



*A Policy Research Partnership for
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Youth Access Tobacco Possession, Use,
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INTRODUCTION

Cigarettes continue to be the tobacco of choice among youth. Youth Risk Behavior Surveillance System (YRBSS) data from 2009 report a 19.5% current smoking prevalence among 9th to 12th graders in the United States, with 11.2% reporting ever daily smoking.¹⁻² Smoking prevalence among older youth was similar, as shown by 2010 Monitoring the Future (MTF) data, which report 2010 smoking rates of 19.2% among 12th graders. Past 30-day smoking prevalence was reported at 13.6% among 10th graders and 7.1% among 8th graders.³

Many tobacco control policies have been aimed at preventing and reducing tobacco use among youth. Recent tobacco control policy efforts include legislation related to: price or tax increases; smoke-free air laws; and youth access laws: both sales to minors' laws and possession, use, and purchase laws. Other types of tobacco control efforts include: tobacco advertising bans; marketing restrictions; media counter-advertising campaigns; and school-based prevention programs. These policies and tobacco control efforts have become common components of comprehensive tobacco control strategies.⁴⁻¹⁴ Mass-media counter-marketing campaigns, such as the American Legacy "truth" campaign, have also been popular tobacco control strategies employed to target youth smoking.¹⁵

Tobacco youth access laws are designed to prohibit minors from accessing tobacco products, and also to simultaneously reduce both the supply of tobacco and the availability of tobacco products to minors. A variety of multi-level government policies have been enacted to reduce youth access to tobacco, including: sales to minors' laws, which target the merchant for selling tobacco to minors; and possession, use, and purchase (PUP) laws, which target the minor for illegally possessing, using, and/or purchasing tobacco products.⁹ Other types of youth access restrictions include minimum age provisions for cigarette sales (i.e. raising the minimum age)

and restrictions on product marketing such as banning vending machine sales, restricting product sampling to adult only venues, restricting self-service displays of tobacco products, and prohibiting out-of-package sales.^{9-10, 16}

Youth access PUP laws have been controversial, with arguments both for and against their usefulness to discourage youth tobacco use. Supporters argue that possession, use, and purchase laws increase the cost of tobacco for youth and require accountability for underage use, similar to illegal use policies of alcohol and illicit drugs.¹⁷⁻¹⁹ Some researchers point to enforcement of PUP laws, in addition to other youth access laws, as a key component for effectiveness.²⁰⁻²² Opponents argue that PUP laws are supported by tobacco companies, shifting blame away from retailers and industry marketing practices, and towards youth, who have been enticed to smoke by tobacco marketing and advertising.²³⁻²⁷ Others also argue that enforcement is difficult and expensive, and may actually increase youth desire for ‘adult only’ products.²⁸⁻²⁹

Trends over the past few decades indicate a sharp increase in the percentage of states restricting minors’ possession, use, and/or purchase (PUP) of tobacco products. Since 1988, the number of states with PUP laws has increased dramatically. The average number of these laws per state was 0.45 in 1988, and 1.94 in 2006. In 1988, only 17 states had enacted at least one of these three laws; by 2006, however, 45 states had enacted at least one PUP law [See Figure 1].³⁰⁻

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There are also possession, use, and purchase ordinances that have been enacted at the local or community level, and trends also indicate an increase in the number of PUP ordinances. States without existing state-level PUP laws, like New Jersey, may still have local level PUP ordinances. Local ordinances, and local enforcement of state-level PUP laws, often require time and resources that police departments need for competing demands; therefore, as more local PUP ordinances are passed, enforcement of these laws may become an increasing challenge.³²⁻³³

State and local-level PUP laws have been frequently enacted; however, their effectiveness in terms of reducing and preventing youth smoking has not been frequently and thoroughly studied on a national scale, and measures of PUP enforcement have not been collected or considered in relation to their effectiveness.^{28,30,34} This research study collected data on the enforcement of youth access PUP laws at the state level and developed index measures of enforcement for PUP state-level laws. This study has also utilized local level possession enforcement data to construct a measure of possession enforcement at the local level. These state measures of PUP enforcement and local measure of possession enforcement will provide useful data to better understand and study the effectiveness of PUP laws and their relationship to youth smoking behavior and attitudes.

METHODS

State-Level PUP Enforcement Measures

This study collected state-level data on the enforcement of possession, use, and purchase laws from appropriately identified tobacco control officials in 45 states with PUP laws in 2000 or 2001. A state enforcement interview was designed and administered via telephone to appropriately identified tobacco control officials during May to December 2002. This instrument was reviewed and Internal Review Board approval was obtained at the Roswell Park Cancer Institute in April 2002, prior to beginning state enforcement interviews. Structured questions concerning PUP laws and their enforcement were constructed based on a review of existing literature and tobacco possession enforcement questions included in the ImpacTeen Tobacco Possession Ordinance Feedback Module.³⁵ ImpacTeen is a Robert Wood Johnson funded multi-substance (tobacco, alcohol, illicit drugs) project coordinated at the University of Illinois at Chicago, which evaluates the impact of policies and programs on adolescent substance use. The

draft survey instrument was sent to tobacco control researchers familiar with youth access laws at the Roswell Park Cancer Institute and University of Illinois at Chicago. This survey was subsequently revised following review and comments from these tobacco control experts.

Tobacco control officials were identified from a contact list provided by the Substance Abuse and Mental Health Services Administration (SAMHSA) in the Department of Health and Human Services. SAMHSA is responsible for coordinating statewide youth access sales to minors' compliance check programs; therefore, tobacco control officials directly responsible for state-level youth access enforcement activities report to this agency. The protocol allowed the interviewer to determine if the contact person was the most knowledgeable and appropriate person to speak with and, if not, prompted the interviewer to identify the most appropriate respondent before commencing the actual interview. Tobacco control officials were interviewed concerning their knowledge and job duties related to enforcement of state-level PUP laws, and no personal or demographic information was collected. Interview responses were analyzed as aggregated data by state, and these state data were used to develop enforcement indices at the state level for possession, use, and purchase laws. Individual state enforcement responses were not identified or presented with individual states.

Data were collected on state enforcement activities in 2000 and 2001, related to youth access PUP laws including: PUP enforcement policies; patterns; and practices. Follow-up interviews were conducted as necessary with additional state and/or local contact sources, and names of contact persons have been documented for future research possibilities.

The PUP State Enforcement Index (SEI) was based on 8 key components identified from the state enforcement interview survey instrument, with a maximum total of 35 points for the strongest measure of PUP enforcement. It includes the following state enforcement measures:

level of enforcement; state resources for local enforcement; predominant pattern of enforcement; typical enforcement action(s) when a violation is observed; number of citations issued in the past year; the typical enforcement penalties when a first-time violation is observed; the typical enforcement penalty when a second or subsequent violation is observed; and publicity related to enforcement in the past year. These enforcement measures were selected based on the importance and quality of data provided, avoiding subjective responses, and including the most objective and relevant data to incorporate for state PUP enforcement measures [See Table 1].

The point values assigned to each SEI enforcement measure varied, with maximum point values ranging from 2 points for ‘level of enforcement’ to 6 points for ‘number of citations’ and ‘publicity related to enforcement’ during the past 12 months. The 8 SEI enforcement measures and their corresponding point values are detailed in Table 1. These ratings were determined by a review process that considered: the number of possible responses corresponding to each enforcement measure included in the SEI index; the relative importance of each question and response category, as a component of the entire SEI measure; and the total number of points that could represent strength of state-level enforcement for each measure. Points were increased or additional points were added to the total rating score of an enforcement measure for specific components identified to contribute to the strength of state enforcement, which were considered to be stronger enforcement activities or practices during the data collection process.

