EVIDENCE BRIEF

How large pictorial health warnings on the packaging of tobacco products affect knowledge and behaviour
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Abstract

Evidence shows that combined written and graphic health messages on the packaging of tobacco products are more effective than text-only warnings. Indeed, images have been shown to increase the awareness of the health risks related to tobacco consumption. Article 11 of the WHO FCTC requires the adoption of health warnings on packages and the guidelines on implementation of this article recommend the adoption of pictorial health warnings. Studies have shown that pictorial health warnings increase quit attempts and decrease smoking uptake. Pictorial health warnings, including graphic, fear-arousing information, have proven to be particularly effective. They also have public support; half of the EU citizens recognized the effectiveness of such measures in 2008. Contrary to what tobacco companies are claiming, pictorial health warnings are fast and cheap to implement, and they do not increase illicit trade. These measures are in compliance with international trade law and intellectual property law.

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Background

Tobacco use is the second leading cause of death globally. It dramatically increases the risk of contracting serious diseases, such as cardiovascular diseases and some types of cancer. Large pictorial health warnings are designed in an effort to improve the public’s knowledge about these consequences, decrease smoking uptake and increase cessation.

The WHO Framework Convention on Tobacco Control (WHO FCTC) (1) aims at protecting present and future generations from the devastating consequences of tobacco consumption and exposure to tobacco smoke. Article 11 of the Convention requires the adoption of health warnings on packages. The Guidelines for implementation of Article 11 of the WHO Framework Convention on Tobacco Control (2) recognize that combined written and graphic health messages on the packaging of tobacco products are more effective than text-only warnings and recommend the adoption of such warnings.

In the WHO European Region, some countries have adopted pictorial health warnings, while in others text-only warnings appear on the packaging of tobacco products.

In the European Union (EU), Directive 2001/37/EC of the European Parliament and of the Council of 5 June 2001 on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of tobacco products (Article 5) (3) regulates the labelling of packages with regard to warnings and information about the dangers of tobacco products to health. Under this Directive, text-only warnings have been mandatory and it has been optional to include pictorial warnings on only one side of the pack. However, the new tobacco-products Directive (4), adopted in March 2014, changed the requirements for health warnings, whereby both text and pictorial health warnings covering the top 65% of both the front and back of tobacco packs will be now mandatory.

Objective

Based on experience gained both in and outside the Region, this paper seeks to provide evidence that pictorial health warnings are more effective than text-only warnings in relation to smoking prevention and cessation.

Evidence

A review of the scientific literature and survey results has revealed that most of the current evidence on the effectiveness of pictorial health warnings stems from countries that, at an early stage, met some or all of the requirements of Article 11 of WHO FCTC (1) and the guidelines on its implementation (2). Both recommend the adoption of large pictorial health warnings with shocking images covering 50% of both sides of the pack. A lot of evidence is available on experience gained in adhering to this requirement, for example, in Australia, Canada and Thailand, where it has been
the practice since 2005, 2000 and 2006, respectively, and in Brazil where the use of large, shocking pictorial health warnings on only one side of the pack started in 2001.

In contrast, little evidence is available in the WHO European Region on the effectiveness of pictorial health warnings. This is partly because the inclusion of pictorial health warnings on cigarette packs has only recently been implemented in the Region. In addition, the national requirements for doing so have often been weaker than is the case outside the Region. For example, until the revision of the EU Directive on tobacco products, the sole option available to the WHO European Member States was to include health warnings with relatively mild pictures on one side of the pack only (3). Therefore, this paper is based on the evidence available both in and outside the WHO European Region (5).

**Health warnings increase awareness of the health risks related to tobacco consumption**

Health warnings on cigarette packs are among the most effective sources of health information: most smokers report having been made aware about the risks of smoking through warnings on cigarette packs rather than from other sources of information, apart from television (6).

Findings indicate that a considerable proportion of non-smokers are also aware of the health warnings on cigarette packs (7,8,9).

**Pictorial health warnings are more likely to be noticed and read than text-only warnings**

The evidence shows that pictorial health warnings are more likely to attract the attention of the public and are more effective in spreading information about the specific risks of tobacco use than text warnings alone (10,11). This is why Article 11 of the WHO FCTC (1) and the guidelines on its implementation (2) recommend the adoption of pictorial warnings. Among other countries, Canada, Romania and the United Kingdom have provided evidence that pictorial health warnings are more effective than text-only warnings.

Canada introduced pictorial health warnings in 2001, the first country to do so. Since then, several surveys have compared the effectiveness of text versus pictorial warnings. The results consistently show that pictorial health warnings are “more likely to be noticed and read by smokers, are associated with stronger beliefs about the health risks of smoking as well as increased motivation to quit smoking” (12). One of these studies showed that 58% of smokers gave more thought to the health effects of smoking as a result of the pictorial health warnings (13).

In 2008, Romania (14) and the United Kingdom (15) implemented pictorial health warnings designed by the European Commission (Box 1).

In 2008, the Romanian Ministry of Health conducted a study, which revealed that
before the introduction of pictorial health warnings, the most general warnings, such as “smoking seriously damages your health”, were those that smokers remembered best (quoted by 35% of the respondents). In contrast, soon after the implementation of pictorial health warnings, the warnings smokers remembered were much more specific: for example, 18% of smokers participating in the study related smoking to images about lung cancer (17,18).

Box 1. Implementation of pictorial health warnings in the EU: Romania and the United Kingdom
The results of a survey conducted in the EU in 2008 revealed that 61% and 56% of the Romanian and British respondents, respectively, recognized that health warnings on tobacco packs were more effective when they comprised pictures and text rather than text alone (16).

