



Evaluation of the Texas Department of Health *Texas Tobacco Prevention Pilot Initiative* 2000-2002 Effects on Adults

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This report summarizes evaluations of the effects of the Texas Department of Health's Tobacco Prevention Pilot Initiative (T.T.P.P.I.) on adult tobacco use and cessation in Public Health Regions 5 & 6 (Houston and southeast Texas, approximately 4 million adults ages 18 or older). Intensive pilot activities were conducted during the past three years in these regions to enhance access to cessation resources, featuring a telephone advice and counseling service provided by the American Cancer Society (A.C.S.) to help smokers quit. An autumn 2002 telephone survey of 7,049 Texans found that, when compared to smokers in other parts of the state, smokers in the pilot region reported more awareness and utilization of telephone counseling services and higher rates of cessation. The T.T.P.P.I. activities in Public Health Regions 5 & 6 were associated with lower rates of tobacco use in 2002 and, over the past three years, a two times greater rate of reduction in tobacco use than the reduction that was observed in other parts of Texas. The differences were 5.1% vs. 2.5% in absolute percent reduction and 21% vs. 11% relative reduction, yielding approximately 90,000 fewer smokers than would be expected if T.T.P.P.I. activities had not been implemented. More than 12,000 smokers received advice or counseling from the A.C.S. telephone service. An experimental evaluation during the first months of service availability, involving 1,014 smokers who were attempting to quit, found that provision of the service significantly increased their odds of becoming smoke-free. The A.C.S. service tripled (39% vs. 11%) the one year maintained cessation rate in a study group of 420 young adults (18-25 years of age). These findings show that the Texas Department of Health's Tobacco Prevention Pilot Initiative in Houston and southeast Texas is having a significant effect on adult smoking, especially among younger adults.

Surveys of Smokers in Pilot and Non-Pilot Regions

A statewide telephone survey was conducted to assess tobacco use and exposure to anti-tobacco public health activities among adult Texans statewide and in the Texas Tobacco Prevention Pilot Initiative (T.T.P.P.I.) study areas. The survey sample included 18 years and older Texans in all 11 Public Health Regions. Data were collected through random digit dialing telephone interviews between October and December 2002, with 7,049 subjects enrolled for study. The overall response rate to the survey was 71%. The obtained sample data were weighted using the 2000 census data as a reference population. This provided a representation of the entire Texas population: 49.0% were males and 51.0% females. Proportions of different ethnic groups were: "White" (Anglo) 59.0%, Hispanic 26.8%, "Black" (African-American) 9.1%, and 5.0% from other groups. For studying changes over time, these data were merged with a similarly weighted sample of 6,502 collected in a 1999 telephone survey of all Texas Public Health Regions using methodologies corresponding to those in the 2002 survey.

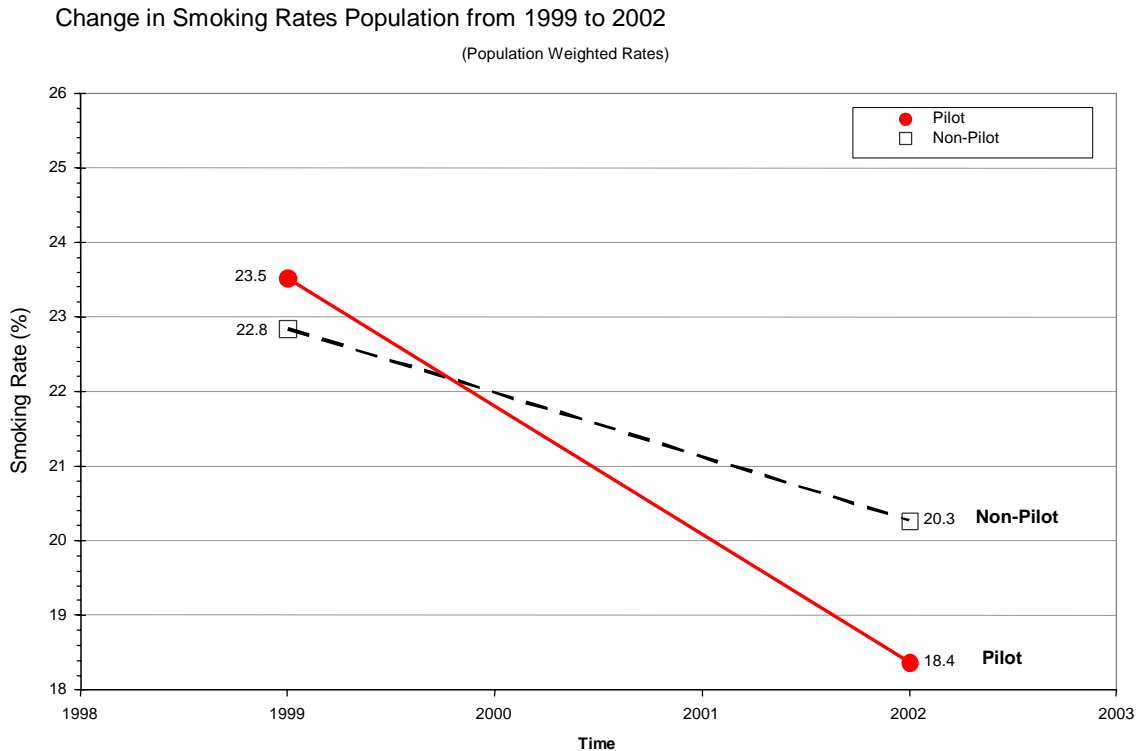
Current smoking was measured by asking if they had smoked more than 100 cigarettes in their life and whether they were currently smoking, according to standard methods from the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System. Additional questions asked about cessation attempts and exposure to T.T.P.P.I. activities and services, including the ACS quit line and anti-tobacco media messages from various sources. To evaluate the effects of community-based media and other anti-smoking program activities supported by the Texas Department of Health, the sample was divided into two areas. The pilot area consisted of Public Health Regions 5 and 6 or 2,076 subjects. The non-pilot area (4,426 subjects) included the remainder of the public health areas, except region 10 (n=547), to represent the rest of Texas. Region 10 was excluded due to intensive anti-smoking activities in the El Paso area funded by a local foundation there.

