



Tomorrow's Doctors, Tomorrow's Cures®

Physician Behavior and Practice Patterns Related to Smoking Cessation

Summary Report

A Report Prepared for the American Legacy Foundation

By

Association of American Medical Colleges
2450 N Street, N.W.
Washington, D.C. 20037-1127

In cooperation with

Center for Health Workforce Studies
University at Albany
7 University Place
Rensselaer, NY 12144-3458

2007

Association of
American Medical Colleges

Preface

While significant strides have been made in reducing tobacco use in the United States, smoking remains the number one cause of preventable death and illness in this country. Nearly 70% of smokers report wanting to quit, but many lack access to treatments that support ongoing abstinence. While physician involvement greatly increases the likelihood that patients who try to quit smoking will achieve long-term success, physicians are not being as effective as they could be in helping patients quit. Greater understanding of physician practice patterns, resources, needs and education and training related to treating individuals who smoke is important in developing strategies to increase physicians' sustained participation in cessation activities.

Through the generous support of the American Legacy Foundation (Legacy), the Center for Workforce Studies, Association of American Medical Colleges (AAMC) conducted a nationwide physician survey examining physician knowledge, perspectives, and practice patterns in assisting patients to stop smoking. AAMC collaborated on this project with the Center for Health Workforce Studies (CHWS/Albany), School of Public Health, University at Albany. Both research centers are dedicated to helping providers, educators, policy makers, and the public better understand issues related to the health workforce.

AAMC appreciates the interest and valuable support provided to this research by Cheryl Heaton, Dr.P.H., Jennifer Duke, Ph.D., and Kristen McCausland, M.P.H., M.S.W. at Legacy.

Edward Salsberg, M.P.A.; Director of the AAMC Center was the Principle Investigator for the Study. Bonnie Primus Cohen, M.S., Associate Director of CHWS/Albany was the project director. Sandra McGinnis, Ph.D., Research Associate at CHWS/Albany assisted in the research and preparation of this report. Other contributors include Guy Forte, Tracey Continelli, M.S., Debra Krohl, and Lyrissa Smith of the CHWS/Albany; Atul Grover M.D., Ph.D. and Hisachi Yamagata, Ph.D. of CWS/AAMC and Jane Lindsey, M.D.

Further, we would like to thank members of the two advisory boards whose expertise and insights contributed to the development of our survey instruments and informed our analyses. National Advisory Committee members included Michael Eriksen, Sc.D.; Michael Fiore, M.D., M.P.H.; Howard Koh, M.D.; Steven Schroeder, M.D.; Susan Swartz, M.D., M.P.H.; and Christine Williams, M.Ed. Medical Specialty Committee members include Jacquelyn Admire-Borgelt, M.S.P.H.; Steven Bernstein, M.D.; Wayne Bylsma, Ph.D.; Janet Chapin, R.N., M.P.H.; Donna Grande, M.G.A.; Jeanne Mahoney; Michael Weitzman, M.D.; Josh Wilk, Ph.D.; and Richard Yeast, Ph.D.

Ideas expressed in this report are those of the authors and do not represent the views of Legacy, AAMC, or the University at Albany.

The full report, detailed data and appendices can be viewed on the AAMC Legacy Foundation websites at www.AAMC.org/workforce/ and www.legacy.org.

Introduction

Physicians can be major contributors to efforts to reduce smoking and tobacco use and remain one of the most important sources of information on health issues and health risks for patients and their families. More than 70% of smokers will visit a physician each year (AHCPR, 1997), and physician advice and encouragement have been shown to increase the number of patients who will attempt and succeed in quitting smoking. Recent studies suggest that physician interventions have the potential to increase long-term abstinence rates to 30% from only 7% among adult smokers attempting to quit on their own (Orleans & Alper, 2003).

