

THE
MILBANK
QUARTERLY

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POPULATION HEALTH AND HEALTH POLICY

The Engineering and Regulation of Ultraprocessed Foods

Milbank Quarterly Webinar
April 13, 2026

Panelists

- **Ashley Gearhardt**, PhD, Clinical Science Area Chair and Professor of Psychology at the University of Michigan and lead author of *From Tobacco to Ultraprocessed Food: How Industry Engineering Fuels the Epidemic of Preventable Disease*
- **Brian King**, PhD, MPH, Executive Vice President for U.S. Programs, The Campaign for Tobacco-Free Kids and Past Director of the FDA's Center for Tobacco Products
- **Andrea Barton Reeves**, JD, Commissioner, Connecticut Department of Social Services
- **Alan Cohen**, ScD, Editor, *The Milbank Quarterly* (moderator)

From Tobacco to Ultra-Processed Food

How Industry Engineering Fuels the Epidemic of Preventable Disease



Ashley N. Gearhardt, Ph.D
Professor of Psychology | University of Michigan



We've been in this moment before

Smoking was normalized

Harm was debated

Responsibility was placed on individuals

→ **Same moment with ultra-processed foods**



The Same Argument, Different Industry

TOBACCO

ULTRA-PROCESSED FOOD

“It’s just a plant.”

“It’s just food.”



VS



Both industries center their argument on the raw material — avoiding focus on how the product is engineered.

Industrial Engineering Transforms Plants into Products

Tobacco leaf
→ cigarette



Crops
→ ultra-processed products



Engineered delivery system

Same Companies, Same Playbook

Tobacco companies didn't just sell cigarettes — they bought food companies too.

Philip Morris



Kraft / General Foods

RJ Reynolds (RJR)



Nabisco

These companies brought their knowledge of profiting from cigarettes directly into the food supply.

How Do You Engineer Addiction?

Across addictive products, four levers consistently appear:

DOSE

Pack in more of the
reinforcing
ingredient

SPEED

Deliver it fast into
the body

SENSORY

Engineer flavors
that
keep you coming
back

UBIQUITY

Make it available
everywhere, always

Dose + Speed = Addictive Potential

Plant Matrix Destruction



Food Matrix Destruction



Flavor Is Engineered, Not Accidental

Cigarettes are 2 to 20% sugar by weight. Flavor enhancers are the most common additives

Hungry for flavor? Tareyton's got it!



Flavor you never thought you'd get from any filter cigarette!

If you're hungry for flavor, Tareyton's got plenty—and it's plenty good! Quality tobacco at their peak go into Tareyton. Then the famous Dual Filter brings out the best taste of those choice tobaccos. Try a pack of Dual Filter Tareyton—you'll see!

Dual Filter makes the difference.

DUAL FILTER Tareyton

Why it feels appealing—and safe

TOBACCO

Flavor additives
“Light,” “low tar”



UPFs

Flavor engineering
“High protein,” “low fat”



Appealing + justified

In Arms Reach of Desire

TOBACCO

Everywhere (historically)



UPFs

Everywhere (now)



No “off switch”

What Does This Look Like in Real Life?

“I can’t even be in the same vicinity as Krispy Kreme or any type of donuts, ’cause I will finish a dozen all by myself and I’m type 2 diabetic. So that could kill me, and I know that and I know that I shouldn’t be eating all those. But for some reason I just can’t stop eating them.”

