

Promotion and brief intervention of smoking cessation at smoking hotspots

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- Training consultants: *Ms. Anita Chan, Ms. Jessica Leung, Ms. Gina Lee*

Indoor smoking ban and evolvement of smoking hotspots

- An extensive indoor smoking ban since 2007
- The ban led to increase in smoking in outdoor areas
- **Smoking hotspots**: Many smokers smoke together near some rubbish bins, which have a collector of cigarette butts
- Common hotspot locations: outdoor bus stops, exits of MTR stations, and entrances of buildings and shopping malls



Pilot study in 2009: Proactive smoking cessation promotion and intervention

- Briefly trained university students to promote smoking cessation
- Proactively approached the smokers at these hotspots
- Delivered brief smoking cessation advice (1 minute) with “AWARD”
 - **A**sk, **W**arn, **A**dvice, **R**efer, **D**o-it-again
- Process and outcome evaluation:
 - How many smokers could be approached at smoking hotspots?
 - Acceptability of smokers?
- Process and findings published in *Journal of Cancer Education**

<https://link.springer.com/article/10.1007%2Fs13187-016-1085-3>



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Journal of Cancer Education
pp 1-6

Proactive and Brief Smoking Cessation Intervention for Smokers at Outdoor Smoking “Hotspots” in Hong Kong

Authors **Authors and affiliations**

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Article

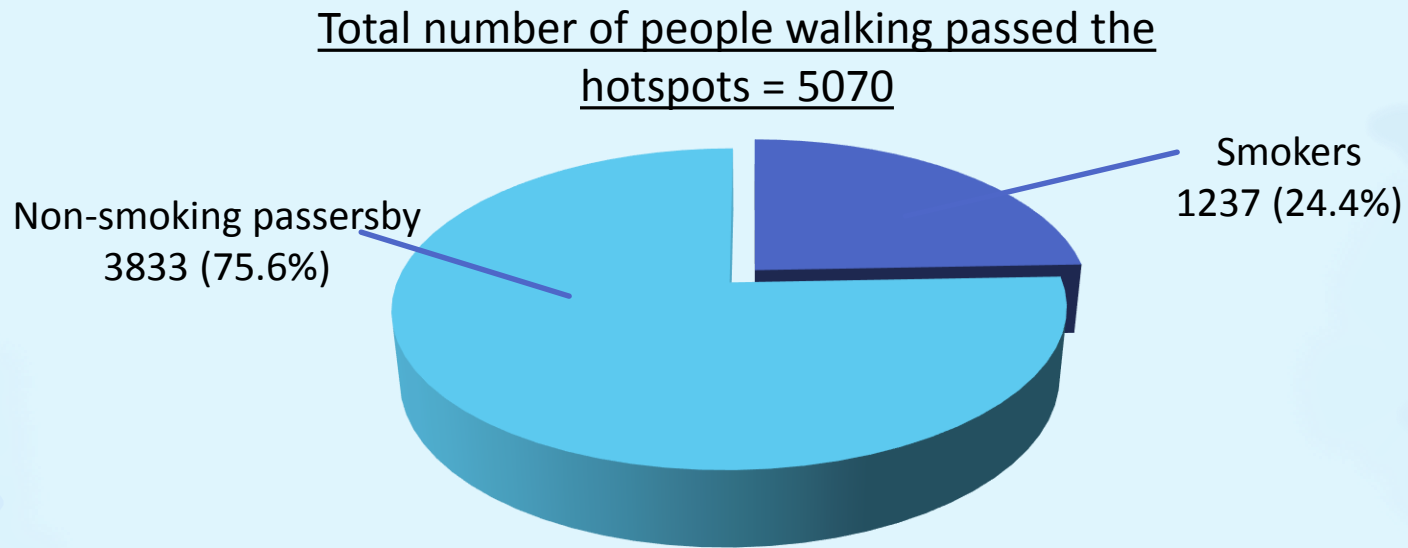
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Pilot study in 2009: Findings

