

# Purchasing health insurance coverage for smoking cessation treatment: Employers describe the most influential information in this decision

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Received 25 July 2005; accepted 29 November 2005

**Employer provision of insurance coverage for smoking cessation treatment (SCT) remains spotty despite a body of treatment efficacy and cost-effectiveness evidence available to inform and support this health care purchasing decision. This qualitative study examined the information on which this coverage decision is made. In this study, state employers describe the content and sources of the most influential information in their decision to provide insurance coverage for SCT as well as a second health benefit for comparative purposes. We provide insight into the extent to which SCT evidence informs the SCT coverage decision and suggest topics and targets for research dissemination. We interviewed 55 employee benefit staff in 35 states. Responses were compared from states with and without SCT coverage to explore the types of information that may be more effective at promoting coverage. The content and sources of the information employers judged most useful varied notably between states with and without SCT coverage. Compelling evidence of the efficacy of SCT and its cost-effectiveness did not appear to play an influential role in the SCT decision among states without SCT coverage relative to states with SCT coverage. States with SCT coverage relied significantly on benefit consultants and actuaries for the information they described as most influential; in comparison, noncovered states reported service providers, staff, and the Internet as major information sources. To foster employers' provision of SCT coverage, research dissemination efforts should emphasize SCT efficacy and cost-effectiveness information and tailor communication to benefit consultants and actuaries in addition to employers themselves.**

## Introduction

A key strategy for reducing tobacco dependence is to increase the use of efficacious smoking cessation treatment (SCT). One important step toward this goal is to increase the accessibility of SCT through greater insurance coverage (Fiore et al., 2000). Providing insurance coverage for SCT to defined populations has been shown to increase the use of SCT and reduce smoking prevalence (Curry, Grothaus, McAfee, & Pabiniak, 1998; Schauffler

et al., 2001). Several expert panels have recommended expanding coverage to stimulate use (e.g., Fiore et al., 2000; Fiore et al., 2004; Task Force on Community Preventive Services, 2001; U.S. Department of Health and Human Services, 2000). Numerous stakeholders have influence over the availability of SCT insurance coverage, including health insurers and managed care organizations, legislative bodies, and employers.

Employers are especially promising agents of policy change. They are the primary source of health insurance for nonelderly Americans (Fronstin, 2004), and they influence the design and scope of the health insurance benefits available to their employees (e.g., Bodenheimer & Sullivan, 1998a, 1998b; Maciejewski, Dowd, & Feldman, 1997). Moreover, they stand to benefit directly from reduced smoking prevalence among employees through increased productivity, reduced absenteeism, and reductions in health care

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use (Lesmes, 1992; Pronk, Goodman, O'Connor, & Martinson, 1999; Wagner, Curry, Grothaus, Saunders, & McBride, 1995).

Despite these incentives to provide coverage, employers in both the public and private sectors have been slow to include SCT in employee health plans. For example, more than half of states do not require that the health insurance offered to their state employees conform to the U.S. Public Health Service guideline for treating tobacco use and dependence in terms of the inclusion of both pharmacotherapy and counseling (Burns, Bosworth, & Fiore, 2004; Fiore et al., 2000). Among private employers, SCT ranked close to the bottom of 24 preventive services covered (Partnership for Prevention, 1999).

Employers report cost as a significant barrier to the purchase of preventive health benefits, including SCT (Partnership for Prevention, 2002). However, the available evidence regarding SCT cost contradicts these specific concerns. For example, employers note that preventive benefits are perceived as cost-ineffective. Numerous studies have shown SCT to be cost-effective, alone or compared with other preventive treatments (Coffield et al., 2001; Cromwell, Bartosch, Fiore, Hasselblad, & Baker, 1997; Harris, Schaffler, Milstein, Powers, & Hopkins, 2001). Employers also report that insufficient demand exists to justify the cost of such coverage. Studies have demonstrated that if demand for SCT is stimulated, effective use increases (Curry et al., 1998; Schaffler et al., 2001). Finally, employers argue that a mismatch exists between the short-term cost of preventive benefits borne by the employer and the long-term benefit likely to be reaped by a future employer (Partnership for Prevention, 2002). However, the payoff time to employers who provide SCT insurance has been calculated as approximately 3 years, less than the 3.6-year median tenure of employment in the United States (Harris et al., 2001; Warner, Smith, Smith, & Fries, 1996).