Physicians do not yet play the role they might in helping patients to reduce their dependence on tobacco. Of the approximately 45 million Americans who smoke, an estimated 70% reported wanting to quit (Centers for Disease Control and Prevention, 2004). However, the number of patients reporting that they had received advice to quit smoking from their physicians fell short of national goals established to address smoking cessation (National Women's Law Center, 2003; Fiore, Bailey & Cohen, 2000; Schnoll & Engstrom, 2004; Katz et al., 2004; Soloe et al., 2003). In addition, physicians are not routinely prescribing medications or providing services such as counseling and other supports consistent with current practice guidelines (Thorndike et al., 1998; Borum, 1999). Greater understanding of the factors that facilitate or impede physician participation in activities to control use of tobacco is needed to inform the design of programs and policies aimed at further reducing smoking, the most preventable cause of death and illness in our country.

The American Legacy Foundation (Legacy) funded the Association of American Medical Colleges (AAMC) to undertake a study that would increase understanding of physician practices and help explain why some doctors are more active in addressing smoking cessation with smokers than others. This information will be useful to a range of stakeholders including professional medical associations, public health agencies, policy makers, advocates and medical educators. AAMC, in collaboration with the Center for Health Workforce Studies (CHWS) at the School of Public Health, University at Albany, completed this comprehensive, national study of physicians and smoking interventions in 2006.

Project Goals

The overarching goal of the study was to promote the health of Americans by informing the development of programs and policies that improve medical treatment and prevention activities related to tobacco dependence. To reach this goal, the project was designed to:

- identify physician perspectives, knowledge, and practice patterns related to helping patients quit smoking;
- identify strategies to make more effective use of physicians in reducing smoking; and
- inform future investment in tobacco control initiatives.

Background

The study targeted physicians in four medical specialties: Family Medicine, General Internal Medicine, Obstetrics/Gynecology and Psychiatry.¹ The specialties selected have extensive contact with patients and are likely to treat patients who are smokers. Physicians in the primary care specialties and Obstetrics/Gynecology are likely to be the first point of contact for patients experiencing medical problems, and these physicians typically have long-term relationships with patients and their families. Psychiatrists were included because individuals with mental health diagnoses are more likely to be smokers than others (Williams & Aiedonis, 2004) and these physicians are also likely to have regular and long-term relationships with patients.

Project Activities

Several activities were undertaken to increase understanding of physician practices and experiences in addressing smoking with patients. These included:

- **Expert Advisory Committees**

A National Advisory Committee and a Medical Specialty Advisory Committee were established to serve as resources to investigators. The committees assisted with the design of the survey instrument, interpretation of findings, and identification of strategies to support physician involvement in helping control smoking with patients. The National Advisory Committee included educators, researchers, providers, and policy makers who were experts in addressing tobacco use. Medical Specialty Advisory Committee members included representatives of specialties targeted in the study as well as representatives from Emergency Medicine, Pediatrics, and the American Medical Association (AMA). A listing of committee members can be found in Appendix A of the full report on the AAMC and Legacy Web sites.

- **Survey of Physician Perspectives on Smoking Interventions**

A comprehensive survey instrument was developed and distributed to a sample of 17,941 physicians in the targeted specialties randomly selected from the AMA Masterfile of Physicians. The response rate to the survey was 17.1%, with more than 3,000 physicians returning completed questionnaires. This was significantly lower than had been anticipated; therefore, a validation survey was developed. The intent of the validation survey was to assess the potential bias from the low response rate to the original survey. The second survey trimmed down survey was sent to 650 non-respondents—along with \$20—which yielded a response rate of 56%. Based on a comparison of responses to both surveys, it was determined that little bias existed in responses to the original survey. This determination enabled the investigators to proceed with the analysis of the original survey responses and to generalize findings to all physicians in the four specialties with greater confidence. Findings presented in the report were drawn from a weighted database of survey responses from the original survey mirroring the profile of the targeted specialties. Both questionnaires are provided in Appendix B of the full report. A more detailed discussion of the data collection and analysis methodologies can be found in Appendix E of the full report.

