A Multistate Asian-Language Tobacco Quitline: Addressing a Disparity in Access to Care

Sharon E. Cummins, PhD, Shiushing Wong, PhD, Erika Bonnevie, MA, Hye-ryeon Lee, PhD, Cynthia J. Goto, MD, Judy McCree Carrington, BA, Carrie Kirby, MS, and Shu-Hong Zhu, PhD

Objectives. We conducted a dissemination and implementation study to translate an intervention protocol for Asian-language smokers from an efficacy trial into an effective and sustainable multistate service.

Methods. Three state tobacco programs (in California, Colorado, and Hawaii) promoted a multistate cessation quitline to 3 Asian-language-speaking communities: Chinese, Korean, and Vietnamese. The California quitline provided counseling centrally to facilitate implementation. Three more states joined the program during the study period (January 2010–July 2012). We assessed the provision of counseling, quitting outcomes, and dissemination of the program.

Results. A total of 2004 smokers called for the service, with 88.3% opting for counseling. Among those opting for counseling, the 6-month abstinence rate (18.8%) was similar to results of the earlier efficacy trial (16.4%).

Conclusions. The intervention protocol, based on an efficacy trial, was successfully translated into a multistate service and further disseminated. This project paved the way for the establishment of a national quitline for Asian-language speakers, which serves as an important strategy to address disparities in access to care. (*Am J Public Health.* 2015;105:2150–2155. doi:10.2105/AJPH.2014.302418)

Smokers who speak Asian languages and have low English proficiency have had limited access to tobacco cessation resources in the United States. The idea of a multistate cessation program for this population grew out of a desire to address this disparity in access to care. The goal was to provide Asian-language smokers the same quality of tobacco cessation services currently afforded to English- and Spanish-speaking smokers.

Smoking is the leading preventable cause of death and is a primary contributor to health disparities.[1–3] Yet even among long-term smokers, quitting smoking has immediate health benefits and reduces long-term harms.[4,5] Telephone quitlines are a proven strategy for helping smokers quit.[6] The effectiveness of telephone counseling has been well documented, and tobacco quitlines are accessible to any resident of the United States.[7,8] Quitlines offer an individualized intervention, but with a broader reach than clinic-based programs. Prior to the multistate project, California was the only state with a quitline offering direct service in Asian languages; most other states used third-party translation services to accommodate Asian-language speakers.[9] Translation services have proven beneficial in fact-based information exchanges, such as physician and hospital visits, but behavioral counseling can be more nuanced if provided directly by someone who speaks the client's language.[10–12]

Asian immigrant men have higher rates of smoking than do their US-born counterparts, perhaps because of the cultural acceptability of smoking in their home countries.[13,14] For example, smoking among men is estimated to be 56% in Vietnam, 52% in China, and 40% in Korea.[15–17] Asians are the only ethnic group in the United States for whom cancer is the leading cause of death, with especially high mortality rates from lung cancer.[18] And although Hispanics still represent the largest ethnic minority in the United States, since 2009, more Asians than Hispanics have immigrated to the United States.[19] Most Asians living in the United States (74%) are foreign born, and of those, only about half are proficient in English.[19] Limited English proficiency is a major barrier to health service access and results in underuse of services, less compliance with medications and programs, and greater likelihood of stopping treatment prematurely.[20–25]

One public health dilemma is how to ensure that Asian-language speakers receive the same level of smoking cessation service as their English- and Spanish-speaking counterparts. The California quitline, which is operated by the University of California, San Diego, established its Chinese-, Vietnamese-, and Korean-language quitline services in 1993. A large randomized controlled trial was conducted from 2004 to 2008 to establish the efficacy of the Asian-language counseling protocol. The study showed that telephone counseling significantly increased quitting success (odds ratio [OR] = 2.26; 95% confidence interval [CI] = 1.73, 2.94), both overall and for each language group.[26] However, until the multistate program, California was the only state to offer direct Asian-language quitline services.

To facilitate the adoption of Asian-language services by other states, we obtained an dissemination and implementation (D&I) grant from the Centers for Disease Control and Prevention (CDC). D&I research is the study of the processes involved in translating evidence-based research into practice.[27] D&I studies represent the final stage of research from efficacy to implementation. They examine issues related to making a program work and ensuring its sustainability. Our D&I grant proposed the creation of a multistate Asian-language quitline with several simultaneous aims. One aim was to replicate the results of the randomized efficacy trial with a broader clientele, thereby showing the real-world effectiveness of the counseling service. Another aim was to show that the multistate service could be adopted by several states and implemented from a centralized location while retaining the counseling impact. The final aim was to show that the service could be disseminated more broadly.

