Out of View but in Plain Sight: The Illegal Sale of Single Cigarettes

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ABSTRACT *The practice of selling single cigarettes (loosies) through an informal economy is prevalent in urban, low socioeconomic (low SES) communities. Although US state and federal laws make this practice illegal, it may be occurring more frequently with the recent increase in taxes on cigarettes. This investigation provides information concerning the illegal practice of selling single cigarettes to better understand this behavior and to inform intervention programs and policymakers. A total of 488 African American young adults were recruited and surveyed at two education and employment training programs in Baltimore City from 2005 to 2008. Fifty-one percent of the sample reported smoking cigarettes in the past month; only 3.7 % of the sample were former smokers. Approximately 65 % of respondents reported seeing single cigarettes sold daily on the street. Multivariate logistic regression modeling found that respondents who reported seeing single cigarettes sold on the street several times a week were more than two times as likely to be current smokers compared to participants who reported that they never or infrequently saw single cigarettes being sold, after controlling for demographics (OR=2.16; $p=0.034$). Tax increases have led to an overall reduction in cigarette smoking. However, smoking rates in urban, low SES communities and among young adults remain high. Attention and resources are needed to address the environmental, normative, and behavioral conditions influencing tobacco use and the disparities it causes. Addressing these factors would help reduce future health care costs and save lives.*

KEYWORDS *Tobacco use, Young adult, African American, Cigarettes, Informal economy, Health disparities*

Despite overall reductions in tobacco use over the past decade, tobacco use still remains a major public health problem among minority and low socioeconomic populations.¹⁻⁴ In addition to individual and behavioral factors, high smoking rates in minority and low-income populations are related to environmental factors or the effects of living in a disadvantaged neighborhood. Studies have shown that tobacco use, especially the selling of single cigarettes (loosies) and little cigars, is especially

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frequent in urban, disadvantaged, African American communities in the USA and other countries.⁵⁻¹⁰ The availability of single cigarettes in minority communities may be related to smoking patterns of minority and low-income populations. African Americans and Hispanics are more likely to be light smokers (<10 cigarettes per day) compared to Caucasians.^{11, 12} Studies have consistently found that the density of tobacco outlets is associated with the percentage of minority populations; additionally tobacco outlet density is associated with higher smoking prevalence.¹³⁻¹⁶ The high density of tobacco outlets is compounded by the high availability of tobacco products, especially single cigarettes (loosies).⁸

The practice of opening cigarette packages and selling them singly through an informal economy is more prevalent in low socioeconomic communities despite state and federal laws which make this practice illegal.^{8, 17, 18} Through the Master Settlement Agreement and previous settlements, in 1998 cigarette manufacturers agreed to not manufacture or sell cigarettes in packages of less than 20 for a period of 5 years; one of the main goals of this prohibition was to reduce youth access to cigarettes. In 1999, the sale of cigarettes in packages fewer than 20 was banned in Baltimore City.¹⁹ In 2000, the Maryland General Assembly passed legislation to make permanent a ban on the sale of cigarettes in packages of less than 20. Additionally, the US Family Smoking Prevention and Tobacco Control Act of 2009 prohibits the sale of cigarettes in packages containing fewer than 20 cigarettes.²⁰

In addition to prohibitions banning the sale of single cigarettes, policy-makers and public health practitioners have been successful in increasing the price of cigarettes. The Children's Health Care Insurance Reauthorization Act of 2009 raised the federal tax on cigarettes by approximately 61 cents, raising the federal tax to a total of \$1.00 per pack, the first tax increase since 2002.²¹ Taxation is an especially important tobacco control strategy and many states have increased their excise tax on tobacco.²²⁻²⁴ For example, Maryland's successful 2009 campaign resulted in a tax increase from \$1.00 to \$2.00 per pack of 20 cigarettes. Studies have consistently found that policy approaches in tobacco control, especially increasing taxes and the price of cigarettes, have been successful in reducing consumption and decreasing smoking prevalence in the population, especially among adolescents and young adults.²⁵⁻²⁸ Findings from these studies indicate that higher tobacco taxes were associated with lower odds of tobacco initiation and reduced smoking prevalence. However, there may be unintended consequences of these policy approaches, especially in low SES communities, that have not been adequately addressed.²⁹⁻³² These include informal economic practices, such as street sales, that can be understood as survival strategies used by people who are somehow excluded from the more formal economic sector.

