



Electronic Smoking Devices: Policy Recommendations and Pitfalls

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International Society of Substance Use Professionals (ISSUP) webinar series
New electronic smoking devices – what's the difference?



Disclosures

- Executive Director, Southeast Asia Tobacco Control Alliance (SEATCA)
- Member, Tobacco Experts Group, World Heart Federation
- Member, International Advisory Board, World Conference on Tobacco or Health
- No conflict of interest to disclose

Nicotine without smoke

“People smoke for the nicotine but die from the tar.”

(Michael Russell, BMJ, 1976)

Who is Michael Russell?

- British psychiatrist
- proponent of *theoretical* low-tar, high nicotine cigarette
- collaborated with **BAT** on two ‘safer’ cigarette studies
- engaged **RJR** on a study of its HTP, Premier
- espoused cigarette **filters** as helping reduce smoking risk [now proven false]

Russell, MAH. (1976). Low-tar medium-nicotine cigarettes: a new approach to safer smoking. *BMJ*, 1:1430-1433

Elias J, Ling PM. Invisible smoke: third-party endorsement and the resurrection of heat-not-burn tobacco products. *Tobacco Control* 2018;27:s96-s101. https://tobaccocontrol.bmj.com/content/27/Suppl_1/s96.long



Industry “transformation”

- Claim: “no combustion = no tar, no ash, no smoke = 90-95% less harmful”
- “smoke-free” but not tobacco-free



Smoke? Vapor? Aerosol?



Aerosol = aero-solution

- suspension of fine solid particles and/or liquid droplets in air

Cigarette smoke/aerosol



Credit: Courtney Africa/RealTime Images/ABACA/PA Images

ESD aerosol



Credit: fotofabrika - stock.adobe.com

COVID-19 risks

- Aerosol + mask removal
- Hand to mouth movement
- Shared products/devices



**Toxicity / health harms
...reduced?**



Ultra lights smokers:
Can you get at least 50% less tar and nicotine and still get flavor in a cigarette?

NOW you can.

NOW 100
2 mg. tar, 0.2 mg. nic.

Other brands shown: Virginia Slims Ultra Lights (5 mg. tar, 0.5 mg. nic.), Benson & Hedges (5 mg. tar, 0.5 mg. nic.), Kent III Ultra Lights (5 mg. tar, 0.4 mg. nic.), True (5 mg. tar, 0.5 mg. nic.), Merit 100's (5 mg. tar, 0.5 mg. nic.).

The lowest in tar and nicotine.
Of all soft pack 100's. By U.S. Gov't. testing method.

7 mg. "tar", 0.2 mg. nicotine av. per cigarette by FTC method. Based on a comparison of selected national brands. ALL BRAND STYLUS SHOWN ARE 100MM. © 1988 B. & W. T. BROWN CO.

SURGEON GENERAL'S WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, And May Complicate Pregnancy.

NEWEST RELEASE

U.S. GOV'T REPORT

Carlton IS LOWEST.

Box- less than 0.01 mg. tar, 0.002 mg. nicotine.

Carlton
10 FILTER CIGARETTES

Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health. Box: Less than 0.5 mg. "tar", 0.05 mg. nicotine av. per cigarette. FTC Report Dec. '81.

Introducing Cambridge Box:

No cigarette is lower in tar or nicotine.

Cambridge
Box: Less than 0.1 mg. tar.

Cambridge Soft Pack: For easy-drawing smoking satisfaction in an ultra low tar cigarette. Only 1 mg. tar.

Cambridge 100's: For satisfying tobacco taste in a longer length, ultra low tar cigarette. Only 4 mg. tar.

Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health. © Philip Morris Inc. 1988. Box: Less than 0.1 mg. "tar", 0.01 mg. nicotine—Soft Pack; 1 mg. "tar", 0.1 mg. nicotine—100's; 4 mg. "tar", 0.4 mg. nicotine av. per cigarette by FTC Method.

Did you say 1/3 less tar?

Pall Mall Light 100's.
A third less tar than the leading filter king, and still great taste.

Pall Mall Light 100's: 9 mg. tar (0.09 mg. nicotine av.), leading filter king; 15 mg. tar (long nic. lowest brand); 0.07 mg. tar (0.007 mg. nic. lowest brand).

PALL MALL LIGHT 100's
LOW TAR - FILTER

Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health.

“I'll bet that the first company to produce a cigarette claiming a **substantial reduction in tars and nicotine** ... will take the market.”

—1958, Philip Morris scientist

PJ Hilts. (1996). Smokescreen - The Truth Behind the Tobacco Industry Cover-Up, Addison Wesley, p26, quoting CV Mace, Memo to R N DuPuis, Untitled, 1958, 24 July.



No combustion?



black, sticky, tar-like substance



Caused by

- sweet flavors
- veg glycerin
- high wattage
- intense vaping

charred IQOS Heet stick



Screen captures from different video reviews of IQOS

IQOS: debris from burned heat stick

*Instructional video on cleaning iQOS



Check the burned tobacco !

Before cleaning



After cleaning



ENDS: toxic chemical aerosol (not vapor) (chemical reactions from mixing and heating)

Propylene glycol + vegetable glycerin + flavors +
nicotine (mixing without heating)