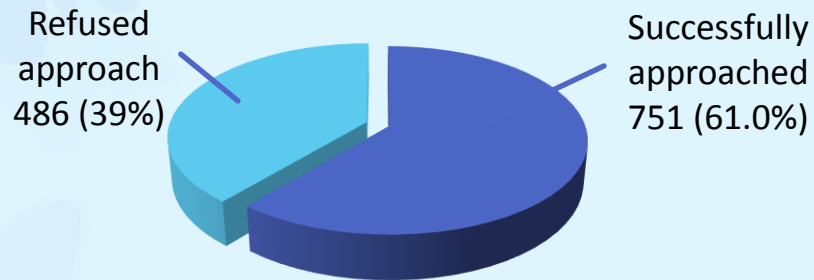
- From February 2009 to August 2009, outreach interventions were conducted at 10 hotspots for 40 hours.



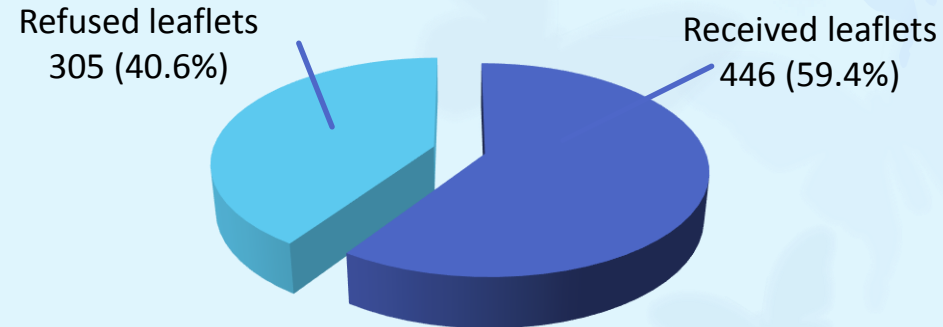
Average no. of smokers at hotspots per hour = 30.7 (SD 19.4)

