

**ASSESSING THE CRACK-DOWN ON MARIJUANA IN MARYLAND**

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## Summary

There has long been a body of opinion that criminal sanctions are unnecessarily harsh for minor marijuana offenses. In the 1970s eleven states, not including Maryland, removed those sanctions, replacing them with fines and civil penalties. In the last few years a number of Western nations (e.g., Australia, Belgium, Germany) have done the same and in some cases removed all penalties, though retaining the prohibition. The recent increases in arrests, the publicity about the rise in high school use, as well as the passage of referenda allowing marijuana for therapeutic purposes in seven states, have brought this debate back into focus in the United States.

This report explores the costs and consequences of the recent crackdown on marijuana use in the state of Maryland. After briefly summarizing the nature of the state's marijuana problem it describes who is arrested; how many are incarcerated; whether there is evidence of disparate impact on minorities; who goes into treatment; and what services they receive. It attempts to assess how marijuana enforcement fits into policing generally and the extent to which marijuana treatment-seeking is primarily a means for avoiding criminal justice sanctions. Finally it offers an overall assessment, relying on national and international analyses, of the consequences of the increase in enforcement.

Marijuana use has increased substantially among youth; whereas in 1992 15 percent of Montgomery County 12<sup>th</sup> graders reported using marijuana in the previous 12 months, in 1998 36 percent reported such use. National data suggest that use by those over age 25 declined moderately. For adolescents aged 12 to 17, the number of marijuana-related admissions to hospital emergency departments in Baltimore rose from 37 to 493 between 1991 and 1998. However, most of those admissions involved use of another drug as well; the numbers admitted for marijuana alone, though sharply increased, remained very modest.

Most adolescents who use marijuana do not go on to more dangerous drugs and they quit using marijuana of their own volition, without either arrest or any demonstrable harm. Nonetheless, marijuana is not harmless. It causes accidents because of intoxication and creates dependence in about ten percent of those who try it, though generally that dependence is of modest duration and severity. Frequent use has, on average, adverse effects on adolescent development. Reducing marijuana use, particularly among adolescents, is an important public policy goal.

In the 1990s Maryland, like the rest of the nation, experienced a massive increase in marijuana possession arrest rates for youth and for African-Americans. By 1997 marijuana possession ranked third among all offenses for which adolescents were arrested in Maryland. African-Americans were almost four times more likely to be arrested for marijuana possession in 1997 as in 1991; for adolescents the ratio of 1997 arrest rates to those in 1991 was seven to one. Whereas in 1991 arrest rates were almost equal for African-Americans and whites, by 1997 African-Americans were twice as likely to be arrested for marijuana possession

These increases cannot be accounted for by changes in the number of marijuana users over the same period. Marijuana users of all ages were much more likely to be arrested in 1997 than at the beginning of the decade.

Though almost nobody arrested for marijuana possession is sent to state prison, a surprisingly large number spend a substantial time in local jails pre-trial. In Baltimore City, Montgomery County and Prince George's County, we found that approximately one-sixth of adult arrestees spent ten days or more. There was some evidence that African-Americans spent substantially more time in jail on these offenses than did Whites; this difference may be accounted for by differences in criminal histories.

Curiously, this major crack-down has never been a topic of public discussion. We have found hardly any reference to a police department decision to pursue marijuana users. Observations and interviews with police did not provide an adequate explanation of why marijuana enforcement had increased. Many of these arrests are not targeted at marijuana possession itself but are incidental to traffic stops, drug enforcement more generally, disorderly conduct and other patrol activities. Examining arrest rates across counties, marijuana possession arrests seem to be driven by police decisions, not by the popularity of the drug in a particular county.

Admissions of marijuana users to drug treatment programs in Maryland more than doubled between 1992 and 1998, again as in the nation. Most of that increase came from criminal justice referrals and again the increase was particularly dramatic for adolescents, rising about nine fold. Analysis of county level data also suggest that it is arrest rates, not the prevalence of marijuana use, that drives these figures. Treatment may be a method of diverting low level marijuana offenders, many without a serious drug problem, from the criminal justice system, rather than a way of treating a substance abuse or other behavioral problem.