The multistate project began with 3 participating states (California, Colorado, and Hawaii), with the goal of disseminating the services to additional states. To participate, states had to agree to promote the service and provide quitting aids (such as nicotine patches) consistent with those provided to their English and Spanish speakers. We report on the implementation and impact of the counseling service by comparing results from the multistate program with those of the previous efficacy trial. We also report on efforts to disseminate the services to additional states.

METHODS

Detailed information on the efficacy trial has been published elsewhere.[26] We conducted the trial between 2004 and 2008, recruiting 2277 Chinese- (Mandarin and Cantonese), Korean-, and Vietnamese-speaking smokers from among callers to the California Smokers' Helpline's Asian-language lines. Participants were stratified by language and randomly assigned to telephone counseling plus self-help materials or to a self-help materials-only condition. Research staff evaluated participants by telephone 4 and 7 months after enrollment.

Multistate Population and Services

Starting in January 2010, 3 states (CA, CO, and HI) promoted the toll-free Asian-language quitline service to their Asian-language communities. As other states joined the project (i.e., NY, TX, WA), they also promoted the service. From January 2010 to July 2012, the Chinese (Mandarin and Cantonese), Korean and Vietnamese lines were made available to callers throughout the United States. Callers were eligible to receive services even if their state had not officially enrolled in the multistate program and was not actively promoting the service.

To increase the capacity of the Asian-language quitlines to provide services to multiple states, the California quitline hired additional counselors in each language. Callers completed a standard intake interview, providing demographic information, health insurance status, smoking status, tobacco consumption, and how they heard about the services. Whereas in the efficacy trial assignment to condition was random, smokers in the multistate program chose their own level of service (counseling, self-help materials, or both). Participating states provided quitting aids consistent with the services provided to English and Spanish speakers. Once their state became an official participating member of the multistate service, callers from Colorado, Hawaii, New York, and Texas received free nicotine patches if they were medically eligible, regardless of whether they chose counseling. As per the state's protocol, California callers were eligible for nicotine patches only if they lived in Los Angeles County or if they were Medicaid recipients. Washington originally provided nicotine patches to callers, but it lost funding in July 2011, after which only callers from King County were eligible to receive free nicotine patches.

All contact with participants was recorded in the quitline database, including the date and length of all counseling calls. The multistate program used the same counseling protocol as that used in the efficacy trial, which included a comprehensive session to prepare for quitting and follow-up calls scheduled according to the risk of relapse (i.e., front-loaded).[28,29] Experienced quitline counselors who were bilingual and bicultural provided the counseling. The multistate service also used the self-help materials from the efficacy trial, which were designed to motivate smokers to make quit attempts and to teach the skills needed to avoid relapse. Chinese speakers chose whether to receive booklets with traditional or simplified characters.

Multistate Evaluation of Quitting Outcomes

The evaluation unit of the California Smokers' Helpline contacted participants in the multistate program 7 months after enrollment. The evaluation pool included all callers from Colorado, Hawaii, New York, Texas, and Washington. Because of the large number of participants and limited resources, we selected a random sample (50%) of California callers for evaluation. Following standard evaluation procedures, the evaluators asked participants about smoking status and quitting history since enrollment. To increase the contact rate, the evaluation team sent participants precontact letters with a $2 bill 1 week prior to evaluation.

We compared the efficacy trial and the multistate program on 3 outcome measures. These included (1) the quit attempt rate, defined as intentionally quitting for 24 hours or more within 90 days of enrollment; (2) the 30-day abstinence rate, defined as not smoking for at least 30 days prior to evaluation; and (3) the 180-day abstinence rate. We considered clients to be no longer abstinent if they smoked 2 or more days in a row.

