

RESEARCH ARTICLES

Pharmacy Students' Perceptions of Tobacco Sales in Pharmacies and Suggested Strategies for Promoting Tobacco-Free Experiential Sites

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Objective. The objectives of this report were to estimate the extent to which pharmacy student perceptions are aligned with the 2003 resolution of the American Association of Colleges of Pharmacy (AACP) addressing the use of experiential sites that sell cigarettes and other tobacco products.

Methods. Pharmacy students participating in a national tobacco cessation training program completed posttraining survey instruments and indicated their opinion about tobacco sales in pharmacies. Responses were examined with respect to students' sex and tobacco use status.

Results. Of 3,064 students, 3.5% were in favor of tobacco sales in pharmacies. Opinions varied by students' sex ($p < 0.001$) and tobacco use status ($p < 0.001$); in logistic regression analyses, males (OR = 2.62; 95% CI, 1.77, 3.89) and current tobacco users (OR = 2.31; 95% CI, 1.41, 3.76) were most likely to be in favor of tobacco sales.

Conclusion. Few pharmacy students are in favor of tobacco sales in pharmacies. Given the overall lack of support, and acting in accordance with the 2003 AACP resolution, pharmacy schools are encouraged to use only experiential sites that do not sell tobacco products. Suggested strategies for moving toward this goal are presented.

Keywords: tobacco, pharmacies, pharmacy education, experiential sites, community pharmacy

INTRODUCTION

For more than 3 decades, the pharmacy profession has repeatedly expressed its opposition to the sale of tobacco products in pharmacies through numerous channels, ranging from individuals to state and national organizations.¹ In 1970, the American Pharmaceutical Association (APhA) stated, "Mass display of cigarettes in pharmacies is in direct contradiction to the role of the pharmacy as a public health facility." One year later, the APhA House of Delegates passed a series of recommendations regarding the dangers of cigarette smoking and the first recommendation was that tobacco products not be sold in pharmacies. Since that time, state organizations have voiced similar opinions. For example, in 1973 and again

in 1977, the California Pharmacists Association adopted the following recommendation: "Pharmacists, in the interest of raising the standards for public health and social welfare in the community, shall discourage the sale of tobacco products in the pharmacies in which they practice." The pharmacy profession is aligned with these recommendations, with fewer than 2% of current and future California pharmacists being in favor of tobacco sales in pharmacies.^{2,3} Yet in 2003,⁴ 61 of 100 pharmacies in San Francisco sold cigarettes (93.8% of traditional chain pharmacies and 24.1% of independently-owned pharmacies), and 84% of pharmacies selling cigarettes also displayed cigarette advertising.

Tobacco is the only consumable product that when used as intended will contribute to the death of half or more of its users.⁵ As such, tobacco sales through pharmacies directly contradicts the pharmacist's code of ethics,³ which states that pharmacists must be committed to the welfare of their patients and must act with honesty and integrity in professional relationships, avoiding actions that compromise dedication to the best interests of their patients.⁶ In 2003, the AACP House of Delegates

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passed a resolution (Table 1) encouraging its members to use only pharmacies that do not sell tobacco products. The objective of this study was to estimate the extent to which student perceptions are aligned with the 2003 AACP resolution and to provide colleges and schools of pharmacy with suggested steps toward responding to the resolution.

METHODS

Pharmacy students participating in a national dissemination study of the *Rx for Change: Clinician-Assisted Tobacco Cessation* program⁷ completed anonymous, pre-training and posttraining survey instruments during the 2003-2004 academic year. The data reported here, which represent a subset of items from a larger survey assessing the impact of the *Rx for Change* program on students' tobacco cessation counseling skills,² derive from students at 46 colleges and schools of pharmacy representing 32 states. Only posttraining data are reported here because these data offer the best approximation of the perceptions that students will possess as they enter their experiential sites.

Student perceptions were assessed using a single item: "What is your opinion about whether pharmacies should sell tobacco products?" Response options included strongly against it, against it, neither for it nor against it, in favor of it, and strongly in favor of it. Chi-squared tests of independence were used to examine these responses as a function of sex and tobacco use status (current, former, never). All study procedures and measures were approved by the Yale University Human Investigations Committee as well as the institutional review boards for the protection of human subjects at each study site.

RESULTS

Over two thirds (68.6%) of the study population (n = 3,064) was female. Nearly half of students (45.3%) had never tried tobacco, 37.0% had experimented with

tobacco a few times in the past, 7.5% were former tobacco users, 4.8% used tobacco less than once a day, and 5.4% used tobacco once or more a day.

The majority of students were either against (32.8%) or strongly against (38.3%) tobacco sales in pharmacies; few were either in favor (2.3%) or strongly in favor (1.2%) of tobacco sales; and 25.5% were neither for it nor against it (Figure 1). Perceptions differed by sex and tobacco use status, in that male students were more likely than female students to be in favor of tobacco sales (6.2% versus 2.3%; $p < 0.001$), and 7.5% of current tobacco users (daily or non-daily use), 4.4% of former tobacco users, and 3.0% of those who never use tobacco (includes experimenters) were in favor of tobacco sales ($p < 0.001$).

Logistic regression analysis revealed that both sex and tobacco use status are significantly related to pharmacy students' perceptions about tobacco sales in pharmacies (Table 2). Compared to their referent groups, male students were 2.62 times as likely and current tobacco users were 2.31 times as likely to be in favor of tobacco sales in pharmacies. Former tobacco users did not differ from never use ($p = 0.44$).