¹ The American Academy of Pediatrics (AAP) had just concluded fielding a survey that addressed issues related to tobacco cessation counseling among patients and parents to its members when this project began. This specialty was therefore not surveyed as part of the AAMC study although AAP participated on the specialty advisory committee.

AAMC/CHWS also used information on levels of state tobacco control investment and information on quitlines (Tauras, 2005; North American Quitlines Consortium, 2006) to further examine physician practice patterns.

Literature Review

A review of the literature examining physician participation in activities addressing tobacco use was also completed. The review included an examination of factors that influence physician behavior as well as the practices of physicians in the targeted specialties related to helping control tobacco use. The summary of the literature review is provided in Appendix D.

Findings of the Study

- All physicians surveyed believe it is their role to help patients quit smoking.
- While most physicians consistently ask patients who smoke about their smoking status and advise them to stop (86%), they do not regularly provide extensive assistance to help patients try to quit. For example, only 13% say they usually refer smokers to others for appropriate treatment and only 17% say they usually arrange for follow-up visits to address smoking.
- Physicians regard current smoking cessation tools as inadequate, citing:
 - Insufficient services, resources, and organizational supports;
 - Interventions that have only limited effectiveness; and
 - Limited education and training for physicians on addressing tobacco use and cessation interventions
- The five factors cited most often by physicians as significant barriers to successful interventions are: (1) lack of patient motivation (63%); (2) limited coverage for interventions (54%); (3) limited reimbursement for a physician's time (52%); time with patients is limited (41%); and too few available cessation programs (39%).
- Physicians believe patients bear a significant responsibility for both smoking and quitting. However, these beliefs were not found to be associated with levels of participation in cessation activities.
- Physicians identified "More effective interventions" (78%) and "Increased availability of interventions" (60%) as the factors that would most motivate them to more frequently assist patients quit smoking. Increased insurance coverage for both cessation interventions (61%) and physician services (43%) to support their helping patients to quit smoking would also motivate physicians.
- Physicians who viewed incremental reductions in levels of tobacco use as successful outcomes were more likely to participate in cessation activities than those regarding success as complete abstinence only.
- Physicians reported they are not confident in their ability to motivate smokers to quit (44%), make referrals (34%), or monitor patient progress (33%).
- Physicians required by their medical practices to perform cessation activities were more likely to participate in a greater depth and breadth of activities to address tobacco use.
- Conversely, physicians who participated in a greater breadth and depth of cessation activities reported they had more resources available and/or were more positive in assessments of intervention effectiveness.

- The cessation practices and attitudes of Psychiatrists were significantly different from the other physician specialties targeted.
- Greater per capita investment in state tobacco control programs was associated with increased rates of physician referrals to cessation services as well as increased awareness of some resources.
- Quitline referrals were higher in states with established quitline programs and with a greater investment in tobacco control.

Physician Behaviors and Experience

Physicians believe they have a significant role to play in helping patients control tobacco use. More than 90% believed their role included helping both motivated and unmotivated patients to quit, discussing smoking behavior and relapse with patients, referring smokers to others for appropriate treatment, and monitoring patients' progress in their attempts to quit. Perceptions varied little by medical specialty, organizational setting of practice, or demographic background.

Physicians were much less likely to report that they regularly participated in the range of activities they recognized as part of their responsibilities. While a significant majority routinely asked patients about smoking status (84%) and advised smokers to stop (86%), fewer participated in activities such as counseling patients, enlisting support for quitting, monitoring progress, or prescribing medication (Table 1). Physicians were least likely to arrange follow up visits to address smoking with patients or refer them to others for appropriate treatment. This broad variation in performance of tasks was generally consistent with findings of other physician studies.²

Table 1. Percent of Physicians who “Usually” Engage in Specific Cessation Activities with Patients who Smoke

