Relationship Between Tobacco Control Policies and the Delivery of Smoking Cessation Services in Nonprofit HMOs


Background: This project examined tobacco policies and delivery of cessation services in nonprofit HMOs that collectively provide comprehensive medical care to more than 8 million members. Methods: Three annual surveys with health plan managers showed that all of these health plans had written tobacco control guidelines that became more comprehensive over the span of this study. We also surveyed a random sample of 4207 current smokers who had attended a primary care visit in the past year (399–528 at each of nine health plans). Results: Of these smokers, 71% reported advice to quit, 56% were asked about their willingness to quit, 49% were provided some assistance in quitting (mostly self-help material or information about classes or counseling), and 9% were offered some kind of follow-up. Smokers receiving assistance in quitting reported higher satisfaction with their care. Conclusions: In general, health plans with the most comprehensive policies also showed higher rates of implementing tobacco treatment programs in primary care. Compared with tobacco control efforts of a decade or more ago, considerable progress has been made. However, there is still room for improvement in the proportion of smokers who receive the most effective forms of assistance in quitting. [J Natl Cancer Inst Monogr 2005;35:75–80]

Tobacco smoking remains the leading preventable cause of morbidity and mortality in the United States, accounting for more than 440,000 deaths annually and a third of all cancer deaths (1–3). Although the proportion of the population that smokes has declined considerably in the past 25 years, overall smoking rates have recently leveled off (2).

Health care systems are in a particularly strong position to address the tobacco epidemic. Many clinical trials have documented the effectiveness of brief physician advice and counseling to stop smoking, and the U.S. Public Health Service clinical guideline has summarized the evidence behind its recommendations for the “5 A’s”, a five-step sequential treatment program: (1) ASK patients about smoking status at every visit, (2) ADVISE all tobacco users to quit, (3) ASSESS a patient’s willingness to try to quit, (4) ASSIST the patient’s quitting efforts (provide smoking-cessation treatments or referrals), and (5) ARRANGE follow-up (schedule supportive follow-up contacts) (4,5). The five A’s have become the national model for tobacco treatment in medical care.

Since 60%–70% of smokers at any given time express an interest in quitting, and since 70% of them also report at least one physician visit in the past year, there is ample opportunity for clinicians to take effective action (2,6–8).

Most Americans receive their health care from managed-care organizations, and these health systems are in an excellent position to encourage a variety of smoking cessation treatments as a part of routine health care. HMOs can combine policy, organizational, health care provider, and individual-level initiatives to integrate tobacco control into delivery systems, and they have their own financial incentive to reduce tobacco use in their defined populations (9–13). Several HMOs have become nationally known for their tobacco cessation research (7,14–20).

Tobacco control policies in HMOs have been assessed by three large-scale national surveys conducted in 1997, 2000, and 2002 by the Addressing Tobacco in Managed Care (ATMC) program (21–23). These policy surveys included 323, 85, and 152 managed care programs in 1997, 2000, and 2002, respectively. The ATMC surveys show a trend toward improved tobacco control policies and increasing insurance coverage for smoking-cessation services between 1997 and 2002. For example, in 1997 less than half of the responding plans (47%) had written guidelines or had implemented any of the AHCPR guidelines for managed-care organizations, whereas by 2004, 71% had written guidelines for tobacco control. The ability of plans to identify individual members who smoke increased from 15% of plans in 1997 to 72% in 2002. Full coverage for some form of pharmacotherapy for smoking cessation increased from 25% of plans in 1997 to 89% of plans in 2002. Overall, the results of the ATMC surveys show a strong trend toward more aggressive tobacco control policies in HMOs.
control policies with increasing attention to identifying smokers and providing them with advice and assistance in stopping smoking. A similar survey of 34 California-based HMOs conducted in 1999 showed much the same results as the ATMC surveys (24).

This article examines the tobacco control policies in 11 nonprofit HMOs and shows how those policies evolved over a 3-year period. All of the HMOs in this study have been leaders in developing and implementing tobacco control programs. Of special interest is a patient survey conducted in nine of these health plans immediately after the first policy survey. The combination of the policy and patient surveys allows examination of the relationships between organizational policies and the actual delivery of tobacco cessation services to smokers. Relevant data from a simultaneous survey of physicians in the nine health plans are also presented. Although the study HMOs are not representative of managed-care plans in general, the results from the surveys show how well current national guidelines for tobacco control are being implemented in nonprofit health care systems with long-standing, comprehensive tobacco control programs.

