use;¹³ however, some states in Malaysia have already banned vaping outright, causing a backlash among the growing number of e-cigarette users and proponents of e-cigarette use for smoking cessation.

What should Malaysia's action be? Should it follow countries like Argentina, Brazil, the United Arab Emirates, Singapore, and Thailand, which have banned all forms of vaping?¹⁴ Or should it take other forms of action such as a partial ban, formation of vape-free zones, restriction of use by introduction of legislation or by incorporating vaping into the tobacco control act? Lessons can be learned from the present tobacco control measures in Malaysia. The principal strategies to combat the smoking menace in Malaysia have been health education and promotion directed at smokers. Cigarette advertisements are now banned and cigarette packaging has gory illustrations of the consequences of smoking. The bulk of tobacco control measures are directed towards smokers, with the core message being that smoking is injurious to the smoker's health. However, non-smokers are still not made aware of the dangers of second-hand smoke, resulting in increased tolerance towards smoking in public.¹⁵ Policies to regulate e-cigarettes should be carefully formulated and take into account their potential to normalise smoking. Formulation of policies which frame vaping as an unacceptable social habit might prevent a new wave of smoking normalisation.

The Ministry of Health Malaysia has recommended that e-cigarettes be strictly regulated as a pharmaceutical product, and has restricted the sale of e-cigarettes to minors and implemented an immediate e-cigarette ban in schools and tertiary institutions nationwide. It is also reviewing the Poisons Act 1952 to include e-cigarettes, and has enforced quality and safety specifications for e-cigarette devices. Will Malaysia's aspiration to be a smoke-free nation by

2045 include e-cigarettes as well? The right policies to achieve this aspiration will depend on evolving evidence and definitive answers.

*Kurubaran Ganasegeran, Abdul Rashid
Department of Public Health, Penang Medical College,
George Town, Penang, 10450, Malaysia (KG, AR); and Ministry
of Health Malaysia, Parcel E, Putrajaya, Malaysia (KG)
medkuru@yahoo.com

We thank Kevin B Nolan (Vice President and Registrar, Penang Medical College, Penang, Malaysia) for reviewing and commenting on this paper. We declare no competing interests.

- 1 Kantar, EY Analysis. E-cigarettes: an emerging category. London, UK: Ernst & Young LLP, 2016.
- 2 Euromonitor International. NRT smoking cessation aids in Malaysia. Country Report, January, 2016. http://www.euromonitor.com/ nrt-smoking-cessation-aids-in-malaysia/report (accessed July 25, 2016).
- 3 Jensen RP, Luo W, Pankow JF, Strongin RM, Peyton DH. Hidden formaldehyde in e-cigarette aerosols. N Engl J Med 2015; 372: 392–94.
- 4 Farsalinos K. 7124 participants. Study patterns of electronic cigarette use among vapers in Malaysia, 2016. http://7124participants.net/who-tookpart/ (accessed July 27, 2016).
- 5 Malaysian E-Vaporizers and Tobacco Alternative Association. Facts and information. http://mevta.org/fact-information/ (in Malaysian) (accessed July 10, 2016).
- 6 Kim AE, Arnold KY, Makarenko O. E-cigarette advertising expenditures in the US, 2011–2012. Am J Prev Med 2014; 46: 409–12.
- 7 Truth Initiative. Vaporized—youth and young adult exposure to e-cigarette marketing. Nov 23, 2015. http://truthinitiative.org/research/vaporized-majority-youth-exposed-e-cigarette-advertising (accessed July 27, 2016).
- 8 Centers for Disease Control and Prevention. National youth tobacco survey (NYTS). 2011–2014. http://www.cdc.gov/tobacco/data_statistics/ surveys/nyts/ (accessed July 27, 2016).
- 9 Rahman A, Nik Mohamad MH, Jamshed S. Evaluating effectiveness and safety toward electronic cigarettes among Malaysian vapers: one-month observational study. Arch Pharma Pract 2016; 7: 43–55.
- 10 Institute for Public Health. National Health and Morbidity Survey 2015. Report on smoking status among Malaysian adults. Kuala Lumpur, Malaysia: Institute for Public Health, 2015.
- Bullen C, Colin H, Laugesen M, et al. Electronic cigarettes for smoking cessation: a randomised controlled trial. Lancet 2013; 382: 1629–37.
- 12 Farsalinos KE, Romagna G, Tsiapras D, Kyrzopoulos S, Voudris V. Characteristics, perceived side effects, and benefits of electronic cigarette use: a worldwide survey of more than 19000 consumers. Int J Environ Res Public Health 2014; 11: 4356-73.
- 13 Sinniah D, Khoo EJ. E-cigarettes—facts and legal status. *leJSME* 2015; **9:** 10–19.
- 14 Institute for Global Tobacco Control. Country laws regulating E-cigarettes: a policy scan. Baltimore, MD: Johns Hopkins Bloomberg School of Public Health. 2015.
- 15 Rashid A, Manan AA, Yahya N, Ibrahim L. The support for smoke free policy and how it is influenced by tolerance to smoking—experience of a developing country. PLoS One 2014; 9: e109429.