The apparent disconnection between employers' concerns regarding SCT coverage and the evidence available to counter those concerns suggests an opportunity for research dissemination. Although scientific information is just one factor among many that affect health care purchasing decisions (Milbank Memorial Fund, 2000; Schneider & Jacoby, 1996), it is a resource that is readily available to tobacco policy analysts and advocates and one that is appreciated by health care purchasers. Health care purchasers report that they highly value clinical and cost-effectiveness evaluations of health technologies and interventions; however, they also report difficulty assessing the data and translating evidence into practice (Milbank Memorial Fund, 2000). Understanding the nature of the information that purchasers consult in the SCT coverage decision, and

the information sources that they view as credible, can help guide dissemination efforts by identifying both under utilized areas of SCT research in this decision process and effective conduits for SCT research.

This study describes the content and sources of information that state employers identify as most influential in the SCT coverage decision. Ideally, these findings will provide insight into the extent to which specific components of smoking cessation information influence the SCT decision process. We also hope to suggest topic areas, and additional targets, for research dissemination to facilitate the purchase of SCT coverage for employees. We used qualitative interviews to elicit state employers' views of the most influential information (MII) in the SCT decision process. Responses from states with and without SCT coverage for their employees were then compared to explore the types of information that may be more effective in promoting SCT coverage. For these same two groups of states, we also compared employers' descriptions of MII for another health benefit decision. This second analysis provided insight into whether potential differences in MII reported for the SCT decision between states with and without SCT coverage were specific to that decision or potentially related to other factors such as differences in the health benefit purchasing process.

Our focus is on state employers. They are often the largest employers in their states, among the largest in the country, and cover more than 5 million employees and retirees nationwide (The Segal Company, 2000). Even modest increases in SCT utilization by state employees could have a substantial impact on population health. Additionally, state employers often serve as health care purchasing leaders for the private sector. For example, states led the use of cost-containing purchasing strategies such as employer-defined contributions to health insurance premiums (Lipson & De Sa, 1996), and they pioneered risk-adjusted health insurance premiums for public employees (Wilson et al., 1998). In many markets, state and other public employers have influenced both what insurers offer employers and what employers offer employees (Watts, Christianson, Heineccius, & Trude, 2003).

## Method

We used exploratory qualitative methods to inductively generate categories of the content and sources of information that state employer staff described as most influential in the health benefit decision process. The study team included a national leader in SCT research, a health services researcher, a qualitative research methodologist, and a survey

researcher with many years of experience in conducting telephone interviews.

### *Sample*

For each of the 50 states, we identified the agency responsible for employee health care purchasing through an Internet search, and used telephone follow-up to identify its administrator. Administrators from 45 states agreed to have their agency participate in the study and nominated interviewees. We asked for two nominations from each state, a staff person and a decision maker, who were knowledgeable about how the agency made employee health insurance purchasing decisions. We also asked each interviewee to recommend additional knowledgeable persons from the agency and we attempted to recruit these individuals for the study. Following a pilot and revision of the interview instrument in two of the 45 participating states, a final version was conducted in 43 states. A total of 55 respondents from 35 states described the decision-making process for an SCT benefit. These 35 states constitute the sample for this study. The remaining respondents from 8 states had no knowledge of an SCT decision process, in most cases because they were not in their current positions at the time an SCT benefit was considered.

Research conducted at the same time as these interviews identified 29 states with SCT coverage for at least some state employees, and 16 states with no such coverage (Burns et al., 2004). Our sample includes 23 of the 29 states with SCT coverage and 12 of the 16 without coverage.

### *Interview process*

The survey researcher conducted semistructured, open-ended telephone interviews lasting approximately 30 min. The study team conducted mock interviews prior to the pilot interviews, and reviewed one-third of the actual interview transcripts for technique and consistency. All respondents agreed to audiotaping of the interviews, and the tapes were transcribed verbatim by a professional transcription service.

We first asked respondents to describe the decision process for SCT benefits, particularly regarding the information they consulted in that decision. We used the same survey instrument for each state regardless of the state's SCT insurance coverage status. We provided the following definition for SCT to the respondent: "I mean by smoking cessation treatment, any counseling or FDA-approved medication for smoking cessation recommended by the U.S. Public Health Service, for example, the nicotine patch, Zyban, or telephone counseling." We then asked

about one other health benefit of their choice. We wanted to collect information about benefit decisions with which the respondents were most familiar rather than about particular kinds of benefits. We therefore described other benefits broadly as "such as a medication, procedure, or treatment." The benefits described ranged widely, including, for example, preventive and quality-of-life benefits, elective surgery, and prescription formularies. All direct quotations that follow were related to SCT decisions.

