

A SURVEY OF PHARMACISTS' OPINIONS AND PRACTICES RELATED TO THE SALE OF CIGARETTES IN PHARMACIES—REVISITED

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ABSTRACT: The objective of the study was to follow-up on important findings from a 1996 statewide survey of Indiana pharmacists regarding their opinions and practices related to the sale of cigarettes in pharmacies. More specifically, this study was designed to (1) collect 2001 statewide data concerning the percentage of Indiana pharmacies selling cigarettes and to learn what pharmacists think about the sale of cigarettes in their stores; (2) compare these findings with results from a 1996 study; and collect new information on (3) whether a cigarette selling policy in pharmacies in which pharmacists are employed differs from their professional and personal values; (4) pharmacists' opinions related to state-wide initiatives on tobacco control in Indiana; and (5) the level of involvement with smoking cessation activities by community pharmacists.

A 1996 survey instrument of Indiana pharmacists opinions and practices related to the sale of cigarettes in pharmacies served as the basis for questionnaire design. In addition, 11 new items were added to assess the three new objectives of the study. This questionnaire was administered to half of the 1280 pharmacies in Indiana. Collected data were analyzed by using descriptive and inferential statistical methods.

Findings reveal that independent pharmacies had significantly reduced their sale of cigarettes from 1996 while there was no significant change among retail chain pharmacies. Additionally, significantly more pharmacists in 2001 believed that pharmacies should not sell cigarettes compared to five years ago. Also, more than three-fourths of pharmacists who worked in pharmacies that sold cigarettes felt it differed from their professional values.

When it came to pharmacists involvement in tobacco control activities, results were mixed. This study found that the majority of pharmacists do not ask their patients about their smoking habits. In addition, an overwhelming majority of Indiana pharmacists were unfamiliar with a number of state public health programs/resources on smoking preven-

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tion and cessation. Nevertheless, it was very encouraging that nearly three-fourths of the pharmacies offer counseling programs for smokers who want to quit and more than one-half believed that increasing the state excise tax on cigarettes would be effective on tobacco control in Indiana.

KEY WORDS: cigarette sales in pharmacies; pharmacist opinions and values related to cigarette sales; pharmacist activities related to smoking cessation.

INTRODUCTION

Smoking continues to be the leading cause of death in Indiana, killing 10,000 Hoosiers annually. In fact, Indiana has the eighth highest death rate related to smoking among all states.¹ In 1999, the adult smoking prevalence in Indiana was 27.0%, which ranks them well above the median (22.7%) of all states. Furthermore, the fact that more than one in four Indiana residents smoke places an enormous economic burden on the state. The ongoing excess expenditures incurred due to smoking in Indiana are at least \$3.5 billion per year.² These losses include \$2 billion that is spent annually on treating the medical consequences of tobacco use and another \$1.4 billion in economic output due to the smokers' health-related early retirement from the labor force. The magnitude of these costs, as well as the fact that smoking is the number one preventable cause of premature death and disability in Indiana make the issue of tobacco use a legitimate area of interest to the state of Indiana.

Fortunately, several forces have combined to increase dramatically the funds available for tobacco control at the state level. First, the Indiana State Department of Health (ISDH) has long recognized that its state's relatively high use of tobacco significantly impacts its citizens quality of life. In 1991, as part of ISDH's attempt to secure funding for the state's community-based interventions and statewide programs related to tobacco control, ISDH applied for, and received national funding from the National Cancer Institute (NCI) to become one of 17 states to participate in the American Stop Smoking Intervention Study (ASSIST). Project ASSIST or Smokefree Indiana as it came to be known in Indiana, has served for the past decade as the state's lead association dedicated solely to building support networks among various organizations to provide tobacco prevention and control activities. The funding from NCI for Project ASSIST ended in 1999. Tobacco control and prevention funding is now allocated by the Centers for Disease Control and Prevention (CDC). Currently, Smokefree Indiana receives \$1.4 million annually for tobacco control funding from the CDC.¹

Second, Indiana has committed all of its first year payments (\$112.5 million) from the 1998 National Tobacco Settlement for health purposes.³ In fact, Indiana is one of only five states to designate all of its settlement payments to public health. Of this amount, \$35 million has been designated for tobacco prevention and control. To administer the dispersing of these funds, the state legislature created the Indiana Tobacco Prevention and Cessation Agency (ITPCA). Clearly, recent perspectives and initiatives related to tobacco control in Indiana have shifted markedly.