The debate on regulation of e-cigarettes in China

Published Online October 12, 2016 http://dx.doi.org/10.1016/ S2213-2600(16)30313-7 See Comment page 854 See Spotlight page 868 China manufactures 80% of the world's e-cigarettes.¹ The domestic Chinese e-cigarette market has expanded since 2014, with a 33% increase in sales in 2015 alone.² The 2014 China Global Youth Tobacco Survey, which studied 155117 students aged

13–15 years, showed that 45-0% of them had heard about—and 1-2% had used—e-cigarettes.³ Some members of the global public health community are calling for regulation of e-cigarettes, but, owing to inconclusive evidence on their impact,⁴ no simple

and unified guidelines exist to assist countries in such regulation. In China, a regulatory framework has been debated between the public health community and government agencies since 2005. We aim to analyse the development of a regulatory system for e-cigarettes and the interests and strategies of policy makers in China, and hope that this Comment might assist other countries undergoing similar debates on the regulation of e-cigarettes.

There have been dramatic changes in the way that e-cigarettes are marketed in China since they first emerged in 2005. Back then, e-cigarette companies promoted their products as a cigarette-like but healthier alternative to tobacco, as a tool to help quit smoking, and as gifts,⁵ which attracted attention from tobacco control advocates and government agencies. However, with little evidence on the health effects of e-cigarettes, and little international experience in their regulation, government agencies were initially hesitant to take over regulatory responsibility. The ensuing debate centred on whether to categorise e-cigarettes as tobacco, medicinal, general, or harmful products—each coming under different agencies with different regulatory mechanisms.

Over a decade later, this issue is still unresolved. The China Food and Drug Administration expressed its position in 2006 that "Electronic Nicotine Delivery Systems (ENDS) should not be managed as medical equipment." The State Tobacco Monopoly Administration (STMA) refused to classify e-cigarettes as tobacco products but rather as potentially harmful chemical products, recommending regulation under State Administration of Work Safety.

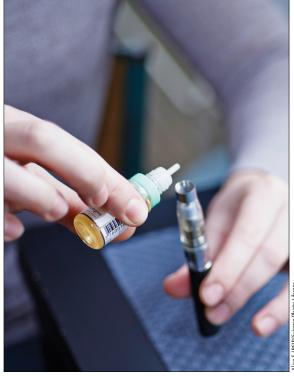
Nonetheless, the e-cigarette industry was challenged by the media and public health advocates for its marketing ploys. The industry then changed its strategy to promote e-cigarettes as fashionable, innovative, leisure consumer goods, and built a fan base, both online and offline. Many e-cigarette centres, clubs, and bars were established in major cities to help disseminate and portray the culture of vaping, and to increase sales of e-cigarettes.

As the e-cigarette industry developed, the Chinese tobacco monopoly decided to include e-cigarette development in its own strategy. It established a task force led by the STMA's leaders to coordinate issues related to all new tobacco products. Its local branches,

an affiliated research centre, and two e-cigarette companies agreed to cooperate in development of e-cigarettes co-branded with the key existing cigarette brands.⁷

The trajectory of e-cigarette regulatory development has also been affected by the changing policy context in China. First, many tobacco control measures have been implemented, such as increases in tobacco tax, revision of advertising laws, non-smoking directives to government officials, and a national smoke-free law under process. Second, as China's economy has begun to slow down since 2009, a core strategy of the Chinese administration to stimulate economic vitality is through deregulation of industries. The government also encourages industries to form associations for improved self-regulation. With more than 1000 brands, 6000 products, and over 1800 companies in the industry, leading e-cigarette companies echoed this central policy by establishing the first National Association of Electronic Cigarettes in 2015.8

The Ministry of Industry and Information Technology (MIIT)—the supervising ministry for STMA—seems to support the self-regulation of the e-cigarette industry. By encouraging small and medium



oir) science miore

e-cigarette companies to form into associations, MIIT might be able to manage the industry more easily. However, MIIT suggested that the STMA should seriously consider and push forward the regulation of e-cigarettes and other tobacco products. At the time of writing, the central government has yet to make a decision on how to regulate e-cigarettes.

