



Smoking Cessation and E-cigarettes



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Objectives

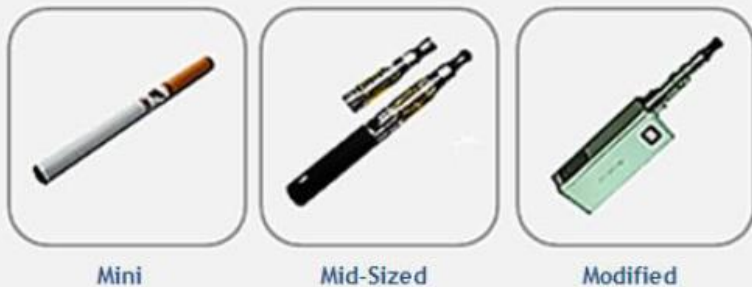
- Understand tobacco use prevalence
- Describe recommendations and evidence for e-cigarettes and cessation
- List public health concerns about e-cigarettes
- Utilize evidence-based smoking cessation medication and Chinese-language counseling resources

What are E-Cigarettes?

Anatomy of an E-cigarette



Types of E-cigarettes



- Battery-powered devices
- Heated aerosol
 - Propylene glycol
 - Nicotine
 - Flavorings
 - Other additives



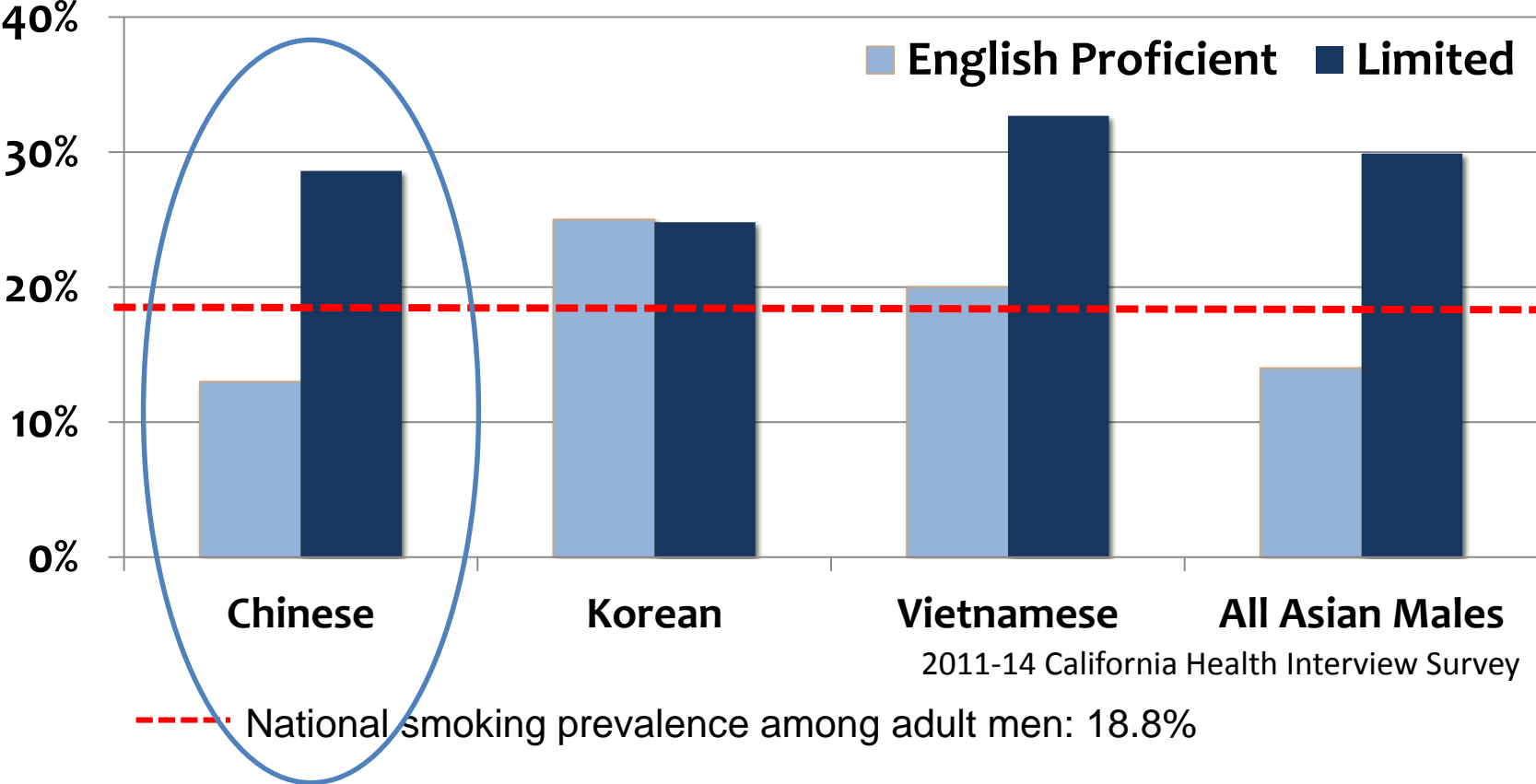
Tobacco and E-Cigarette Use

National Adult Tobacco Survey, US, 2013-2014

TABLE 1. Percentage of persons aged ≥18 years who reported tobacco product use “every day” or “some days” and met established thresholds, by tobacco product and selected characteristics — National Adult Tobacco Survey, United States, 2013–2014