Pilot study in 2009: Findings

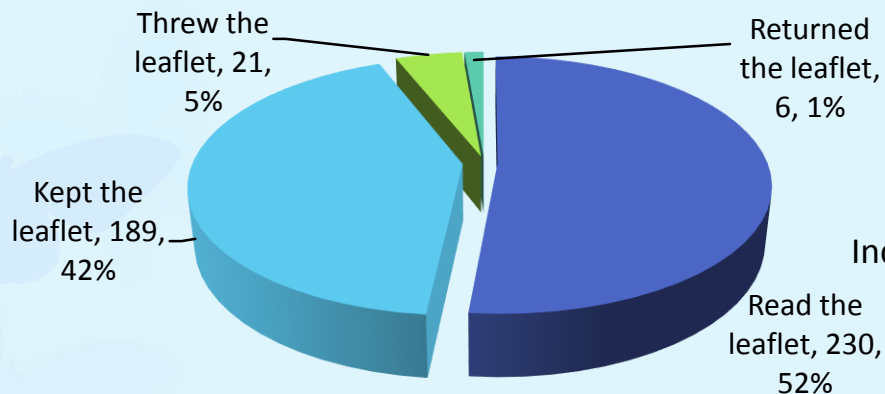
Smokers at the hotspots n= 1237



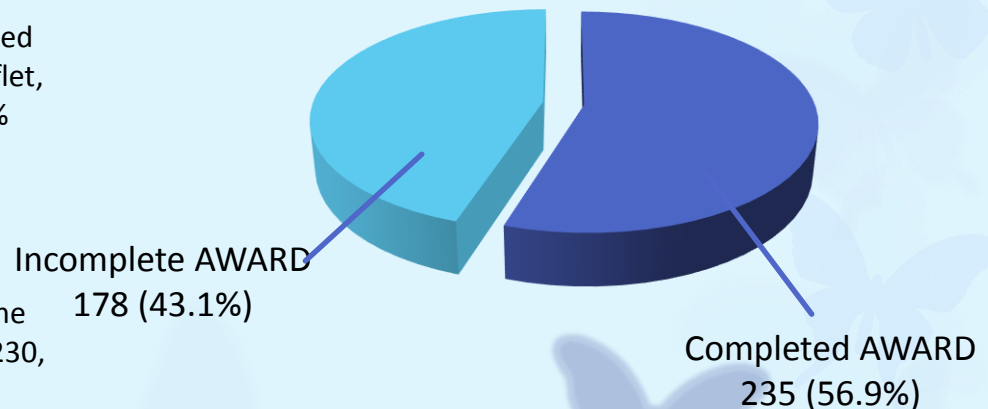
Approached smokers n = 751



Smokers received the leaflet n = 446



Smokers received AWARD advice n = 413



Average no. of smokers received AWARD per hour = **10.3**

Pilot study in 2009: Conclusions and improvements

- **Conclusions**

- Large number of smokers could be approached
- Over half of the approached smokers accepted brief advice, even though they were smoking

- **Improvements**

- The promotion should be done in more hotspots
- More smoking cessation ambassadors
- More training for the ambassadors with evaluation
- More attractive souvenir
- Telephone follow-up can be provided to the smokers
- Quitting outcomes and change of knowledge should be evaluated
- More interventions can be provided (e.g. Advice on medications, booklet)

2015 hotspot smoking cessation promotion: Aims and targets

- **Aims**
 - Building capacity of smoking cessation
 - Promotion of smoking cessation at smoking hotspots
 - Proactive delivery of brief intervention at smoking hotspots
 - Evaluation of the feasibility, quitting outcomes, and the costs



2015 hotspot smoking cessation promotion: Aims and targets

- **Targets**
 - Train 10 university students to be outreach ambassadors;
 - Approach 1,700 smokers, and distribute souvenirs to 1,000 smokers at the 15 smoking hotspots;
 - Provide AWARD brief advice to 850 smokers, and 425 (50%) of them receive the complete intervention; and
 - Further contact 85 smokers (around 10% of the smokers who receive brief intervention) through telephone



Process and evaluation

Training of ambassadors

- Change of knowledge, attitude and confidence for smoking cessation

Hotspot selection

- Explored the smoking hotspots with greatest number of smokers

Hotspot intervention

- Characteristics of smokers at the hotspots (sex & estimated age group)
- Proportion of (1) being approached, (2) accepting the souvenir, (3) receiving the advice, (4) consenting to the follow-up

Follow-up of smokers

- Characteristics of smokers who consented to the follow-up
- Quitting outcomes: (1) Self-reported abstinence in past 7 days at 6-month follow-up, (2) Smoking reduction by at least 50%, (3) Quit attempt (abstinence for >1 day)
- Attitude outcomes: (1) Intention to quit, (2) knowledge in smoking and health
- Cost analysis: Cost per smoker receiving the intervention and cost per quitter

Training of ambassadors

- Recruitment of university students via mass mail
- Training: Two half-day sessions (4 hours each)
- Curriculum
 - Study overview
 - Tobacco epidemic
 - Smoking cessation counseling skills
 - Specific skills in proactive approach
 - Pharmacotherapy (Nicotine replacement therapy)
 - Role play
- 40 university students participated
 - Female: 75%
 - Discipline: Nursing 50%, Science 17.5%, Social sciences 12.5%, Others 20.0%
 - Had experience of advising smokers to quit: 47.5%
 - Had experience of referring smokers to services: 0%



Training results

	Pre-test (N=40)	Post-test (N=38)	p-value (pair sample t-test)
Perceived effectiveness of the intervention (0 lowest; 10 highest)	6.58	7.40	0.03
Perceived importance of the intervention (0 lowest; 10 highest)	7.00	7.68	0.04
Self-efficacy (1 lowest; 4 highest)			
Perceived confidence to advise smokers	2.89	3.09	0.01
Perceived importance to advise smokers	3.13	3.16	0.66
Perceived difficulty to advise smokers	2.82	2.57	0.10