### *Qualitative analysis*

*Analytic procedures.* The open-ended interview format produced data on the health benefit decision-making process. We adapted Strauss and Corbin's (1990) approach for identifying and developing categories in unstructured data through the constant comparative method. This iterative procedure began with generating categories that captured the meaning of a response. For example, for the response "I review the benefits to make sure they're sort of in line with national standards" we generated the categories *keeping externally current* and *benefit norms* to code this unit of data. As additional responses were coded, the names and scope of the categories were modified as necessary. For example, as more data coded to *benefit norms* was compared with earlier coded data, the category was seen to reflect two components: Norms (either national or regional) and the content of the norms (benefits, credibility of providers, and the like). In this way a set of categories evolved that provided a full conceptual description of the data, which were then clustered into larger or more general categories.

Additionally, all responses were coded for several sets of factual or tagging codes (Seidel & Kelle, 1995), such as the type of benefit being discussed. We prepared tables of the number of cases coded to various combinations of analytic categories and factual codes. We then identified those portions of the category system most relevant to our objective of distinguishing the characteristics of information that influenced the benefit decisions. In the final step, we extracted the underlying textual data associated with relevant categories to prepare a narrative account.

We used the ATLAS.ti software package to manage the data and support the analysis. ATLAS.ti permits flexible segmenting, coding, and annotating of textual data, and generates frequency distributions of text segments by code or groups of codes and by interview or groups of interviews in order to identify patterns and regularities in the coded data. To present our findings by state, we accumulated the responses from all respondents in each state to obtain the most complete description of the content and sources of information considered

influential by the state respondents. Many respondents reported multiple examples of MII in any one decision. Likewise, two respondents within one state may have reported different information as most influential. In both situations, we reported this information additively. For example, if one respondent in a state indicated that information about regional norms was most influential, and another respondent in that state indicated that cost analysis was most influential, we considered both regional norms and cost analysis most influential in that state, just as if a single respondent had cited both categories as most influential.

*Category scheme.* Based on interviewee responses, we developed a model of MII considered in the health benefit decision with two dimensions, *content* and *source*. Content encompasses both the type of information and the purpose for which information was sought and used. We identified nine kinds of information content described by the interviewees. Four of the nine concerned economic factors: Cost analysis, relative cost, treatment efficacy, and utilization. *Cost analysis* refers to information about the current and future economic impacts of the benefit itself, and *relative cost* refers to the cost of a treatment relative to competing benefits and the total budget. The remaining five kinds of information content concerned norms, employee welfare, and provider credibility. *Regional norms* refers to information about the insurance benefits and policies of other state and regional employers. *National norms* refers to information such as federal guidelines or published norms of nationwide insurance coverage. *Health advocacy* information concerns the promotion of employee welfare, wellness, or prevention, and *health management* information is oriented toward actively managing employee health behavior. Information about *the credibility of service providers* included their qualifications, experience, length of time in business, financial stability, and reputation. In SCT decisions, a service provider is specifically a provider of SCT behavioral treatment modalities (e.g., typically a local cessation counseling program).

We generated six categories of information sources based on interviewee responses: *Benefit intermediaries* (e.g., insurers, health plan medical directors, third-party administrators), *providers* (e.g., physicians; vendors of pharmaceuticals and medical goods; and service providers), employee benefit and actuarial *consultants*, *employee data* (history of claims and utilization of benefits), *miscellaneous* sources (employees, other state agencies, and Internet searches), and *champions and advocates* (insiders personally committed to tobacco cessation and tobacco control advocacy organizations).

Qualitative methods produce data-driven categories from unstructured data that offer insight rather than quantifiable relationships; therefore, all percentages and proportions should be considered approximate (for brevity, the term *approximate* has been omitted throughout).

## Results

We present our findings in three parts. First, we elaborate our findings for the content and sources of information most frequently identified as most influential information (MII) in the SCT decision for the states with SCT coverage (henceforth, covered states). We then present the content and sources of MII in the SCT decision for states without SCT coverage (henceforth, noncovered states). Finally, we compare MII reported for other health benefit decisions in covered and noncovered states. A summary of all results is shown in Table 1.

### *Content of most influential information in the SCT decision: Covered states*

*Credibility of service providers.* In 25% of covered states, information regarding the credibility of providers that offered SCT behavioral treatment modalities was identified as most influential in the decision process. In some cases, this included asking for references from service providers' other clients, reviewing credentials and financial stability of cessation programs, and asking consultants to evaluate local providers of cessation services. Provider credibility information emphasized the capacity of the program or provider to provide cessation services.

