



## special report

### Smoking Restrictions at Boston-Area Hospitals, 1990-1992\*

#### A Serial Survey

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Boston-area hospitals were initially surveyed in 1990 and again in 1992 regarding their policies on smoking. In 1990, all 40 facilities participating had policies restricting in-hospital smoking, 3 had banned smoking entirely, and only 1 hospital still permitted tobacco sales on its grounds. By December 1991, 18 of the hospitals had banned smoking, and no facility sold tobacco. As of February 1992, 29 had banned smoking, and 37 were offering ongoing smoking

Hospitals have come under increasing pressure from several national and governmental agencies to eliminate smoking. In 1984, the American Medical Association advocated restricting smoking to certain areas and eliminating tobacco sales on hospital grounds.<sup>1</sup> The Surgeon General and the director of the Health Care Financing Administration asked hospitals providing Medicare services to become smoke-free in 1988 (C. E. Koop, W. L. Roper, written communication, May 11, 1988). Effective January 1, 1992, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) required of all organizations seeking accreditation the "dissemination and enforcement of a hospitalwide smoking policy that prohibits the use of smoking materials throughout the hospital building(s)" or a plan to do so by December 31, 1993.<sup>2</sup>

In 1981, an American Hospital Association survey showed that 91 percent of respondents had a written policy on smoking and 97 percent restricted smoking to certain areas.<sup>3</sup> Holland's 1988 study of over 2,000 US hospitals<sup>4</sup> found that 93 percent had antismoking policies, 88 percent prohibited tobacco sales, 60 percent offered employee programs for smoking cessation, and only 5 percent were smoke-free. An earlier survey of Massachusetts hospitals<sup>5</sup> showed that only 46 per-

cent had stated antismoking regulations, 72 percent prohibited tobacco sales, and 35 percent had smoking cessation programs for employees. The current study was initially undertaken in 1990 to provide up-to-date information on the adoption of antismoking policies among Boston-area hospitals. It was repeated in 1992 to assess the further evolution of restrictions and response to the JCAHO standard.

(*Chest* 1993; 104:1589-91)

JCAHO = Joint Commission on Accreditation of Healthcare Organizations

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#### METHODS

All hospitals with acute care beds listed in the 1990 Boston area Yellow Pages under "hospitals" were eligible for study with the exception of those dedicated exclusively to psychiatric and/or substance abuse treatment. Data were collected in a standard fashion by phone during the month of February 1990. Those interviewed were generally administrative or public relations officers at their respective hospitals who were knowledgeable about their institution's policies.

Hospitals were initially surveyed on the following information: type of policy in place; date implemented or last updated; in-hospital tobacco sales; availability of smoking cessation programs for employees; whether any formal evaluations of a policy had been done; the number of beds; and medical school affiliation, if any. Telephone interviews were conducted again in February 1992. Information was gathered on the policies in place just prior to January 1, 1992, and then in February 1992. In 1992, hospitals were also asked about the administration's opinion of the JCAHO standard; whether any hospital employees were unionized; and if so, whether there had been any union opposition to restricting smoking on hospital grounds.

A smoking ban was defined as the complete prohibition of smoking inside the hospital with the possible exception of individual patients with physician prescriptions as specified by the JCAHO standard. Smoking areas were defined as types of areas where smoking might be permitted: cafeteria sections and/or coffee shops; lounges; and office or other work areas. In considering responses, psychiatric and substance abuse areas were excluded from the analyses. Information on all other areas was analyzed. By definition, 1991 policies were those in place in December 1991.

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**Table 1—Smoking Policies in 40 Hospitals at Study Time Points\***

|  | February<br>1990 | December<br>1991 | February<br>1992 |
|--|------------------|------------------|------------------|
| Smoking ban                                    | 8 (3)            | 45 (18)†         | 72 (29)‡         |
| Smoking in one area                            | 40 (16)          | 40 (16)          | 20 (8)           |
| Smoking in two areas                           | 42 (17)          | 12 (5)           | 8 (3)            |
| Smoking in three areas                         | 10 (4)           | 2.5 (1)          | 0                |
| Tobacco sold                                   | 2.5 (1)          | 0                | 0                |
| Smoking cessation program offered to employees | 92 (36/39)       | ...              | 92 (37)          |

\*Values are percentages with numbers of institutions in parentheses.

† $p < 0.001$  for 1991 vs 1990.

‡ $p < 0.01$  for 1992 vs 1991.

### RESULTS

A total of 43 hospitals met the inclusion criteria. Staff at 40 could be reached and responded adequately. Medical school-affiliated hospitals composed 62 percent (25) of the sample and included 10 Harvard University, 7 Boston University, and 8 Tufts University affiliates. Most hospitals (60 percent [23/38]) had at least one employee union. The mean number of beds was  $278 \pm 194$ , ranging widely from 30 to 1,081.

