J Occup Health 2010; 52: 375–382

Journal of Occupational Health

Field Study

Employee and Employer Support for Workplace-based Smoking Cessation: Results from an International Survey

Michael T. HALPERN[1] and Humphrey TAYLOR[2]

[1]Division of Health Services and Social Policy Research, RTI International and [2]Harris Interactive, USA

Abstract: Employee and Employer Support for Workplace-based Smoking Cessation: Results from an International Survey: Michael T. HALPERN, *et al*. Division of Health Services and Social Policy Research, RTI International, USA—Objectives: Workplace smoking cessation programs can increase smoking cessation rates, improve employee health, reduce exposure to second-hand smoke, and decrease costs. To assist with the development of such programs, we conducted a Global Workplace Smoking Survey to collect information on workplace attitudes towards smoking cessation programs. **Methods:** Data were collected from 1,403 employers (smoking and non-smoking) and 3,525 smoking employees participating in surveys in 14 countries in Asia, Europe, and South America in 2007. Results were weighted to ensure that they were representative of smokers and employers at companies with the specified number of employees. **Results:** More than two-thirds of employers (69%) but less than half of employees (48%) indicated that their company should help employees with smoking cessation. Approximately two-thirds of employees and 81% of employers overall felt that smoke-free policies encourage cessation, but fewer individuals from Europe (vs. from Asia or South America) agreed with this. In companies with a smoke-free policy, 76% of employees and 80% of employers felt that their policy had been somewhat, very, or extremely effective in motivating employees to quit or reduce smoking. Employers and employees differed substantially regarding appropriate methods for encouraging cessation, with more employees favouring financial incentives and more employers favouring education. **Conclusions:** Both employees and employers value smoke-free workplace programs and workplace cessation support activities, although many would like their companies to offer more support. These results will be useful for organizations exploring means of facilitating smoking cessation amongst employees. *(J Occup Health 2010; 52: 375–382)*

Key words: Health policy, Occupational health services, Smoking cessation, Workplace

In recent years, there has been increased attention on the health and economic impact of smoking in the workplace as well as opportunities for employers to facilitate smoking cessation. Given the amount of time most adults spend in a workplace environment, workplace cessation interventions can affect substantial numbers of smokers[1]. Provision of resources and social support for smoking cessation in the workplace has been associated with successful cessation[2]. Many smoking employees are interested in participating in cessation programs. For example, in the UK, approximately 30% of employees smoke, and more than 70% of smoking employees express a desire to quit[3]. In addition to helping employees quit, workplace smoking cessation programs can reduce daily cigarette consumption; improve working relationships and morale; and reduce the risk of smoking-related illnesses[3].

Workplace smoking cessation programs also decrease exposures of non-smokers to second-hand smoke, which can have serious health and economic consequences. In the US, passive smoking has been linked to the deaths of at least 53,000 non-smokers each year, approximately one tobacco-related non-smoker death per eight tobacco-related smoker deaths[4]. Further, disparities exist in the likelihood of exposure to second-hand smoke in the workplace. In a study of Swedish workers, younger individuals, male skilled manual workers, and female unskilled manual workers had significantly higher adjusted odds ratios of environmental tobacco smoke exposure than did non-manual (higher-level) employees[5].

There have been many evaluations and models demonstrating the health and economic benefits of worksite smoking cessation programs. These evaluations

Received May 21, 2010; Accepted Aug 9, 2010
Published online in J-STAGE Sep 8, 2010
Correspondence to: M. T. Halpern, Division of Health Services and Social Policy Research, RTI International, 701 13th St. NW, Suite 750, Washington, DC 20005, USA
(e-mail: mhalpern@rti.org)

generally find that workplace smoking cessation programs can produce net economic savings in addition to increasing smoking cessation and improving worker health. A model by Warner and colleagues[6] projected that the costs of a smoking cessation program for a large US employer would approximately equal the benefits from the program at 3 yr, with a net profit occurring in subsequent years. Similarly, Halpern *et al*.[7] found that economic savings from a workplace smoking cessation program exceeded the costs of the program within 4 yr, and produced an internal rate of return (IRR) of 39% to 60% in 10 yr. According to the World Bank[8], workplace smoking cessation programs are relatively low-cost and yield financial returns over the long run that far outweigh their costs.

