surgeon General’s Report was prompted by private health organizations and how the Advisory Committee was chosen. It discusses the significant findings of the committee. I quoted from the National Institute of Health website on my main event page.

Newsletters

Komaroff, Anthony MD. “Surgeon General's 1964 Report: Making Smoking History.” *Harvard Health Blog, Harvard Health Publishing: Harvard Medical School, 10 Jan. 2014, www.health.harvard.edu/blog/surgeon-generals-1964-report-making-smoking-history-201401106970.*

This article in the Harvard Health Newsletter is written from the perspective of a first-year medical student who hailed the Surgeon General Dr. Luther Terry as his hero. Dr. Komaroff explained the culmination of the surgeon report and the black lungs they witnessed in cadavers convinced he and his fellow med school students to give up smoking. His personal account was very insightful, and I contacted him for an email interview.

Reports

Advisory Committee. “Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service.” U.S DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, 1 Jan. 1964.

This is the official 387-page 1964 Report to the Surgeon General. Besides the analysis of smoking studies data and the conclusions, the report included other sections stating the criteria used to determine causality, the pharmacologic action of nicotine on nerve cells and effect on the central nervous system and cardiovascular effects. Dr. Luther Terry would become the most well-known Surgeon General from heading up the Advisory Committee who dedicated themselves to this piece of work.

Bates, Clive. Tobacco Explained: The truth about the tobacco industry ...in its own words [PDF]. WHO. <https://www.who.int/tobacco/media/en/TobaccoExplained.pdf>

This report from the World Health Organization contains incredulous statements from the tobacco company's top officials. The executives prioritized their business over the public's lives. It was a very eye-opening document to read through.

“Chapter 2: A Historical Review of Efforts to Reduce Smoking in the United States.”

Tobacco Data Statistics Report, Center of Disease Control and Prevention, www.cdc.gov/tobacco/data_statistics/sgr/2000/complete_report/pdfs/chapter2.pdf.

This report from the CDC is a very comprehensive history of the rise to prominence of the cigarettes and the control efforts over the decades. It was interesting to note that a general in World War I stated that they needed cigarettes as much as bullets.

Curated by Alan Blum, MD. “The American Medical Association: The Unfiltered TRUTH...About Smoking and Health.” University of Alabama Center for the Study of Tobacco and Society.

This is a huge collection of documents curated by Dr. Alan Blum. He exposed the collaboration between the doctors in the American Medical Association and the tobacco companies. They often received grants to conduct research and have cigarette stocks in their pension funds. I used some political cartoons from this site on my website.

“Executive Summary.” Campaign for Tobacco-Free Kids Resources, 2018.

The Campaign for Tobacco-Free Kids Resources had the Executive Summary for the Master Settlement Agreement of 1998 which required tobacco companies to pay 46 states for tobacco-related health costs in perpetuity. This was a major win against the tobacco industry. I used a quote in the Impact page of my website.

Secretary, HHS Office of the, and Office of the Surgeon General. **“Tobacco Reports And Publications.”** *HHS.gov*, US Department of Health and Human Services, 23 Jan. 2020, www.hhs.gov/surgeongeneral/reports-and-publications/tobacco/index.html. This Health and Human Services website had a list of recent reports from the Surgeon General. Some of the them included e-cigarettes as well.

“The 1964 Report on Smoking and Health | Reports of the Surgeon General - Profiles in Science.” *U.S. National Library of Medicine, National Institutes of Health*, profiles.nlm.nih.gov/spotlight/nn/feature/smoking.

This was a summary of the landmark 1964 Report on Smoking and Health which was on the front-page news and every radio and TV station in the United States. It was helpful to have the highlights of the 387-page official document. I quoted from the article on my website.

“UNITED STATES’ WRITTEN DIRECT EXAMINATION OF ALLAN M. BRANDT, Ph.D. SUBMITTED PURSUANT TO ORDER #471.” UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA, United States of America vs. PHILIP MORRIS USA INC.