= ingredients + **chemical byproducts**

+

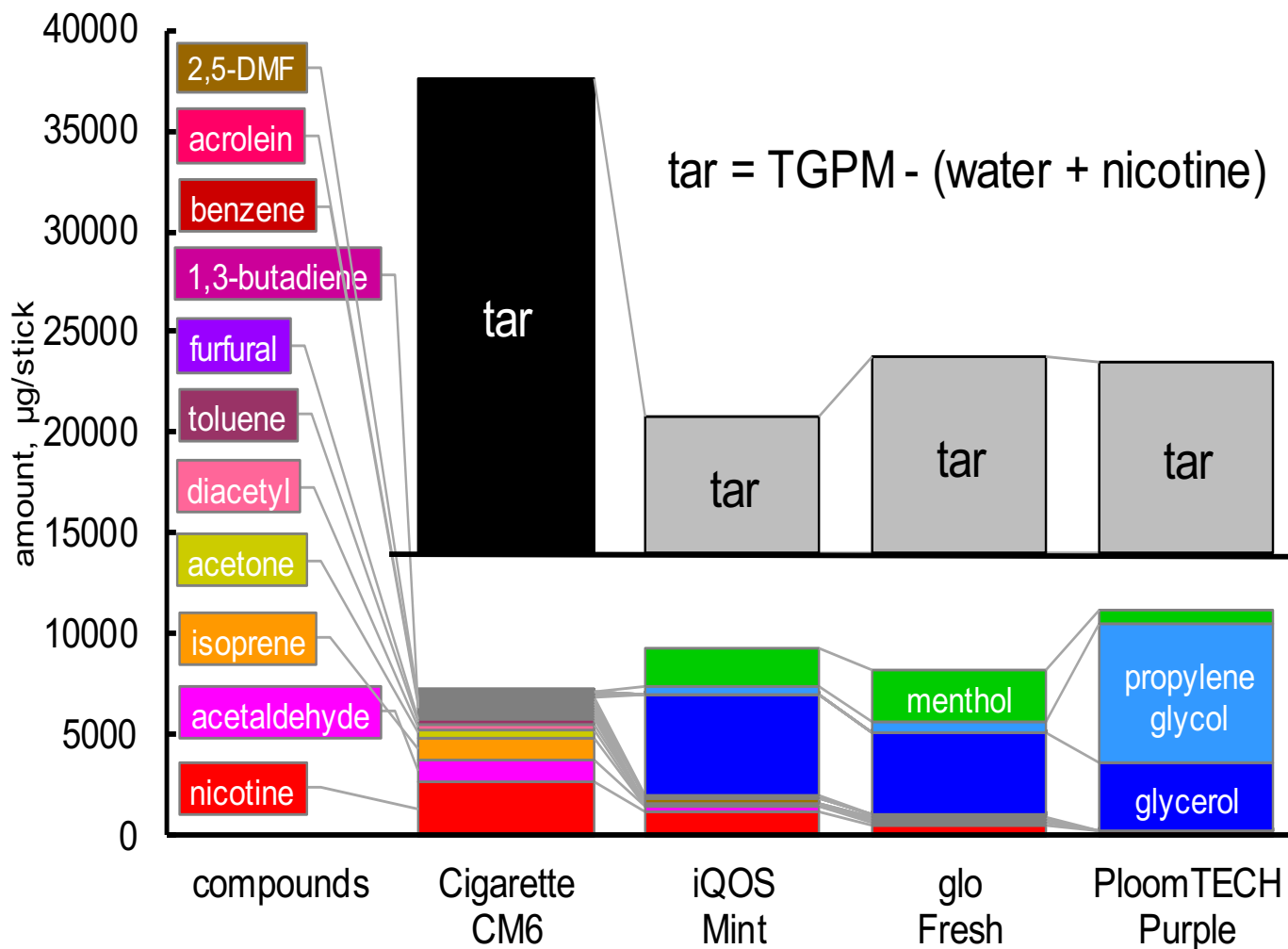
heat



fine particulate matter (PM 2.5), glycols, aldehydes (e.g. formaldehyde),
volatile organic compounds (VOCs), polycyclic aromatic hydrocarbon (PAHs),
tobacco-specific nitrosamines (TSNAs), toxic metals (lead, nickel, and
chromium), silicate particles and others



HTP: Less tar, not “no tar”



“Tar”
from HTPs



Reduced dose = reduced harm?

Q: ... safer than regular smoking?

- smoking intermittently or socially
- smoking just one cigarette a day

A: No.

100% poison vs 5% poison

Bjartveit, K., & Tverdal, A. (2005). **Health consequences of smoking 1-4 cigarettes per day.** *Tob Control, 14*(5), 315–320. doi:10.1136/tc.2005.011932

Schane, R. E., Ling, P. M., & Glantz, S. A. (2010). **Health effects of light and intermittent smoking: a review.** *Circulation, 121*(13), 1518–1522. doi:10.1161/CIRCULATIONAHA.109.904235



PMI warning to US FDA re iQOS

Extract from Philip Morris International's Modified Risk Tobacco Product Application to the US Food and Drug Administration [15, p18].

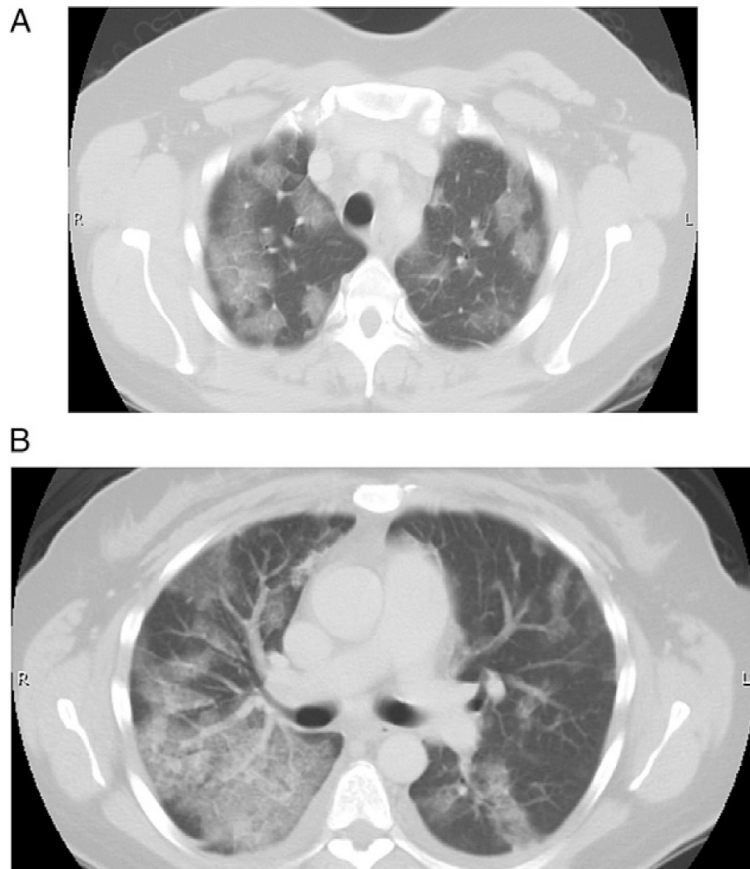
PMI IMPORTANT WARNING:

- It has not been demonstrated that switching to the *iQOS* system reduces the risk of developing tobacco-related diseases compared to smoking cigarettes.
- *HeatSticks* contain nicotine, which is addictive.
- Using the *iQOS* system can harm your health.



An Unexpected Consequence of Electronic Cigarette Use

Lindsay McCauley, DO; Catherine Markin, MD, FCCP; and Danielle Hosmer, MD



- First published report of lipoid pneumonia linked to e-cigarettes
- 42 y.o. female
- Non-smoker
- 7-month use of e-cigarettes

FIGURE 1. Representative CT images show the “crazy paving” pattern of patchy ground glass superimposed on interlobular septal thickening. A, Bilateral upper lobes. B, Bilateral lower lobes.

