PostScript

LETTERS

Tobacco-free electronic cigarettes and cigars deliver nicotine and generate concern

Novel cigarette-appearing items have been introduced to the market with the intent, either stated or implied, of reducing toxicants in mainstream and second-hand smoke and/or helping smokers break their nicotine addiction. We report here the introduction to the market of electronic products that mimic a cigar, cigarette or pipe. These articles are unique in that they are the first to have the appearance of conventional tobacco products but contain no tobacco. The products deliver nicotine, at different amounts, but no smoke or tar.

The items have been developed by Beijing SBT Ruyan Technologies and Development, Beijing, China (http:///www.sbtry.cn/anli-en. asp) and are marketed by the Create Times Industrial & Trading, Shenzhen, China (http://www.quism.net).





Figure 1 View of the cigar case (panel A) and cigar components (panel B) of a Mario Raphael healthy electronic cigar from Ruyan. (1) Cigarappearing tube of stainless steel; the arrow denotes the hole in which a pin or paper clip is used to reset to normal working conditions every 20-30 days; (2) sealed plastic cases for smoke-generating inserts that deliver high nicotine (18 mg nicotine/cartridge), medium nicotine (14 mg), low nicotine (11 mg) and no nicotine; (3) battery recharger; (4) two lithium-ion batteries; (5) white plastic cylinder containing a fibre plug moistened with glycerol and nicotine; (6) black plastic mouthpiece; (7) indicator light cap with a red light, which when dim indicates that the batteries require recharging; (8) mouthpiece cover to be used during and between smoking sessions and, not shown, an instruction manual.

The electronic cigar we purchased recently is shown in fig 1. The cigar was purchased for US\$108 (€143, £846) and the shipping and handling charges from China to the US was (\$65). All items are sold on the internet and, most probably, circumvent regulatory policies of the US and other countries.

The manufacturer states in the instruction manual that a "... low thickness nicotine liquid enters an atomizing cell after ultra micro atomizing pump pressurizing and is atomized into about 0.5-1.5 μm fog drops in the highfrequency ultra-sonic vibration field". Further, the product can "... refresh and satisfy the joviality and long-term psychological habit of smokers so as to achieve humanized healthy smoking; and at the same time, it simulates a cigarette and does not contain such hazardous substances as carbon monoxide, nitrogen dioxide, hydro cyanic acid, arsenic, lead, perishing the harm of second-hand smoking to surrounding crowd so as to achieve the authentic humanized smoking".

It has been reported that Ruyan has gained more than 1 billion yuan (元) (US\$127.6 million) in domestic sales during the past year. Questions regarding product safety have prompted the Chinese Center for Disease Control and Prevention to carry out authoritative tests (http://news.xinhuanet.com/english/2006-12/04/content 5432536.htm).

The unanswered, but very important questions raised by these new products are many, including:

- Are they safe and effective for use as a cessation aid?
- Are they unapproved drug delivery devices making unsupported health claims to consumers?
- What credible, peer-reviewed, scientific evidence exists to support the claims of the manufacturer for these products?
- Do these products deliver a rapid and addictive dose of nicotine similar to that delivered by cigarettes?
- Are these products viewed by consumers as viable alternatives to cigarettes, cigars and other combusted forms of tobacco?
- If consumers use these non-evidence-based products in an attempt to quit smoking and fail, what are the opportunity costs of that failure —a return to tobacco smoking, greater risk of death and disease?

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Does free nicotine replacement therapy for young adults prompt them to call a quitline?

A recent paper by An et al found that offering free nicotine replacement therapy (NRT) through Minnesota's state tobacco quitline (QL) was associated with large increases in calls and quit rates.\(^1\) Other state programmes might not be able to afford NRT for all QL callers, and instead could target specific at-risk populations. Washington State's tobacco QL had a free NRT service enhancement targeted at young adults—a population whose smoking prevalence has recently increased in the United States.\(^2\) In this letter, we describe Washington's QL service enhancement for young adults, and the associated changes in call volume and quit rates.

From January 2005 through January 2006, the Washington QL offered a five-call proactive counselling service that included free NRT for 8 weeks (that is, "Washington Benefit") to all 18-29-year-olds willing to set a quit date within the next month or needing help staying quit. This enhancement was funded, in part, by the Centers for Disease Control and Prevention. Before this enhancement, 18-29-year-old callers eligible for the "Washington Benefit" through the state QL were mostly low income: they had to be (a) uninsured, enrolled in Medicaid, or Indian Health Service, or pregnant, and (b) willing to set a quit date within the next month or needing help staying quit. Others without a cessation benefit through their insurer or employer received a one-call intervention without free NRT. The state advertised the enhancement through various media channels.

When examining monthly QL call volume during 2004-6, we limited the dataset to smokers who were at least 18 years old and received a QL intervention. If there were multiple calls for a given smoker, we used only the call associated with their earliest registration date. In 2004 before the enhancement, the monthly number of adult smokers calling the QL remained stable (fig 1). Calls increased dramatically among 18-29-year-old smokers during the enhancement period, and then decreased to 2004 levels after the enhancement stopped. Although less money was spent on all QL promotions during the enhancement period (\$1.1 million, including about \$120 000 for promotions focused on the enhancement) than during 2004 (\$1.4 million), calls also increased somewhat among smokers over 29 years old during the enhancement. The increase among older callers may have been caused by an increase in earned media resulting from the promotion of the enhancement, and also from the older callers hoping to obtain free NRT.

Quit rates among young adult callers also increased during the enhancement. Using data from a 3-month follow-up telephone survey (51% response rate), we compared 18–29-year-olds who called the QL between July 2004 and December 2004 (that is, before the enhancement, n = 114) with those who called between January 2005 and May 2005 (that is, during the enhancement, n = 218). The 7-day quit rate at three months increased from 21% before the enhancement to 38% during the enhancement (p = 0.014).