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The available evidence, though it is not overly strong, suggests that tougher enforcement has little effect on marijuana use, crime or public safety. Moreover, it now has a substantial racially disparate impact. With 13,500 arrests and perhaps as many as 3,000 adults spending time in jail each year, tough enforcement of marijuana possession laws in Maryland needs a much clearer justification than has been provided.

## Introduction

There has long been a body of opinion that criminal sanctions are unnecessarily harsh for minor marijuana offenses. In the 1970s eleven states<sup>1</sup>, not including Maryland, removed those sanctions, replacing them with fines and civil penalties. In the last few years a number of Western nations (e.g., Australia, Belgium, Germany) have done the same and in some cases removed all penalties, though retaining the prohibition. The recent increases in arrests, the publicity about the rise in high school use, and the passage of referenda allowing marijuana for therapeutic uses in seven states have brought this debate back into focus in the United States.

This report explores the costs and consequences for Maryland of marijuana enforcement in the late 1990s. It first briefly summarizes patterns of marijuana use and related problems in Maryland. It then describes who is arrested, how many are incarcerated and whether there is evidence of disparate impact on minorities; who goes into treatment and what services they receive. It attempts to assess how marijuana enforcement fits into policing generally and the extent to which marijuana treatment seeking is primarily a means for avoiding criminal justice sanctions. Finally it offers an overall assessment, relying on national and international analyses, what may have been gained by the increase in enforcement.

### *Marijuana Use and Problems in Maryland*

Occasional marijuana use is a common adolescent experience in the U.S. In the late 1990s, national surveys found that approximately half of high school seniors reported that they had used marijuana at least once in their lifetimes (Johnston, O'Malley and Bachman, annual). Over a 25-year period this figure has fluctuated significantly, rising in the late 1970s, falling steadily and substantially to 1992, and then rising again very sharply over the next five years.

Nationally the data show that, for the population as a whole, the prevalence of current use has been very stable in the last decade because older age groups are quitting use somewhat earlier than in the past. Thus a larger share of to-day's users are adolescents, which may be relevant to our analysis because adolescents are more vulnerable to arrest than are adults.

The only systematic data for Maryland come from school surveys conducted every two years since 1992 in tenth and twelfth grades. Figures on the percentage of students reporting use of marijuana in the previous year are given in Table 1 for the four largest jurisdictions. In the three jurisdictions for which 1992 and 1998 data are available, we see the same doubling as in

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<sup>1</sup> South Dakota was the twelfth state to pass such legislation but the legislature repealed it within the year.

the national data. No data on use at older ages are available for Maryland. We shall assume that Maryland rates for older age groups have also changed in the same way as the national rates, i.e., declined slightly.

**Table 1**  
**Marijuana Use Among Maryland School Students: by year, grade and county**  
 (percent reporting use in the prior twelve months)

<i>County</i>	<b>10<sup>th</sup> grade</b>				<b>12<sup>th</sup> grade</b>			
	<i>1992</i>	<i>1994</i>	<i>1996</i>	<i>1998</i>	<i>1992</i>	<i>1994</i>	<i>1996</i>	<i>1998</i>
Baltimore	14	27	28	35	17	25	33	38
Montgomery	12	19	15	26	15	27	29	36
Prince George's	14	n.a.	18	n.a.	19	n.a.	26	n.a.
Baltimore City	13	25	24	33	20	20	17	28

*Source: Maryland Department of Education*

*Percentages are rounded to the nearest whole percent; n.a. is not available*

Marijuana use now is by far the most frequently detected drug among juvenile arrestees. Other drugs such as cocaine and PCP are now rarely detected in the same population. Research suggests that frequent use of marijuana is a predictor of later criminality

Not a great deal is known about the problems associated with adolescent marijuana use. That of itself has some significance; psychosis and other acute effects are rare. Much has been made in the media of increases in the number of marijuana-related medical emergencies. The Drug Abuse Warning Network (DAWN) estimates the number of admissions to hospital emergency departments (EDs) for drug-related problems.

