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An Initiative of Comprehensive Primary Healthcare Collaboratory
綜合基層醫療健康協作平台推動之項目

POLICY BRIEF

EFFECTIVENESS OF MOBILE SMOKING CESSATION TREATMENT WITH 1-WEEK NICOTINE REPLACEMENT THERAPY SAMPLING AT OUTDOOR SMOKING HOTSPOTS

LESSONS FOR MAINLAND CHINA FROM HONG KONG'S EXPERIENCE

Key Points:

- This study examined the real-time effects of alcohol marketing exposure on drinking behaviors among university students in Hong Kong.
- Marketing exposure is widespread, occurring through multiple channels, with more than three-quarters of students reporting exposure to alcohol marketing within a two-week period. Common sources include restaurants, internet platforms, and public transportation.
- University students exposed to alcohol marketing were 3.5 times more likely to consume alcohol and 4.6 times more likely to purchase alcohol the following day compared to those without exposure
- Current regulations on alcohol marketing are insufficient to protect young adults from harmful exposure and its consequences.

BACKGROUND

Tobacco use remains a leading cause of preventable death globally, with over half of tobacco users dying prematurely from tobacco-related diseases. Despite the availability of evidence-based smoking cessation (SC) treatments, such as counseling and medications, uptake remains low, particularly in low- and middle-income countries. Offering short-term nicotine replacement therapy (NRT) sampling has shown promise in promoting quit attempts and increasing the use of SC services. However, the impact of NRT sampling on long-term abstinence and SC service utilization remains unclear.

This policy brief summarizes the findings of a cluster randomized controlled trial (RCT) conducted in Hong Kong, which evaluated the effectiveness of mobile SC treatment with 1-week NRT sampling at outdoor smoking hotspots. The study aimed to increase recruitment, quit attempts, SC service use, and tobacco abstinence among daily smokers. The lessons learned from Hong Kong's experience can provide valuable insights for Mainland China to enhance its smoking cessation efforts.

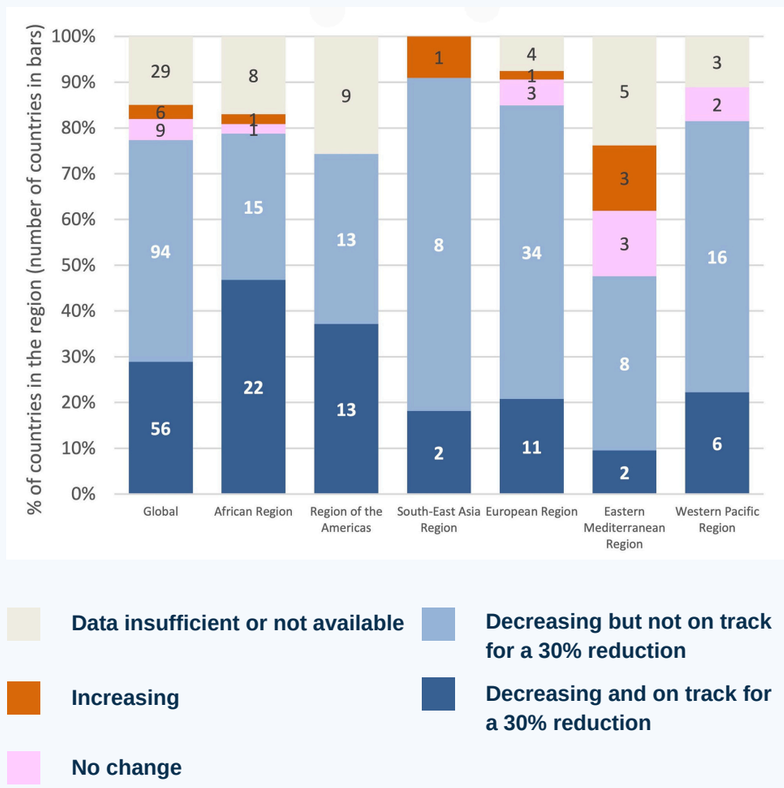

Figure 1. Status of tobacco use prevalence reduction target by WHO region in 2022. Adapted from WHO global report on trends in prevalence of tobacco use 2000-2030.

RESEARCH METHODOLOGY

In the 244 recruitment sessions, 1392 were screened for the study eligibility. In 37 experimental and 31 control group sessions where the mobile SC trucks were unavailable, 102 and 65 participants were recruited, respectively (21.1% vs. 18.5%; $\chi 2 = 0.92$, P = 0.34). A total of 834 participants were randomized into the experimental group (n = 482, 57.8%), and the control group (n = 352, 42.2%) (Figure 1).