Statistical Analysis

We compared efficacy trial results with multistate results using 95% confidence intervals.[30] Because the original trial was conducted in California, we further divided the multistate results into California and the other states. We calculated 30-day and 180-day abstinence rates, using both intention-to-treat analysis, in which we coded all participants not evaluated as not having made a quit attempt, and complete-case analysis, in which we included in the analysis only participants reached for evaluation.[31]

In addition, we used logistic regression to test the independent effects of counseling and quitting aid use (as well as the interaction) on the 180-day abstinence rate while controlling for demographics. We conducted all statistical analyses using SAS statistical package version 9.3 (SAS Institute, Cary, NC).[32]

RESULTS

The D&I grant originally included California, Colorado, and Hawaii, each agreeing to promote the service and provide cessation aids according to the state's protocol. New York joined the program in November 2010, Washington in January 2011, and Texas in February 2011.

From January 2010 to July 2012, a total of 2297 callers completed enrollment. Almost 13% (n = 290; 12.6%) were proxies calling for family members or relatives and 3 were younger than 18 years (0.1%); we excluded them from further analysis. The remaining 2004 callers were smokers who called the Chinese, Korean, and Vietnamese lines of the multistate program and completed enrollment. By state, 1339 (66.8%) were from California, 70 (3.5%) from Colorado, 215 (10.7%) from Hawaii, 162 (8.1%) from New York, 87 (4.3%) from Washington, and 22 (1.1%) from Texas. The toll-free lines were open to other states that were not officially part of the study; 109 smokers (5.4%) called from these other

states. The greatest number of smokers called the Korean line (n = 1144; 57.1%), 479 (23.9%) called the Chinese line, and 381 (19.0%) called the Vietnamese line.

Table 1 compares the demographic characteristics of the efficacy trial and the multistate program. Data from the multistate program are further divided to allow comparison of California callers with callers from other states and comparison of California callers from the multistate program with participants in the efficacy trial, which was conducted in California. The multistate program had more Korean speakers (57.1%) and a greater proportion of women (18.4%) than the efficacy trial (37.2% and 10.0%, respectively; $P < .05$). Likewise, the multistate population was older (69.4% ≥ 45 years) than the efficacy trial population (52.0% ≥ 45 years; $P < .05$). The percentage of daily smokers was high in both samples (98.2% vs 98.3%), and there was no significant difference in tobacco consumption between the 2 samples (≥ 15 cigarettes per day: 56.6% vs 54.9% for multistate and efficacy trial, respectively; data not shown).

Within the multistate program, California callers were less likely to be female (14.6% vs 25.9%; $P < .05$) and had more education (> 12 years: 58.5% vs 34.3%; $P < .05$) than callers from other states.

Table 2 compares the implementation of the counseling intervention for the efficacy trial and the multistate program; the multistate program was again separated to compare California with other states. Data from the efficacy trial include all participants randomly assigned to receive counseling (n = 1124). Data from the multistate program include only the 1769 participants who chose counseling (88.3% of the 2004 smokers). Among those who opted for or were assigned counseling, the rate of receiving counseling was higher in the multistate program (91.6%) than in the efficacy trial (87.2%; $P < .05$). Table 2 also compares the multistate sample and the efficacy trial on the number of counseling sessions received and minutes of counseling. Although participants in the multistate program were more likely to be counseled, they received fewer counseling sessions (mean: 4.1 vs 4.9; $P < .05$) and fewer minutes of counseling across all sessions (58.2 vs 72.0; $P < .05$) than those in the efficacy trial. Implementation data from California and the other states do not differ from each other.

There was no significant difference in overall attrition rates between the efficacy trial and the multistate program; 82.0% and 82.0% completed evaluation at 7 months, respectively.

Table 3 displays the use of quitting aids among counseling clients (those who were randomly assigned in the efficacy trial or who chose counseling in the multistate program) who were selected for evaluation. Using complete case analysis, we found that participants in the multistate program reported higher rates of using nicotine patches (43.0%) and any quitting aid (53.1%) than those in the efficacy trial (9.1% and 12.8%, respectively; $P < .05$). There were no differences in quitting aid use between California and the other states in the multistate program.