Selected hotspots in Hong Kong Island



Melbourne Plaza, Central



Theatre Lane, Central



Admiralty Centre, Admiralty



Shun Tak Centre, Sheung Wan



SOGO, Causeway Bay

Selected hotspots in Kowloon



Bus Terminal, Tsim Sha Tsui



Festival Walk, Kowloon Tong



Grand Plaza, Mong Kong



Shum Shui Po MTR station

Selected hotspots in New Territories



Kwai Fong MTR station



Shatin Centre



Tsuen Wan MTR station



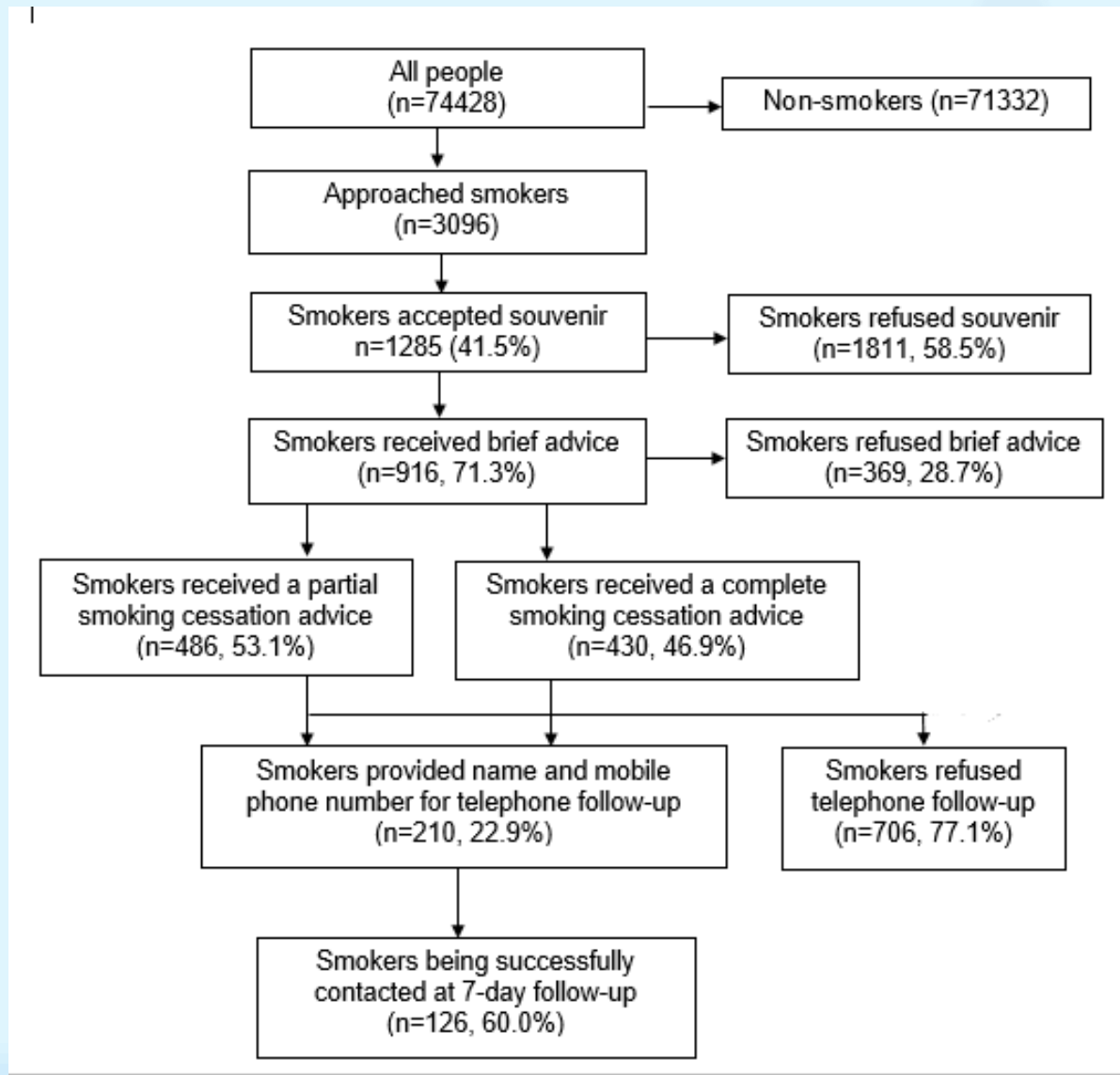
Sheung Shui MTR station

Interventions

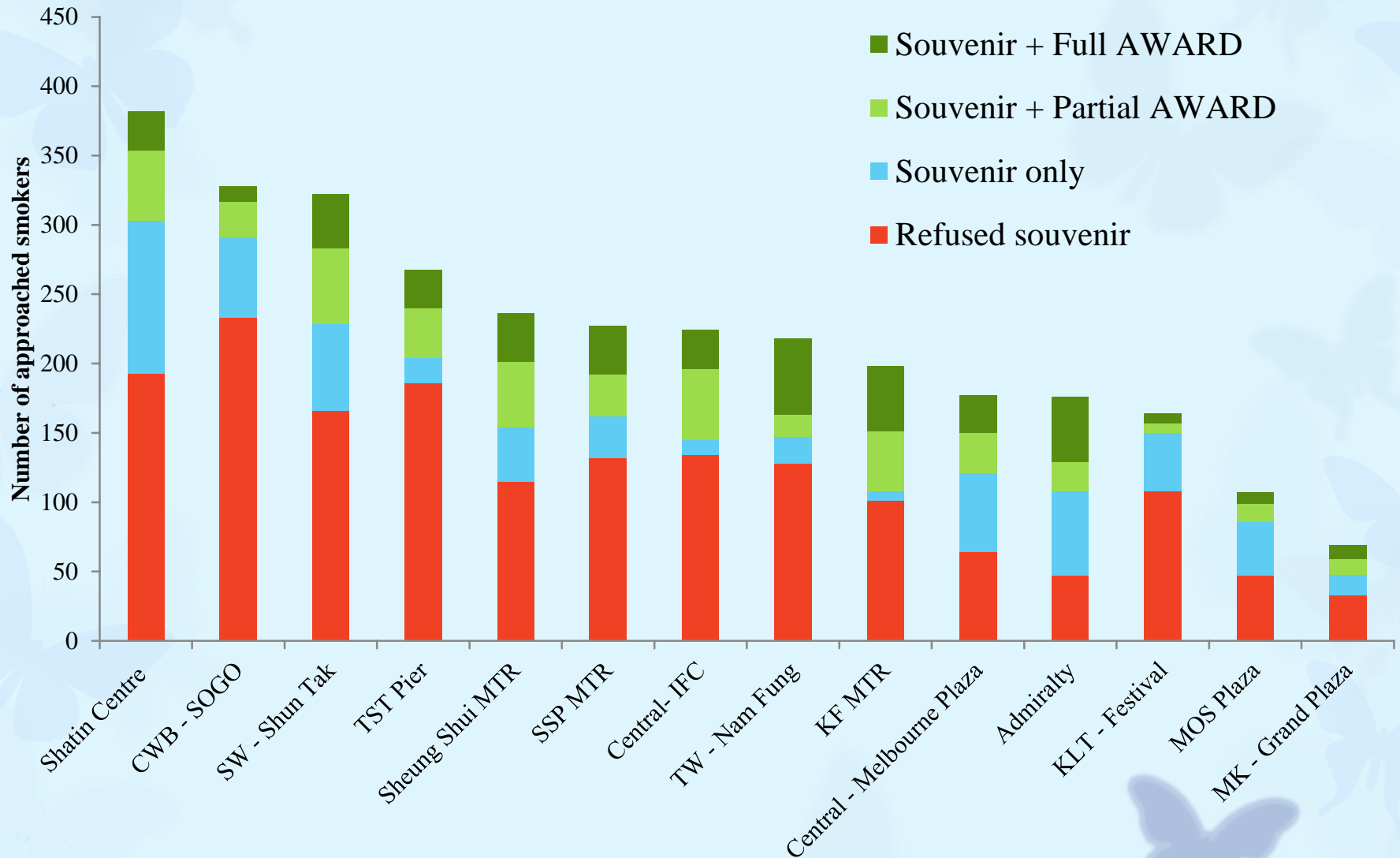
- Study period: January to August 2015
- 27 promotion sessions at 14 smoking hotspots
- Foot-in-the-door strategy: People who have first agreed to a small request are more likely to comply later with a larger request
 1. Delivered a tissue pack with quitting messages and information of cessation services
 2. Probed for smoking habit and history (e.g. 你食左煙幾耐?)
 3. Measured exhaled carbon monoxide with Smokerlyzer
 4. Brief advice (AWARD protocol)
 5. Delivered a 12-page self-help smoking cessation booklet (designed by Hong Kong Council on Smoking and Health)
 6. Invitation for telephone follow-up