To collect more detailed information on attitudes toward workplace smoking and workplace smoking cessation programs available in a range of countries, Harris Interactive completed the Global Workplace Smoking Survey on behalf of Pfizer. This survey collected information from employers and from smoking employees in 14 countries in 2007. We previously reported on responses by employers and smoking employees to questions on beliefs regarding workplace smoking[9]. In this manuscript, we present results related to the types of workplace smoking cessation programs available as well as attitudes towards such programs by employers and employees, with a focus on smoke-free workplace policies.

Subjects and Methods

Detailed information on the global workplace smoking survey is presented in a prior manuscript[9]. The survey was conducted in 3 regions comprised of 14 countries: China, India, Japan, South Korea, and Taiwan comprised the Asian region; France, Germany, Italy, Poland, Spain, Sweden, Turkey, and the UK comprised the European region; and Brazil was the sole country for the South American region. These countries were selected based on having high prevalences of smoking as well as changing tobacco control policy environments. In addition, there was an intent to include the countries involved in two prior international surveys focused on attitudes towards smoking: the STOP survey[10] and the SUPPORT survey[11]. All interviews were conducted between July 1 and September 18, 2007 using web-assisted telephone interviews (WAPI) except in India, where surveys were conducted face-to-face. The surveys were conducted in the language of each country and took approximately 21 min each.

Representative nationwide samples of employers and smoking employees were surveyed in each country. Separate employer and smoking employee (henceforth referred to simply as "employee") populations participated in the survey; that is, employers and employees were not necessarily employed by the same companies. Employers were contacted at their workplace while employees were contacted at home except in Brazil and India, where employees were contacted at work or outside work. The employer sample included approximately 100 employers per country who were either human resources managers or were otherwise involved with decision-making regarding workplace benefits. The employee sample included approximately 250 full-time employed smokers aged 25 yr or older in each country. Smokers were defined as those who smoke cigarettes at least once a day; cigar or pipe use was not included in designating smoking status. For both samples, participants were required to work for companies with at least 100 employees, except in Turkey and Sweden where participants' companies were required to have at least 25 and 50 employees, respectively. This reflects the smaller average size of companies found in Turkey and Sweden.

All participating employees were current cigarette smokers, while employers included both smokers and non-smokers (approximately 18% of surveyed employers were current smokers). Smoking employees were contacted in a number of ways to create probability samples representative of the adult population of each country meeting the study inclusion criteria. Random-digit dialling (RDD) was used in Sweden, France, Germany, Italy, Poland, Spain, Sweden and the UK. Country-wide phone lists were used in Korea, Japan, China and Taiwan. In Turkey, RDD was used in only Istanbul, Bursa, Ankara and Izmir. In Brazil, employees were contacted at work through business lists and yellow pages only in Recife, Porto Alegre, Belo Horizonte, Rio do Janeiro, Sao Paulo and in the state of Parana. In India interviewing was conducted face-to-face outside of businesses only in Delhi, Bangalore and Chennai.

Employers were identified from random samples of comprehensive lists of employers (for example, Dun and Bradstreet), and were also designed to be a representative sample of all employers meeting the minimum size criteria of the study. However, interviewing in Brazil was conducted only in Recife, Porto Alegre, Belo Horizonte, Rio do Janeiro, Sao Paulo and in the state of Parana; interviewing in Turkey was conducted only in Istanbul, Ankara and Izmir, and business lists and yellow pages were used.

