

AN ORDINANCE AMENDING CHAPTER 135 “C-1 LOCAL BUSINESS DISTRICT”, TITLE VII “ZONING AND PLANNING ORDINANCE” OF THE CITY CODE BY ADDING A NEW SECTION 7.135.025 PUBLIC POLICY AND OTHER AMENDMENTS AS IT RELATES TO EXPANSION OF TOBACCO RETAILERS IN THE CITY.

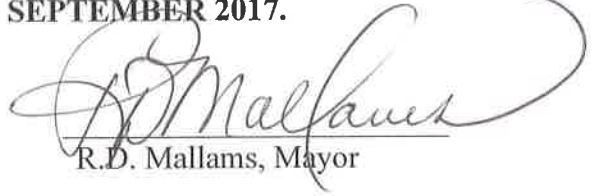
LEGISLATIVE FINDINGS:

1. When tobacco retail outlets are concentrated in certain neighborhoods or around schools, there are negative consequences for tobacco control and public health.
2. Communities that are densely populated with tobacco retailers make it easier for youth to get tobacco products.
3. Retail outlets are a key marketing channel for tobacco products, a high density of tobacco retailers in a neighborhood creates a concentration of tobacco marketing, meaning children, youth, and adults living in these neighborhoods will be exposed to multiple environmental cues designed to encourage tobacco use.
4. Studies have shown that tobacco advertising is more prevalent in stores near schools and where adolescents are likely to shop.
5. Tobacco retailers are an important marketing channel for reaching and attracting potential new users, the vast majority of which are teenagers under 18 years old.
6. Convenience stores – which are popular with teenage shoppers – vigorously participate in tobacco marketing activities and tend to feature significantly more tobacco advertising and promotions compared to other types of stores.
7. Exposure to these marketing and promotional activities has been shown to affect tobacco use initiation rates among adolescents, particularly when the stores are close to schools.
8. Studies have documented that youth who live or go to schools in neighborhoods with a high density of tobacco outlets (or with the highest density of retail tobacco advertising) have higher smoking rates compared to youth who live, or attend school, in neighborhoods with fewer or no tobacco outlets.
9. The Surgeon General has found that the tobacco industry’s retail outlet advertising targets people with the lowest income and education and that there is more in-store tobacco advertising in minority and low-income neighborhoods.
10. Evidence demonstrates that restrictions on the number and locations of tobacco retail outlets within a community have clear public health benefits, particularly for youth, young adults, and for low-income and other populations disparately impacted by the chronic diseases caused by tobacco use.

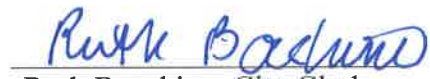
SECTION 1 – ADDITION TO CHAPTER 135. Section 7.135.025 to be included within Title VII, Chapter 135 of the City Code attached hereto and incorporated herein.

SECTION 2 – SEVERABILITY CLAUSE. The provisions of this ordinance are severable and if any provision hereof is declared invalid, unconstitutional or unenforceable, such determination shall not affect the validity of the remainder of the ordinance.

**PASSED, SIGNED, AND MADE EFFECTIVE BY THE CITY COUNCIL OF THE CITY
OF GLADSTONE, MISSOURI THIS 11th DAY OF SEPTEMBER 2017.**


R.D. Mallams, Mayor

ATTEST:


Ruth Bocchino, City Clerk

1st Reading: September 11, 2017

2nd Reading: September 11, 2017



Community Development Department

Staff Report

Date: August 18, 2017 *R. Pappas*

File #: 2017-006

Requested Action: Zoning Text Amendment

Date of PC Consideration: August 21, 2017

Date of Council Consideration: September 11, 2017

Applicant: City of Gladstone, Community Development Department

Owner: N/A

Architect: N/A

Engineer: N/A

Address of property: N/A

Community Development staff has been instructed by the City Council to research the possibility of regulating smoke shop businesses within Gladstone. Since August 2016 staff has worked diligently to identify scientific and social research that describes the negative effects of smoke shops in communities. With the assistance of our City Attorney, the attached ordinance and policies have been drafted to better regulate such uses.

What Does the Public Say?

At the time this staff report was written, staff has not heard from any member of the public. Planning and zoning ordinances are enacted with the aim to protect the health, safety, general welfare, and property values of the community. Please keep these considerations in mind as you determine the value and necessity of this text amendment.

Staff feels that regulation is necessary due to the likelihood of continued expansion of smoke shops in the City. Studies show that such expansion results in undesirable community impacts, including: increased sales of tobacco and vapor products to minors, a greater opportunity for the sale of drug paraphernalia, negative aesthetic impacts, and the loss of property values in close proximity to these uses. Care has been taken to ensure that these regulations address the negative impacts while still allowing a reasonable number of establishments to be located within the City.

To summarize this policy and supporting research, staff has determined that separation requirements are necessary. Essentially, smoke shops should be separated by at least 5,280 feet from other smoke shops, at least 200 feet of any residential structure, and at least 500 feet of any school, daycare, youth center, community center, recreational facility, park, church or religious institution, hospital, or other similar uses where children regularly gather. In addition, such uses should be located in a multi-tenant development housing not less than four separate occupancies. The full policy is attached. Community Development staff is happy to answer any questions the Planning Commission or City Council may have.

GLADSTONE PLANNING COMMISSION MINUTES
Council Chambers August 21, 2017

1. Meeting called to Order- Roll Call- Chairman Markenson called the meeting to order at 7:00 pm.

Commissioners present were: Anne Alexander
Jennifer McGee
Katie Middleton
Carlos Salazar
Bill Turnage
Don Ward
Larry Whitton
Gary Markenson

Also present: Jean Moore, Councilmember
Bob Baer, Assistant City Manager
Nick Pappas, CD Director
Alan Napoli, Building Official
Cheryl Lamb, Administrative Assistant

Absent were: Chase Cookson
James New
Shari Poindexter

2. Pledge of Allegiance to the United States of America.

3. Approval of Minutes.

Chairman Markenson asked if there was a motion to approve the minutes from the May 15, 2017 and July 17, 2017 meetings. Mr. Ward moved to approve the minutes with the following corrections to the July 17th minutes:

Page 23, Line 4: change Safe to Sage
Page 23, Lines 1, 7, 17: change New to Ward
Page 28, Line 10: change Ward to New
Page 29, Line 20: change New to Ward
Page 30, Line 13: change New to Ward

Mr. Whitton seconded. The minutes were approved, as amended, 8-0.

Chairman Markenson stated that today was a once in a lifetime historic event. It's the eve of Anne Alexander's 90th birthday. Anne celebrated with an eclipse, a flood of Noah's proportion, and he hoped that she wasn't going to have locust next as he doesn't like locust. He asked everyone to join him in giving Anne a round of applause and he congratulated her.

Chairman Markenson announced that the Commission has a new member, Katie Middleton, and asked her to share a little bit about herself. Ms. Middleton stated that she has been a residence of Gladstone since 2001. She wanted to get involved with government beyond just casting a vote every so often. She attended a Future Leaders academy in 2015 and became a member of the Board of Zoning Adjustment that year. She is a member of the Labor Control Board, and was recently asked to join the Planning Commission. Chairman Markenson welcomed her to the Planning Commission.

4. PUBLIC HEARING: Smoke shop text amendment. File #2017-006.

Mr. Pappas shared that City Manager, Scott Wingerson, attended the July meeting of the Planning Commission to brief the Commission on the genesis of the Smoke Shop ordinance, why it was wanted,

and reasons behind it. From that meeting there were a couple of areas of concern and clarification that were noted. He added that the information in their packet demonstrates how that was accomplished. One was expanding the proximity requirements when it comes to areas where children congregate or are seen frequently. Initially it addressed just schools and day cares. Since then they have looked at other cities throughout the region and nationally to come up with a broader definition. Now it includes schools, day cares, youth centers, community centers, recreational facilities, parks, churches or religious institutions, hospitals, and other places where children regularly gather.

The second area of concern that was discussed was whether the ordinance should be looked at the same way as liquor. Should they be looking at a percentage base for the restriction, not just the square footage, to determine whether a smoke shop is the focus of the business or an ancillary sale. Mr. Pappas said they looked throughout the nation and found a few examples in Florida, California, and Nevada, and quite few in Illinois, but didn't find any in Missouri. He shared that if this approach is taken it might result in creating a Board that just looks at smoke shops, the way we have a liquor control board. Since there are no other examples in Missouri, it would make Gladstone ripe for a lawsuit since there's been no case law up to this point. Not to mention it would require a lot of staff monitoring on an ongoing basis. It is staff's opinion that they should stick to what other cities throughout the nation have done, just looking at a square footage based requirement defining whether or not something is a smoke shop.

There is a third area that was looked into this morning. Chairman Markenson contacted him to ask about Public Safety. He asked if there were numbers that actually show that we have a problem with smoke shops selling to underage minors. Mr. Pappas talked with Chief Hasty and he said that, due to limited resources, they don't conduct sting operations the way that they do liquor, even though that might be something that we look into in the future and that we might want to pursue. At this time it's just complaint driven. If they get a complaint that someplace is selling to minors, then they look into it. He wasn't able to provide numbers as they were busy today with the eclipse. He did say that you could count them on one hand, if that. That's where that stands.

Mr. Pappas added that even if sales of tobacco and vapor products to minors aren't really a problem in Gladstone at this time, there are three other issues that are the focus of this ordinance.

1. *Research shows that Smoke shops actually provide a greater opportunity for the sale of drug paraphernalia.*
2. *It has negative aesthetic impacts.*
3. *It has been demonstrated that the proximity of smoke shops actually causes a loss of property values.*

Even absent of the problem of selling to underage minors, there are these three other areas that this ordinance does touch on. He encouraged the Commission to look at these areas and vote on this ordinance tonight so it can be taken before the City Council. He added that any discussion that happens here would be relayed to the City Council in his presentations.

Chairman Markenson asked if there were any questions for Mr. Pappas.

Mr. Salazar asked if previous discussions regarding being one mile from other smoke shops, would they be grandfathering existing ones, or are we asking them to move, or ?

Mr. Pappas replied that they would be grandfathering them at this time.

Chairman Markenson stated that he had a few questions. This ordinance affects only smoke shops, tobacco shops. It doesn't affect liquor stores that sell cigarettes, grocery stores, drug stores, . . . He asked if Mr. Pappas knows if the tattoo businesses in Gladstone sell cigarettes. It doesn't affect any of those.