Both ITPCA and Smokefree Indiana recognize the need for actively involving all sectors of society in obtaining their goal of improving the quality of life in Indiana by promoting a tobacco-free lifestyle among Hoosiers. One significant sector is health care professionals. It is well known that physicians, pharmacists and other health care professionals can play a major role in the prevention and cessation of cigarette smoking.⁴ Specifically, pharmacists have special obligations in the anti-tobacco campaign because of the influence they have on the public and whereas regrettably, pharmacies continue to be a major outlet for the sale of cigarettes in Indiana. Kotecki, Torabi, and Elanjian⁵ reported that nearly 64% of Indiana pharmacies sold cigarettes in 1996, a significant ($p \leq .05$) decline from the 71% of drugstores that sold cigarettes in 1990. This was notable progress, nevertheless the task remaining is immense.

The national professional organizations that represent pharmacists have continued to add their full weight to this public health imperative. In the last few years, the American Pharmaceutical Association, the American Public Health Association, and the American Medical Association have all reiterated their long standing resolution which have asked pharmacists to stop selling tobacco products.⁶

There is little doubt an overwhelming majority of American pharmacists would agree that as health care professionals they have a responsibility to help their customers take active steps toward achieving a healthier lifestyle, especially when it comes to smoking.⁶ At the state-level, pharmacists in at least 17 states outside of Indiana are helping people quit smoking in programs cooperatively sponsored by state pharmacy associations, hospital pharmacy societies, and other professional groups and government agencies.⁷ The foundation has been established, but much more needs to be done between pharmacists and state-level programs. This development is essential because according to recent research,⁸ Indiana pharmacists are well aware of the negative health consequences of smoking. However, the same study also reported that most Indiana pharmacists (78%) did not believe it was their responsibility to be very involved with counseling their patients about tobacco use.

This belief of noninvolvement is disconcerting because as an accessible health care professional the pharmacist is in a unique position to assist patients who wish to quit smoking. Few healthcare practitioners have as many contacts with patients; interacting repeatedly with patients who smoke upon their return for medication refills or when purchasing non-prescription products.⁹ This unrivaled position was reflected in 1996 by the Agency for Health Care Policy and Research (AHCPR) when they released their guidelines encouraging all clinicians, including pharmacists, to promote smoking cessation as part of their clinical practice.¹⁰ Further, pharmacists are considered the most trusted health care professional, allowing them added opportunity to affect the health and health care decisions of their patients in community pharmacies.¹¹

For those who are in the business of providing medical and health care for treating patients, preventing diseases, and promoting the health of individual members within their communities, this is an opportune time for pharmacists and the pharmacies in which they work to continue to take a more proactive approach on tobacco control in Indiana. Therefore, continued research directed at determining the percentage of Indiana pharmacies selling cigarettes and pharmacists' opinions related to the sale of cigarettes by pharmacies, as well as information on the level of involvement with smoking cessation activities by community pharmacists in Indiana are of considerable ongoing interest to tobacco control experts.

Specifically, this study was designed to (1) collect 2001 state-wide data concerning the percentage of Indiana pharmacies selling cigarettes and to learn what pharmacists think about the sale of cigarettes in their stores; (2) compare these findings with results from a 1996 study; and collect new information on (3) whether a cigarette selling policy in pharmacies in which pharmacists are employed differs from their professional and personal values; (4) pharmacists' opinions related to state-wide initiatives on tobacco control in Indiana; and (5) the level of involvement with smoking cessation activities by community pharmacists.

METHODS

A 1996 survey instrument (19 items) of Indiana pharmacists' opinions and practices related to the sale of cigarettes in pharmacies served as the basis for questionnaire design.⁵ In addition, 11 new items were added to assess the following: (a) the level of involvement with smoking cessation activities by community pharmacists in Indiana (7 items); (b) cigarette-selling activity and professional and personal values (2 items); and (c) pharma-

cist opinions related to state-wide initiatives on tobacco control (2 items). The instrument was pretested for validity in a small representative sample of pharmacists in Indianapolis, Indiana and, subsequently, refined for data collection.