There were no missing data for PUP enforcement measures from any of the state enforcement interviews. Points for each of the 8 state enforcement measures were recorded in a SEI database for each state-level PUP law, and these 8 values were subsequently summed to create the total SEI index score for PUP laws in each of the 43 states with one or more state-level PUP laws in 2000 and in each of the 45 states with one or more state-level PUP laws in 2001.

SEI scores were calculated for state-level possession, use, and purchase laws in 2000 and 2001, with a maximum total score of 35 points [See Table 1].

Local-Level Possession Enforcement Measures

Local possession enforcement data are preliminary data obtained from the ImpacTeen Project key informant Tobacco Possession Ordinance Feedback Module interviews. The appropriate tobacco control officials were identified, as key informants, among community sites matched to schools as part of the Monitoring the Future Study sample for 2000 and 2001.³⁵ ImpacTeen key informant interviews are conducted in approximately one-half of the eligible MTF community sites in a given year to minimize respondent burden and effectively utilize available data collection resources. These local PUP enforcement data include responses from tobacco enforcement officials in 85 community sites for 2000 and 2001.

It is possible for each community site to have multiple communities. For example, community site A (representing school district A) could include the individual communities A, B, and C, since students from communities A, B, and C, all attend school district A. Individual communities within community sites were weighted by the percent of students in each community, in the development of the local enforcement possession index as described below. Respondents were police chiefs and police officers responsible for tobacco enforcement in these communities. Key informants were matched to corresponding community sites across the U.S. and identified by researchers at Battelle in Baltimore, MD. Battelle was subcontracted to conduct key informant interviews for all community modules in 1999-2004. Telephone interviews were conducted with appropriately identified respondents and data were provided to ImpacTeen researchers at UIC following data cleaning and coding procedures. Data were subsequently

placed on the secure ImpacTeen server and made available to project members only, via a website connection.

The PUP Local Enforcement Index (LEI) was based on 6 components taken from the ImpacTeen key informant Tobacco Possession Ordinance Feedback Module for 2000 and 2001, with a maximum total of 15 points for the strongest measure of local possession enforcement. It includes the following local possession enforcement measures: ordinance enforced in community; priority of enforcement; resources for effective enforcement; predominant pattern of enforcement; typical enforcement action(s) taken in community when youth is caught for tobacco possession; and parents routinely notified if youth are cited for tobacco possession. LEI enforcement measures were selected based on existence and availability of data from key informant interviews for both 2000 and 2001; therefore, the most relevant questions with the most available objective data on local tobacco possession enforcement were included.

The point values assigned to each LEI possession measure varied, with maximum point values ranging from 1 point for ‘ordinance enforced in community’ to 4 points for ‘priority of enforcement’ and ‘typical enforcement action(s)’. The 6 LEI possession enforcement measures and their corresponding point values are detailed in Table 2. [See Table 2]. These ratings were determined by a review process that considered: the number of possible responses corresponding to each enforcement measure included in the LEI possession index; the relative importance of each question and response category, as a component of the entire LEI possession measure; and the total number of points that could represent strength of local-level possession enforcement. LEI possession measures were obtained from the key informant databases for 2000 and 2001, which provide individual community data within community sites. Key informant tobacco possession data included 85 community sites for 2000 and 2001, with multiple communities in

some sites. In 2000, there were 45 community sites including responses from 75 individual communities, and in 2001, there were 40 community sites including responses from 87 individual communities. The responses for individual communities corresponding to each of the 6 LEI possession measures were summed to total an individual community LEI possession score. All individual community LEI possession scores for a community site were weighted by the percent of students in each community from the Monitoring the Future Study in each respective year (2000 and 2001).

The individual community weights were added to the local possession enforcement database and the local enforcement index scores for each community site were calculated as a weighted average sum of the individual community local enforcement index scores (weighted by the community id weighting factor). The local enforcement index score for a community site = [(individual community 1 weighting factor X the individual community 1 enforcement score) + (individual community 2 weighting factor X the individual community 2 enforcement score) + ... for the total number of individual communities per site]. As described above, after weighting, all individual community LEI possession scores were then summed to total the LEI possession score for each community site with a possession law.

Local enforcement measures are only available for possession ordinances, not use or purchase ordinances, since possession laws were selected for study by ImpacTeen project researchers at the beginning of community data collection in 1999. Possession laws are the most commonly enforced PUP law, and are essentially the same as use laws in terms of meaning and enforcement, but more commonly legislated.^{30,32,34} Purchase laws are not typically enforced, since merchants are often cited for selling minors tobacco, rather than youth cited for tobacco purchase. If minors illegally purchase tobacco, it is still more common to cite for possession or

use violations, since youth are often observed smoking and subsequently cited. Therefore, ImpacTeen researchers selected possession laws as the most appropriate to study in terms of enforcement given limited resources available for key informant interviews.

There were some missing data from key informant tobacco possession ordinance interview responses among individual communities. If data were missing for one or more individual community(ies) within a community site, the weighted score(s) of the individual community(ies) with existing data were calculated and summed and used as the local enforcement index possession score for that community site. There were 11 individual communities in 10 community sites, out of 162 individual communities in 85 community sites, with missing data in the calculation of the community site local enforcement index possession score (with existing data for at least one other individual community within a community site). Missing data procedures, as described, were applied in the calculation of the community site local enforcement indices. Using the community weights for individual communities with local enforcement data, when calculating the community site score with missing data, maximizes the use of existing and available data in the calculation of the community site local enforcement index scores. LEI scores were calculated for local-level possession enforcement in 2000 and 2001, with a maximum total score of 15 points [See Table 2].

Analyses

Descriptive analyses were conducted in SPSS version 14.0, and the frequency distributions for state PUP laws and local PUP laws were calculated in 2000 and 2001. Frequency distributions, in addition to mean scores and standard deviations, were also calculated for enforcement of state-level PUP laws (SEI scores) and enforcement of local-level possession laws (LEI scores) in 2000 and 2001.

Comparisons between SEI and LEI scores were only possible for possession laws, since local enforcement data were not collected for use laws or purchase laws. Therefore, these state and local possession enforcement scores were compared in terms of their strength of possession enforcement, with respect to each set of enforcement measures. SPSS 14.0 was used to correlate state and local possession scores, and tests for significant correlations at $p \leq 0.05$ were conducted. SEI and LEI possession scores were also compared relative to their enforcement scales at the midpoint of the range for each enforcement index, considered as the 50th percentile of enforcement, which was 17.5 points for the SEI possession score (maximum total 35 points) and 7.5 points for the LEI possession score (maximum total 15 points). Frequency distributions were used to calculate the percent of SEI and LEI possession scores at the 50th percentile or higher to compare the strength of enforcement for state and local possession laws in 2000 and 2001.

RESULTS

Figure 2 shows the number of state-level possession, use, and purchase laws, among states with at least 1 PUP law, in both 2000 and 2001. There were 43 states with 1 or more PUP law(s) in 2000 and 45 states with 1 or more PUP law(s) in 2001 included in state-level enforcement interviews. State-level purchase laws were the most common (38 states in 2000; 40 states in 2001), followed by possession laws (34 states in 2000; 36 states in 2001), and use laws (19 states in 2000; 20 states in 2001) [See Figure 2].