Mr. Pappas stated that it does if those places don't fall into the ancillary sale requirements. If they have display areas that are over 200 square feet or 2%, whichever one is less, than it would fall into a smoke shop even if it is primarily a liquor store or a tattoo parlor. If they have display areas that exceed those limits, they are considered a smoke shop and would be subject to this ordinance.

Chairman Markenson clarified that the ordinance would apply to any grocery store, convenience market, kiosk or similar use. He asked if that was the definition of "ancillary use" and if that is what Mr. Pappas is saying.

Mr. Pappas replied that was correct.

Chairman Markenson asked if that definition was broad enough to get into drug stores, tattoo parlors, . . .

Mr. Pappas said that it was. It would be broad enough to get in every use.

Chairman Markenson asked for clarification that even though it specifies a few and it doesn't specify others, it applies to everybody.

Mr. Pappas replied that it does. If they have a floor area dedicated to selling those items, it applies.

Chairman Markenson said that we have ten (10) legislative findings and he agreed with all of them, except none of the findings mention the word "smoke shop" or "tobacco shop". They all talk about tobacco retailers and one of them talks about convenience stores.

Mr. Pappas stated that for the ordinance they can actually craft the definition to more adequately match what was being discussed.

Chairman Markenson questioned if what they are doing is enough. He repeated that Mr. Pappas said this will keep two or three smoke shops out of the City, at the most. He asked if instead of specifying "smoke shop", if we specify "tobacco retailer" would they pick up more potential businesses and prevent more potential businesses.

Mr. Pappas believes that it can be defined as that. He said that it would really be semantics because our definitions are so broad, but they do pick up ancillary.

Chairman Markenson said he would feel better if "ancillary use" did not list a couple of things specifically and then say "and others".

Mr. Pappas shared that the definition was taken from a common definition from most cities that were reviewed. That could be changed. He stated that if the Commission wants to say that ancillary sale refers to grocery stores, convenience markets, retail kiosks, . . .

Chairman Markenson stated that he would like the list to be extensive instead of hoping that a judge interprets it that way. Oftentimes, sometimes when you specify certain things and say "anything else", the court will say "if it's anything why didn't you specify that?". You specify some and it applies to everything.

Mr. Pappas stated that the particular sentence is saying, "For a grocery store, convenience market, retail kiosk or similar use consisting of 250 square feet or less". They are referring to a kiosk like you would find in an airport. In that case, "the ancillary sale shall not be more than five (5) square feet". That is the only thing it's really pointing to. If a store is 250 square feet or less, meaning they are really just a kiosk like you find in an airport, at that time an ancillary sale shall mean that not more than five (5) square feet

of that 250 square feet are being used for the display, sale and distribution of tobacco and tobacco related products.

Chairman Markenson asked if it really only applies to kiosks.

Mr. Pappas clarified that that one sentence does. Everything else is under the two percent (2%) or 200 square feet rule. It really is a catch-all. All businesses are included.

Chairman Markenson asked if it would include tattoo parlors.

Mr. Pappas replied that it would. It would include any use.

Chairman Markenson stated that he doesn't read it that way. It says "grocery store, supermarket, convenience store, or similar market that uses no more than two (2%) of its gross floor area or 200 square feet, whichever is less, being used for the display, sale and distribution of tobacco and tobacco related products". He asked how that includes a tattoo parlor, or a drug store.

Mr. Pappas stated that he sees Chairman Markenson's point.

Mr. Ward asked if that falls under the "kiosk", the kiosk being the sale area inside the tattoo parlor.

Mr. Pappas stated that it could. He asked for clarification on whether it would help if they more broadly said "any retail use". It could say that. It doesn't define grocery store in the definition. It could say "in any retail use", period.

Mr. Turnage said that the second paragraph says regulation is necessary due to the likelihood of continued expansion of smoke shops in the City. He was curious what was behind that. He questioned if Gladstone fits a particular demographic that makes it appealing here, even with increased regulation.

Mr. Pappas shared that the problem is that there are two major corridors that traverse our City. Gladstone picks up a lot of people that drive through our City who spend their money on those products. He wouldn't say that Gladstone is particular to that.

Mr. Turnage asked if this expansion is likely to continue.

Mr. Pappas said yes it is.

Mr. Salazar stated that it was shared that other cities were researched for the way they word this. He asked if they are able to look at the impact that those new statutes or ordinances played.

Mr. Pappas shared that a lot of cities were like Gladstone in that the problem surfaced before the city really took any targeted focus on that problem. For many cities it stopped a lot of these uses from coming in. Gradually, as these uses have closed up shop, went out of business, or decided to move down the road, then, at that point, it actually decreased over time.

Mr. Salazar asked if there were there any legal issues.

Mr. Pappas stated that there were not any in Missouri. There were a couple in Florida, but the Florida Supreme Court actually decided in favor of the cities.

Chairman Markenson asked if there were any other questions or comments. None were stated. He then asked if there was anyone in the audience that wanted to testify in favor of this bill, or anyone that wished

to testify against this bill. Hearing none, he closed the Public Hearing. He asked if there was any discussion from the Commission.

Mr. Pappas asked Chairman Markenson if he could re-state the definition of “ancillary sale” so that everyone is on the same page, based on tonight’s discussion.

Chairman Markenson asked him to proceed.

Mr. Pappas read the definition: *“Ancillary sale. Any retail use that uses not more than two percent (2%) of its gross floor area or 200 square feet, whichever is less, for the display, sale, distribution, delivery, offering, furnishing, or marketing of conventional cigars, cigarettes, or tobacco. For any retail use consisting of 250 square feet or less “ancillary sale” shall mean not more than five (5) square feet are used for the display, sale, distribution, delivery, offering, furnishing, or marketing of conventional cigars, cigarettes, or tobacco. The display, sale, distribution, delivery, offering, furnishing, or marketing of e-cigarettes or tobacco products or tobacco paraphernalia, regardless of square footage used, is subject to the restriction of this Section and shall not constitute “ancillary sale” under any circumstances.*

Chairman Markenson said that he felt that definition was inclusive and was what he wanted. He felt that to exclude smoke shops seemed to be almost worth their time to do, but this is much broader and he appreciates that.

Chairman Markenson asked if there were any other comments. None were stated. He then said that he was prepared to entertain a motion to recommend amending Chapter 135, C1, Local Business District, Title VII, Zoning and Planning Ordinance of the City Code by adding a new Section 7.135.025 Public Policy, and other amendments as it relates to the expansion of smoke shops in the City. He added that maybe they could change the title to “Tobacco Retailers in the City”.

Mr. Pappas stated that could be done.

MOTION: By Mr. Turnage, second by Mr. Ward, to approve Chapter 135, C1 Local Business District, Title VII, Zoning and Planning Ordinance of the City Code, Section 7.135.025 Public Policy, as amended.

VOTE:	Ms. Alexander	Yes
	Ms. McGee	Yes
	Ms. Middleton	Yes
	Mr. Salazar	Yes
	Mr. Turnage	Yes
	Mr. Ward	Yes
	Mr. Whitton	Yes
	Chairman Markenson	Yes

The motion carried. (8-yes, 0- no)

5. Other Business:

- a. **Commission Education.** Mr. Pappas shared that Community Development had subscribed to a website for planners called “planetizen”. The site is inclusive of planning commissioners and there are over 100 courses that are all video based. The website can be shared through Mr. Pappas’ login. The idea is that anyone who has any interest in additional educational opportunities can take a look at some of these courses. He referred to the handout showing a sample of the courses that are available, including the ones he felt that the Commission would be most interested in. His examples included, “Legal

Issues in Sign Codes” which explains what’s going on with signs and that is an area the Commission is looking at. He also mentioned “Regulating Electronic Message Centers” which is another area that the Commission is reviewing. He said that if any Commissioner wants to look into these issues, they can contact him to schedule a viewing session in the Community Development conference room. These classes are offered through a website called <https://courses.planetizen.com/courses>.

- b. **Planning and development related news.** Mr. Pappas shared that on August 28th there will be a Beyond the Loop meeting. These are the meetings that MARC is putting on that discuss closing the Broadway Bridge for a period of time. That’s on August 28th. If anyone has an interest in going, contact him to carpool as he will be attending.

6. **Communications from City Council and Staff.** Councilmember Moore expressed her thanks to the Commission for their critical and careful deliberation of the tobacco retail ordinance. She shared that the passage of this ordinance will go a long way toward trying to stop the proliferation of these kinds of businesses in the City. She knows the Commission has taken the time to read though the information and they were very critical and careful in their deliberations.
7. **Communications from Planning Commission.** Chairman Markenson shared that he attended the Eclipse Party in Linden Square and it was a fabulous event. Over 400 people were in attendance. Kids were running around barefoot in the grass, music was playing. The music all had to do with “suns’ and ‘moons”. It was a delightful place and it is nice to have a place that the community knows they can gather.

Ms. Alexander invited the Commission to a birthday party being held in her honor by Curry Company. It will be at 11:00 am tomorrow at the new Kendallwood Clubhouse.

8. **Adjournment-** Chairman Markenson adjourned the meeting at 7:27 pm.

Respectfully submitted:

Cheryl Lamb, Recording Secretary

Approved as corrected _____

Gary Markenson, Chairman

Approved as submitted _____

Sec. 7.135.025. Public Policy.

(a) Regulation is necessary because there is a likelihood of the expansion of smoke shops and tobacco retailers in the City.

(b) Such expansion results in undesirable community impacts including: increased sales of tobacco and vapor products to minors, a greater opportunity for the sale of drug paraphernalia, negative aesthetic impacts, and the loss of property values in close proximity to these uses.

(c) Regulation addresses negative impacts while still allowing a reasonable number of establishments to be located within the City.

(d) Definitions.

Alternative nicotine product. Any non-combustible product containing nicotine that is intended for human consumption, whether chewed, absorbed, dissolved, or ingested by any other means. Alternative nicotine products do not include any vapor product, tobacco product or any product regulated as a drug or device by the United States Food and Drug Administration under Chapter V of the Food, Drug, and Cosmetic Act.

Ancillary sale. A grocery store, supermarket, convenience store or similar market that uses no more than two percent (2%) of its gross floor area, or 200 square feet, whichever is less, for the display, sale, distribution, delivery, offering, furnishing, or marketing of tobacco products, vapor products, or tobacco paraphernalia. For any grocery store, convenience market, retail kiosk or similar use consisting of 250 square feet or less, "ancillary sale" shall mean not more than five (5) square feet are used for the display, sale, distribution, delivery, offering, furnishing, or marketing of tobacco products, vapor products, or tobacco paraphernalia. The display, sale, distribution, delivery, offering, furnishing, or marketing of vapor products or tobacco paraphernalia that uses more than five (5) square feet is subject to the restrictions of this Section and shall not constitute "ancillary sale" under any circumstances.

