the "Fairness Doctrine," required broadcasters to provide a significant amount of time for antismoking messages on television and radio. Thus, one antismoking message appeared for every three or four industry-sponsored, prosmoking advertisements. This amounted to approximately \$75 million (in 1970 dollars) in commercial air time for antismoking messages annually, until a ban on prosmoking advertisements on television and radio became effective on January 1, 1971. Thus, for several years, the American public was exposed to both pro- and antismoking messages.

During this time, per capita cigarette consumption declined 7 percent, from 4,280 in 1967 to 3,985 in 1970. Most of the 7 percent decline (6.2 percent) was attributable to the anti-smoking messages.<sup>84</sup> This was the first time since the early 1930's that per capita consumption declined consecutively for 3 years and was one of the largest declines ever recorded. Additionally, a study of nearly 7,000 adolescents found that adolescent smoking rates declined during this period.85 The greatest decline occurred in the first year that the antismoking messages appeared. A 1972 econometric analysis confirmed that the antismoking messages had up to a 5.6 times greater effect on cigarette consumption than promotional cigarette advertising.86 When the antismoking messages ended on television and radio (due to the Federally-mandated ban on advertising on television and radio, thereby ending the application of the Fairness Doctrine), per capita cigarette consumption began to rise.

A similar experience occurred in Greece during the late 1970's.87 In an effort to reduce cigarette consumption, the Greek government launched an antismoking campaign and, in 1978, banned cigarette advertising on television and radio. In 1979, the Greek Government intensified its antismoking effort by adding television and radio counter-advertising as well as a community-based print education campaign. This enhanced campaign lasted 2 years but was discontinued following a change in government, with the ban on television and radio advertising remaining. Evaluation of this experience revealed that, during the counter-advertising phase, the annual increase in per capita tobacco consumption dropped to zero, compared to the pre-campaign advertising ban rate of 6 percent increase in consumption. When the campaign ended, the annual rate of increase in tobacco consumption quickly increased to earlier levels. This experience suggests that intensive

health education and counteradvertising campaigns can be effective.

There have been numerous research and demonstration projects evaluating the effectiveness of counter-advertising and mass-media smoking cessation programs.<sup>88</sup> As the research designs have evolved, more has been learned about which types of programs are effective and under what conditions. Most recently, well-evaluated studies of programs in Vermont, California, and elsewhere suggest that mass-media and counter-advertising campaigns can have a sustained effect on both preventing teens from starting to smoke and in helping smokers quit.

In Vermont, researchers tested the effect of mass-media and school health education programs.<sup>89</sup> Students exposed to both school and media interventions were 35 percent less likely to have smoked in the past week than students exposed only to the school program, and this preventive effect persisted for at least 2 years following the completion of the intervention program. The decrease occurred even in students who were considered to be at slightly higher risk of becoming smokers because of demographic considerations (lower family income).

There have been similar results in helping smokers interested in quitting. In California, the Department of Health Services has been conducting a \$26 million multi-year media campaign to prevent teens from starting to smoke and help adult smokers quit. In a preliminary study of the campaign's effectiveness, researchers found that the state media campaign "had a negative impact on cigarette consumption, while industry advertising had a positive impact on cigarette consumption." The authors concluded that "[t]his suggests, as one would expect, that increasing state media expenditures and decreasing industry advertising are both effective ways to deter smoking." 90 According to a recent evaluation, the media campaign's advertisements directly influenced 7 percent (33,000) of Californians who quit smoking in 1990 to 1991, and contributed to the quitting of another 173,000.91 The California media program has also resulted in high levels of awareness among young people,92 and may have contributed to stopping the rise in teen smoking that had been occurring in California prior to the campaign.93

FDA has proposed general criteria in the codified language. The following describes one set of requirements for such a program that the agency is considering requiring in a final rule. FDA is soliciting comments on whether the described program would

accomplish the goal of creating an effective national program that would correct and combat the effects of the pervasive positive imagery in advertising and, thus, help reduce young people's use of tobacco products or whether additional or different requirements would be preferable. The program would be national in scope and could require that the companies purchase certain times and places on television programming (referred to in the industry as a "buy"). For example, a television buy could: (1) Devote at least 80 percent of its resources to television messages, both on network and on cable television, during prime time hours (between the hours of 8 p.m. and 11 p.m.), early fringe time (between the hours of 4 p.m. and 6 p.m.), and access time (time that is allocated to local broadcasting stations); (2) be directed to persons between the ages of 12 and 17 years; and (3) be national in scope. Moreover, the buy could include advertising time in at least 50 percent of television programs rated by a national rating service as being in the top 20 for persons between the ages of 12 and 17 and corresponding to the demographic profile of underage tobacco users by gender, racial, and ethnic characteristics, and the remaining percentage in programs with either high concentration or high coverage to young people. The buy could ensure that the manufacturer reach an average of 70 to 90 percent of all persons between the ages of 12 and 17 years five to seven times per 4-week period. (The 4-week period is often referred to as a "flight.") Such requirements would help to ensure that the educational messages reach large numbers of young people and are consistent with the way in which advertising is typically purchased. In addition, to ensure that the messages change over time and remain novel and of interest to young people, each message could be limited in use so that each message would be presented no more than 15 times per quarter to the top two-fifths (referred to as top two quintiles) of television viewers between the ages of 12 and 17 and who watch the most television.

The industry members could select from a variety of messages maintained by FDA. FDA could collect and maintain a file of messages developed by states with active tobacco control programs (such as California and Massachusetts), from voluntary health organizations (as was done by broadcasters during the Fairness Doctrine period), and from other appropriate sources, including messages developed and submitted by the tobacco