To remove bias in the survey results (arising from a demographic skew, potential selection biases or a modal bias resulting in desirable instead of true respondent responses), all data were weighted using a rim weighting algorithm, also known as raking[12], to ensure that it was representative of smokers and corporate employers at companies with the specified number of employees. The target weights for smoking employees were based on previous surveys where smoking employees were a sub-sample of all adults while the target weights for employees

were based on publicly available data from each country. The same weighting technique was used in all countries; the weighting targets varied based on the information that was available. All results presented in this manuscript are based on weighted data. As both employees and employers were identified from samples designed to be representative of the entire corresponding populations, comparisons between employee and employer results are appropriate.

Results

Table 1 presents results from the employee and employer surveys (overall and by geographic region) regarding belief on responsibility for smoking cessation. The greatest proportion of both employees and employers indicated that smokers have responsibility for cessation, followed by family, policy makers, medical professionals and employers/co-workers. In all cases a greater proportion of employers responded positively for each group having responsibility than did employees. Even when asked whether employers have responsibility for smoking cessation, the proportion of employers responding positively (39%) was almost three times that for employees (14%). Among the three geographic regions, more employees from Asia and more employers in Asia than South America indicated that policy makers had responsibility for smoking cessation, while employers and employees from Europe were more likely to indicate that responsibility was held by medical professionals.

Table 1 also presents responses as to whether the employee's or employer's company should provide support to help its employees in quitting smoking. Employees, all of whom were smokers, were evenly split as to whether their company should provide cessation support. In contrast, nearly 70% of employers indicated that workplace smoking cessation support should be provided.

Table 2 presents responses to survey questions on the level and type of smoking cessation support offered. When asked about the level of support offered, 33% of employees indicated that their company provided just the right amount compared with nearly twice that proportion (57%) of employers. This suggests that despite most employees' beliefs that employers are not responsible for helping smokers quit (Table 1), many employees would like their employers to provide cessation support. Further, three times as many employees as employers indicated that their company did not provide smoking cessation support. While the employers and employees included in this survey are not necessarily from the same companies, this large discrepancy suggests that employers overstate the availability of workplace smoking cessation support; that employees are not aware of offered services; or both.

Table 2 also presents responses to questions on appropriate methods for companies to encourage smoking cessation. Almost 50% of employees and 70% of employers indicated that enforcing a smoke-free workplace was an appropriate strategy for encouraging cessation. A similar proportion of employees and approximately 60% of employers responded that offering counselling was an appropriate method. Among employers and employees, support for smoke-free workplaces was lowest and support for counselling was greatest among those from South America. Employees and employers differed substantially regarding the appropriateness of financial incentives and education to encourage cessation. More than one-third of employees indicated that offering financial incentives was an appropriate strategy to support cessation, while only 21% of employers supported this strategy. In contrast, only 27% of employees indicated that providing education was an appropriate strategy compared with more than twice this proportion (56%) of employers.

Table 2 also provides information on the types of smoking cessation support currently being provided by the companies/organizations of participating employees and employers. In all cases, a greater proportion of employers than employees indicated that each type of support was being offered (except in the case of financial benefits to quit). The most common support activity reported was enforcement of smoke-free workplace policies. More than one-third of employees and approximately one-fifth of employers responded that no smoking cessation support was being offered. The proportions of employees and employers who responded that their company currently enforced a smoke-free workplace policy were similar to the proportions (also presented in Table 2) who indicated that enforcing a smoke-free workplace policy was an appropriate way to encourage smoking cessation. For all other categories of smoking cessation support, the proportion of employees and employers who indicated that a particular method was appropriate was substantially greater than the proportion who indicated that their company currently offered the method. For example, while the proportions of employees and employers who indicated that education was an appropriate strategy to support smoking cessation were 27% and 56%, respectively, the proportions who stated that their company currently offered education were 8% and 22%. This suggests that both employees and employers would like to see their companies offering more smoking cessation support.