Data from Baltimore tell the same story as national data. Marijuana ED mentions rose from 16 per 100,000 population in 1991 to 65 in 1998, making Baltimore the sixth highest among 23 metropolitan areas. Table 2 presents the Baltimore data. The majority of episodes involve other drugs which are more likely to be causally related to the emergency. The numbers involving persons aged 12 to 17 and which are for marijuana alone are very small indeed. Approximately 140 persons aged 12 to 17 were admitted to an ED for a problem related to use of marijuana alone, with another 354 being admitted as the result of use of marijuana and either alcohol or some other illicit drug.<sup>2</sup> Admission could be for reasons other than injury; in some

<sup>2</sup> Data supplied by Judy Ball of the Substance Abuse and Mental Health Services Administration; they are derived from weighted data.

cases admission to a drug treatment program is preceded by an ED episode for the purpose of medical examination.

**Table 2**  
**Hospital Emergency Department Admissions by Drug and Age, 1990-1998**

Year/type	Ages							Unknown
	6 - 11	12 - 17	18 - 24	25 - 34	35 - 44	45 - 64	65 - 97	
1990								
Marijuana only		3	11	12	6	1		
Marijuana + alcohol		2	28	27	8	2		
Marijuana and other drugs		32	99	140	39	18		
No Marijuana	13	510	1,414	4,075	2,729	644.	42	25
1993								
Marijuana only		24	45	39	15	2		1
Marijuana + alcohol		22	53	46	25	8		
Marijuana and other drugs		62	336	601	199	43		2
No Marijuana	7	554	2,346	9,020	7,535	2,009	88	91
1996								
Marijuana only	1	90	115	71	39	12		
Marijuana + alcohol		49	99	85	53	23		
Marijuana and other drugs		166	409	859	520	94		
No Marijuana	21	493	2,005	9,314	9,350	3,035	133	36
1998								
Marijuana only		139	152	100	64	25	2	
Marijuana + alcohol		96	98	79	88	25	3	
Marijuana and other drugs		258	599	786	514	137		3
No Marijuana	24	604	2,052	6,639	7,837	3,079	74	60

Most adolescents who use marijuana do not go on to more dangerous drugs and they quit using marijuana of their own volition, without either arrest or any demonstrable problem. There is no evidence that marijuana use of itself generates crime, though frequent use of marijuana in adolescence is a weak predictor of criminality. Nonetheless marijuana use is not without its dangers. It can cause accidents because of intoxication and creates dependence in about ten percent of those who try it (though generally that dependence is of modest duration and severity). The extent to which marijuana contributes to automobile accidents is unclear. Frequent use has adverse effects on the adolescent development of many users. Reducing marijuana use, particularly among adolescents, is an important public policy goal. We now turn to the effort to crack down on marijuana use in Maryland in the last decade.

## Arrests

Marijuana enforcement has intensified rapidly in both the United States and Maryland in recent years; arrests for marijuana possession in Maryland more than doubled between 1992 and 1997 to 13,500.<sup>3</sup> Tables 3 and 4 provide the basic data on marijuana possession arrests for the state.<sup>4</sup> Table 3 shows the number and composition of these arrests in Maryland over the period 1980-1997; the same figures are presented as rates per hundred thousand population in Table 4. The general story is simple to describe: arrests fell by about one-third during the 1980s, then more than doubled in the first seven years of the 1990s. We focus on the lowest arrest year, 1991; if we had used the average of 1989-1991, the results would have been only slightly different.

The recent increase has been dramatically sharper for youth and blacks than for adults and whites. For ages 12 to 17, the number of arrests per 100,000 has risen more than sevenfold between 1991 and 1997; almost 1 percent of that age group was arrested in 1997<sup>5</sup> for marijuana offenses. For blacks, the rate in 1991 was almost identical to that for whites (about 120) but then surged; by 1997 the black arrest rate was 413 per 100,000 compared to white's rate of only 209. Unfortunately, the state crime reporting statistical system does not permit calculation of arrest rates by age and race simultaneously. Assuming that the share of African-Americans among marijuana arrestees, age 12 to 17, is the same as that for all ages, we estimate that in 1997 the rate per thousand for African-American males aged 12-17 was 38 in Baltimore City; that is, nearly four percent of all African-American males aged 12 to 17 were arrested for marijuana possession. For Prince George's County the figure was 17 per thousand and in Montgomery County approximately ten.