*Regional norms.* In 25% of covered states, MII concerned regional insurance benefit norms of both state and private employers, particularly in neighboring states. Some states surveyed bordering states to find out the success they had been having with their SCT and other preventive programs.

*Cost analysis.* In 17% of covered states, treatment cost was identified as MII. In less than half of these states, the information referred to cost-effectiveness analyses, with the remainder analyzing cost alone. For those states that evaluated cost-effectiveness, all but a few interpreted the evidence to support SCT, about equally because of current timeframe benefits to employers of increased productivity and reduced absenteeism and future timeframe benefits of anticipated reductions in health costs. Those few that judged against SCT on the basis of cost-effectiveness did so not because they had information indicating

**Table 1.** Content and sources of most influential information in the smoking cessation treatment (SCT) and other health benefit decisions among states with and without SCT coverage.

Description		SCT decision		Other benefit decision	
		States with coverage (n=23)	States without coverage (n=12)	States with coverage (n=23)	States without coverage (n=12)
<b>Content of information</b>					
Credibility of service providers	Qualifications and experience of service providers	25%	0%	8%	11%
Regional norms	Insurance benefits and policies of other states and regional employers	25%	0%	0%	0%
Cost analysis	Current and future economic impacts of the benefit itself	17%	0%	31%	22%
Treatment efficacy	Efficacy in support of cost-effectiveness and cost reduction	17%	0%	15%	22%
Health advocacy	Employee welfare, wellness, or prevention	8%	50%	8%	12%
National norms	Federal guidelines and published norms of nationwide insurance coverage	0%	0%	8%	0%
Health management	Managing employee health behavior	8%	50%	0%	0%
Relative cost	Cost in relation to competing benefits and the total budget	0%	0%	30%	11%
Utilization of benefits	Utilization in support of estimating and controlling costs	0%	0%	0%	22%
		100%	100%	100%	100%
<b>Source of information</b>					
Benefit intermediaries	Insurers, medical directors, third-party administrators	27%	0%	19%	33%
Consultants	Health benefit consultants and actuaries	27%	0%	38%	17%
Miscellaneous	Includes employees, Internet searches, other agencies	18%	50%	14%	17%
Providers	Physicians; product, pharmaceutical, and service providers	10%	50%	5%	8%
Employee data	History of claims and utilization of benefits	9%	0%	14%	25%
Champions and advocates	Personally committed insiders and national organizations	9%	0%	10%	0%
		100%	100%	100%	100%

that SCT was cost-ineffective but because of a perceived lack of cost-effectiveness information.

*Treatment efficacy.* In 17% of covered states, treatment efficacy information was named as MII. Respondent views on efficacy were inconsistent. Respondents indicated that when treatment efficacy information was available it had led to adoption of efficacious interventions, and some respondents noted that when previously unavailable treatment efficacy information became available it counteracted prior negative opinions, as in this example:

The reason the board turned it down before was there wasn't any really good evidence that covering smoking cessation would result in people actually stopping smoking. So, now that there were some good studies that supported that, that sort of turned the tide.

However, a sizable minority of covered states had rejected SCT benefits at some point previously based on negative treatment efficacy information, or because such information was perceived as unavailable, information often provided by consultants, as in this example:

It was briefly considered but put back on the table, because our [consultants] told us the statistics showed most people do not quit, so the money spent on smoking cessation is wasted.

*Sources of most influential information in the SCT decision: Covered states*

Benefit intermediaries and consultants were the two primary providers of MII in states with SCT coverage. Our respondents reported that consultants played a particularly valued role as most important general advisers. We found three consultant roles: Educator, provider of actual and perceived expertise, and formation of working partnerships, for example:

I relied on the benefit consultants to have the best [SCT] practices in the industry at the time. So, whatever they may have used for resources or for examples, I relied on them.

People tend to look at the outside consultants as the experts. So I think without having the outside consultants it's not as effective because just us

coming with [an SCT presentation], you know, we're not necessarily considered experts.

Interestingly, champions and advocates were cited by only 9% of states as a source of MII in the SCT decision. We found SCT champions to be an infrequent and serendipitous information source, typically a beneficiary or a benefit staff person personally committed to a benefit beyond his or her job role, as described here:

A couple of smokers did [champion SCT] who were on the Joint Health Care Committee. There were smokers on both sides, and they were both bringing up that they couldn't get any benefits. Over-the-counter crap was costing them a fortune.