Methods and Results

This study was conducted within the Cancer Research Network (CRN), a consortium of research organizations affiliated with nonprofit integrated health care delivery systems and the National Cancer Institute. The CRN consists of the research programs, enrollee populations, and databases of 11 integrated health care organizations that are members of the HMO Research Network. The health care delivery systems participating in the CRN are: Group Health Cooperative, Harvard Pilgrim Health Care, Henry Ford Health System/Health Alliance Plan, HealthPartners Research Foundation, the Meyers Primary Care Institute of the Fallon Healthcare System/University of Massachusetts, and Kaiser Permanente in six regions (Colorado, Georgia, Hawaii, Northwest [Oregon and Washington], Northern California, and Southern California). The 11 health plans have nearly 10 million enrollees. The CRN conducts collaborative research on variations in cancer prevention and treatment policies and practices.

The three components of this project included HMO policy surveys, a patient survey, and a survey of primary care physicians. The methods and results of each of these project components are described below in series, followed by a description of how findings from these components relate to each other. The results of the three components provide a comprehensive view of the delivery of tobacco control services in these nonprofit HMOs. A few of the HMOs in this study included multiple health care models. We limited our physician and patient surveys to those portions of the health care systems that were staff models or an exclusive group practice model that closely resembled a staff model (i.e., Kaiser Permanente).

Human Subject Reviews

All of the data collection procedures described in this article were reviewed and approved annually by each of the institutional review boards of the HMOs listed in the following section. This task was complicated by the widely various and occasionally conflicting requirements of these review boards.

Policy Surveys

Survey methods. We surveyed key managers in 11 medium and large HMOs to obtain descriptions of their policies and practices regarding tobacco control. All 11 HMOs are well-established nonprofit managed-care organizations with a strong research orientation, clear commitment to control of tobacco use, award-winning tobacco control programs, and above-average scores on the Health Plan Employer Data Information Set (HEDIS) tobacco measure (25). Managers were surveyed by mail and telephone using a standardized protocol (16). The first policy survey was conducted in the winter of 1999–2000, and the subsequent surveys were completed in 2001 and 2002.

The 11 HMOs surveyed included nine members of the CRN, plus two more nonprofit HMOs (27). A description of the CRN health plans may be found in Wagner et al. (in press). The two non-CRN health plans were the Providence Health Plan in Portland, Oregon, and Kaiser Permanente Georgia (Kaiser Permanente Georgia joined the CRN consortium after this study was completed).

The structured survey used in this assessment covered the program components recommended by the USPHS tobacco guidelines (5) and the Centers for Disease Control and Community Preventive Services Task Force (28, 29). Assessment included questions about clinical guidelines for smoking cessation and prevention, other tobacco-related policies, implementation of tobacco control policies, monitoring and encouraging provider adherence to tobacco guidelines, support for systems to address tobacco cessation treatments, and health plan coverage of tobacco-cessation treatments. Multiple informants with knowledge of each organization's tobacco-control policies, typically physician administrators or health educators, were chosen to complete the survey in writing and by telephone. Initial informants were selected by tobacco cessation researchers in the local health plan, with additional informants identified during the interviews. Interviews required an average cumulative total of 8 hours per health plan. To ensure consistency, one staff member conducted all of the policy interviews.

Policy survey results. Results of the first policy survey, which was completed in 2000, have been reported (26), but the results of the 2001 and 2002 surveys are reported here for the first time and show the rapid evolution of tobacco control policies. The first survey found that all 11 HMOs had established many policies and programs for tobacco control. Ten of the 11 HMOs had an overall written tobacco control policy, and all 11 had policies and procedures to encourage delivery of the first two of the five A's (ask about smoking status and advise patients to quit smoking) as part of routine medical care. Policies regarding the other A's were less consistent, as were policies concerning special patient populations.

The second and third annual policy surveys showed that tobacco control policies in these health care organizations became increasingly comprehensive over this short time span. There was steadily increasing attention to systems to support the detection of tobacco use in multiple populations and the delivery of a variety of tobacco cessation services to patients.

Figure 1 shows the concordance of tobacco policies of these HMOs with the national treatment guidelines (5 A's). Between 2000 and 2002 there was a change toward more comprehensive policies, especially for the Assess and Assist steps. By 2002, all 11 HMOs had policies calling for assessing tobacco use at every primary care visit, providing advice to quit, and providing patients with assistance...
in their smoking cessation efforts. However, only about half of the HMOs had tobacco control policies in place for special populations such as pregnant women, hospital patients, and adolescents, and this changed little over this period (data not shown).

