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Saving our next generation from tobacco and nicotine addiction

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Summary of the Impact

- Our studies have provided fundamental empirical evidence for the Government to lay out the policy on a total ban on alternative tobacco products (ATPs) in Chief Executive's 2018 policy address in the face of tremendous interference from the tobacco industry
 - Generated many world's first evidence on ATPs, which are widely publicised to counter the interference and garner public support.
 - Our evidence has direct impacts on the decision of the government, votes of legislators and support of the public to the success of the total ban of ATPs in Hong Kong.
 - Such impact will continue to influence tobacco control policy in other regions.

Underpinning research

- Over the past 20+ years, we are the only research team in Hong Kong focusing on smoking cessation and tobacco control
- Published >300 journal papers since 2000,
 - Including high-impact papers in *Lancet Digital Health*, *JAMA Internal Medicine*, *JACC*, *JAMA Pediatrics*, *Tobacco Control*, *Addiction*, etc.
- Received funding from RGC GRF/ECS, HMRF, HMRF RFS, HCPS/HCPF, FHB, DH, COSH, FAMRI (US), Cancer Research UK, and numerous NGOs
- Long-term collaborators:

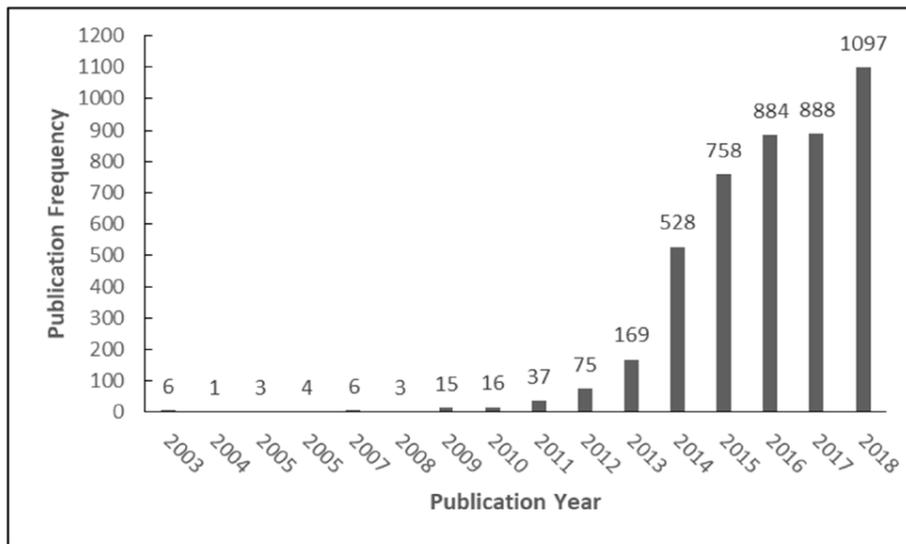


戒煙綜合
服務中心



Underpinning research

- ATPs is currently the most intense area of research in the field of nicotine and tobacco use worldwide
- Since 2008, the WHO has published 7 reports focusing on policy of ATPs



Briganti et al. Bibliometric Analysis of Electronic Cigarette Publications: 2003-2018. Int J Environ Res Public Health. 2019;16(3):320