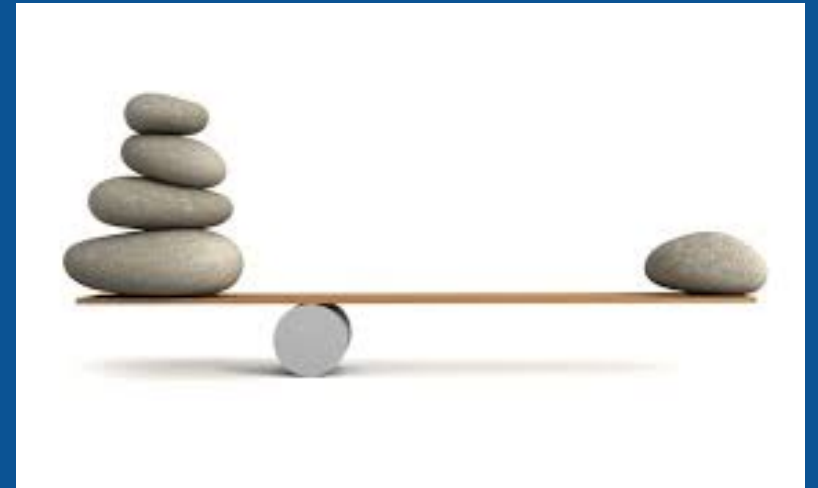
— Participant with severe food addiction (Parnarouskis et al., 2025)

When Is There Enough Evidence to Act?

Industry tactic: demand more evidence to delay action.

We saw this exact tactic with tobacco — and the costs of waiting were enormous.

The question is: what are realistic, science-based benchmarks for action?



Brandt, 2007; The Cigarette Century

We All Have to Eat

A Dual-Path Strategy for Transforming the Food Environment

Promote Real Food

Build the Default

- Public procurement standards
- UPF-free contexts (schools, childcare, healthcare)
- Subsidies & incentives for real food
- Retail stocking standards for minimally processed foods
- Institutional defaults (real food as the baseline)

Demote Harmful UPFs

Reduce Exposure & Power

- Restrictions on child-targeted marketing
- Litigation (deceptive marketing, youth targeting)
- Taxes on high-risk products (e.g., sugary beverages)
- Zoning/retail/stocking limits (especially near schools)
- Transparency requirements – warning labels