Implementation of tobacco cessation programs in medical care settings can be greatly facilitated by certain types of system support. For those plans that have a unified medical record, for example, a systematic way to identify smoking status in the medical record of every patient can provide a reminder to clinicians to give advice and assistance, and such a way can facilitate continuity of care and follow-up treatment. In the first survey, only three HMOs reported having systematic ways to identify smokers in their medical records systems, and this number rose to five by the third survey. Figure 2 shows the changes in policy related to medical office systems to support tobacco control, for example, the use of stickers, chart stamps, and other prompts for identifying tobacco use status to providers (tobacco use as a vital sign) and to encourage delivery of tobacco cessation services. Note that only half of the HMOs had current training programs for staff in any given survey year. Figure 3 shows changes in overall policies and implementation supports for tobacco control. Note that an increasing proportion of the health care systems were setting specific tobacco reduction goals.

**Patient Survey**

**Patient survey methods.** To assess the experience of smokers in primary care, we surveyed a random sample of patients in each of the nine HMOs in the CRN (see policy survey methods). That is, we conducted patient surveys in nine of the 11 HMOs in which we conducted policy surveys. Together, these nine HMOs provide comprehensive medical care to more than eight million members including a 30% minority enrollment.

To identify about 500 current smokers in each of these nine HMOs, we mailed a 29-item survey to 64764 adults who had a primary care visit in the previous 12 months. Those who did not respond were mailed a prompting letter and then a second survey. Those who did not return the survey by mail were called and the survey was completed as a telephone interview (a minimum of three attempts were made to contact by telephone). The survey started in late 1999 and was completed in the fall of 2000 (25,30). The patient survey was intended to assess the general population of adult smokers and did not attempt to identify individuals who were parents of young children, had been hospitalized or were pregnant in the past year, or other special populations of patients. The patient survey was kept as brief as possible in an attempt to minimize participant burden that thereby increase the response rate.

**Patient survey results.** After adjusting for the 7.5% that were undeliverable or where respondents were found to be ineligible (died, no longer members, or unable to communicate), there were 41677 completed responses (70%). Of these, 80% had responded by mail and 20% to telephone follow-up. The response rate from all of those with attempted telephone follow-up was 33%. Compared with those who responded, nonresponders were more likely to be male (40% versus 33%; P≤0.001) and younger (mean age 44 versus 49 years; P≤0.001).

Of those who provided survey responses (n = 41677) 10% were current smokers who had made at least one outpatient visit in the previous 12 months (n = 4207). The number of smokers identified from each health plan ranged from 399 to 528. Combining data from all nine health plans, 74% of the current smokers reported being asked about tobacco use at their last primary-care visit, with a range of 66% to 82% across the nine health plans. This high rate of assessment of smoking status shows that, in these health care systems, tobacco use has become a vital sign assessed at most primary care visits.

When considering receipt of tobacco cessation advice and services, we chose to ask about the patient’s experiences over the previous 12 months. Although the guidelines call for provision of services at every visit, we chose to ask “During the past 12 months, did a doctor, nurse or other health care professional do any of the following …?” With limited space on the questionnaire, we were
most interested in the overall pattern of services for patients over time rather than by visit. Using this approach, 71% (range, 65%–78%) of the smokers reported getting advice to quit at least once in the past year, 56% (range, 47%–68%) were asked about their interest in quitting (Assess), 49% (range, 42%–63%) received some form of assistance in quitting, and 9% (range, 8%–14%) were scheduled for follow-up contacts to help in quitting (Arrange).

The most commonly reported form of assistance was being offered pharmacotherapy (38% of smokers), followed by 37% receiving information about classes or counseling and 30% receiving self-help materials (some smokers reported receiving more than one type of assistance in the past 12 months).

Consistent with many other studies, we found that most smokers wanted to quit within the next 6 months (69%) and that most smokers (82%) reported that they wanted their physicians to address smoking often or at every visit. Satisfaction with health care services was lowest among smokers who did not receive cessation services and was highest among those who reported assistance or follow-up contacts (30).

### Physician Survey

**Survey methods.** In early 2001 we conducted a survey of primary care physicians in each of the nine CRN HMOs participating in this study (31). We mailed a 19-item questionnaire (one page) to 100 randomly selected physicians in each organization. Eligibility criteria included adult primary care physicians (internists, family physicians, or obstetrician–gynecologists) who had worked for the current group for at least 1 year and who worked at least half time in a non–urgent care setting.