As enforcement of a smoke-free workplace policy was viewed as one of the most appropriate methods to encourage smoking cessation (Table 2), and was the method currently being used by the greatest proportion of companies to encourage cessation (Table 2), beliefs about and actions resulting from smoke-free policies are highly important. Table 3 presents responses to survey questions dealing with these beliefs and actions.

Table 1. Responsibility for smoking cessation*

	Employees				Employers			
	Global	Europe	South America	Asia	Global	Europe	South America	Asia
N	3,525	2,020	253	1,252	1,403	801	100	502
Who do you believe has a responsibility for helping smokers to quit?								
Smokers' themselves	87%	81%	94%	88%	92%	90%	91%	93%
Family spouse, Partner, Friends (NET)	59%	38%	30%	64%	68%	68%	59%	69%
Families or friends (excluding spouses or partners)	44%	27%	24%	48%	62%	60%	54%	64%
Spouses or partners	49%	26%	20%	53%	62%	63%	34%	63%
Policy makers or Government officials	32%	17%	9%	35%	54%	49%	19%	58%
Medical professional (NET)	30%	36%	16%	30%	48%	65%	29%	40%
Doctors	28%	33%	16%	29%	46%	64%	29%	38%
Nurses	9%	11%	2%	9%	31%	41%	6%	27%
Pharmacists	8%	16%	4%	7%	26%	37%	4%	21%
Employers, Co-workers (NET)	23%	20%	14%	23%	48%	56%	30%	45%
Co-workers	17%	13%	11%	18%	40%	40%	18%	41%
Employers	14%	13%	7%	14%	39%	44%	24%	38%
Tobacco companies	17%	19%	6%	17%	32%	35%	9%	32%
Insurance companies	11%	15%	6%	10%	28%	38%	5%	24%
Other	1%	2%	1%	1%	3%	5%	2%	2%
Do you think your company or organization should provide support to help its employees quit smoking?								
Yes	48%	43%	69%	48%	69%	58%	87%	73%
No	47%	50%	30%	47%	27%	39%	13%	22%

*Column percentages may not be total 100% due to exclusion of "Don't know" and "Decline to answer" categories.

Approximately two-thirds of employees and 81% of employers indicated that smoke-free policies encourage cessation. Fewer employees and employers from Europe indicated that these policies encourage cessation compared with those from Asia or South America. Among those whose company offers a smoke-free policy, 76% of employees and 80% of employers indicated that the policy has been somewhat, very, or extremely effective in motivating employees to quit or reduce smoking. However, there were marked differences in the perceived degree of effectiveness. Among employees and employers whose company offers a smoke-free policy, only 14% of employees compared with 35% of employers indicated that smoke-free policies are very or extremely effective at motivating employee cessation. This pattern was reversed in South America, where 36% of employees compared with 19% of employers indicated that smoke-free policies were very or extremely effective.

Table 3 also presents employee actions in response to smoke-free workplace policies. Among those whose company/organization offers a smoke-free workplace policy, more than 60% of employees overall (driven largely by employees from Asia) found alternative places to smoke. However, 44% of employees reduced the amount smoked and approximately one-quarter tried to quit, suggesting effectiveness of smoke-free policies. The final set of responses presented in Table 3 is from employees and employers who feel that their companies' smoke-free workplace policies have not been effective. One main reason stated for lack of effectiveness is smokers finding other places to smoke; this was also (as presented above in Table 3) one of the most common employee action in responses to smoke-free workplace policies. Approximately half of employers and employees agreed that the lack of effectiveness of smoke-free workplace policies is because smoking cessation is very difficult, but approximately twice as many employers (who are largely non-smokers) compared with employees indicated that enjoyment of smoking or socialization during smoking were reasons for lack of effectiveness of smoke-free policies. Employers were also approximately twice as likely to indicate that smoke-free workplace policies have not been effective because smoke-free policies are not enough or that there has not been sufficient support from employers. These responses correspond well with those presented in Table 1, where

