



## TOBACCO WARNING LABELS: EVIDENCE OF EFFECTIVENESS

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The 2009 Family Smoking Prevention and Tobacco Control Act requires graphic (pictorial) warning labels to cover the top 50 percent of the front and rear panels of the cigarette package. The same warning labels are required in advertising and must comprise at least 20 percent of the advertisement's area. The new law's requirements are based on the best available science and real world experience regarding warning labels, including the best practices from other countries and the recommendations of the World Health Organization (WHO), Institute of Medicine of the National Academy of Sciences, the U.S. President's Cancer Panel, the U.S. Surgeon General and other leading health experts.

There are approximately 43.8 million smokers in the United States today.<sup>1</sup> About half of all continuing smokers will die prematurely as a result of their addiction.<sup>2</sup> Despite the numerous public reports on the risks of smoking, studies show that a large number of smokers have inadequate knowledge of the health effects of smoking. While some smokers generally know that tobacco use is harmful, they underestimate the severity and magnitude of the health risks. Knowledge of the health risks of smoking is even lower among people with low income and fewer years of education because of limited access to information about the hazards of smoking.

Warning labels have been found to inform smokers about the health hazards of smoking, encourage smokers to quit, and prevent nonsmokers from starting to smoke. Warning labels on tobacco products are an ideal way of communicating with smokers. Since the intervention is delivered at the time of smoking, nearly all smokers are exposed to warning labels and pack-a-day smokers could be exposed to the warnings more than 7,000 times per year.<sup>3</sup> Given the reach and frequency of exposure, warning labels have the potential to have a significant impact on smoking behavior. Further, two-thirds of all smokers indicate that the package is an important source of health information and health knowledge is strongly associated with an intention to quit smoking.<sup>4</sup>

In addition to conveying important health information:

- Warning labels decrease the attractiveness and appeal of cigarettes and help to create an environment where non-smoking is the norm.
- Strong warning labels also counter the alluring and persuasive images the tobacco industry uses to market their products.

Warning labels were first required on cigarette packs by the Federal Cigarette Labeling and Advertising Act of 1965. Unfortunately, since the current requirements for warning labels were established in 1984, their effect on smokers has drastically weakened, and the current labels are now virtually meaningless. Using the same parameters and the same four messages approved by Congress more than 20 years ago, today's labels are small and easily overwhelmed by the designs on cigarette packages. Moreover, smokers have become habitualized to the style of labels, to the point that the labels go unnoticed altogether. According to the Institute of Medicine,

“Even though tobacco products are legally available to adults, the paramount public health aim is to reduce the number of people who use and become addicted to these products, through a focus on children and youths. The warnings must be designed to promote this objective. In the committee's view, the current warnings are inadequate even when measured against an informed choice standard, but they are woefully deficient when evaluated in terms of proper public health criteria.”<sup>5</sup>

Studies indicate that the public favors graphic warning labels on cigarette packs. A 2007 study in *Nicotine & Tobacco Research* found that a majority of smokers in the United States support strong, graphic warning labels similar to those used in Canada, and appreciate the information they provide.<sup>6</sup> Results from the 2009 New York State Adult Tobacco Survey show that in 2009, 80 percent of

nonsmokers and 58 percent of smokers in New York support the use of graphic warning labels on cigarette packs and the percent of New Yorkers who favor graphic warning labels has increased significantly over time.<sup>7</sup>

### **The New Warning Label Requirements are Based on Sound Science and Experience**

A recent, comprehensive review of the evidence on the impact of tobacco warning labels found that warning labels with the following characteristics are noticed more, are an important source of health information, increase knowledge about tobacco use harms and perceptions of risk and promote smoking cessation. In addition, comprehensive warning labels are effective among youth and there is evidence that they prevent smoking initiation. Pictorial warning labels that elicit a strong emotional response are especially effective.<sup>8</sup>