DISCUSSION

Few pharmacy students (3.5%) in our sample were in favor of tobacco sales in pharmacies, and these results are comparable to those obtained in recent studies: (1) of California pharmacy students, reported by Corelli et al (1.2% in favor, n = 493 students) and Hudmon et al (2.0% in favor, n = 1,518 students)³ and (2) of California pharmacists (1.6% in favor, n = 1,168 pharmacists).³ In earlier studies, Bentley⁸ and Kotecki⁹⁻¹² similarly reported pharmacists' discontent. Most consumers also are not in favor of tobacco sales in pharmacies. Of 988 adult consumers surveyed by telephone in California, 72.3% disagreed with the statement, "I am in favor of tobacco products being sold in drugstores." Furthermore, 82.6%

Table 1. AACP 2003 Resolution on Tobacco Sales in Pharmacies

WHEREAS, smoking cigarettes and use of other tobacco products is a contributing factor to the deaths of more than 400,000 individuals each year in the United States, and
WHEREAS, cigarettes and other tobacco products are sold in many pharmacies, and
WHEREAS, the sale of cigarettes and other tobacco products is not consistent with the role of pharmacists as providers of health care services and as advocates for public health
BE IT RESOLVED that AACP commend pharmacies that do not sell cigarettes and other tobacco products, and
BE IT FURTHER RESOLVED that AACP urge the pharmacies that currently sell cigarettes and other tobacco products to discontinue doing so, and
BE IT FURTHER RESOLVED that AACP member colleges and schools consider taking a position that they will only use pharmacies that do not sell cigarettes and other tobacco products as clerkship/experience sites, and
BE IT FINALLY RESOLVED that AACP member colleges and schools encourage their students who are seeking employment opportunities in community pharmacy practice to include the sale of cigarettes and other tobacco products among the factors to be considered in their employment decisions.

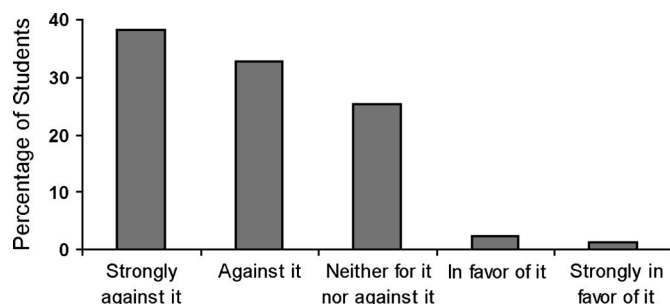


Figure 1. Pharmacy students' perceptions of tobacco sales in pharmacies (n = 3,064).

stated that if the drugstore where they most commonly shopped were to stop selling tobacco products, they would shop there just as often, 14.2% would shop there more often, and 3.2% would shop there less often.³

The data presented here supplement our existing, published data from California,^{2,3} which were subject to concerns regarding generalizability to other states. This much larger, nationally representative sample provides additional evidence to suggest that our profession is not in favor of tobacco sales in our practice environments. Given this level of opposition, and acting in accordance with the 2003 AACP resolution, we propose the following:

- Tobacco cessation training should raise awareness of the negative health effects of tobacco, its interactions with medications, and its contradiction with the pharmacist's role as a health-care provider.
- Through discussion and debate in ethics coursework, faculty members should raise students' awareness of the ethical dilemma imposed by tobacco sales in settings where pharmaceutical care is rendered and should encourage their students to consider tobacco sales when making employment decisions.
- When exclusive use of tobacco-free experiential sites is not possible, all sites should be clearly

designated with respect to their tobacco sales practices.

- Students should be encouraged to select tobacco-free sites.

Strengths of this study include the large, national sample. Our data are limited in that the presented data derive from a survey instrument used in a larger study that was designed to evaluate the impact of a tobacco cessation training program, and participation in the tobacco cessation training program has been shown to significantly strengthen opposition toward tobacco sales in pharmacies.² However, the *Rx for Change* training is being widely adopted by colleges and schools of pharmacy throughout the United States. Thus, posttraining perceptions likely are representative of the perceptions that most pharmacy students will possess as they enter their experiential sites.

CONCLUSION

Few pharmacy students are in favor of tobacco sales in pharmacies, and these opinions are aligned with the 2003 AACP resolution. Feasible suggestions are provided to assist US colleges and schools of pharmacy in responding to the resolution, thereby eliminating or minimizing use of experiential sites that are purveyors of tobacco products. Given the current national shortage of pharmacists, the window of opportunity is open for our profession to voice its widespread lack of support for tobacco sales in pharmacies, raise awareness, and ultimately remove the single-most important cause of preventable death in our country¹³ from our pharmacy shelves.

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Table 2. Predictors of Pharmacy Students' Perceptions Toward Tobacco Sales in Pharmacies*

Characteristic†	Odds Ratio (95% CI)
Sex (female)	2.62 (1.77, 3.89)
Tobacco use status (never user‡)	
Former user	1.32 (0.67, 2.60)
Current user	2.31 (1.41, 3.76)

*Dichotomous dependent variable (in favor or strongly in favor, coded 1; strongly against it, against it, or neither for it nor against it, coded 0)

†Referent group designated in brackets

‡Includes students who had never tried tobacco and students who experimented with tobacco a few times in the past

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