Table 4 displays quitting outcomes among counseling clients (those who were randomly assigned or chose counseling) who were selected for evaluation. Using the intent-to-treat analysis, we found significantly higher rates of quit attempts among participants in the multistate program than among those in the efficacy trial (65.3% vs 54.9%; $P < .05$). However, the 30-day prolonged abstinence rates were not different (32.3% for both groups). The 180-day abstinence rates were higher in the multistate than in the efficacy trial (18.8% vs 16.4%, respectively), but the difference was not significant. Complete case analysis showed similar patterns for quit attempts (79.6% vs 60.5%; $P < .05$) and for abstinence (39.4% vs 39.4% and 22.9% vs 20.0% for 30-day and 180-day abstinence, respectively; $P > .05$). There were no significant differences between

TABLE 1—Demographic Characteristics of Participants in an Efficacy Trial and Multistate Asian-Language Tobacco Quitline: January 2010–July 2012

Characteristic	Efficacy Trial (n = 2277), % (95% CI)	Multistate–All (n = 2004), % (95% CI)	Multistate–California (n = 1339), % (95% CI)	Multistate–Other States (n = 665), % (95% CI)
Language				
Chinese	32.0 (30.1, 33.9)	23.9 (22.0, 25.8)	24.1 (21.8, 26.4)	23.5 (20.2, 26.7)
Korean	37.2 (35.3, 39.2)	57.1 (54.9, 59.3)	57.8 (55.2, 60.5)	55.6 (51.9, 59.4)
Vietnamese	30.7 (28.8, 32.6)	19.0 (17.3, 20.7)	18.1 (16.0, 20.1)	20.9 (17.8, 24.0)
Age, y				
18–24	3.2 (2.5, 3.9)	1.6 (1.0, 2.1)	1.7 (1.0, 2.4)	1.2 (0.4, 2.0)
25–44	44.9 (42.9, 46.9)	29.0 (27.0, 31.0)	28.6 (26.2, 31.0)	29.8 (26.3, 33.3)
45–64	45.0 (42.9, 47.0)	57.1 (55.0, 59.3)	56.8 (54.1, 59.4)	57.8 (54.1, 61.6)
≥ 65	7.0 (5.9, 8.0)	12.3 (10.9, 13.7)	12.9 (11.1, 14.7)	11.2 (8.7, 13.5)
Gender				
Female	10.0 (8.8, 11.2)	18.4 (16.7, 20.1)	14.6 (12.7, 16.5)	25.9 (22.6, 29.3)
Male	90.0 (88.8, 91.2)	81.6 (79.9, 83.3)	85.4 (83.5, 87.3)	74.1 (70.7, 77.4)
Education, y				
≤ 12	46.4 (44.4, 48.5)	49.5 (47.3, 51.7)	41.5 (38.8, 44.2)	65.7 (62.0, 69.3)
> 12	53.6 (51.6, 55.6)	50.5 (48.3, 52.7)	58.5 (55.8, 61.2)	34.3 (30.7, 38.0)

Note. CI = confidence interval. The last 2 columns are subsets of the overall multistate program (second column). The 6 states in the multistate program were CA, CO, HI, NY, TX, and WA.

TABLE 2—Counseling Sessions and Length of Calls in an Efficacy Trial and Multistate Asian-Language Tobacco Quitline: January 2010–July 2012

Counseling	Efficacy Trial (n = 1124)	Multistate–All (n = 1769)	Multistate–California (n = 1188)	Multistate–Other States (n = 581)
Counseling rate, % (95% CI)	87.2 (85.2, 89.1)	91.6 (90.3, 92.9)	91.0 (89.4, 92.6)	92.8 (90.7, 94.9)
No. of sessions				
Mean (95% CI)	4.9 (4.8, 5.1)	4.1 (4.0, 4.2)	4.1 (4.0, 4.3)	4.0 (3.8, 4.2)
Median	5.0	4.0	4.0	4.0
Length of counseling, min				
Mean (95% CI)	72.0 (69.9, 74.0)	58.2 (56.6, 59.8)	58.6 (56.5, 60.8)	57.4 (55.0, 59.8)
Median	67.0	51.0	51.0	52.0

Note. CI = confidence interval. The last 2 columns are subsets of the overall multistate program (second column). The 6 states in the multistate program were CA, CO, HI, NY, TX, and WA.

California and other states on any cessation outcome.

We ran a logistic regression on the counseling condition, the use of quitting aids, and the interaction term between counseling and use of quitting aids on 180-day abstinence rate, controlling for demographics. Both counseling ($\chi^2 = 5.5$; OR = 2.2; 95% CI = 1.1, 4.4) and use of quit aids ($\chi^2 = 22.0$; OR = 2.5; 95% CI = 1.7, 3.7) had independent effects on 180-day abstinence rates. There was no significant interaction effect between counseling and use of quit aids.