The More Things Change, The More They Stay The Same

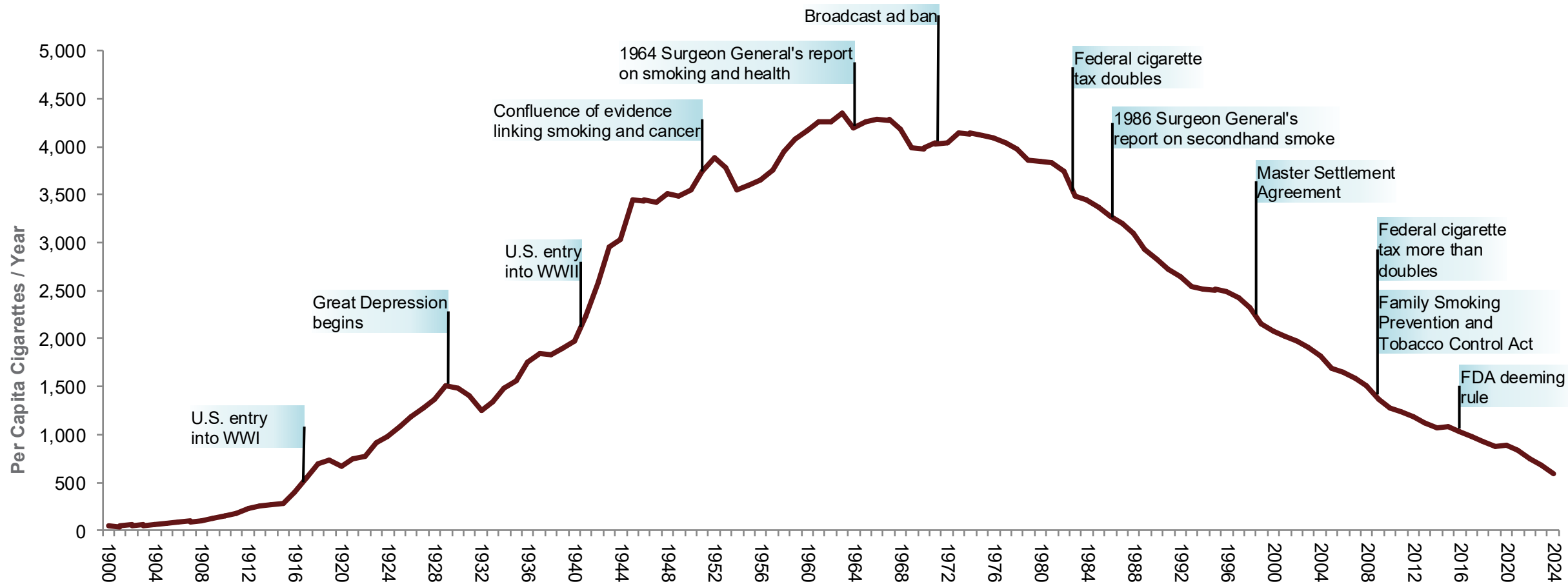
Lessons from Tobacco Control



Brian King, PhD, MPH / Executive Vice President, Campaign for Tobacco-Free Kids



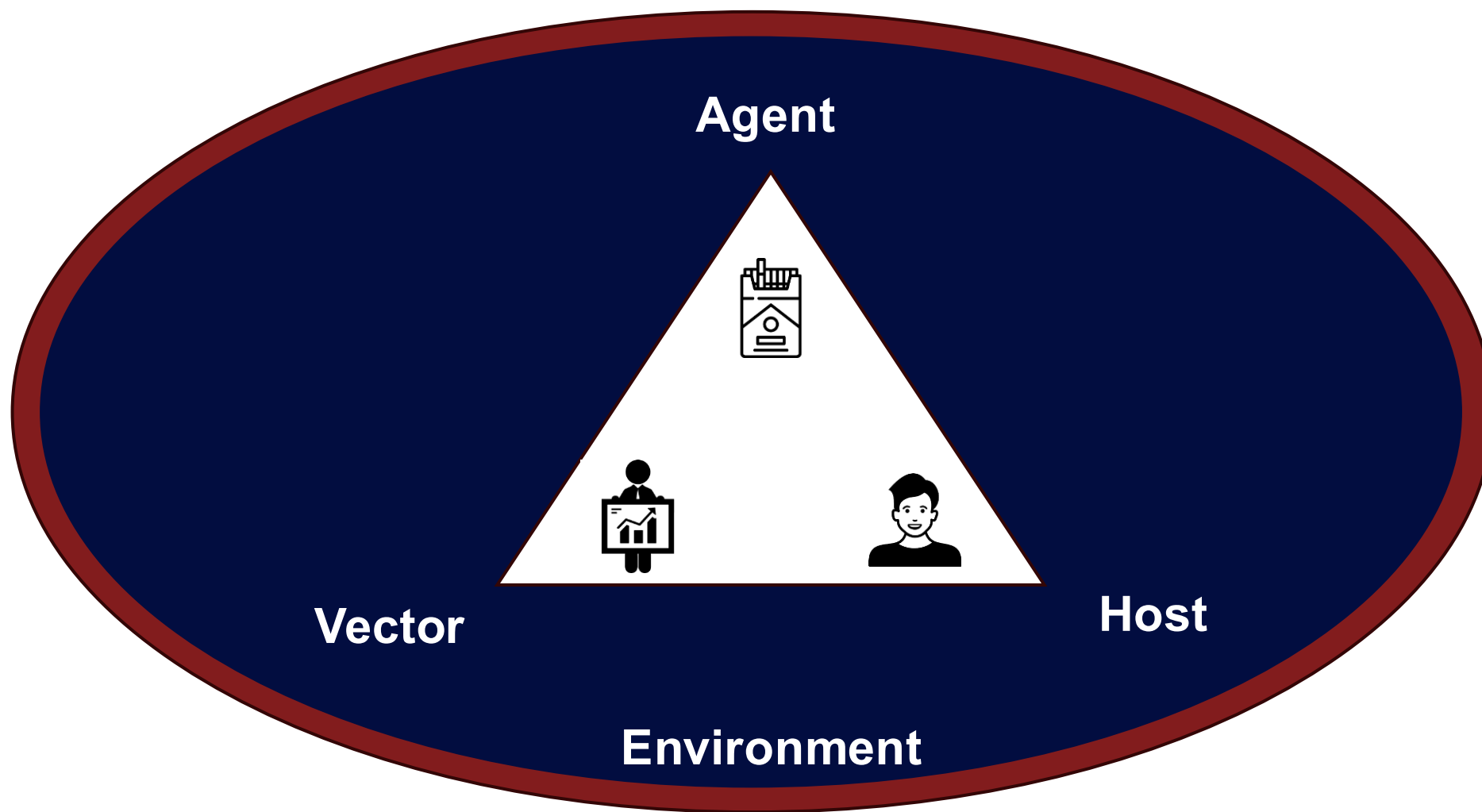
Cigarette Consumption United States, 1900-2024