American Cancer Society Telephone Service Utilization

Among current and ex-smokers in the pilot areas, 23.1% were aware of the A.C.S. service, compared to 13.8% in non-pilot areas. Reflecting their greater awareness, 2.7% of current or ex-smokers in the pilot areas reported receiving telephone advice or counseling about quitting tobacco use. The corresponding number in non-pilot areas was only 1.2%. Because the telephone service was not promoted in the media in the non-pilot areas, it is likely that some of the telephone advice was received from other sources. The difference between the utilization rates in the pilot and non-pilot areas is 1.5% and that number is the best estimate of the utilization rate for the A.C.S. service. With approximately 900,000 current smokers in the pilot areas, this survey yields an estimate of 13,000 smokers receiving advice or counseling from the American Cancer Society's telephone service.

Cessation Rates and Changes in the Prevalence of Smoking

Smoking cessation rates during the past year (2002) were greater in the T.T.P.P.I. pilot areas than in the non-pilot areas: 11.0% vs. 9.5%, respectively. This difference was mainly due to significantly higher cessation rates among females in the pilot areas than among females in the non-pilot areas (12.4% vs. 8.2%). Changes over three years in the prevalence of current cigarette smoking in the T.T.P.P.I. pilot areas and in other parts of Texas are displayed in the figure below. In 1999 there was no significant difference in the proportion of current smokers in the pilot and non-pilot areas. The prevalence of smoking declined in both areas, but the decline in the pilot areas was twice as large as the decline in the non-pilot areas (5.1% vs. 2.5% absolute percent reduction, 21% vs. 11% proportional reduction). The weighted rates in 2002 are significantly lower in the pilot areas than in the non-pilot areas. These numbers yield an estimate of approximately 180,000 fewer smokers in the pilot areas (21% of the estimated 900,000 adult smokers in 1999), approximately 90,000 more than would have been expected if the T.T.P.P.I. activities had not been implemented.



Experimental Evaluation of A.C.S. Telephone Service

Since it was opened in June 2000 the American Cancer Society's telephone service has provided advice or counseling to 12,530 callers, close to the estimate of 13,000 derived from the population survey. During the first six months, telephone assistance was provided by the American Cancer Society on an experimental basis: 3,518 current smokers called and 1,014 met the counseling recruitment criterion by agreeing to make a quit attempt within two weeks. Among this group 463 were randomized to receive mailed self-help booklets and 551 were randomized to receive booklets and to be eligible for the new telephone counseling service. All study participants were mailed three American Cancer Society booklets. The smokers randomized to receive telephone assistance were sent booklets and provided up to five sessions of individually tailored counseling.

The study group consisted of 37% men (mean age 41.7) and 63% women (mean age 41.9) and is 71% "Anglo" or "White" and 20% African-American, with approximately 5% Hispanic and 4% "other" ethnic group participation. The average daily smoking rate at baseline was 23.0 cigarettes in both the counseling and self-help groups. The mean number of previous quit attempts was 6.6 in the counseling group and 7.0 in the self-help group. There were no significant differences in the characteristics of smokers in the two experimental groups or among those who did or did not enter the study.