DISCUSSION

The purpose of the multistate Asian-language quitline program described here was to provide Asian-language smokers the same quality of tobacco cessation services afforded to English- and Spanish-speaking smokers. Thus, it addressed the disparity in access to quality cessation services experienced by much of the Asian-language population in the United States. This D&I project studied the processes of translating an evidence-based quitline intervention into an established multistate program. It simultaneously examined (1) the replication of the intervention used in the efficacy trial within an effectiveness trial with a broader clientele; (2) the adoption, implementation, and impact of the multistate program; and (3) the dissemination of the program.

It is not uncommon for an intervention to have an impact in an efficacy trial but not be effective in a real-world service setting. Decline in impact can be related to the broader range of people included, the delivery of the intervention with less enthusiasm or fidelity to protocols, or other reasons. To assess the effectiveness of the Asian-language counseling service, we compared the participant demographics, clinical processes, and quitting outcomes of the newly created multistate Asian-language cessation quitline with those of the earlier efficacy trial. The efficacy trial was conducted in California, whereas the multistate program was conducted with participants from throughout the United States and had none of the eligibility restrictions used in the randomized study. The cessation outcomes for the multistate program were somewhat higher than for the efficacy trial, although the difference was not significant. These findings suggest that the quitline intervention that was proven successful in the efficacy trial transitioned into an effective program.

This study demonstrated that it was feasible to provide counseling for Chinese, Korean, and Vietnamese speakers across multiple states in a way that maintained its impact. Several key factors contributed to this program's success. The multistate program used the existing California Asian quitline infrastructure, thus limiting costs typically associated with initiating a new program. Using a centralized service also facilitated consistency of implementation. And, most importantly, the California quitline used an Asian-language counseling protocol that was proven effective in a rigorous randomized controlled trial.[26] Despite the challenges of offering service across 5 time zones (Hawaii–Aleutian to

TABLE 3—Use of Quitting Aids in an Efficacy Trial and Multistate Asian-Language Tobacco Quitline: January 2010–July 2012

Type of Quit Aid	Efficacy Trial, No. or % (95% CI)	Multistate–All, No. or % (95% CI)	Multistate–California, No. or % (95% CI)	Multistate–Other States, No. or % (95% CI)
Intent-to-treat	1124	953	579	374
Patch	7.5 (5.9, 9.0)	35.4 (32.3, 38.4)	35.2 (31.3, 39.1)	35.6 (30.7, 40.4)
Any aids	10.5 (8.7, 12.3)	43.7 (40.5, 46.8)	41.6 (37.6, 45.6)	46.8 (41.7, 51.9)
Complete case	922	781	476	305
Patch	9.1 (7.3, 11.0)	43.0 (39.5, 46.5)	42.6 (38.2, 47.1)	43.6 (38.0, 49.2)
Any aids	12.8 (10.6, 15.0)	53.1 (49.6, 56.6)	50.4 (45.9, 54.9)	57.4 (51.8, 62.9)

Note. CI = confidence interval. The last 2 columns are subsets of the overall multistate program (second column). The 6 states in the multistate program were CA, CO, HI, NY, TX, and WA.

TABLE 4—Cessation Outcomes of Counseling Clients in an Efficacy Trial and Multistate Asian-Language Tobacco Quitline: January 2010–July 2012

Outcome	Efficacy Trial, No. or % (95% CI)	Multistate—All, No. or % (95% CI)	Multistate—California, No. or % (95% CI)	Multistate—Other States, No. or % (95% CI)
Intent-to-treat	1124	953	579	374
Quit attempt made	54.9 (52.0, 57.8)	65.3 (62.2, 68.3)	65.8 (61.9, 69.7)	64.4 (59.6, 69.3)
Abstinent ≥ 30 d	32.3 (29.6, 35.0)	32.3 (29.3, 35.3)	30.4 (26.6, 34.2)	35.3 (30.4, 40.1)
Abstinent ≥ 180 d	16.4 (14.2, 18.6)	18.8 (16.3, 21.3)	17.1 (14.0, 20.2)	21.4 (17.2, 25.6)
Complete case	922	781	476	305
Quit attempt made	60.5 (57.3, 63.7)	79.6 (76.8, 82.5)	80.0 (76.4, 83.6)	79.0 (74.4, 83.6)
Abstinent ≥ 30 d	39.4 (36.2, 42.5)	39.4 (36.0, 42.9)	37.0 (32.6, 41.3)	43.3 (37.7, 48.9)
Abstinent ≥ 180 d	20.0 (17.4, 22.6)	22.9 (20.0, 25.8)	20.8 (17.1, 24.5)	26.2 (21.3, 31.2)

Note. CI = confidence interval. The last 2 columns are subsets of the overall multistate program (second column). The 6 states in the multistate program were CA, CO, HI, NY, TX, and WA.