While a few studies have investigated the sales of single cigarettes in low-income communities as a health disparity issue, additional research is necessary to better understand the dynamics of the issue.^{8, 31-35} Involving the community to promote compliance with laws and changing community norms to be less supportive of these practices are public health challenges. In this study, we provide information concerning the illegal practice of selling single cigarettes to better understand this behavior and to inform intervention programs and policymakers. By examining these behaviors in young adults who are neither working nor in school, we address a population often missed by national surveys.

METHOD

Study Population

From February 2005 through December 2008, a total of 488 young African American adults were surveyed. The study design and the method of participant recruitment are described elsewhere.^{8, 9, 17} Participants were recruited and surveyed at the Youth Opportunity Centers, which are education and employment training programs in Baltimore City. Each participant received a 20-dollar gift card. This research is part of an academic and community partnership to promote healthy behaviors in urban communities. The study was approved by the Institutional Review Board of the Johns Hopkins Bloomberg School of Public Health.

Measures

Questions in the 110-item quantitative survey included self-reported demographic characteristics such as age and gender, level of education, race/ethnicity, tobacco acquisition and use, age of initiation, community norms, and smoking cessation. This investigation focused on questions related to acquisition and availability of single cigarettes and community norms.

Demographics and Smoking Status. Information on demographic characteristics (e.g., age, gender, education, and weekly income) was obtained from each participant. Each of the following characteristics was divided into two categories: age (18–19 and 20–24 years); educational status (less than high school and high school or above) and weekly income (equal or less than \$50/week and greater than \$50/week). Smoking status was evaluated using two questions: “Have you smoked 100 cigarettes in your life time” and “How often did you smoke cigarettes in the past 30 days”. Those who have smoked 100 cigarettes and smoked in the last 30 days were defined as current smokers; those who have smoked 100 cigarettes but did not smoke in the last 30 days were defined as former smokers; and those remaining were defined as never smokers.

Acquisition of Cigarettes. To assess how participants acquired cigarettes, current smokers were asked where they purchased cigarettes (e.g., bought cigarettes near where they live and socialize) and whether they purchased single cigarettes or packs of cigarettes (e.g., bought cigarettes by the pack during the last month). The responses for purchasing loose cigarettes over the past month, included: never, once or twice, several times a month, several times a week, and every day. Smokers were also asked for their “reasons for purchasing single cigarettes.”

Availability of Single Cigarettes (Loosies). The entire sample of smokers and nonsmokers was asked about availability of single cigarettes. These questions included how often the respondent saw individuals selling single cigarettes, who they had seen selling single cigarettes (e.g., neighbors, friends, and drug dealers), and where single cigarettes are likely to be found (e.g., outside bars/clubs and grocery/corner stores).

Community Norms Regarding Single Cigarettes. The entire sample of smokers and non-smokers was also asked about norms related to smoking. The study will include a question about whether individuals thought single cigarettes should be available in their community.