Pictorial health warnings increase quit attempts
By increasing the level of knowledge about the harm caused by tobacco use, pictorial health warnings are more likely to succeed in encouraging smokers to quit than text-only warnings (19).

For example, in a survey conducted in Canada in 2001–2003, 44% of smokers reported that pictorial health warnings had increased their motivation to quit (13,20). Other surveys have also shown that pictorial health warnings help former smokers to refrain from taking up smoking again in the long run, 30% reporting that pictorial health warnings had helped them remain abstinent (21). (Box 2). In Romania, the situation is similar (Box 3).

Box 2. Canada: pictorial health warnings increase motivation to quit and help ex-smokers remain abstinent
In a survey conducted in Canada between 2001 and 2003, 44% of smokers reported that pictorial warnings had increased their motivation to quit (13,20).

Box 3. Romania: pictorial health warnings increase cessation attempts
Combined text and pictorial warnings played a role in prompting 31% of smokers to try to quit. In addition, 21.8% of smokers considered quitting because of pictorial-only warnings; in comparison, only 14.2% considered quitting as a result of text-only warnings (18).

Providing a quitline number on tobacco packaging increases quit attempts
The Guidelines for the implementation of Article 11 of the WHO FCTC (2) also recommend including cessation advice and information on cessation resources on tobacco packs: “… such as a web site address or toll free telephone quitline number, because these resources can help tobacco users to change their behaviour”. Many studies show that, in combination with other measures, such as mass-media campaigns, the provision
of a quitline number on packs results in an increased number of calls to cessation services \((19,20)\) (Boxes 4 and 5).

**Box 4. Brazil: an almost nine-fold increase in number of calls within 6 months after the adoption of pictorial warnings**

In Brazil, two thirds of smokers (67\%) said that warnings resulted in their wishing to quit \((20)\). In addition, in the six months after the implementation of graphic warnings combined with toll-free quitline numbers, calls to these numbers increased nearly nine fold \((20)\).

**Box 5. United Kingdom: twice as many calls per month after the introduction of larger text warnings**

The Department of Health has estimated that the introduction of larger text-warnings prompted an additional 2000–4000 calls to the toll-free number for the National Health Service smoking helpline, which was provided on tobacco packaging before the introduction of pictorial health warnings \((19)\).

**Pictorial health warnings decrease smoking uptake**

Several surveys have revealed that pictorial health warnings have an impact on smoking initiation. For example, between one fifth and two thirds of youths in Australia and Canada \((12)\) indicated that graphic health warnings had helped them not to start smoking.

**Pictorial health warnings including graphic, fear-arousing information are most effective**

Research in the field of health communication indicates that messages with emotionally arousing content are more likely to be noticed and processed by smokers \((23)\).

Graphic warnings on labels may result in strong emotional reactions in a considerable proportion of smokers. Such reactions are associated with increasing the motivation of smokers to quit and prompting them to consider the health risks involved and take steps to stop \((24)\).

The effectiveness of graphic, fear-inducing images is supported by surveys on and focus groups dealing with smokers (Box 6).

**Box 6. Consultation on the effectiveness of graphic, fear-inducing images, United Kingdom**

An extensive public consultation conducted by the Department of Health received more than 20 000 responses. The highest-rated warnings generally included graphic pictures of the health effects of smoking \((22)\).

**Pictorial health warnings have public support**

A survey conducted in the EU in 2008 showed that more than half of the EU citizens recognized the effectiveness of adding pictures to text-only health warnings \((16)\).
Legal and financial implications of pictorial health warnings

Pictorial health warnings do not increase illicit trade, contrary to the claims of the tobacco industry. Pictorial warnings for use on tobacco products must be officially approved, which helps government authorities identify counterfeit products. There are also many other ways of fighting the illicit trade of tobacco products, such as the use of digital stamps (26), or packs with invisible markings, which make it easy for enforcement officials to distinguish illegal cigarettes (27,28).

The use of measures to include large pictorial health warnings on tobacco products is in compliance with international intellectual property law, namely the World Trade Organization (WTO) Treaty on Trade Related Aspects of Intellectual Property (TRIPS) and EU law (29,30). The basic purpose of intellectual property law is to prevent the illegal use of a trademark, for example, by counterfeiting it (30). The use of large pictorial health warnings would not affect the rights of trademark owners who would continue to own their trademarks and be protected against the unauthorized use of these trademarks by third parties.

The use of large pictorial health warnings is in compliance with the international trade regulations set out by WTO. Although such measures may restrict trade somewhat, they would satisfy the requirements of the public health exceptions provided under both the WTO General Agreement on Tariff and Trade (GATT) (31,32,33) and the WTO Agreement on Technical Barriers to Trade (TBT) (34), as well as most bilateral investment treaties. For example, Article XX(b) of GATT (32) states that measures restricting trade can be adopted if they are “necessary to protect health”. As shown above, large pictorial health warnings are among the most effective ways of increasing smoking cessation and decreasing smoking uptake. Therefore, such measures are “necessary to protect health” and are proportionate to the goal pursued.

The implementation of pictorial health warnings is fast and cheap. The tobacco industry argues that adding large pictorial health warnings to the packaging of tobacco products is too costly. However, since all implementation costs are borne by the tobacco industry, there is no cost to government or the taxpayer, making the measure very cost effective. According to the tobacco companies, the costs are prohibitive but, as they are constantly redesigning their packaging, this argument does not hold. As some tobacco-control experts have noted, “… most of the costs are borne by the tobacco industry as a result of decreased sales. This means the warnings will have their intended impact: reducing tobacco use” (20). The tobacco
industry also argues that it needs time to implement pictorial health warning measures. Experience has shown that the average implementation time for pictorial health warnings is 9–12 months after the adoption of measures to this effect (20).

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