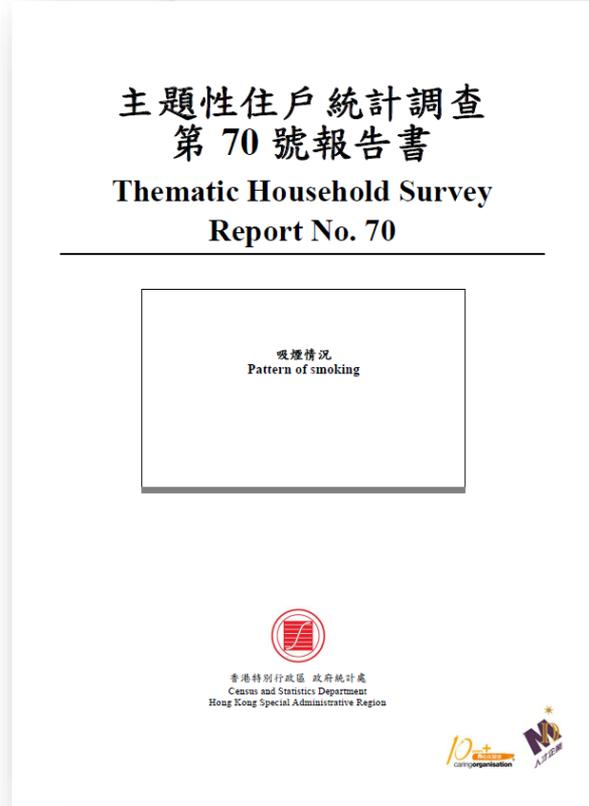
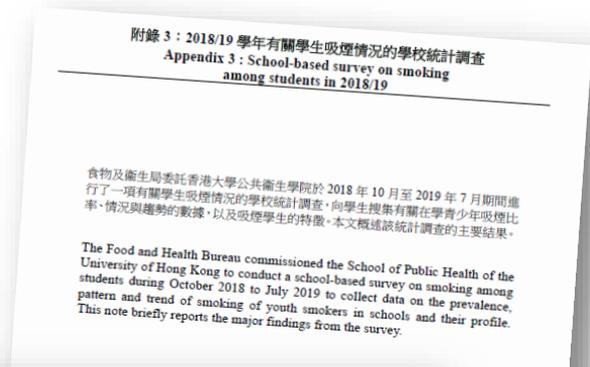
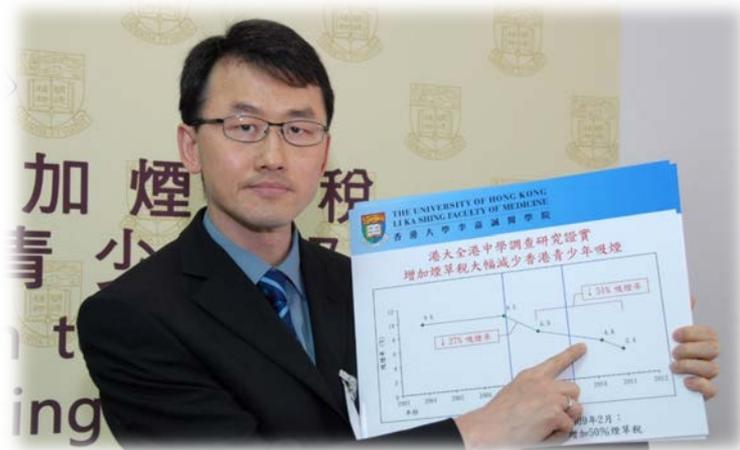
Figure 1. Annual electronic cigarette publication frequency from 2003 to 2018.

- Since emergence of ATPs in Hong Kong in early 2010, our research team has begun studying ATPs and published 21 journal papers to provide the scientific basis of ATP policies

Underpinning research

- **School-based Survey on Smoking and Health**

- Commissioned by FHB
- PI: Dr Daniel SY Ho
- Monitor pattern of tobacco use in children and adolescents in Hong Kong since 2003
- Findings were reported in the Thematic household survey by Census and Statistics Department



Underpinning research

- **HKU Youth Quitline**

- Established in 2005 with the support from HCPS
- Current PI: Dr Kelvin MP Wang
- First youth-oriented smoking cessation service in Hong Kong
- Recognised as a core partner to WHO Collaborating Centre for Smoking and Treatment of Tobacco Dependence since 2012
- Collected longitudinal data on tobacco use in 3100+ youth smokers in Hong Kong



HKU Youth Quitline
香港大學青少年戒煙熱線



Underpinning research

- **“Quit to Win” Smoke-free community campaign**
 - Funded by Hong Kong Council on Smoking and Health
 - PI: Dr Kelvin MP Wang
 - Held annually since 2009
 - Included 12 RCTs on smoking cessation interventions
 - Collected longitudinal data on tobacco use in 13000+ adult smokers in the community



Underpinning research – selected paper (1)



Volume 50, November 2015, Pages 124-127

Electronic cigarette use and its association with smoking in Hong Kong Chinese adolescents

Man Ping Wang^a, Sai Yin Ho^{b,*}, Lok Tung Leung^b, Tai Hing Lam^b

^a School of Nursing, University of Hong Kong, Hong Kong, China

^b School of Public Health, University of Hong Kong, Hong Kong, China

School-based Survey on Smoking and Health 2012/13

- Provided evidence on the role of e-cigarette in
 - Promoting smoking initiation in adolescents (“Gateway effect”)
 - Increasing tobacco addiction in current adolescent smokers

Table 2

Associations of e-cigarette use with intention to smoke, tobacco addiction and quit.