Figure 3 presents the number of local-level possession, use, and purchase ordinances among the community sites in the ImpacTeen community data sample. In 2000, there were 32 community sites with one or more local PUP ordinances (18.5% of 173 community sites); in 2001, there were 38 community sites with one or more local PUP ordinances (17.2% of 221 community sites). Possession ordinances were the most common at the local level, with 24 local

possession ordinances in 2000 and 32 local possession ordinances in 2001. Purchase ordinances were the next most common type of local PUP ordinance, and use ordinances were the least frequent in this ImpacTeen community sample for both years of data. These 2000 and 2001 community data samples were cross-sectional, not longitudinal; however, the percentages of possession, use, and purchase ordinances were approximately the same for both years of community data [See Figure 3].

State-Level Enforcement Results

Results from PUP state enforcement interviews show that states with state-level possession, use, and/or purchase laws indicate enforcement of these laws; however, a majority of this enforcement activity occurs at the local level. The ‘level’ of enforcement, as presented in Table 3, refers to the government authorities responsible for coordination of enforcement efforts, where actual enforcement practices and enforcement activities occur. For example, a state PUP law may be enforced by state authorities responsible for its enforcement (i.e. state alcohol beverage control officers, state police officers) or it may be enforced by local authorities responsible for its enforcement (i.e. local police officers), or it may be enforced by both state and local enforcement officials. The ‘level’ of enforcement is typically determined by provisions of the PUP law, as enacted, including any specifically identified enforcement authorities. Table 3 shows the level of enforcement for state PUP laws in 2000 and 2001, indicating that roughly 60% of these state laws are enforced at the local-level only. A little less than 40% of states indicated that there was some type of state and local-level PUP enforcement activity, and 1 state (2% of states in the sample) had only state-level enforcement of a purchase law in 2000 and 2001.

There are 26 states in both 2000 and 2001 with only local-level enforcement of state PUP laws. Table 3 shows the source of money and/or resources for local-level enforcement among these 26 states. Only 11.5% of these states (3 states) reported receiving state assistance in terms of money and/or resources for local-level PUP enforcement of state PUP laws. A majority of these 26 states (88.5%) had to rely only on local money and resources to accomplish local PUP enforcement activities, making this enforcement a typically un-funded mandate in most local areas.

States generally indicated that they did not receive a specific amount of money or resources allocated for PUP enforcement activities. Youth access funds were often earmarked for sales to minors' enforcement activities and tobacco education and prevention activities. One hundred percent of states interviewed indicated that PUP enforcement did not divert money and/or resources away from other youth access enforcement activities, specifically sales to minors' enforcement, since PUP enforcement activities were typically conducted with other sources of money and/or resources from existing budgets at the state and local levels. Most local-level enforcement (88.5%) was carried out within the existing budget and duties of local police departments, and police officers were most often responsible for PUP enforcement among communities.

Combining 2000 and 2001 data, the pattern of enforcement among state-level PUP laws suggests that possession and/or use laws were more frequently enforced than purchase laws. The specific pattern of enforcement varies greatly among local jurisdictions within states. A majority of states (84%) indicated that their PUP enforcement pattern is largely determined by local enforcement patterns and practices, which is not surprising given that a majority of states also indicated only local-level PUP enforcement (approximately 60%).

From detailed responses to open-ended state enforcement interview questions, state tobacco control officials indicated that possession and use laws were essentially implemented and enforced in a similar manner. Youth found in possession of tobacco and/or observed using it were typically issued a citation for possession, rather than use; therefore, enforcement of possession and use laws was often considered to be identical in practice, and if both laws existed in a state, then a citation was more likely to be issued for a possession violation.

Issuing a citation and notification of parents were the most typical actions taken when a minor was observed in PUP violation. Some states indicated that it was also common to give a verbal and/or written warning to youth for a first-time PUP violation (14%), and that a citation, with parent notification, would typically be issued for a second or subsequent offense in these six states. Requiring youth to appear in juvenile, family, or teen court was also mandated by localities in a small percent of states when a first-time or subsequent PUP violation was observed [See Table 3].

Although states indicated that issuing PUP citations was their most common action taken in response to PUP violations, the frequency and number of citations were typically not collected, documented, or tracked at the state-level, and the practice of issuing citations varied among local areas. Ninety-three percent of states ($n = 41$), with one or more state-level PUP law(s) in both 2000 and 2001, indicated that citations had been issued for PUP violations during the past year; however, most did not document or track the number of citations issued. Twenty-seven percent of states ($n = 12$) issuing citations in 2000 and/or 2001 were able to provide an estimate of the number that had been issued for PUP violations in the past year. The number of PUP citations issued in a state during the past year ranged from low of 1 citation to a high of 3,884 citations.

More than three-quarters of states indicated that fines were the most common first-time penalty imposed when a minor was in violation of PUP laws. Only 34% of states specified minimum and maximum fines as penalty guidelines, while most fines (73%) were determined by local-level courts that processed PUP violations. Other typical, but less common, first-time penalties were community service and participation in a tobacco cessation program or class. Some states (7%) required youth to pay a fine and perform community service and/or attend a tobacco cessation program; however, this was not typical of a first-time penalty and varied greatly among local jurisdictions. In a few states, it was also common for local courts to offer a type of diversion program, where youths cited for PUP violation had a choice to pay a fine or attend a tobacco education/cessation program [See Table 3].

Graduated penalties for second or subsequent PUP violations also varied greatly among localities and included an increasing fine schedule in 30% of states or a combination of community service and/or a mandated tobacco cessation program, in addition to a fine in 23% of states. Driver license suspension was not common, but has also been a PUP penalty used in localities among 3 states (7%); however, when used this penalty was most often imposed for second or subsequent PUP violations.

Only 20% of states ($n = 9$), with one or more PUP laws in 2000 and 2001, indicated any type of publicity related to their enforcement during the past 12 months. Different types of publicity related to PUP enforcement included: television, radio, or newspaper ads (primarily community service messages), and various storefront or community posters. Publicity related to PUP enforcement was moderately and significantly correlated with: the number of PUP citations issued during the past 12 months in 2000 ($r = .63, p \leq 0.01$) and 2001 ($r = .61, p \leq 0.01$); and the typical enforcement penalties for second or subsequent PUP violations in 2000 ($r = .60, p \leq 0.01$)

and 2001 ($r = .56, p \leq 0.01$). PUP enforcement publicity was also moderately and significantly correlated with state resources provided for local enforcement in 2001 ($r = .61, p \leq 0.01$), but not significantly correlated with state resources provided for local enforcement in 2000. These descriptive correlations suggest that states with any PUP enforcement publicity in 2000 and/or 2001 were also more likely to: issue PUP citations issued in the previous 12 months; have stricter penalties for second or subsequent PUP violations; and have more state resources available for local PUP enforcement.

Local-Level Enforcement Results

Results from community key informant possession enforcement interviews, with appropriately identified police officials, show that communities with local possession ordinances do indicate that they enforce them. Table 4 shows that close to 80% of communities enforced the tobacco possession ordinance in 2000 and close to 90% indicated community possession enforcement in 2001. Although a majority of local communities enforce tobacco possession laws, slightly less than 30% of police officials interviewed indicated that their community had a high or very high priority for tobacco possession enforcement in 2000 (27%) or 2001 (28%). A majority of police officials also indicated that there were not adequate resources available for effective tobacco possession enforcement in 2000 (64%) or 2001 (55%) among the communities interviewed.

The predominant pattern of local tobacco possession enforcement varied among the communities interviewed. Close to 60% of police officials from communities in 2000 (64%) and 2001 (58%) that enforced the law indicated that the possession ordinance was rarely enforced. In 2000, less than 5% of communities indicated that local enforcement officials (police officers) enforced the tobacco possession ordinance among any youth smoking and appearing to be

underage, and in 2001, 17% of communities indicated that the possession ordinance was enforced among any youth observed smoking who appeared underage.