Additionally, champions almost without exception presented information orally, and they were universally reported to lose their effectiveness because of typically presenting their advocacy in an overly forceful or emotional manner.

*Content of most influential information in the SCT decision: Noncovered states*

*Health advocacy.* Health advocacy information was cited as MII in 50% of noncovered states, compared with 8% of covered states. The content of this information varied from information shared within the state government regarding national tobacco litigation, to internal data on the smoking rate among pregnant women and its anticipated ill-effects on infant health. The defining characteristic of this information content was its emphasis on employee wellness and health often aimed at reducing future health care costs.

*Health management.* In 50% of noncovered states, compared with 8% of covered states, MII in the SCT decision concerned employee health management, which is distinguished from health advocacy information by the former's emphasis on management approaches to altering health behavior. Typical examples of this content area include information regarding the use of higher health insurance premiums for smokers relative to nonsmokers, the use of worksite smoking restrictions to reduce smoking, and SCT medication coverage being contingent on smoking abstinence or participation in behavioral therapy.

*Sources of most influential information in the SCT decision: Noncovered states*

States without SCT coverage reported only two sources of MII in the SCT decisions: Miscellaneous

(including employees, Internet searches, and other agencies) and providers. Providers as a source of MII referred primarily to independent vendors who offer services such as smoking cessation classes, quitlines, or behavior treatment modalities but in some cases referred to physicians advising about both pharmacotherapy and behavioral treatment modalities.

*Most influential information in other health benefit decisions: Covered versus noncovered states*

Both states with and without SCT coverage reported a variety of information content as most influential in other health benefit decision processes. Common to both groups was reliance on treatment cost information, both cost analysis and relative cost, and treatment efficacy information to inform purchasing decisions. States without SCT coverage also reported benefit utilization information as most influential in other health benefit coverage decisions. States with and without SCT coverage identified the same four major sources of MII for other health benefit decisions, though with somewhat different frequencies: Benefit intermediaries, consultants, miscellaneous, and employee data. Noncovered states more frequently reported benefit intermediaries and employee data as a source of MII, whereas covered states more frequently reported consultants as a source of MII.

## Discussion

The information described as most influential in the SCT decision varied notably between states with and without SCT coverage. Among states with SCT coverage, employers identified information regarding the credibility of behavioral SCT providers, regional insurance norms, cost analysis, and treatment efficacy as most influential in their decision to purchase SCT coverage. States without coverage identified two types of information as most influential in the SCT decision: Health advocacy and health management information. In covered states, the content of influential information appears to map more closely to SCT research subject areas than does the information identified as influential in states without coverage. However, in all states, employers' descriptions of the information they found influential suggest two particular areas of research underutilization: Treatment efficacy and cost-effectiveness research.

None of the states without SCT coverage identified treatment efficacy and cost analysis information as most influential in the SCT decision, although the smoking cessation literature is rich in both areas (e.g., Fiore et al., 2000; Javitz et al., 2004; Warner et al., 1996). Among SCT-coverage states, some

respondents specifically noted that when previously unavailable treatment efficacy information became available, it counteracted prior negative opinions. However, even within SCT-coverage states, treatment efficacy was identified as MII no more frequently than provider credibility, which pertained to the capacity of a program or provider to deliver cessation services more so than to the specific efficacy of the treatment. Regarding cost analysis information, in states with SCT coverage, we found cost-effectiveness information to be less influential than might be expected or hoped, particularly given that credible evidence of the cost-effectiveness of SCT is available (e.g., Coffield et al., 2001). However, two of our findings may suggest a fruitful direction for shifting employer focus to cost-effectiveness research.

State employers gave value to both long-term health cost reductions and short-term productivity gains. This finding is in contrast with previous reports of employers' reluctance to incur short-term preventive costs because the long-term benefit will likely be reaped by subsequent employers (Partnership for Prevention, 2002). Our finding may be explained by the possibly longer average tenure of state sector employment. A second factor is the worsening budgetary climate for state-provided health care, a trend likely to continue for several years. Yet even in a poor cost climate, a case can be made for cost-effective expenditures that can be shown to produce greater savings than outlays. These two factors suggest a framework for presenting cost-effectiveness information that may be both comprehensible and relevant to employers' needs: Cost-effectiveness is greater to the extent that long-term benefits are valued as much as short-term benefits, and even in a poor cost climate, an economic rationale for cost-effective expenditures can be justified.