Characteristic	Tobacco product % (95% CI)							
	Any tobacco product*	Any combustible tobacco product†	Cigarettes§	Cigars/Cigarillos/Filtered little cigars¶	Regular pipe**	Water pipe/Hookah††	E-cigarettes§§	Smokeless tobacco¶¶
Overall	21.3 (20.8–21.7)	18.4 (18.0–18.8)	17.0 (16.6–17.4)	1.8 (1.6–1.9)	0.3 (0.2–0.4)	0.6 (0.5–0.7)	3.3 (3.1–3.5)	2.5 (2.3–2.6)
Sex								
Male	26.3 (25.6–27.0)	21.5 (20.8–22.1)	19.3 (18.6–19.9)	2.8 (2.5–3.1)	0.6 (0.5–0.7)	0.8 (0.6–0.9)	4.0 (3.6–4.3)	4.8 (4.5–5.2)
Female	16.7 (16.2–17.3)	15.7 (15.1–16.2)	15.1 (14.5–15.6)	0.8 (0.6–0.9)	—***	0.4 (0.3–0.5)	2.8 (2.6–3.0)	0.3 (0.2–0.3)
Race/Ethnicity								
White, non-Hispanic	21.3 (20.8–21.8)	17.8 (17.3–18.3)	16.6 (16.2–17.1)	1.5 (1.3–1.7)	0.3 (0.2–0.4)	0.4 (0.3–0.5)	3.6 (3.4–3.9)	3.1 (2.8–3.3)
Black, non-Hispanic	25.1 (23.7–26.6)	23.5 (22.0–24.9)	21.3 (19.9–22.6)	3.3 (2.7–3.9)	0.3 (0.1–0.5)	0.9 (0.5–1.2)	2.1 (1.6–2.6)	1.1 (0.7–1.4)
Asian, non-Hispanic	11.2 (9.2–13.1)	9.3 (7.6–11.1)	8.1 (6.5–9.7)	—***	—***	—***	2.8 (1.8–3.8)	—***
Other, non-Hispanic	32.6 (30.1–35.2)	29.1 (26.3–31.6)	27.5 (25.1–30.0)	2.1 (1.5–2.8)	0.6 (0.3–1.0)	—***	5.2 (4.0–6.5)	4.0 (3.0–5.0)
Hispanic	17.6 (16.3–19.0)	16.2 (14.9–17.5)	14.7 (13.5–16.0)	1.8 (1.3–2.3)	—***	1.1 (0.7–1.5)	2.7 (2.1–3.2)	1.0 (0.6–1.3)

California Asian American Men



Smoking prevalence among men in China: **52.9%** (2010 GATS)

CLINICAL DECISIONS
 INTERACTIVE AT NEJM.ORG

E-Cigarettes and Smoking Cessation

This interactive feature addresses the approach to a clinical case. A case vignette is followed by specific options, neither of which can be considered correct or incorrect. In short essays, experts in the field then argue for each of the options. Readers can participate in forming community opinion by choosing one of the options and, if they like, providing their reasons.

CASE VIGNETTE

A Man Considering the Use of E-Cigarettes

James S. Yeh, M.D., M.P.H.

Mr. O'Malley is a 29-year-old man whom you are seeing for the first time for a routine health check-up. He has a medical history of obesity, hypertension, and childhood seizures. During the visit, he mentions that he is interested in quitting smoking. He started smoking cigarettes when he was 15 years old, while "hanging out" with his friends, and in those days smoked about half a pack a month.

During college, he began smoking more frequently and more heavily; for the past 6 years, he has been smoking up to 1.5 packs per day. Several times in the past, he has reduced his cigarette consumption by up to half, using various nicotine-replacement regimens, or has stopped smoking altogether by quitting "cold turkey." Each time, he was able to sustain his efforts for 2 to 3 weeks before resuming his previous smoking habits.

Mr. O'Malley is an auto mechanic, and he consumes 3 to 4 beers weekly. He has been married for 3 years and has no children. He smokes inside the house on occasion; his wife does not smoke.

His only medication is chlorthalidone, which he takes at a dose of 25 mg daily. He has no known drug allergies. A review of systems is

unremarkable. He reports no chronic cough, wheezing, or dyspnea.

On physical examination, his blood pressure is 128/76 mm Hg, his weight is 95.3 kg (210 lb), and his body-mass index (the weight in kilograms divided by the square of the height in meters) is 31. Both lungs are clear to auscultation; there is no wheezing, and no crackles are heard. The rest of the physical examination is unremarkable.

After obtaining the history and performing the physical examination, you discuss smoking-cessation aids. The patient mentions that he has read about electronic cigarettes (e-cigarettes); he has friends who use them on a regular basis and have stopped smoking cigarettes altogether. He is interested in trying e-cigarettes as a smoking-cessation aid and asks for your opinion.

OPTIONS

What is your recommendation for this patient?

1. Recommend trying e-cigarettes for smoking cessation.
2. Do not recommend trying e-cigarettes for smoking cessation.

To aid in your decision making, each of these approaches is defended in a short essay by an expert in the field. Given your knowledge of the patient and the points made by the experts, which option would you choose? Make your choice, vote, and offer your comments at NEJM.org.

VOTE

Recommend?

Not recommend?