- Large warning labels are the most effective. Warning labels must be large enough to be easily noticed and read, and should be as large as possible.<sup>9</sup> 46 countries now require health messages to comprise at least 50 percent of the overall package, and three countries (Australia, Sri Lanka, Uruguay) require warnings to cover as much as 80 percent of the package.
- Smokers report greater recall for warnings that appear on the front, compared to the side, of packages.<sup>10</sup>
- Warning labels that contain a clear, direct and accurate message about the dangers of tobacco use, including messages about specific health effects, are the most effective. Messages that are worded simply and speak directly to the reader have the greatest impact.<sup>11</sup>
- Warnings with pictures are more effective than text-only warnings. Pictures also increase the message's accessibility by people with low levels of literacy and can help smokers visualize tobacco-caused diseases. Color pictures are more effective than black and white pictures.<sup>12</sup>
- Warning labels that include graphic images that elicit an emotional response have been shown to be the most effective. Strong, emotional responses are associated with increases in the warning's effectiveness.<sup>13</sup>
- Warning labels need to be rotated regularly to avoid overexposure.<sup>14</sup>
- Warning labels include information for smokers who want to quit about where to find help have been shown to increase the number of smokers who try to quit.<sup>15</sup>

### **Tobacco Warning Labels Encourage Smokers to Quit and Discourage Nonsmokers from Starting to Smoke**

The evidence that warning labels can and do work is solid and extensive. The International Tobacco Control Policy Evaluation Project ("ITC") is an international cohort study that consists of surveys of adult smokers in nineteen countries and focuses on tobacco control policy evaluation. According to ITC research on tobacco warning labels, adult and youth smokers report that large, comprehensive warning labels reduce smoking consumption, increase motivation to quit and increase the likelihood that they will remain abstinent following a quit attempt.<sup>16</sup>

Another ITC research project includes a four-country comparative study by Hammond, et al. which found that text-only labels (as seen in the U.S.) were associated with lower levels of awareness about the health risks of smoking than prominent, pictorial warning labels (as seen in Canada and Australia). Furthermore, the study indicated that pictorial warning labels were more effective than text-only labels in leading people to think about quitting and deterring them from having a cigarette.<sup>17</sup> Other important findings from the study include:

- "Large, graphic warnings on cigarette packages are an effective means of increasing health knowledge among smokers [and] may also help to reduce the disparities in health knowledge by providing low-income smokers with regular access to health information."

- Smokers in countries where a warning depicts a particular health hazard of smoking were much more likely to know about that hazard and smokers who reported noticing warnings were 1.5 to 3.0 times more likely to believe in each health hazard.<sup>18</sup> This is important because smokers who perceive greater health risk from smoking are more likely to intend to quit and quit smoking successfully.<sup>19</sup>

This study provides strong evidence that perhaps the most effective way to convey health risks to smokers is with graphic, large and comprehensive warning labels. Other studies suggest that picture warnings that include graphic, fear-arousing depictions of smoking's effect on the body are the most effective because they are associated with increases in motivation to quit smoking, thinking about health risks and engaging in cessation behavior.<sup>20</sup> A follow-up investigation of the four-country study revealed that larger, pictorial warning labels were associated with increased quit attempts.<sup>21</sup> Another study, released in 2010, found that more graphic depictions of health consequences on warning labels produced stronger effects and strengthened smokers' intentions to quit smoking.<sup>22</sup> A recent Canadian study found that, after controlling for price, graphic tobacco warnings significantly decreased the odds of being a smoker and significantly increased the odds of making a quit attempt.<sup>23</sup>

Real-world experience also suggests that the graphic warning labels will be effective in encouraging smokers to try to quit. The day the U.S. Food and Drug Administration unveiled the new graphic warning labels, there were 4,803 calls to the toll-free quitline number 1-800-QUIT-NOW - more than double the number of calls received the same day a week earlier. Call volume remained elevated for the entire first week after the new labels received widespread attention in the media.

Research suggests that graphic warning labels are also effective among youth.

- More than 90 percent of Canadian youth agree that picture warnings on Canadian cigarette packages have provided them with information about the health effects of smoking and make smoking seem less attractive.<sup>24</sup>
- An Australian study examined the impact of the introduction of graphic health warning labels on adolescents. The authors found that adolescent experimental and established smokers were more likely to think about quitting, and intentions to smoke were lower among those students who discussed the new warning labels.<sup>25</sup>
- A Greek study of adolescents indicates that proposed European Union pictorial warning labels were more effective at informing about the health effects of smoking and preventing initiation than the previous text-only labels. Approximately 84 percent of non-smoking adolescents reported that the proposed EU pictorial labels were more effective than the old EU text labels in preventing smoking initiation.<sup>26</sup>

Additional research regarding the effectiveness of warning labels is summarized below.