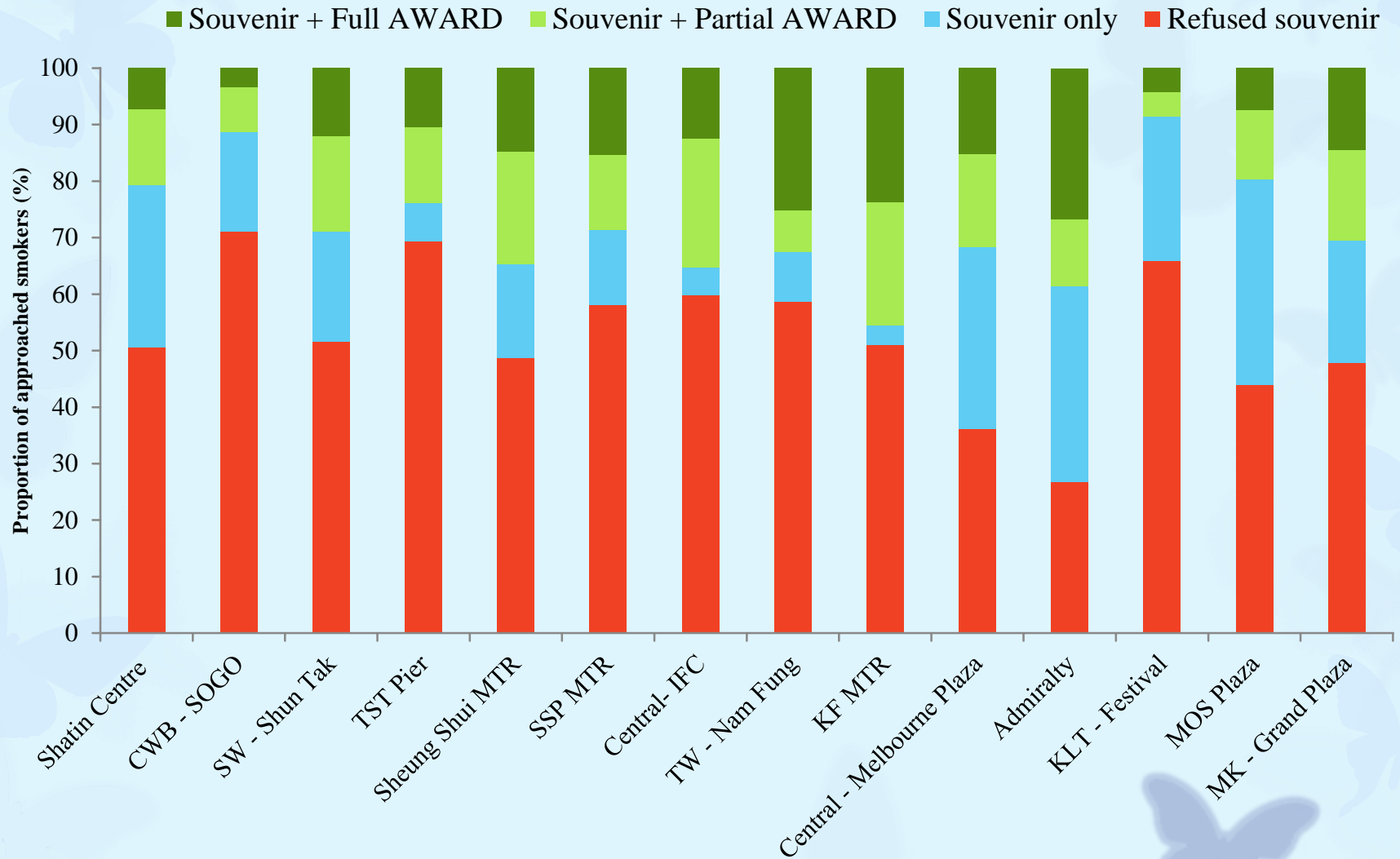
Flowchart of approach, advice and follow-up