Whether e-cigarettes end up being regulated by the STMA or through self-regulation by the e-cigarette industry, we call upon the central government to include e-cigarettes in all future tobacco surveys, and establish a regulatory system as soon as possible to at least ban sales to children, prevent e-cigarette marketing towards youth and non-smokers, and require disclosure of ingredients and labelling—as a first step until the science is clear.

Xiaoxin Xu, *Xinsong Wang, Xiulan Zhang, Yanli Liu, Huan He, Judith Mackay

School of Social Development and Public Policy, Beijing Normal University, Beijing 100875, China (XX, XW, XZ, YL); School of Public Administration, Southwestern University of Finance and Economics, Chengdu, Sichuan, China (HH); and Vital Strategies, Kowloon, Hong Kong Special Administrative Region, China (JM) xinsong@bnu.edu.cn

We declare no competing interests.

- 1 Shan J. E-cigarette controls considered for safety. China Daily, Jan 7, 2015. http://www.chinadaily.com.cn/china/2015-01/07/content_19255939. htm (accessed May 31, 2016).
- Beijing Hua Yan Zhong Shang Yanjiu Yuan. Analysis of e-cigarettes market status in China and trend forecasting, 2015–2020. Beijing: Beijing Hua Yan Zhong Shang Yanjiu Yuan, 2015 (in Chinese).
- 3 Global Youth Tobacco Survey. Fact sheet: China 2014. Chinese Center for Disease Control and Prevention, WHO, and Centers for Disease Control and Prevention. http://www.wpro.who.int/china/gyts_china_fs_ en_20140528.pdf?ua=1 (accessed May 24, 2016).
- 4 Levy DT, Cummings KM, Villanti AC, et al. A framework for evaluating the public health impact of e-cigarettes and other vaporized nicotine products. Addiction 2016; published online April 25. DOI:10.1111/ add.13394.
- 5 Tobacco China Online. Healthy "cigarettes" appearing at Canton Fair, customers mostly from overseas. 2005. http://www.tobaccochina.com/ zt/ruyan/meiti_07.html (in Chinese) (accessed May 24, 2016).
- 6 China State Food and Drug Administration. Notice on classification of products including the system of re-leveling of leukocyte (2006, No 268, State Food and Drug Administration), Article 41. In: China State Food and Drug Administration, ed. Beijing: China State Food and Drug Administration, 2006.
- 7 Jiang Z, Gu M. Shanghai Lvxin and CNTC cooperate on e-cig, taking the high ground. 2014. http://finance.sina.com.cn/ stock/s/20140417/141418831669.shtml (in Chinese) (accessed May 4, 2016).
- 8 Cecmol. National Association of Electronic Cigarettes established. 2015. http://www.aiweibang.com/yuedu/70936775.html (in Chinese) (accessed May 4, 2016).
- 9 Dongfang Yancao Wang. The speech by Miao Yu at the 2016 Tobacco Work Meeting (excerpt). 2016. http://www.eastobacco.com/pub/web/ zxbk/dyzxz/zzydtpxw/201601/t20160115_392417.html (in Chinese) (accessed May 4, 2016).

W

Protecting respiratory health through research: a call for papers

Published Online
October 12, 2016
http://dx.doi.org/10.1016/
S2213-2600(16)30309-5
To submit to The Lancet go to
http://ees.elsevier.com/
thelancet/
To submit to The Lancet
Respiratory Medicine go to http://
ees.elsevier.com/thelancetrm
For the 2017 ATS Conference

see http://conference.thoracic.

There are many threats to respiratory health in the modern era: worsening air quality in cities, the continued widespread use of tobacco, and the spread of



new and emerging infectious diseases, to name a few. Fortunately, respiratory health researchers around the globe are conducting exciting and innovative research which aims to counter these threats and protect respiratory health over coming decades. *The Lancet* and *The Lancet Respiratory Medicine* aim to showcase this important research and bring it to as wide an audience as possible. We are therefore planning special issues to coincide with the 2017 American Thoracic Society (ATS) Conference in Washington, DC, USA, on May 19–24, and are seeking high-quality clinical research related to respiratory medicine and critical care with findings that will have an effect on the management of patients. We particularly welcome clinical trials.

The Lancet group is dedicated to the advancement of respiratory and critical care medicine, and both journals offer a fast-track publication process in which papers can be published online in as little as 20 days from submission. We can also highlight papers in