Drug paraphernalia. All equipment, products, substances, and materials of any kind which are used, intended for use, or designed for use, in planting, propagating, cultivating, growing, harvesting, manufacturing, compounding, converting, producing, processing, preparing, storing, containing, concealing, injecting, ingesting, inhaling, or otherwise introducing into the human body a controlled substance as defined by Section 195.010.1(5), RSMo or an imitation controlled substance as defined by Section 195.010.1(21), RSMo.

Electronic cigarette or e-cigs. A device consisting of a cartridge with liquid solution containing nicotine and a battery powering a coil which heats the liquid solution into vapor.

Smoke shop and tobacco store. Any premises dedicated to the display, sale, distribution, delivery, offering, furnishing, or marketing of tobacco, tobacco products, or tobacco paraphernalia; provided, however, that any grocery store, supermarket, convenience store, or similar retail use that only sells conventional cigars, cigarettes, or tobacco as an ancillary sale shall not be defined as a "smoke shop and tobacco store" and shall not be subject to the restriction of this Section.

Vapor product. Any noncombustible product that employs a heating element, power source, electronic circuit, or other electronic, chemical or mechanical means, regardless of shape or size, that can be used to produce vapor from a solution or other form that may or may not contain nicotine. "Vapor product" includes any electronic cigarette, electronic cigar, electronic cigarillo,

electronic pipe, or similar product or device and any vapor cartridge or container of nicotine in a solution or other form that is intended to be used with or in an electronic cigarette, electronic cigar, electronic cigarillo, electronic pipe, or similar product or device. "Vapor product" does not include any alternative nicotine product or tobacco product.

Tobacco. Any preparation of the nicotine-rich leaves of a tobacco plant, which are cured by a process of drying and fermentation for use in smoking, chewing, absorbing, dissolving, inhaling, snorting, sniffing, or ingesting by any other means into the body.

Tobacco paraphernalia. All equipment, products, substances, and materials of any kind which are used, intended for use, or designed for use, in planting, propagating, cultivating, growing, harvesting, manufacturing, compounding, converting, producing, processing, preparing, storing, containing, concealing, ingesting, inhaling, or otherwise introducing into the human body tobacco or tobacco products. Does not include matches or lighters.

Tobacco product. Any substance containing tobacco leaf including, but not limited to, blunt wraps, cigarettes, cigars, pipe tobacco, snuff, chewing tobacco, or dipping tobacco but does not include alternative nicotine products or vapor products.

(e) *Nonconforming use.* A nonconforming use of land existing at the time of enactment of this Section may be continued, but shall not be extended, expanded or enlarged. Those businesses that were in legal operation at the same location as of the effective date of this ordinance shall be considered as legal nonconforming uses. An existing business shall be one that has been in continuous operation under the same business name and ownership from and after the date of enactment of this Section.

(f) *Separation requirements.* No permit shall be issued for any smoke shop business that is located within 5,280 feet of any other smoke shop business, or within 200 feet of any property used primarily for single-family residence, a two family residence, a townhouse, an apartment building; or within 500 feet of any school, day care, youth center, community center, recreational facility, park, church or religious institution, hospital, or other similar uses where children regularly gather. The separation distance shall be measured from or to the outer wall of the smoke shop business, and from or to the property line of the property containing the residential use.

The minimum separation distance shall be measured from any smoke shop business or residence, located within the city limits of Gladstone or outside and immediately adjacent to the city limits. This separation provision shall not apply to an existing business that has been in continuous operation at the same location and under the same business name and ownership from and after the date of enactment of this Section.

(g) *Buildings where located.* Each smoke shop business shall be located within a multi-tenant commercial building, housing not less than four (4) separate occupancies.

(h) *Penalty.* Any violation of any provisions of this Section by a person or business shall be subject to the penalties, fines, and enforcement provisions set forth in Section 7.100.070 of this Title.

Density of Tobacco Retailers Near Schools: Effects on Tobacco Use Among Students

William J. McCarthy, PhD, Ritesh Mistry, PhD, Yao Lu, PhD, Minal Patel, MPH, Hong Zheng, MPH, and Barbara Dietsch, PhD

The dominant approach to minimizing illicit drug use among adolescents in the United States has been supply reduction, often dubbed the "war on drugs." By contrast, the dominant approach to minimizing tobacco use among underaged children and adolescents has been demand reduction. However, tobacco control activists have been showing increased interest in supply reduction as a complement to existing prevention efforts and in response to evidence that perceived availability of tobacco is perhaps the most important predictor of tobacco use initiation among young people.¹

One way to reduce adolescents' access to tobacco is to advocate for the licensing of tobacco retailers and the revocation of licenses if retailers sell tobacco to minors.² But the consensus seems to be that enforcement of state laws against selling tobacco products to minors as the way to prevent underaged adolescents from purchasing these products has been insufficiently effective in terms of reducing adolescent tobacco use.³ Such efforts have not been without impact, however, because they appear to have influenced adolescents to obtain their tobacco primarily from social sources, such as older siblings and older friends, as opposed to commercial sources.³⁻⁵

Tobacco control activists have begun exploring another way to prevent underaged adolescents from purchasing tobacco. The Institute of Medicine recently called for states to limit the number of tobacco retail outlets for the express purpose of reducing tobacco use through reduced access.⁶ Activists are beginning to recommend that communities adopt zoning restrictions and conditional use permits to limit sales of tobacco products near schools.⁷ Although such an approach might help reduce access to tobacco products among students, it is unclear whether reducing access would lead to actual reductions in tobacco use. Evidence of the positive impact of reductions in the density of alcohol outlets on alcohol-related problems (e.g., violent assaults) encourages those who believe

Objectives. We examined the relationship between students' tobacco use and the density and proximity of tobacco retailers near their schools.

Methods. We used data from the 2003–2004 California Student Tobacco Survey and California retail licensing data. Measures included students' self-reported tobacco use and geocoded state-reported locations of tobacco retailers. We used random-intercept generalized linear mixed modeling to jointly evaluate individual-level and school-level predictors.

Results. Density of retailers was associated with experimental smoking (odds ratio [OR]=1.11; 95% confidence interval [CI]=1.02, 1.21) but not established smoking (OR=1.06; 95% CI=0.94, 1.20). The effects on experimental smoking were confined to high school students (OR=1.17; 95% CI=1.06, 1.29) in urban areas (OR=1.11; 95% CI=1.01, 1.21); no effects were observed among middle school students or in rural schools. High school students were more likely to obtain cigarettes from a retailer; middle school students relied more heavily on social sources.

Conclusions. Our results support the plausibility of reducing rates of students' experimental smoking, but not established smoking, by restricting their access to commercial sources of tobacco in urban areas. (*Am J Public Health*. 2009;99:2006–2013. doi:10.2105/AJPH.2008.145128)

that reducing the density of tobacco outlets could reduce problems related to tobacco use.^{6,8}

Existing observational data can be used to begin evaluating the premise that proximity of tobacco retailers to school sites might influence student tobacco use. The limited research in this area suggests that presence of tobacco retailers near homes and schools may influence adolescent tobacco use by making cigarettes easier to procure. Novak and associates⁹ reported recently that, after control for census tract–derived school neighborhood characteristics, the density of tobacco retailers in the Chicago area was associated with students' reported tobacco use. Novak and his associates were not able to provide data on adolescents' tobacco purchasing patterns or gauge their perceived ease of obtaining tobacco products. Leatherdale and Strath⁴ found that increased density of tobacco retailers near schools in Ontario, Canada, was associated with a greater likelihood that student smokers would purchase cigarettes rather than obtaining them from social sources.

Evidence also suggests that the density and proximity of tobacco retailers influence adults'

smoking behaviors, including number of cigarettes smoked per day.¹⁰ One non-school-based study¹¹ confirmed that retail tobacco availability, defined as the number of retailers that illegally sold tobacco per 1000 young people residing in the community, was associated with initiation of tobacco use but not with rates of established smoking.

Using a large statewide survey of students in randomly sampled California schools, we investigated whether similar effects would be found for the geographically and demographically more heterogeneous California student population. If increased adolescent tobacco use were found to be associated with tobacco retailer density near schools in California, such findings should be pertinent to most other states as well. The reason is that the situation in these other states is similar to that in California as a result of the Congressional mandate called "the Synar amendment"¹²; that is, laws and enforcement standards are in place in these states to sanction adolescent possession, use, or purchase of tobacco.¹³

In theory, the Synar amendment requires all states to enforce prohibitions on the sale of

tobacco products to minors and document that no more than 20% of their tobacco retailers are selling tobacco products to minors or be faced with the loss of millions of dollars of federal aid. If tobacco retailers were totally compliant with state prohibitions on the sale of tobacco products to minors, then student tobacco users would have to rely on older individuals procuring cigarettes for them, and student tobacco use rates would be unaffected by the density of tobacco retailers around schools. Annual evaluations in which underage confederates have been used to purchase cigarettes continue to show significant non-compliance, however (e.g., see <http://ww2.cdph.ca.gov/programs/tobacco/Documents/CTCPRResultsYouthTobaccoPurchaseSurvey2008.pdf>).

We attempted to extend current research by evaluating measures of tobacco retailer density and proximity in relation to student tobacco use, tobacco purchasing patterns, and perceived ease of obtaining cigarettes, as assessed through random sample surveys of adolescent students in California and use of geocoded information on state licensing of tobacco retailers. In addition to including diverse neighborhoods in our study, ranging from densely populated urban centers to sparsely populated rural areas, we assessed various neighborhood-level (e.g., tobacco retailer density), school-level, and student-level characteristics given that they can contribute to students' susceptibility to tobacco use. Age, gender, and racial/ethnic background are all student-level characteristics that have been shown to influence tobacco use.¹⁴ Thus, we included these variables along with parental educational attainment, another consistent correlate of adolescent tobacco use.¹⁵ We also assessed students' perceptions of the prevalence of tobacco use among their peers.

METHODS

We used data from California's 2003–2004 In-School Evaluation of Tobacco Use Prevention Education Programs, which included administration of the California Student Tobacco Survey, a cross-sectional survey designed to collect information on student tobacco use and correlates at 261 schools randomly sampled proportional to size from a directory of

California public schools.¹⁶ Self-report surveys were administered in class by trained survey proctors between October 2003 and March 2004. After adjustment for schools missing the address information necessary for coding each school in terms of its exact longitude and latitude, the analysis included 245 schools. In terms of demographics, the 245 schools retained in the analysis were similar to the 261 in the original sample (all *t*-test comparisons on demographic measures were nonsignificant [$P > .10$]). The resulting analytic sample included 19 306 students.