Promotion results by hotspots



Promotion results by hotspots



Socio-demographic characteristics (Reported at 7-day telephone follow-up)

Characteristics		N=126, n (%)	All smokers from THS* 2015 (%)
Male		107 (84.9%)	83.9%
Age, years	15-29	34 (27.0%)	11.5%
	30-59	66 (52.3%)	67.1%
	60 or above	12 (9.5%)	21.4%
	Missing	14 (11.1)	
Employed		88 (69.8%)	79.0%
Education level	Primary	12 (9.5%)	NA
	Secondary	65 (51.6%)	
	Tertiary or above	35 (27.8%)	
	Missing	14 (11.1%)	

*Thematic Household Survey (2015, No. 59), Census and Statistics Department

Smoking and quitting characteristics (Reported at 7-day telephone follow-up)

Characteristics		N=126, n (%)	All smokers from THS (%)
Cigarette consumption	No daily smoking	4 (3.2%)	6.6%
	≤10	68 (54.0%)	52.3%
	11-20	46 (36.5%)	39.0%
	>20	3 (2.4%)	2.2%
	Missing	1 (0.8%)	-
Had intention to quit		91 (72.2%)	37.0%
Time of recent quit attempt	Within 7 days	15 (11.9%)	30.8%
	Within 30 days	9 (7.1%)	
	Within last year	13 (10.3%)	
	More than a year ago	37 (29.4%)	
	No previous attempt	51 (40.5%)	69.2%
	Missing	1 (0.8%)	

Quitting outcomes

	1-month n (%) (N= 210)	3-month n (%) (N= 210)	6-month n (%) (N= 210)
Self-reported 7-day point prevalence quitting (A)	12 (5.7)	14 (6.7)	16 (7.6)
Biochemically validated quit rate	NA	NA	2 (1.8)
Self-reported smoking reduction by 50% or more (B)	8 (3.8)	8 (3.8)	9 (4.3)
Self-reported quitting and reduction (A+B)	20 (9.5)	22 (10.5)	27 (11.9)
Quit attempt	18 (8.6)	21 (10.0)	26 (12.4)
Have intention to quit	75 (37.9)	70 (35.7)	66 (34.0)
*Assuming non-respondents did not change smoking behavior			

Change of knowledge in smoking and health

	1-week	3-month		6-month	
	N (%)	N (%)	p-value [§]	N (%)	p-value [§]
Retention	126 (60%)	103 (49.0%)		109 (51.9%)	
1. If smokers have been smoking for decades, it's already too late to quit. (Incorrect statement)					
Answered correctly	93 (73.8)	59 (57.3)	0.02	56 (51.4)	0.02
2. Smoking low-tar cigarettes is a safe alternative of quitting smoking. (Incorrect statement)					
Answered correctly	51 (40.5)	46 (44.7)	0.36	63 (57.8)	0.03
3. Secondhand smoke is less harmful than outdoor air pollution. (Incorrect statement)					
Answered correctly	47 (37.3)	56 (54.4)	<0.01	62 (56.9)	<0.01
4. One or more than one out of two smokers die prematurely because of smoking. (Correct statement)					
Answered correctly	64 (50.8)	67 (65.0)	0.02	66 (60.6)	0.06

[§]p-value of McNemar's test

Cost analysis

	Cost (HK\$)	Cost (US\$)
1. Training (1 Chair professor, 2 nurses, 1 social worker, and 1 post doc fellow)	3,939	505
2. Recruitment manpower		
• A full time research assistant for 10 months	177,902	22,808
• 4 trained student ambassadors in each promotion session (2 in a pair to provide intervention in each promotion session, 27 days x 4 persons x 4 hours)	24,040	3,082
3. Telephone follow up (210 subjects x 0.25 hour of each follow up)	2,925	375
4. Publicity items (Leaflets and souvenirs)	6,802	872
Total	215,608	27,642