This was the transcript of Professor Allan M. Brandt as an expert witness in the Big tobacco trial. While it was beyond the scope of this project, it was very enlightening to read about the extent of his background they questioned him about in the direct examination of the U.S. v. Phillip Morris case.

Videos

Center for the Study of Tobacco and Society, director. 1964 NBC Special Report on Surgeon General's Smoking Report, 6 Mar. 2017, www.youtube.com/watch?v=LxMxHQOSN_Q&feature=emb_title.

This video was the NBC Special Report on 1964 Surgeon General’s Smoking Report after the release of the publication. Dr. Terry Luther addressed the press and communicated the findings of the committee. I included a short clip of this video on my website.

“Highlights of 1964 Surgeon General's Report.” Center for the Study of Tobacco and Society, 20 Aug. 2013, www.youtube.com/watch?v=JTLEjRW1XSQ.

This video contained a segment where high school students were interviewed after the release of the 1964 Surgeon General's Report. It was interesting to hear firsthand from teens and their perception of the cigarettes from the advertisements and their reaction to the health hazards. I used a clip of this video in the Impact page of my website to show the public reaction.

Ruble, Kayla. “Read the Surgeon General's 1964 Report on Smoking and Health.” *PBS, Public Broadcasting Service*, 12 Jan. 2014, www.pbs.org/newshour/health/first-surgeon-general-report-on-smokings-health-effects-marks-50-year-anniversary.

This PBS website included the Surgeon General's 1964 Report document and a video on the current state of smoking. The acting Surgeon General Boris Luisniak warned that the battle against smoking is not over. He recommended including more graphic warning labels, increasing taxes on e-cigarettes.

Websites

“50 Years of Anti-Smoking Efforts Save 8 Million Lives.” *American Medical Association*, 9 Jan. 2014, <https://www.ama-assn.org/delivering-care/public-health/50-years-anti-smoking-efforts-save-8-million-lives>.

This website shows the American Medical Association being proud supporters of anti-tobacco measures from prohibiting smoking on public transportation to stopping smoking advertising targeting children. It shows an overwhelming statistic that 8 million lives were saved from the anti-smoking initiatives.

“Big Tobacco Referendum Built on Lies Is Desperate Attempt to Keep Hooking Kids with Candy-Flavored Tobacco.” *Campaign for Tobacco-Free Kids*, 25 Nov. 2020, www.tobaccofreekids.org/press-releases/2020_11_24_flavorshookkids-california.

The Campaign for Tobacco Free Kids website contained a great page of quotes by directors and chairs of prominent organizations such as American Lung Association, American Cancer Society, and American Heart Association about the SB-793 bill. On my

Conclusion page, I quoted from two of these leaders to show the same deception and delay tactics for economic gain over the health of the youth today.

Blum, Alan. "Blowing Smoke: The Lost Legacy of the 1964 Surgeon General's Report on Smoking and Health." *Cancer Network*, U.S. Department of Health & Human Services, 14 May 2014, www.cancernetwork.com/view/blowing-smoke-lost-legacy-1964-surgeon-generals-report-smoking-and-health.

Dr. Alan Blum asserts that while the 1964 Surgeon General's Report was monumental, the remedial action he called for were left to the government. As a result, the tobacco companies and their connections with the medical community and Congress prevented tighter restrictions being passed. I used these quotes to show another perspective on the impact of the landmark report.

Secondary Sources

Books

Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Phillip Morris*. New York: Alfred A. Knopf, 1996.

This book was in the Reference list of Allan Brandt's *The Cigarette Century*, so I decided to peruse the original source. Kluger provided more background information on the scientific studies in his book. Though I consulted parts of the book, I did not use any quotes from it.

Milov, Sarah. *The Cigarette: A Political History*. Cambridge: Harvard University Press, 2019.

This book was the only one that set the scene for the morning press conference announcing the 1964 Surgeon General's Report. Milov provided vivid details such as the auditorium doors were locked with guards blocking the doors to the other parts of the building and "no-smoking" signs that were affixed just before the meeting. She also explained about the effect of World War I on cigarettes which I quoted in my website.