Advise patients to stop smoking	86%
Ask about smoking status	84%
Discuss pharmacotherapies	68%
Assess patient willingness to quit	63%
Discuss counseling options	37%
Recommend nicotine replacement therapy	31%
Discuss enlisting support for quitting	29%
Monitor patient progress in attempting to quit	27%
Prescribe other medication	25%
Provide brochures/self help materials	24%
Arrange follow-up visits with patient to address smoking	17%
Refer patients who smoke to others for appropriate cessation treatment	13%
Refer patients to a quitline	7%

² Studies examined include: Goldstein et al., 1998; Ellerbeck, et al., 2003; Saywell et al., 1996; Ellerbeck, et al., 2001; Chapin & Root, 2004; Grimley et al., 2001; Quinn et al., 2005; Easton et al., 2001; and Partnership for Tobacco Prevention and Cessation for Women of Reproductive Age, 2005.

Practice patterns differed among the targeted medical specialties, with Psychiatrists being the least likely to participate in most cessation activities. Obstetricians/Gynecologists were less likely than other specialties to prescribe medication and nicotine replacement therapy (NRT), or to discuss pharmacotherapies. While this likely reflects the fact that medications are often contraindicated when treating women who are pregnant, it also suggests particular challenges in addressing smoking with patients within this specialty as increasing numbers of women use Obstetricians/Gynecologists as their primary source of care. Practice patterns among physicians did not vary by demographic background or by organizational setting.

More than half of physicians reported spending on average between two and 10 minutes discussing quitting with patients. One in 10 reported spending more than 10 minutes, which is remarkable given the length of the average patient encounter.

Shortage of Cessation Tools

A majority of physicians across specialties and settings reported significant limitations in the interventions they have available to help smokers stop smoking. These included having too few cessation resources and organizational supports, as well as lacking interventions that are effective in helping patients quit.

In fact, physicians identified “More effective interventions” (78%) and “Increased availability of interventions” (60%) as the factors that would most motivate them to more frequently assist patients quit smoking. The more resources and organizational supports that physicians reported were available, the more they reported participating in a greater breadth and depth of cessation activities. Physicians most active in smoking cessation were also more likely to have more positive perceptions of the effectiveness of interventions.

Insufficient Services, Resources and Organizational Supports

Only half of physicians reported having at least one resource available to help patients quit smoking. As seen in Table 2, physicians were most likely to report that brochures, pamphlets, and posters were available in their waiting rooms, and that group programs by referral and individual counseling by referral were available. Many physicians without access to adequate resources indicated they would use them if they were available: Nine in ten physicians reported that they would use individual counseling and group programs, and seven in ten would use Internet-based smoking programs and multilingual resources.

Table 2. Percent of Physicians Reporting the Following Resources/Organizational Supports Were Available to Help Patients Quit Smoking

Informational poster / pamphlets in waiting room	50%
Group programs available by referral	46%
Individual counseling available by referral	41%
Tobacco user identification system	33%
Individual counseling available on-site	27%
Web-based smoking cessation programs available	26%
Multilingual resources available	18%
Staff dedicated to providing tobacco dependence treatment	13%
Group programs available on-site	10%
None of the above	13%

Physicians practicing in states with a higher per capita investment in tobacco control programs were more likely to report that resources were available and to refer patients to others for appropriate treatment. This pattern was consistent with physicians' reports that they would use resources if they were available.

Physicians who were more likely to know the status of patient coverage for medication/pharmacotherapy, counseling, and quitlines were also more likely to engage in smoking cessation activities.

While there was some variation among medical specialties in reporting the availability of resources and organizational supports, no single specialty had the most access to cessation tools. Psychiatrists were generally least likely to report that resources were available, with the exception of individual counseling. Internists, who were typically among the most active in participating in cessation activities, were more likely to report limited availability of resources than physicians in the other primary care specialties.

Lack of Effective Smoking Cessation Interventions

A majority of physicians reported that most cessation interventions have “some” effectiveness; however, less than one-third rated any single intervention as “highly” effective. The interventions physicians were most likely to perceive as being highly effective included bupropion and nicotine replacement therapy (NRT) (29%), NRT and counseling (21%), or family support (19%). Evidence-based studies suggested that such interventions are associated with abstinence rates of up to 38%.