During the 1990s, arrests for possession of drugs other than marijuana was fairly stable, after rising sharply during the 1980s. The increase in marijuana arrests was not part of a general crackdown on drug use. As a share of all drug possession arrests, marijuana constituted 32

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<sup>3</sup> Arrests for marijuana possession have outnumbered arrests for marijuana sales by a ratio of five to one consistently over two decades. Since there is little debate as to the appropriateness of at least moderately aggressive enforcement against marijuana sellers, we focus attention on possession arrests.

<sup>4</sup> Each arrest may have multiple charges; these are arrests in which marijuana possession is the most serious charge, using a hierarchy of seriousness developed by the FBI.

<sup>5</sup> The data are for number of arrests rather than number of individuals arrested; few individuals are arrested for repeated marijuana offenses within the one year.

percent in 1991; in 1997 that figure rose to 53 percent. In 1997 marijuana possession was the 3<sup>rd</sup> most frequent arrest offense among juveniles in the state; only larceny and assault occurred more frequently. Among adults, it is the fifth most common arrest, with DWI, drug sales/manufacturing, larceny and assault ranking higher.

**Table 3**  
**Marijuana Possession Arrests in Maryland, 1980-1997, by Age and Race**

<i>Year</i>	<i>Total</i>	<i>Under 18</i>	<i>18-44</i>	<i>Black</i>	<i>White</i>	<i>Any other drug</i>
1980	9199	3203	5930	3398	5775	2108
1985	7206	1719	7140	3665	5230	4397
1990	6489	586	5800	1733	8132	11512
1991	5661	470	5094	1422	4225	12029
1992	6262	639	5502	1543	4693	12850
1993	7200	1125	5934	2141	5032	14674
1994	9250	2253	6787	3351	5848	13947
1995	11661	3251	8207	4523	7068	15265
1996	12508	3968	8282	4935	7514	11797
1997	13501	3843	9353	5775	7667	12655

**Table 4**  
**Maryland Drug Possession Arrests Rates 1980-1997, by Age and Race**  
(per hundred thousand population)

<i>Year</i>	<i>Marijuana</i>					<i>Any other drug</i>
	<i>Over 12</i>	<i>12-17</i>	<i>18-44</i>	<i>Black</i>	<i>White</i>	
1980	220	694	326	354	182	49
1985	204	431	353	345	159	99
1990	135	167	265	145	235	239
1991	116	132	231	115	122	247
1992	127	176	252	122	135	262
1993	144	301	273	166	144	296
1994	185	586	313	255	167	279
1995	232	822	379	336	202	303
1996	247	990	382	359	215	233
1997	264	934	433	413	219	248

Males account for nearly 90 percent of all Maryland marijuana possession arrests, a surprising figure given that about 37 percent of marijuana users are female.<sup>6</sup> Thus the rates for

<sup>6</sup> In the National Household Survey on Drug Abuse (NHSDA), the rate use in the preceding year for males over the age of 12 in 1997 was 6.7 percent and for females 3.5 percent.

young males are very high, as shown in Table 5. Note that 12 to 17 year-old males are more likely to be arrested for marijuana possession than for possession of any other drugs.<sup>7</sup> In contrast, adults are seven times more likely to be arrested for some drug other than marijuana. Thus marijuana is the principal drug bringing adolescents into contact with the criminal justice system<sup>8</sup> but relatively unimportant in that respect for adults.