Journal Articles

Schabath, Matthew B., and Michele L. Cote. "Cancer Progress and Priorities: Lung Cancer." *Cancer Epidemiology, Biomarkers & Prevention*, American Association for Cancer Research, 1 Oct. 2019, cebp.aacrjournals.org/content/28/10/1563.

This journal article contains a graph of lung cancer deaths for male and female smokers and per capita cigarette consumption. The data spans from 1900 to today. I used it on my Conclusion page of my website to show the significant decline in smoking rates since the 1964 Surgeon General's Report.

Reports

"Tobacco Litigation Case Summaries.", U.S Department of Health & Human Services.

This digital publication provided summaries of tobacco litigation cases. They included light cigarettes, secondhand smoke, and smokeless cigarettes. It was good for taking a cursory look to gain understanding but not the focus of my project.

Websites

"2000 Surgeon General's Report Highlights: Warning Labels." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 21 July 2015, www.cdc.gov/tobacco/data_statistics/sgr/2000/highlights/labels/index.htm.

The CDC showed how the Surgeon General warning labels on cigarettes has evolved from 1965 to the mid-1980s. It was interesting to note the warning labels in other countries are much stronger and graphic than those in the U.S.

"Achievements in Public Health, 1900-1999: Tobacco Use -- United States, 1900-1999." *Centers for Disease Control and Prevention*, 2 May 2001, www.cdc.gov/mmwr/preview/mmwrhtml/mm4843a2.htm.

This CDC article attributed the reduction in smoking to more concrete scientific evidence, dissemination of the information, counter advertising by activists, policy changes and increased taxes. The combination of these factors brought down the smoking rates, but half of those who still smoke will die of smoking related diseases.

Blaha, Michael Joseph. “5 Vaping Facts You Need to Know.” *Johns Hopkins Medicine*, www.hopkinsmedicine.org/health/wellness-and-prevention/5-truths-you-need-to-know-about-vaping.

This website explained the health risks associated with vaping which I included in the Conclusion page. While vaping may be less harmful than smoking, E-cigarettes still increase the risk of heart attacks, chronic lung disease and asthma. Since they also contain nicotine, they are just as addictive.

“Cigarettes Were Once 'Physician' Tested, Approved.” *Hematology/Oncology*, 10 Mar. 2009, www.healio.com/news/hematology-oncology/20120325/cigarettes-were-once-physician-tested-approved.

This article in the Hematology/Oncology news explained how the tobacco companies used the image of trusted doctors to reassure patients' concerns. Ironically, though the industry claimed cigarettes were harmless, they also promoted their brands as less irritating on the throat. This was one of the articles I read early in my research which gave me insight into these outrageous ads.

“Disparities in Point-of-Sale Advertising and Retailer Density.” *Counter Tobacco*, countertobacco.org/resources-tools/evidence-summaries/disparities-in-point-of-sale-advertising-and-retailer-density/.

This website had graphs that clearly shows the disparities in smoking rates by education and income level. I used them in my Conclusion page of the website to demonstrate the shift in the smoking trends. I also wanted to point out the communication needs to address the groups most affected.

Elflein, John. “Vaping and e-Cigarette Use by Age U.S. 2018.” *Statista*, 20 July 2018, www.statista.com/statistics/882611/vaping-and-electronic-cigarette-use-us-by-age/.

This website provided statistics and graphs showing vaping and e-cigarette usage by age. I used a graph on the Conclusion page of my website to show the smoking trends today.

Elliott, Stuart. “When Doctors, and Even Santa, Endorsed Tobacco.” *The New York Times*, The New York Times, 6 Oct. 2008, www.nytimes.com/2008/10/07/business/media/07adco.html.

As if it was not disturbing enough to portray medical professionals smoking, they later involved the Flintstones cartoon and Santa in the act. Children, babies and pets were also pictured in the ads. This article pointed me to dig up more ads in that era to communicate that smoking was depicted as a family activity.

