Advancing Smoking Cessation in California’s Medicaid Population

April Roeseler, BSN, MSPH, 1 Neal D. Kohatsu, MD, MPH 2

THE PROBLEM OF TOBACCO USE IN MEDICAID

Tobacco use remains the leading underlying cause of mortality in the U.S. 1 Additionally, treatment of smoking-related diseases is a major cost driver for state and federal Medicaid programs, nationally accounting for 15.2% of Medicaid expenditures ($39.6 billion) annually. 2 In California, smoking-related Medicaid healthcare spending is estimated at $3.58 billion annually. 3 Putting this into perspective, this cost exceeded the California Department of Public Health’s (CDPH) fiscal year 2017/2018 $3.2-billion budget. 4

The Centers for Medicare and Medicaid Services (CMS) reported that 27% of adult Medicaid members use tobacco. 5 Although tobacco use among Medicaid members is high relative to the general population and leads to a considerable financial burden on government, there is strong evidence that a full-coverage cessation benefit, eliminating barriers to treatment, and promoting a cessation benefit decreases smoking and results in cost savings. 6–10

In the past three decades, California made significant progress in reducing smoking; adult smoking prevalence declined by 51.9% from 23.7% in 1988 to 11.4% in 2016. 11 Progress was fueled by tobacco tax increases and CDPH’s comprehensive tobacco control program. 12 Despite the decline in overall adult smoking, large disparities in tobacco use persist among subpopulation groups. Predominantly, tobacco use among adults is concentrated among low-income populations. 13,14 Low-income people who smoke represent about half of California’s 3.2 million adult smokers. 15

With approximately 14 million enrollees, more than one third of the state’s population, California’s Medicaid program, known as Medi-Cal, represents an important area to focus efforts to help smokers quit. 14 More than 80% of Medi-Cal’s population is served by 28 full-scope, managed care plans that are overseen by the Department of Health Care Services (DHCS). 14 As described by Zhu et al. 15 in this issue, the adult smoking prevalence among Medi-Cal beneficiaries is 18.7% compared with 11.5% among those with private insurance. They note that smokers with Medi-Cal coverage account for 41.2% of California’s smoking population, and consistent with the national Medicaid population, they are more likely to experience severe psychological distress and suffer from a chronic disease than those with private/other insurance. 15 Remarkably, nationally and in California, quit attempt rates among smokers with Medicaid insurance are comparable to those with private insurance, yet this population is less successful at quitting, and smoking rates among Medicaid beneficiaries remain stagnant. 15,16

ABOUT THE MEDI-CAL INCENTIVES TO QUIT SMOKING PROJECT

In 2011, CMS awarded a 5-year, $10-million grant for a smoking-cessation study to DHCS with the co-author, Neal D. Kohatsu, serving as principal investigator. The study was designed to accelerate successful quitting by (1) increasing use of a well-established and effective phone counseling service, the California Smokers’ Help-line (CSH); (2) decreasing barriers to obtaining nicotine replacement patches; and (3) offering economic incentives to encourage quitting. Led by DHCS, collaborators included the University of California San Diego (where CSH was developed and is currently housed); University of California Davis; University of California San Francisco; and CDPH represented by the first author, April Roeseler.

From the 1California Tobacco Control Program, California Department of Public Health, Sacramento, California; and 2Kohatsu Consulting, Carmichael, California

At the time of study, Dr. Kohatsu was with the Department of Health Care Services, Sacramento, California.

Address correspondence to: April Roeseler, BSN, MSPH, California Tobacco Control Program, California Department of Public Health, P.O. Box 997377, MS 7206, Sacramento CA 95899. E-mail: april.roeseler@cdph.ca.gov.