The response rates for schools (85.0%) and students (66.3%) were adequate, that is, consistent with response rates reported in previous student tobacco use survey research.¹⁷ All student participation required active parental consent, which is typically associated with participation rates approximately 10% to 25% lower than those normally associated with passive parent consent.¹⁸ In previous studies on student tobacco use comparing prevalence estimates obtained under active and passive parent consent procedures, only minimal differences in estimates have been detected when response rates are high, despite the differences in the percentages of participating students.^{18,19}

Measures

Most of the items used in the California Student Tobacco Survey were derived from national surveys, particularly the National Youth Tobacco Survey, the Youth Risk Behavior Survey, and the Behavioral Risk Factor Survey. Detailed information on the psychometric properties of the survey items is available at the Web sites dedicated to these surveys (http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm, http://www.cdc.gov/HealthyYouth/yrbs/questionnaire_rationale.htm, and http://www.cdc.gov/BRFSS/technical_infodata/surveydata/2008.htm, respectively).

Study outcome measures. Students' tobacco use was assessed in terms of whether they were established or experimental smokers. Established smoking was defined as smoking cigarettes at least 1 day in the preceding 30 days and having ever smoked 100 or more cigarettes.²⁰ Experimental smoking was defined as smoking cigarettes at least 1 day in the preceding 30 days and not having smoked at least 100

cigarettes.²⁰ Data were also gathered on average number of cigarettes smoked on days when respondents smoked. These smoking status measures have been validated and used in previous studies,^{21–23} and adolescents' self-reports of tobacco use have been shown to be generally valid.²⁴

Two additional tobacco-related outcome measures focused on students' usual source of cigarettes in the preceding 30 days and, if they purchased tobacco products, the usual commercial venue where they did so. The question addressing usual commercial venues included the following options: gas station, convenience store, grocery store, drug store, vending machine, Internet, and other. Both questions were derived from the National Youth Tobacco Survey.²⁵

Covariate measures. When practical, we dichotomized the study covariates to minimize loss of degrees of freedom and to facilitate the interpretation of our results. We conducted sensitivity analyses demonstrating that different categorizations of study covariates did not change our overall findings. For instance, no differences in our findings were observed when friends' smoking was dichotomized as all 4 best friends smoke versus 3 or fewer best friends smoke as opposed to when it was dichotomized as 2 or more best friends smoke versus 1 or no best friends smoke. The final model odds ratios (ORs) for this covariate were 5.49 (95% confidence interval [CI]=4.04, 7.45) under the first formulation and 4.85 (95% CI=4.26, 5.53) under the second formulation. All other statistically significant associations with risk of experimental smoking remained significant no matter how friends' smoking was operationalized.

The individual-level measures used as study covariates included age, gender, race/ethnicity, English-language use in the home, self-reported previous year's grades, perceived prevalence of peer smoking, friends' smoking, ease of obtaining cigarettes, and depressive symptoms. Most of these items were derived from the National Youth Tobacco Survey²⁵ and the Youth Risk Factor Survey.²⁶ The peer tobacco use measure assessed whether or not respondents perceived most of their peers (61%–100%) as smoking. The friends' smoking measure indicated whether most (≥ 2) of one's 4 best friends smoked. A 4-point Likert scale (very

easy, sort of easy, sort of hard, very hard) was used to determine students' perceived ease of obtaining cigarettes.

Depressive symptoms were measured with a single item, derived from the Youth Risk Behavior Survey,²⁶ that assessed prolonged self-reported hopelessness and feelings of sadness in the preceding year. English-language use in the home was assessed according to the frequency with which English was spoken in the student's home (always, often or sometimes, almost never).

School-level or community-level covariates included school type (middle versus high school), whether or not the school was located in a rural area (school rurality), and school-level parental education. School-level parental education, used as a proxy for socioeconomic status, was based on school averages in terms of parents' self-reported educational attainment (less than high school, high school, some college, college, postgraduate education); schools report this information annually to the California Department of Education.²⁷

School rurality was determined by the population category associated with a school's zip code as designated by the 2000 census.²⁸ The census classifies areas associated with zip codes into one of 8 categories, ranging from large cities to rural areas. For ease of interpretation, the 2 categories containing the word rural were designated rural; all other categories were designated urban.

Main predictor variables. The primary study predictors, retailer density and proximity, addressed the presence of tobacco retailers near schools. Retailer density was assessed with 2006 California Board of Equalization data on tobacco retail licensees. The board provided a list of all organizations and businesses required to pay excise taxes to the state of California, and this master list was edited to include only businesses that paid the cigarette and tobacco products retailer license tax (other tax licensees were not included because they were usually wholesalers rather than retailers).

We used a batch geocoder based on Google Maps (<http://www.batchgeocode.com>) to translate the addresses of these businesses and the addresses of the schools in our analytic sample to geocodes (longitude and latitude data associated with a specific address). We

imported the resulting geocodes into ArcGIS version 9.2 (ESRI, Redlands, CA) geographic information systems to generate points on a map. Because of geocoding limitations, not all of the data were geocodable; as a result, we excluded 237 of the 22 165 retailers (1.1%) from our analyses.

A 1-mile (1.6 km) radius buffer area was created around each school to represent the area most likely to be frequented by the school's students. One mile was considered the outer limit of the distance that most students would walk or bike regularly to school in urban areas but the distance minimally necessary in rural areas to encompass at least one tobacco retailer near most rural schools. We overlaid a map of the retailer locations with a map of the school buffer zone areas (this double overlaying is called a "spatial join") to determine the number of tobacco retailers within each school's buffer zone.

To spatially join these data, we converted projections of the maps to the NAD 1983 State Plane—one of a few consensus coordinate systems used by states to provide precise location information across different map layers—so that they would be consistent with the US census California state boundary file (<http://www.census.gov/geo/www/cob/st2000.html>). This standardization of projections allowed us to minimize variability in distances because all map layers could appear on the same longitude–latitude plane.

A projection of school buffer zones was spatially joined to the projection of geocoded tobacco retailers, yielding the number of tobacco retailers within each school's 1-mile buffer zone. As with most count data involving a positive skew, the resulting density measure required a natural log transform.²⁹ As a separate measure of proximity, the average straight-line distance from the main office of the school to each retailer within the school's 1-mile buffer was measured in feet.

We conducted model-based rather than design-based analyses³⁰ because the general concept being evaluated here—that density and proximity of tobacco retailers to schools may be associated with student tobacco use—was not expected to be limited to California. Thus, for model-testing purposes, we ignored the sampling weights associated with the complex design of the California Student Tobacco Survey. As

a result, our findings should not be interpreted as representative of California.

Data Analysis

We used Stata versions 9.2 and 10.1 (Stata Corp LC, College Station, TX) in conducting all of our analyses. The first step was to determine the demographic characteristics of the study sample (Table 1). This analysis suggested that the analytical sample ($n=19\,306$) was highly similar to the overall sample ($n=25\,973$). Characteristics of both samples are shown in Table 1.

Second, we assessed smoking outcome frequencies, as well as frequency values for the main predictors and cigarette access behaviors, for the overall analytic sample and according to school type (high school or middle school) and school rurality. We used multilevel logistic regression to examine differences associated with school type and rurality.

Third, we used random-intercept models in a generalized linear mixed-model framework to examine the possible influence of tobacco retailers on student tobacco use as well as the influence of confounders. We initially assessed the effects of density of retailers and then examined the effects of retailer proximity. We tested models on both the overall sample and 4 subsamples: high schools, middle schools, urban areas, and rural areas. All regression analyses controlled for student-level and school-level covariates.

RESULTS

Descriptive data on the analytical sample (Table 1) showed that demographic characteristics were consistently associated with tobacco use status. For example, established smokers were older and reported lower letter grades for the previous year. In addition, male students, White students (versus students from other racial/ethnic groups), students with depressive symptoms (versus students without such symptoms), and students residing in rural areas were more likely to be established smokers.

Descriptive results for student tobacco use are reported in Table 2. More than 9% of students reported having smoked on at least 1 day in the preceding 30 days, but fewer than one third of these students had smoked 100

TABLE 1—Demographic Characteristics of the Full Sample and Analytic Sample, Along With Smoking Prevalence Estimates for the Analytic Sample: California Student Tobacco Survey, 2003–2004

Characteristic	Full Sample (n=25 973), % or mean (SD)	Analytic Sample (n=19 306), % or mean (SD)	Established Smokers, % or mean (SD)	Experimental Smokers, % or mean (SD)
Race/ethnicity				
African American	7.1	6.6	1.8	4.7
American Indian/ Native Alaskan	2.6	1.6	2.8	6.3
Asian	12.8	13.2	1.6	3.7
Hispanic/Latino	33.6	31.9	2.0	7.9
Native Hawaiian/Pacific Islander	2.6	2.7	4.6	8.6
White	41.9	43.9	4.3**	6.0**
Gender				
Boys	46.9	45.7	3.8	6.4
Girls	53.1	54.3	2.4**	6.2
Frequency of English-language use in the home				
Almost always	66.5	67.4	3.4	6.2
Often or sometimes	27.4	26.7	2.1	6.5
Almost never	6.0	5.9	3.3**	6.9
Felt sad/hopeless almost every day in preceding year				
Yes	27.6	27.3	4.7	10.3
No	72.4	72.7	2.3**	4.8**
Smoking among peers				
Most peers smoke (61%–100%)	10.8	10.7	8.9	16.1
Other	89.2	89.3	2.3**	5.1**
No. of best friends who smoke				
2–4	13.9	13.8	15.7	23.4
0–1	86.1	86.2	1.0**	3.6**
Location of school				
Urban	91.9	90.8	2.9	6.4
Rural	8.1	9.2	4.5*	5.5
Type of school				
High school	57.9	61.2	4.5	8.1
Middle school	42.1	38.8	0.7**	3.4**
Age, y	14.9 (1.9)	15.1 (1.9)	16.6 (1.4)**	15.8 (1.9)**
Previous-year grade point average ^a	3.1 (0.8)	3.1 (0.8)	2.6 (1.0)**	2.6 (1.0)**
School-level parental education rating ^b	2.9 (0.7)	3.0 (0.6)	3.0 (0.6)	2.9 (0.6)**

Note. P values for cross tabulations are from χ^2 tests; P values for means are from t tests.

