



Japan Society for Tobacco Control

日本禁煙学会

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電子タバコ使用が紙巻きタバコの禁煙を促進するというイギリス政府の方針に対する Stan Shatenstein 氏のコメント

日本禁煙学会 理事 松崎道幸・訳

(解説) 電子タバコに関しては、多くの人が危険と言っています。それにもかかわらず、イギリスは何を間違ったのか Cessation のために無料で配ると言っています。これは大問題です。

アメリカではすでに約 5000 もの訴訟が Juul に対して起こされていますが、これは Juul が中学校、高等学校の生徒に宣伝のために無料で配ったために起こったものです。Juul はそれまでの電子タバコよりもずっと高濃度の、しかも純粋ニコチンではなくニコチン塩を含有しており、従って非常に多くの未成年の方々がニコチン依存症になってしまったわけでした。

しかもイギリスの保健相が頼っているコクラン・レビューでは、わずか 3 つの RCT のみで結論を出しています。それも純粋なニコチンを使った電子タバコのみで、Juul などに広く使われているニコチン塩 (ニコチン塩 nicotine salt: 安息香酸ニコチンなどは口に優しく、量を多くしても吸う事ができます) を使用している電子タバコでははっきりとした cessation の効果は得られなかったとしています。結局のところ、

1. Dual use の問題。
2. Youth がニコチン中毒になる。
3. Cessation には役に立たない、などが問題となると思います。日本禁煙学会 理事長 作田 学)

【文献 1】<https://pubmed.ncbi.nlm.nih.gov/36977570/> ニコチン供給電子タバコ (ENDS : Electronic Nicotine Delivery Systems) だけを使う人々も、紙巻きタバコと ENDS の両方を使う人々 (デュアルユーザー) も増えている。中高年のデュアルユーザーが、1 年後に紙巻きタバコを止めて ENDS だけを使う行動変容は見られなかった。

【文献 2】<https://pubmed.ncbi.nlm.nih.gov/35908322/> 電子タバコが紙巻きタバコの禁煙成功率を高めるといふ確実な調査成績は得られていない。一方、電子タバコ使用が紙巻きタバコの禁煙成功率を低めるといふ調査成績も出ていない。

【文献 3】<https://pubmed.ncbi.nlm.nih.gov/36470837/> 電子タバコの新規使用者は呼吸器症状が増える。

【文献4】 <https://pubmed.ncbi.nlm.nih.gov/36342713/> 新しいニコチンを多く含む電子タバコの使用が増加している。若い世代のニコチン依存が強化させることで、どのような健康被害がもたらされるかを検討する必要性が増している。また、フレーバー添加タバコ製品の包括的禁止を含む強力な規制が必要である。

何らかの理由で、私はデボラ・アーノット氏からの返信を直接受け取っていなかった。しかし、コーネル・ラドゥ・ローギン氏の投稿でその内容を知ることができた。私は ENSP 事務総長が AHS（ロンドン）に行った質問内容に賛同する。あわせて、イギリスの保健相ニール・オブライエン氏の声明に対するすべての批判的なコメントに全面的に賛同する。

彼が引用した NEJM の論文（Hajek P, Phillips-Waller A, Przulj D, et al. A Randomized Trial of E-Cigarettes versus Nicotine-Replacement Therapy. *N Engl J Med*. 2019;380(7):629-637. doi:10.1056/NEJMoa1808779）に多くの批判が寄せられている。

それも NEJM のレター欄

（https://www.nejm.org/doi/full/10.1056/nejmoa1808779#article_letters）だけで

なく、スタントン・グランツ氏のブログ（<https://profglantz.com/2020/10/26/new-cochrane-review-concluding-e-cigs-used-as-clinical-therapy-increase-quitting-is-not-relevant-to-assessing-e-cigs-in-the-real-world/>）が、コクランレビュー（Hartmann-

Boyce J, McRobbie H, Butler AR, et al. Electronic cigarettes for smoking cessation. *Cochrane Database Syst Rev*. 2021;9(9):CD010216. Published 2021 Sep 14. doi:10.1002/14651858.CD010216.pub6）について「それが 50 件の質の高い論文、26 件の RCT の 12430 名の人々を解析対象としたにもかかわらず、たった 1498 名の人々を対象とした 3 件の論文(Bullen 2013, Hajek 2019, Lee 2018)だけを根拠として、電子タバコが NRT（ニコチン代替療法）よりも禁煙に効果があるという最終結論を出している」と指摘しているように、極めて偏った結論であると考える。