The 30 study questions were addressed in a cross-sectional mail survey of pharmacists in Indiana. Of the 1280 registered Indiana pharmacies in a directory obtained from the Indiana State Health Professions Bureau, one-half were chosen using a systematic random selection process. An initial postcard explaining the purpose of the study and requesting participation by a staff pharmacist was mailed to all selected pharmacies 1 week before the questionnaire was mailed. Questionnaires and postage-paid envelopes were mailed to the 640 selected pharmacies. Recipients were asked to have one staff pharmacist answer the questionnaire. Follow-up postcards were mailed 2 weeks after the initial mailing.

The collected data were analyzed using SPSS 10.0. The Pearson chi-square and descriptive statistics were used to examine relationships between cigarette-selling practices and pharmacy characteristic variables. The level of statistical significance was set at $p < .05$.

RESULTS

From the 640 pharmacies contacted, 476 pharmacists responded completely to the questionnaire, providing a 74.4% response rate. The margin of error for 95% confidence intervals for all proportions reported was $\pm 4\%$.

Respondents ranged in age from 24 to 68 years, with a mean age of 40.3 and a standard deviation of 11.1. The majority of pharmacists were men (65.3%), had practiced for 10 or more years (70.9%), had a bachelors of pharmacy (92.2%) and managed the pharmacy they worked at (61.0%). Slightly more than one in five (21.5%) of the pharmacists indicated ownership of the pharmacy. More than one-half (56.4%) of the pharmacists responding practiced in a retail chain pharmacy, 30.0% worked in independently owned pharmacies (independents), while 13.6% were employed in clinic/professional types of pharmacies, mostly hospital-based units.

The service area location was fairly evenly distributed, with 38.0% of pharmacists practicing in rural settings, 35.8% in suburban settings, and 26.2% in urban settings. More than 4 out of 10 respondents (42.7%) worked in pharmacies that filled more than 200 prescriptions per day, while nearly two-thirds (64.4%) of the respondents indicated the percentage of their stores' sales volume accounted for more than 75% of total

TABLE 1

Pharmacies Practices Regarding Sale of Cigarettes

<i>Sell Cigarettes</i>	<i>Yes</i>	<i>No</i>
	<i>N (%)</i>	<i>N (%)</i>
2001	275 (58.1)	198 (41.9)
1996	306 (63.7)	174 (36.3)

$$\chi^2 = 3.151; df = 1; p > .05.$$

sales. The descriptive characteristics of this sample were similar to those observed in previous research.^{5,8}

As shown in Table 1, 58.1 percent of the pharmacies sold cigarettes in 2001, a 5.6% decline since 1996. However, performing a chi-square test demonstrates that this change was not significant ($p > .05$). Similar to the 1996 study, retail chain pharmacies were the most likely type of pharmacy to sell cigarettes in 2001 (Table 2). Further, the data analysis in Table 2 reveals no significant difference ($p > .05$) between retail chain pharmacies by year. There was, however, a significant relationship between independent ($p < .01$) and clinic/professional ($p < .01$) pharmacies by year. This indicates that independent and clinic/professional pharmacies were less likely to sell cigarettes in 2001 than in 1996.

Table 3 indicates that pharmacies that generated a greater share of their business from prescription drugs were less likely ($p < .01$) to sell cigarettes. This was true for both retail chain and independent pharmacies.

TABLE 2

Type of Pharmacies and Sale of Cigarettes by Year

<i>Sell Cigarettes</i>	<i>Retail-Chain</i>		<i>Independently Owned</i>		<i>Clinic/Professional</i>	
	<i>Yes N (%)</i>	<i>No N (%)</i>	<i>Yes N (%)</i>	<i>No N (%)</i>	<i>Yes N (%)</i>	<i>No N (%)</i>
2001	248 (93.6)	17 (6.4)	25 (17.7)	116 (82.3)	0 (00.0)	56 (100)
1996	240 (97.2)	7 (2.8)	53 (37.6)	88 (62.4)	13 (14.4)	77 (85.6)

$$\chi^2 = 3.670; df = 1; p > .05 \quad \chi^2 = 13.894; df = 1; p < .01 \quad \chi^2 = 8.880; df = 1; p < .01.$$

TABLE 3

Prescription Concentration and Sale of Cigarettes

<i>Sell Cigarettes</i>	<i>Yes</i>	<i>No</i>
	<i>N (%)</i>	<i>N (%)</i>
<i>Prescription Concentration</i>		
< than 50% of total sales	23 (85.2)	4 (14.8)
51%–75% of total sales	118 (86.1)	19 (13.9)
76% or more of total sales	125 (42.1)	172 (57.9)

$\chi^2 = 83.391$; $df = 2$; $p < .01$.