Sources: U.S. Department of Agriculture; Alcohol and Tobacco Tax and Trade Bureau; U.S. Census.



Epidemiological Model of Tobacco Control





Agent: Product Evolution

1920s

Miss MARIE E. BARDIN
of Richmond, Va.

PRIZE WINNER
Marlboro Contest for Distinguished Housewives

Miss Bardin Wins

Marlboro - A Cigarette for those who can afford 20¢ for the best

Every Marlboro full, firm and round

Mild as May

MARLBORO
PHILIP MORRIS & CO. LTD., INC. NEW YORK

1950s

A Frank Statement to Cigarette Smokers

RECENT ADVERTS on cigarette packs have gone wild, promising to deliver the greatest smoking ever, based on long careers in human history.

Although considered by doctors of public health, these experiments are not regarded as scientific in the field of cancer research. We do not believe that any medical research, even though the results are inconclusive should be displayed in light of death.

At the same time, we feel it is in the public interest to call attention to the facts concerning disease and research activities have publicly sponsored the related significance of these experiments.

Disappointing statistics prove us:

1. The medical records of recent years indicate every possible cause of lung cancer.
2. The death toll is expected among the millions of people who smoke.
3. The tobacco industry is the greatest cause of cigarette smoking in the world.

It is the scientific community in this cigarette smoking with the disease could fight with about twice in any one of every million people of cancer risk, based on the studies of the American Cancer Society, is guaranteed by common scientific.

We cannot ignore the people's health and the responsibility, particularly in every other consideration in our business. We believe the practice to make our own cigarettes to smoke.

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

TOBACCO INDUSTRY RESEARCH REPORTS STATE:

1950-1951

THE AMERICAN LUNG ASSOCIATION, PHILIP MORRIS & CO. LTD., INC. NEW YORK

1952-1953

THE AMERICAN LUNG ASSOCIATION, PHILIP MORRIS & CO. LTD., INC. NEW YORK

1954-1955

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1956-1957

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1962-1963

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1964-1965

THE AMERICAN LUNG ASSOCIATION, PHILIP MORRIS & CO. LTD., INC. NEW YORK

1966-1967

THE AMERICAN LUNG ASSOCIATION, PHILIP MORRIS & CO. LTD., INC. NEW YORK

1968-1969

THE AMERICAN LUNG ASSOCIATION, PHILIP MORRIS & CO. LTD., INC. NEW YORK

1970-1971

THE AMERICAN LUNG ASSOCIATION, PHILIP MORRIS & CO. LTD., INC. NEW YORK

1980

KOOL SUPER LIGHTS

Now smooth gets smoother and even lower in 'tar.'

A light mouthful blend gives low 'tar' without the harsh taste they want. Never harsh tasting. Now you can make the smooth move to KOOL Super Lights.