さらに重大なことは、「くり返し政府の行動が必要であると述べた」とあるが、イングランドには以前から、紙巻きタバコ禁煙を勧める方策として電子タバコを熱烈に推奨する人々が存在している（ASH ロンドンだけでなく、イングランド保健省そして、現保健相自身）。しかし、電子タバコ使用推奨が若者と中高年の人々に異なる影響をもたらすにもかかわらず歯止め策（ファイアウォール）がないこと、そして若者の電子タバコ使用率が再び増える懸念があるという危機意識に欠けていることが問題である。

「ファイアウォール」という言葉が出たのでついでに述べるが、電子タバコ使用による火傷や火事の増加に対する懸念が感じられない。プラスチックゴミの問題もある。紙巻きタバコの海洋汚染、環境汚染については多くの人々が環境問題ととらえているが、電子タバコのプラスチックとリチウム電池がもたらす環境汚染についてはどう考えているのか？多くの人々が軽率で拙速であると批判している今回の声明について、保健

相は、環境・食糧・農村問題担当国務長官に相談をしなかったのか？

最後に、ASH ロンドンは、電子タバコが紙巻きタバコよりも 95%安全だという主張が誤りだという公式見解を発表する用意はあるのか？この 10 年間に数百回、数千回にもわたって電子タバコの安全性に関する疑わしい主張が繰り返されていたことを見るならば、電子タバコの安全性に関する今回の保健相の前例のない信頼性を欠いた主張は間違っており、これまでに ASH ロンドン自身が紹介してきた諸論文の方に信頼がおけることは明らかである。

Stan Shatenstein (スタン・シャテンスタイン)

【文献 1】 Brouwer AF, Jeon J, Jimenez-Mendoza E, et al. Changing patterns of cigarette and ENDS transitions in the USA: a multistate transition analysis of youth and adults in the PATH Study in 2015-2017 vs 2017-2019 [published online ahead of print, 2023 Mar 28]. *Tob Control*. 2023;tc-2022-057905. doi:10.1136/tc-2022-057905

Abstract

Introduction: It is unknown how recent changes in the tobacco product marketplace have impacted transitions in cigarette and electronic nicotine delivery system (ENDS) use.

Methods: A multistate transition model was applied to 24 242 adults and 12 067 youth in waves 2-4 (2015-2017) and 28 061 adults and 12 538 youth in waves 4 and 5 (2017-2019) of the Population Assessment of Tobacco and Health Study. Transition rates for initiation, cessation and product transitions were estimated in multivariable models, accounting for gender, age group, race/ethnicity and daily versus non-daily product use.

Results: Changes in ENDS initiation/relapse rates depended on age, including among adults. Among youth who had never established tobacco use, the 1-year probability of ENDS initiation increased after 2017 from 1.6% (95% CI 1.4% to 1.8%) to 3.8% (95% CI 3.4% to 4.2%). Persistence of ENDS-only use (ie, 1-year probability of continuing to use ENDS only) increased for youth from 40.7% (95% CI 34.4% to 46.9%) to 65.7% (95% CI 60.5% to 71.1%) and for adults from 57.8% (95% CI 54.4% to 61.3%) to 78.2% (95% CI 76.0% to 80.4%). Persistence of dual use similarly increased for youth from 48.3% (95% CI 37.4% to 59.2%) to 60.9% (95% CI 43.0% to 78.8%) and for adults from 40.1% (95% CI 37.0% to 43.2%) to 63.8% (95% CI 59.6% to 67.6%). Youth and young adults who used both products became more likely to transition to ENDS-only use, but middle-aged and older adults did not.

Conclusions: ENDS-only and dual use became more persistent. Middle-aged and older adults who used both products became less likely to transition to cigarette-only use but not more likely to discontinue cigarettes. Youth and young adults became more likely to transition to

【文献2】 Jackson SE, Kock L, Kotz D, Brown J. Real-world effectiveness of smoking cessation aids: A population survey in England with 12-month follow-up, 2015-2020. *Addict Behav.* 2022;135:107442. doi:10.1016/j.addbeh.2022.107442

Abstract

Objective: To examine the real-world effectiveness of popular smoking cessation aids, adjusting for potential confounders measured up to 12 months before the quit attempt.

Methods: 1,045 adult (≥ 18 y) smokers in England provided data at baseline (April 2015-November 2020) and reported a serious past-year quit attempt at 12-month follow-up. Our outcome was smoking cessation, defined as self-reported abstinence at 12 months. Independent variables were use in the most recent quit attempt of: varenicline, prescription NRT, over-the-counter NRT, e-cigarettes, and traditional behavioural support. Potential confounders were age, sex, social grade, alcohol consumption, and level of dependence (measured at baseline), variables relating to the most recent quit attempt (measured at 12-month follow-up), and survey year.