Table 2. Level and types of smoking cessation support*

	Employees				Employers			
	Global	Europe	South America	Asia	Global	Europe	South America	Asia
N	3,525	2,020	253	1,252	1,403	801	100	502
Does your company or organization do too much, too little or just the right amount to encourage employees to quit or reduce smoking? Or do they do nothing at all?								
Too much	4%	3%	12%	4%	10%	2%	16%	14%
Just the right amount	33%	30%	26%	34%	57%	60%	38%	57%
Too little	18%	16%	20%	18%	18%	20%	38%	16%
Does nothing at all	43%	44%	43%	43%	14%	16%	7%	13%
Which do you believe are appropriate ways for your company or organization to encourage employees to quit or reduce smoking?								
Enforcing a smoke-free workplace policy (that is, not allowing employees to smoke in the workplace)	48%	33%	18%	52%	69%	74%	32%	69%
Offering health support (that is, counselling)	48%	34%	68%	49%	59%	61%	79%	57%
Offering financial benefits to help you quit smoking/ to support employees who are trying to quit	36%	27%	20%	38%	21%	23%	20%	20%
Education about support hotlines or support groups and other forms of support	27%	30%	37%	27%	56%	64%	58%	51%
Offering discounts for smoking cessation treatments (that is, products which help smokers quit)	26%	29%	22%	26%	30%	41%	19%	24%
Other	9%	4%	1%	10%	6%	9%	2%	4%
Employer is not responsible for encouraging employees to quit or reduce smoking	13%	17%	6%	13%	5%	4%	–	6%
Which, if any, is your company or organization currently doing to encourage employees to quit or reduce smoking?								
Enforce a smoke-free workplace policy (that is, not allowing employees to smoke in the workplace)	41%	31%	15%	44%	56%	70%	28%	51%
Offer health support (that is, counselling)	17%	13%	27%	17%	32%	33%	57%	30%
Educate employees about support hotlines or support groups and other forms of support	8%	10%	12%	8%	22%	34%	25%	16%
Offer discounts for smoking cessation treatments (that is, products which help smokers quit)	3%	6%	2%	3%	8%	14%	4%	5%
Offer financial benefits to support employees who are trying to quit	5%	5%	3%	5%	4%	6%	2%	3%
Other	9%	5%	1%	11%	9%	8%	2%	10%
None of these	36%	43%	50%	34%	21%	17%	18%	23%

* Column percentages may not be total 100% due to exclusion of “Don’t know” and “Decline to answer” categories. A dash (“–”) indicates less than 0.5% for a cell.

Table 3. Beliefs about and actions resulting from smoke-free workplace policies*

	Employees				Employers			
	Global	Europe	South America	Asia	Global	Europe	South America	Asia
N	3,525	2,020	253	1,252	1,403	801	100	502
Do you believe smoke-free workplace policies encourage employees who smoke to quit or reduce smoking?								
Yes	64%	52%	71%	65%	81%	73%	90%	84%
No	31%	42%	28%	30%	17%	25%	10%	14%
How effective do you believe your company's or organization's smoke-free workplace policy has been in motivating you (for employees) or employees (for employers) to quit or reduce smoking?**								
N	1,262	652	41	569	859	566	24	269
Extremely effective	2%	7%	7%	1%	12%	8%	7%	14%
Very effective	12%	16%	29%	11%	23%	22%	13%	25%
Somewhat effective	63%	37%	49%	65%	46%	45%	67%	45%
Not very effective	14%	17%	11%	14%	12%	16%	13%	8%
Not effective at all	8%	22%	4%	7%	3%	5%	–	3%
Which of the following have you done because your employer does not allow employees to smoke in the workplace?**								
Found alternative places to smoke during the working day	62%	42%	30%	65%				
Reduced the number of cigarettes you smoke	44%	47%	42%	43%				
Tried to quit smoking	24%	21%	21%	24%				
Started smoking more while you're not at work	23%	19%	25%	24%				
None of these	6%	14%	4%	6%				
Why do you think your company's or organization's smoke-free workplace policy has not been effective in helping you (for employees) or employees (for employers) quit or reduce smoking?***								
N	448	269	7	172	159	119	2	38
You go elsewhere to smoke	49%	42%	70%	50%	64%	69%	100%	56%
Giving up smoking is extremely difficult to do	48%	53%	54%	47%	55%	72%	–	33%
You enjoy smoking too much	26%	49%	13%	22%	53%	64%	50%	36%
Smoke-free workplace policies are not enough	22%	21%	13%	23%	46%	53%	–	35%
There has not been sufficient enforcement of the smoke-free workplace policy	22%	9%	13%	25%	26%	20%	–	36%
There has not been enough support from your employer / from the organization or company	15%	17%	13%	15%	24%	23%	–	26%
You/employees smoke to socialize and network	14%	18%	–	13%	28%	27%	–	31%
You/employees feel pressure to continue smoking from co-workers	8%	3%	7%	9%	4%	3%	–	5%
Other	3%	13%	–	1%	5%	8%	–	–