At only 7mg. 'tar,' it's lower than all these.

NATURAL AMERICAN SPIRIT

the additive-free alternative

We believe smokers deserve a better tasting, all-natural alternative to the highly processed products of the big tobacco companies. Our 100% additive-free, shade-leaf natural tobacco contains no chemical additives, no preservatives, no additives, and no processed meats.

The 'tar' in the tobacco in most cigarettes contains additives drawn from a long list of chemicals. The only ingredient used in Natural American Spirit is the finest, premium tobacco.

For a sample carton offer, call 1-800-872-6460 ext. 79972 or visit www.nascigs.com

Surgeon General's Warning: Smoking By Pregnant Women May Result in Fetal Injury, Premature Birth, And Low Birth Weight.

No additives in our tobacco does NOT mean a safer cigarette.

2010

WE'RE MOVING AWAY FROM CIGARETTES. WHAT ABOUT YOU?

decision to build our future without cigarettes.

over \$4.5 billion in creating better alternatives to smoking.

world-class scientists, engineers and technicians are helping make it happen.

adult smokers have switched away from cigarettes to our alternative products.

300 men and women converting every day.

ant to be in a position to stop selling cigarettes altogether.

many has done anything like this before.

clear. And the benefits are clear too. For everyone.

go to PM.com.

PHILIP MORRIS INTERNATIONAL

IN A CIGARETTE

THE SMOKE'S THE THING!

THE BURN OF SLOWER-BURNING CAMELS GIVES YOU EXTRA MILDNESS, EXTRA COOLNESS, EXTRA FLAVOR, AND...

28% LESS NICOTINE

than the average of the 8 other of the largest-selling cigarettes tested... less than any of them... according to independent scientific tests of the smoke itself.

W

My smoking 20's a day.

5 EXTRA SMOOKS PER PACK

CAMEL - THE SLOWER-BURNING CIGARETTE

1940s

Consider your Altair Altair!!

Don't Rasp Your Throat With The Irritant

1 out of every 2 cigarette smokers

Kent - the one cigarette that can show you proof of greater health protection

"Reach for the SURELY SURE!"

NEWEST RELEASE!

U.S. GOV'T REPORT

Herald Gazette

U.S. GOV'T REPORT: CARLTON IS LOWEST

U.S. Government laboratory tests confirm no cigarette lower in tar than Carlton.

CARLTON IS LOWEST.

All the fuss about smoking got me thinking I'd either quit or smoke True.

I smoke True.

Considering all I'd heard, I decided to either quit or smoke True.

I smoke True.

1960s - 1970s

ADVANCE

A Step In The Right Direction.

All of the taste... Less of the toxins.

Reduced carcinogens. Premium taste.

Also available in Ultra Lights.

Reduced carcinogens. Premium taste.

Reduced carcinogens. Premium taste.

Early 2000s

THE NEW ALTERNATIVE TO SMOKING

HEATED TOBACCO. NO LIQUID.

DISCOVER A FRESH, NEW WAY TO EXPERIENCE NICOTINE SATISFACTION.

IQOS

ZYN

- SMOKE-FREE**
More discreet than cigarettes or e-cigs, with no lingering smell.
- SPIT-FREE**
Upper-lip placement means less saliva, and no need to spit.
- TOBACCO-FREE**
Made with tobacco-derived nicotine salt for a fresh nicotine experience.
- FULL SATISFACTION**
Available in 3 mg and 6 mg nicotine pouches.