E-cigarette-induced lung disease: from acute to chronic

Florian Poschenrieder, Michael Rotter, Andreas Gschwendtner, Okka W Hamer

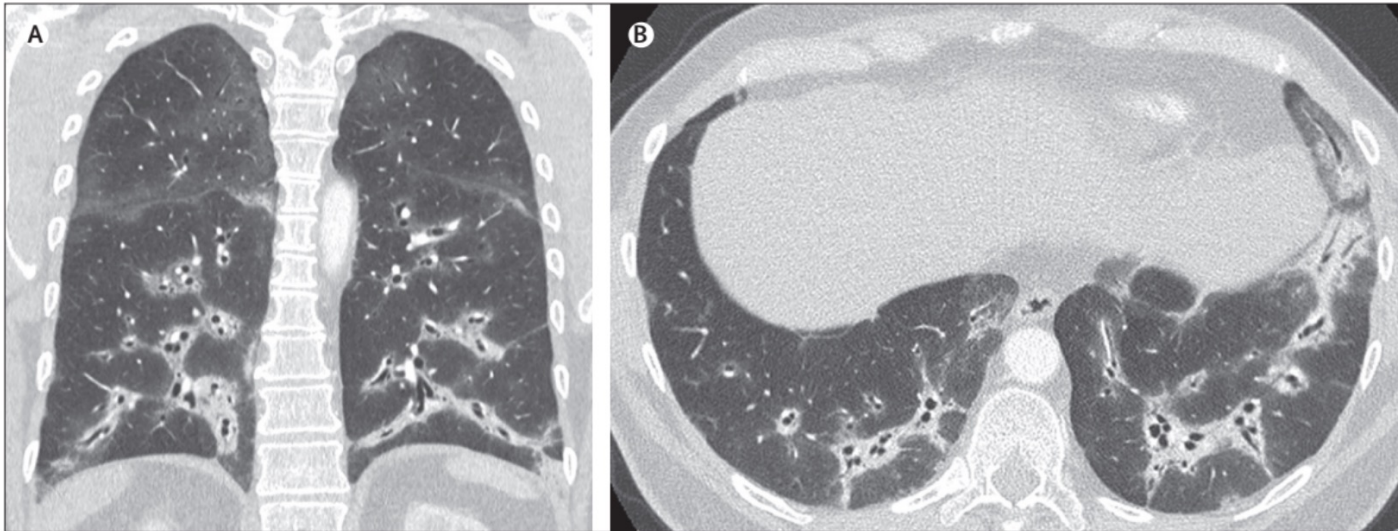
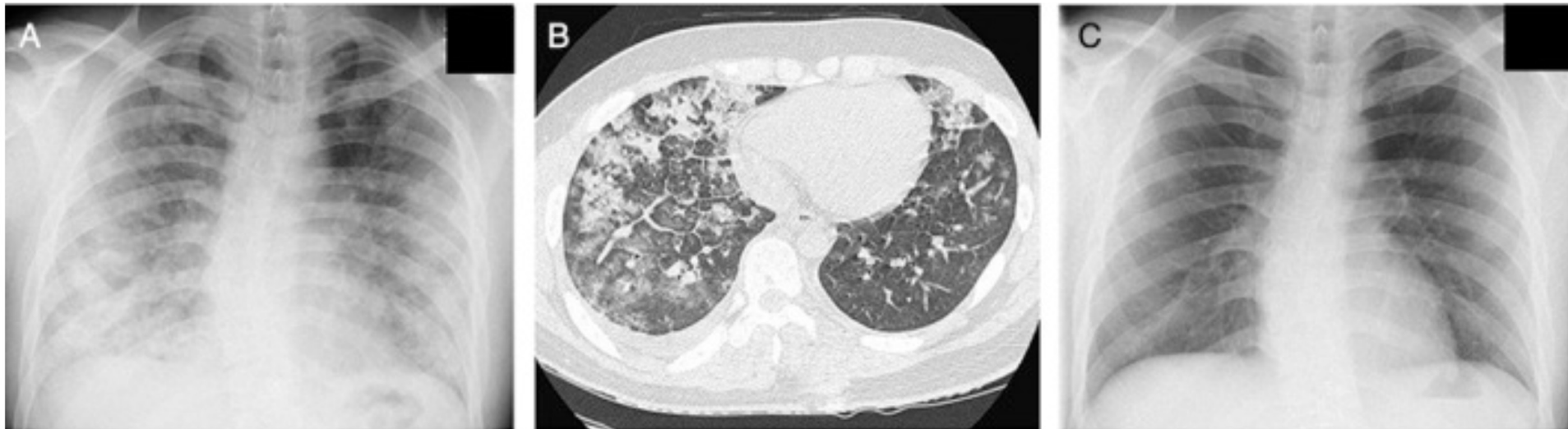


Figure: E-cigarette-induced fibrosing interstitial lung disease

A high-resolution chest CT scan shows lower lobe predominant, bilateral consolidations in a peribronchovascular distribution—the pattern of an organising pneumonia—in both coronal (A) and transverse (B) sections.

- 52 y.o. male, smoker for 40 years
- “Quit” smoking and started non-THC vaping for past 4 months
- Dx: organizing pneumonia indicating foreign body inhalation
- Stopped vaping; started steroid tx, but no improvement after 4 months
- Repeat bronchoscopy: non-specific interstitial pneumonia, indicating chronic inflammation

Acute eosinophilic pneumonia following heat-not-burn cigarette smoking



20 y.o. male, started smoking 20 cigarettes of HC per day 6 months previously and then purchased a second device for smoking HC to increase smoking HC to 40 cigarettes a day 2 weeks before hospitalization.

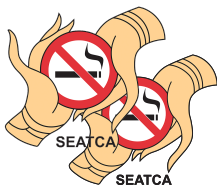
2017 (USA)

Forbes

193,977 views | Jul 18, 2019, 07:00pm

Teen's Two-Pod A Day Juul Addiction Caused Massive Stroke, Lawsuit Says

<https://http://www.forbes.com/sites/kenrickcai/2019/07/18/teen-two-pod-a-day-juul-addiction-caused-massive-stroke-lawsuit-vaping-e-cigarettes/#3aa75ff56ace>





VAPE DEBATE

MS. BERKMAN

**TEENS TESTIFY JUUL TOLD NINTH-GRADERS
ITS E-CIGARETTE WAS "TOTALLY SAFE"**

TOMORROW ON CNN

THE MOVIES

NEW SERIES
9P ET



CNN

12:51 PM ET

NEWSROOM



SEATCA

Nicotine: addiction and toxicity*

*Mishra A, Chaturvedi P, Datta S, et al. (2015). Harmful effects of nicotine. *Indian Journal of Medical and Paediatric Oncology*. DOI: 10.4103/0971-5851.151771



Keeping smokers addicted

“Nicotine is addictive. We are, then, in the business of selling nicotine—an addictive drug.”

(Brown & Williamson, 1963)

A. Yeaman, “Implications of Battelle Hippo I & II and the Griffith Filter,” 17 July 1963, Document Number 1802.05, <http://www.library.ucsf.edu/tobacco/docs/html/1802.05/>.

