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It is time to improve cigarette package health warning labels in Mexico

Effectiveness of messages promoting smoking cessation

Es hora de mejorar las advertencias sanitarias en los paquetes de cigarrillos en México

Eficacia de los mensajes para la cesación del tabaquismo

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Abstract

Mexico has been a leader in tobacco control; however, 15.5% of Mexican adults still smoke, and although most wish to quit, nicotine dependence and the tobacco industry's constant innovations make this difficult. Health warnings with images on cigarette packets have succeeded in raising awareness of the harms of tobacco and encouraging cessation behaviours, but information on risks alone is insufficient to help smokers quit.

Against this backdrop, it is proposed to strengthen Mexico's labelling policy by incorporating 'efficacy messages' that highlight the benefits of quitting smoking and offer practical advice on how to do so. Health communication theories and empirical evidence indicate that these messages complement risk-based warnings, helping smokers to turn motivation into concrete action.

The experience of Canada (the only country with an established policy of efficacy messages inside cigarette packets) shows that those who read them have greater self-efficacy to quit smoking, make more attempts to quit, and maintain abstinence more successfully. Experimental studies also confirm that these messages increase motivation and behaviours aimed at quitting smoking.

For Mexico, this strategy represents a scalable, low-cost opportunity that can be implemented through inserts in cigarette packets or within the text area already required on packaging, with the potential to reduce the health inequalities associated with smoking and lessen its burden of disease.

Keywords: Tobacco control; Smoking cessation; Drug labeling; Health communication.

Resumen

México ha sido líder en control del tabaco; sin embargo, el 15.5% de los adultos mexicanos aún fuma, y aunque la mayoría desea dejar el hábito, la dependencia a la nicotina y las innovaciones constantes de la industria tabacalera lo dificultan. Las advertencias sanitarias con imágenes en las cajetillas han logrado incrementar la conciencia sobre los daños del tabaco y fomentar conductas de cesación, pero la información sobre riesgos por sí sola resulta insuficiente para ayudar a los fumadores a abandonar el hábito.

Ante este escenario, se propone fortalecer la política de etiquetado en México incorporando "mensajes de eficacia" que destaquen los beneficios de dejar de fumar y ofrezcan consejos prácticos para lograrlo. Las teorías de comunicación en salud y la evidencia empírica indican que estos mensajes complementan los de riesgo, ayudando a los fumadores a convertir la motivación en acción concreta.

La experiencia de Canadá (único país con una política consolidada de mensajes de eficacia al interior de las cajetillas) demuestra que quienes los leen presentan mayor autoeficacia para dejar de fumar, realizan más intentos de cesación y sostienen la abstinencia con mayor éxito. Estudios experimentales confirman además que incrementan la motivación y los comportamientos orientados al abandono del tabaco.

Para México, esta estrategia representa una oportunidad escalable y de bajo costo, implementable mediante insertos en las cajetillas o en el área de texto ya obligatoria en los empaques, con potencial para reducir las disparidades asociadas al tabaquismo y disminuir su carga de enfermedad.

Palabras claves: Control del Tabaco; Cese del Hábito de Fumar; Etiquetado de Medicamentos; Comunicación en Salud.

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Introduction

Mexico has made substantial progress in tobacco control over the past two decades through implementation of taxation, smoke-free policies, advertising restrictions, and pictorial health warning labels (HWLs) prominently displayed on cigarette packages. The World Health Organization has repeatedly awarded Mexican government officials, researchers, and advocates with its prestigious World No Tobacco Day Award for promoting and adopting best-practices tobacco control policies that the WHO Framework Convention on Tobacco Control recommends. Nevertheless, smoking remains a significant public health problem. According to the 2023 Global Adult Tobacco Survey, 15.5% of Mexican adults smoke (23% of males and 7.3% of females¹, and smoking prevalence has remained relatively stable for more than a decade^{2,3,4}. Most Mexicans who smoke want to quit (71.9%)¹, but nicotine dependence makes quitting hard. Also, the tobacco industry has introduced and strongly marketed a variety of innovations to counteract tobacco control policies and ensure that Mexicans keep buying their products. While much attention has been paid to new nicotine products, like electronic cigarettes^{5,6,7,8,9,10}, heated tobacco products^{11,12}, and nicotine pouches¹³, the most impactful industry innovation for keeping smokers from quitting are cigarettes with flavor capsules, which are particularly appealing to youth and other vulnerable populations^{14,15,16,17,18,19,20,21,22}.