Eastern Time), the multistate program delivered counseling to a higher proportion of smokers than the earlier efficacy trial (91.6% vs 87.2%). Consistent with the trend for the quitline overall, the multistate program provided fewer counseling calls and sessions were shorter than in the earlier trial; there were no differences on the rate and duration of counseling by state (i.e., CA vs other states).

One significant difference between the 2 programs was the use of quitting aids; multistate participants had higher rates of use than did those in the earlier trial. This was not surprising, since many states provided free nicotine patches as part of the service. Further analysis indicated that counseling and the use of quitting aids each led to more prolonged abstinence, but there was no synergistic effect of the two combined.

Limitations

There are some limitations to this study. First, it is unclear exactly what features of counseling account for the comparability in outcomes across the programs. In the multistate program, more smokers made a quit attempt and more used quitting aids. At the same time, they received fewer counseling sessions, and the sessions were of shorter duration. The net result is that the abstinence rates for the multistate program were not significantly different from those reported in the efficacy trial. Second, the Asian-language quitline only provided in-language services for Chinese (Mandarin and Cantonese), Vietnamese, and Korean speakers. These linguistic groups were chosen because they have high numbers of immigrants with low English proficiency.[33,34] However, other linguistic groups not included here would likely benefit from similar services. The original randomized controlled study was set up to test the efficacy of a single protocol that was translated into 3 languages, with the intent of showing that that the findings could be broadly applicable. It is reasonable to assume that if this protocol worked both overall and for each of these 3 languages, it would be unnecessary to test the protocol for each Asian-language group (e.g., Hmong, Cambodian). The one-on-one structure of the telephone counseling allows the protocol to be tailored to an individual's culture and needs. This study provides a proof of concept for scaling a centralized infrastructure to reach underserved populations. Applications of this model could extend to other linguistic populations or to interventions on other behaviors that contribute to health disparities, such as diabetes management or cancer screening.[35,36]

Conclusions

This project began with 3 partner states: California, Colorado, and Hawaii. One goal was to disseminate the program to additional states. During the grant period, New York, Texas, and Washington formally enrolled in the multistate program. They agreed to promote the Asian-language lines to their residents and to provide quitting aids in accordance with the services provided to their English and Spanish speakers. The multistate program was designed to address the logistical challenges that appear to be at the heart of the lack of Asian-language cessation services.[37] The multistate service offered a broad-reaching centralized infrastructure, which could be particularly appealing to states that lack the resources to hire and maintain bilingual staff. The fact that it was possible to disseminate this program to more states shows the interest for such services.

On the strength of the results from the multistate program, the CDC decided to make Asian-language quitline services a national program. The new national program includes funding for promotion and for service. Asian-language speakers across the United States now have access to the same quality of service that has long been available to English and Spanish smokers. The new national Asian quitline will play an important role in helping reduce disparity in access to care. ■

About the Authors

Sharon E. Cummins, Shiushing Wong, Erika Bonnevie, Carrie Kirby, and Shu-Hong Zhu are with the Moores Cancer Center, University of California San Diego, La Jolla. Hye-ryeon Lee is with the Department of Communicology, University of Hawai'i at Manoa, Honolulu. Cynthia J. Goto is with the Hawai'i Tobacco Prevention & Control Trust Fund Project, Honolulu. Judy McCree Carrington is with the Colorado Department of Public Health and Environment, Denver.

Correspondence should be sent to Shu-Hong Zhu, PhD, Department of Family and Preventive Medicine, University of California, San Diego, 9500 Gilman Dr, MC 0905, La Jolla, CA 92093-0905 (e-mail: szhu@ucsd.edu). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints" link.

This article was accepted October 21, 2014.