Analysis

The frequency of demographic characteristics, acquisition of cigarettes, and availability of cigarettes were stratified by smoking status (i.e., current smokers versus former and non-smokers). Smoking status comparisons were made within each characteristic using chi-square testing for categorical variables and *t* test for continuous variables. Multivariate logistic regression models were fitted to assess the relationship between the availability of single cigarettes (i.e., during the past 30 days, how often have you seen people on the street selling single cigarettes) and smoking status (current smoker versus former and never smokers). Ordinal logistic regression models were fitted to assess the relationship between loose cigarette purchases and daily cigarette use (e.g., 1/2 pack of cigarettes, pack of cigarettes) among current smokers. All regression models controlled for gender, age, and educational status, all of have been important covariates in previous studies.^{4, 11, 16} All probability values reported correspond to two-sided tests and were considered significant at the 0.05 alpha level. Analyses were performed using SAS 9.2 statistical software (SAS Institute Inc., Cary, NC) and Stata 11.2 (Stata Statistical Software: Release 11. College Station, TX: StataCorp LP).

RESULTS

Demographics and Smoking History

The sample was 52 % female (*n*=252) and the mean age was 19.7 years (SD=1.62). The majority of the sample (male and female) had not completed high school and 41 % had a weekly income below \$50 (Table 1). Approximately, 51 % of the sample reported smoking cigarettes in the past month and only 3.7 % of the sample were former smokers. Current smokers were less likely to have a high school diploma or GED (λ^2 ; *p*<0.001) and more likely to be male (λ^2 ; *p*<0.001).

Acquisition of Cigarettes

Table 2 displays buying and selling practices of those in the study. Nearly 74 % of the current smokers purchased at least one pack of cigarettes during the past month.

TABLE 1 Demographic characteristics and smoking status of participants

	Non- and former smokers (<i>n</i> =240)	Current smokers (<i>n</i> =248)	Total (<i>n</i> =488)	<i>p</i> value
Gender				<0.0001
Male	92 (38.33)	144 (58.1)	236 (38.4)	
Female	148 (61.7)	104 (41.9)	252 (51.6)	
Age				0.082
18–19	135 (56.3)	120 (48.4)	255 (52.5)	
20–24	105 (43.7)	128 (51.6)	231 (47.5)	
Education				<0.001
<High school	101 (42.1)	204 (82.3)	305 (62.5)	
≥High school	139 (57.9)	44 (17.7)	183 (37.5)	
Weekly income ^a				0.643
≤\$50	68 (39.3)	64 (41.8)	132 (40.5)	
>\$50	105 (60.7)	89 (58.2)	194 (59.5)	

^a*n*=325

TABLE 2 Acquisition of cigarettes by African-American current smokers

	Total (n=248)
Bought cigarettes by pack during the last month ^a	73.7
Bought cigarettes:	
Near where they live	88.3
Near where they socialize ^a	71.3
Bought cigarettes at a:	
Supermarket, drug store, gas station	86.3
Convenience/corner store ^a	87.1
Bar or club	49.6
Bought cigarettes from:	
Friends ^b	38.2
Family	23.4
Borrow or bum cigarettes	74.6
Pool money to buy cigarettes ^c	45.9
Sold cigarettes ^d	60.3
Bought loosies during the last month ^e	
Never	15.5
Once or twice	31.4
Several times a week	24.5
Everyday	28.6
Reasons for buying loosies:	
Convenient	58.4
Less expensive	57.4
Trying to cut back	51.5
Prevents me from getting started/addicted	27.4

^an=247

^bn=246

^cn=246

^dn=244

^en=245

While convenience stores and gas stations are locations where most purchases take place, sales of cigarettes were also reported at bars and clubs. The majority of current smokers had purchased single cigarettes in the past month (85 %); nearly 29 % of the current smokers reported purchasing single cigarettes everyday over the past month. Over 50 % of the current smokers reported purchasing single cigarettes because of the convenience and affordability. Males and those without high school diplomas were more likely to purchase single cigarettes over the past month (χ^2 ; $p<0.001$); age was not associated with purchasing single cigarettes (χ^2 ; $p=0.555$).