Around the world, 133 countries have adopted pictorial HWLs with prominent health messages on the front and back of cigarette packaging²³. Consistent with rights to informed consumption, the WHO-FCTC recommends this policy to ensure that consumers and potential consumers are informed about the risks of tobacco use, including through the use of imagery to better promote understanding of the harmful consequences of smoking²⁴. HWLs are uniquely positioned to deliver messages to smokers at the point of consumption, and their cost and dissemination are born by the tobacco industry, making pictorial HWLs among the WHO's "Best Buys" for preventing non-communicable diseases²⁵.

Growing evidence suggests that risk information alone may be insufficient to maximize smoking cessation. Messages that provide practical guidance for cessation, enhance smokers' confidence in their ability to quit, and emphasize the benefits of smoking cessation - often referred to as "efficacy messages" - represent a promising complement to traditional risk-based HWL content. Health communication theories^{26,27} and empirical evidence²⁸ indicate that messages about the threats to health are most effective when they are accompanied by messages that promote response efficacy (e.g., the belief that quitting will produce meaningful benefits) and self-efficacy (e.g., the belief that one can successfully quit). Evidence from Canada, where elaborated efficacy messages and pictorial HWLs have been required since 2000, and from a growing body of experimental studies conducted in the United States (US) indicates that efficacy-focused inserts can complement the effects of pictorial HWLs by further increasing self-efficacy and other cessation-related cognitions, as well as motivation to quit and cessation behaviors^{29,30,31,32,33,34,35,36,37,38,39}.

Mexico was an early adopter of pictorial HWLs in 2010, after which Mexican smokers' understandings of health risks from smoking and the toxic constituents in tobacco smoke, as well as their awareness of



cessation resources, interest in quitting, and attempts to quit all increased^{40,41,42,43,44,45,46,47,48,49,50}. Mexico's policy involves the world's most rapid rotation of HWL content, with the ability to change message content every three to six months. This relatively rapid rotation of message content has the potential to make Mexico's HWLs like a campaign, where novel communication strategies and content could be regularly implemented to re-engage smokers with message content, which otherwise becomes less effective over time. The addition of efficacy-oriented messages would offer a practical and low-cost strategy to balance health risk messages and, thereby, further support smoking cessation.

Theoretical and empirical rationale for integrating efficacy messages into health warning labels in Mexico

HWLs on cigarette packs traditionally focus on communicating the harms of smoking. Such messages increase awareness of risks, stimulate negative feelings about smoking, and motivate quitting^{51,52}. However, fear-based messages may be less effective when smokers feel unable to change their behavior. According to diverse theories of behavior change^{27,28}, motivation is more likely to translate into action when individuals believe both that quitting will improve their lives and that they possess the skills or resources necessary to quit successfully.

Much of the available evidence supporting the adoption of efficacy messages for HWLs is based on messages printed on “inserts” (i.e., small leaflets) inside cigarette packs. The use of inserts for elaborated messaging recognizes the tobacco industry's technical capacity to print and adopt them; indeed, industry has long used inserts to communicate promotional messages to consumers. Package inserts are particularly well suited to delivering efficacy information because they do not compete visually with risk-focused pictorial HWLs on the outside of the pack. Instead, inserts can reinforce motivation generated by pictorial HWLs while providing practical assistance for quitting^{30,31}.

Evidence from Canada: Real-world policy experience

Canada provides the strongest evidence base because it is the only country in the world with a long-standing national policy requiring cigarette package inserts with efficacy messages (Australia implemented efficacy message inserts in 2025, and other countries are considering their adoption). Importantly, the revised Canadian inserts introduced in 2012 shifted toward greater efficacy-oriented content, including practical cessation tips and positive imagery. This policy change reflected recognition that smokers need support as well as fear-based pictorial HWLs. This strategy was continued when Canada's cigarette labeling content was updated in 2024.

Studies evaluating the Canadian policy consistently indicate that inserts are noticed, read, and promote a variety of desirable smoking cessation-related outcomes. Canadian smokers who read inserts are more likely to make quit attempts – including sustained abstinence of one month or more – compared to those who do not read them^{30,31}. Over the two years after updating insert content in 2012, reading inserts increased while noticing and reading pictorial HWLs on the outside of packs decreased. People who read inserts also increased their self-efficacy to quit, and this increase explained their sustained abstinence from smoking. These findings provide direct support for the theoretical proposition that efficacy communications facilitate smoking cessation.