In response to the question: “Do you think that pharmacies should sell cigarettes,” 88.7 percent said “no” and 11.3 percent said “yes” (Table 4). This was a 7.2% increase over 1996, which was a significant ($p < .01$) change. Additionally, no significant difference ($p > .05$) existed between the pharmacists position and whether or not they thought pharmacies should sell cigarettes (Table 4). However, this study revealed a significant relationship between ($\chi^2 (1) = 21.82$, $p < .01$) pharmacists’ opinions and the sale of cigarettes. In other words, more pharmacists who think that pharmacies should sell cigarettes were more likely to work in pharmacies that sold cigarettes.

Respondents from pharmacies that sold cigarettes were asked if this policy differs from their professional and personal values, more than

TABLE 4

Pharmacists’ Opinions by Year and Position Regarding Sale of Cigarettes

<i>Think Pharmacies Should Sell Cigarettes</i>	<i>Think Pharmacies Should</i>		<i>Think Pharmacies Should Sell Cigarettes</i>	<i>Think Pharmacies Should</i>	
	<i>Yes</i>	<i>No</i>		<i>Yes</i>	<i>No</i>
	<i>N (%)</i>	<i>N (%)</i>		<i>N (%)</i>	<i>N (%)</i>
2001	48 (11.3)	375 (88.7)	Own	13 (15.5)	71 (84.5)
1996	89 (18.5)	393 (81.5)	Manage	27 (10.4)	232 (89.6)
			Staff	8 (10.1)	72 (89.9)

$\chi^2 = 8.883$; $df = 1$; $p < .01$.

$\chi^2 = 1.787$; $df = 2$; $p > .05$.

three-fourths (75.8%) replied that this practice is different from what their professional values tells them to do compared to slightly less than one-third (32.7%) who responded that this practice differs from what their personal values tell them to do. Finally, nine in 10 (90.1%) pharmacists feel that cigarettes is an important cause of morbidity in Indiana and that personal health behaviors (88.4%) play a major role in promoting health and reducing morbidity in Indiana.

Pharmacists level of involvement in smoking cessation activities was assessed by asking respondents several questions (Table 5). First, pharmacists were asked if they generally inquire about their patients smoking habits. Only slightly more than one-fourth (27.0%) of respondents indicated generally asking their patients about their smoking habits, roughly the same percent (26.5%) as in 1996. The most frequently cited barrier in limiting their

TABLE 5

Pharmacists' Level of Involvement in Smoking Cessation Activities

<i>Question</i>	<i>Yes</i>	<i>No</i>
	<i>N (%)</i>	<i>N (%)</i>
In general, do you ask your patients about their smoking habits?	114 (27.0)	309 (73.0)
Does your pharmacy provide educational material on smoking?	255 (60.1)	169 (39.9)
Does your pharmacy offer counseling for smokers who want to quit?	340 (72.8)	127 (27.2)
Forms of counseling offered:		
Nicotine Replacement Therapy	322 (94.7)	
Nicotine Replacement Therapy & Behavior Modification	110 (32.4)	
Behavior Modification	6 (1.8)	
Refer to Community Support Groups	55 (16.2)	
Are you familiar with the following Indiana programs/resources on smoking:	<i>Familiar</i>	<i>Unfamiliar</i>
American Cancer Society's <i>Fresh Start Program</i>	114 (24.4)	353 (75.6)
American Lung Association's <i>Freedom From Smoking Program</i>	115 (24.3)	358 (75.7)
Smokefree Indiana / Project ASSIST	94 (19.9)	379 (80.1)

participation in smoking cessation and tobacco control activities was on the job time constraints (83.1%), followed by the lack of reimbursement (51.4%), lack of information or training (37.3%), physical design/layout of the pharmacy (32.5%) and insufficient management support (21.3%).