Availability of Single Cigarettes

Approximately 65 % of all respondents reported seeing single cigarettes being sold every day on the street (Table 3). Nearly 40 % reported that they have seen their neighbors selling single cigarettes, and approximately 35 % reported seeing friends selling singles. Fewer respondents reported seeing a family member selling single cigarettes (22.4 %). More than 80 % of the sample reported the likelihood of finding single cigarettes being sold near subway stations and outside of corner and grocery stores. About 71 % reported that it is likely to find single cigarettes outside bars and clubs, and a smaller percentage (37.5 %) of the respondents reported

TABLE 3 Availability of loose cigarettes

	Total (<i>n</i> =488)	Non- and former smokers (<i>n</i> =240)	Current smokers (<i>n</i> =248)
Seen people on the street selling loosies everyday during the last month ^{*a}	65.2	56.7	73.4
Who they have seen selling loosies on the street:			
Neighbors ^{*a}	39.3	33.6	44.7
Friends	34.5	30.1	38.8
Drug dealers ^b	32.4	36.3	28.6
Relatives	22.3	20.7	23.8
Likely to find loosies being sold			
Near the subway	83.0	83.3	82.8
Outside of corner/groceries store ^{*b}	82.8	79.2	86.6
Outside of bars/clubs	70.5	72.8	68.2
Outside of schools ^{*c}	37.3	41.1	34.2
Loosies should be available in the community ^{*a}	52.3	30.5	73.5

^{*}*p*<0.05 for the comparison by smoking status (χ^2)

^a*n*=486

^b*n*=487

^c*n*=484

seeing sales of single cigarettes outside of schools. A subsample of respondents (*n*=142) reported on the availability of single cigarettes within grocery/corner stores; nearly 60 % reported that it was somewhat or very likely for single cigarettes to be available in grocery/corner stores. About half of the sample thought that single cigarettes should be available in their community.

Availability of Single Cigarettes and Smoking Status

Table 4 displays the results of the multivariate logistic regression model. Participants who reported seeing single cigarettes sold on the street several times a week were more than two times as likely to be current smokers compared to participants who reported that they never saw single cigarettes being sold or saw them being sold infrequently (i.e., several times a month) after controlling for gender, education, and age (OR=2.16; *p*=0.034). The relationship between availability of single cigarettes and smoking status was also significant for participants who reported seeing single

TABLE 4 Logistic regression of smoking status (current vs non-smoker and former smoker) on loose cigarette availability (*n*=486)

	AOR ^a	Confidence interval	<i>p</i> value
During the past 30 days have you seen people on the street selling loose cigarettes?			
Never/several times a month	—		—
Several times a week	2.16	1.06–4.42	0.034
Everyday	2.33	1.40–3.89	0.001
Male	1.87	1.24–2.81	0.003
Age (in years)	1.21	1.06–1.37	0.005
High school diploma/GED ^a	0.16	0.10–0.24	<0.001

^aAdjusted for gender, age, and education

cigarettes being sold every day for the past month ($OR=2.33$; $p<0.01$). Gender, age, and education were all significant predictors of smoking status.

Single Cigarette Purchases and Daily Tobacco Use

Ordinal logistic regression models were used to estimate the relationship between loose cigarette purchases and daily cigarette consumption (e.g., less than one cigarette a day, pack a day). Young adults that purchased loose cigarettes everyday and those who purchased loose cigarettes several times a week were more likely to have higher past month tobacco use ($OR=2.49$; $p=0.23$ and $OR=3.86$, $p=0.01$, respectively) compared to those who did not purchase loose cigarettes in the past month after adjusting for gender, age, and educational status. There were no differences in past month smoking consumption comparing those purchasing loose cigarettes once or twice to young adults never purchasing loose cigarettes ($OR=1.68$, $p=0.18$). Additional analyses were conducted to examine norms regarding single cigarette sales and daily cigarette use; there were no differences in tobacco consumption between young adults who reported that loose cigarettes should be available in their community compared to those who disagreed ($OR=1.19$; $p=0.51$).