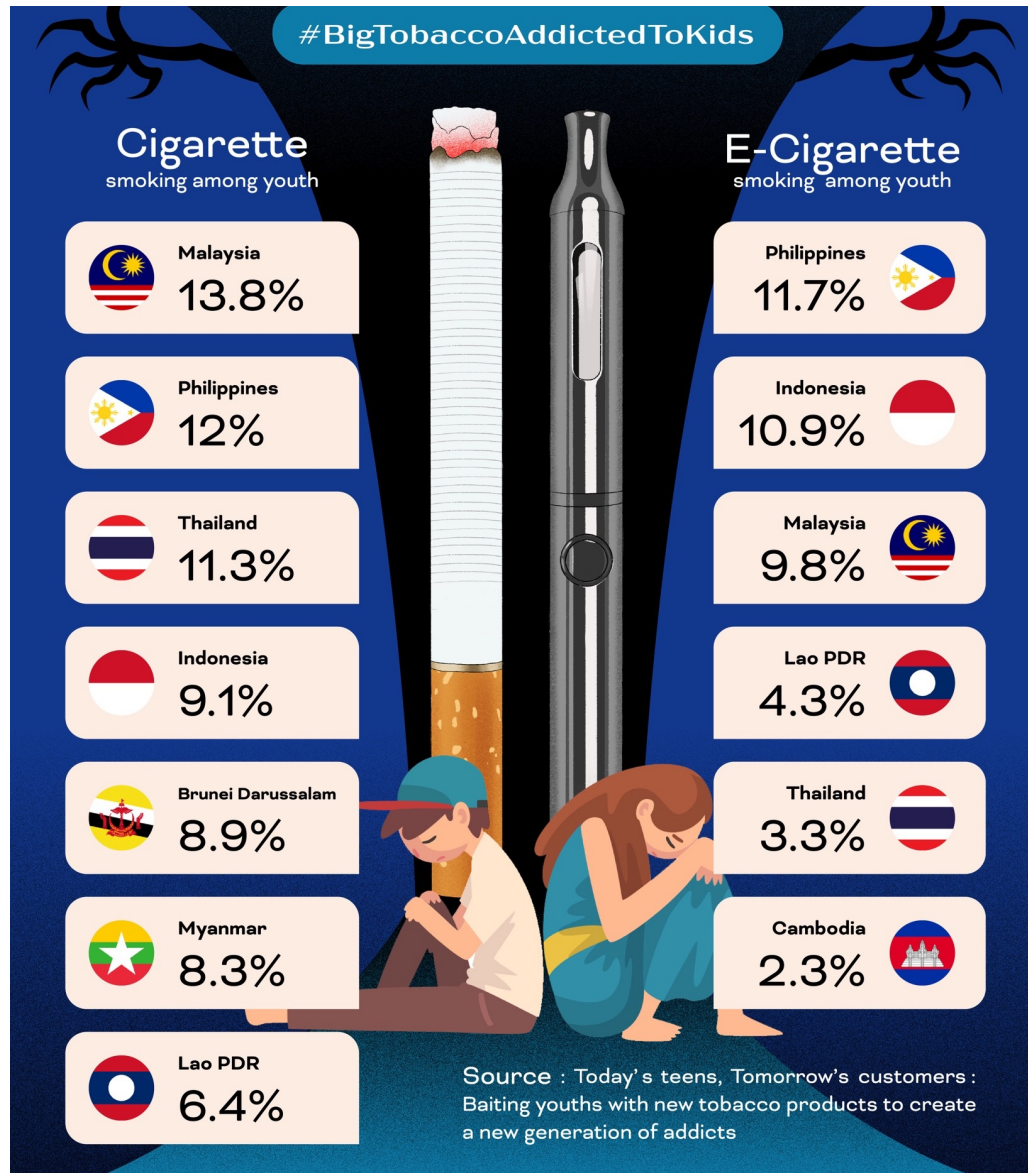
“...was not obtained by accident.... [W]e can regulate, fairly precisely, the nicotine and sugar levels to almost any desired level management might require.”

(BAT, 1963)

Findings of Fact, Conclusions of Law and Recommendations Regarding Non-Liggett Privilege Claims, Minnesota Trial Court File Number C1-94-8565, 8 March 1998, Minnesota Plaintiff’s Exhibit 56 (1) BATCo 1026303333, p. 336; B. Griffith, Letter to John Kirwan, BAT, 1963. <http://www.stic.neu.edu/MN/specialmaster2-10-98.html>.



Teen smoking prevalence in ASEAN



* from Global Youth Tobacco Survey (GYTS)

E-cigarette use among youths, PH

1 of 5 e-cigarette users are
19 years old and below

The youth is the hope of our future.

Jose Rizal

Tech + tricks



Flavors attract youths

"It's a well-known fact that **teenagers** like sweet products. **Honey** might be considered." Marketing Innovations. (1972). Youth cigarette - New concepts [memo to Brown & Williamson]. Bates No. 170042014



THE FLAVOR TRAP

How Tobacco Companies Are Luring Kids with Candy-Flavored E-Cigarettes and Cigars

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Cancer Action Network
American Cancer Society

American Heart Association
American Stroke Association
life is why™

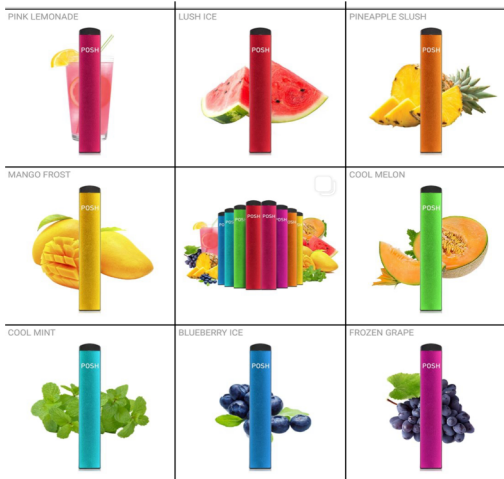
AMERICAN LUNG ASSOCIATION

CAMPAIGN for TOBACCO-FREE Kids™



>15,500 e-liquid flavors

Which flavor is your favorite?

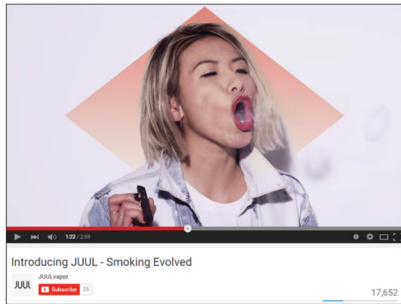
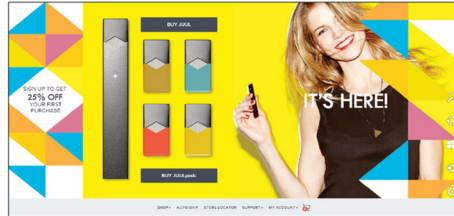


Hsu G, Sun JY, and Zhu SH. (2018). Evolution of electronic cigarette brands from 2013-2014 to 2016-2017: Analysis of brand websites. *J Med Internet Res* 20(3):e80. DOI: 10.2196/jmir.8550



Youth-appealing Juul campaign

JUUL LAUNCH MARKETING CAMPAIGN

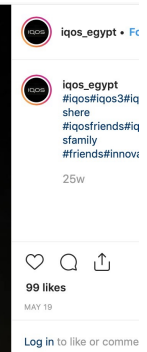


Images taken for Juul's "vaporized" ad campaign.