Differing Recommendations

UK (8/15): Support

“In a nutshell, best estimates show e-cigarettes are 95% less harmful to your health than normal cigarettes, and when supported by a smoking cessation service, help most smokers to quit tobacco altogether.”

US (10/15): No recommendation

“Inadequate evidence on the benefit of ENDS to achieve tobacco cessation in adults or improve perinatal outcomes in infants...balance of benefits and harms cannot be determined”



Public Health
England

E-cigarettes: an evidence update
A report commissioned by Public Health
England



U.S. Preventive Services
TASK FORCE

E-cigarettes and smoking cessation in real-world and clinical settings: a systematic review and meta-analysis

Sara Kalkhoran, MD, Prof Stanton A Glantz, PhD

Published Online: 14 January 2016

E-cig users vs. non-e-cig users among all smokers vs. interested to quit

- 37% less likely to quit cigarettes

Only 1 trial compared e-cig to nicotine patch (voucher)

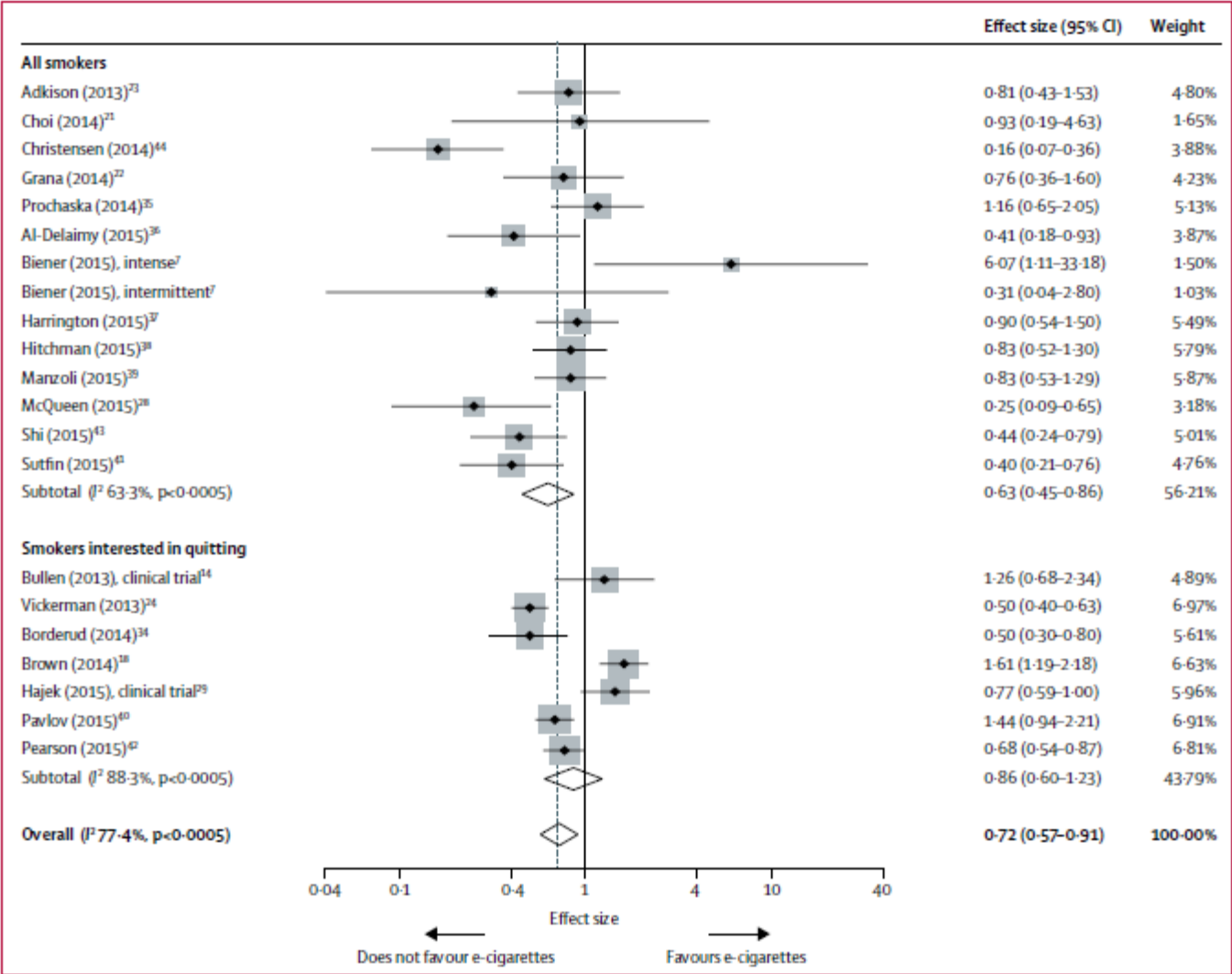
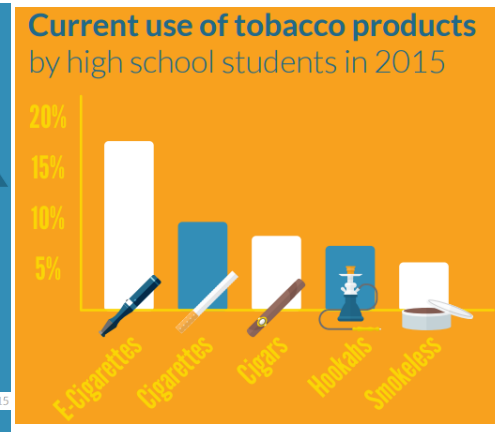
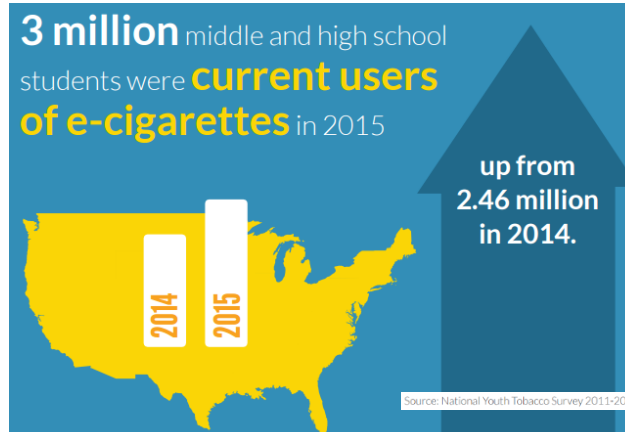