Norms Regarding Single Cigarette Availability

The majority of smokers (73.5 %) and 30.7 % of non-smokers/former smokers support the sale of single cigarettes in their communities, this difference was statistically significant (χ^2 ; $p<0.001$). Chi-squared tests were also performed to identify demographic characteristics associated with pro-loose norms; males ($p<0.001$), young adults who reported seeing loose cigarettes sold ($p=0.280$), and those without a high school diploma/GED ($p<0.001$) were more likely to support the sale of single cigarettes in their community.

DISCUSSION

This cross-sectional study of African American young adults in Baltimore City examined the availability of illegally sold single cigarettes and assessed the relationship between the availability of single cigarettes and smoking status and behaviors. The results indicate that this high-risk sample of young adults has regular access to single cigarettes, although the sale of single cigarettes has been banned Baltimore since 1999 and in Maryland since 2000. The majority (85 %) of the current smokers reported purchasing a single cigarette in the past month, which is higher than previous studies. Thrasher et al. conducted a similar investigation among adult Mexican smokers and found that 38 % of adults purchased single cigarettes in the past month, although it was illegal to sell single cigarettes during the time of the study.³³ The difference in prevalence between the two investigations may be due to the sampling approaches: Thrasher et al. conducted a population-based study in three Mexican cities compared to the convenience sampling used in this current investigation.³⁴ However, young adult populations are often missed in national surveys, as they are not enrolled in school and not working.^{8, 9}

In the current study, young adults reported that single cigarettes were available anytime of the day or night. Most often, single cigarettes could be found outside of establishments that sell cigarettes; these are mainly grocery and corner stores and bars and clubs. Single cigarettes were also available outside of subway stations. It is also important to note that a large percent of our sample also reported on the

availability of single cigarettes within grocery/corner stores. Thus the availability of single cigarettes is very high and can be found on the street and in stores, making this a bigger public health issue than previously thought.

The practice of selling single cigarettes has been identified as a disparity issue and the Federal Drug Administration has taken action in prohibiting these sales through the US Family Smoking Prevention and Tobacco Control Act of 2009. As with most state and local laws prohibiting the sale of single cigarettes, enforcement of this Act takes place solely in the retail environment. However, in many urban, low SES communities, this practice is endemic within and outside of retail stores, with little to no enforcement efforts; considerable community involvement and public health efforts will be needed to eliminate this behavior. The majority of the current smokers in our sample purchased single cigarettes for the convenience, price (less expensive), and as a method to “cut back” cigarette consumption. During the time of the study, the tobacco tax in Maryland was \$1 for a pack of cigarettes and increased to \$2 per pack in 2009. Previous studies have found that increases in excise tax, which increase tobacco product prices, encourage current tobacco users to stop using tobacco products, discourage potential users from taking up tobacco use, and reduce consumption among those that continue to use tobacco products; the greatest impact is on the young and the poor because youth and low-income populations are particularly price sensitive.^{24, 25} In addition, high tax rates may disproportionately burden low-income smokers who then need to spend more of their income to acquire cigarettes.

The increasing cost of cigarettes related to tax and other factors has had the unintended consequence of contributing to an informal economy where single cigarettes as well as other low-cost tobacco products are readily available.^{8, 9, 17} For example, the increase in taxes on cigarettes has also led in some instances to product-switching from cigarettes to small cigars.⁹ In the USA, cigarette sales decreased by 18 % from 2000 to 2007, while the sale of small cigars increased by 115 % during the same time period.³⁶ This is especially troubling as small cigars are often inhaled and have higher levels of nicotine. In addition, the proliferation of sales on the street is of concern as it is documented that these types of sales are occurring predominately in disadvantaged inner-city communities with low SES.^{8, 17} Thus the policy of raising tax rates to increase the cost of a pack of cigarettes in these communities, which should lead to reduced consumption of cigarettes, may have had an unintended consequence: on the street sales of loosies that are easily accessed, and since sold as single sticks makes the unit cost of the cigarette more affordable to this disadvantaged population. This manner of sales also seems to dovetail with the smoking habits in these communities, especially the sale of single cigarettes, since it is well documented that African Americans smoke fewer cigarettes per day than the majority population.^{11, 12} Thus, purchasing one to three cigarettes at a time, even though costing more in the long-term, is affordable in the short-term and fits with the smoking pattern.