Glantz, Stanton A. “Two Big National Studies Show E-Cigarettes Won’t Help Smokers Quit, but They May Become Addicted to Vaping.” *Center for Tobacco Control Research and Education*, UCSF, 3 Sept. 2020, tobacco.ucsf.edu/two-big-national-studies-show-e-cigarettes-won%E2%80%99t-help-smokers-quit-they-may-become-addicted-vaping.

Though E-cigarettes have been touted as a cessation tool, this article explained how two studies concluded that they were not effective. While it is being used more often than the nicotine patch, nicotine gum and prescription medications, users can become addicted to vaping as a result. I used a quote from this article in my Conclusion page.

Goszkowski, Rob. “Among Americans, Smoking Decreases as Income Increases.” *Gallup.com*, Gallup, 22 Dec. 2020, news.gallup.com/poll/105550/among-americans-smoking-decreases-income-increases.aspx.

This was a graph showing the results of the Gallup poll among Americans. It shows that smoking decreases as income increases. I used it on my Conclusion page of my website to illustrate that the smoking problem persists with lower socioeconomic groups.

“Health Effects of Cigarette Smoking.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 10 Dec. 2020, www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/index.htm.

This CDC Fact Sheet webpage showed staggering statistics such as cigarette smoking harms nearly every organ in the body. Even with the significant reduction, smoking still

accounts for more deaths than HIV, drug and alcohol, car accidents, and firearms combined today. Therefore, communication of such facts needs to go to the groups that need to hear them, specifically younger and lower socioeconomic demographics, to continue combating this health issue.

“History of the Surgeon General's Report on Smoking and Health.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 15 Nov. 2019, www.cdc.gov/tobacco/data_statistics/sgr/history/index.htm.

This page contained a great summary with bullet points on the History of the Surgeon General's Report. I referred to this in the beginning of my research.

Kanakia, Rahul, and Rahul Kanakia. “Tobacco Companies Obstructed Science, History Professor Robert Proctor Says.” *Stanford University*, 21 Feb. 2007, news.stanford.edu/news/2007/february21/proctorsr-022107.html.

In this 2007 news article from Stanford University, Professor Proctor shared information he learned from reading logs and correspondence from tobacco industry. He found that not everyone knew-- some believed the deceptive marketing and died for it. The cigarette companies were trying to win in court by arguing that the public knew of the dangers, so it was their own fault if they choose to smoke and got lung cancer.

Little, Becky. “When Cigarette Companies Used Doctors to Push Smoking.” *History.com*, A&E Television Networks, 13 Sept. 2018, www.history.com/news/cigarette-ads-doctors-smoking-endorsement.

This is an introductory article on the advertising history of using physicians to promote cigarettes. It may surprise people today to see such advertisements, but it was common practice back in the 1950s. I found this article helpful in the beginning of my research.

Long, Jamie. “Public Health Law Center.” *What the Referendum on California's Flavored Tobacco Sales Ban Means* / *Public Health Law Center*, 25 Jan. 2020, 2021, www.publichealthlawcenter.org/blogs/2020-09-04/what-referendum-californias-flavored-tobacco-sales-ban-means.

This article explains the status of the SB-793 bill, California's Flavored Tobacco Sales Ban law. Though it was passed in 2020, it is now suspended for two years due to the referendum. I used a quote from this website on my Conclusion page to draw a connection to how tobacco companies are still using delay tactics today.

Markel, Dr. Howard. "This Surgeon General's Famous Report Alerted Americans to the Deadly Dangers of Cigarettes." *PBS, Public Broadcasting Service*, 11 Jan. 2018, www.pbs.org/newshour/health/this-surgeon-generals-famous-report-alerted-americans-to-the-deadly-dangers-of-cigarettes.

This article discusses the conclusions of the 1964 Surgeon General's Report. The 150,000-word publication produced after a 14-month review headed by Dr. Luther Terry was responsible for the most famous health warning. I quoted from this article on the 1964 Surgeon General's Report page.

Marshall, Thomas R. "1964 Surgeon General's Report and Americans' Beliefs about Smoking." *OUP Academic, Oxford University Press*, 6 Feb. 2014, academic.oup.com/jhmas/article-abstract/70/2/250/776240?redirectedFrom=fulltext.