**Table 5**  
**Maryland Drug Possession Arrests of Males by Age, 1980-1997**  
(per hundred thousand population)

<i>Year</i>	<b>Marijuana</b>		<b>All Other Drugs</b>			
	<i>Total arrests</i>	<i>Rate 12-17*</i>	<i>Rate 18-44</i>	<i>Total arrests</i>	<i>12-17*</i>	<i>18-44</i>
1980	7749	1085	578	1736	244	1492
1985	6018	696	630	3565	354	3211
1990	5581	280	464	9606	711	8895
1991	4833	215	402	10309	779	9530
1993	6222	504	481	12204	1100	11104
1995	10206	1379	680	12552	1293	11259
1997	11754	1583	769	10191	1278	8913

\* *Total juvenile arrests divided by the population aged 12-17.*

The five largest jurisdictions in Maryland (Ann Arundel County, Baltimore, Baltimore County, Montgomery County and Prince George's County) accounted for 68 percent of the state's population in 1995 and for 59 percent of marijuana possession arrests. That the large counties as a group have a lower marijuana possession arrest rate than the rest of the state, generally more rural and with small towns, may be accounted for by attitudes of residents; in more rural jurisdictions, police may be more inclined to make an arrest when marijuana is detected. Other factors, such as the extent of use of other drugs, no doubt also matter. For example, marijuana possession arrests constitute a majority of all drug arrests in Montgomery County; cocaine and heroin arrests are very few. The opposite is true for Baltimore City. These facts certainly reflect the very high rates of cocaine and heroin use in Baltimore.

<sup>7</sup> The numerator contains a very small number of arrests under the age of 12.

<sup>8</sup> Some of those arrested for use may also be dealers but it is their possession of the drug that generates the arrest.

During the period 1980-1997 there was a substantial redistribution of arrests among the five jurisdictions (see Table 6). Whereas in 1980 Baltimore City accounted for almost 40 percent of all these possession arrests and Montgomery County for only 4 percent, by 1995 each county accounted for about 16 percent of the total. Even taking account of Baltimore's population decline and Montgomery's population growth, the shift is substantial. Between 1995 and 1997 Montgomery County's share of arrests declined while that for Baltimore City remained constant, but the difference was vastly less than in 1980 and 1985.

**Table 6**  
**Share (%) of Marijuana Possession Arrests in the State by County and Year for Five Largest Jurisdictions**

<i>Year</i>	<b>Jurisdiction</b>				
	<i>Anne Arundel</i>	<i>Baltimore City</i>	<i>Baltimore County</i>	<i>Montgomery</i>	<i>Prince George's</i>
1980	16.1	37.7	10.4	4.1	7.3
1985	6.3	39.2	12.2	7.1	6.7
1990	7.6	18.3	13.1	9.6	4.7
1995	8.7	16.2	16.3	16.4	10.0
1997	8.5	16.2	13.1	9.8	11.5

We do not have data on the prevalence of marijuana use among blacks in Maryland and how that has changed over time. At the national level there is evidence of a substantial increase in both the absolute and relative rates of marijuana use among blacks as compared to whites<sup>9</sup>. However that increase, if applied to Maryland, would account for only half of the rise in the ratio of black/white arrests between 1992 and 1997 in Maryland. In general, marijuana enforcement has a smaller disparate racial impact than enforcement against other drugs. For all other drugs (mostly cocaine and heroin, which cannot be identified separately in the arrest data) blacks accounted for 70 percent of the 12,600 total arrests; the arrest rate for blacks was six times that of whites. Nonetheless, rates of arrest for black males under 18 are very high indeed, approaching four percent in Baltimore City. Estimates for marijuana possession arrest rates in the five largest counties are provided in Table 7; details of these estimates are given in Appendix A.

<sup>9</sup> The NHSDA estimates that in 1992, 3.9 percent of non-Hispanic blacks over the age of 12 had used marijuana in the previous thirty days, compared to 5.1 percent of non-Hispanic whites. By 1998 the figure for blacks had risen to 6.6 percent, while that for whites was down very slightly at 5.0 percent.

**Table 7**  
**Estimated Marijuana Possession Arrest Rate for Black Males Under 18 for the Five Largest Maryland Counties, 1980-1997**

<i>Year</i>	<i>Anne Arundel</i>	<i>Baltimore City</i>	<i>Baltimore County</i>	<i>Montgomery</i>	<i>Prince George's</i>
1980	790	1928	655	392	418
1985	169	1337	590	730	374
1990	477	202	103	269	24
1995	662	2165	1863	1924	1181
1997	1456	3796	2898	1678	1017

\* Rates are calculated as estimated number of black male juvenile arrestee population per 100,000 black males aged 5-17.