Source: <https://stanford.io/2X4eovY>



IQOS social media campaign



<https://www.reuters.com/article/us-philipmorris-ecigs-instagram-exclusive/exclusive-philip-morris-suspends-social-media-campaign-after-reuters-exposes-young-influencers-idUSKCN1SH02K>



Similarities in marketing tactics

Traditional cigarettes

ENDS / HTPs



Source: <https://bit.ly/2B1wuWM> and <https://stanford.io/2X4eovY>

Similarities in marketing tactics

Traditional cigarettes

ENDS / HTPs



Source: <https://bit.ly/2XEh5TU> and <https://bit.ly/3d8QftO>

**Industry:
“switching products”,
not cessation products**

(but marketed as “quitting” smoking)



Dual use is common

Hon Lik invented the e-cigarette to quit smoking - but now he's a dual user

Chinese pharmacist says he only smokes cigarettes now to check flavours, and he sees no conflict with company he works for being owned by Imperial Tobacco

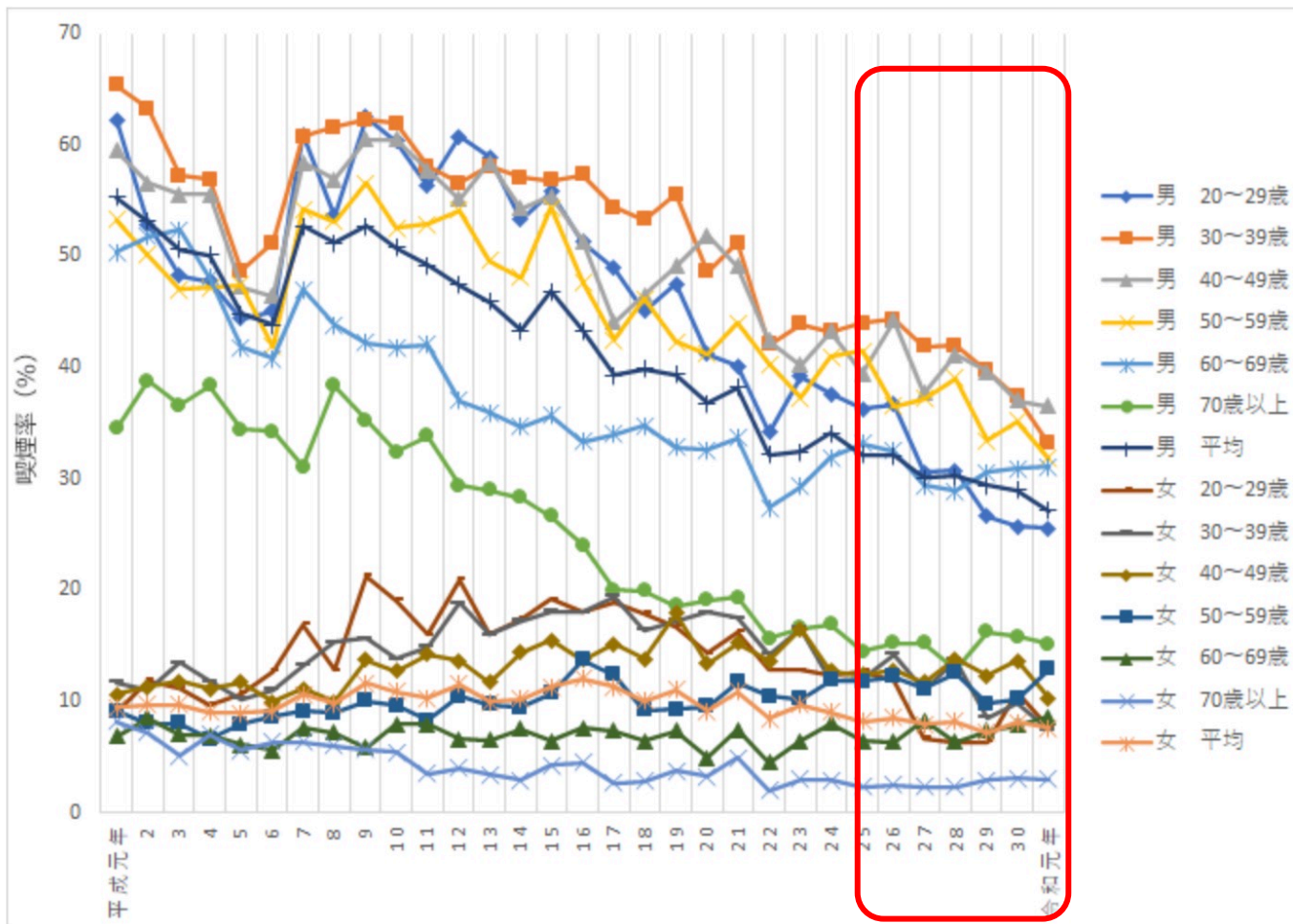


▲ Hon Lik, inventor of the e-cigarette, uses one of the devices in London on Tuesday. Photograph: Stefan Wermuth/Reuters

Since 1980s, gradual decline in smoking rates
 Since 2014 intro of HTPs, no major decline in smoking rates

Japan
 1989-2020

Annual transition of smoking habits (by gender and age)



●Adult smoking rate (Ministry of Health, Labor and Welfare National Health and Nutrition Survey)

Currently, the percentage of people who smoke habitually is 16.7%, and by gender, 27.1% are men and 7.6% are women. Over the last 10 years, both have decreased significantly. By age group, the percentage is high among men in their 30s and 60s, and about 30% habitually smoke.