Results: Participants who reported using varenicline in their most recent quit attempt had significantly higher odds of abstinence than those who did not, after adjustment for potential confounders and use of other aids (OR = 2.69, 95 %CI = 1.43-5.05). Data were inconclusive regarding whether using prescription NRT, over-the-counter NRT, e-cigarettes, or traditional behavioural support was associated with increased odds of abstinence ($p > 0.05$; Bayes factors = 0.41-1.71, expected effect size OR = 1.19), but provided moderate evidence that using e-cigarettes was more likely associated with no effect than reduced odds (Bayes factor = 0.31, expected effect size OR = 0.75).

Conclusions: Use of varenicline in a quit attempt was associated with increased odds of successful smoking cessation. Data were inconclusive regarding a benefit of e-cigarettes for cessation but showed use of e-cigarettes was unlikely to be associated with reduced odds of cessation. Associations between other cessation aids and cessation were inconclusive.

【文献3】 Berlowitz JB, Xie W, Harlow AF, et al. Cigarette-E-cigarette Transitions and Respiratory Symptom Development. *Am J Prev Med.* 2023;64(4):556-560. doi:10.1016/j.amepre.2022.10.006

Abstract

Introduction: E-cigarette use is associated with pulmonary inflammation, functional respiratory changes, and chronic lung disease. Most population-level E-cigarette research has

utilized point-in-time measures of E-cigarette exposures, which may not generalize to adults who transition between cigarettes and E-cigarettes.

Methods: Data obtained from the Population Assessment of Tobacco and Health study were collected from 2013 to 2019 and analyzed in 2022. Three observations were created per respondent, with exposure intervals assessed over Waves 1-2, 2-3, and 3-4. Each wave of the exposure interval was classified as nonuse, exclusive E-cigarette use, exclusive smoking, or dual use, producing 16 possible cigarette-E-cigarette transitions. The association between transitions and both dry nighttime cough and wheeze symptom development during follow-up were assessed using mixed-effects Poisson models.

Results: Among 33,231 observations from 13,528 unique participants, transitioning from nonuse to exclusive E-cigarette use was associated with 1.62 times higher incidence rate of wheeze (incident rate ratio=1.62; 95% CI=1.12, 2.34) than persistent nonuse. There was no change in reported dry nighttime cough (incident rate ratio=0.84; 95% CI=0.52, 1.35) or wheeze (incident rate ratio=0.87; 95% CI=0.52, 1.46) in individuals who switched from cigarettes to E-cigarettes, whereas transitioning from dual use to E-cigarette use was associated with large reductions in both symptoms (incident rate ratio=0.58; 95% CI=0.39, 0.87 and incident rate ratio=0.36; 95% CI=0.20, 0.63, respectively).

Conclusions: E-cigarette initiation among nonusers is associated with increased respiratory morbidity. Further research should assess the risks and benefits of E-cigarette-assisted cigarette cessation given the reduction in symptom development rates among dual use to E-cigarette switchers.

【文献 4】 Glantz S, Jeffers A, Winickoff JP. Nicotine Addiction and Intensity of e-Cigarette Use by Adolescents in the US, 2014 to 2021. *JAMA Netw Open*. 2022;5(11):e2240671. Published 2022 Nov 1. doi:10.1001/jamanetworkopen.2022.40671

Abstract

Importance: As e-cigarettes have become more effective at delivering the addictive drug nicotine, they have become the dominant form of tobacco use by US adolescents.

Objective: To measure intensity of use of e-cigarettes, cigarettes, and other tobacco products among US adolescents and their dependence level over time.

Design, setting, and participants: This survey study analyzed the cross-sectional National Youth Tobacco Surveys from 2014 to 2021. Confirmatory analysis was conducted using Youth Behavioral Risk Factor Surveillance System from 2015 to 2019. The surveys were administered to national probability samples of US students in grades 6 to 12.

Exposures: Use of e-cigarettes and other tobacco products before and after the introduction of e-cigarettes delivering high levels of nicotine.

Main outcomes and measures: First tobacco product used, age at initiation of use, intensity of use (days per month), and nicotine addiction (measured as time after waking to first use of any tobacco product).