^aOn a traditional 4.0 grade point scale.

^bRatings were on a 5-point scale (1=less than high school, 2=high school, 3=some college, 4=college, 5=postgraduate education).

*P≤.01; **P≤.001.

cigarettes or more; thus, more than 6% were experimental smokers with a limited history of previous smoking. Table 3 presents (separately for established and experimental smokers)

data on sources of cigarettes among respondents who smoked. Overall, fewer than one third of students who had smoked during the preceding 30 days purchased cigarettes from

a store; the majority of smokers obtained cigarettes from social sources.

Multilevel Modeling Results

The pattern of intraclass correlations across multilevel logistic models illustrated in Table 4 suggests that most of the variance in smoking behavior was explained by the individual- and school-level predictors in the final model. After control for these predictors, clustering effects were reduced and lost significance when density of tobacco retailers was included in the final, full model (the intraclass correlation changed from 0.08 to 0.006; Table 4). In the case of experimental smoking, but not established smoking, the addition of the measure of tobacco retailer density nonetheless significantly reduced the unexplained between-school variance in the null model by 4.6%, beyond the 68.9% reduction already obtained through the inclusion of 13 individual-level and 3 school-level covariates in the model (likelihood $\chi^2_1=5.49$; $P=.02$).

The density of tobacco retailers near their school did not seem to be significantly associated with students' established smoking behaviors (OR=1.06; 95% CI=0.94, 1.20) but was associated with experimental smoking (OR=1.11; 95% CI=1.02, 1.21). There were racial/ethnic differences in the relationship between retailer density and smoking, with lower prevalence rates of experimental smoking among Asian and African American students than among White students in the final model.

Additional differences emerged when we stratified the analytic sample according to school type and rurality (data not shown). Among high school students, who are more likely than middle school students to obtain cigarettes from a retailer, tobacco retailer density significantly contributed to higher experimental smoking prevalence rates (OR=1.18; 95% CI=1.06, 1.30). This did not hold true for middle school students (OR=0.91; 95% CI=0.76, 1.08), who relied more heavily on social sources.

The tobacco retailer density measure was associated with experimental smoking among students residing in urban areas (OR=1.11; 95% CI=1.01, 1.21). With the inclusion of tobacco retail density in the final model, school rurality and school-level average parental education no longer had an influence on risk of experimental smoking. Surprisingly, inclusion

TABLE 2—Results for Smoking Status and Tobacco Retailer Measures, by Type and Rural Status of School: California Student Tobacco Survey, 2003–2004

Measure	Overall (n=19306), % (95% CI) or mean (SD)	High School (n=11825), % (95% CI) or mean (SD)	Middle School (n=7481), % (95% CI) or mean (SD)	Urban (n=17532), % (95% CI) or mean (SD)	Rural (n=1774), % (95% CI) or mean (SD)
Established smoking ^a	3.0 (2.7, 3.4)	4.5 (4.1, 5.0)	0.7 (0.5, 0.9)	2.9 (2.5, 3.3)	4.5 (3.3, 6.1)
Experimental smoking	6.3 (5.8, 6.9)	8.1 (7.5, 8.8)	3.4 (2.9, 4.0)	6.4 (5.8, 7.0)	5.5 (4.3, 7.0)
No. of retailers within 1 mi ^b	10.8 (8.9)	10.5 (8.9)	11.1 (9.0)	11.6 (8.9)	2.9 (3.3)
Distance from school to retailer, ft ^{a,b}	3602 (952)	3623 (948)	3568 (958)	3507 (871)	4539 (1182)

Note. CI = confidence interval; SD = standard deviation. CIs were based on Taylor linearization variance estimations for data clustered in schools. For all measures, mean differences between high school and middle school students significant at the $P < .001$ level.

^aMean differences between rural and urban students significant at the $P < .001$ level.

^bAverage straight-line distance in feet from the main office of the school to each retailer within the school's 1-mile buffer.

of tobacco retail density did not reduce the size of the association between experimental smoking and either perceived ease of access to tobacco products or whether most of one's best friends smoked.

Sources of and Perceived Ease in Obtaining Cigarettes

Students who reported that their usual source of cigarettes was a retail tobacco store also reported greater perceived ease in obtaining

cigarettes (with a mean rating on the 4-point Likert scale of 3.54; 95% CI=3.46, 3.62) than did adolescent smokers who reported obtaining cigarettes from most of the other sources. Students who encountered challenges

TABLE 3—Usual Sources of Tobacco Among Established and Experimental Smokers, by Type and Location of School: California Student Tobacco Survey, 2003–2004

	Overall, No. or % (95% CI)	High School, No. or % (95% CI)	Middle School, No. or % (95% CI)	Urban, No. or % (95% CI)	Rural, No. or % (95% CI)
Established smokers					
No. of established smokers	582	531	51	503	79
Source of tobacco					
Store	31.8 (27.7, 36.2)	33.5 (29.2, 38.2)	13.7 (6.4, 27.1)	32.8 (28.4, 37.5)	25.3 (15.9, 37.8)
Vending machine	1.2 (0.6, 2.5)	0.9 (0.40, 2.2)	3.9 (0.9, 14.8)	1.2 (0.5, 2.6)	1.3 (0.6, 2.6)
Purchased by someone else	30.8 (27.1, 34.7)	30.9 (27.0, 35.0)	29.4 (18.5, 43.3)	30.0 (26.1, 34.2)	35.4 (25.8, 46.4)
Borrowed	12.5 (10.0, 15.6)	13.2 (10.5, 16.4)	5.9 (1.4, 21.6)	11.9 (9.2, 15.3)	16.5 (10.8, 24.2)
Provided by person older than 18 y	6.7 (4.8, 9.2)	6.8 (4.8, 9.4)	5.9 (1.8, 17.3)	6.6 (4.6, 9.4)	7.6 (4.0, 14.0)
Taken from store or family member	6.2 (4.4, 8.6)	4.5 (2.9, 6.9)	23.5 (14.8, 35.2)	7.0 (5.0, 9.7)	1.3 (0.2, 8.8)
Other	10.8 (8.8, 13.3)	10.2 (8.2, 12.6)	17.6 (9.0, 31.7)	10.5 (8.3, 13.3)	12.7 (8.1, 19.2)
Experimental smokers					
No. of experimental smokers	1195	946	249	1098	97
Source of tobacco					
Store	12.6 (10.4, 15.0)	14.2 (11.7, 17.1)	6.4 (3.9, 10.4)	12.8 (10.6, 15.4)	9.3 (4.8, 17.2)
Vending machine	1.8 (1.2, 2.8)	1.5 (0.9, 2.4)	3.2 (1.5, 6.6)	1.9 (1.2, 2.9)	1.0 (0.2, 6.5)
Purchased by someone else	14.6 (12.5, 16.9)	14.7 (12.4, 17.4)	14.1 (10.4, 18.8)	14.8 (12.6, 17.2)	12.4 (7.7, 19.3)
Borrowed	34.8 (31.8, 38.0)	38.8 (35.4, 42.3)	19.7 (15.1, 25.3)	33.6 (30.5, 36.9)	48.4 (40.6, 56.4)
Provided by person older than 18 y	11.8 (9.9, 14.0)	12.3 (10.1, 14.8)	10.0 (6.8, 14.5)	11.9 (10.0, 14.2)	10.3 (5.7, 18.0)
Taken from store or family member	8.8 (7.1, 10.9)	6.0 (4.5, 8.0)	19.3 (14.9, 24.6)	9.2 (7.4, 11.4)	4.1 (1.5, 10.8)
Other	15.6 (13.5, 18.1)	12.6 (10.5, 14.8)	27.3 (21.6, 33.9)	15.8 (13.5, 18.3)	14.4 (9.3, 21.6)

Note. CI = confidence interval. To determine usual sources of tobacco, students were asked "How did you usually get your cigarettes in the past 30 days?" CIs based on Taylor linearization variance estimations for data clustered in schools. For both established smokers and experimental smokers, distributions of responses between high school and middle school students were significantly different at the $P < .001$ level; there were no differences in the distributions of responses between urban and rural students.

TABLE 4—Odds Ratios and Comparisons for Models Predicting Risk of Experimental Smoking Among Members of the Analytic Sample: California Student Tobacco Survey, 2003–2004

Predictor	First Model, ^a OR (95% CI)	Second Model, ^b OR (95% CI)	Third Model, ^c OR (95% CI)	Full Model, OR (95% CI)
Age, y	1.23 (1.18, 1.27)	1.08 (1.04, 1.12)	1.06 (1.00, 1.12)	1.06 (1.00, 1.12)
Male	0.96 (0.85, 1.05)	1.00 (0.88, 1.13)	1.00 (0.88, 1.14)	1.00 (0.88, 1.14)
African American	0.63 (0.48, 0.84)	0.71 (0.53, 0.95)	0.67 (0.50, 0.90)	0.67 (0.50, 0.90)
American Indian/Native Alaskan	1.09 (0.68, 1.76)	1.03 (0.63, 1.70)	1.01 (0.61, 1.67)	1.01 (0.61, 1.67)
Asian	0.68 (0.54, 0.87)	0.80 (0.63, 1.03)	0.77 (0.60, 0.98)	0.75 (0.59, 0.97)
Hispanic	1.04 (0.89, 1.22)	1.15 (0.98, 1.36)	1.05 (0.89, 1.25)	1.05 (0.88, 1.24)
Native Hawaiian/Pacific Islander	1.28 (0.92, 1.78)	1.23 (0.87, 1.74)	1.16 (0.82, 1.65)	1.15 (0.81, 1.63)
English use in home	1.04 (0.93, 1.17)	1.05 (0.93, 1.18)	1.05 (0.93, 1.18)	1.06 (0.95, 1.20)
Previous-year grades	0.58 (0.55, 0.62)	0.69 (0.65, 0.74)	0.70 (0.65, 0.75)	0.70 (0.65, 0.75)
Hopelessness in past year	1.94 (1.72, 2.20)	1.57 (1.38, 1.79)	1.57 (1.38, 1.78)	1.57 (1.38, 1.78)
Most peers smoke		1.54 (1.33, 1.80)	1.54 (1.33, 1.80)	1.55 (1.33, 1.80)
A majority of best friends smoke		4.86 (4.26, 5.54)	4.86 (4.26, 5.54)	4.85 (4.26, 5.53)
Perceived ease of access to cigarettes		1.46 (1.35, 1.57)	1.46 (1.35, 1.57)	1.46 (1.35, 1.57)
School-level average parental education			0.87 (0.77, 0.98)	0.89 (0.79, 1.00)
School location (rural vs urban)			0.71 (0.56, 0.91)	0.81 (0.62, 1.06)
Type of school (high school vs middle school)			1.12 (0.88, 1.42)	1.12 (0.88, 1.42)
No. of retailers within 1 mi of school				1.11 (1.02, 1.21)
Model statistics				
Between-school SE	0.2695	0.2104	0.1710	0.1455
Intraclass correlation	0.0216	0.0133	0.0088	0.0064
Model comparison				
χ^2 (df)	591.60 (10)	856.88 (3)	13.95 (3)	5.49 (1)
P	<.001	<.001	.003	.02

Note. CI = confidence interval; OR = odds ratio. Each model was evaluated relative to the previous model (listed to its left). The null model is not shown; its between-school standard error was 0.5495, and its intraclass correlation was 0.0840. The null model is the one against which the first model was compared. (n = 19 306)

^aIncluding demographic and psychological correlates.