* Column percentages may not be total 100% due to exclusion of "Don't know" and "Decline to answer" categories. A dash ("–") indicates less than 0.5% for a cell. **Among organizations offering a smoke-free workplace policy. Caution should be used when interpreting results due to small base size for South American employers (n=24) and South American employees (n=41). ***Among respondents indicating that their organization's smoke-free workplace policy has not been effective. Caution should be used when interpreting results due to small base size for Asian employers (n=38), South American employers (n=2) and South American employees (n=7).

employers were more likely than employees to indicate that employers had responsibility to help smokers quit.

Discussion

This study presents results from a global workplace smoking survey focusing on attitudes towards workplace smoking cessation programs and the availability of such programs. A number of conclusions can be drawn from the responses. First, while smokers were felt to have the main responsibility for cessation, the majority of both employees and employers recognized the need for others to help smokers quit smoking. Second, employers were more likely than employees to indicate that employers had a responsibility to assist with smoking cessation, and that their company should be supporting cessation. However, employers were also more likely than employees to indicate that their companies were currently providing support for cessation. As participating employers and employees were not necessarily from the same companies, differences in perceived availability of cessation supports could reflect lack of information on available supports by employees or actual differences in supports among employers' and employees' companies. Third, smoke-free workplaces were viewed by most people in both groups as an effective strategy to encourage cessation. Finally, support for smoke-free workplace policies was somewhat lower in Europe, where there is more smoke-free workplace legislation, than in Asia or South America.

A key finding is that a majority of both employers and smoking employees believe that smoke-free workplace policies encourage smoking cessation or reduced smoking. This is in agreement with previous published studies indicating that workplace smoking bans can reduce smoking prevalence and/or cigarette consumption in Norway[13], Italy[14], South Korea[15], Spain[16], Taiwan[17], and the USA[18, 19]. Among smokers who quit following implementation of a workplace smoking ban in Ireland, 80% reported that the ban had helped them quit and 88% reported that the ban helped prevent recidivism[20]. A ban on smoking in New York City coupled with a large tax increase resulted in an 11% decrease in the number of adult smokers and a 13% decline in cigarette consumption over 1 yr[21], as well as increased sales of nicotine replacement therapy[22]. Further, a recent study from a Japanese worksite[23] reported that lower workplace smoking prevalence is associated with increased likelihood of successful smoking cessation. This provides further support for the ability of smoke-free workplace policies to encourage smokers to quit.

Previous studies also provide strong support for the benefit of smoke-free workplaces to non-smokers. For example, a 2003 workplace smoking ban in South Korea decreased exposure of non-smokers to second hand smoke by 86%[15]. Pell and colleagues[24] found that hospital admission for acute coronary syndrome in Scotland decreased by 17% following implementation of national smoke-free legislation, whilst a decrease of only 4% was observed in England without a smoking ban. Further, the reduction in acute coronary syndrome admissions was 14% among smokers vs. 21% among individuals who never smoked. Decreased exposure to second-hand smoke among never-smokers after the smoke-free legislation was confirmed by significant reductions in serum cotinine.