States without SCT coverage identified health advocacy and health management information as most influential in the SCT decision. To the extent that the information consulted in the SCT decision is related to the SCT coverage status of the states, these content areas may have been less effective than MII identified among covered states. Although ample evidence details the health effects of smoking cessation (e.g., Hays, Lowell, Hurt, & Croghan, 1998; Kawachi et al., 1994; U.S. Department of Health and Human Services, 1990), strategies for reducing smoking in the workplace (Fichtenberg & Glantz, 2002), and effective SCT benefit design (Curry et al. 1998; Schauffler et al., 2001), the interview data did not indicate substantial awareness or review of these data. Respondents drew widely on internal data and communications, and published and unpublished information from service providers,

as sources for health advocacy and management information.

The sources of MII varied considerably from states with and without SCT coverage. As other studies have reported (e.g., Marquis & Long, 2000; Thompson, Draper, & Hurley, 1999), we found that consultants played a particularly influential role in the health benefit decision-making process. Among states with SCT coverage, consultants and benefit intermediaries were identified as the two primary sources of MII in the SCT decision. States without SCT coverage identified providers (i.e., medical, pharmaceutical, and service providers) and miscellaneous (employees, Internet searches, other agencies) as the sole sources of MII in the SCT decision. However, these same states relied on benefit intermediaries and consultants significantly for MII in other health benefit decisions, suggesting that these entities could play a larger role in the SCT decision. We suggest that educative information about SCT be prepared and disseminated to consultants in formats and language appropriate to their professions such that they may convey accurate and up-to-date SCT research findings to employers.

Because champions are often considered essential components of change in organization theory, we were surprised to find SCT champions and advocates were cited least frequently as a source of information among states with SCT coverage. Our finding of the ineffectiveness of emotional advocacy is consistent with Montini and Bero (2001), who reported that federal policy makers do not respond well to emotional testimony from tobacco control advocates and that summary and review documents of scientific information are much more influential. It seems that internal champions of SCT as channels of informal information will not substitute for the proactive dissemination of summarized scientific information targeted to purchasers' needs.

The differences that we observed in MII identified in states with and without SCT coverage may suggest the information content and sources that are more effective at promoting SCT coverage. Alternatively, these differences may simply reflect differences in the health benefit decision process between these two groups of states. To explore the extent to which our findings may be a function of differences in the purchasing process rather than differences specific to the SCT decision, we compared the content and source of MII for another health benefit decision. In general, states with and without SCT coverage reported similar content and sources of MII in other health benefit decisions. This finding suggests that differences in the health benefit purchasing process may not explain the different MII content and sources reported for SCT decisions between states with and without coverage.

The present study has several limitations. The emphasis in our exploratory, qualitative study was to generate the categories of a descriptive framework rather than gather systematic data on a set of existing categories. Our quantitative conclusions are therefore preliminary, and follow-up surveys are needed to verify our quantitative estimates. A second limitation is that we did not distinguish between the decision-making processes for different modalities of SCT, particularly between the two broad categories of pharmacotherapy and behavioral treatment. These modalities have very different characteristics and the decision-making process for providing these benefits may be different. A third limitation is that information is only one factor influencing the SCT decision process. We have not considered other factors, such as bureaucratic or political factors, nor have we considered the interplay of information with other factors. Finally, we studied state employers, and our conclusions do not necessarily generalize to smaller employers or employers in the private sector. We are not aware of any research that has compared public and private employers' information use in health care purchasing. However, studies of health care purchasing among public and large private employers suggest many similarities in the purchasing strategies they use, including strategies to reduce health insurance premiums (Lipson & De Sa, 1996; Trude, Christianson, Lesser, Watts, & Benoit, 2002) and to guide employee choice through the collection and provision of comparative health plan information (Long & Marquis, 1999).

Our study suggests several next steps to foster the purchase and provision of SCT coverage for employees. Compelling evidence of the efficacy of SCT and its cost-effectiveness did not appear to play an influential role in the SCT decision among states without SCT coverage, compared with states with SCT coverage. Research dissemination efforts should emphasize these two research areas. Employers rely heavily on benefit consultants, actuaries, and insurers as sources of information in their health benefit decision-making. Tobacco policy analysts and advocates should consider tailoring their communication of SCT evidence to these audiences in addition to the employers themselves.