^bFirst model plus smoking precursors.

^cSecond model plus school and community influences.

in obtaining cigarettes were more likely than those who did not encounter challenges to report using social sources (e.g., older friends) to obtain their cigarettes. Despite this association of students' perceived ease of obtaining cigarettes with reported purchase of cigarettes from tobacco retail stores, there was no association between perceived ease of obtaining cigarettes and retail store density ($r=0.009$).

There was no association between tobacco retail density and student reports of purchasing

cigarettes from a store. However, there was a significant linear trend indicating increases in the prevalence of experimental smokers who reported having borrowed a cigarette with decreasing quintiles of tobacco retailer density (trend $P=.01$), indicating some association between tobacco retail density and how smokers procured their cigarettes.

Among students who reported purchasing cigarettes in the preceding 30 days, the most frequent commercial sources were as follows:

gas stations (24.3%), convenience stores (22.8%), drug stores (5.2%), grocery stores (4.7%), vending machines (2.0%), and the Internet (0.9%). Many respondents also reported "other" as their commercial source (40.2%). A multilevel model including age, gender, school-level average parental education, and school type indicated that school rurality was negatively associated with purchasing cigarettes from convenience stores (OR=0.45; 95% CI=0.23, 0.89). Gas stations were the most popular commercial source among rural students (37.8%), with convenience stores far behind (15.6%), whereas these 2 commercial sources were equally popular (23%) among urban students.

When the outcome measure was the number of cigarettes smoked on days when respondents smoked, no relationship was observed with either retailer density or retailer proximity. Tobacco retailer proximity, in contrast to tobacco retailer density, was not associated with either established or experimental smoking in any of the samples analyzed.

DISCUSSION

Our study extends previous research by examining student tobacco use data from an entire state with a heterogeneous student population. The study sample included 245 schools, thereby allowing more sensitive school-level comparisons than was possible with, for example, the 29 schools examined by Leatherdale and Strath.⁴ In addition, our data permitted an assessment of the association between student tobacco use and type of neighborhood environment (rural or urban). Our results showed that, among high school students and urban students but not middle school students or rural students, there seems to be a small but nonetheless significant relationship between the density of retailers within 1 mile of a school and students' reports of smoking initiation.

Although tobacco retailer density has been operationalized in different ways, the same pattern has been observed in most reports; that is, increasing tobacco retailer density is associated with increasing risk of tobacco use among adolescents (in our study, we observed this effect for experimental smoking but not for

established smoking). The finding that number of cigarettes smoked per day is related to retailer concentration and distance, as noted in a previous study involving adult smokers,¹⁰ was not confirmed among the adolescent respondents surveyed here.

Although the density of tobacco retailers near a school was positively related to the prevalence of students reporting experimental smoking, the proximity of tobacco retailers showed no such relation. This suggests that it is not the mere presence of a tobacco retailer near a school that might influence students to experiment with smoking; rather, if there is to be an association, several tobacco retailers must be within walking distance of the school.

When students were asked to report what kind of store provided them with cigarettes, 2 specific types of outlets were mentioned most often: gas stations and convenience stores. These outlets were cited more than 4 times as often as any other specific source, including grocery stores. Despite the frequency with which consumers purchase other products from grocery stores, student smokers cited grocery stores as the source of their cigarettes only one fifth as often as they cited gas stations and two thirds less often than had been the case nationally during 1997 through 1999.³¹ Fewer than 1% of student smokers mentioned the Internet as a source of their cigarettes, even though age verification is seldom required for Internet tobacco purchases.³²

Limitations

Several limitations of this study should be noted. First, the mode of transportation used by students to get to and from school was not measured and could have varied according to area of residence (rural or urban). Students who walk or ride bikes to school may be more likely than those who drive to school to encounter tobacco retailers. Second, we relied on a simple straight-line method to estimate distances from schools to retailers and to create buffer zones. Use of information about street contours near schools could provide more accurate and realistic measures of distance.

Third, we used a 1-mile-radius, straight-line distance to define the area in which tobacco retailers were counted because we wanted the largest possible area in which students could

imaginably have walked or rode a bike from their school to the retailer. Although some researchers have used a 0.5-mile radius,³³ we viewed this criterion as overly restrictive because it could lead to many rural schools appearing to have no tobacco retailers nearby; in addition, some high schools with large sporting activity areas might occupy much of the 0.5-mile distance adjacent to the main office address used to geocode school locations.

Fourth, unlike previous studies,^{4,9} we did not enumerate tobacco retailers near schools through direct inspection. As with all government lists, some of the information on our list of tobacco retailers was outdated by the time we obtained the list. Moreover, the characteristics associated with the zip code of a school may not fairly represent the true characteristics of the students attending the school. Finally, as with all cross-sectional studies, causal inferences are easily challenged. More confident inferences require prospective, longitudinal data.

Conclusions

The associations we observed between density of tobacco retailers and experimental smoking risk and the lack of association with established smoking risk suggest that tobacco retailers' greatest influence may be on adolescents who are not yet addicted but are willing to try smoking opportunistically. Once they are addicted, adolescents who smoke may be affected less by retailer proximity and more by internal physiological cues.³⁴ Future studies are needed to confirm and explain why experimental smoking but not established smoking among students might be influenced by the presence of tobacco retailers close to their school.

Educating tobacco retailers about the importance of not selling tobacco products to minors has limited effectiveness.^{5,35} Using the leverage of licensing restrictions to motivate tobacco retailers' compliance with the law not to sell to minors may be more effective.³⁶ One way to reduce both direct and indirect sales to students is to create zoning restrictions or conditional use permits that can be used to prohibit the operation of tobacco retailers close to schools.^{7,37} The city council of Tempe, Arizona, recently adopted an amendment to its zoning and development code limiting tobacco retailers from locating within one fourth mile of any elementary or secondary school (see http://www.tempe.gov/clerk/history_03/20070628dsrl04.pdf). Also, the city council of La Mirada, California, recently adopted a conditional use permit limiting tobacco retailers from locating within 600 ft (183 m) of a school (see [http://www.amlegal.com/nxt/gateway.dll/California/lamirada_ca/cityoflamiradacalifornia-codeofordinances?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:lamirada_ca](http://www.amlegal.com/nxt/gateway.dll/California/lamirada_ca/cityoflamiradacalifornia-codeofordinances?f=templates$fn=default.htm$3.0$vid=amlegal:lamirada_ca)).

Our results confirm the plausibility of the notion that zoning restrictions can help reduce tobacco use initiation by students attending secondary schools. More targeted interventions might be equally effective, however. For example, zoning restrictions may not be needed for grocery stores but might be needed for convenience stores around schools because of evidence that grocery stores comply with state laws banning the sale of tobacco products to minors more often than do convenience stores. Prospective, longitudinal data would be helpful in clarifying whether and how much restricting the density and proximity of tobacco retailers around schools affects students' risk of tobacco use. ■

About the Authors

William J. McCarthy is with the School of Public Health and the Department of Psychology, University of California, Los Angeles, and WestEd, Los Alamitos, CA. Ritesh Mistry and Minal Patel are with the School of Public Health, University of California, Los Angeles. Yao Lu is with the Department of Sociology, Columbia University, New York, NY. Hong Zheng and Barbara Dietsch are with WestEd.

Correspondence should be sent to William J. McCarthy, PhD, UCLA Division of Cancer Prevention and Control Research, Mail Code 690015, 650 S Charles E. Young Dr, Los Angeles, CA 90095-6900 (e-mail: wmcCarthy@ucla.edu). Reprints can be ordered at <http://www.ajph.org> by clicking the "Reprints/Eprints" link.

This article was accepted February 7, 2009.

Contributors

W.J. McCarthy originated the study, led the writing, and supervised all aspects of study implementation. R. Mistry, Y. Lu, and W.J. McCarthy conducted the analyses. M. Patel completed the geocoding of tobacco retailers and participating schools. H. Zheng served as the data manager in the original data collection process. B. Dietsch supervised the original data collection and contributed to the writing of the article. All of the authors helped to interpret findings and review drafts of the article.

Acknowledgments

Some of the findings reported here were originally presented at the Tobacco-Related Disease Research Program Investigators Conference, October 2007,

Sacramento, CA. This research was supported by grants from the California Tobacco-Related Disease Research Program (13RT-0051, 15FT-0002, and 17KT-0030).

Human Participant Protection

This study was approved by the institutional review board at the University of California, Los Angeles.

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Location, Location, Location:

Regulating Tobacco Retailer Locations for Public Health

The Tobacco Control Legal Consortium has created this series of legal technical assistance guides to serve as a starting point for organizations interested in implementing certain tobacco control measures. We encourage you to consult with local legal counsel before attempting to implement these measures.¹ For more information, please contact the Consortium.

Both the Institute of Medicine² and the U.S. Surgeon General³ have recommended that communities take steps to limit the number and restrict the location of tobacco retailers as an effective tobacco control measure. This publication explains how regulating tobacco retailer locations benefits public health and provides policy options and legal issues to consider.



Policy Rationale – Why the Location of Tobacco Retailers Matters for Public Health

When tobacco retail outlets are concentrated in certain neighborhoods or around schools, there are negative consequences for tobacco control and public health. Communities that are densely populated with tobacco retailers make it easier for youth to get tobacco products. Also, because retail outlets are a key marketing channel for tobacco products, a high density of tobacco retailers in a neighborhood creates a concentration of tobacco marketing, meaning children, youth, and adults living in those neighborhoods will be exposed to multiple environmental cues designed to encourage tobacco use.