#### *Adjusting for Drug Use Rates*

It is useful to estimate, for the period 1991-1997, how the arrest probability of a marijuana user in a specific age group has changed. Using a methodology described in Appendix A, we estimate that the probability of arrest for a past year user of marijuana, aged 12 to 17, rose from about 30 per 1,000 in 1992 to almost 90 per 1,000 four years later; in other words, an adolescent user had almost a 10 percent probability of being arrested in the course of a year. For those who use every year from age 12 to age 17, there is roughly a 50 percent probability of arrest: this is merely an illustrative figure since most adolescent users do not use every year from ages 12 to 17. For ages 18 to 24 the use rate stayed approximately constant and we estimate that the arrest rate per thousand users rose from 26 in 1992 to 53 in 1996. It is reasonable to characterize the recent pattern of arrests as a crack down on youthful marijuana use. Older users experienced no increase.

In summary, there has been an extraordinary increase in arrest rates for marijuana possession among blacks and youths during the 1990s. This increase cannot be accounted for by changes in marijuana use by these groups. A substantial fraction of adolescent males face risk of arrest during their teen years; we conjecture that for black adolescent males the rates may be quite high indeed.

#### *What generates marijuana arrests?*

One striking feature about this increase in marijuana possession arrests is that it is not apparently the consequence of a public campaign. Though "zero tolerance" is a much used

phrase in describing modern policing, a specific focus on marijuana possession has not been prominent. That is true for both Maryland and the nation.

If the documented rise in marijuana arrests was not generated by growth in total marijuana use or a declared campaign, then two other alternatives suggest themselves. First, there may have been a shift in community attitudes toward marijuana, perhaps generated by the widely reported increase in adolescent use. The drug may seem more dangerous because it is increasingly used by adolescents, as well as because of reputed increases in potency. This may have led to an intensified police effort against marijuana possession, particularly by youth. It is difficult to test these explanations in any systematic fashion without survey data on attitudes either of police (particularly senior police officials who decide policy) or from the population generally. The NHSDA shows that the percentage of the population reporting that they believe occasional use of marijuana (once a month) is harmful has stayed fairly constant since 1992 at about 42 percent, which is inconsistent with the hypothesis of growing panic about marijuana.

A second possible explanation is that there have been changes in police practices which although they do not target marijuana possession nonetheless have led to an increase in the number of these arrests. The shift to "quality of life" policing, with its emphasis on maintaining order and not allowing small offenses to escape arrest (Kelling and Coles, 1997), is potentially just such a shift. If this were the case, then the rise in marijuana arrests might properly be viewed as simply a consequence of trying to improve public safety in the broadest sense and an assessment of the practice would have to focus on how much it accomplished in this respect as well as how much it reduced marijuana-specific problems.

We investigated this issue by: (1) interviewing a number of patrol officers, during the course of ride-alongs in three counties and (2) analyzing 1997-1998 arrest data provided by the police departments. Neither procedure is perfectly suited for these purposes because pre-crackdown data are not available. However we believe that our use of these methods can help provide useful insight by describing how marijuana enforcement fits into current policing practices in three major Maryland jurisdictions.

### **Police Interviews**

The police departments of Baltimore City, Montgomery County and Prince George's County granted permission for the authors to ride along with patrol officers in areas and at times that were likely to yield marijuana arrests. As it turned out, only a handful of actual marijuana

arrests were observed. However, the officers were generally very willing to discuss practices, experiences and attitudes with respect to marijuana offenses.

The observations were conducted over a three-month period in the summer of 1999. Observations were made in eight-to-ten hour ride-alongs in a police patrol car; six of these were in Baltimore City with an additional four in Montgomery County and four in Prince George's County. Police were asked a variety of questions during ride-alongs. Interview questions primarily focused on their motivations to make drug arrests their tactics and factors the officers perceived to explain the observed increase in marijuana arrests.