Previous studies have also found that smokers report purchasing single cigarettes as a strategy to reduce tobacco use.³³ However, a longitudinal study of smokers by this same author did not find that purchasing single cigarettes led to “cutting back,” nor was this practice associated with likelihood of attempting to quit tobacco use.³⁴ This current investigation finds that most smokers report that ease of access and the availability of the product are the most likely reasons for their purchasing cigarettes. In addition, our regression models indicated that the availability of single cigarettes was positively associated with current cigarette use, and that exposure to these sales was significantly associated with smoking.

There are several limitations to our study. First, this investigation relies on self-reported measures. Since the sale of single cigarettes is illegal, respondents may not feel comfortable reporting this behavior. However, in our survey we found that a very high percentage of both smokers and non-smokers reported seeing and knowing about sales of cigarettes on the street. In a study based on community-engaged approaches, we found resistance within the community to identify stores that were selling single cigarettes. In addition, while a high percentage of the survey population reported smoking, we believe that our prevalence rates may actually underestimate smoking since many respondents smoke other tobacco products, including little cigars, and do not always identify themselves as smokers when they used these products rather than cigarettes. Another limitation is that our study reported only on young adults who were enrolled in education and training centers; thus we cannot generalize some of these results beyond this population or these communities. However, this is an often-overlooked demographic group, and their views and behaviors on these issues are of interest. In addition, other communities report similar activities, suggesting a “tip of the iceberg” phenomenon and that this informal economy around sales of cigarette is more prevalent than reported.^{6, 19, 29–35} Lastly, the study is cross-sectional so temporal associations cannot be determined. It is possible that the presence of single cigarettes may predispose people to smoke, however, it also possible that current smokers are more likely to be aware of single cigarettes being sold in their community compared to former and non-smokers. Future studies should examine this relationship over time. This concern is in part mitigated by the analyses that found a significant association between loose cigarette purchases and tobacco consumption.

An issue needing resolution is how to reduce tobacco use and availability in low-income communities. While taxes have been increased, little of that money has been used to fund smoking prevention or reduction programs. Few resources are available in cities such as Baltimore to help young adults quit smoking. In addition, community norms are still supportive of the practice of selling single cigarettes. While the norms concerning sales of single cigarettes remain high, the community had supportive norms concerning second-hand smoke exposure, with the majority of both smokers and non-smokers reporting not wanting to expose children to tobacco smoke. Baltimore City and Maryland instituted a ban on smoking in public places as of February 1, 2008. These policies seem to have had an effect even in low SES communities since a majority of our sample also reported smoking restrictions in their homes, an indication of how public policy can affect individual behavior. Thus second-hand smoke policy initiatives have benefited low SES communities, compared to the effect of increased taxation. Overall these communities have high density of stores that sell tobacco and now have on the street sale of tobacco products, with little enforcement of the legislation prohibiting these practices. Without support from the community, few resources for enforcement of existing laws, and limited access to prevention and cessation services, these communities do not benefit from the protective policies that have been enacted.

The current policy-oriented approach to this issue seems to be having unintended consequences in the low SES, urban, and underserved population. Attention and resources are needed to address the environmental, normative, and behavioral conditions influencing tobacco product availability and use that exist and further contribute to disparities. Finding the political will and resources to address these disparities in our urban low SES communities and especially among young adults would reduce health care costs and save lives.