Table 1 summarizes the prevalence of various smoking policies at study time points. In 1990, all 40 hospitals restricted tobacco use. Only 8 percent (3) had banned smoking, while 40 percent (16) permitted smoking in one area; 42 percent (17) in two areas; and 10 percent (4) in three areas. Seventy-two percent (26/36) had modified their policies within the past 25 months, 50 percent (18/36) within the past 13 months, and 11 percent (4/36) in the month prior to the survey. All facilities except one Veterans Administration hospital had eliminated tobacco sales. A large majority (92 percent [36/39]) were offering smoking cessation programs to employees; 75 percent of the programs were free or subsidized. All responding medical school affiliates (24) offered such programs, while 80 percent (12/15) of nonteaching hospitals did so ( $p < 0.05$ , Fisher's exact test). Some hospitals had surveyed attitudes and/or smoking prevalence, but none had done so serially during the study period to assess the impact of their policies.

In 1992, all 40 of the original participating hospitals responded to the second survey. At that time, 92 percent (37) of the hospitals were providing smoking cessation programs to employees, and all had offered programs at some time between 1990 and 1992. No hospital permitted the sale of tobacco products. By the end of 1991, 45 percent (18) had smoking bans in effect, while 40 percent (16) permitted smoking in one area, 12 percent (5) in two areas; and 2.5 percent (1) in three areas. This constituted a significant increase in the prevalence of bans since 1990 ( $p < 0.001$ , McNemar's test). By February 1992, 72 percent (29) had smoking bans in place, another increase from 1991

( $p < 0.01$ , McNemar's test); while 20 percent (8) permitted smoking in one area, and 8 percent (3) in two areas. Of the 29 smoking bans in effect in 1992, 38 percent (11) were implemented on January 1, 1992; 52 percent (15) within 3 months of that date; and 59 percent (17) within 6 months.

### DISCUSSION

The results demonstrate a universal trend toward the adoption of strong and comprehensive smoking restrictions among the hospitals surveyed. The serial survey and the timing of policy implementations show that the rate of regulatory change has been rapid. The large number (59 percent) of bans implemented within 6 months of the January 1992 JCAHO standard is the most dramatic finding (38 percent were introduced on January 1, 1992) because hospitals still had 24 months to comply with the new rule. A national standard seemed to depersonalize the issue. To paraphrase several administrators, they were no longer antismoking zealots out to persecute the smoking minority, but concerned managers ensuring continued operation of the hospital. These results are fascinating because Holland's 1988 survey<sup>4</sup> reported numerous negative comments from hospital executives regarding various proposed JCAHO antismoking standards.

Only two facilities relaxed their policy at any time during the 2-year study period. The first was a hospital that had banned smoking in July 1990. In August 1991, an inside smoking lounge was reinstated because the administrator felt that employees smoking outside created a negative public impression. The second was a community hospital that had banned all smoking in 1989. In 1990, an employee smoking lounge was created because of union contract demands. The smoking lounge was again eliminated on January 1, 1992. The rarity of policy reversals implies that even strict antismoking policies create little discord, and fears of antagonizing smokers are largely unfounded. Surveys of employees at workplaces with such policies have demonstrated high levels of satisfaction.<sup>6,7</sup> In fact, in 1989, over 90 percent of Americans, including over 80 percent of smokers, favored workplace smoking restrictions or bans.<sup>8</sup>

The present study does have a number of limitations, however. First, it involved a small, regional sample. The prevalence of smoking restrictions and/or bans and the rate at which hospitals comply with the JCAHO standard may be significantly different in other areas of the country. However, the 1990 Boston data are similar to 1988 national data; therefore, the trend is likely not to be limited to this area. Second, perhaps the most important limitation is the inability to directly assess the effects of the implemented policies. The present study cannot determine the degree of compliance, whether air quality has been

improved and environmental tobacco smoke exposure has been decreased, and whether smoking cessation rates have increased. In this regard, an excellent report from Baltimore<sup>9</sup> described a well-designed evaluation of the 1988 ban on smoking at the Johns Hopkins Medical Institutions. The authors provided convincing documentation showing an increase in the quit rate for smokers, a decrease in the number of cigarettes smoked at work, a decrease in hospital fires, and decreased environmental tobacco smoke exposure as measured by air monitoring for nicotine.

#### CONCLUSION

In the past 2 years, the regulation of smoking in hospitals has undergone rapid change and accelerated dramatically in the past several months. In Boston, smoke-free hospitals are now the norm rather than the exception. The JCAHO standard appears to have had a positive effect in promoting smoking bans without antagonizing hospital administrators. Even where smoking has not been banned, policies have become increasingly restrictive and only rarely relaxed. The results should bolster the confidence of administrators inside and outside hospitals on local and national levels who are in favor of further limitations on public smoking.

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