Studies have shown that tobacco advertising is more prevalent in stores located near schools and where adolescents are likely to shop.⁴ Tobacco retailers are an important marketing channel for reaching and attracting potential new users, the vast majority of which are teenagers under 18 years old.⁵ Convenience stores – which are popular with teenage shoppers⁶ – vigorously participate in tobacco marketing activities and tend to feature significantly more tobacco advertising and promotions compared to other types of stores.⁷ Exposure to these marketing and promotional activities has been shown to affect tobacco use initiation rates among adolescents, particularly when the stores are close to schools.⁸ Thus, studies have documented that youth who live or go to schools in neighborhoods with the highest density of tobacco outlets (or with the highest density of retail tobacco advertising) have higher smoking rates compared to youth who live, or attend school, in neighborhoods with fewer or no tobacco outlets.⁹

Tobacco retailer location is also a factor in tobacco use by adults, particularly for low-income or minority communities. Neighborhoods with relatively large low-income and/or minority populations tend to have higher numbers or densities of tobacco retail outlets.¹⁰ The Surgeon General has found that the tobacco industry's retail outlet advertising targets people with the lowest income and education and that there is more in-store tobacco advertising in minority and low-income neighborhoods.¹¹ High densities of tobacco retailers have been linked to increased smoking rates among adults living in the surrounding neighborhoods.¹²

The evidence demonstrates that restrictions on the number and locations of tobacco retail outlets within a community have clear public health benefits, particularly for youth, young adults, and for low-income and other populations disparately impacted by the chronic diseases caused by tobacco use. Communities interested in regulating the quantity, location, or density of tobacco retailer locations have several options, including regulating the types of retailers that can sell tobacco products and where they can be located.

Policy Options

Licensing and zoning laws are two common local government tools that can be used to regulate tobacco retailers in various ways, including *how* they do business and *where* they can do business. These kinds of laws regulate business conduct by conditioning the grant or renewal of a license or permit on the performance or non-performance of specific activities. For more information about how licensing and zoning authority can be used to regulate tobacco retailers, please see the Consortium's publication [*Using Licensing and Zoning to Regulate Tobacco Retailers*](#).¹³ This publication focuses on options that could be implemented in conjunction with tobacco licensing or zoning laws or through stand-alone laws that directly regulate tobacco retailer locations. The following approaches could be used singly or in combination to limit the number of tobacco retail outlets, control where they are located, and reduce retailer density within neighborhoods.

- **Restrict the types of businesses that can sell tobacco and related products:** One way to reduce the number or restrict the location of tobacco retailers in a community is to limit the types of retailers that may sell tobacco products. For example, dozens of communities around the nation have prohibited pharmacies and other healthcare institutions from serving as tobacco retail outlets because selling those products is incompatible with their health and medical mission.¹⁴ Some companies, including CVS, have taken this step voluntarily.¹⁵ Some communities have also prohibited educational institutions from serving as retail outlets for tobacco, because youth are particularly at risk for becoming smokers, and the sale of tobacco would be incompatible with an educational mission to educate the younger population about social, environmental and health risks and harms.¹⁶ Although a number of jurisdictions have restricted tobacco outlet options as part of a tobacco licensing law, the same goal can be accomplished through a separate regulation. Communities considering a broader approach could restrict tobacco sales to specialty shops where minors are prohibited from entering, as some jurisdictions do with alcohol retailers.¹⁷ Restricting the types of stores that sell tobacco could reduce the raw number of tobacco retailers within a community and also lessen the density of tobacco retailers.

- **Regulate where tobacco retail outlets can be located:** Several communities prohibit health care or educational institutions from selling tobacco products and housing tobacco retailers on their properties. Additionally, communities can restrict how close tobacco retailers can be to each other, or to schools or other areas where large numbers of children and adolescents are frequently present. With this kind of spacing restriction, it would be important to consider whether the regulation causes retailers to concentrate in certain areas outside of the prohibited areas. While licensing and zoning regulations often have the benefit of existing enforcement mechanisms, a direct regulation may need to create a new enforcement process.

Policy Elements

Well-crafted restrictions on tobacco retailer locations are explicit about how tobacco retailer locations will be restricted, and how communities will implement and enforce the restrictions. Here are a few elements found in such policies:

- **Timely, community-specific findings and clear statement of purpose:** Findings are brief statements of fact or statistics that outline the issue being addressed, support the need for the policy, and help clarify the policy goals. If data is available or can be collected about the density, locations, and numbers of tobacco retailers within specific areas of a community, this data should be included to make the findings as relevant and strong as possible.
- **Statement of authority:** A clear and concise (but well-researched) statement explaining the local government unit's authority (whether it be a city council, board of health, or other local government entity) to enact the law may be useful to include either in the findings or in a separate provision of the law. Including this statement could help avoid arguments that the local government lacks the authority to pass the law because of preemption, lack of home rule authority, or for some other reason (see below for more discussion on this point).
- **Clear definitions and concise language:** Clearly define critical terms such as "tobacco product," "health care institution" or "educational institution." Draft the definition of "tobacco product" appropriately to include products such as flavored cigars, little cigars, spit/chewing tobacco, e- cigarettes, dissolvable tobacco products, flavored tobacco lozenges, and other emerging smokeless products.
- **Clear statement of how the law will be enforced:** The law should clearly describe the restrictions on tobacco retail locations. The enforcement provision should state who or what department is responsible for enforcing the law. The penalties section of the policy should clearly identify when persons can be found in violation of the policy, and the penalties or fines imposed for first, second and subsequent violations, as appropriate.
- **Well-planned implementation process:** Because any of these options are likely to affect existing retail outlets, a practical and well-thought out plan for implementation will

be important. When setting a date for the policy to take effect, consider how much time the responsible authorities will need to establish the necessary procedures for implementation and enforcement, to notify affected businesses of their obligations under the policy, and for businesses to take the steps necessary to comply. Establish a process for publicizing the policy and educating the community about why it is needed and how it will be implemented, and include procedures for receiving, tracking and following up on complaints.

Challenges

The tobacco industry and its allies have a history of challenging tobacco control measures in court, particularly when novel approaches are tried. In the context of tobacco retailer location restrictions, however, these challenges have not been very successful.

Past cases indicate that limitations on what kinds of institutions or businesses can serve as tobacco retail outlets will be on solid legal footing so long as the following conditions apply: the jurisdiction has the authority to pass the law; there is a rational basis for the restriction; and the law applies uniformly to similar types of businesses (i.e., all stores with pharmacies, regardless of their size or type of inventory). The first set of laws to prohibit retailers with pharmacies from also serving as tobacco retail outlets was passed by San Francisco, and was challenged in a series of lawsuits on First Amendment, Equal Protection, Due Process, and state law preemption grounds.¹⁸ These challenges were largely unsuccessful—the only successful case was an Equal Protection challenge brought by a drug store chain on the grounds that an exemption in the law for “big box” and grocery stores was unfair.¹⁹ After the exemption was removed, however, the law was upheld.²⁰

Generally, jurisdictions considering options for restricting tobacco retailer locations should consider the following legal issues:

- **Authority:** The governmental unit needs to have the power to enact the law. While states often have the power to pass these kinds of retailer restrictions, a local government’s authority to do so depends largely upon what authority a state has preserved for itself and what it has delegated to local governments through special legislation, home rule charters, or similar laws. Additionally, for local governments, it is important to assess whether local authority has been preempted by state law. Preemption occurs when a higher level of government (e.g., federal or state) eliminates or limits the authority of a lower level of government (e.g., state or local) to regulate a certain issue. Preemption is a frequent tobacco industry strategy. For example, the industry has pushed to include language in state youth access laws that could preempt local government authority to pass any tobacco control laws.²¹ As noted above, the San Francisco law prohibiting stores with pharmacies from selling tobacco products was challenged as being preempted by state pharmacy regulations.²² Although this argument did not win in California, preemption arguments are jurisdiction-specific so there could be different outcomes in other states.

- **Existing businesses:** Regardless of the policy option chosen, part of the process should include an analysis of how the proposed restrictions would affect existing businesses whose location would be out of compliance. Drafters should fully understand the legal ramifications of placing restrictions on such businesses, and be prepared to address arguments that retailers have a vested property interest or rights in selling tobacco products at that location. Generally, a license to sell products is considered a privilege, not a right, but how courts treat licenses can vary across jurisdictions. Drafters may also wish to consider ways to implement the law that would mitigate the impact on existing businesses, such as by allowing staggered implementation dates.

Select Legislation and Policies

A state or local government considering whether to adapt any language from the following policies should take care to ensure that the language is appropriate, practical, and legal for its jurisdiction. Please note that the Tobacco Control Legal Consortium does not endorse or recommend any of the following policies. We have included these examples simply to illustrate how various jurisdictions have regulated tobacco retailer locations.

Jurisdiction	Ordinance/Statute	Excerpts from law
West Hollywood, CA	West Hollywood Municipal Code, Chapter 7.32, Tobacco Sales Near Schools	<p>7.32.010 Purpose. It is the policy of the state of California to reduce smoking by young people. . . . The sale of tobacco in close proximity to schools frustrates the successful implementation of state policy by facilitating sales to young people who regularly congregate in the vicinity of and pass by these retailers on their way to and from their schools. . . . Although it is unlawful to sell tobacco products to minors, studies show that eight and six-tenths percent of California retailers surveyed do sell to minors. . . . The purpose of the ordinance codified in this chapter is to protect the health and welfare of the community by curtailing the grave public health consequences of early addiction to nicotine.</p> <p>7.32.030 Tobacco Sales Near Schools Prohibited. It is unlawful to sell or dispense cigarettes or tobacco products within six hundred feet of any public or private school, measured from the nearest point of the property line of the school to the nearest of the property line of the tobacco retailer.</p>
Groton, CT	Groton Code of Ordinances, Chapter 8.5, Article III	<p>Sec. 8.5-81. - Findings. The Town of Groton finds: (1) G.S. §§ 53-344 and 53-344a make it unlawful for any person engaged in the manufacture of sale of cigarettes to sell, barter, give or deliver cigarettes to any individual under the age of 18 years; and</p>

(2) Cigarettes are the most heavily advertised consumer product in the United States and the tobacco industry spends more than \$8.24 billion on advertising and promotion of cigarettes; and

(3) Connecticut medical costs related to treating smoking related diseases exceeds \$1 billion every year; and

(6) In Connecticut nearly one of every three high school students and 13 percent of middle school children used tobacco within the last 30 days; and

(7) Every year, 12,000 Connecticut children become daily smokers; and

(8) The average start smoking age in Connecticut is 11 years old; and

(9) Current laws and regulations have proved ineffective and inadequate in preventing the illegal purchase of cigarettes by children under the age of 18 years, particularly from cigarette vending machines; and

(10) G.S. § 12-289a(h) authorizes a town or municipality to ban or significantly restrict the placement of vending machines for cigarettes, tobacco or smokeless tobacco products.