Table 4 shows that 55% of enforcement officials in 2000 and 44% of enforcement officials in 2001 indicated that they ‘usually’ or ‘always’ issued a citation to a minor caught for tobacco possession. Close to one-quarter of enforcement officials in 2000 ‘sometimes’ issued a citation to a youth in tobacco possession violation, while more than one-third ‘sometimes’ issued a citation to minors violating the possession law in 2001.

It was not common for enforcement officials to release a minor caught for tobacco possession with no action taken (11%), and a little more than one-third of enforcement officials in 2000 (36%) indicated that they ‘sometimes’ released youth caught for tobacco possession with a warning, while close to one-half (47%) indicated that they ‘sometimes’ released youth with only a warning in 2001. A majority of communities also notified parents of minors caught for tobacco possession. Table 4 shows that between 80-90% of enforcement officials in 2000 and 2001 indicated that they routinely notified parents when a youth was cited for a tobacco possession violation [See Table 4].

State and Local Enforcement Measures

State enforcement indices were developed from enforcement measures for state-level possession, use, and purchase laws in 2000 and 2001. Figure 4 shows the possession state enforcement index (SEI), which ranges from 1.5 to 23 points for 34 states with a possession law in 2000, and ranges from 3.5 to 24 points for 36 states with a possession law in 2001. SEI possession scores are similar in 2000 and 2001, but overall scores were slightly higher in 2001. Almost 30% of states had a possession score of 9 points, which was the most common score for

both years. The second most common possession SEI score among states in 2000 and 2001 was 13 points.

Figure 5 shows the SEI use scores, which are similar to the possession enforcement scores for 2000 and 2001. They range from 1.5 to 23 points for 19 states with a use law in 2000, and from 3.5 to 24 points for 20 states with a use law in 2001. Use scores were slightly lower than possession enforcement scores for 2000 and 2001. Nine points and 13 points were also the most common use enforcement scores for both years, and like possession SEI scores, the overall distribution of use SEI scores was slightly higher in 2001.

Figure 6 depicts purchase SEI scores, which have noticeably lower enforcement scores than possession or use laws, for 2000 and 2001. Scores range from 0 to 17 points for 38 states with a purchase law in 2000, and from 0 to 18 points for 40 states in 2001. Purchase enforcement scores of only 1 or 2 points, at the lower end of the distribution, were most common for both years. Although, like possession and use laws, overall purchase SEI scores were still slightly higher in 2001.

Figure 7 shows the mean state enforcement indices for 2000 and 2001. The maximum SEI score for possession, use, and purchase laws was 35 points. Possession had the highest mean SEI in 2000 at 12.38 points, with a slightly lower mean use score of 11.63 points. Purchase had the lowest mean enforcement score at 4.63 points. The mean purchase SEI was significantly lower than the mean possession and mean use enforcement scores in 2000. Mean SEI possession, use, and purchase scores for 2001 look similar to the 2000 SEI scores. Again, possession had the highest mean enforcement score in 2001, followed by a slightly lower mean use score and a much lower purchase score. The mean purchase score was once again significantly lower than

the mean possession and use scores. All mean SEI scores for possession, use, and purchase laws were slightly higher in 2001.

Figure 8 shows the possession local enforcement index (LEI) scores for 2000 and 2001. The maximum possession LEI score for both years was 15 points. The mean possession LEI was 6.76 points in 2000, ranging from 0 to 14 points among 45 community sites, and 6.91 points in 2001, ranging from 0 to 13 points among 40 community sites. These descriptive data show that the means were similar, but slightly higher in 2001. These data, collected from tobacco possession enforcement officials among ImpacTeen community sites in 2000 and 2001, are cross-sectional not longitudinal; therefore, the same community sites were not included in the sample for 2000 and 2001.

State and local enforcement scores were available for possession laws; therefore, the correlation between these SEI and LEI possession scores was examined. State and local possession scores were not highly or significantly correlated in 2000 ($r = .24, p = .11$) or 2001 ($r = .15, p = .31$). However, local possession laws did have higher enforcement scores than state possession laws, relative to their scales of enforcement.

DISCUSSION

At the state-level, purchase laws were the most common existing PUP law, followed by possession laws and use laws; while possession ordinances were the most common at the local level, followed by purchase ordinances and use ordinances. Local PUP findings were consistent with both national data from localities, reported by the American Nonsmokers' Rights Foundation, and New Jersey data on local PUP ordinances, reported by Hrywna and colleagues, which also indicated that possession ordinances were the most commonly enacted local-level PUP laws.³⁰⁻³⁴

States with PUP laws indicated that they were enforced, but that a majority of this enforcement activity occurred at the local level, and generally without assistance in terms of money and/or resources. Like states, most localities with local possession laws indicated that they were enforced, although a majority of local officials reported that there were inadequate resources and a less than high priority for tobacco possession enforcement. These findings concur with those of Hrywna and colleagues, who reported that local PUP enforcement officials are over-burdened and lack resources for effective enforcement.³²

The pattern of state PUP enforcement suggests that possession and/or use laws were more frequently and effectively enforced than purchase laws, and the specific pattern of enforcement varied greatly among local jurisdictions within states. The predominant pattern of local tobacco possession also enforcement varied among the communities interviewed, and suggested that a majority of communities lack money and resources to conduct strong and effective local tobacco possession enforcement. In a study among several Florida counties with local PUP laws, Woodhouse and colleagues reported that there were differing levels of enforcement ability across local areas, and that additional enforcement resources were needed.¹⁹ Livingood and colleagues also reported enforcement to be an important component of support for the implementation of possession laws as a tobacco control strategy in the Florida Tobacco Control Program.²¹ Gottlieb et al. reported differential possession enforcement in local areas based on racial/ethnic characteristics among youth, indicating that enforcement patterns may also vary within the same community, as well as across different communities within states.³⁶

Issuing a citation and notifying parents were the most typical state and local enforcement actions taken when a minor was observed in PUP violation. Although states and localities indicated that issuing PUP citations was the most common action taken in response to PUP

violations, the frequency and number of citations were typically not collected, documented, or tracked, and the practice of issuing citations varied among local areas. These findings reflect enforcement difficulties that have been mentioned in a study of local New Jersey PUP ordinances, by Hrywna and colleagues who indicated that close to 50% of towns with these laws did not document the number of citations.³²

States and localities indicated that fines were the most common first-time penalty imposed in violation of PUP laws, and most fines were determined by localities. Other less typical penalties for first and subsequent PUP violations in states and localities were community service and participation in a tobacco cessation program or class. These findings correspond with results from studies by Hrywna et al. and Lazovitch et al., who also found fines to be the most common PUP penalty.^{22, 32, 37}

Woodhouse and colleagues reported fines as the most common PUP violation penalty, but suggested that other types of penalties, such as driver's license suspension, would be more effective than fines.¹⁹ In their study of over 28,000, White, Hispanic, and African American students in Texas schools, Gottlieb and colleagues also found that threat of driver's license suspension was associated with lower likelihood of future smoking intentions among ever-daily youth smokers, while a citation for tobacco possession violation was not related to future smoking intentions among most youth.³⁶ Jason and colleagues reported quit rates among youth who were fined for PUP violation between 15% to 24%; however, these results did not account for the possibility of reporting bias among youth following punishment for PUP violation in subsequent follow-up assessment³⁸. Lazovitch and colleagues also reported results from a Minnesota study that showed receiving a PUP citation and attending a tobacco cessation class were more commonly reported among past-month smokers living in counties with tobacco

diversion programs, where class attendance was statistically significant.³⁷ Although a majority of states did not report receiving publicity related to PUP enforcement during the past 12 months, greater publicity was generally associated with stronger PUP enforcement in terms of more citations issued among youth and stricter penalties.