One Year Cessation Rates

All participants completed a baseline interview and an effort was made (with up to 20 call attempts if needed) to interview them all again twelve months after the presumed quit date (two weeks after enrollment in the study). Cases who reported that they were abstinent at the time of the call and who experienced no more than five single-day slips (brief relapses) were considered to have maintained cessation. Of the 551 callers assigned to receive counseling, 275 (50%) were successfully interviewed in the one year follow-up. Among the 463 callers assigned to receive booklets but no counseling, 204 (45%) were followed accordingly. The causes of loss to follow-up were refusal (19%), changes to unlisted or disconnected numbers (55%) and failures to answer (36%). To verify self-reports, 19 study participants in the Houston area from both study groups provided saliva samples for nicotine testing and to confirm nonsmoking status at a face-to-face interview.

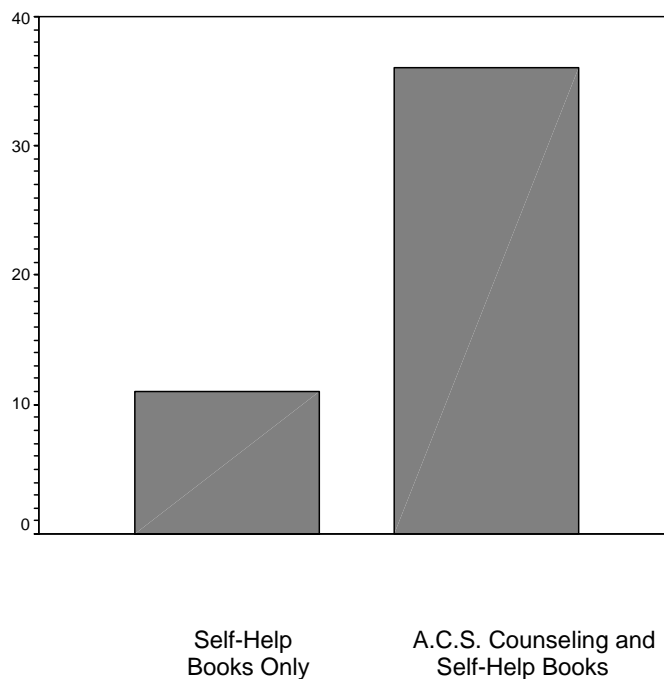
If the quit rate calculation includes only those who were reached for follow-up interviews and makes no assumptions about those who were not reached, the estimated quit rates are 20.7% in the counseling group and 13.2% in the self-help only group, a statistically significant net decrease of approximately 8%. The most conservative method for calculating effects assumes that cases lost to follow-up did not stop smoking. Based on this criterion the estimated cessation rates are reduced by approximately half. In either analysis the results show that telephone counseling nearly doubles one year cessation rates.

Effects among Young Adult Smokers

Effects of A.C.S. counseling on younger smokers were evaluated with a larger sample of randomized participants from this age group who were enrolled during 2000 and 2001. The proportion of study participants in the 18-25 age group (420/3523) was 12%, similar to their proportion in the population as a whole. Women outnumbered men, but the younger group had a significantly higher proportion of men than the older group (39% vs. 33%). There were no significant differences in the ethnicity of younger and older smokers, with 72-73% of men and women describing themselves as “white” or Anglo in both groups. In addition to a significantly shorter duration of smoking, the younger smokers reported less frequent use (18 vs. 24 cigarettes per day) and a non-significant trend toward fewer previous quit attempts (7.2 vs. 9.2).

The age groups differed significantly in their use of NRT (nicotine replacement therapy) during the quit attempt, with 10.4% reporting use in the 18-25 group and 17.4% reporting use in the older group. Counseling increased recommended medication use among 18-25 year olds (13.7% vs. 7.9%, $p < 0.05$). Among these young people there were significantly higher cessation rates in the group that was offered counseling than in the group that only received self-help booklets. The one year follow-up cessation rates (36% vs. 11%) are shown in the figure below.

Cessation Rates Among 18-25 Year-Olds Followed for One Year by Experimental Group



Conclusion

These evaluation studies provide strong and concurrent evidence that, during the 2000-2003 implementation intervals, the Texas Tobacco Prevention Pilot Initiative had significant effects on adult tobacco smoking behavior. Smokers in the Houston and southeast Texas pilot areas used quitting resources, e.g., the American Cancer Society telephone counseling service, more than smokers in other parts of the state. Smokers in the pilot areas, especially women, quit more frequently than smokers in other parts of the state. In the pilot areas the prevalence of smoking has declined since 1999 at twice the rate of decline observed in other parts of the state. The American Cancer Society's telephone counseling service has been utilized by 12,530 smokers in the pilot areas. This service significantly contributed to the change in smoking prevalence in the pilot areas by increasing success rates among smokers making quit attempts, with the most substantial impact among young adults between the ages of 18 and 25. Overall these findings show that the activities of the Texas Tobacco Prevention Pilot Initiative are effectively reducing adult tobacco use in Houston and southeast Texas.

Public Health Regions