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REFERENCES

1. Dube SR, Asman K, Malarcher A, Caraballo R. Cigarette smoking among adults and trends in smoking cessation—United States, 2008. *MMWR Morb Mortal Wkly Rep.* 2009; 58(44): 1227–1232.
2. Tynan MA, McAfee T, Promoff G, Pechacek T. Consumption of cigarettes and combustible tobacco—United States, 2000–2011. *MMWR Morb Mortal Wkly Rep.* 2012; 61(30): 565–569.
3. Reid JL, Hammond D, Boudreau C, Fong GT, Siahpush M. Socioeconomic disparities in quit intentions, quit attempts, and smoking abstinence among smokers in four western countries: findings from the International Tobacco Control Four Country Survey. *Nicotine Tob Res.* 2012; 12(suppl 1): S20–S33.
4. Siahpush M, Singh GK, Jones PR, Timsina LR. Racial/ethnic and socioeconomic variations in duration of smoking: results from 2003, 2006 and 2007 tobacco use supplement of the current population survey. *J Public Health.* 2012; 32(2): 210–218.
5. Jolly DH. Exploring the use of little cigars by students at a historically Black University. *Prev Chronic Dis.* 2008; 5(3): A82.
6. Malone RE, Yerger V, Pearson C. Cigar risk perceptions in focus groups of urban African American youth. *J Subst Abuse.* 2001; 13(4): 549–561.
7. Page JB, Evans S. Cigars, cigarillos, and youth: emergent patterns in subcultural complexes. *J Ethn Subst Abuse.* 2004; 2(4): 63–76.
8. Stillman FA, Bone L, Avila-Tang E, Smith K, Yancey N, Street C & Owings K. Barriers to cessation in 18–24 year old inner city African Americans. *Am J Public Health.* 2007; 97(8): 1405–1408.
9. Milam AJ, Bone L, Furr-Holden D, Coylewright M, Dachille K, Owings K, et al. Mobilizing for policy: using community-based participatory research to impose minimum packaging requirements on small cigars. *Prog Community Health Partnersh.* 2012; 6(2): 205–212.
10. Laws MB, Whitman J, Bowser DM, Krech L. Tobacco availability and point of sale marketing in demographically contrasting districts of Massachusetts. *Tob Control.* 2002; 11(suppl 2): ii71–ii73.
11. Okuyemi KS, Ahluwalia JS, Richter KP, Mayo MS, Resnicow K. Differences among African American light, moderate, and heavy smokers. *Nicotine Tob Res.* 2001; 3(1): 45–50.
12. Delva J, Tellez M, Finlayson TL, Gretebeck KA, Siefert K, Williams DR, et al. Cigarette smoking among low-income African Americans: a serious public health problem. *Am J Prev Med.* 2001; 29(3): 218–220.
13. Reid RJ, Peterson NA, Lowe JB, Hughey J. Tobacco outlet density and smoking prevalence: does racial concentration matter? *Drugs (Abingdon Engl).* 2005; 12(3): 233–238.
14. Siahpush M, Jones PR, Singh GK, Timsina LR, Martin J. Association of availability of tobacco products with socio-economic and racial/ethnic characteristics of neighborhoods. *Public Health.* 2010; 124(9): 525–529.
15. Henriksen L, Feighery EC, Schleicher NC, Cowling DW, Kline RS, Fortmann SP. Is adolescent smoking related to the density and proximity of tobacco outlets and retail cigarette advertising near schools? *Prev Med.* 2008; 47(2): 210–214.
16. Peterson NA, Lowe JB, Reid RJ. Tobacco outlet density, cigarette smoking prevalence, and demographics at the county level of analysis. *Subst Use Misuse.* 2005; 40(11): 1627–1635.