Assessments of interventions did not vary by specialty, organizational setting, or gender. Younger physicians and those who reported being well prepared by their formal medical education and training on tobacco use were more likely to accurately identify intervention effectiveness.

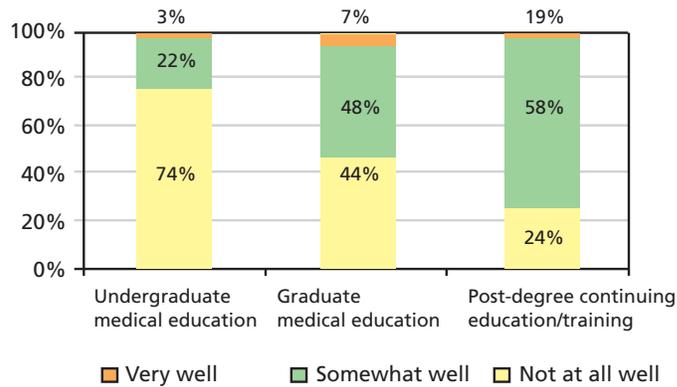
As noted above, physicians who were more active in cessation activities differed from other physicians in their perceptions of intervention effectiveness. They were more likely to hold positive perceptions of interventions overall and less likely to hold negative perceptions. However, more active physicians were only slightly more likely than others to accurately assess intervention effectiveness consistent with evidence-based findings. This reinforces the need to improve physicians' knowledge about interventions generally.

Limited Learning Opportunities

Few physicians reported being “very well prepared” by medical education and training to help patients stop smoking. However, more recent medical school graduates were more likely to report that they were well prepared by education and training. Most physicians reported that their specialty training (graduate medical education or GME) programs prepared them to assist patients with smoking cessation; 42% of physicians graduating prior to 1975 reporting they were “somewhat” or “very well prepared” as compared to 80% of graduates since 1995. However, seven in ten physicians graduating since 1995 did not feel well prepared by their undergraduate medical education alone (Figure 1).

Figure 1. Evaluation of Formal Preparation in Smoking Cessation

More physicians reported that CE programs on cessation did not prepare them very well.



Twenty-eight percent of physicians reported that no continuing medical education (CME) programs on smoking cessation were available, while only 2% reported having “many options.” Among the medical specialties, physicians in Family Medicine were least likely to report continuing education on cessation to be unavailable (19%), as compared to more than 30% of those in Internal Medicine, Obstetrics/Gynecology, and Psychiatry. A reexamination of the design and delivery of educational programs may be needed to increase physician awareness of, and access to, continuing education.

Additional Information Desired

Physicians want additional information on a range of smoking cessation topics. About three-fifths of all physicians wanted to learn about selecting self-help materials for patients who smoke and motivating patients who smoke to quit despite limited confidence in the effectiveness of such materials. Specialties varied in their interest in several topics. In some cases this reflected the patient populations served; for example, Obstetricians/Gynecologists were more interested than others in information on treating pregnant women while Family Medicine physicians were more interested in information on treating patients under 18 years of age. Psychiatrists and Obstetricians/Gynecologists were much more likely to want additional information on how best to “ask” and “advise” patients to stop smoking.

Addressing the Need for Behavioral Changes

Most physicians felt they were not “very effective” in addressing behavioral changes of any type with patients (Table 3). However, physicians who were more confident in their abilities in this area were more likely to participate in a greater breadth and depth of activities to reduce use of tobacco with patients.

