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Commentary

Community based interventions to increase use of Quitline services

Man Ping Wang

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

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Western Pacific region accounts for a third of the smoking population worldwide and faces tremendous health, economic and social burden associated with smoking and second-hand smoke exposure. [1] Smoking cessation is one of the most cost-effective interventions to improve health. Effectiveness of smoking cessation interventions such as Quitline counseling and nicotine replacement therapy (NRT) has been proven. [2] WHO estimated about 30% smokers worldwide have access to smoking cessation services. [3] Yet, few smokers use smoking cessation services. Common reasons of the low use of smoking cessation services include lack of motivation to quit, lack of understanding about the services, worries about the side effects of medication and practical reasons such as service time, inconvenient location and expenses.

Various proactive interventions have been designed to increase the use of effective smoking cessation services. In the United States, Ask-Advise-Connect brief model in health care settings has been developed to assess, advise and refer smokers to smoking cessation services. [4] In the United Kingdoms, researchers have developed individual tailored risk letters to motivate smokers, identified in primary health care records of National Institute for Health Research, to attend non-committed taster sessions of smoking cessation services. [5] In Hong Kong, a proactive approach was used to recruit smokers in community for brief advice and active referral to community cessation services. [6] Population interventions such as mass media campaign and financial incentives have also been evaluated.

In *The Lancet Regional Health – Western Pacific*, Gulam Khandaker and colleagues further advanced the population based campaign to increase the use of Quitline in Queensland, Australia. [7] The territory-wide campaign "10,000 Lives" is unique in the region by combining various components including mass media promotion, referral systems with community and health care sectors, and free NRT and behavioral support. By using the interrupted time series (ITS) analysis at a period of 30 months after initiation of the campaign, Gulam Khandaker and colleagues have found that compared with control regions, the campaign accounted for significant higher monthly rates of referral to Quitline (238.5%), completed initial counselling sessions (248.6%), completion of total counselling sessions (251.6%) in the intervention region (Central Queensland). Moreover, monthly dispatch of NRT had increased, 93.6% for gum, 141.4% for lozenges and 121.6% for patches. In fact, WHO has advocated that comprehensive tobacco cessation support and treatment should be provided when resources allow. [3] The "10,000 Lives" campaign has severed as a model to scale up the effect of a national smoking cessation system by proactive promotion, enhanced referral system and provision of specialized tobacco dependence treatment services. Some of these features such as referral system and treatment services will continue to produce effect after the campaign evaluation. The campaign has been reported to be low cost (A$280,748 including A$64164 for research part) thus is potentially sustainable and applicable to other parts of Australia and in the Western Pacific region with Quitline services.

Gulam Khandaker and colleagues have rigorously scrutinized the effect of the campaign on smoking cessation services use. They have selected control regions to be comparable to the campaign region, used ITS analysis to remove seasonality fluctuation and extensively assessed the effects using different methods and parameters. The similar results across different periods and various outcomes, suggested the robustness of the campaign impacts on smoking cessation services use. The study also raises interesting questions about methodology in evaluating the impacts of community based program on smoking cessation services, smoking prevalence and attributed health burden. Randomized controlled trial (RCT) is the gold standard for assessing effectiveness of interventions. However, many times, RCT is not feasible for evaluating the effect of community based campaigns due to the large population covered, complexity of implementation and policy driven initiatives. Quasi-experimental design provides real-world findings but also is subjected to potential confounders such as other concurrent campaigns or interventions. The results should be interpreted contextually. Another key question related

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to the study is about the outcome of campaigns. Smoking cessation service use such as counselling and NRT are strong predictors of smoking abstinence and important to inform resources allocation. Evaluating impacts on smoking prevalence and health burden in longer term should consider using biochemically validated abstinence and quality-adjusted life year for international comparison.

Gulam Khandaker and colleagues have used social media to promote the use of Quitline, which is a key platform nowadays but under-studied. More studies on digital health are needed to identify effective strategies on smoker recruitment, intervention and evaluation. Some mobile phone based interventions such as text messaging and chat-based instant messaging were effective for smoking cessation. [8,9] More advanced technologies such as artificial intelligent personalized interventions with automated response system (e.g. Chatbot) may further scale up and sustain the effects of smoking cessation campaigns in future.

Declaration of Competing Interest

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