Retention rates between the two groups were not statistically significant at 1- (68.6% vs. 70.2%; $\chi 2 = 0.25$, P = 0.62), 3- (62.9% vs. 60.8%; $\chi 2 = 0.07$, P = 0.79) and 6-month (58.5% vs. 60.5%; $\chi 2 = 2.40$, P = 0.12) follow-ups. Approximately 81.3% of participants were male, with a mean age of 40.9 (SD = 11.1) years. Table 1 shows that baseline characteristics were similar between the two groups.

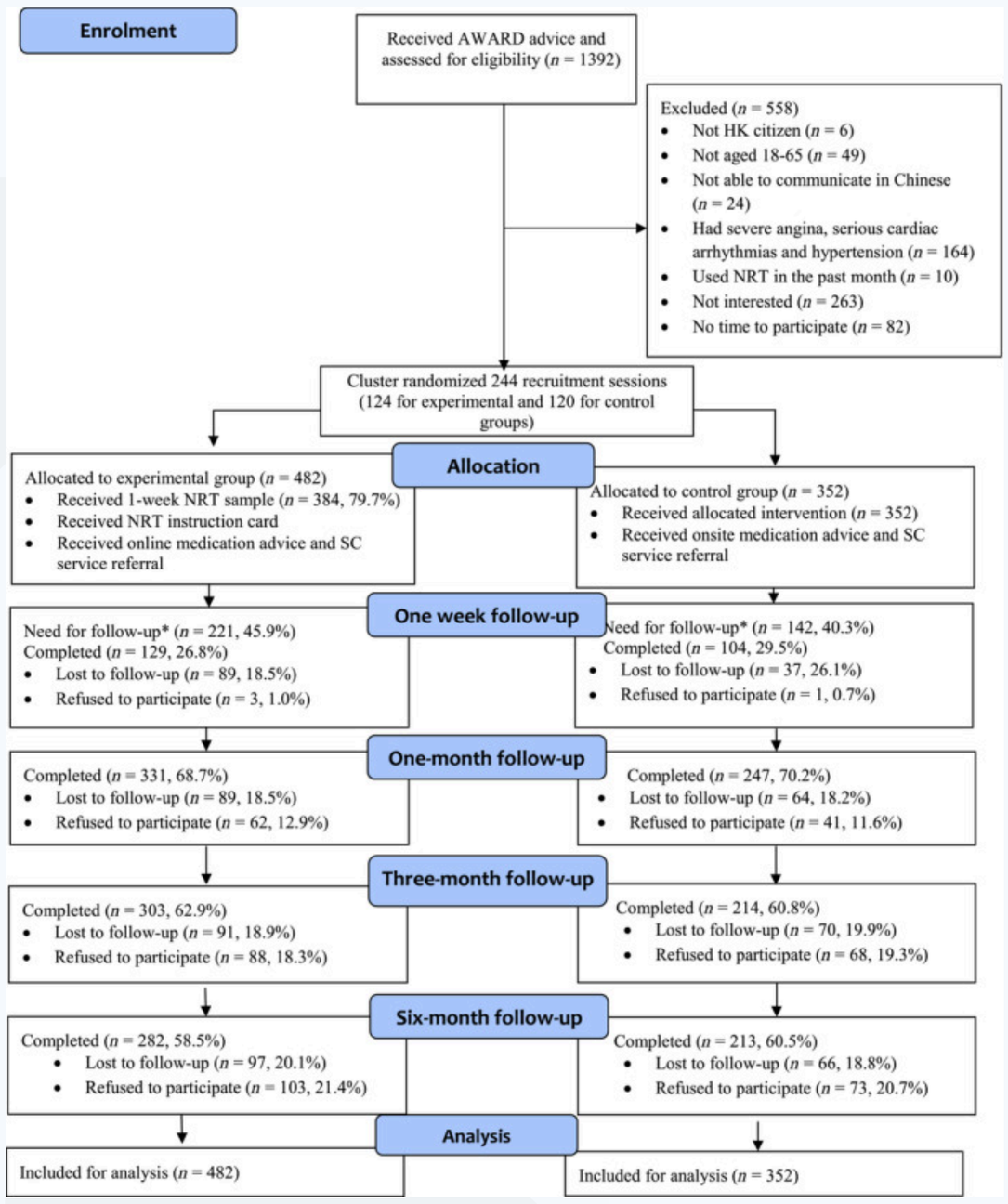

Figure 2. The consolidated standards of reporting trials (CONSORT) flow diagram.

KEY FINDINGS

Mobile Outreach in High-Smoking Areas

Hong Kong's mobile SC treatment targeted outdoor smoking hotspots, effectively reaching smokers who may not otherwise seek SC services. Mainland China can:

- Identify high-smoking areas (e.g., public squares, transportation hubs) for targeted mobile SC interventions.
- Deploy mobile teams equipped with NRT samples and trained professionals to provide brief medication advice.