This article is part of a supplement entitled Advancing Smoking Cessation in California’s Medicaid Population, which is sponsored by the California Department of Public Health. 0749-3797/$36.00 https://doi.org/10.1016/j.amepre.2018.07.019
The Medi-Cal Incentives to Quit Smoking (MIQS) project drew upon the work of the Massachusetts Medicaid program that found that improving the smoking-cessation benefit, decreasing barriers to access, and broadly promoting the cessation benefit significantly reduced smoking prevalence. The Massachusetts Medicaid pharmacotherapy cessation benefit was associated with a significant decrease in hospitalization claims for acute myocardial infarction and acute coronary heart disease. The MIQS project also sought to understand how economic incentives affect cessation-seeking assistance, enrollment in cessation services, and sustained quitting behavior among a Medicaid population, as previous cessation incentive studies focused on employed and middle- to upper-income populations. Finally, the MIQS project sought to establish the cost effectiveness and cost benefit of incentivized interventions.

**MEDI-CAL INCENTIVES TO QUIT SMOKING OUTREACH STRATEGIES**

The MIQS intervention included linguistically (English, Spanish, Chinese, Vietnamese, Korean) and culturally tailored (American Indian, African American, Asian, Hispanic) targeted materials and outreach to clinics serving these groups. To motivate calls to the CSH, outreach materials promoted a $20 gift card incentive, which callers had to request.

In this issue, Tong et al., Vijayaraghavan and colleagues, Saw et al., and Dove and colleagues describe various outreach strategies to low-income, American Indian, African American, Asian, Latino, white, and pregnant women/women with children populations and their impact on increasing calls to the CSH. As noted by Hood-Medland et al., one of the most successful outreach methods leveraged existing “all-household” mailings to California’s 14 million Medi-Cal members. A multilingual flyer was inserted into these all-household mailings. In this issue, Anderson and colleagues describe an RCT that tested the effectiveness of three motivational messages used on different mailing inserts. Their study found that the mailers were a cost-effective strategy to generate calls to the CSH; when the message included an incentive, the cost per caller ranged from $32 to $53 per caller compared with $130 per caller for the free, cessation-counseling message. Per-caller costs for the all-household mailings were considerably lower than the $260 cost per call reported by the TIPs advertising campaign to generate calls to the national quitline.

As described in this issue by Tong et al. during the MIQS project, there was a 70% increase in the average number of calls per year to the CSH from Medi-Cal members compared with periods prior to the MIQS project. MIQS outreach efforts originally sought to enroll 75,000 smokers and ended up engaging 92,900 Medi-Cal smokers. This success reflects upon both the effectiveness of the outreach and interest in quitting among this population.

Collectively, the studies identify the pros and cons of various outreach approaches including priority population, clinic-based, and direct mail strategies. Clinic-based outreach strategies fostered new or strengthened existing relationships; however, they required one-on-one outreach, investment in relationship building, and a reliable bulk distribution chain to disseminate materials to many providers statewide. Conversely, an advantage to the all-household mailings approach was that it provided a targeted reliable mass-distribution channel, enabled rapid testing of motivational messages, and was cost effective. Consequently, after the MIQS project ended, CDPH continues using these mailings to promote the CSH to Medi-Cal beneficiaries.

**EFFECTIVENESS OF INCENTIVIZING QUITTING BEHAVIORS**

At the core of the MIQS project was a three-arm RCT designed to encourage CSH callers to quit smoking: Arm 1 participants received telephone counseling; Arm 2 participants received counseling and nicotine patches mailed to their home; and Arm 3 participants received counseling, nicotine patches, and financial incentives to increase participation in counseling. Sending free nicotine patches was tested as an incentive because California’s comprehensive tobacco control program, which is the primary supporter of the CSH, does not fund pharmacotherapy. Similar to general population studies, as described in this supplement, Anderson and colleagues found that financial incentives significantly increased enrollment and maintenance in counseling, quit attempts, and successful quitting. The Arm 3 (counseling, nicotine patches, and financial incentives) group significantly outperformed the other treatment arms.