Figure 3: Odds of quitting smoking, stratified by all smokers versus those with an interest in quitting. Figure shows odds of quitting among e-cigarette users compared with non-e-cigarette users. The overall odds of quitting cigarettes is 0.72 (95% CI 0.57-0.91) irrespective of how studies are stratified.

Public Health Concerns

- Adolescent uptake
- Nicotine poisonings
- Vapor chemicals
- Exposure from secondhand vapor
- Lithium battery explosions
- Marketing tactics
- Long-term health effects



IT'S NOT JUST "HARMLESS WATER VAPOR"

E-cigarette aerosol contains at least **10 chemicals** on California's Prop 65 list of chemicals known to cause **cancer, birth defects or other reproductive harm.**

- TOLUENE
- ACETALDEHYDE
- CADMIUM
- BENZENE
- FORMALDEHYDE
- ISOPRENE
- LEAD
- NICKEL
- NICOTINE
- N-NITROSODNICOTINE

POISON HELP

1-800-222-1222

AAPCC

Year	Number of Cases
2011	271
2012	460
2013	1,543
2014	3,783
2015	3,073
2016	1,038

through July 31

(1958 v. 2013) Some e-cigarette ads are tapping into the cool, rugged masculinity that became famously linked with cigarettes.



LM

Yes, today's LM gives you **Less tars & More taste**

They said it wouldn't be done... a cigarette with such an improved flavor... with such powerful taste. But LM did it. LM's patented flavoring process... intentionally gives every LM cigarette the richness of smoke... resulting today's LM to give you... and to puff... love like in the smoke that our fathers. The LM shows you... delivering you the clean risk base of the Bluebird's front cigarette release. The best tasting smoke in each one that

Live Modern... change to modern LM

blu ELECTRONIC CIGARETTES

Take back your freedom with blu e-cigs. The most innovative alternative to traditional cigarettes.

- Smoother, Velvety Appearance
- The Ultimate Smooth, Cools Vapor
- Flavors Made in the U.S.A.

Now Available in Retail Stores Nationwide

blu.com/store-locator/

A content analysis of electronic cigarette manufacturer websites in China

Tobacco Control

An international peer-reviewed journal for health professionals and others in tobacco control

Tingting Yao^{1,2}, Nan Jiang^{2,3}, Rachel Grana², Pamela M Ling⁴, Stanton A Glantz⁵



Figure 1 "Realizing the dream of healthy smoking" in a Ruyan (Dragonite Ltd) web advertisement. Source: http://www.ruyantech.com/_d271668698.htm (accessed 10 Aug 2014).

- 2014 Chinese tobacco companies enter market
 - Lunar New Year smoker gift
- Marketing claims from 18 websites of 12 e-cig manufacturers in China on Alibaba
 - 89% health-related benefits
 - 78% no smoke exposure
 - 67% smoking cessation

E-Cig Fact Sheet on www.asianarch.org



甚麼是電子煙?

電子煙是一種使用電池，將含有尼古丁的煙油加熱的電子產品。尼古丁是煙草中所含的一種使人很容易上癮的化學物。電子煙將煙油變成霧狀，讓使用者可以吸入或呼出成霧氣（蒸汽），類似吸煙。使用者可以選購不同口味含有尼古丁的電子煙油配件。

有關電子煙的須知

- 45萬初中生和2百萬高中生都會嘗試使用電子煙，而且這些數字每年都在增加。¹
- 許多電子煙生產商都是由大煙草公司擁有。
- 目前並沒有足夠的證據證明電子煙可以幫助吸煙者戒煙。
- 目前還沒有足夠的研究來支持電子煙比捲煙或普通香煙更安全的說法。
- 因為電子煙不受監管，所以電子煙中可能含有有害的化學物質尚未明瞭。
- 電子煙對健康造成的長期性影響，尚未確定。

電子煙的組裝解剖圖



電子煙類型



¹ Arora RL, Singh T, Corey CE, et al. Tobacco Use Among Middle and High School Students – United States, 2011–2014. MMWR 64(14): 381–385. 2015.

電子煙的危害

電子煙使用者噴出的霧氣含有尼古丁和其他有毒化學物質。孕婦若接觸到這些化學物質可能會影響胎兒的大腦發育。

兒童若接觸到電子煙可能會導致他們在幼年時開始吸煙。

電子煙油色彩繽紛，含有味道，很容易讓小孩意外飲用而中毒。



電子煙是否比香煙更安全?