Increased workplace smoking cessation activities, including increased implementation and enforcement of smoking bans, have the potential to substantially increase smoking cessation, improved health outcomes, and decreased costs. Levy & Friend[25] estimated that worksite smoking bans could decrease smoking prevalence by 6%, while comprehensive clear air laws (with public smoking bans) could decrease prevalence by 10%. Similar results have been found from "real world" workplace smoking bans; bans in South Korea and Spain resulted in decreased smoking rates of 6.4% and 5.1%, respectively[15, 16]. Ong & Glantz[26] modelled the impact of a 100% workplace smoking ban in the US (compared with the 69% of workplaces with smoke-free policies at the time of the study). They projected that in the first year of a complete workplace smoking ban, there would be approximately 1.3 million new quitters and decreased consumption of over 950 million cigarette packs. The ban would also prevent approximately 1,500 myocardial infarctions and 350 strokes in the first year, associated with direct medical savings of almost $60 million. At steady state, they modelled that a complete workplace smoking ban would prevent 6,250 myocardial infarctions and 1,270 strokes annually, with direct medical cost savings of $279 million.

There are a number of limitations associated with this study. The main limitation is that the (smoking) employee and employer samples included in the survey are not necessarily representative of the entire employee or employer populations in their countries. The sampling framework used for this study did not give all eligible employees or employers in a country an equal likelihood of being asked to participate in the survey. As such, the generalizability of the results is uncertain. In addition, employees and employers included in the survey were not necessarily from the same companies or organizations. While we have compared employers and employee responses, the potential of different worksites for these two groups limits these comparisons. However, given that both employees and employers are likely to be representative of their specified groups, comparison of results between the two groups is likely to be appropriate. Further, all data collected in the survey were by self-report; no attempt was made to confirm responses using other data sources. However, as the survey focused on individual beliefs, no other data source could have provided confirmation of these responses.

Despite these limitations, this survey provides important findings. The results presented in this paper indicate the importance assigned to smoking cessation support among employees and employers as well as high levels of support for smoke-free workplace policies. Based on these results, employees are likely to welcome a range of activities encouraging smoking cessation by their employers. More work is needed to project the health and economic effects of different cessation strategies, particularly of smoke-free workplace policies combined with efforts to support employee cessation and reduce recidivism, as well as differences in effects by country and geographic region.

Acknowledgments: The Global Workplace Smoking Survey was supported by Pfizer Inc. and performed by Harris Interactive. Editorial support in the form of proofing the manuscript and preparing it for submission was provided by Aideen Young, PhD of Envision Pharma Ltd and funded by Pfizer Inc. Humphrey Taylor is an executive of Harris Interactive, which received financial support from Pfizer Inc. to conduct this study and prepare this manuscript.

