

# An evaluation of usage patterns, effectiveness and cost of the national smoking cessation quitline in Thailand

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► Additional material is published online only. To view please visit the journal online (<http://dx.doi.org/10.1136/tobaccocontrol-2013-051520>).

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Received 27 December 2013

Accepted 20 May 2014

Published Online First

11 June 2014

## ABSTRACT

**Background** Telephone-based smoking cessation services (quitlines) offering counselling for smoking cessation without nicotine replacement therapy may be important components of tobacco control efforts in low and middle income countries, but evaluations in such resource-limited settings are lacking. We aimed to evaluate the usage, effectiveness and cost of the Thailand National Quitline (TNQ).

**Methods** Analysis of retrospective data for callers to the TNQ between 2009 and 2012 and a follow-up survey in 1161 randomly selected callers.

**Results** Between 2009 and 2012 there were 116 862 callers to the TNQ; 36 927 received counselling and at least one follow-up call. Compared with smokers in the general population, callers were younger, more highly educated, more likely to be students, and more likely to smoke cigarettes rather than roll-your-own tobacco. Continuous abstinence rates at 1, 3 and 6 months after calling were 49.9%, 38.0% and 33.1%. The predicted rate at 12 months was 19.54% (95% CI 14.55 to 26.24). Average cost per completed counselling was \$31 and the average cost per quitter was \$253. Assuming all (and two-thirds) TNQ callers who succeed in quitting would have failed to quit without the assistance of the TNQ, cumulative life years saved (LYS) for the 4-year period were 57 238 (36 733) giving a cost per LYS of \$32 (50) (about 7.93 LYS per quitter) and an estimated return on investment over 4 years of 9.01 (5.78).

**Conclusions** A low-cost quitline without nicotine replacement therapy is a promising model for smoking cessation services and likely to offer good value for money in Thailand.

## INTRODUCTION

Smoking cessation quitlines are defined as telephone-based support services, including proactive or reactive counselling or the provision of other information to those calling a helpline with the aim of helping smokers to quit. They have become central components of many comprehensive tobacco control programmes in many countries worldwide.<sup>1</sup> Their key advantage is an ability to deliver evidence-based information to members of the public irrespective of their physical location or ability to pay.<sup>2</sup> Most quitlines provide counselling services and information to smokers wanting to quit and to family members, friends or healthcare providers who want to help smokers quit. Some national quitlines, including those in the UK and Australia, offer pharmaceutical cessation assistance.<sup>3–5</sup> Stead *et al*<sup>5</sup> conducted a systematic review

of 14 trials of interventions for smokers who contacted quitlines. They concluded that counselling is an effective intervention for assisting smokers to quit, while self-help materials also offer a small benefit.

In 2009 there were 53 countries having at least one toll-free national quitline.<sup>6</sup> Only 4 and 17 of these were from low-income and middle-income countries, respectively. Of those 53 countries, 34 reported having 75–100% population coverage for their quitline services.<sup>7</sup> These data do not include Thailand since during that period the Thai National Quitline (TNQ) was not yet toll free, but charged 3 Thai Baht (US\$0.09) per landline call.

## The quitline programme in Thailand

Thailand is a predominantly rural middle-income country in Southeast Asia with a population of 67 million. The prevalence of smoking in Thailand has been decreasing consistently over time since the 1990s, probably in part due to tobacco control policies in the country,<sup>8–9</sup> though recently levels appear to have stabilised (the prevalence rates in Thailand in 1991, 2009 and 2011 were 32.0%, 20.7% and 21.4%, respectively).<sup>10</sup> Reasons for this lack of continued decline in smoking are not clear. However, there is a recognised need to improve national smoking cessation efforts through improved targeting of specific population groups and potentially through provision of new services to people underserved by more traditional programmes. The Thai Health Promotion Foundation (ThaiHealth), an independent state agency set up by the Health Promotion Act 2001 and funded by a 2% surcharge tax on tobacco and alcohol excise taxes, established the TNQ in September 2008. The TNQ (or Quitline 1600) is a telephone-based smoking cessation service which has been providing counselling for smoking cessation since January 2009. TNQ services provide reactive and proactive behavioural counselling to help callers (smokers and their relatives) to develop and follow a plan to quit smoking. The TNQ does not use medication as an adjunct to treatment and may offer self-help cessation literature on request. TNQ reactive services to callers include advice or brief interventions to those who are proxy or general public, and intensive counselling lasting approximately 30 min to smokers who have some level of intention to quit. The counselling aims to help smokers understand tobacco addiction, increase self-efficacy and confidence to quit, to set a quit plan and determine a quit date. TNQ proactive services include



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**To cite:** Meeyai A, Yunibhand J, Punkrajang P, *et al.* *Tob Control* 2015;**24**:481–488.