- The average costs for a smoker to receive the brief advice (n=920), consent to follow-up (n=210), and quit successfully (n=16) at 6-month follow-up were **US\$30, US\$132, and US\$1,728**, respectively.
- The cost for recruiting a smoker was comparable to that incurred by using social media (US\$1 to US\$173) (Topolovec-Vranic & Natarajan, 2016, Frandsen et al. 2014, Heffner et al. 2013)

Project achievements – exceeded goals

- The findings have been accepted as publication in *Nicotine & Tobacco Research*

<https://academic.oup.com/ntr/article-abstract/doi/10.1093/ntr/ntx147/3888604/Feasibility-Efficacy-and-Cost-Analysis-of>

Goals	Achievements
<ul style="list-style-type: none">Train 10 students to be ambassadors	<ul style="list-style-type: none">40 ambassadors were trained.Significant increase in perceived effectiveness on the promotion and confidence to deliver brief advice
<ul style="list-style-type: none">Approach 1,700 smokers, and distribute souvenirs to 1,000 smokers at the 15 smoking hotspots	<ul style="list-style-type: none">3,096 smokers were approached and 1,285 of them (41.5%) accepted our souvenirs
<ul style="list-style-type: none">Provide brief cessation advice (AWARD) to 850 smokers, in which 425 (50%) of them receive the complete intervention	<ul style="list-style-type: none">916 smokers received the advice, in which 430 (46.9%) received the complete AWARD advice (about 1 minute)
<ul style="list-style-type: none">Further contact 85 smokers (around 10% of the smokers who receive brief intervention) through telephone	<ul style="list-style-type: none">210 smokers consented to the follow-up, and 60.0% of them (n=126) were successfully contacted at 1-week follow-up.

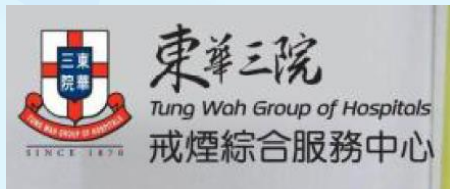
Limitations

- Uncontrollable factors on recruitment results:
 - Weather, facilities nearby, number and capacity of ambassadors, extended smoke-free areas since 2007
 - Other tobacco control measures
- Lack of incentive, social marketing in mass campaign, and cessation assistance
- Other impacts on smokers who refused follow-up were unknown

Implications for practice: Outreach recruitment in COSH Quit-to-Win Contests



Implications for practice: Development of further interventions and collaborations



Active referral

NRT sampling



Cheung et al. *Trials* (2016) 17:355
DOI 10.1186/s13063-016-1485-z

Trials

STUDY PROTOCOL

Open Access



Motivating smokers at outdoor public smoking hotspots to have a quit attempt with a nicotine replacement therapy sample: study protocol for a randomized controlled trial

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Contents lists available at ScienceDirect

Addictive Behaviors

journal homepage: www.elsevier.com



Effectiveness of a small cash incentive on abstinence and use of cessation aids for adult smokers: A randomized controlled trial

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Incentives for validated abstinence

Nicotine & Tobacco Research, 2017, 1–6
doi:10.1093/ntr/ntx026
Original investigation
Received August 15, 2016; Editorial Decision January 13, 2017; Accepted January 23, 2017



Original investigation

Brief Advice on Smoking Reduction Versus Abrupt Quitting for Smoking Cessation in Chinese Smokers: A Cluster Randomized Controlled Trial

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Cut-down-to-quit intervention

Conclusions

- The promotion of smoking cessation at smoking hotspots was feasible and efficient to reach more smokers and motivate quitting
- When new tobacco control measures are implemented, this proactive approach could be more effective
- The approach is also feasible and important when no new tobacco control measures are available.
- Further studies on different interventions at hotspots are warranted

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