References

1) Moher M, Hey K, Lancaster T. Workplace interventions for smoking cessation. Cochrane Database Syst Rev 2005; CD003440.
2) Albertsen K, Borg V, Oldenburg B. A systematic review of the impact of work environment on smoking cessation, relapse and amount smoked. Prev Med 2006; 43: 291–305.
3) Griffiths J, Grieves K. Why smoking in the workplace matters: an employer's guide. Copenhagen: World Health Organization. [Online]. 2002 [cited 2010 May 20]; Available from: URL: http://www.euro.who.int/document/e74820.pdf
4) Fichtenberg CM, Glantz SA. Effect of smoke-free workplaces on smoking behavior: systematic review. BMJ 2002; 325: 188–219.
5) Moussa K, Lindström M, Ostergren PO. Socioeconomic and demographic differences in exposure to environmental tobacco smoke at work: the Scania Public Health Survey 2000. Scand J Public Health 2004; 32: 194–202.
6) Warner KE, Smith RJ, Smith DG, Fries BE. Health and economic implications of a work-site smoking-cessation program: a simulation analysis. J Occup Environ Med 1996; 38: 981–92.
7) Halpern MT, Dirani R, Schmier JK. Impacts of a smoking cessation benefit among employed populations. J Occ Env Med 2007; 49: 11–21.
8) World Bank. Smoke free workplaces. Washington DC: World Bank. [Online]. 2003 [cited 2010 May 20]. Available from: URL: http://siteresources.worldbank.org/INTPHAAG/Resources/AAGSmokeFreeWorkplaces.pdf
9) Halpern MT, Taylor H. Beliefs regarding smoking in the workplace: results from the global workplace smoking survey. Int J Public Health 2009; 54: 391-401.
10) Pipe A, Sorensen M, Reid R. Physician smoking status, attitudes toward smoking, and cessation advice to patients: an international survey. Patient Educ Couns 2009; 74: 118-23.
11) Reid RD, Pipe AL, Riley DL, Sorensen M. Sex differences in attitudes and experiences concerning smoking and cessation: results from an international survey. Patient Educ Couns 2009; 76: 99–105.
12) Deming WE. Statistical adjustment of data. New York: Wiley; 1943.
13) Braverman MT, Aarø LE, Hetland J. Changes in smoking among restaurant and bar employees following Norway's comprehensive smoking ban. Health Promot Int 2008; 23: 5–15.
14) Gallus S, Zuccaro P, Colombo P, et al. Effects of new smoking regulations in Italy. Ann Oncol 2006; 17: 346–7.
15) Kim B. Workplace smoking ban policy and smoking behavior. J Prev Med Public Health 2009; 42: 293–7.
16) Martínez-Sánchez JM, Fernández E, Fu M, et al. Impact of the Spanish smoking law in smoker hospitality workers. Nicotine Tob Res 2009; 11: 1099–106.
17) Hu SC, Huang SY, Li D, Wen CP, Tsai SP. Workplace smoking policies in Taiwan and their association with employees' smoking behaviours. Eur J Public Health 2005; 15: 270–5.
18) Bauer JE, Hyland A, Li Q, Steger C, Cummings KM. A longitudinal assessment of the impact of smoke-free worksite policies on tobacco use. Am J Public Health 2005; 95: 1024–9.
19) Moskowitz J, Lin Z, Hudes E. The impact of workplace smoking ordinances in California on smoking cessation. Am J Pub Health 2000; 90: 757–61.
20) Fong GT, Hyland A, Borland R, et al. Reductions in tobacco smoke pollution and increases in support for smoke-free public places following the implementation of comprehensive smoke-free workplace legislation in the Republic of Ireland: findings from the ITC Ireland/UK Survey. Tob Control 2006; 15 (Suppl 3): iii51–8.
21) Gottlieb S. New York's war on tobacco produces record fall in smoking. BMJ 2004; 328: 1222.
22) Metzger KB, Mostashari F, Kerker BD. Use of pharmacy data to evaluate smoking regulations' impact on sales of nicotine replacement therapies in New York City. Am J Public Health 2005; 95: 1050–5.
23) Nishiura C, Narai R, Ohguri T, Funahashi A, Yarita K, Hashimoto H. The effect of smoking prevalence at worksites on individual cessation behavior. J Occup Health 2009; 51: 48–56.
24) Pell JP, Haw S, Cobbe S, et al. Smoke-free legislation and hospitalizations for acute coronary syndrome. N Engl J Med 2008; 359: 482–91.
25) Levy DT, Friend KB. The effects of clean indoor air laws: what do we know and what do we need to know? Health Educ Res 2003; 18: 592–609.
26) Ong MK, Glantz SA. Cardiovascular health and economic effects of smoke-free workplaces. Am J Med 2004; 117: 32–8.