Table 3: Physicians Perceived Effectiveness When Discussing Certain Behavioral Changes

	Not very effective	Somewhat effective	Very effective
Smoking	14%	76%	10%
Alcohol	21%	71%	8%
Obesity	32%	61%	7%
Cholesterol	10%	58%	32%

Most physicians feel unable to affect behavioral changes in their patients particularly when it comes to the use of tobacco, alcohol and behavior related to obesity. However, physicians clearly feel more comfortable dealing with health conditions that are medically or pharmacologically “treatable” such as hypercholesterolemia. Providing opportunities for skill development around behavioral change issues at all levels of education would help improve physicians’ effectiveness in addressing chronic relapsing disorders, such as smoking, with patients.

In addition, most physicians regard patient outcomes short of total abstinence as successful results in controlling use of tobacco. Broader views of what constitutes successful outcomes were associated with greater physician participation in cessation activities. This suggests that physicians should be educated about more inclusive definitions of what constitutes “successful” smoking cessation outcomes.

Other Barriers to Effective Smoking Cessation Behavior

Lack of patient motivation and poor financing of cessation activities were both reported as significant barriers to helping patients stop smoking.

Patient Responsibility

Physicians believe that patients bear considerable responsibility for choosing to smoke and for quitting; “Patients are not motivated to quit” was most frequently identified as a significant barrier (63%). Two-thirds also believe that “Smokers choose to continue smoking,” and almost two-fifths believe that “Most smokers quit on their own.” These attitudes and perspectives suggest the frustrations and challenges many physicians experience in trying to assist smokers to reduce tobacco use.

It is important to note that physicians’ attitudes about patients were not associated with the breadth or depth of their participation in smoking cessation activities. Physicians who held these attitudes were no more or less likely to be active in assisting smokers. However, more than half of physicians reported that they would be motivated to assist patients more frequently if more patients asked for

help. Since most smokers report wanting to quit, identifying strategies to encourage both smokers and physicians to initiate discussions about stopping smoking would be useful.

As their self-reported general knowledge about tobacco use increased, physicians were less likely to hold negative perceptions and attitudes about patients' use of tobacco.

Reimbursement

More than half of physicians identified financing issues as barriers to assisting patients to stop smoking, including limited coverage for cessation interventions (54%) and limited reimbursement for a physician's time (52%).

As seen in Table 4, medical specialties differed in their perceptions of these barriers. Physicians in most specialties were similarly likely to report coverage for cessation interventions as "limited". Those in Family Medicine were more likely than others to view reimbursement for a physician's time as limited. Psychiatrists were less likely than others to report these barriers as "significant".

Table 4. Physicians Reporting Significant Barriers to Helping Patients Stop Smoking by Specialty

Percent reporting barrier as significant	Family Medicine	Internal Medicine	Obstetrics/ Gynecology	Psychiatry	All Respondents
Patients are not motivated to quit	59%	67%	67%	58%	63%
Coverage for cessation interventions is limited	56%	55%	54%	45%	54%
Reimbursement for physician time is limited	58%	51%	48%	46%	52%
Time with patients is limited	45%	43%	41%	30%	41%
Too few cessation programs are available	32%	44%	34%	47%	39%
My understanding of CPT codes for smoking treatment is limited	32%	36%	42%	40%	36%
Patients have more immediate problems to address	31%	34%	34%	47%	35%
Patients usually fail to quit	30%	38%	37%	35%	35%
Other practice priorities reduce my ability to address smoking w/ patients	27%	25%	37%	40%	30%
Staff are unfamiliar with interventions to help smokers quit	15%	19%	26%	28%	20%
Colleagues do not believe in the efficacy of cessation interventions	8%	9%	11%	12%	9%
Cessation heightens patients' other symptoms	6%	10%	6%	22%	9%
My experience in intervening with smokers is limited	3%	5%	14%	19%	8%

The survey asked physicians whether most of patients had coverage for specific cessation services. Nearly two-thirds reported that patients had some coverage for medication as compared with only one-third reporting coverage for counseling, and less than one-tenth reporting coverage for quitlines. Physicians were also more likely to “know” whether a majority of patients had coverage for medication and pharmacotherapies as compared to counseling services and quitlines. Physicians who knew the status of coverage, despite availability, were more likely to participate in a greater depth and breadth of cessation activities.