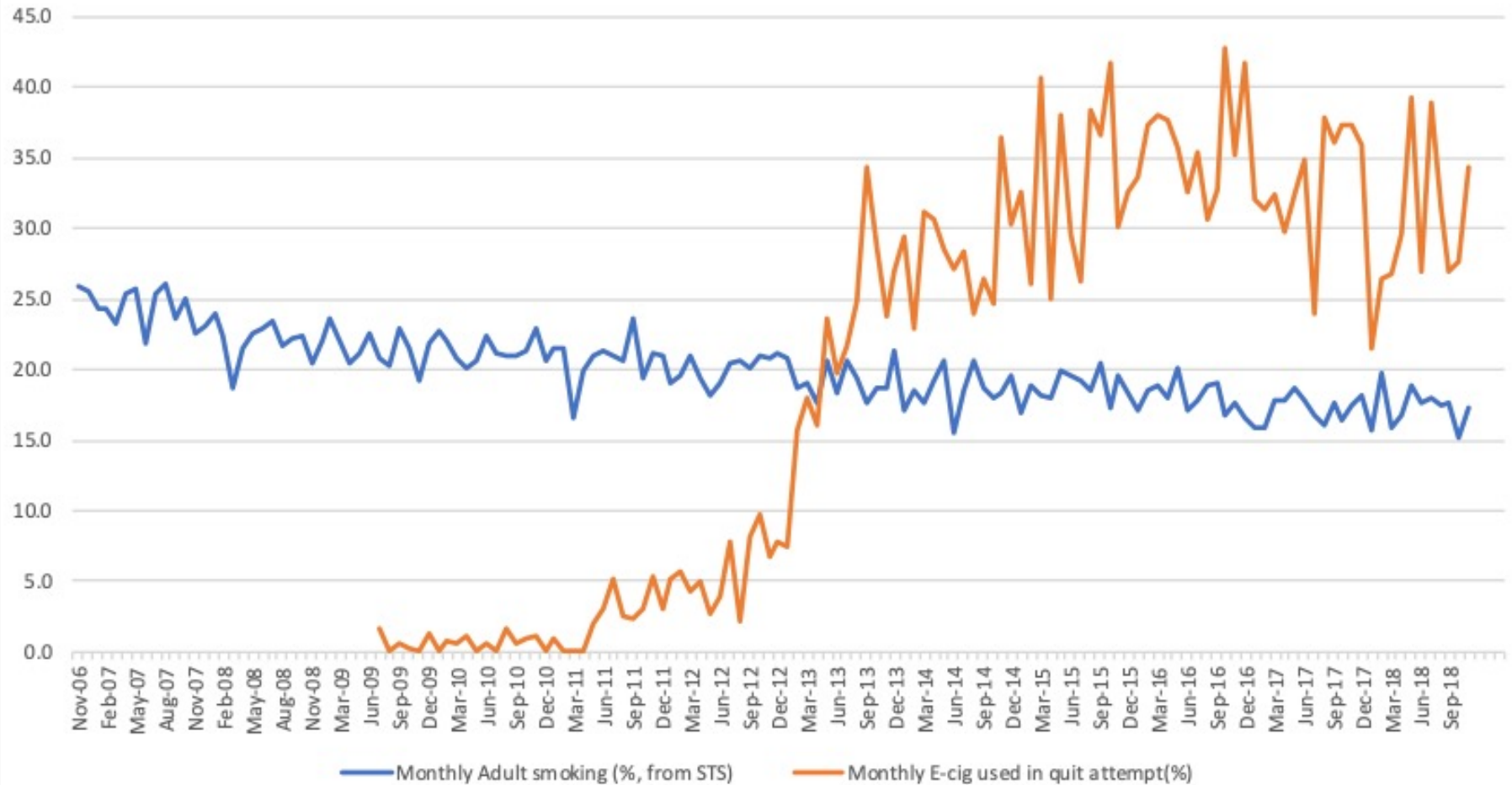
<http://www.health-net.or.jp/tobacco/product/pd100000.html>



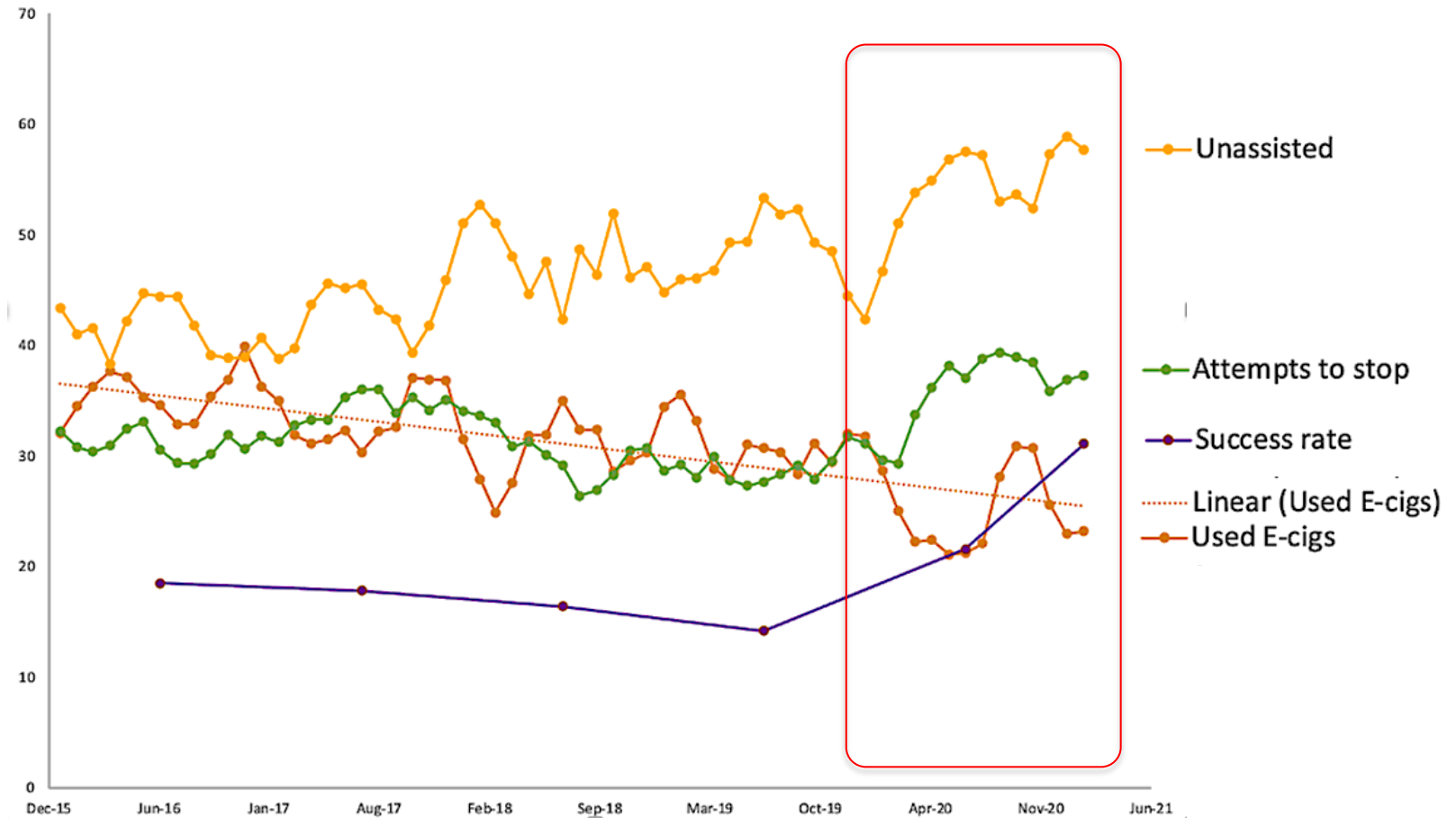
UK: no impact on smoking rates

STS smoking rates vs % quit attempts using e-cigarettes

2006-2018



Quit attempts and success vs cessation strategy, England 2016-21



Prof. Simon Chapman: *In the midst of a pandemic, English smokers are quitting in droves. So how are they doing it?* 15 April 2021