The final MIQS article compares the costs and benefits of these three CSH cessation interventions. Sung et al. found that the Arm 3 intervention yielded the greatest cost savings. Compared with the Arm 1 (i.e., telephone counseling only) group, the Arm 3 group would save additional health-care costs with a benefit—cost ratio of 1.90 over a 10-year period. This means that compared with the already highly effective counseling intervention program, every $1 spent on the additional intervention of sending nicotine patches and offering financial incentives would be associated with a savings in healthcare costs by $1.90 over 10 years.
CAPITALIZING ON SYNERGY

Simultaneous to the MIQS project, DHCS began a Quality Strategy in 2012. Quality Strategy goals were to (1) improve the health of all Californians; (2) enhance quality, including the patient care experience in all DHCS programs; and (3) reduce the Department’s per capita healthcare costs. DHCS sought to deliver effective, efficient, and affordable care; engage Medi-Cal members and families in their health; enhance communication and coordination of care; advance prevention; foster healthy communities; and eliminate health disparities. The Quality Strategy highlighted a need to improve the tobacco-cessation benefit, and in 2014, DHCS enhanced managed care Medicaid provider minimum tobacco-cessation benefit requirements and again updated them in 2016. These changes reduced barriers to treatment and instituted requirements for tracking systems to identify and treat tobacco users.

CMS’s $10-million research investment stimulated improvements in the Medi-Cal program and strengthened partnerships among DHCS, academic researchers, and the public health community. The partnership between the researchers and Medi-Cal’s Office of the Medical Director enabled testing the effectiveness of incentives on tobacco-cessation outcomes. DHCS collaborated closely with researchers to leverage their all-household mailings and establish a system to verify that those enrolled in the RCT were Medi-Cal members. Given that California’s Medicaid population is larger than the population of many states, having the opportunity to examine the impact and cost effectiveness of a health promotion intervention in this population is important and noteworthy as Medicaid enrollees are more likely to report having a chronic disease and high rates of psychological distress. As such, interventions to motivate and sustain enrollment of this population in health promotion activities are likely to require greater intensity than for the general population. Determining what will accelerate health improvements among Medi-Cal members and then designing and transforming the healthcare system to offer tailored and effective interventions is at the crux of health equity and DHCS’s Quality Strategy.

The MIQS project helped bridge the health care–public health divide. It improved linkages between the healthcare delivery system and a population-based cessation treatment service (CSH), and advanced DHCS’ efforts to improve the cessation treatment benefit contractually required of Medi-Cal health plans. These partnerships also led to CDPH incorporating use of the all-household mailings into its CSH promotion plans, and as described by Kaslow et al., led CDPH to fund a tobacco-cessation learning collaborative to build, sustain, and coordinate multi-sector health system changes begun by the MIQS project. We hope that this special American Journal of Preventive Medicine supplement issue will further stimulate advances in tobacco control within other Medicaid programs as well as other health systems, nationally.

ACKNOWLEDGMENTS

Publication of this article was supported by the California Tobacco Control Program, California Department of Public Health (CDPH). The project described was supported by Funding Opportunity Number 1B1CMS330901 from the Centers for Medicare & Medicaid Services. The findings and conclusions in this article are those of the authors and do not necessarily represent the official position of CDPH or the U.S. Department of Health and Human Services or any of its agencies.

The authors have no relevant financial interests, activities, relationships, and affiliations as well as no conflicts of interest to disclose.

Dr. Kohatsu serves on the editorial board for the American Journal of Preventive Medicine. He had no involvement in the peer-review and decision-making processes for this paper.

SUPPLEMENT NOTE

This article is part of a supplement entitled Advancing Smoking Cessation in California’s Medicaid Population, which is sponsored by the California Department of Public Health.

REFERENCES


8. Land T, Warner D, Paskowsky M, et al. Medicaid coverage for tobacco dependence treatments in Massachusetts and associated decreases in