Specialties differed in their understanding of how to effectively code for smoking treatment. Physicians with lower understanding of codes were less active in cessation activities. Increasing physician awareness both of the status of patient insurance coverage and of CPT codes related to cessation interventions would seem to be advisable.

Factors Associated with Increased Cessation Activities

Practice Requirements

Approximately half (53%) of physicians report that they are required by practice guidelines to ask patients about tobacco use and to document patient smoking status; one-third are required to document discussion of treatment strategies. Physicians participating in the greatest breadth and depth of cessation activities were more likely to report any one of such required protocols in their practices. The greatest correlation between physician activity and practice protocols was with the requirement to document treatment strategies.

Psychiatrists were less likely than other physicians to have requirements to ask about tobacco use or to document smoking status or treatment strategies despite organizational setting.

Physicians who reported any practice requirements were also more likely to report having resources available to help smokers stop smoking. Since resources and organizational supports do not currently meet existing needs, understanding the relationship between access to resources and clinical practice requirements will be a useful focus for future study. Such research will help clarify how requirements influence physicians’ skills in identifying potential resources and shape characteristics of practices that may facilitate access to services. This information will help optimize use of existing and new resources that may become available.

State Investment in Tobacco Controls

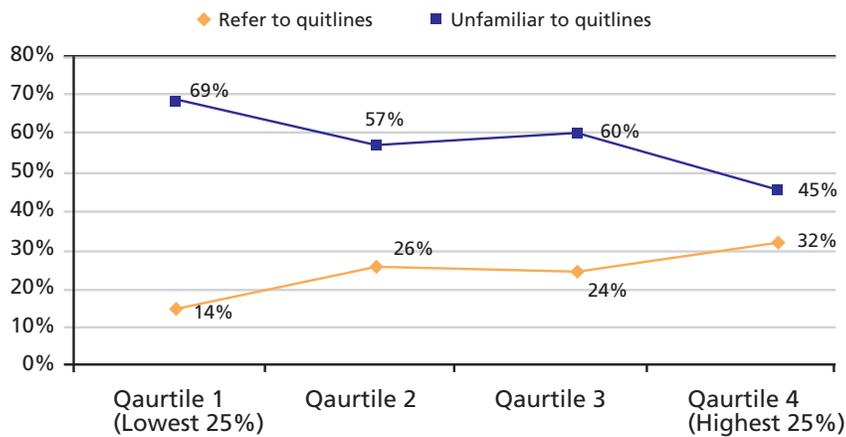
Investment in tobacco control varies with states allocating funds from several potential sources to reduce tobacco use. These include Master Settlement Agreement funds negotiated by the tobacco industry and states, state taxes on tobacco, other federal or state allocations, and foundation support. Investments have been made in a range of initiatives: cessation programs, public information campaigns to increase awareness of the hazards of tobacco use, development of educational material, establishment of information and referral resources, school smoking prevention programs, and public policy initiatives to reduce smoking.

Investigators found that the level of state per capita investment in tobacco control was positively associated with physician behavior in some key areas. Physicians are more likely to refer patients who smoke to others for treatment as state investment in tobacco control increases. Those practicing in states with higher per capita investment were also more likely to report greater availability of some types of cessation resources, including group programs and informational materials (pamphlets, brochures, and posters).

A positive relationship between state investment and the use of quitlines was also found. Quitlines typically provide a range of direct and referral services to smokers. Physicians in states with greatest per capita investment in tobacco control were more than twice as likely to make referrals to quitline programs as those in states with lowest investment. Physicians' awareness of quitlines also increased with investment in tobacco control programs (Figure 2).

Figure 2. Referral to Quitlines by Level of State Investment in Tobacco Control

Physicians were more likely to know about refer to quitlines as state investment in tobacco control increased.