### Acknowledgments

Support for this research was provided by Robert Wood Johnson Foundation grant 042084, National Cancer Institute grant CA084724, and National Institute on Drug Abuse grant DA019706. Michael C. Fiore has served as a consultant, given lectures sponsored by, or has conducted research sponsored by GlaxoSmithKline, Pharmacia, Pfizer, and Sanofi-Synthelabo. In 1998, the University of Wisconsin appointed Dr. Fiore to a named chair, made possible by an unrestricted gift to the university from GlaxoWellcome. Dr. Fiore has served as principal investigator or coinvestigator on grants or contracts from the National Institutes of Health, the Agency for

Healthcare Research and Quality, the Centers for Disease Control and Prevention, and the Robert Wood Johnson Foundation.

### References

- Bodenheimer, T., & Sullivan, K. (1998a). How large employers are shaping the health care marketplace, Part I. *The New England Journal of Medicine*, 338, 1003-1007.
- Bodenheimer, T., & Sullivan, K. (1998b). How large employers are shaping the health care marketplace, Part II. *The New England Journal of Medicine*, 338, 1084-1087.
- Burns, M. E., Bosworth, T. W., & Fiore, M. C. (2004). Insurance coverage of smoking cessation treatment for state employees. *American Journal of Public Health*, 94, 15-16.
- Coffield, A. B., Maciosek, M. V., McGinnis, J. M., Harris, J. R., Caldwell, M. B., Teutsch, S. M., Atkins, D., Richland, J. H., & Haddix, A. (2001). Priorities among recommended clinical preventive services. *American Journal of Preventive Medicine*, 21, 1-78.
- Cromwell, J., Bartosch, W. J., Fiore, M. C., Hasselblad, V., & Baker, T. (1997). Cost-effectiveness of the Clinical Practice Recommendations in the AHCPR Guideline for Smoking Cessation. *The Journal of the American Medical Association*, 278, 1759-1766.
- Curry, S. J., Grothaus, L. C., McAfee, T., & Pabiniak, C. (1998). Use and cost effectiveness of smoking-cessation services under four insurance plans in a health maintenance organization. *The New England Journal of Medicine*, 339, 673-679.
- Fichtenberg, C. M., & Glantz, S. A. (2002). Effect of smoke-free workplaces on smoking behavior: Systematic review. *British Medical Journal*, 325, 188-194.
- Fiore, M. C., Bailey, W. C., Cohen, S. J., Dorfman, S. F., Gritz, E. R., Heyman, R. B., Holbrook, J., Jaen, C. R., Kottke, T. E., Lando, H. A., Mecklenbur, R., Mullen, P. D., Nett, L. M., Robinson, L., Stitzer, M., Tommasello, A. C., Villejo, L., & Wewers, M. E. (2000). *Treating tobacco use and dependence. Clinical practice guideline*. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service.
- Fiore, M. C., Croyle, R. T., Curry, S. J., Cutler, C. M., Davis, R. M., Gordon, C., Heaton, C., Koh, H., Orleans, C. T., Richling, D., Satcher, D., Seffrin, J., Williams, C., Williams, L. N., Keller, P. A., & Baker, T. B. (2004). Preventing 3 million premature deaths and helping 5 million smokers quit: A national action plan for tobacco cessation. *American Journal of Public Health*, 94, 205-210.
- Fronstin, P. (2004). *Sources of health insurance and characteristics of the uninsured: Analysis of the March 2004 Current Population Survey*. (Issue Brief, 276). Washington, D.C.: Employee Benefit Research Institute.
- Harris, J. R., Schauffler, H. H., Milstein, A., Powers, P., & Hopkins, D. P. (2001). Expanding health insurance coverage for smoking cessation treatments: Experience of the Pacific Business Group on Health. *American Journal of Health Promotion*, 15, 350-356.
- Hays, J. T., Lowell, D. C., Hurt, R. D., & Croghan, I. T. (1998). Trends in smoking-related diseases: Why smoking cessation is still the best medicine. *Postgraduate Medicine*, 104, 56-66.
- Javitz, H. S., Swan, G. E., Zbikowski, S. M., Curry, S. J., McAfee, T. A., Decker, D., Patterson, R., & Jack, L. M. (2004). Return on investment of different combinations of bupropion SR dose and behavioral treatment for smoking cessation in a health care setting: An employer's perspective. *Value in Health*, 7, 535-543.
- Kawachi, I., Colditz, G. A., Stampfer, M. J., Willett, W. C., Manson, J. E., Rosner, B., Speizer, F. E., & Hennekens, C. H. (1994). Smoking cessation and time course of decreased risks of coronary heart disease in middle-aged women. *Archives of Internal Medicine*, 154, 169-75.
- Lesmes, G. R. (1992). Corporate healthcare costs and smoke-free environments. *American Journal of Medicine*, 93(Suppl. 1A), 48-54.
- Lipson, D. J., & De Sa, J. M. (1996). Impact of purchasing strategies on local health care systems. *Health Affairs*, 15, 62-72.
- Long, S. H., & Marquis, M. S. (1999). Comparing employee health benefits in the public and private sectors, 1997. *Health Affairs*, 18, 183-193.
- Maciejewski, M. L., Dowd, B. E., & Feldman, R. (1997). How do states buy health insurance for their own employees? *Managed Care Quarterly*, 5, 11-19.
- Marquis, M. S., & Long, S. H. (2000). Who helps employers design their health insurance benefits? *Health Affairs*, 19, 133-138.