不。據我們所知，電子煙並不比香煙更安全。

研究人員發現，電子煙使用者不僅吸入尼古丁，而且還有其他化學物質，就好像吸食普通香煙一般。

吸電子煙與普通香煙一樣，都會吸進蒸氣或煙霧，同樣會刺激和傷害肺部。

使用吸電子煙會幫助吸煙者戒煙嗎?

電子煙不會使吸煙者減輕對尼古丁的成癮。

事實上，有些人可能會同時吸食普通香煙和電子煙，這使得戒煙更難成功。

如果你或你認識的人想戒煙，該如何?

請記住，電子煙還未經證實是一個安全或有效的方法來幫助戒煙。而我們有已經證實安全且有效的戒煙方法。

如果你或你認識的人有興趣戒煙：

- 向你的醫生或其他醫療專業人士諮詢，或
- 參閱網站 <http://www.asiansmokersquitline.org>，或
- 致電華語戒煙熱線：
粵語和普通話：1-800-838-8917
越南語：1-800-778-8440
韓語：1-800-556-5564
英語：1-800-NO-BUTTS (1-800-662-8887)

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設計：

Vickie Nguyen | Mi Tran | Alice Guan

出版機構：

UCSF Healthy Family Project
Vietnamese Community Health Promotion Project
Chinese Community Health Resources Center
Asian American Research Center on Health

部份資源由以下機構提供：

Tobacco-Related Disease Research Program Grant 22RT-0089H 及
National Institute on Drug Abuse Grant 5R01DA036740
<http://www.asianarch.org/teck> | All rights reserved, September, 2015

- Dangers, safety issues, not approved quitting aid
- Resources to help friend or family quit

US FDA Authority to Start Regulating E-Cigarettes

In 2016, FDA's Center for Tobacco Products (CTP) finalized a rule to regulate:



E-Cigarettes



Dissolvables



Pipe Tobacco



Hookah Tobacco



Cigars



Novel and Future Products

Since June 2009, CTP has regulated:



Cigarettes



Roll-Your-Own Tobacco

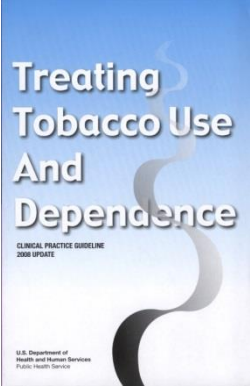


Smokeless Tobacco

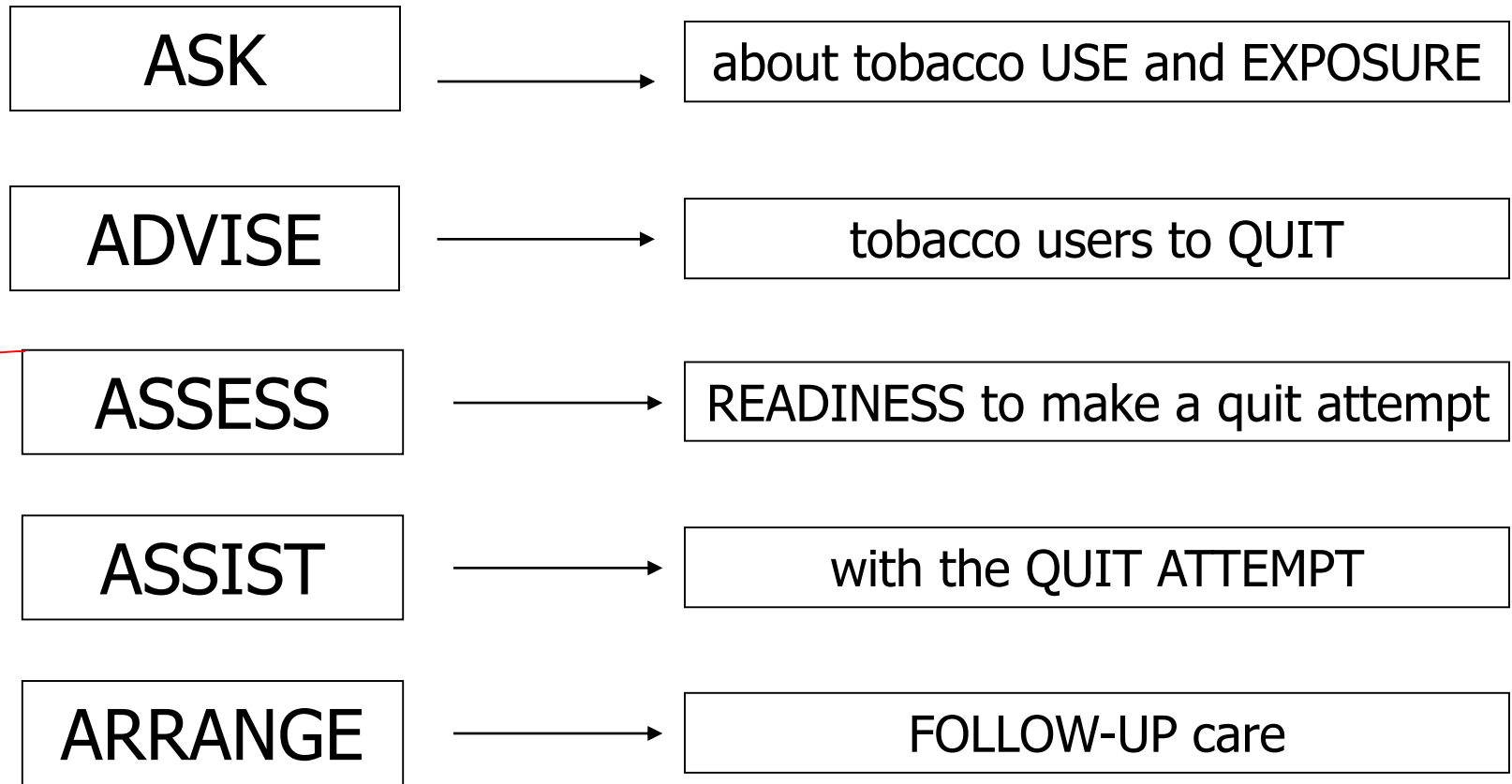
Provisions and Requirements

The final rule will subject all manufacturers, importers and/or retailers of newly-regulated tobacco products to any applicable provisions related to tobacco products in the Federal Food, Drug, and Cosmetic Act and FDA regulations, including:

- Registering manufacturing establishments and providing product listings to the FDA;
- Reporting ingredients, and harmful and potentially harmful constituents;
- Requiring premarket review and authorization of new tobacco products by the FDA;

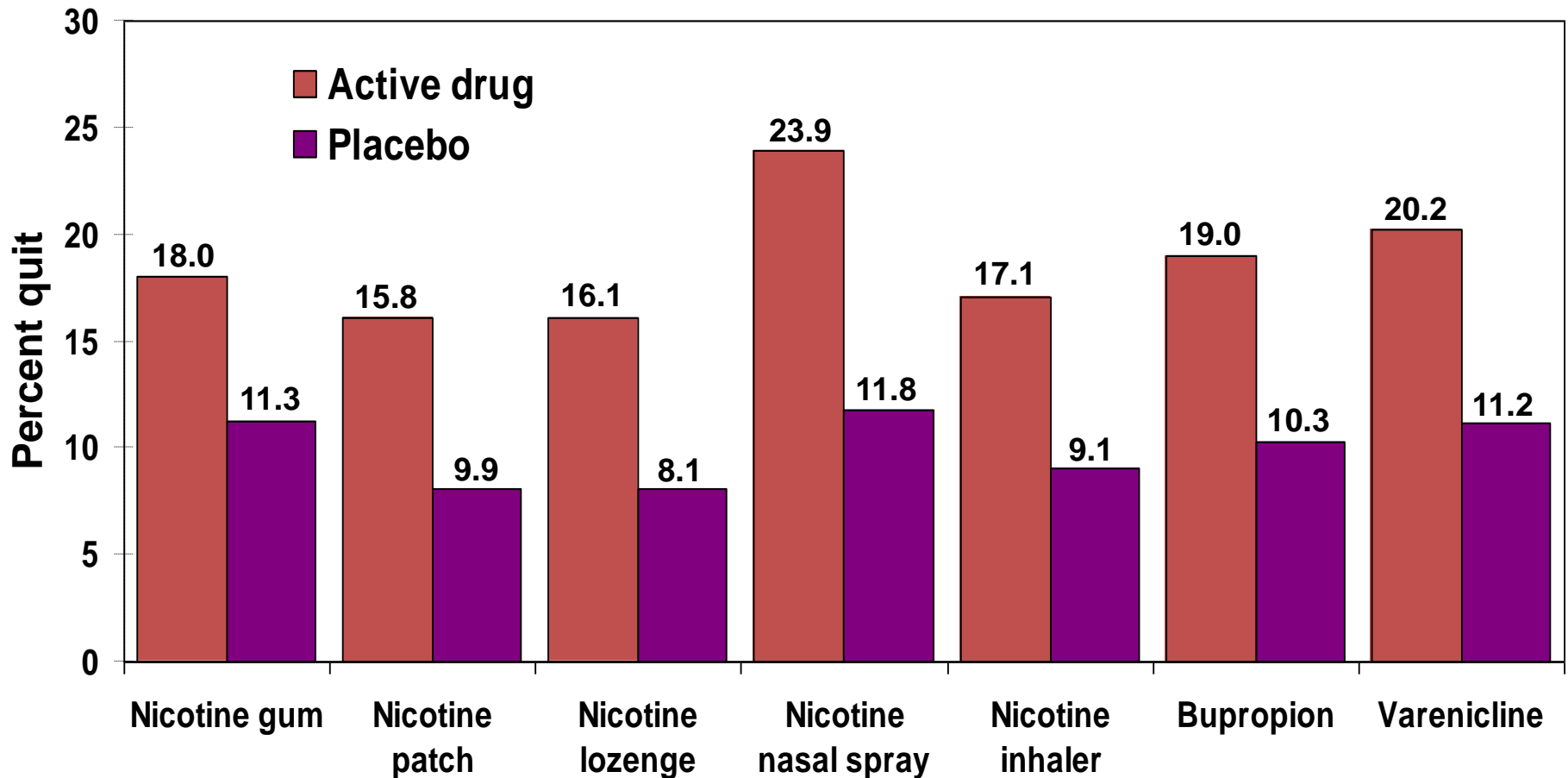


PHS Tobacco Treatment Guidelines: Counseling and Medication



REFER to quitline

Long-term (≥ 6 month) Quit Rates Doubled for 7 FDA-approved Medications



Data adapted from Cahill et al. (2008). *Cochrane Database Syst Rev*; Stead et al. (2008).