Ref: <https://simonchapman6.com/2021/04/15/n-the-midst-of-a-pandemic-english-smokers-are-quitting-in-droves-so-how-are-they-doing-it/>



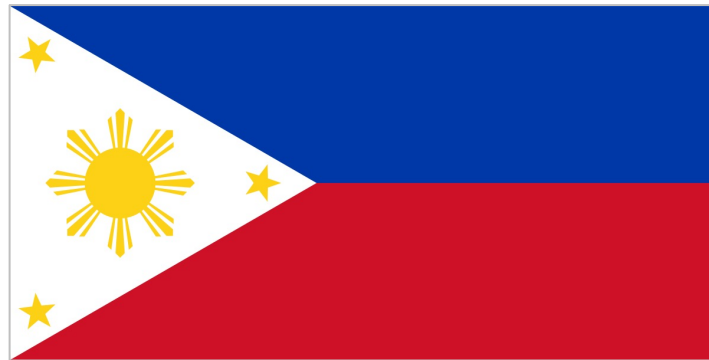
Basis for regulation

ESDs are harmful to health

- Toxic chemical aerosol
- Known health harms
- Sustained addiction
- Hindrance to cessation; switching isn't quitting
- Youth uptake
- Distraction/threat to tobacco control



Regulatory policy experience in the





Taxation

- Reduce affordability to discourage use
- Raise government revenues, ideally allocated for tobacco control and health promotion

Taxation

- Industry lobbies for low tax rates

Specific tax rates effective 1 Jan 2020, in PHP

	cigarettes	ENDS	HTP
RA 11346	45 /pack + 5/yr	1.00 / ml + 5%/yr	10 /pack + 5%/yr
RA 11467	maintain	4.50 / ml (freebase) + 0.50/yr 37/ml (salt) + 5/yr	25 /pack + 2.50/yr





Smoke-free environments

- Protect from exposure to toxins in air
- Encourage cessation
- Denormalize tobacco use



Smoke-free Policy

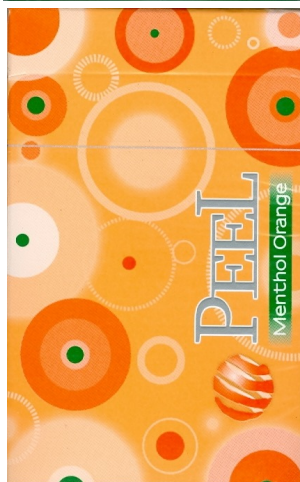
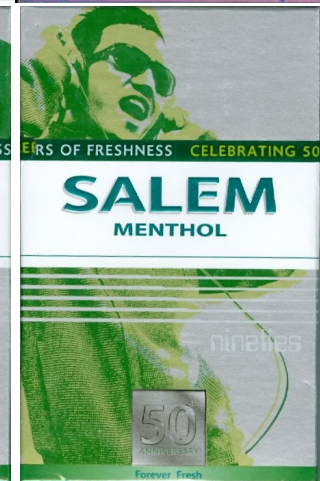
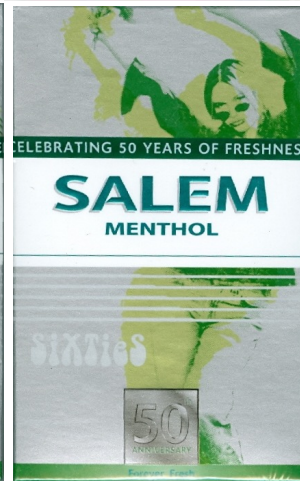
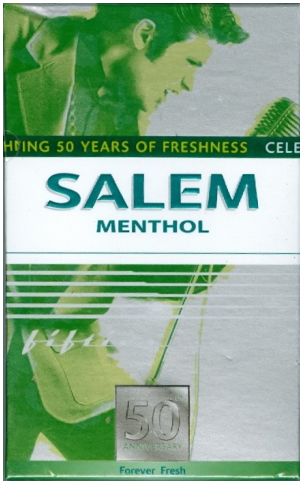
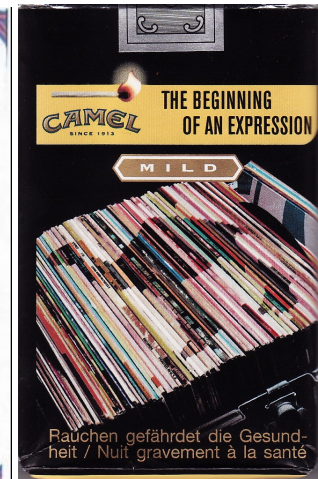
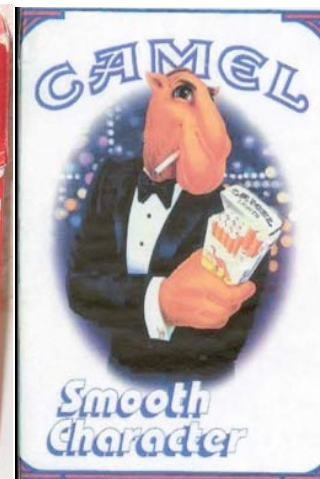
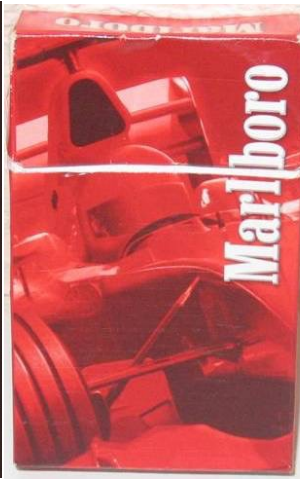
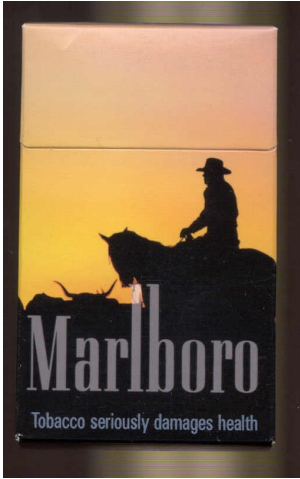
- Industry lobby for indoor use of both conventional and new products



Large pictorial health warnings and Standardized packaging

- Reduce attractiveness of tobacco products
- Raise awareness of health harms
- Encourage cessation and prevent youth uptake





Ang paninigarilyo ay sanhi ng
STROKE



Ang paninigarilyo ay sanhi ng
KANSER SA LEEG



Ang paninigarilyo ay sanhi ng
KANSER SA BIBIG



TRUTH

GRAPHIC HEALTH WARNINGS

(RA 10643), 2014

PANINIGARILYO + MAGULANG =
PREMATURE BIRTH



Nagiging sanhi ng
KANSER SA BIBIG
ang PAGSISIGARILYO



Smoking causes
GANGRENE



24 years to GHWs because of industry interference

NON



1992
[RA 7394,
1 side]



2003 (2006)
[RA 9211,
30% front only]



2014 (2016)
[RA 10643,
50% bottom
front & back]