This abstract had a good explanation about the public reaction to the 1964 Surgeon General's Report. I quoted it on the Impact page of my website to convey the public understanding following the release of the report.

McKenzie, Michelle. "Supported Bill Prohibiting Sale of Flavored Tobacco Products Passes Key Hurdle." *CDA, CDA*, 14 Aug. 2020, www.cda.org/Home/News-and-Events/Newsroom/Article-Details/cda-supported-bill-prohibiting-sale-of-flavored-tobacco-products-passes-key-hurdle.

This article on the California Dental Association website explains the shortcomings of the federal laws on E-cigarettes and the reason the CA SB-793 bill is necessary. On my Conclusion page, I used a quote by Dr. Jim Wood who is an Assembly member explaining the dangers of youth using flavored E-cigarettes.

Meier, Barry. “12 Years On, Tobacco Suit Due in Court.” *The New York Times*, The New York Times, 31 Jan. 2011, www.nytimes.com/2011/01/31/business/31tobacco.html?_r=0.

This New York Times article described past Tobacco trials and the verdicts. David Kessler explained that the combination of litigation with scientific evidence and public initiatives was most effective in changing public perception. Judge Kessler ruled favoring the government stating that the tobacco industry had violated civil racketeering laws.

Mendes, Elizabeth. “The Study That Helped Spur the U.S. Stop-Smoking Movement.” *American Cancer Society*, American Cancer Society, 9 Jan. 2014, www.cancer.org/latest-news/the-study-that-helped-spur-the-us-stop-smoking-movement.html.

Mendes states that the Hammond and Horn study was the first large scale study that was prospective. It was the turning point of the smoking studies and a major contributor to the of conclusive evidence for the 1964 Surgeon General’s Report. I quoted from her article on my Scientific Findings page of my website.

Miles, Dennis. *Public Health Cigarette Smoking Act of 1969*, Middle Tennessee State University, www.mtsu.edu/first-amendment/article/1089/public-health-cigarette-smoking-act-of-1969#:~:text=With%20the%20FCLAA%20set%20to,radio%2C%20beginning%20in%20January%201971.

This article had a good description of the Public Health Cigarette Smoking Act of 1969 which required a stronger warning on all cigarette packages and banned advertising on television and radio. I used a quote from this article on my Impact page of my website.

“Motion Picture Association.” *Smokefree Movies*, UCSF, smokefreemovies.ucsf.edu/whos-accountable/mpaa.

This website discusses the proposed R-rating for movies when smoking scenes are involved. It stated that while motion picture producers are aware that teens are influenced

by these smoking scenes, they refuse to change the ratings. I used this quote on my Impact page.

NPR, Richard Knox / . “50 Years After Landmark Warning, 8 Million Fewer Smoking Deaths.” *KPBS Public Media*, KPBS, 7 Jan. 2014, www.kpbs.org/news/2014/jan/07/50-years-after-landmark-warning-8-million-fewer/.

Knox quoted Dr. Allan Brandt in this article describing the environmental and public safety changes that occurred after the 1964 Surgeon General’s Report. He also shared stories of smokers such as the Harvard statistician on the Advisory Committee who smoked four packs a day died a year after the report came out.

“On This Day in Medical History: Smoking Declared a Health Hazard.” *MDLinx*, www.mdlinx.com/article/on-this-day-in-medical-history-smoking-declared-a-health-hazard/lfc-1353.

This article provided a succinct summary of the 1964 Surgeon General’s Report with bullet point takeaways. However, it ends with 40 million Americans still smoking today and CDC’s “Tips from Former Smokers” has been an effective campaign assisting over half a million to quit. This was a good overview article.

“Public Health Law Center.” *United States v. Philip Morris (D.O.J. Lawsuit) | Public Health Law Center*, 18 Oct. 2016, www.publichealthlawcenter.org/topics/commercial-tobacco-control/commercial-tobacco-control-litigation/united-states-v-philip.