#### **Police Tactics**

The tendency of some officers to make frequent marijuana arrests seemed more rooted in a desire to make drug arrests in general than in a particular focus on marijuana. In an effort to make more drug violation arrests, some officers resorted to frequent traffic stops. Many officers reported that very minor reasons could be used to stop and search suspicious automobiles. In Montgomery County, the only jurisdiction that provided detailed information on circumstances of arrests, 35% of marijuana possession arrests reportedly resulted from traffic stops. (Half of all such arrests reportedly resulted from direct observation.) Of the 436 traffic stop arrests, information on the reasons for stop are provided for 335 of them. Officers made 330 stops for traffic violations (as opposed to driving a stolen car or dealing drugs). Of these 330 stops, 36 percent were for moving violations—most commonly speeding and reckless driving. Another 57% of stops involved equipment, including use of seat belts and broken head lights. Finally, 7% of stops were for suspicion. Thus, both official data and (as we shall see) qualitative data are consistent with the assertion that traffic stops are, in no small part, a tool of drug enforcement. This method seems relatively successful at finding drugs.

What happened next depended very much on the officer. Officers observed in Baltimore were more likely to report that they would release a person in possession of a small quantity of illegal substance. Officers in the two suburban counties appeared more likely to make an arrest under similar circumstances, regardless of the quantity of the illegal substance found.

*Quote*<sup>10</sup>:

Q: What motivates you to stop someone in a vehicle for a drug search?

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<sup>10</sup> Quotes here are not always verbatim but are at least close summaries, based on notes made by the author involved in the ride-along.

A: Well, it could be any number of things. I stopped a guy last week because his tire touched the yellow line twice. He could have been a drunk driver. It turned out he had one needle on him, a heroin needle. I took the needle, turned it in to Evidence, and told him not to come back to Baltimore. I've stopped people for moving erratically. They may have been trying to buckle up their seatbelts. Then again they may have been hiding drugs.

*Observation:*

The officer describes this process as "fishing". That is, you wait for a car that looks suspicious and find a reason to pull them over. Grounds for suspicion may include a former police car likely bought at police auction, a car that that is "tricked out" (i.e. altered in some way such as tires that don't fit the car) or a dirty car with a clean tag. Grounds for the traffic stop may include expired tag, tag on wrong window, failing to signal or stop, broken taillight, speeding etc. If the driver is fidgety and making mistakes in complying with the officer's requests he is more likely to be searched. Some police are better fisherman than others.

Some officers thought that traffic stops accounted for 90-95 percent of all drug arrests made; as reported above, it turned out that only 35 percent of arrests in Montgomery County originated in traffic stops. Officers believe that drug dealers see automobiles as the most efficient way to transport the drugs. Thus, many officers attempting to make a drug arrest profiled automobiles in hopes of stopping and searching suspicious autos.

Traffic stops of suspicious automobiles as well as erratic and dangerous driving may account for a large percentage of drug arrests (pursuant to a search). Nevertheless, officers mentioned other reasons why they may deem a person worthy of being stopped and searched for illegal substance possession.

The following quotes depict traffic stop scenarios that were commonly observed during our ride-alongs. The following quotes also offer more insight into the enforcement process generating marijuana arrests.

*Observation (Two officers making a traffic stop and arrest)*

The officer said that they would have pulled the van over anyway because it was missing a rear window and a rear taillight was burned out. They would have simply given the driver a repair order had they not smelled alcohol on his breath. They next did a search of his person for their own personal safety. This search revealed the marijuana. Since they would be arresting him and towing the vehicle, they were entitled to search the vehicle without his consent. The officer said they would not bother arresting him for DUI because they got him on marijuana possession--a more serious charge.

*Observation*

The officer described an incident in which he stopped three juveniles for a minor traffic violation. He explained that he was able to smell marijuana in their car. The youths had apparently been smoking in the car. He was able to see some buds on the driver's shirt and a roach in his ashtray. The front passenger had placed some marijuana in his shoe. The rear passenger, a female, had a Philly Blunt (a cheap cigar used for smoking marijuana). The driver and the rear passenger were each given a citation for paraphernalia. The front-seat passenger was arrested for marijuana possession.

Another police tactic is to target the known drug hot spots. Every officer interviewed for this study was aware of the drug hot spots in their respective districts. Officers also knew what type of drug was being sold in a specific area. All of the known drug hot spots police mentioned were in minority neighborhoods.