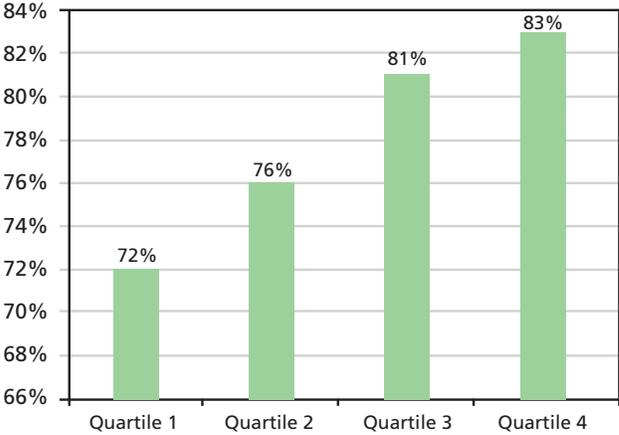
Quitlines have been available in some states for several years but have only recently been established in many others. There is now an established national quitline, 1-800-QUITNOW, that directs patients to their state-run quitline. These programs promote system change by connecting partners working to reduce smoking, e.g., employers, insurers, and services, in addition to offering direct services to smokers.

Only about one-fifth of physicians surveyed had ever referred patients to quitlines. Referrals were higher in states where quitlines had operated 36 or more months and were also highest in states that had established programs. Physicians under the age of 40 were more likely to have ever referred patients to a quitline. Referrals to, and familiarity with, quitlines decreased as physicians aged, with those older than 60 being less likely to use or know about this type of resource.

Other referrals by physicians increased with the level of state investment as well (Figure 3).

Figure 3: Physicians Reporting Making Referrals to Others for Appropriate Treatment

More physicians had “ever” made referrals to others in states with higher per capita investment in tobacco control initiatives.



The association between physician behavior and level of state investment differed by specialty. Those in Family Medicine were more likely to refer and to report awareness and availability of resources than physicians in other specialties as state expenditures increased. Physicians in hospitals were much more likely to be familiar with and to have referred to quitlines (50% vs 33% for group practice and 24% for solo practice) as state investment in tobacco control programs increased. Women and non-Hispanic White physicians were also more likely to participate in cessation activities in high investment states.

This finding seems consistent with physicians’ views that more resources would be used if they were available.

Conclusions

Decreasing the rate of tobacco use in the US will require greater activity on the part of the nation's physicians in cessation activities. This will require increased familiarity with available resources as well as sustained efforts to improve the quantity and quality of these resources. Specifically, several areas for improvement exist, including:

Increase the availability and use of tobacco control tools

- Increase the number and range of smoking cessation services
- Promote physician familiarity with tobacco control resources through the timely sharing of information on new and existing programs as well as how patients can access these services
- Provide physicians with additional information on quitlines and web based resources

Increase physician assistance to patients who smoke to reduce their use of tobacco

- Encourage medical practices to require documentation of activities undertaken to help patients quit smoking, e.g., documentation of treatment strategies discussed with patients
- Include questions in electronic medical records that monitor smokers' use of tobacco
- Use feedback systems in practice settings to update physicians on patient activities related to trying to quit
- Develop incentives, such as "pay for performance" initiatives, to encourage regular physician participation in cessation activities
- Improve physician-patient communication around tobacco use

Increase physician knowledge of tobacco control interventions

- Improve effectiveness of medical school and residency curricula on tobacco control as part of assisting patients with behavioral changes
- Increase the availability of CME related to smoking cessation and behavioral change

Improve coverage for tobacco control treatment, services, and physician time

- Expand insurance coverage to include additional cessation treatment and support services
- Broaden the services reimbursable for physicians when assisting patients with smoking cessation
- Improve physician understanding of insurance coverage for cessation activities

Support investment in tobacco control

- Increase tobacco education funding to states with lower spending
- Improve linkages between physician associations and other tobacco control stakeholders to promote collaboration in efforts to promote the health of citizens in communities.