Limitations

A limitation of the enforcement data presented is that a majority of state and local PUP enforcement occurs in local areas, such as towns or communities; therefore, PUP enforcement is dependent upon local activities and practices, which are subject to a high degree of variability within and among localities. The enforcement measures developed do not include detailed data from all possible localities and all possible PUP enforcement officials in a given state, since collecting such information was not feasible and was beyond the scope of this study. State PUP enforcement data reflect the knowledge of the best and most appropriately identified tobacco control official(s) for a given state, while local possession enforcement data reflect the responses of the most knowledgeable enforcement officials from the communities and community sites included in the ImpacTeen Project in 2000 and 2001.

Validity of these state and local self-report data may also be a concern; however, every effort was made throughout the screening and interview process to identify the most appropriate and knowledgeable tobacco control and tobacco enforcement officials. Where necessary, additional follow-up interviews were also conducted to obtain the most correct and accurate data possible.

Another limitation, related to collecting and describing PUP enforcement measures, includes the lack of available data on local enforcement of use and purchase laws. Local use and purchase enforcement data were not available from Project ImpacTeen, or other data sources;

therefore, PUP analyses including local enforcement were limited to possession laws. Also, local possession enforcement data for 2000 and 2001 are cross-sectional, not longitudinal; therefore, the same community sites are not included in both years of data collection. These local community sites are only representative of the ImpacTeen communities that have been interviewed in a given year to represent participating MTF communities and school sites.

An additional limitation includes the lack of standardized enforcement measures that could apply to both states and localities. State and local measures used different questions and data sources to develop enforcement indices. While these different PUP enforcement measures provided the most available data possible for state and local enforcement, they also used different scales to develop enforcement indices, with different maximum point values. The lack of standardized questions, measures, and scales to assess both state and local PUP enforcement is a study limitation; however the best possible questions and indices, within the scope and feasibility of this study, were developed following a peer review and revision process. Furthermore, these data were analyzed in a manner that took into account the different scales and maximum scores.

Conclusion

PUP state enforcement indices showed that possession laws had the highest enforcement, while purchase laws had the lowest mean enforcement scores. Study findings may also help to explain why possession laws have the highest enforcement scores. Possession laws are the most common PUP laws at the local level, while purchase laws are the least common, and most PUP enforcement occurs in local areas. State and local possession scores were not highly or significantly correlated with each other; however, local possession laws did have higher enforcement scores than state possession laws, relative to their scales of enforcement. These

results further support previous study findings that most PUP enforcement occurs for local-level possession laws, with great variation among communities.^{19, 32} PUP enforcement measures can be incorporated into larger studies related to youth smoking behavior and attitudes. These studies can assess the effectiveness of PUP laws, incorporating measures of enforcement and contributing to the knowledgebase of these frequently enacted and seldom evaluated tobacco control policies.

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TABLE 1: PUP State Enforcement Index (SEI) – State Enforcement Measures:

(Maximum SEI Total Score = 35 points)

State PUP Enforcement Measures (Max Points)	Corresponding Point Categories for State PUP Enforcement Measures
<ul style="list-style-type: none"> ✓ Level of Enforcement (2 points maximum) 	<ul style="list-style-type: none"> ✓ No state or local enforcement: 0 points (Total SEI = 0) ✓ State enforcement only: 1 point ✓ Local enforcement only: 1 point ✓ State and local enforcement: 2 points
<ul style="list-style-type: none"> ✓ State Resources for Local Enforcement (2 points maximum) 	<ul style="list-style-type: none"> ✓ State enforcement only (no local enforcement): 0 points ✓ No enforcement money/resources provided: 0 points ✓ State provides assistance/grants in terms of money and/or resources for local enforcement: 2 points ✓ <i>State allocated a specified amount of money for PUP enforcement during the past year: add '1' point to the total score</i>
<ul style="list-style-type: none"> ✓ Predominant Pattern of Enforcement (2 points maximum) 	<ul style="list-style-type: none"> ✓ Not regularly enforced in practice: 0 points ✓ Youth cited only when observed doing something else wrong: 1 point ✓ Only enforced at specific times/places/events: 2 points ✓ Enforcement pattern various in strength among local areas: 2 points ✓ Enforced among any youth smoking and appearing underage: 3 points
<ul style="list-style-type: none"> ✓ Typical Enforcement Action(s) When Violation is Observed (5 points maximum) 	<ul style="list-style-type: none"> ✓ Not typically enforced/no action: 0 points ✓ Verbal warning only: 0.5 points ✓ Written warning only: 1 point ✓ Citation issued: 2 points ✓ <i>Parent notification: add '1' additional point to the total score</i> ✓ <i>Issued notice to appear in juvenile court: add '2' points to total score</i>
<ul style="list-style-type: none"> ✓ Number of Citations Issued in State Past 12 Months (6 points maximum) 	<ul style="list-style-type: none"> ✓ No citations issued past 12 months: 0 points ✓ Issued >=1 citation in past 12 months, # unknown: 1 point ✓ Less than 10 citations – 2 points ✓ 10-99 citations – 3 points ✓ 100-499 citations – 4 points ✓ 500-999 citations – 5 points ✓ 1000 or more citations – 6 points
<ul style="list-style-type: none"> ✓ Typical Enforcement Penalty(ies) When First-Time Violation is Observed (5 points maximum) 	<ul style="list-style-type: none"> ✓ Not typically enforced/No penalty: 0 points ✓ Fine – 1 point ✓ Tobacco cessation program/class: 1 point ✓ Community service: 1 point ✓ Fine + tobacco cessation program/class: 2 points ✓ Fine + community service: 2 points ✓ Tobacco cessation program/class + community service: 2 points ✓ Fine + tobacco cessation program/class + community service: 3 points ✓ <i>Driver license suspension: add '2' points to total score</i>
<ul style="list-style-type: none"> ✓ Typical Enforcement Penalty(ies) For Second or Subsequent Violations (5 points maximum) 	<ul style="list-style-type: none"> ✓ Not typically enforced/No penalty: 0 points ✓ Fine – 1 point ✓ Tobacco cessation program/class: 1 point ✓ Community service: 1 point ✓ Fine + tobacco cessation program/class: 2 points ✓ Fine + community service: 2 points ✓ Tobacco cessation program/class + community service: 2 points\ ✓ Fine + tobacco cessation program/class + community service: 3 points ✓ <i>Increased fine or increased number of community service hours: add '1' point</i> ✓ <i>Possible driver license suspension: add '1' point to total score</i>
<ul style="list-style-type: none"> ✓ Publicity Related to Enforcement During the Past 12 Months (5 points maximum) 	<ul style="list-style-type: none"> ✓ No publicity past 12 months: 0 points ✓ Publicity past 12 months: 2 points ✓ <i>TV publicity past 12 months – add '1' point to the total score</i> ✓ <i>Radio publicity past 12 months – add '1' point to the total score</i> ✓ <i>Newspaper publicity past 12 months – add '1' point to the total score</i> ✓ <i>Other publicity (anything else specified) past 12 months – add '1' point to total score</i>

TABLE 2: Local Enforcement Index (LEI) – Local Possession Enforcement Measures:
(Maximum LEI Total Score = 15 points)