Outcomes	% outcome ^a		OR (95% CI) ^b	
	E-cig use	No e-cig use	Crude	Adjusted ^c
Intention to smoke				
All	72.8	20.3	10.56 (8.75–12.75) ^{***}	1.74 (1.30–2.31) ^{***}
Never smokers	23.4	11.8	1.30 (1.29–4.10) ^{***}	2.18 (1.12–4.23) [*]
Ever-smokers	83.3	62.6	2.97 (2.28–3.87) ^{***}	2.79 (2.05–3.79) ^{***}
Experimenters	64.9	44.7	2.29 (1.42–3.68) ^{**}	2.17 (1.32–3.62) ^{**}
Former smokers	77.6	70.5	1.45 (0.98–2.16)	1.48 (1.02–2.13) [*]
Current smokers	96.1	95.0	1.27 (0.58–2.80)	1.25 (0.58–2.72)
Heavier smoking	7.4	4.5	2.90 (1.98–3.83) ^{***}	2.54 (1.28–3.81) ^{***}
Morning smoking	72.1	46.1	2.25 (1.57–3.21) ^{***}	2.16 (1.50–3.11) ^{***}
Quit intention	57.8	72.7	0.72 (0.50–1.03)	0.76 (0.52–1.09)
Quit attempts	79.0	83.3	0.78 (0.55–1.11)	0.80 (0.56–1.23)

^a All are % except average cigarette consumed per day of smoking cigarettes for heavier smoking.

^b All are odds ratios except β coefficient for heavier smoking.

^c Adjusting for sex, age, perceived family affluence, peer smoking, parental smoking and school clustering effect.

Underpinning research – selected paper (2)

January 2016

JAMA
Pediatrics

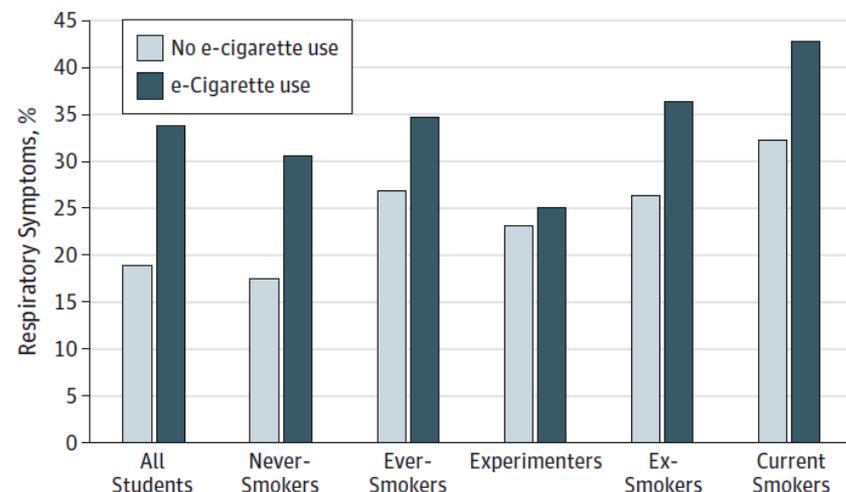
Electronic Cigarette Use and Respiratory Symptoms in Chinese Adolescents in Hong Kong

Man Ping Wang, PhD¹; Sai Yin Ho, PhD²; Lok Tung Leung, BSc²; Tai Hing Lam, MD²

School-based Survey on Smoking and Health 2012/13

- The world's first evidence on the hazards of e-cigarette use in adolescents
- Prevalence of respiratory symptoms
 - Similar between cigarette smokers and e-cigarette users (34% vs 33%)
 - Highest in dual users (>40%)
- Rejected the claim that e-cigarette use could lower the health risk of tobacco use

Figure. Higher Prevalence of Respiratory Symptoms in e-Cigarette Users Than Nonusers Across Different Smoking Status



$\chi^2 P < .001$ for all students, $P < .01$ for never-smokers, $P = .01$ for ever-smokers, $P = .69$ for experimenters, $P = .04$ for ex-smokers, and $P = .40$ for current smokers.