This website had a concise summary of the U.S. v. Phillip Morris trial which was helpful to understand the litigation. I used it on my Impact page of my website to show the long-term impact of the 1964 Surgeon General’s Report.

Stern, Scott W. “How War Made the Cigarette.” *The New Republic*, 25 Sept. 2019, newrepublic.com/article/155164/war-made-cigarette.

This article explained that the federal government’s initiative in supplying soldiers with cigarettes propelled the cigarette’s status. Combined with cunning advertisement, the

cigarette became the “iconic consumer good.” I quoted from this article in my Historical Context page on my website.

Story by Kenneth E. Warner and Harold A. Pollack. “The Nicotine Fix.” *The Atlantic*, Atlantic Media Company, 21 Aug. 2015, www.theatlantic.com/national/archive/2014/11/the-nicotine-fix/382666/.

The article from the Atlantic has a very clear graphic on the rise and fall of cigarette consumption in the U.S. with significant events marked like a timeline. I used this graphic on my Impact page of the website. The author also explained how despite the accomplishments, the addiction in the lower income group still persists today.

Szczesniak, Michael. “The Change in Public Opinion on Cigarette Smoking.” *Michael Szczesniak Penn State*, 2015, sites.psu.edu/mszczesniakeportfolio/the-change-in-public-opinion-on-cigarette-smoking/.

This was one of the first articles I found on the transformation of the public opinion on smoking. It was a great overview of the cigarettes being transformed from culturally desirable to social stigma due to the 1964 Surgeon General’s Report.

“The Tobacco Companies Were Terrified of the 1964 Surgeon General Report; Will Obama Finally Realize Their Fears?” *Center for Tobacco Control Research and Education*, 8 Jan. 2014, tobacco.ucsf.edu/tobacco-companies-were-terrified-1964-surgeon-general-report-will-obama-finally-realize-their-fears.

This article from the UCSF Center for Tobacco explained how the 1964 Surgeon General’s Report mentioned having a second report on policy recommendations but that was never followed through. The articles also presented internal communication within the tobacco companies showing fear of losing the public. I gained understanding of how they adopted the philosophy of “expect the worst but work for the best,” in which they quickly pivoted to filter cigarettes and smokeless cigarettes.

“The Tobacco Prevention Toolkit.” *Tobacco Prevention Toolkit*, med.stanford.edu/tobaccopreventiontoolkit.html.

The “A Little History to Set the Stage” PowerPoint on this website was a great overview that I began my research with. From there, I found the Stanford Research into the Impact of Tobacco Advertising (SRITA) site which contained a huge collection of ads throughout the last century.

“Tobacco Taxes Are NOT the Most Effective Tobacco Control Policy (as Actually Implemented).” *Center for Tobacco Control Research and Education*, 11 Jan. 2014, tobacco.ucsf.edu/tobacco-taxes-are-not-most-effective-tobacco-control-policy-actually-implemented.

This article compares the amount of cigarette tax that needs to be raised to be achieve the same effect as other tobacco control policies such as the warning labels, smokefree workplaces, antismoking campaigns and R-rating for smoking scenes in movies. I quoted the smoking percent decrease from each of those tobacco control measures.

Warner, Kenneth E. “Who's Smoking Now, and Why It Matters.” *Medical Xpress - Medical Research Advances and Health News*, Medical Xpress, 1 Feb. 2019, medicalxpress.com/news/2019-02-who-smoking-now-and-why.html.

This news article contained graphs and statistics showing that today those without a high school degree are 4 times more likely to smoke those who are highly educated whereas it was only 20 percent difference between the groups in 1966. The gap is also widening for those below the federal poverty line compared to those 400 percent above. This article helped with my research on the impact of cigarettes today.

“What Do Tobacco Advertising Restrictions Look like Today?” *Truth Initiative*, 6 Feb. 2017, truthinitiative.org/research-resources/tobacco-industry-marketing/what-do-tobacco-advertising-restrictions-look-today.

This webpage had a timeline of events after the 1964 Surgeon General’s Report. It was a good overview of the legislations and court cases. This site provided a good understanding of the advertising restrictions today.