Contributors

S. E. Cummins led the analysis and writing. S. Wong analyzed data and contributed to the writing. E. Bonnevie contributed to the writing and obtained background

information and references. H. Lee contributed to the research design, and she, C. J. Goto, and J. McCree Carrington coordinated outreach efforts for the multistate program. C. Kirby served as project manager. S.-H. Zhu designed the study and supervised all aspects of implementation. All authors contributed ideas and reviewed drafts of the article.

Acknowledgments

This study was supported by the Centers for Disease Control and Prevention (grant R18 DP002106).

We thank Alison Shigaki and Elaine Ishihara of the Asian Pacific Islander Coalition Against Tobacco, Washington, DC; Barry Sharp of the Tobacco Prevention & Control Program, Texas; Elizabeth Kilgore of the Department of Health and Mental Hygiene, New York, NY; Paula Celestino of the New York State Smokers' Quitline; Rod Lew of the Asian Pacific Partners for Empowerment, Advocacy and Leadership (APPEAL); and Linda Bailey of the North American Quitline Consortium (NAQC) for their enthusiasm and support for the multistate Asian Quitline. James Dearing of Michigan State University and Gary Tedeschi of the University of California, San Diego, provided valuable input in their respective fields of expertise. The advisory board for this multistate project was chaired by David Willoughby, whose vision for national centers of excellence serving minority populations continues to influence the field.

Human Participant Protection

The University of California, San Diego, institutional review board approved this study, including the consent procedures (IRB # 091374).

References

1. Centers for Disease Control and Prevention. Current cigarette smoking among adults—United States, 2005–2012. *MMWR Morb Mortal Wkly Rep.* 2014;63(2):29–34.

2. US Dept of Health and Human Services. The health consequences of smoking—50 years of progress: a report of the surgeon general, 2014. January 2014. Available at: http://www.surgeongeneral.gov/library/reports/50-years-of-progress. Accessed October 16, 2014.

3. Centers for Disease Control and Prevention. QuickStats: number of deaths from 10 leading causes. *MMWR Morb Mortal Wkly Rep.* 2013;62(8):155.

4. Doll R, Peto R, Boreham J, Sutherland I. Mortality in relation to smoking: 50 years' observations on male British doctors. *BMJ.* 2004;328(7455):1519.

5. US Dept of Health and Human Services. How tobacco smoke causes disease: the biology and behavioral basis for smoking-attributable disease. A report of the surgeon general, 2010. Available at: http://whyquit.com/CDC/SGR_2010_How_Tobacco_Smoke_Causes_Disease.pdf. Accessed October 16, 2014.

6. Clinical Practice Guideline Treating Tobacco Use and Dependence 2008 Update Panel, Liaisons, and Staff. A clinical practice guideline for treating tobacco use and dependence: 2008 update. A US Public Health Service report. *Am J Prev Med.* 2008;35(2):158–176.

7. Stead LF, Lancaster T, Perera R. Telephone counselling for smoking cessation. *Cochrane Database Syst Rev.* 2006;(3):CD002850.

8. Zhu SH, Anderson CM, Tedeschi GJ, et al. Evidence of real-world effectiveness of a telephone quitline for smokers. *N Engl J Med.* 2002;347(14):1087–1093.

9. Keller P, Feltracco A, Bailey L, et al. Changes in tobacco quitlines in the United States 2005–2006. *Prev Chronic Dis.* 2010;7(2):A36.

10. Jacobs E, Lauderdale DS, Meltzer D, Shorey JM, Levinson W, Thisted RA. Impact of interpreter services on delivery of health care to limited-English-proficient patients. *J Gen Intern Med.* 2001;16(7):468–474.

11. Jacobs E, Shepard DS, Suaya JA, Stone E. Overcoming language barriers in health care: costs and benefits of interpreter services. *Am J Public Health.* 2004;94(5):866–869.

12. Griner D, Smith TB. Culturally adapted mental health intervention: a meta-analytic review. *Psychotherapy (Chic).* 2006;43(4):531–548.

13. Chae DH, Gavin AR, Takeuchi DT. Smoking prevalence among Asian Americans: findings from the National Latino and Asian American Study (NLAAS). *Public Health Rep.* 2006;121(6):755–763.

14. Baluja K, Park J, Myers D. Inclusion of immigrant status in smoking prevalence statistics. *Am J Public Health.* 2003;93(4):642–646.

15. Centers for Disease Control and Prevention, Ministry of Health Viet Nam. Global Adult Tobacco Survey (GATS): Viet Nam 2010. Available at: http://www.who.int/tobacco/surveillance/en_tfi_gats_vietnam_report.pdf. Accessed October 16, 2014.