Underpinning research – selected paper (3)

[Published: 24 May 2017](#)

**Pediatric
RESEARCH**

Electronic cigarette use is not associated with quitting of conventional cigarettes in youth smokers

Man Ping Wang¹, William H. Li¹, Yongda Wu¹, Tai Hing Lam² and Sophia S. Chan¹

HKU Youth Quitline

- The world's first evidence on the prospective association of e-cigarette use and smoking cessation in youth smokers
- Rejected the claim that e-cigarette use could help smokers quit smoking
- Paper selected as the “Editor’s focus” of the Journal with an author interview

Table 2. Association between ever e-cig use and quitting cigarette smoking and quit attempts in all participants at the 6-month follow-up

	N	Outcome ^a		Effect size ^b	Raw coefficient (95% CI) ^c	
		No E-cig use	E-cig use		Model 1	Model 2 ^d
Quitting cigarette	189	20.8%	13.4%	0.10	0.59 (0.27 to 1.28)	0.56 (0.24 to 1.35) ^e
Quit attempts	89	2.1 ± 2.4	3.1 ± 3.2	0.35	1.32 (0.05 to 2.60) ^f	1.26 (-0.13 to 2.66)

Underpinning research – selected paper (4)



International Journal of
*Environmental Research
and Public Health*

Does Electronic Cigarette Use Predict Abstinence from Conventional Cigarettes among Smokers in Hong Kong?

Socrates Yong-da Wu ¹ , Man Ping Wang ^{1,*} , William H. Li ¹, Antonio C. Kwong ², Vienna W. Lai ² and Tai Hing Lam ³

Published: 26 February 2018

Quit to Win Smoke-free Community Campaign 2014

- First report on the prospective association of e-cigarette use with smoking cessation in Chinese smokers
- Rejected the claim that e-cigarette use could help quit smoking in adult smokers

Table 3. Association of abstinence outcomes at the 6-month follow-up with ever EC use at 1-week follow-up.

Outcomes	Ever EC Use		Adjusted Odds Ratio (95% CI)		
	No (%)	Yes (%)	Model 1	Model 2 ^a	Model 3 ^b
Missing = no cessation attempt nor reduction (n = 956)					
Abstinence from conventional cigarettes	12.6	13.5	0.98 (0.59 to 1.62)	1.08 (0.64 to 1.83) ^c	1.09 (0.65 to 1.85)
Biochemically validated quitting	7.1	9.8	1.28 (0.71 to 2.32)	1.34 (0.71 to 2.49) ^c	1.33 (0.72 to 2.48)
Cessation attempt ^d	40.9	41.1	0.96 (0.68 to 1.36)	0.92 (0.65 to 1.31)	0.95 (0.67 to 1.36)
Smoking reduction by at least 50%	19.6	17.2	0.91 (0.58 to 1.42)	0.92 (0.59 to 1.45)	0.89 (0.57 to 1.40)

Underpinning research – selected paper (5)

BMJ Journals

Tobacco Control

Association of heated tobacco product use with smoking cessation in Chinese cigarette smokers in Hong Kong: a prospective study

Tzu Tsun Luk ,¹ Xue Weng,¹ Yongda Socrates Wu ,¹ Hiu Laam Chan,¹ Ching Yin Lau,¹ Anthony Cho-shing Kwong,² Vienna Wai-yin Lai,² Tai Hing Lam,³ Man Ping Wang ¹

Quit to Win Smoke-free Community Campaign 2018

- The world's first evidence on the association of HTP use with smoking cessation in adult smokers
- Rejected the claims that HTP could aid smoking cessation in adult smokers

Table 3 Associations of current (past 7 day) use of HTP at baseline (yes vs no (reference group)) with smoking cessation outcomes (multiply imputed data analysis)