- Milbank Memorial Fund. (2000). *Better information, better outcomes? The use of health technology assessment and clinical effectiveness data in health care purchasing decisions in the United Kingdom and the United States*. Retrieved August 1, 2004, from [www.milbank.org/reports/000726purchasing.html](http://www.milbank.org/reports/000726purchasing.html).
- Montini, T., & Bero, L. A. (2001). Policy makers' perspectives on tobacco control advocates' roles in regulation development. *Tobacco Control, 10*, 218–224.
- Partnership for Prevention. (1999). *Why invest in disease prevention? Results from the Partnership for Prevention/William M. Mercer Survey of Employer-sponsored Health Plans*. Washington, DC: Author.
- Partnership for Prevention. (2002). *Preventive services: Helping employers expand coverage*. Washington, DC: Author.
- Pronk, N. P., Goodman, M. J., O'Connor, P. J., & Martinson, B. C. (1999). Relationship between modifiable health risks and short-term health care charges. *The Journal of the American Medical Association, 282*, 2235–2239.
- Schauffler, H. H., McMenamin, S., Olson, K., Boyce-Smith, G., Rideout, J. A., & Kamil, J. (2001). Variations in treatment benefits influence smoking cessation: Results of a randomized controlled trial. *Tobacco Control, 10*, 175–180.
- Schneider, S. K., & Jacoby, W. G. (1996). Influences on bureaucratic policy initiatives in the American states. *Journal of Public Administration Research and Theory, 6*, 495–522.
- The Segal Company. (2000). *Survey of state employee health benefit plans*. Atlanta, GA: Author.
- Seidel, J., & Kelle, U. (1995). Different functions of coding in the analysis of textual data. In: U. Kelle (Ed.), *Computer-assisted qualitative data analysis: Theory, methods and practice*. Thousand Oaks, CA: Sage.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.
- Task Force on Community Preventive Services. (2001). Recommendations regarding interventions to reduce tobacco use and exposure to environmental tobacco smoke. *American Journal of Preventive Medicine, 20*(2S), 10–15.
- Thompson, J. M., Draper, D. A., & Hurley, R. E. (1999). Revisiting employee benefits managers. *Health Care Management Review, 24*, 70–79.
- Trude, S., Christianson, J. B., Lesser, C. S., Watts, C., & Benoit, A. M. (2002). Employer-sponsored health insurance: Pressing problems, incremental changes. *Health Affairs, 21*, 66–75.
- U.S. Department of Health and Human Services. (1990). *The health benefits of smoking cessation. A report of the surgeon general*. (DHHS Publication No. CDC90-8416). Rockville, MD: Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Public Health Service.
- U.S. Department of Health and Human Services. (2000, November). *Healthy People 2010*. Washington, DC: Author. Retrieved August 5, 2004, from [www.healthypeople.gov/Document/HTML/Volume2/27Tobacco.htm](http://www.healthypeople.gov/Document/HTML/Volume2/27Tobacco.htm).
- Wagner, E. H., Curry, S. J., Grothaus, L., Saunders, K. W., & McBride, C. M. (1995). The impact of smoking and quitting on health care use. *Archives of Internal Medicine, 155*, 1789–1795.
- Warner, K. E., Smith, R. J., Smith, D. G., & Fries, B. E. (1996). Health and economic implications of a work-site smoking-cessation program: A simulation analysis. *Journal of Occupational and Environmental Medicine, 38*, 981–992.
- Watts, C., Christianson, J. B., Heineccius, L., & Trude, S. (2003). The role of public employers in a changing health care market. *Health Affairs, 22*, 173–180.
- Wilson, V. M., Smith, C. A., Hamilton, J. M., Madden, C. W., Skillman, S. M., Mackay, B., Matthisen, J. S., & Frazzini, D. A. (1998). Case study: The Washington State Health Care Authority. *Inquiry, 35*, 178–192.