16. Li Q, Hsia J, Yang G. Prevalence of smoking in China in 2010. *N Engl J Med.* 2011;364(25):2469–2470.

17. Organisation for Economic Cooperation and Development. OECD Factbook 2013: economic, environmental and social sciences. Updated 2013. Available at: http://www.oecd-ilibrary.org/sites/factbook-2013-en/12/02/01/index.html?itemId=/content/chapter/factbook-2013-98-en. Accessed October 16, 2014.

18. Fried VM, Prager K, MacKay AP, Xia H. *Chartbook on Trends in the Health of Americans, Health United States 2003.* Hyattsville, MD: National Center for Health Statistics; 2003.

19. Pew Research Center. The rise of Asian Americans. June 19, 2012; updated April 4, 2013. Available at: http://www.pewsocialtrends.org/2012/06/19/the-rise-of-asian-americans. Accessed October 16, 2014.

20. Smedley B, Stith A, Nelson A, eds. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.* Washington, DC: National Academies Press; 2003.

21. Sue S, Zane N, Nagayama Hall G, Berger L. The case for cultural competency in psychotherapeutic interventions. *Annu Rev Psychol.* 2009;60:525–548.

22. Cooper LA, Hill MN, Powe NR. Designing and evaluating interventions to eliminate racial and ethnic disparities in health care. *J Gen Intern Med.* 2002;17(6):477–486.

23. Kim G, Aguado Loi CX, Chiriboga DA, Jang Y, Parmelee P, Allen RS. Limited English proficiency as a barrier to mental health service use: a study of Latino and Asian immigrants with psychiatric disorders. *J Psychiatr Res.* 2011;45(1):104–110.

24. Derose KP, Escarce JJ, Lurie N. Immigrants and health care: sources of vulnerability. *Health Aff (Millwood).* 2007;26(5):1258–1268.

25. Snowden LR, Masland M, Guerrero R. Federal civil rights policy and mental health treatment access for persons with limited English proficiency. *Am Psychol.* 2007;62(2):109–117.

26. Zhu S, Cummins SE, Wong S, Gamst AC, Tedeschi GJ, Reyes-Nocon J. The effects of a multilingual telephone quitline for Asian smokers: a randomized controlled trial. *J Natl Cancer Inst.* 2012;104(4):299–310.

27. Brownson RC, Colditz GA, Proctor EK. *Dissemination and Implementation Research in Health: Translating Science to Practice.* Oxford, UK: Oxford University Press; 2012.

28. Zhu S, Pierce JP. A new scheduling method for time-limited counseling. *Prof Psychol Res Pr.* 1995;26(6):624–625.

29. Tedeschi GJ, Zhu S, Cummins SE, Shin H, Nguyen MH. Counselling Asian smokers: key considerations for a telephone intervention. *J Smok Cessat.* 2013;8(1):2–10.

30. Fleiss JL. *Statistical Methods for Rates and Proportions.* 2nd ed. New York, NY: John Wiley & Sons; 1981.

31. Hollis S, Campbell F. What is meant by intention to treat analysis? Survey of published randomised controlled trials. *BMJ.* 1999;319(7211):670–674.

32. *SAS 9.3 Language Reference: Concepts.* Cary, NC: SAS Institute; 2011.

33. Tang H, Shimizu R, Chen MS. English language proficiency and smoking prevalence among California's Asian Americans. *Cancer.* 2005;104(12 suppl):2982–2988.

34. Ryan C. *Language Use in the United States: 2011.* Washington, DC: US Census Bureau; 2013. American Community Survey Report ACS-22.

35. Sacco WP, Malone JI, Morrison AD, Friedman A, Wells K. Effect of a brief, regular telephone intervention by paraprofessionals for type 2 diabetes. *J Behav Med.* 2009;32(4):349–359.

36. Menon U, Belue R, Wahab S, et al. A randomized trial comparing the effect of two phone-based interventions on colorectal cancer screening adherence. *Ann Behav Med.* 2011;42(3):294–303.

37. Zhuang Y, Cummins S, Lee H, Dearing J, Kirby C, Zhu S. Perceived barriers to adopting an Asian-language quitline service: a survey of state funding agencies. *J Community Health.* 2012;37(5):1058–1065.