Sixty percent of the respondents indicated that their pharmacies provide educational material on cigarettes and that nearly three-fourths (72.8%) of their pharmacies offer counseling for smokers who want to quit (Table 5). The overwhelming majority (94.7%) offer nicotine replacement therapy (NRT), with a fairly even number indicating either prescription (84.4%) or OTC medications (82.9%) as part of NRT. A much lower percentage (32.4%) offered both NRT and behavior modification counseling at their pharmacies, with only 6 respondents (1.8%) offering only behavior modification.

Less than one in six (16.2%) pharmacists referred people who wanted to quit smoking cigarettes to community support groups. The majority of pharmacists indicated they were not familiar with Indiana public health programs/resources on smoking (Table 5). More than three-fourths were unfamiliar with American Lung Association's *Freedom From Smoking Program* (75.7%), American Cancer Society's *Fresh Start Program* (75.6), and Smokefree Indiana/Project ASSIST (80.1%). However, most respondents (78.8%) indicated they would be willing to participate in continuing education courses to learn more about smoking prevention and cessation.

The level of community participation in general health education/promotion programs was moderate (41.9%) with significantly more respondents (63.1%) feeling that pharmacists currently play a significant role in health promotion and disease prevention to the public they serve. Respondents had differing opinions regarding how effective they thought state-wide initiatives on tobacco control would be (Table 6). Only one in five (20.6%) pharmacists thought that the newly created Indiana Tobacco Prevention and Cessation Agency would be effective, while more than one-half (51.7%) believed that increasing the state excise tax on cigarettes would be effective in tobacco control. Among those respondents who believed an increased cigarette excise tax would be effective, more than four-fifths (83.8%) would recommend a 50 cent or higher increase.

DISCUSSION

The major focus of this study was to ascertain changes in pharmacists' opinions and practices concerning the sale of cigarettes in Indiana pharmacies from 1996 to 2001. While no significant decrease occurred in

TABLE 6

Pharmacist Opinions Related to Indiana State-Wide Initiatives
on Tobacco Control

<i>How Effective Do You Think the Following Indiana Initiatives Would Be on Tobacco Control:</i>	<i>Effective N (%)</i>	<i>Not Effective N (%)</i>	<i>Unsure/ Undecided N (%)</i>
2000 Indiana Tobacco Preven- tion and Cessation Agency	96 (20.6)	160 (34.4)	209 (44.9)
Increasing the current state ciga- rette excise tax of 15.5 cents	242 (51.7)	196 (41.9)	30 (6.4)
If you think increasing the excise tax would be effective, the in- crease you would recommend	<u>15-25 cents</u> 39 (16.1)	<u>50 cents</u> 162 (66.9)	<u>> 50 cents</u> 41 (16.9)

the number of pharmacies selling cigarettes in the past five years, a significant decrease did occur among independent pharmacies.

This drop-off among independents was a highly encouraging finding. This decline may be attributed to a 1996 resolution passed by the National Community Pharmacists Association, which represents the business and proprietary interests of America's independent community pharmacists, which suggested to independent drug owners that it "may be an appropriate time for pharmacists to reassess their own individual decision regarding the sale of tobacco."¹² At the time the resolution passed, one in five independents surveyed who currently stocked cigarettes indicated they planned to end such sales the following year. From the results of this study, it appears that independents in Indiana stayed firm and followed through which squeezed the ranks of independents selling cigarettes in Indiana over the past five years.

The fact that no significant change occurred among retail chain pharmacies was disappointing. This is probably a result of business decisions made by business managers, often non-pharmacists. Whereas independent pharmacy owners have freedom to decide whether or not they want to sell cigarettes, chain store managers and employees have little or no control over whether or not cigarettes are sold at their pharmacies. This decision to sell cigarettes is in direct conflict with the health care/wellness center role of the pharmacy as a public health facility. Consequently, according to John Cova of the Health Insurance Association of

America, pharmacy cigarette sales place pharmacists in a “socially awkward position. It’s hard to believe pharmacists are sincere about health care, encouraging compliance and so forth, when they are selling tobacco.”¹³

A significant increase did occur in the number of pharmacists who believe that pharmacies should not sell cigarettes. The mounting negative media attention given to smoking and the 1998 National Tobacco Settlement may have contributed to this increase.