- After new, large pictorial warnings were introduced in 2000, 91 percent of Canadian smokers surveyed reported having read the warning labels and demonstrated a thorough knowledge of their content. Further, smokers who read, thought about, and discussed the warning labels in greater depth at baseline were significantly more likely to either quit, attempt to quit, or reduce their smoking at follow-up.<sup>27</sup>
- In Brazil, after the introduction of new picture warnings, 73 percent of smokers approved of them, 54 percent had changed their opinion on the health consequences of smoking, and 67 percent said the new warnings made them want to quit. The impact was particularly strong among less educated, lower income people.<sup>28</sup> Brazil introduced a second set of warning labels in 2004. In a study evaluating both sets of warning labels, researchers found the most graphic and threatening warning labels increased intentions to avoid smoking.<sup>29</sup>
- The introduction of stronger warning labels in Australia resulted in a 29 percent increase in people reporting that they always noticed the warning.<sup>30</sup>
- After Singapore introduced their pictorial warning labels in 2004, a Health Promotion Board survey found that 28 percent of the smokers surveyed reported smoking fewer cigarettes

because of the warnings; 14 percent of the smokers surveyed said that they made it a point to avoid smoking in front of children; 12 percent said that they avoided smoking in front of pregnant women; and 8% said that they smoked less at home.<sup>31</sup>

- Since Thailand introduced their second set of pictorial labels in 2006, 53 percent said the pictorial warning labels made them think “a lot” about the health risks and 44 percent of smokers said the warnings made them “a lot” more likely to quit over the next month.<sup>32</sup>
- An investigation of the impact of the text-only Chinese labels compared to other text and pictorial labels from around the world found that larger pictorial labels were perceived to be more effective at informing about the dangers of smoking, convincing youth not to start and motivating smokers to quit.<sup>33</sup>

Graphic warnings in Canada, Australia, Brazil as well as other countries include concrete information on ways to quit such as quitline numbers and website addresses. Experience from these countries indicates that graphic warnings that include specific ways to get help in quitting are an effective way to encourage tobacco users to quit.

- After Australia introduced pictorial labels with quitline information in 2006, the rate of quitline callers doubled from the previous two years.<sup>34</sup> The rise in calls to the Australian quitline service was substantial and sustained and researchers concluded that this was the result of the introduction of the new graphic cigarette pack warnings that included the quitline number.
- After New Zealand introduced pictorial labels with quitline information in 2008, the average number of new monthly calls increased and more first-time callers reported obtaining the quitline number from tobacco product packaging.<sup>35</sup>
- Tobacco pack warnings that included a quitline number were reported as the second largest driver of calls to the UK National Health Service Stop Smoking Helpline, according to the United Kingdom Department of Health.<sup>36</sup>

More than 60 countries in the Americas, Eastern Mediterranean, Europe, South-East Asia and Western Pacific regions require pictures or images on cigarette packs (some of these are still being implemented).<sup>37</sup> A European Union directive gives its 27 member countries the option of adding pictures to warnings as a way to educate smokers about the risks of continuing to smoke. These actions reflect the growing consensus that warning labels are effective at communicating health messages and discouraging tobacco use.

<b>Countries and jurisdictions that require pictures or images on cigarette packs</b>	
1. Argentina	33. Malta
2. Australia	34. Mauritius
3. Bahrain	35. Mexico
4. Belgium	36. Mongolia
5. Bolivia	37. Nepal
6. Brazil	38. New Zealand
7. Brunei Darussalam	39. Niger
8. Burkina Faso	40. Norway
9. Canada	41. Oman
10. Chile	42. Pakistan
11. Colombia	43. Panama
12. Costa Rica	44. Peru
13. Denmark	45. Philippines
14. Djibouti	46. Qatar
15. Ecuador	47. Romania
16. Egypt	48. Russia
17. El Salvador	49. Saudi Arabia
18. Fiji	50. Seychelles
19. France	51. Singapore

20. Honduras	52. Spain
21. Hungary	53. Sri Lanka
22. Iceland	54. Switzerland
23. India	55. Thailand
24. Iran	56. Turkey
25. Ireland	57. Ukraine
26. Jordan	58. United Arab Emirates
27. Kazakhstan	59. United Kingdom
28. Kuwait	60. United States
29. Latvia	61. Uruguay
30. Liechtenstein	62. Venezuela
31. Madagascar	63. Vietnam
32. Malaysia	64. Yemen

**The Campaign for Tobacco-Free Kids, March 19, 2013 / Meg Riordan**

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<sup>37</sup> The list just includes countries that have passed legislation. A number of sub-national jurisdictions including Hong Kong and Taiwan have also passed legislation requiring pictorial warnings.