2020s



Agent: **Product Manipulation**





Vector: Promotions

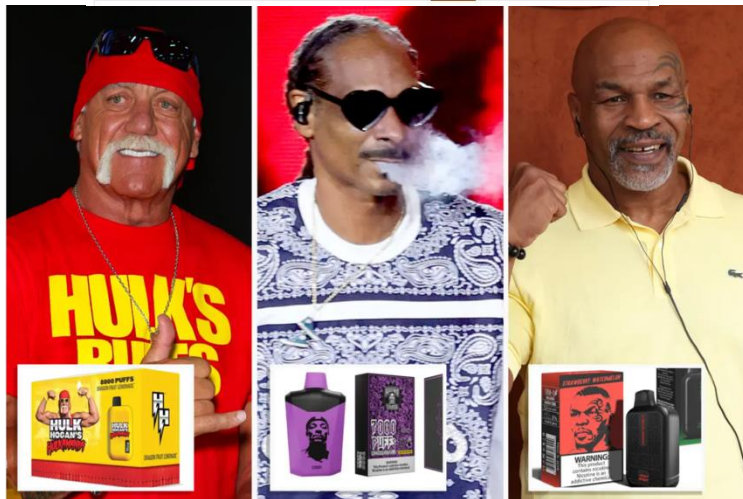
Endorsement



Influencer



Sponsorships



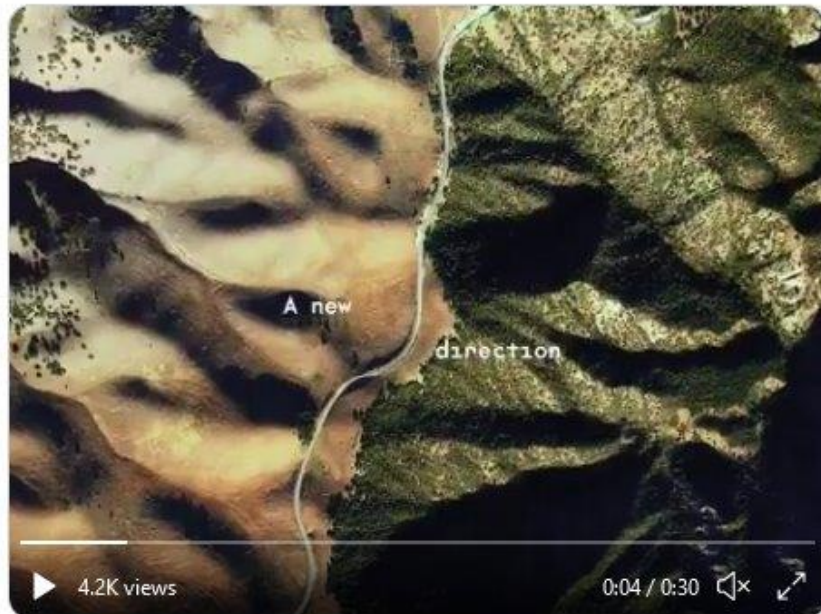


Vector: Rebranding

Pinned Tweet



1/ Altria's companies are leading the way in moving adult smokers away from cigarettes – by taking action to transition millions toward potentially less harmful choices.



1:57 PM · Oct 5, 2020 · Twitter Web App

Altria About Altria Moving Beyond Smoking Responsibility Investors People & Careers

Moving Beyond Smoking At-A-Glance

Over the next 10 years, Altria's Vision is to responsibly lead the transition of adult smokers to a non-combustible future. We are developing and investing in potentially reduced harm alternatives that smokers will want to transition to.

Our companies have a long history of leading the industry. Today, adult tobacco consumers are increasingly seeking new options, including those that reduce risk, and their preferences are evolving rapidly.

Our 10-Year Vision is to responsibly lead the transition of adult smokers to a non-combustible future.

Importantly, we will work within the framework that government, public health, and regulatory bodies have established to communicate about reduced harm choices. And

Billy Gifford
Chief Executive Officer
Altria Group, Inc.

"With adult smoker demand for non-combustible alternatives, innovation and an appropriate regulatory framework, we have the opportunity to make more progress on reducing the harm caused by cigarettes in the next 10 years than we have in the past 50."



