

Smoking Cessation

A Report of the Surgeon General



U.S. Department of Health and Human Services

2017). Existing evidence suggests that states that sustain adequate funding for comprehensive tobacco control programs can achieve higher rates of cessation.

Overall, the evidence is sufficient to infer that comprehensive state tobacco control programs can reduce the prevalence of smoking among adults, increase quit attempts, and increase smoking cessation. Because state tobacco control programs typically involve multiple strategies and components, it is difficult to attribute their effects to specific cessation strategies (such as support for clinical or onsite cessation services). The final section of this chapter describes how simulation studies can be used to evaluate the individual and synergistic effects of multiple tobacco control strategies.

Pictorial Health Warnings

Since 1965, Congress has enacted legislation requiring cigarette packages in the United States to carry small, text-based health warnings. Health warnings on cigarette packages can be an important means of conveying information to smokers about the health effects of smoking and available cessation resources. Nearly 50 countries now require large pictorial health warnings (also called graphic warning labels), often covering 50% or more of the cigarette package, that feature graphic depictions of smoking-related disease and a phone number for a tobacco cessation quitline (Hammond 2011; USDHHS 2014). However, health warnings on cigarette packages in the United States are weaker and less prominent than health warnings used on packages in many other countries (USDHHS 2000, 2014).

Evidence suggests that large, pictorial health warnings are a more effective means of reaching smokers than small, text-based messages (Hammond 2011). Furthermore, substantial evidence suggests that large pictorial health warnings that highlight the health risks of smoking are associated with increased knowledge of the harms of smoking, increased perceptions of risk associated with smoking, increased interest in quitting and motivation to quit, increased number of quit attempts, increased likelihood of remaining abstinent after a quit attempt, and reduced prevalence of smoking (Borland et al. 2009; Hammond 2011; USDHHS 2012; NCI and WHO 2016; Noar et al. 2016a,b; Reid et al. 2017). Given this evidence, the NCI-WHO Monograph 21 concluded that “Large pictorial health warning labels on tobacco packages are effective in increasing smokers’ knowledge, stimulating their interest in quitting, and reducing smoking prevalence” (NCI and WHO 2016, p. 13).

Noar and colleagues (2016b) conducted a meta-analysis of 37 experimental studies about the effects of

pictorial health warnings on tobacco packages in 16 countries. The study reported that “relative to text-only warnings, pictorial warnings (1) attracted and held attention better, (2) garnered stronger cognitive and emotional reactions, (3) elicited more negative pack attitudes and negative smoking attitudes, and (4) more effectively increased intentions to not start smoking and to quit smoking” (p. 341).

In a separate meta-analysis of longitudinal studies, Noar and colleagues (2016a) found that pictorial health warnings were associated with a 13% relative reduction in the prevalence of smoking among adults and with increased quit attempts. In another study with a nationally representative sample of Canadians, Azagba and colleagues (2013) assessed the impact of pictorial health warnings on smoking and quitting and found that the implementation of such warnings nationwide in Canada was associated with decreased prevalence of smoking (OR = 0.875; 95% CI: 0.82–0.93) and increased odds of making a quit attempt (OR = 1.33; 95% CI: 1.19–1.49). In a study of 14 countries that implemented graphic pictorial warnings, CDC (2011) found that the percentage of smokers thinking about quitting increased by at least 25% in 13 of the 14 countries.

Studies have also found that pictorial health warnings can lead to increased engagement in cessation treatment (Willemsen et al. 2002; International Tobacco Control Policy Evaluation Project 2009; Wilson et al. 2010; Noar et al. 2016a; Guydish et al. 2018). For example, in an experimental study, Guydish and colleagues (2018) found that smokers exposed to pictorial health warnings on their cigarette packages were significantly more likely to engage in a cessation group program compared with controls who did not receive pictorial warnings on their cigarette packages. Additionally, Australia, Brazil, the Netherlands, New Zealand, and the United Kingdom reported significant increases in calls to their national quitlines after the telephone numbers for the quitlines were included on pictorial health warnings (Willemsen et al. 2002; Miller et al. 2009; Hammond 2011, 2012; Noar et al. 2016a).

In summary, the evidence is sufficient to infer that pictorial health warnings increase smokers’ knowledge of health harms from smoking, motivation and intention to quit, and quit attempts, and decrease the prevalence of smoking, particularly when the labels cover at least 50% of the cigarette package and identify specific resources and contact information for cessation support, such as a phone number for a tobacco quitline.