**Physician survey results.** After excluding 65 respondents who did not meet the inclusion criteria (e.g., left the practice group, not working at least half-time), the adjusted response rate was 91% (761 of 835). Physician awareness of their health plan’s clinical guidelines for tobacco cessation was highly variable. For example, the proportion of physicians who reported receiving a copy of their plan’s tobacco guidelines varied from 61% to 90%. However, at least two-thirds of the physicians at each HMO (range, 66%–98%) reported ‘yes’ to the questions “Does your plan’s guideline recommend identifying smokers at every visit?” “…advising all smokers to quit?” and “…assisting smokers to quit?” Although many physicians at each plan were unaware of the details, a large proportion understood the general aspects of their plan’s tobacco policy.

### Relationships Between Policy and Patient Reports

The overall finding from our study has been that the national tobacco treatment guidelines, both for health care administrators and insurers, as well as the 5 A’s, have been partially implemented. All of the medium and large HMOs we studied had aggressive policies focused on tobacco control, but the actual implementation of these policies was uneven. Whereas patient surveys at all nine of the plans studied showed high rates of assessing tobacco use, only about half of the patients reported receiving assistance in quitting during that period. Most of those not receiving assistance reported an interest in quitting smoking and an expectation that their physician should help them stop smoking.

Using data from the year 2000 policy survey and the year 2000 patient survey, we found an association between health plan policies and services received by patients. Five of the nine health plans provided feedback to physicians regarding their delivery of smoking cessation services and had incentive systems for delivering these services. Patients in HMOs providing feedback and incentives to physicians reported higher levels of receiving advice to quit, assessment of readiness to quit, receiving self-help smoking cessation materials, and smoking cessation counseling from their physician (Table 1). Physician survey results also showed that organizations providing feedback and incentives to physicians had higher levels of physician knowledge of the HMOs tobacco policies, and higher rates of assistance for patients. Smokers in the four HMOs with physician training programs were also statistically significantly more likely to report receiving tobacco cessation advice and services than those in the HMOs without training programs (Table 1).

There were only minimal differences between the nine health plans with regard to coverage for more intensive treatment programs. At the time of our survey, all nine plans provided coverage for Bupropion and some form of nicotine replacement, and all nine plans also provided coverage for group-based smoking cessation counseling. Most also offered coverage for telephone counseling, and/or referrals to non–health plan telephone counseling programs. Since there were only minimal differences in coverage, we were not able to see differences in service delivery related to insurance coverage for pharmacotherapy or behavioral treatment.

### Discussion

Compared with a few decades ago when health care workers smoked on the job and it was common practice to sell cigarettes in hospital gift shops, we can see great improvement in tobacco policies in HMOs. Most patients in the systems we studied are now being asked if they smoke, and this information is likely to be recorded in the medical record as a vital sign. Most smokers are also likely to receive advice to quit smoking. Although not sufficient, these improvements are an essential foundation for a comprehensive tobacco control program. The other key elements,
assessing patient readiness to quit, providing assistance in quitting to willing patients, and arranging follow-up contacts for patients who are attempting to quit, are being provided less consistently, but the overall trend appears to be toward providing more comprehensive services for smokers. The proportion of patients receiving assistance, particularly the more effective types of assistance, is higher in health plans that provide feedback and incentives about these actions to physicians.

A major limitation of this study is that the policies and smoking cessation treatment patterns seen in these HMOs are not representative of managed-care programs in the United States. In comparison with the national policy surveys conducted by ATMC (23), the health plans included in our study have more aggressive and comprehensive tobacco control programs. Study of these vanguard plans helps to show which policies are most effective and provides examples of effective policy implementation.

Given the relatively aggressive tobacco control policies of the HMOs in our study, it is a bit disappointing that many smokers are not receiving assistance in quitting or are receiving only minimal assistance such as a smoking cessation brochure. To be specific, our patient survey shows that only about half of the smokers with insurance coverage for multiple smoking cessation treatments are actually receiving treatment in any given year. Although this is much better than several decades ago when treatment rates were in the low single digits, there is still much room for improvement.

In our study, the programmatic supports for tobacco cessation that appeared to have the most effect on increasing the proportion of patients who receive treatment include detailed and specific tobacco control policies, physician training programs, providing feedback to physicians on their delivery of tobacco services to patients, and using incentives for providing tobacco cessation treatment. This level of commitment by health plans leads to higher rates of delivering smoking cessation services to patients. Areas still needing improvement include developing more effective supports for delivering high quality assistance to patients and better systems for providing supportive follow-up for patients receiving initial smoking cessation treatment.

REFERENCES

NOTES

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