Cochrane Database Syst Rev; Hughes et al. (2007). *Cochrane Database Syst Rev*

Asian Smokers' Quitline: Free Evidence-based Services

- Available nationwide
 - Operated by UC San Diego
 - >10,000 callers since 2012
- FREE 2-weeks nicotine patches mailed to Asian-language smoker
- FREE in-language counseling in Cantonese or Mandarin



**Asian
Smokers'
Quitline**



電話諮詢



Direct Referral Web Portal

www.asiansmokersquitline.org

HOME

ABOUT ▾

CHINESE (中文)

KOREAN (한국어)

VIETNAMESE (TIẾNG VIỆT)

RESOURCES FOR STATES ▾

CONTACT US

注册点击这里 / 註冊點擊這裡

온라인 등록하기

GHI DANH TẠI ĐÂY

WEB REFERRAL ▾

If your parent or referring organization is not listed below, please visit our registration page [here](#).

1. Provider Information

2. Patient Information

First Name :

3. Patient Consent

Please read the following to the patient or parent/guardian of the patient and check the box to indicate that the patient provides consent:

I give my permission for the above-named organization to share my (or my child's) contact information with the Asian Smokers' Quitline. I give the Quitline permission to contact me (or my child) to provide help to quit smoking or other tobacco.

Type the code from image:

72805213

Submit

Patient will be contacted in 1-2 business days by Helpline counselor.

Extra Slides

Provider Resources

- www.asiansmokersquitline.org
- www.asianarch.org
- www.ucquits.com
 - Quick provider resources
 - Brief training videos (free CME)
- www.stillblowingsmoke.org



www.ucquits.com

An advertisement for the Asian Smokers Quitline. It features a photograph of a man in a white t-shirt and a woman's hands. The woman is holding a small orange card that says "你可以做到!" (You can do it!). The background is white. On the left side, there is vertical Chinese text: "戒煙 我們全力支持" (Quit smoking, we fully support you). At the bottom, there is more Chinese text: "打通電話 索取免費戒煙貼" (Call to get free quit patches), "想戒煙, 卻不知如何著手? 快撥打全美亞裔戒煙專線, 獲得由聯邦政府資助, 已經歷可獲成功率倍增的各種免費戒煙服務, 例如一對一電話諮詢, 提供自助戒煙資料等。現在致電, 更有免費戒煙貼兩週試用裝大贈送。請立即撥打專線!" (Want to quit smoking, but don't know how to get started? Call the national Asian smoking quitline, which is funded by the federal government, to receive various free quit services that have a higher success rate, such as one-on-one phone counseling, providing self-help quit materials, etc. Now calling, you will also receive a free 2-week trial pack of quit patches. Please call the quitline immediately!). On the right side, there is a large red number "800-838-8917" and the website "WWW.ASIANSMOKERSQUITLINE.ORG". Above the number, it says "超過6,000人獲得戒煙協助" (Over 6,000 people have received quit assistance). Below the number, it says "專線戒煙專線" (Dedicated quitline).

Evidence for ASQ Counseling

ARTICLE

The Effects of a Multilingual Telephone Quitline for Asian Smokers: A Randomized Controlled Trial

Shu-Hong Zhu, Sharon E. Cummins, Shiushing Wong, Anthony C. Gamst, Gary J. Tedeschi, Jasmine Reyes-Nocon

Manuscript received June 17, 2011; revised November 29, 2011; accepted December 1, 2011.

Correspondence to: Shu-Hong Zhu, PhD, Department of Family and Preventive Medicine, University of California, San Diego, 9500 Gilman Drive, MC 0905, La Jolla, CA 92093-0905 (e-mail: szhu@ucsd.edu).

Background Although telephone counseling services (quitlines) have become a popular behavioral intervention for smoking cessation in the United States, such services are scarce for Asian immigrants with limited English proficiency. In this study, we tested the effects of telephone counseling for smoking cessation in Chinese-, Korean-, and Vietnamese-speaking smokers.

Methods A culturally tailored counseling protocol was developed in English and translated into Chinese, Korean, and Vietnamese. We conducted a single randomized trial embedded in the California quitline service. Smokers who called the quitline's Chinese, Korean, and Vietnamese telephone lines between August 2, 2004, and April 4, 2008, were recruited to the trial. Subjects (N = 2277) were stratified by language and randomly assigned to telephone counseling (self-help materials and up to six counseling sessions; n = 1124 subjects) or self-help (self-help materials only; n = 1153 subjects) groups: 729 Chinese subjects (counseling = 359, self-help = 370), 848 Korean subjects (counseling = 422, self-help = 426), and 700 Vietnamese subjects (counseling = 343, self-help = 357). The primary outcome was 6-month prolonged abstinence. Intention-to-treat analysis was used to estimate prolonged abstinence rates for all subjects and for each language group. All statistical tests were two-sided.

Results In the intention-to-treat analysis, counseling increased the 6-month prolonged abstinence rate among all smokers compared with self-help (counseling vs self-help, 16.4% vs 8.0%, difference = 8.4%, 95% confidence interval [CI] = 5.7% to 11.1%, $P < .001$). Counseling also increased the 6-month prolonged abstinence rate for each language group compared with self-help (counseling vs self-help, Chinese, 14.8% vs 6.0%, difference = 8.8%, 95% CI = 4.4% to 13.2%, $P < .001$; Korean, 14.9% vs 5.2%, difference = 9.7%, 95% CI = 5.8% to 13.8%, $P < .001$; Vietnamese, 19.8% vs 13.5%, difference = 6.3%, 95% CI = 0.9% to 11.9%, $P = .023$).