Although pictorial health warnings have been implemented in numerous countries worldwide as part of recommendations from the WHO Framework Convention on Tobacco Control (FCTC), the United States is not a party to the FCTC. In the United States, the *Family Smoking*

Prevention and Tobacco Control Act of 2009 (or Tobacco Control Act) (2009) requires FDA to implement pictorial health warnings on cigarette packages and advertisements. On June 22, 2011, FDA published a final rule requiring color graphics depicting the negative health consequences of smoking to accompany the nine textual warning statements set out in the *Tobacco Control Act*. However, several tobacco companies challenged the final rule in court, and on August 24, 2012, the U.S. Court of Appeals for the District of Columbia Circuit vacated the rule on First Amendment grounds and remanded the matter to the agency (*R.J. Reynolds Tobacco Co., et al. v. FDA et al.* 2012).

FDA conducted further research on pictorial health warnings. A subsequent lawsuit by public health groups filed in 2016 resulted in a September 2018 decision by the U.S. District Court of Massachusetts that ordered FDA to expedite the issuance of a final rule for cigarette health warnings, after finding that FDA had unlawfully withheld and unreasonably delayed execution of the provision in the *Tobacco Control Act* that requires the implementation of such warnings (*American Academy of Pediatrics v. FDA 2018; FDA 2018a*). In March 2019, the U.S. District Court of Massachusetts ordered FDA to submit the proposed rule for publication in the *Federal Register* by August 15, 2019, and to submit the final rule for publication in the *Federal Register* by March 25, 2020 (*American Academy of Pediatrics v. FDA 2019a*).

FDA issued new cigarette health warnings through a proposed rule on August 16, 2019 (*Federal Register 2019*). When finalized, the new health warnings on cigarette packages and in advertisements would promote greater

public understanding of the negative health consequences of smoking. The 13 proposed warnings, which feature text statements and photo-realistic color images of the lesser-known health risks of cigarette smoking, stand to represent the most significant change to cigarette labels in the United States in 35 years.

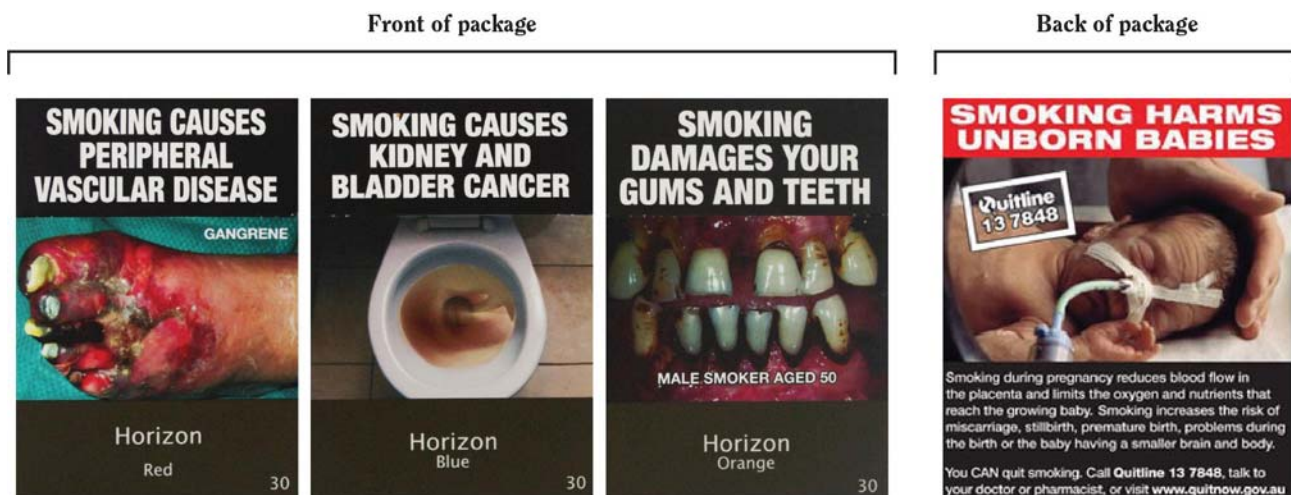
Plain Packaging

Plain packaging requirements standardize the appearance of cigarette packages by removing all brand imagery; using a standard background color and specific text size, font, and position; and including government-mandated information, such as health warnings (Figure 7.3) (USDHHS 2012b). In 2011, Australia became the first country to enact plain packaging requirements. Since then, some countries have passed similar laws standardizing the packaging of tobacco and/or cigarette products—including France, Ireland, New Zealand, Norway, Saudi Arabia, and the United Kingdom—and other countries are in the process of implementing such laws (Campaign for Tobacco-Free Kids 2019a). These laws are often combined with laws about pictorial health warnings.

Plain packaging can have several possible effects, particularly with regard to reducing the appeal of tobacco products (USDHHS 2012b; WHO 2016b). Plain packaging can:

- Make smoking less appealing because plain packages are less attractive and engaging than packages with normal branding (USDHHS 2012b; Hughes et al. 2016; WHO 2016b);

Figure 7.3 Pictorial warning on cigarette packages in Australia



Source: Tobacco Labelling Resource Centre (n.d.a,b), with permission.