(2001)

(2010)

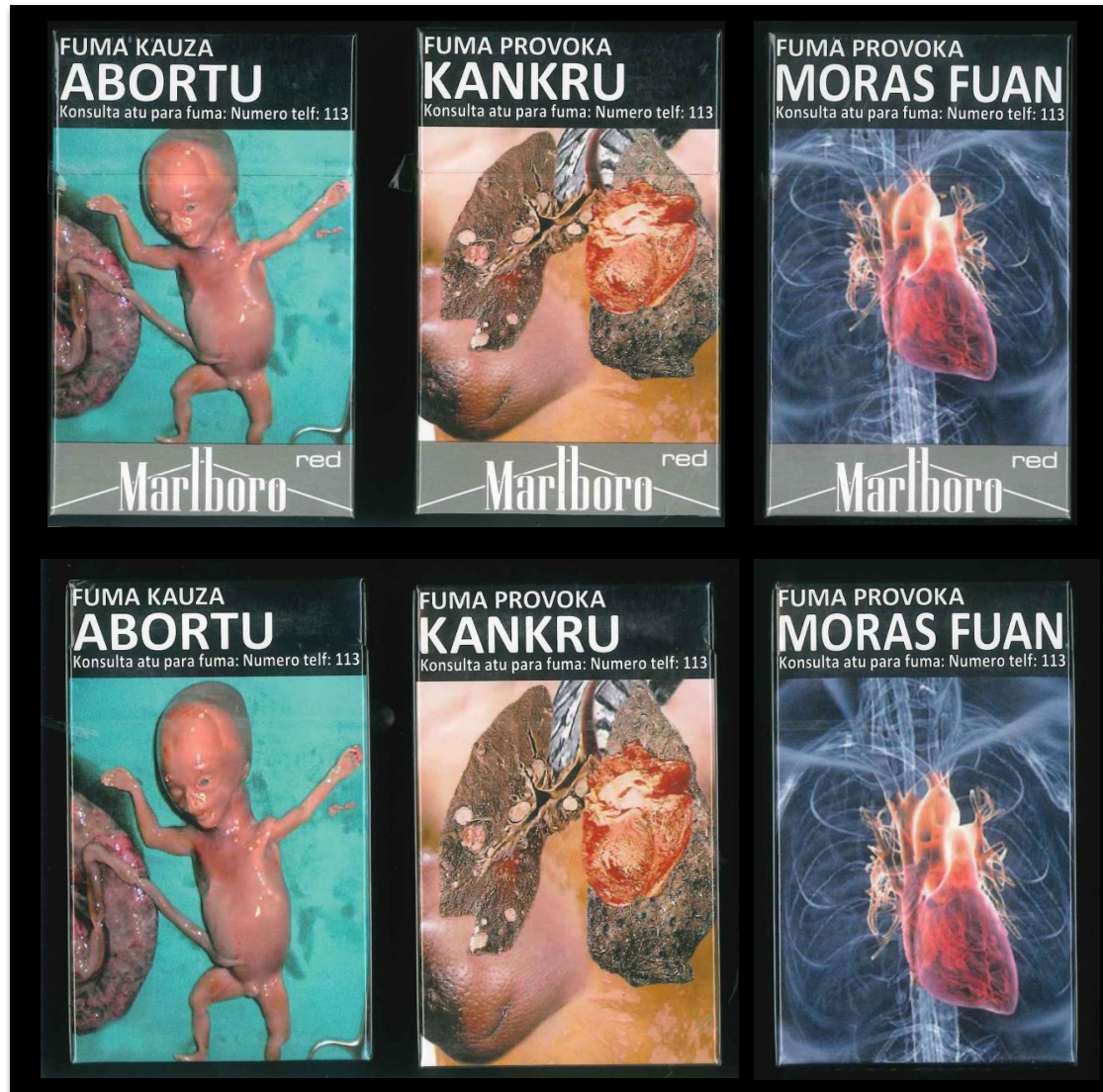
[DOH AO: 25% front & back;
10-year SC case]

[DOH AO: 60% front & back;
5 RTC cases]



World's largest PHW: Timor Leste

(85% front, 100% back)



Philippines



Standardized tobacco packaging in Asia



Thailand 85% PHW



Singapore 75% PHW



Packaging/Health Warnings

- RA 11346 requires PHWs for ENDS/HTP
- Industry lobbying to remove PHWs and have text-only warning
- Industry against standardized packaging



IQOS Heets sold in NZ



JUUL in Israel
before and after standardised packaging



JUUL pack in S. Korea





OUT OF SIGHT, OUT OF MIND

Ban on tobacco advertising, promotion, and sponsorship (TAPS)

- Reduce attractiveness of tobacco products
- Denormalize tobacco products / industry
- Support cessation and prevent youth uptake



Advertising and Promotion

- RA 9211 imposes only partial marketing restrictions for tobacco products
- Industry lobby for similar partial restrictions for ENDS and HTP **plus allow online marketing**, despite claim that products are “not intended for non-smokers or minors”





Ban on sales to youths

- Reduce youth access to tobacco products
- Prevent youth addiction
- Denormalize tobacco products / industry



- RA 11467 sets minimum age at 21 years
- RA 11467 limits flavors to plain tobacco and menthol
- Industry lobbying to revert to 18, despite claim that products are “not intended for non-smokers or minors”
- Industry lobbying to allow many flavors

Balanga's Tobacco-Free Generation

**AND VOWED
NEVER TO SMOKE
IN THEIR LIFETIME**



Sued by tobacco industry!



Video from <https://youtu.be/jySrYCHR0hA>





Regulatory Authority

- RA 11467 mandates **Food and Drug Administration (FDA)** as lead regulator
- Industry lobby to change lead regulator to **Department of Trade and Industry (DTI)**
- Industry lobby accusing FDA of being too restrictive and “anti-tobacco industry”



Who are we?



What do we say we want?



So what do we do?



And stop making tobacco products?



The tobacco industry!



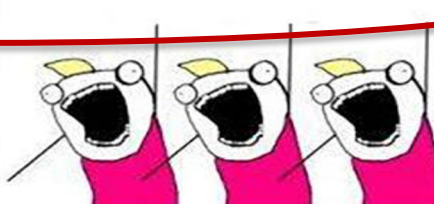
A smoke free world!



Switch to making e-cigarettes!



Hell, no!



THE UNFILTERED TRUTH



SEATCA

"smoke-free future"



Adapted from editorial cartoon by J.D. Crowe, 3 April 2018
https://www.al.com/opinion/2018/04/kay_ivey_wolf_in_sheeps_clothi.html



Further reading

- **European Respiratory Society and tobacco harm reduction**
<https://erj.ersjournals.com/content/54/6/1902009>
- **Electronic cigarettes: A position statement from the Thoracic Society of Australia and New Zealand**
<https://doi.org/10.1111/resp.13904>





**DON'T_{BE}
FOOLED
BY TOBACCO
INDUSTRY**