Local Possession Enforcement Measures (Maximum Points)	Corresponding Point Categories for Local Possession Enforcement Measures
✓ Ordinance Enforced in Community (1 points maximum)	✓ Not enforced: 0 points (Total LEI = 0) ✓ Enforced in community: 1 point
✓ Priority of Enforcement in Community (4 points maximum)	✓ Very Low: 0 points ✓ Low: 1 point ✓ Moderate: 2 points ✓ High: 3 points ✓ Very High: 4 points
✓ Resources for Effective Enforcement in Community (2 points maximum)	✓ Not enough: 0 points ✓ Adequate: 2 points
✓ Predominant Pattern of Enforcement in Community (2 points maximum)	✓ Rarely enforced: 0 points ✓ Youth cited only when observed doing something else wrong: 1 point ✓ Enforced among any youth smoking and appearing to be underage: 2 points
✓ Typical Enforcement Action(s) in Community When Youth or Minor is Caught for Tobacco Possession* (4 points maximum)	✓ Released with no action <ul style="list-style-type: none"> i. Never, rarely – 1 point ii. Sometimes - .5 points iii. Usually, always – 0 points ✓ Released with a warning or given a street or station adjustment <ul style="list-style-type: none"> i. Never, rarely – 0 points ii. Sometimes - .5 points iii. Usually, always – 1 point ✓ Issued a citation <ul style="list-style-type: none"> i. Never, rarely – 0 points ii. Sometimes - .5 points iii. Usually, always – 2 points
✓ Parents Routinely Notified When Teen is Cited for Tobacco Possession (2 points maximum)	✓ No: 0 points ✓ Yes: 2 points

* Add individual point scores for all 3 items comprising the enforcement measure: 'Typical Enforcement Action(s) in Community When Youth or Minor is Caught for Tobacco Possession' for total enforcement measure score

TABLE 3: RESULTS – State Level Enforcement of PUP Laws, 2000-2001

State-Level PUP Enforcement	2000: % Survey Respondents*	2001: % Survey Respondents**
Level of Enforcement for PUP Laws		
State Only	2.3	2.3
State and Local	37.2	38.6
Local Only	60.5	59.1
Source of Money and/or Resources for Local Level Enforcement (<i>N=26 states with local level enforcement only in 2000 and 2001</i>)		
State Assistance	11.5	11.5
Local Money and Resources Only	88.5	88.5
State-Level PUP Enforcement Practices		
	Combined 2000 and 2001 data: % Survey Responses	
Typical Action Taken for PUP Violation		
Citation Issued		77.0
Notification of Parents		68.0
Verbal and/or Written Warning Issued		14.0
Appearance in Juvenile, Family, or Teen Court		9.0
First-Time Penalty for PUP Violation		
Fine		77.0
Community Service		14.0
Tobacco Cessation Program or Class		11.0
Diversion Program		9.0

* N = 43 states with one or more PUP laws in 2000.

** N = 45 states with one or more PUP laws in 2001.

TABLE 4: RESULTS – Local Level Enforcement of Possession Ordinances, 2000-2001

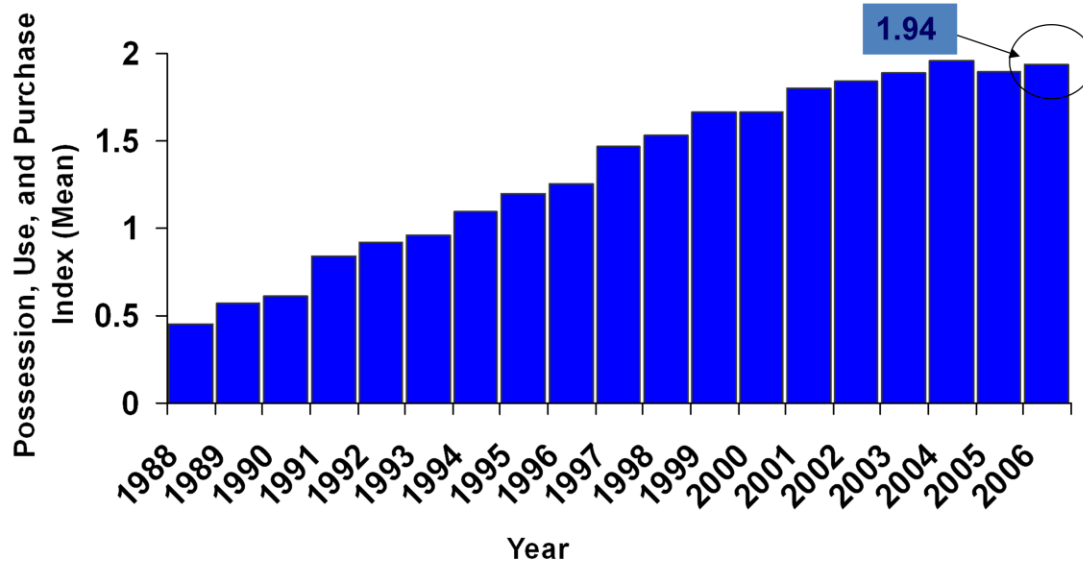
Local-Level Possession Enforcement	2000: % Survey Respondents*	2001: % Survey Respondents**
Tobacco Possession Ordinance Enforced in Community Yes No	77.5 22.5	88.6 11.4
Citation issued to Youth for Tobacco Possession Violation Never, Rarely Sometimes Usually, Always	20.9 23.9 55.2	20.5 35.9 43.6
Parents Routinely Notified when Youth is Cited for Tobacco Possession Violation Yes No	81.8 18.2	86.5 13.5

* N = 94 communities with Possession ordinances in 2000.

** N = 106 communities with Possession ordinances in 2001.

FIGURE 1:

Mean Number of Possession, Use, and Purchase Laws per State* -- United States, 1988-2006**

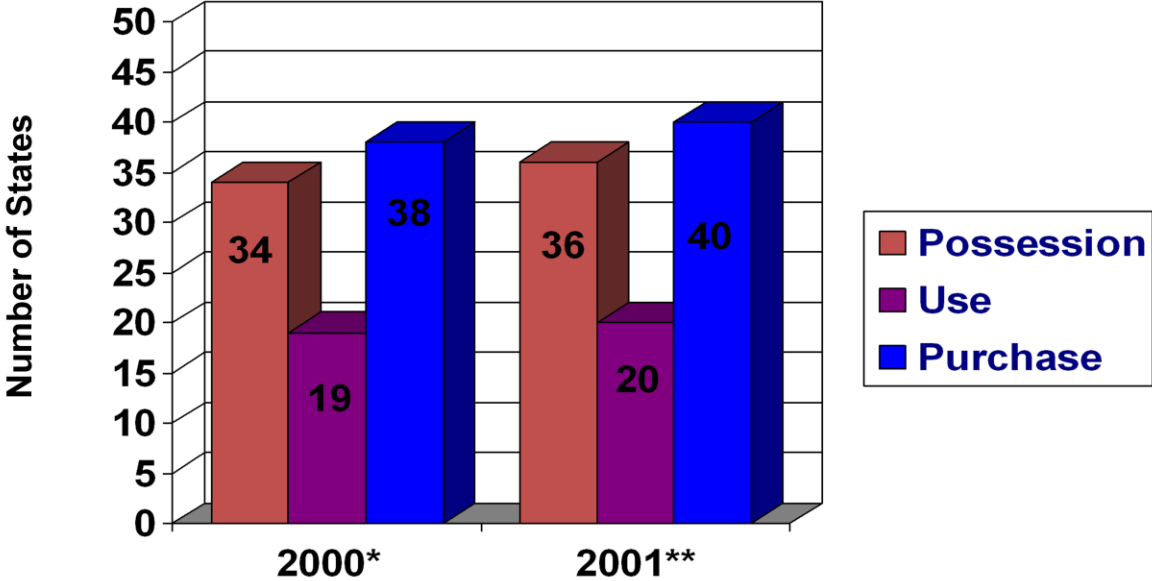


*Includes the District of Columbia; Theoretical Range = 0-3.