Sec. 8.5-82. - Prohibited.

No person shall dispense, or cause to be dispensed, cigarettes, tobacco or smokeless tobacco products from vending machines at any location within the town. A vending machine means a machine used for the purpose of automatically merchandising packaged cigarettes, tobacco or smokeless tobacco products after the proper amount of payment by the purchaser.

Boston, MA

[Boston Public Health
Commission
Regulation](#)

Section I: Definitions

Health care institution: An individual, partnership, association, corporation or trust or any person or group of persons that provides health care services and employs health care providers licensed, or subject to licensing, by the Massachusetts Department of Health under M.G.L. c. 112. Health care institution includes hospitals, clinics, health centers, pharmacies, drug stores and doctors' and dentists' offices.

Educational institution: any public or private college, normal school, professional school, scientific or technical institution, university or other institution furnishing a program of higher education.

Retail establishment: any store that sells goods or articles of personal services to the public.

Tobacco products: any substance containing tobacco leaf, including but not limited to cigarettes, cigars, pipe, tobacco, snuff, chewing tobacco and dipping tobacco.

Section II: Prohibition Against the Sale of Tobacco Products by Health Care Institutions

No health care institution located in the City of Boston shall sell or cause to be sold tobacco products. Additionally, no retail establishment that operates or has a health care institution within it, such as a pharmacy or drug store, shall sell or cause to be sold tobacco products.

Section III: Prohibition Against the Sale of Tobacco Products by Educational Institutions

No educational institution located in the City of Boston shall sell or cause to be sold tobacco products. This includes all educational institutions as well as any retail establishments that operate on the property of an educational institution.

Other Helpful Resources

The parent organization for the Tobacco Control Legal Consortium, the [Public Health Law Center](#), has a webpage dedicated to Consortium publications that discuss tobacco point-of-sale policy options, including resources relating to [licensing](#) and [zoning](#) laws, [retail sales restrictions](#), [marketing and distribution restrictions](#), and [preemption](#). For more information about how federal law impacts the retail environment, please see the Consortium's publication [Federal Regulation of Tobacco and Its Impact on the Retail Environment](#). In addition, the Consortium's publication, [Cause & Effect: Tobacco Marketing Increases Youth Tobacco Use](#), summarizes findings from the 2012 U.S. Surgeon General's Report on Youth and Young Adult Tobacco Use, including findings related to how tobacco retailer location and density impact public health.

Contact Us

Please feel free to contact the Tobacco Control Legal Consortium at publichealthlaw@wmitchell.edu with any questions about the information included in this guide or to discuss local concerns you may have about implementing such a policy.

Last Updated: November 2014

Notes

¹ The information contained in this document is not intended to constitute or replace legal advice.

² RICHARD J. BONNIE ET AL., INST. OF MED., ENDING THE TOBACCO PROBLEM: A BLUEPRINT FOR THE NATION (National Academies Press, 2007).

³ U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES. PREVENTING TOBACCO USE AMONG YOUTH AND YOUNG ADULTS: A REPORT OF THE SURGEON GENERAL 545 (2012) [hereinafter 2012 U.S. SURGEON GENERAL'S REPORT].

⁴ *Id.* at 600.

⁵ People are most likely to start smoking when they are 15 or 16 years old, and 88% of all adult daily smokers tried their first cigarette by the age of 18 years old. *Id.* at 164, 165.

⁶ Teenagers are an important customer segment for convenience stores, with 70% of adolescents shopping at them at least weekly. *Id.* at 543.

⁷ E.g., Ellen C. Feighery et al., *An Examination of Trends in Amount and Type of Cigarette Advertising and Sales Promotions in California Stores, 2002–2005*, 17 TOBACCO CONTROL 93 (2008).

⁸ 2012 U.S. SURGEON GENERAL'S REPORT, *supra* note 3, at 543. See also Lisa Henriksen et al., *Is Adolescent Smoking Related to the Density and Proximity of Tobacco Outlets and Retail Cigarette Advertising Near Schools?*, 47 PREVENTATIVE MED. 210, 211–212 (2008); William J. McCarthy et al., *Density of Tobacco Retailers Near Schools: Effects on Tobacco use Among Students*, 99 AM. J. OF PUB. HEALTH 2006, 2011–2012 (2009); and Sandy J. Slater et al., *The Impact of Retail Cigarette Marketing Practices on Youth Smoking Uptake*, 161 ARCH. PEDIATR. ADOLESC. MED. 440, 440 (2007).

⁹ Henriksen et al., *supra* note 8; Scott T. Leatherdale & Jocelyn M. Strath, *Tobacco Retailer Density Surrounding Schools and Cigarette Access Behaviors Among Underage Smoking Students*, 33 ANNALS OF BEHAV. MED. 105, 106 (2007); McCarthy et al., *supra* note 8; and Joshua H. West, et al., *Does Proximity to Retailers Influence Alcohol and Tobacco Use Among Latino Adolescents?* 12 J. IMMIGRANT & MINORITY HEALTH 626, 631 (2010).

¹⁰ E.g., Andrew Hyland et al., *Tobacco Outlet Density and Demographics in Erie County NY*, 93 AM. J. OF PUB. HEALTH 1075, 1075 (2003); Michael B. Laws et al., *Tobacco Availability and Point of Sale Marketing in Demographically Contrasting Districts of Massachusetts*, 11 TOBACCO CONTROL ii71 (2002) (Massachusetts study); Scott P. Novak et al., *Retail Tobacco Outlet Density and Youth Cigarette Smoking: A Propensity-Modeling Approach*, 96 AM. J. PUB. HEALTH 670, 673–74 (2006) (Chicago study); N. Andrew Peterson, John B. Lowe, & Robert J. Reid, *Tobacco Outlet Density, Cigarette Smoking Prevalence, and Demographics at the County Level of Analysis*, 40 SUBSTANCE USE & MISUSE 1627, 1630 (2005) (Iowa study); and West et al., *supra* note 9, (California study).

¹¹ 2012 U.S. SURGEON GENERAL'S REPORT, *supra* note 3, at 542–43.

¹² Novak et al., *supra* note 10, at 674–75; and Ying-Chih Chuang et al., *Effects of Neighbourhood Socioeconomic Status and Convenience Store Concentration on Individual Level Smoking*, 59 J. EPIDEMIOLOGY & COMMUNITY HEALTH 568, 570–71 (2005).

¹³ See also Ian McLaughlin, *Tobacco Control Legal Consortium, License to Kill?: Tobacco Retailer Licensing as an Effective Enforcement Tool* (2010), available at <http://www.publichealthlawcenter.org/sites/default/files/resources/tclc-syn-retailer-2010.pdf>.

¹⁴ Tobacco Control Legal Consortium, *Prohibiting the Sale of Tobacco Products in Pharmacies – Tips & Tools* (2014), available at http://publichealthlawcenter.org/sites/default/files/resources/tclc-guide-prohibiting-tobacco-pharmacies-2014_0.pdf.

¹⁵ See Campaign for Tobacco-Free Kids, *Tobacco-Free Retailers*, for a list organized by location, available at <http://shoptobaccofree.org>.

¹⁶ Boston Public Health Commission, *Regulation Restricting the Sale of Tobacco Products in the City of Boston* (Feb. 2009), available at http://www.bphc.org/whatwedo/tobacco-free-living/Documents/TobaccoRestrictionRegulation_12_08.pdf.

¹⁷ See, e.g., MINN. STAT. §340A.503, subd. 4 (prohibiting adults under 21 from entering premises of licensed alcohol retailers with limited exceptions).

¹⁸ SAN FRANCISCO CITY AND COUNTY ORDINANCE NO. 194-08 (approved Aug. 7, 2008) and SAN FRANCISCO CITY AND COUNTY ORDINANCE NO. 245-10 (approved Oct. 6, 2010). The cases were: *Philip Morris USA v. City & County of San Francisco*, 2008 WL 5130460 (N.D. Cal. Dec. 5, 2008) *aff'd sub nom.* *Philip Morris USA, Inc. v. City & County of San Francisco*, 345 F. App'x 276 (9th Cir. 2009) (affirming denial of temporary injunction based on claim that law restricted tobacco company's First Amendment right to advertise its products); *Walgreen Co. v. City & County of San Francisco*, 185 Cal. App. 4th 424, 110 Cal. Rptr. 3d 498 (2010) (reversing denial of temporary injunction on grounds that law which exempted certain types of retailers with pharmacies could raise Equal Protection concerns); *Safeway Inc. v. City & County of San Francisco*, 797 F. Supp. 2d 964 (N.D. Cal. 2011) (dismissing claims that amended law violated grocery chain's substantive due process and equal protection rights, and that it was preempted by state laws regulating pharmacies).

¹⁹ *Walgreen Co.*, 185 Cal. App. 4th 424, *supra* note 18.

²⁰ *Safeway Inc.*, 797 F. Supp. 2d 964, *supra* note 18.

²¹ ROBIN HOBART, AM. MED. ASS'N, PREEMPTION: TAKING THE LOCAL OUT OF TOBACCO CONTROL 7 (2003), available at <http://www.rwjf.org/content/dam/supplementary-assets/2006/09/SLSPreemption2003.pdf>. ("We could never win at the local level. The reason is, all the health advocates, the ones that unfortunately I used to call 'health Nazis,' they're all local activists who run the little political organizations. They may live next door to the mayor, or the city councilman, and they say 'Who's this big-time lobbyist coming here to tell us what to do?'...So the Tobacco Institute and tobacco companies' first priority has always been to preempt the field, preferably to put it all on the federal level, but if they can't do that, at least on the state level, because the health advocates can't compete with me on a state level." Victor Crawford, former Tobacco Institute lobbyist); At least 22 states have laws that preempt local authority over access to tobacco products, according to a 2011 study by the Centers for Disease Control and Prevention (CDC). CDC, U.S. Dep't of Health and Human Services, *State Preemption of Local Tobacco Control Policies Restricting Smoking, Advertising, and Youth Access – United States, 2000-2010*, 60 MORBIDITY & MORTALITY WEEKLY REP. 1124 (Aug. 26, 2011), available at <http://www.cdc.gov/mmwr/pdf/wk/mm6033.pdf>.

²² *Safeway Inc.*, 797 F. Supp. 2d 964, *supra* note 18.