	Current HTP use at baseline		Crude PR (95% CI)	P value	Adjusted PR (95% CI)*	P value
	No (n=1153)	Yes (n=60)				
Self-reported 7-day PPA						
3 months	22.5%	17.3%	0.76 (0.40 to 1.45)	0.41	0.81 (0.43 to 1.52)	0.50
6 months	22.8%	24.7%	1.07 (0.63 to 1.83)	0.67	1.08 (0.63 to 1.85)	0.77
24-hour cigarette quit attempt						
3 months	49.1%	44.9%	0.96 (0.67 to 1.36)	0.81	0.95 (0.68 to 1.34)	0.79
6 months	63.8%	71.7%	1.12 (0.92 to 1.37)	0.26	1.14 (0.93 to 1.39)	0.20

*Adjusted for sex, age, education attainment, employment status, daily cigarette consumption, time to first cigarette of the day, past cigarette quit attempt and intention to quit smoking at baseline.

Underpinning research – selected paper (6)



Original Investigation | Public Health

Characterization of Respiratory Symptoms Among Youth Using Heated Tobacco Products in Hong Kong

Lijun Wang, MPH; Jianjiu Chen, PhD; Lok Tung Leung, PhD; Zhi-Ming Mai, PhD; Sai Yin Ho, PhD; Tai Hing Lam, MD; Man Ping Wang, PhD

School-based Survey on Smoking and Health 2018/19

- World’s first evidence on the hazards of HTP in adolescents
- Prevalence of respiratory symptoms
 - Similar between cigarette smokers and HTP users (33.5% vs 31.2%)

Table 2. Associations of Respiratory Symptoms With Various Tobacco Product Use

Product	Students with respiratory symptoms, No. (%)	Model 1, PR (95% CI) ^a	Model 2, PR (95% CI) ^b	Model 3, PR (95% CI) ^c
CC				
Never	4812 (15.8)	1 [Reference]	1 [Reference]	1 [Reference]
Former	416 (19.8)	1.26 (1.14-1.38)	1.11 (1.01-1.23)	1.07 (0.96-1.20)
Current	314 (31.2)	1.98 (1.78-2.19)	1.75 (1.58-1.94)	1.50 (1.30-1.74)
<i>P</i> for trend	NA	<.001	<.001	<.001
HTP				
Never	5255 (16.1)	1 [Reference]	1 [Reference]	1 [Reference]
Former	107 (27.9)	1.74 (1.46-2.07)	1.52 (1.28-1.80)	1.30 (1.06-1.59)
Current	179 (33.5)	2.08 (1.80-2.41)	1.87 (1.61-2.17)	1.59 (1.23-2.06)
<i>P</i> for trend	NA	<.001	<.001	<.001
e-Cigarettes				
Never	4946 (16.0)	1 [Reference]	1 [Reference]	1 [Reference]
Former	369 (20.2)	1.26 (1.14-1.40)	1.13 (1.02-1.25)	0.98 (0.88-1.10)
Current	226 (29.3)	1.84 (1.58-2.13)	1.63 (1.40-1.88)	0.96 (0.78-1.19)
<i>P</i> for trend	NA	<.001	<.001	.75

Engagement

- We have begun advocating for a total ban of e-cigarettes since as early as March 2015
- On 18 May 2015, the Government proposed a total ban of e-cigarettes as one of the measures to strengthen tobacco control
- The proposed ban of e-cigarettes was not immediately realised, giving ways to other measures, including
 - Enlargement of pictorial health warnings
 - Extension of smoking ban to 8 bus interchanges



Press conference co-organised with COSH on 30 March 2015



Mass petition at LegCo Building on 6 July 2015

Engagement

- On 12 June 2018, the Government has proposed to **legalise** e-cigarettes and ATPs with a similar regulatory regime to that of cigarettes
- On 15 June 2018, we co-organised a press conference to urge the Government to enact a total ban on ATPs
 - Findings from our underpinning research were presented
 - The event marked the beginning of a 40-month campaign to advocate for a total ban of ATPs from June 2018 to Oct 2021