Results: A total of 151 573 respondents were included in the analysis (51.1% male and 48.9% female; mean [SEM] age, 14.57 [0.03] years). Prevalence of e-cigarette use peaked in 2019 and then declined. Between 2014 and 2021, the age at initiation of e-cigarette use decreased, and intensity of use and addiction increased. By 2017, e-cigarettes became the most common first product used (77.0%). Age at initiation of use did not change for cigarettes or other tobacco products, and changes in intensity of use were minimal. By 2019, more e-cigarette users were using their first tobacco product within 5 minutes of waking than for cigarettes and all other products combined. Median e-cigarette use also increased from 3 to 5 d/mo in 2014 to 2018 to 6 to 9 d/mo in 2019 to 2020 and 10 to 19 d/mo in 2021.

Conclusions and relevance: The changes detected in this survey study may reflect the higher levels of nicotine delivery and addiction liability of modern e-cigarettes that use protonated nicotine to make nicotine easier to inhale. The increasing intensity of use of modern e-cigarettes highlights the clinical need to address youth addiction to these new high-nicotine products over the course of many clinical encounters. In addition, stronger regulation, including comprehensive bans on the sale of flavored tobacco products, should be implemented.

【原文】

ENDS-only and dual use became more persistent. Middle-aged and older adults who used both products became less likely to transition to cigarette-only use but **not more likely to discontinue cigarettes**.

Changing patterns of cigarette and ENDS transitions in the USA: a multistate transition analysis of youth and adults in the PATH Study in 2015-2017 vs 2017-2019

<https://pubmed.ncbi.nlm.nih.gov/36977570/>

Data were inconclusive regarding a benefit of e-cigarettes for cessation but showed use of e-cigarettes was unlikely to be associated with reduced odds of cessation.

Real-world effectiveness of smoking cessation aids: A population survey in England with 12-month follow-up, 2015-2020

<https://pubmed.ncbi.nlm.nih.gov/35908322/>

E-cigarette initiation among nonusers is associated with increased respiratory morbidity.

Cigarette-E-cigarette Transitions and Respiratory Symptom Development

<https://pubmed.ncbi.nlm.nih.gov/36470837/>

The increasing intensity of use of modern e-cigarettes highlights the clinical need to address youth addiction to these new high-nicotine products over the course of many clinical encounters. In addition, stronger regulation, including comprehensive bans on the sale of flavored tobacco products, should be implemented.

Nicotine Addiction and Intensity of e-Cigarette Use by Adolescents in the US, 2014 to 2021

<https://pubmed.ncbi.nlm.nih.gov/36342713/>

For some reason, I did not receive Deborah Arnott's response directly, but I see it below the post from Cornel Radu-Loghin. I support the ENSP Secretary-General's question to ASH (London), as well as all the critical comments made in response to the announcement by the UK Health Minister, Neil O'Brien.

I would first point out that the NEJM study cited has come under a great deal of criticism, and not just in the letters section (https://www.nejm.org/doi/full/10.1056/nejmoa1808779#article_letters), but I'll cite that for convenience and also note, with respect to the Cochrane Review, that it was extremely narrow, as pointed out in a blog by Stanton Glantz who noted that, "although the review assessed 50 completed studies, representing 12,430 participants, including 26 RCTs, the final analysis that led to the conclusion that e-cigarettes were superior to NRT was only based just three studies involving 1498 participants (Bullen 2013, Hajek 2019, Lee 2018)." <https://profglantz.com/2020/10/26/new-cochrane-review-concluding-e-cigs-used-as-clinical-therapy-increase-quitting-is-not-relevant-to-assessing-e-cigs-in-the-real-world/>

More importantly, while there is mention of a "reiterated... call for government action", there has been an enthusiasm for e-cigarettes in England (not just by ASH London, but also the since-disbanded/rebranded PHE among others and, most significantly now, the Health Ministry itself), ostensibly as cessation aids, but there is no firewall to separate youth uptake from adult use, so the concern re increasing youth vaping rates seems too little, too late.

Speaking of firewalls, though, I don't see the concern for the individuals grievously burned and serious fires caused by e-cigarettes. There is also the issue of waste. Many here have lobbied on the environmental issue of cigarette butts befouling our beaches, waterways and everywhere else. So, what now of all the paper, plastic and lithium-ion batteries of e-

cigarettes? Did the UK Health Minister consult the Secretary of State for Environment, Food and Rural Affairs before making this announcement that so many of us consider rash?

And, finally, for the public record, will ASH London state formally that e-cigarettes have NOT been shown to be 95% safer than conventional cigarettes? Having seen that specious claim reiterated not 100s, but 1000s of times over almost a decade now, I think any literature cited by ASH London would be more credible if the most absolutely not credible claim ever made about e-cigarettes were denounced.

Stan Shatenstein