Changing the Environment



1964: First Surgeon General's Report on Tobacco

- Two-fifths of American adults smoked cigarettes
- Tobacco industry was unregulated
- Smoking allowed everywhere
- Advertising allowed everywhere



1971 Tobacco Ads Banned on TV and Radio





1994 Industry Held Accountable





1998 Master Settlement Agreement



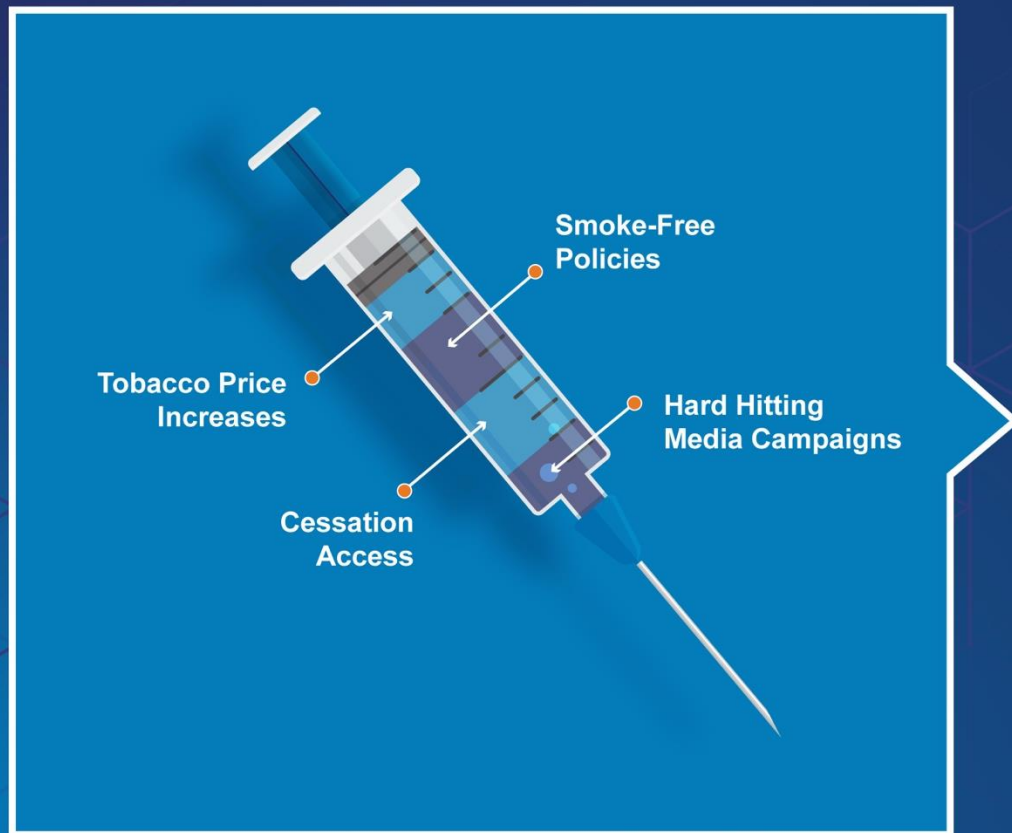


2009 Tobacco Control Act





Tobacco Control Vaccine



Vaccine Booster

Product Availability



Pricing & Promotion



Retail Licensure



Age of Sale



Advertising & Display





The Persistent Toll of Tobacco in the U.S.



490,000

People who die each year from smoking



16 million

People living with a smoking related disease



\$240 billion

Annual health care costs directly caused by smoking



\$375 billion

Smoking-caused productivity losses

“[i]f any one of us believed that the product we were making and selling was in any way harmful to our customer’s health – and our own as well – **we would voluntarily go out of business.**”

- Philip Morris Vice President George Weissman, February 26, 1954



Thank You!



@Campaign for Tobacco Free Kids



@TobaccoFreeKids



@Campaign for Tobacco Free Kids



@TobaccoFreeKids



@tobaccofreekids.bsky.social



@TobaccoFreeKids

Moderated Discussion and Q&A

Thank you for listening.