Furthermore, this study revealed that pharmacists professional values are being severely compromised when they are required to sell cigarettes. This is evident by the fact that more than three-fourths of those pharmacists working in pharmacies that actually sell cigarettes indicated it was in opposition to their professional values. This could indicate that many Indiana pharmacists working in pharmacies that sell cigarettes may be experiencing cognitive dissonance or an unpleasant state of tension generated by simultaneously presenting themselves to the community as health care professionals, while having to sell cigarettes, a product that is the single most preventable cause of death and disease in our society. An option could be for pharmacists to persuade the decision makers to stop selling cigarettes because it harms their pharmacy’s prospects for other profitable health avenues of revenue.¹³

When it came to pharmacists involvement in tobacco control activities, results were mixed. Unfortunately, this study found that little has changed when it comes to pharmacists asking their patients about their smoking habits, with nearly three-fourths of pharmacists indicating they did not ask their patients about their smoking habits, which is similar to 1996. This is untimely since the concept of the teachable moment can be particularly applicable in the pharmacy context because patients are very receptive to pharmacists’ recommendations.¹⁰ Therefore, pharmacists must improve in this area if they want to be in compliance with the 1996 AHCPA guidelines, which encourage all health care professionals to promote smoking cessation as part of their clinical practice.^{4,10}

Nevertheless, it was very encouraging that nearly three-fourths of the pharmacies offer counseling programs for smokers who want to quit. As trusted and accessible health care professionals, pharmacists are in an excellent position to assist patients who wish to quit smoking. However, for Indiana pharmacists to maximize the efficiency of this interaction, they need not only provide drug therapy options, but include behavioral support as part of a comprehensive smoking-cessation program.¹⁴ A significant number of respondents indicated they lacked information or training in smoking cessation activities. This could readily be addressed through continuing education programs, as the overwhelming majority of pharmacists in-

icated they would be willing to participate in courses to learn more about smoking cessation.

Pharmacists also need to be better informed about valuable educational resources and programs that presently exist in the community for their patients who want to quit smoking. An overwhelming majority failed to refer patients who wanted to quit to community support groups. This may be due to their unfamiliarity with a number of Indiana public health programs/resources on smoking prevention and cessation. Likewise, community tobacco control agencies and the state pharmacy association must redouble their efforts in meeting educational and informational needs of pharmacists in this area.

Finally, it was interesting that a majority of respondents thought raising the state excise tax on cigarettes would be effective in tobacco control. This is meaningful for a couple of reasons. First, the state of Indiana, despite repeated legislative attempts, has not increased its cigarette taxes since 1987.^{3,15} This could supply state tobacco control advocates with additional support from an important group of health care professionals in their efforts to reassure state legislators to pass a cigarette tax increase. Furthermore, this advocacy role could provide pharmacists who feel their professional values are being compromised by working in pharmacies that sell cigarettes, an important outlet to improve their public health image in that they would be working to shape legislative efforts and public policy relating to tobacco control.¹⁶

The interpretations of the findings of this study should be viewed in light of the following limitations. While the data was collected anonymously, it is possible that social desirability bias resulted in underestimation of the sale of cigarettes. It is possible that some respondents replied that they did not sell cigarettes because this was the socially desirable answer. However, the scope of this study made an observational method impractical.

Additionally, external validity was slightly compromised because 25.6% of questionnaires were not returned. Nonrespondent data was not collected, and therefore no characterizations can be made about them.

Finally, various factors influence the environments in which community pharmacists work; therefore, the generalizability of the results outside of Indiana might be limited by differences in laws, training, and practices in other states.¹⁷

CONCLUSIONS

Despite the apparent decreasing trend with respect to the number of independent pharmacies selling cigarettes in their stores, cigarettes are

still available in the overwhelming majority of retail chain pharmacies in Indiana. Decision makers in pharmacies where cigarettes are still sold should take a momentous look at their justification for their availability in an environment that has a goal of promoting health. The provision of pharmaceutical care to patients demands that pharmacies stop dispensing the leading cause of disease and premature death in our society and move to promoting healthy lifestyles in their patients to achieve favorable outcomes.

Similarly, it is hoped that pharmacists will continue to increase their role as esteemed professional health care providers and become even more proactive in addressing this major health care issue by serving the public as health educators and advocates. Finally, future studies directed at determining the percentage of pharmacies selling cigarettes in Indiana is important and worthwhile as the role of the community pharmacy as a public health/wellness center continues to evolve.

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