**Sources: ALA's SLATI, CDC's STATE system, and Roswell Park Cancer Institute, SUNY at Buffalo.

FIGURE 2: Existence of State-Level PUP Laws, 2000, 2001

Number of Possession, Use, and Purchase Laws

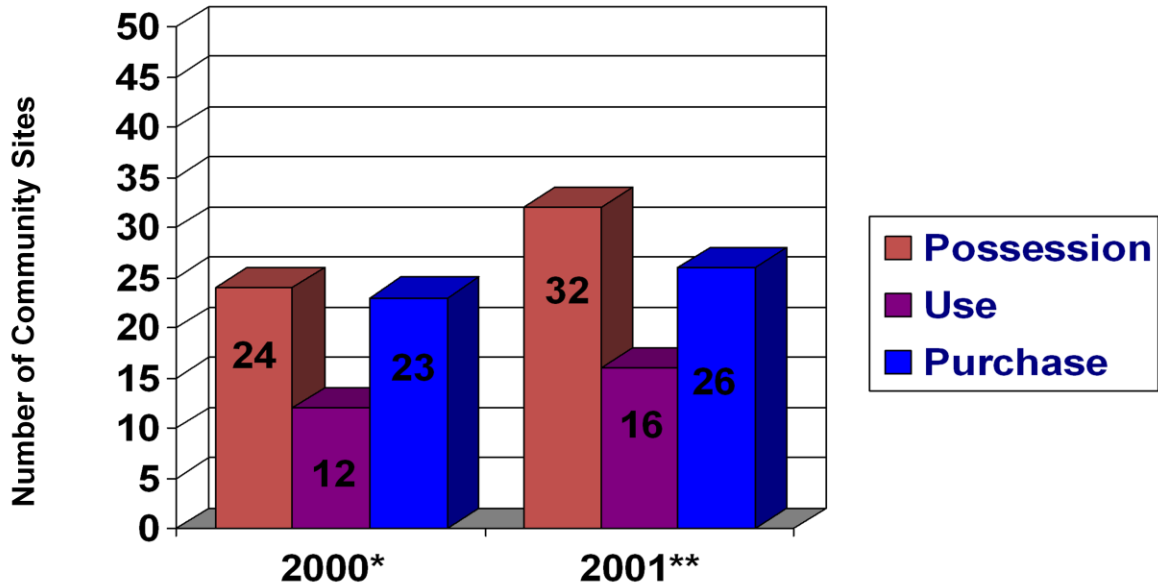


* N = 43 States with 1 or more PUP law(s).

** N = 45 States with 1 or more PUP law(s).

FIGURE 3: Existence of Local-Level PUP Laws, 2000, 2001

Number of Possession, Use, and Purchase Ordinances among ImpactTeen Community Sites



* N = 32 Community Sites with 1 or more local PUP ordinances [173 total community sites].

** N = 38 Community Sites with 1 or more local PUP ordinances [221 total community sites].

FIGURE 4: STATE ENFORCEMENT INDEX: POSSESSION

Year 2000: 1.5 to 23 points (N=34 states)

Year 2001: 3.5 to 24 points (N=36 states)

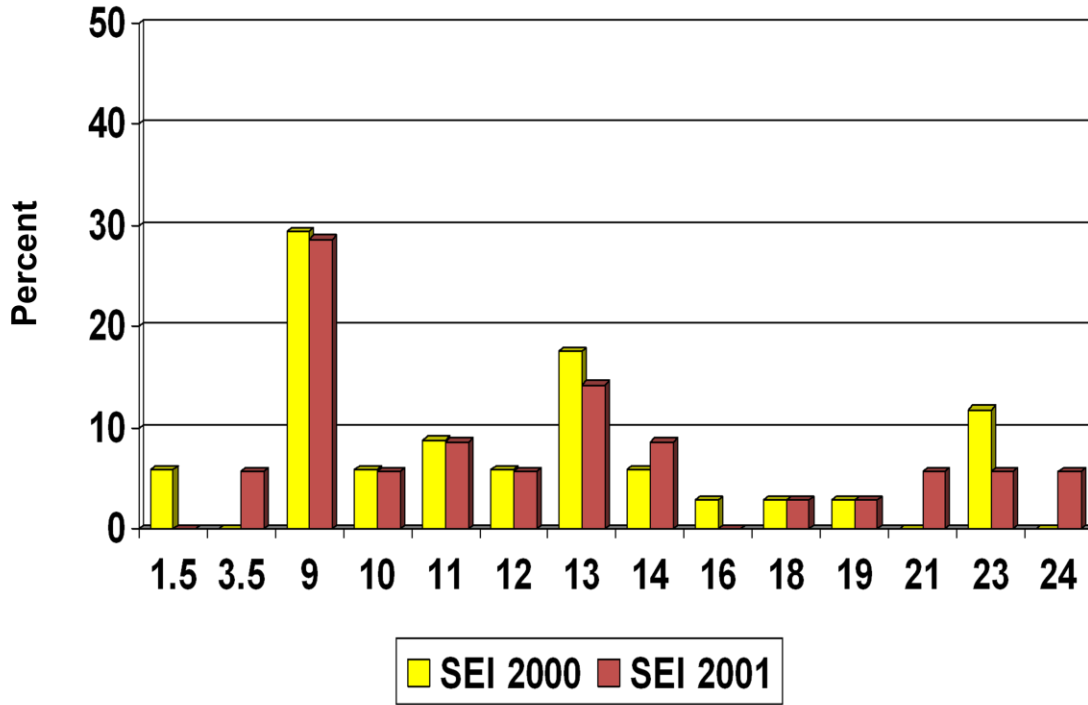


FIGURE 5: STATE ENFORCEMENT INDEX: USE

Year 2000: 1.5 to 23 points (N=19 states)

Year 2001: 3.5 to 24 points (N=20 states)

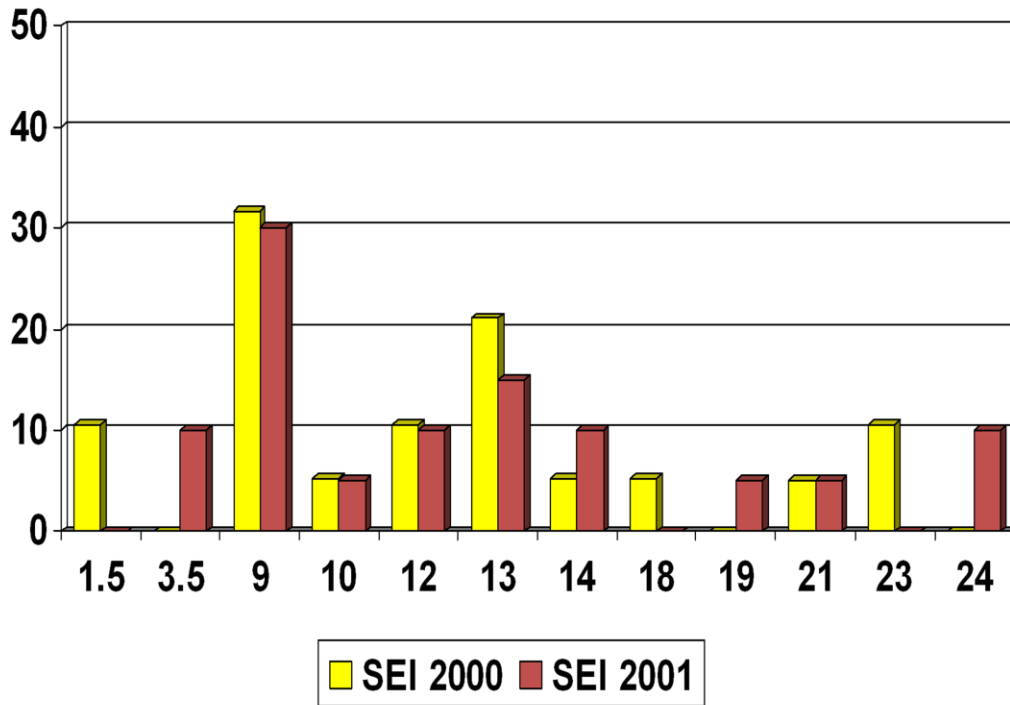


FIGURE 6: STATE ENFORCEMENT INDEX: PURCHASE

Year 2000: 0 to 17 points (N=38 states)