17. Smith KC, Stillman F, Bone L, Yancey N, Price E, Belin P, et al. Buying and selling “loosies” in Baltimore: the informal exchange of cigarettes in the community context. *J Urban Health*. 2007; 84(4): 494–507.
18. Goldstein JA. Cigarette for 75 Cents, 2 for \$1: The Brisk, Shady Sale of “Loosies”. *The New York Times*. NY/Region; 2011.
19. Baltimore City Health Department. Health Code of Baltimore City 2008. <http://baltimorehealth.org/info/HealthCode.pdf>. Accessed July 1, 2013.
20. United States. The Family Smoking Prevention and Tobacco Control Act: H.R. 1256. Washington DC 2009. http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h1256enr.txt.pdf. Accessed July 1, 2013.
21. Alcohol and Tobacco Tax and Trade Bureau. Tobacco statistics. Washington, DC: US Department of Treasury, Alcohol and Tobacco Tax and Trade Bureau 2012. <http://www.ttb.gov/tobacco/tobacco-stats.shtml>. Accessed July 1, 2013.
22. Chaloupka FJ, Yurekli A, Fong GT. Tobacco taxes as a tobacco control strategy. *Tob Control*. 2012; 21(2): 172–180.
23. Ranson MK, Jha P, Chaloupka FJ, Nguyen SN. Global and regional estimates of the effectiveness and cost-effectiveness of price increases and other tobacco control policies. *Nicotine Tob Res*. 2002; 4(3): 311–319.
24. Thomson CC, Fisher LB, Winickoff JP, Colditz GA, Camargo CA Jr, King C III, et al. State tobacco excise taxes and adolescent smoking behaviors in the United States. *J Public Health Manag Pract*. 2004; 10(6): 490–496.
25. Levy DT, Romano E, Mumford E. The relationship of smoking cessation to sociodemographic characteristics, smoking intensity, and tobacco control policies. *Nicotine Tob Res*. 2005; 7(3): 387–396.
26. Tauras JA. Public policy and smoking cessation among young adults in the United States. *Health Policy*. 2004; 68(3): 321–332.
27. Stillman FA, Hartman AM, Graubard BI, Gilpin EA, Murray DM, Gibson JT. Evaluation of the American Stop Smoking Intervention Study (ASSIST): a report of outcomes. *J Natl Cancer Inst*. 2003; 95(22): 1681–1691.
28. Chaloupka FJ, Wechsler HP. Tobacco control policies and smoking among young adults. *J Health Econ*. 1997; 16(3): 359–373.
29. Cantrell J, Hung D, Fahs MC, Shelley D. Purchasing patterns and smoking behaviors after a large tobacco tax increase: a study of Chinese Americans living in New York City. *Public Health Rep*. 2008; 123(2): 135.
30. Connolly GN, Alpert HR. Trends in the use of cigarettes and other tobacco products, 2000–2007. *JAMA*. 2008; 299(22): 2629–2630.
31. Shelley D, Cantrell MJ, Moon-Howard J, Ramjohn DQ, VanDevanter N. The \$5 man: the underground economic response to a large cigarette tax increase in New York City. *Am J Public Health*. 2007; 97(8): 1483–1488.
32. Farrelly MC, Nonnemaker JM, Watson KA. The consequences of high cigarette excise taxes for low-income smokers. *PLoS One*. 2012; 7(9): e43838.
33. Thrasher JF, Villalobos V, Dorantes-Alonso A, Arillo-Santillán E, Cummings KM, O'Connor R, et al. Does the availability of single cigarettes promote or inhibit cigarette consumption? Perceptions, prevalence and correlates of single cigarette use among adult Mexican smokers. *Tob Control*. 2009; 18(6): 431–437.
34. Thrasher JF, Villalobos V, Barnoya J, Sansores R, O'Connor R. Consumption of single cigarettes and quitting behavior: a longitudinal analysis of Mexican smokers. *BMC Public Health*. 2011; 11(1): 134.
35. de Ojeda A, Barnoya J, Thrasher JF. Availability and costs of single cigarettes in Guatemala. *Nicotine Tob Res*. 2013; 15(1): 83–87.
36. Connolly GN, Alpert HR. Trends in the use of cigarettes and other tobacco products, 2000–2007. *JAMA*. 2008; 299(22): 2629–2630.