Recent studies have evaluated smokers responses to inside-pack efficacy messages from before to after Canada's 2024 implementation of updated messages with novel efficacy content. Evaluation of the updated messages found increases from before to after policy implementation in reading inside-pack messages, perceived benefits of smoking cessation, self-efficacy to quit, and forgoing cigarettes that people would normally smoke³⁹. Moreover, these responses to the efficacy messages predicted subsequent quit attempts. These findings suggest that efficacy messages continue to generate meaningful behavioral effects even after years of exposure and within a strong tobacco control environment.

The real-world Canadian experience demonstrates that efficacy messages can be implemented at a national scale and can contribute meaningfully to cessation efforts among adults who smoke.

Experimental evidence: Effects on smoking-related cognitions and behaviors

Although observational evidence is valuable, randomized studies provide stronger causal evidence regarding message impact. Two experimental studies have evaluated US smokers' responses to efficacy messages on cigarette package inserts using ecological momentary assessment (EMA), in which smokers were surveyed around the moments when they smoked cigarettes – which was also when they were most likely to be exposed to cigarette labeling messages – rather than relying on retrospective reports^{35,36}.

One EMA study involved a case-crossover design in which participants were randomized to receive cigarette packs with efficacy message inserts either in the first or second week of the study³⁵. During the week when participants were exposed to inserts, they had stronger self-efficacy beliefs, perceptions of cessation benefits, and motivations to quit.

The second study was a large randomized controlled trial³⁶ in which US adult smokers received a two-week supply of their preferred cigarette brand, with packs modified to reflect one of four labeling conditions: control (four rotating text-only HWLs on the side of packs – current US policy); efficacy message inserts (two inserts with tips to quit and two describing cessation benefits); pictorial HWLs (four rotating messages on 50% of front and back of packs), or both interventions combined. Participants exposed to inserts were significantly more likely to report thinking about the benefits of smoking cessation and forgoing cigarettes that they would normally smoke. Forgoing cigarettes represents a behavioral response that consistently predicts cessation behavior – an outcome that the trial did not evaluate because of the relatively short study period. Importantly, inserts had medium-to-large effect sizes across all hypothesized psychosocial outcomes, though limited statistical power contributed to the absence of significance for some measures due to higher than expected intra-class correlation of the EMA measures. Thus, the overall pattern of evidence remains supportive of efficacy-based communications.

One of the most important mechanisms through which communications influence behavior is through attention. Messages must first be noticed and processed before they can affect motivation or behavior. The RCT described above³⁶ did not assess attention to messages in the context of EMA because of concerns about generating demand effects that would bias study results (i.e., repeatedly asking people if they were noticing or reading the labels may have caused them to pay more attention to them).



Hence, a second evaluation from that trial examined self-reported attention and responses at the conclusion of the study³⁷. Participants exposed to inserts reported more frequent noticing and reading of labels, more thinking about smoking risks and cessation benefits, and more discussions with family and friends about smoking-related issues. Furthermore, mediation analyses demonstrated that attention to labeling mediated all of the observed insert effects. In other words, efficacy inserts increased engagement with package communications, which in turn stimulated cognitive and behavioral responses relevant to cessation.

Efficacy message content: Which types of efficacy messages work best?

A critical policy question is not merely whether inserts work, but what types of efficacy messages are most effective. One best-worst discrete choice experiment among Canadian smokers evaluated different cessation-benefit and cessation-tip messages³². Messages concerning social support, stress reduction, and nicotine replacement therapy were rated as particularly helpful for quitting. Messages highlighting benefits of cessation also performed well, especially when they focused on less familiar health outcomes rather than widely known smoking harms. A parallel discrete choice experiment among U.S. smokers produced similar conclusions³³, while also indicating that inclusion of positive pictorial imagery could enhance message effectiveness, while there was no clear advantage of using testimonials over factual statements. Another study³⁴ evaluated cessation-tip messages adapted from Canadian inserts and compared them to messages derived from the U.S. Food and Drug Administration's "Every Try Counts" campaign. Participants consistently rated the efficacy-focused messages as effective, and messages emphasizing practical quitting strategies received particularly favorable evaluations. These findings suggest that efficacy messages should provide novel, practical, and actionable information.

Policy makers may question whether smokers will perceive efficacy messages as credible or useful. Evidence suggests that they do. One mixed method study³⁸ evaluated smokers' recall and perceptions of efficacy message inserts after they were exposed to them across the course of the two-week randomized trial described above^{36,37}. Participants generally viewed the inserts positively and often described them as encouraging, informative, and thought-provoking. The two response-efficacy messages that emphasized the benefits of quitting – one focused on money saved by not smoking cigarettes, whereas the other focused on cardiovascular benefits of cessation over time - achieved higher recall and higher perceived message effectiveness than messages that provided tips to quit. Furthermore, qualitative findings revealed that many smokers appreciated the positive tone of efficacy messages, particularly in contrast to the predominantly negative framing of traditional HWLs. Participants reported that the messages encouraged reflection on quitting and provided useful information about how cessation could improve their lives.