Year 2001: 0 to 18 points (N=40 states)

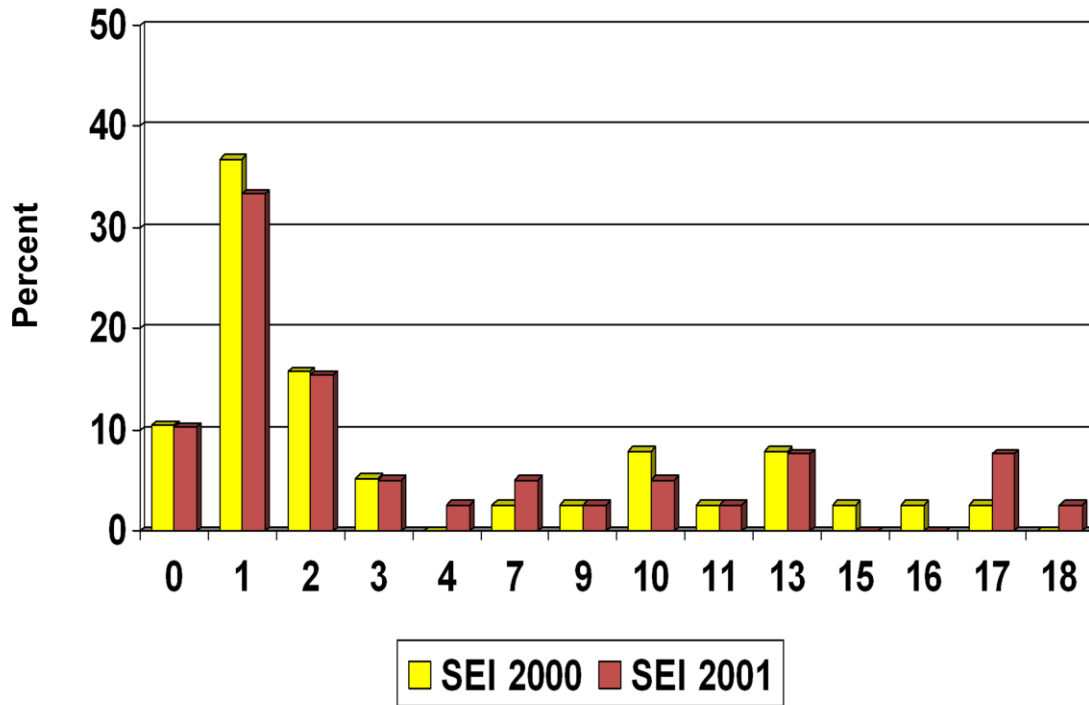
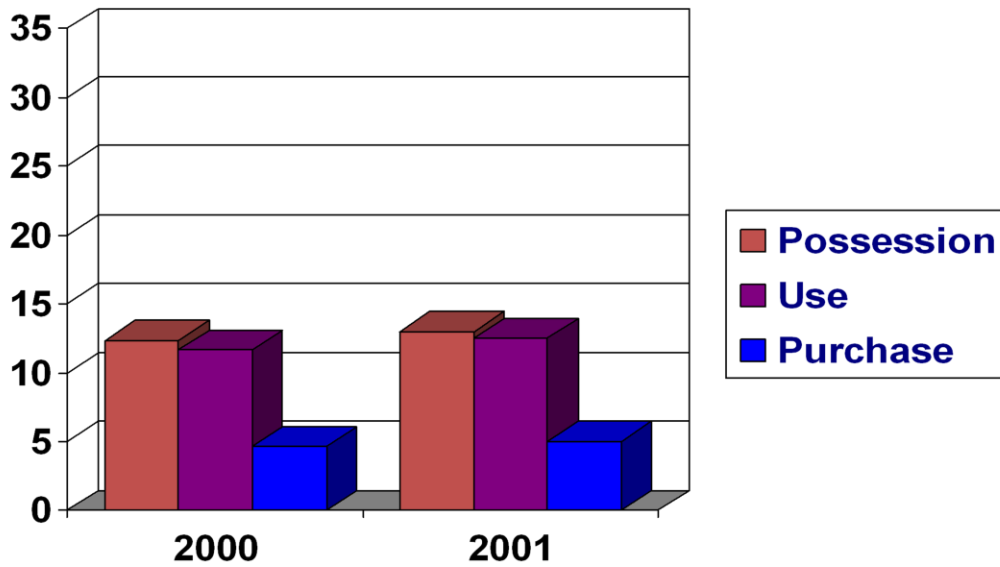


FIGURE 7: PUP State Enforcement Index

MEAN SEI: 2000, 2001

(Max total score – 35 pts.)

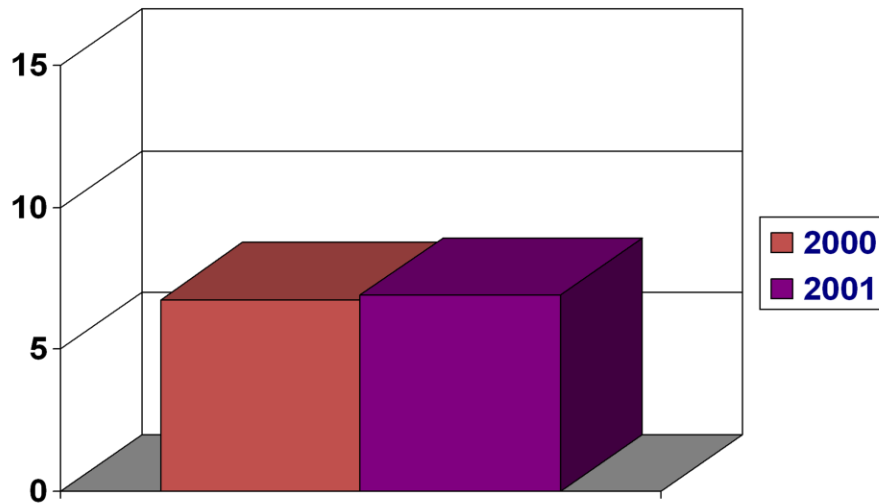


* The mean purchase SEI and mean possession SEI are significantly different at $p < 0.05$. The mean purchase SEI and mean use SEI are significantly different at $p < 0.05$.

FIGURE 8: Possession Local Enforcement Index

MEAN LEI: 2000, 2001

(Max total score – 15 pts.)



* **MEAN LEI 2000:** range = 0 to 14 points (N=45 community sites)

** **MEAN LEI 2001:** range = 0 to 13 points (N=40 community sites)

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