NRT Sampling as an Engagement Tool

Offering 1-week NRT samples significantly increased recruitment for onsite medication advice. Mainland China can:

- Integrate NRT sampling into existing SC programs to attract more smokers to engage with cessation services.
- Provide free or subsidized NRT samples as part of public health campaigns to encourage quit attempts.

Nurse-led Brief Medication Advice

Hong Kong's use of nurse-led brief medication advice proved effective in improving smokers' readiness to quit. Mainland China can:

- Train healthcare professionals, including nurses and community health workers, to deliver brief SC interventions.
- Incorporate brief medication advice into routine healthcare services to reach a broader population.

Cost-Effectiveness of Mobile SC Programs

The study demonstrated that mobile SC treatment with NRT sampling is cost-effective, with lower costs per smoker and per quitter compared to traditional clinic-based services. Mainland China can:

- Allocate resources to mobile SC programs, particularly in underserved rural and urban areas.
- Use cost-effectiveness data to advocate for increased funding and support for mobile SC initiatives.

POLICY RECOMMENDATIONS FOR MAINLAND CHINA

1.Expand Mobile Smoking Cessation Programs

- Scale up mobile SC interventions in high-smoking areas to reach smokers who are less likely to access clinic-based services.

2. Incorporate NRT Sampling into Public Health Campaigns

- Provide free or subsidized NRT samples as part of national and local SC campaigns to encourage quit attempts and increase engagement with SC services.

3. Enhance Training for Healthcare Professionals

- Train nurses, community health workers, and other healthcare professionals to deliver brief SC interventions and provide NRT sampling.

4. Promote Public Awareness of SC Services

- Launch public awareness campaigns to highlight the availability and benefits of mobile SC programs and NRT sampling.

5. Monitor and Evaluate Program Impact

- Establish mechanisms to assess the effectiveness of mobile SC programs, including quit rates, service uptake, and cost-effectiveness, to inform future strategies.

CONCLUSION

Hong Kong's experience with mobile SC treatment and NRT sampling offers valuable lessons for Mainland China to enhance its smoking cessation efforts. By adopting mobile outreach strategies, incorporating NRT sampling, and enhancing healthcare professional training, Mainland China can improve access to SC services, increase quit attempts, and reduce the burden of tobacco-related diseases. These efforts will contribute to healthier communities and support national public health goals.

Reference: He, W. J. A., Wang, Q., Chan, C. H. H., Luk, T. T., Wang, M. P., Chan, S. C. S., Lam, T. H., & Cheung, Y. T. D. (2025). Effectiveness of mobile smoking cessation treatment with 1-week nicotine replacement therapy sampling at outdoor smoking hotspots: A cluster randomized controlled trial. Addiction, 120(1), 106-115. https://doi.org/10.1111/add.16666

Professor Sophia CHAN
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Professor Chan was appointed as undersecretary for Food and Health (2012-2017) and Secretary for Food and Health (2017-2022), notably leading Hong Kong's COVID-19 response and primary health care reforms including establishing District Health Centres, Hong Kong's first Chinese Medicine Hospital, and the Hong Kong Cancer Strategy 2019. Before her government roles, she was Head of the School of Nursing at HKU and Assistant Dean at HKU's Faculty of Medicine.
Professor Chan is internationally renowned in public health, tobacco control, and nursing research, with over 240 scientific publications and more than 3,800 citations. She is a top-funded researcher testing tobacco dependency interventions through RCTs. She pioneered the first smoking cessation counselling training for nurses and other heath care professionals in Hong Kong. Recognized with numerous prestigious awards, including the Gold Bauhinia Star, Fellow of the American Academy of Nursing, and Honorary Fellow of the Royal College of Physicians (UK), she also holds advisory roles with WHO and international nursing leadership boards.

Professor Derek CHEUNG
Assistant Professor, School of Nursing , HKU

Professor Cheung focuses on brief interventions, nicotine therapy sampling, ecological momentary assessment, and nursing education. Over the past six years, he secured five external competitive grants totaling USD 1.04 million as principal investigator. Derek has published 103 peer-reviewed articles in prestigious journals, achieving an h-index of 23 with 2,134 citations.
His research significantly informs professional training, clinical guidelines, and international policies. His innovative teaching methods in smoking cessation training have resulted in recent publications and an award from the Hong Kong International Nursing Forum, contributing substantially to tobacco control initiatives.

Dr. Wanjia Aaron HE
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Dr. He earned his Ph.D. from the Department of Rehabilitation Science at the Hong Kong Polytechnic University. In 2024, he took up the position as a Post-doctoral Fellow at the School of Public Health of the University of Hong Kong. His current research is centred around the use of Mobile-health (mHealth) interventions to influence health behaviours, including smoking cessation, alcohol control, and body management. Dr He is committed to enhancing public health through innovative use of technology and evidence-based interventions.

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