Press conference on 15 June 2018 co-organised with COSH, Hong Kong Medical Association, Hong Kong Doctor Union, and Hong Kong Dental Association



Petition at the Central Government Office on 4 July 2018

- See <https://sctc.nursing.hku.hk/advocacy-works/news> for more reports of our advocacy 15

Engagement



The Hong Kong Special Administrative Region of the People's Republic of China

The Chief Executive's 2018 Policy Address

- On 10 Oct 2018, a total ban of ATPs were proposed in the CE's 2018 Policy Address
- The “gateway” effect of ATPs, their health risk, and lack of evidence in aiding cessation as found in our underpinning research were mentioned

181. In recent years, the emergence of electronic cigarettes (e-cigarettes) and other new smoking products has posed new health risk and challenges. Often packaged as less harmful substitutes with promotion tactics targeted at youngsters and non-smokers, these products open a gateway to the eventual consumption of conventional cigarettes. The fact is: all these new smoking products are harmful to health and produce second-hand smoke. There is also a lack of sufficient evidence to prove that these products can help quit smoking. The public may underestimate the harmful effects of these products and eventually endorse the smoking image and relevant behaviours once again.

182. Since the Government proposed to legislate for the regulation of e-cigarettes and other new smoking products in the middle of this year, the medical professions, education sector, parents and many members of the public have expressed concerns about the adoption of a regulatory approach for the issue. They are worried that allowing the sale of e-cigarettes and other new smoking products with restrictions in the market will not be adequate to protect public health, and will bring about very negative impact on children and adolescents in particular. After weighing the pros and cons of a regulatory approach as opposed to a full ban, I have decided that, with the protection of public health as the prime consideration, the Government will submit proposed legislative amendments in this legislative session to ban the import, manufacture, sale, distribution and advertisement of e-cigarettes and other new smoking products.

Engagement

- We have continued and publicised our research on ATPs through multiple channels to garner legislators' and public support for the Bill
 - Press conferences
 - Presentation at the LegCo
 - Mass petition



Mass petition at LegCo on 13 Apr 2019



Press conference by HKU Youth Quitline on 29 Apr 2021



Press conference co-organised with COSH on 10 Dec 2020

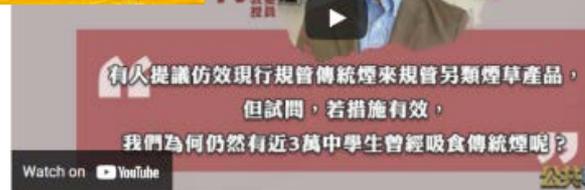


Presentation at LegCo on 13 Apr 2019

Engagement

- We have continued and publicised our research on ATPs through multiple channels to garner legislators' and public support for the Bill
 - Mass media
 - Online media
 - Educational talks

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Impacts achieved

- The Bill to amend the Smoking (Public Health) Ordinance to enact the total ban of ATPs was gazetted on 19 Feb 2019
- Our research findings were referenced in LegCo documents, e.g.,
 - [LC Paper No. FH CR 1/3231/19](#). Legislative Council Brief: Smoking (Public Health) Ordinance (Cap. 371) Smoking (Public Health) (Amendment) Bill. Feb 2019
 - [LC Paper No. CB\(2\)917/20-21\(02\)](#): List of follow-up actions arising from the discussion at the meeting on 23 February 2021
- The Bill was passed on 21 Oct 2021 and will come into effect on 30 April 2022



Impacts achieved

- Our research findings on ATPs have been cited in policy documents by authoritative organisations to generate impact abroad, e.g.,
 - WHO's reports on the scientific basis of tobacco product regulation: 7th & 8th reports (also cited in [LC Paper No. CB\(2\)917/20-21\(02\)](#) & [LC Paper No. CB\(2\)1321/20-21\(01\)](#))
 - US National Academies of Sciences, Engineering, and Medicine. 2018. Public Health Consequences of E-Cigarettes (also cited in [LC Paper No. FH CR 1/3231/19](#))
 - The American Cancer Society public health statement on eliminating combustible tobacco use in the United States 2018
 - Campaign for Tobacco-Free Kids. Heated Tobacco Products: Evidence. 2020