Conclusions Telephone counseling was effective for Chinese-, Korean-, and Vietnamese-speaking smokers. This protocol should be incorporated into existing quitlines, with possible extension to other Asian languages.

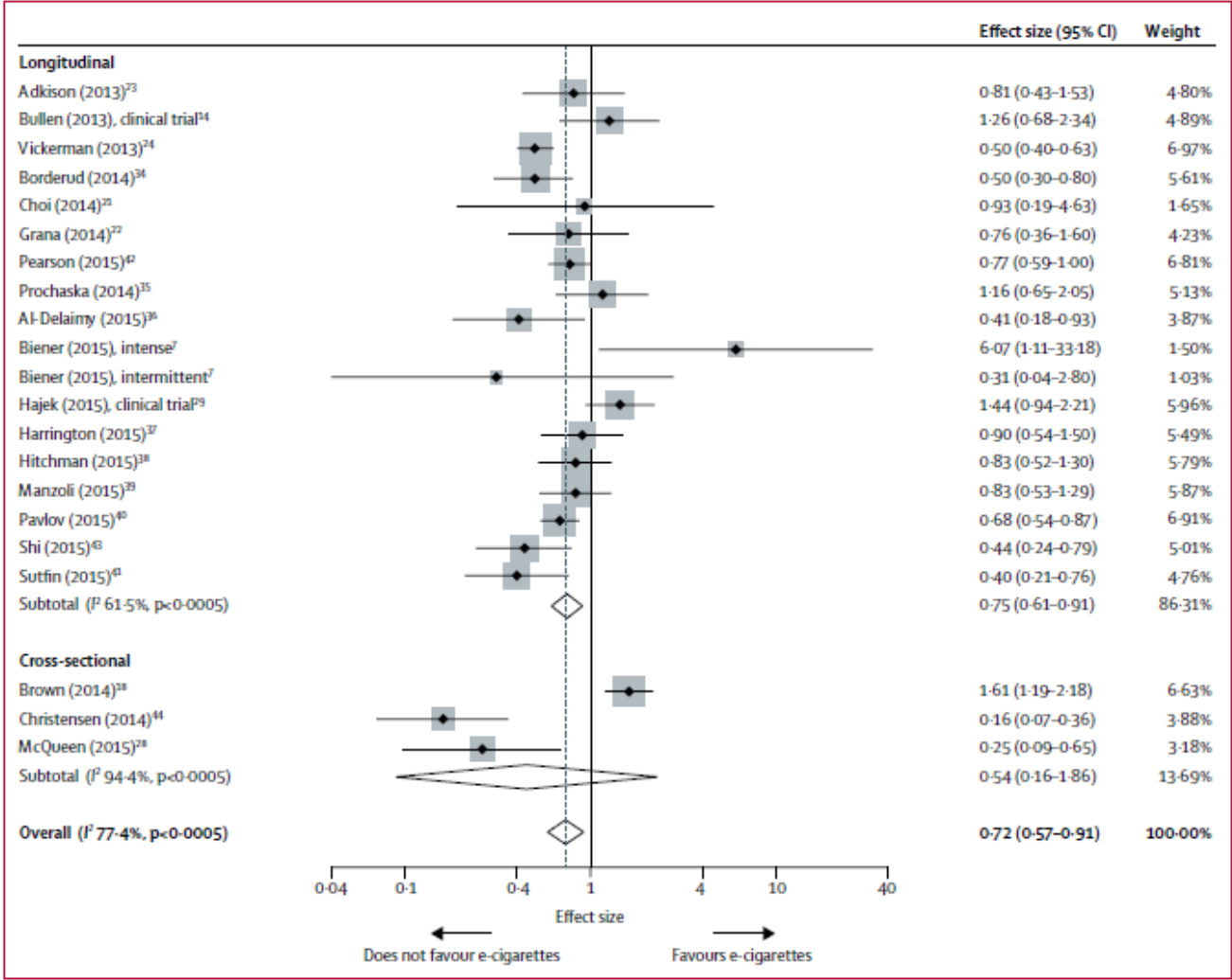
J Natl Cancer Inst 2012;104:299-310

- Randomized trial of counseling vs. self-help materials
 - 2277 Asian smokers
 - 729 Chinese-speaking smokers
- Counseling increased 6-month abstinence
 - Asian (16.4% vs. 8.0%, $p < 0.001$)
 - Chinese (14.8% vs. 6.0%, $p < 0.001$)

E-cigarettes and smoking cessation in real-world and clinical settings: a systematic review and meta-analysis

Sara Kalkhoran, MD, Prof Stanton A Glantz, PhD

Published Online: 14 January 2016



E-cig users vs. non-e-cig users among longitudinal and cross-sectional studies

- 28% less likely to quit cigarettes

Dual use concern

Figure 2: Odds of quitting smoking, stratified by longitudinal versus cross-sectional studies. Figure shows odds of quitting among e-cigarette users compared with non-e-cigarette users. The overall odds of quitting cigarettes is 0.72 (95% CI 0.57-0.91) irrespective of how studies are stratified.