Together, these studies suggest that efficacy messages for Mexico could focus on concrete behavioral guidance, social support, stress management, pharmacotherapy options, and the immediate, as well as longer-term, benefits of quitting. Such messages move beyond simply telling smokers that they should quit and instead provide recommendations for how to quit. As such, efficacy messages may foster constructive engagement with cessation rather than provoking defensive reactions. Overall, this evidence suggests that properly tested efficacy messages are likely to be acceptable and influential even among smokers who are resistant to fear-based messaging.

Why Efficacy Messages Are Especially Relevant for Mexico

Several factors make efficacy messages particularly suitable for the Mexican tobacco control context. First, Mexico already has substantial experience with pictorial HWLs, and novel message content could re-engaging consumers with this critical message channel. Message fatigue can develop after prolonged exposure to HWLs⁵³, and efficacy message inserts could provide an additional communication channel to renew attention and engagement with cessation among smokers who have become accustomed to pictorial HWLs. Efficacy messages would not replace existing risk-based pictorial HWLs but would complement them, as recommended by theory and empirical evidence^{27,28,29}. This mirrors the Canadian model, where inserts were designed specifically to supplement external pictorial HWLs^{31,39}.

Second, many Mexican smokers express interest in quitting but experience repeated cessation failures. Under such circumstances, interventions that strengthen self-efficacy and provide practical guidance may be especially valuable. Efficacy messages can address common barriers to quitting, including low confidence, uncertainty about cessation methods, and misconceptions regarding quitting benefits. Messages could also do a better job of promoting the use of local smoking cessation services by providing more information about what people can expect when they call the toll-free telephone number that is shown on cigarette packs. Free, online cessation resources could be promoted in similar ways.

Third, inserts are a highly scalable and cost-effective intervention. Once implemented, they reach all smokers repeatedly without requiring ongoing expenditures on buying media time, as is typical in campaigns. Every cigarette pack becomes a cessation communication platform.

Fourth, efficacy messages may help reduce disparities in cessation outcomes. Research from randomized trials and observational studies suggests that prominent, well-designed labels that are easy to understand can be particularly effective among populations with lower educational attainment^{54,55,56,57}. Because smoking-related inequalities remain an important public health concern in Mexico, efficacy-oriented communications may contribute to more equitable cessation support.

Finally, the Canadian evidence demonstrates that efficacy messages can remain effective even in environments where smokers have been exposed to tobacco-control communications for many years³⁹. This suggests that Mexico could achieve meaningful public health benefits through adoption of a similar policy.

Conclusions

The accumulated evidence from Canada and the United States provides a compelling case for implementing efficacy messages on cigarette package inserts in Mexico. Longitudinal evaluations of Canada's policy show that efficacy-oriented inserts increase self-efficacy and predict sustained quit attempts³. Experimental studies demonstrate that inserts increase cessation-related behaviors such as forgoing cigarettes⁸, enhance attention to health communications⁹, and stimulate thinking about



quitting benefits⁹. Research on message design indicates that smokers respond favorably to practical cessation tips and information about the benefits of quitting^{4,5,6}. Qualitative studies further show that smokers perceive efficacy messages as positive, credible, and useful¹⁰.

Adoption of efficacy message inserts in Mexico would require new legislation; however, Mexico may be able to integrate efficacy messages into current HWL policy. Since 2010, Mexico has required that 30% of the front of cigarette packs display rotating pictorial HWLs that show the consequences of smoking. By contrast, 100% of the back of all cigarette packs and 100% of one side of the pack must contain health messages that are only text, not pictures. The current policy has effectively communicated the harms of smoking to Mexican's who smoke^{42,43,46}. Nevertheless, should adoption of inserts not be feasible in the current political environment, then health authorities could maintain pictorial HWLs on the front of packs and use the back of the pack to communicate efficacy messages with actionable advice and positive messages about quitting.

Taken together, these findings support the conclusion that efficacy messages represent an evidence-based complement to pictorial HWLs. By balancing information about smoking risks with encouragement, practical guidance, and positive expectations for cessation, efficacy messages can help translate motivation into action. For Mexico, adoption of cigarette package inserts featuring cessation tips and cessation-benefit messages would represent a scientifically grounded, scalable, and potentially highly effective strategy to promote smoking cessation and reduce the burden of tobacco-related disease.

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