However, this knowledge did not offer much foresight into what type of drug an officer might find in person's possession. Officers explained that drug dealers who sell crack or heroin on the street may themselves use marijuana. Consequently, when these drug dealers are apprehended by police, they may be in possession of marijuana, crack or heroin. When arrest seems imminent, experienced dealers will attempt to discard the illegal substances in their possession that will result in the most severe sanctions. Thus, by the time a dealer attempting to elude arrest is apprehended by police, he may possess only marijuana.

Some officers said that when they want to make a drug arrest they go to a known drug hot spot in their district. If an arrest had been made in that particular hot spot earlier, then the officer would wait a few hours and return. This suggests that officers can make a drug arrest when they want to. More professional officers will often wait until a probable cause arises (e.g., observation of a drug sale or drug use) before making an arrest—which can severely limit the number of arrests they can make. Also, officers are often so tied up with answering calls or processing DWI arrests that there is no time. Though the arrest may not result in heavy sanctions, it is a drug arrest nonetheless.

*Observation:*

The officer told me that he liked to make a lot of arrests. He explained that he works in an area where crack is the number one drug of choice and heroin is number two. He stated that marijuana is sold in a very specific marketplace near 51<sup>st</sup> and Belvedere. When I asked why he likes to make so many arrests he remarked that it is fun.

We drove around to different known drug locations, where the officer hoped to make a drug arrest. The ride-along officer became upset. Apparently other officers had already visited this particular drug hot spot. He said he was waiting to hit that spot only after giving the dealers and buyers some time to get comfortable. Now it was going to be harder for him to make an arrest.

Officers are very suspicious of people who seem to be out of place. These suspicions arise from the intersection of race, dress, conduct and place. All of the known drug hot spots were in minority neighborhoods. As a result, the people that seemed to be most out of place were white.

*Observation:*

I asked earlier whether white people come into the area to buy marijuana. He responded that marijuana is available also in the suburbs. They usually come here to buy heroin or cocaine. He later said to me, "I don't stop black people, I stop white people." He explained that it works best to stop people who don't belong in the community. [However the officer also said he did not recall arresting any white offenders in this manner.]

This particular officer was referring to his suspicion of white people walking or driving in a predominantly black, impoverished, neighborhood. Similarly, some blacks may also look out of place in these neighborhoods.

The black male referred to in the following quote was plainly out of place. His attire and his age were clear cues. The area in which he was attempting to purchase drugs was inhabited primarily by young people wearing trendy clothing.

*Observation*

-5:30pm: We stopped a black male approx. 50 y.o., wearing an Hawaiian shirt and Bermuda shorts. The RAO (Ride-Along Officer) gets out of the squad car and approaches the black male. The RAO tells the black male to put his hands on top of his head and not move. The RAO frisks the older black male and looks at the black male's hand. RAO notices the black male is hiding something in his hand. The RAO sees that the male is hiding money. (I see the RAO talking to the black male but I don't know what he is saying.) The RAO and the black male walk to the passenger side of the squad car where I am sitting. The RAO tells the older black male to tell me why he is in the neighborhood. The black male explains to me that he is there to buy drugs. (Obviously ashamed and embarrassed to be caught, his eyes tear up as he tells me that he is there to buy drugs.)

Another scenario related to race that raises an officer's suspicion has been termed "The African Tour Guide." This derogatory term refers to a black person acting as navigator for a white person driving through a black neighborhood in search of drugs.

*Observation*

While driving around on patrol the RAO noticed what he calls the African Tour Guide. The officer defined the term as one black person acting as a tour guide to show one or more white persons where to buy drugs. On this occasion the tour guide was a black female. A white male and a white female were the tourists. Before stopping the vehicle the RAO said the African tour guide scenario is not unusual in this district.

There are a host of reasons that officers may suspect a person of having illegal substances. Yet the above reports indicate that it is not race that raises police suspicion as much as people who look out of place.

*Knowledge of Dealer Behavior*

Generally, officers were knowledgeable about drug dealer behavior. This was true even for officers who felt little motivation to make drug arrests. Police explained that a person behaves suspiciously when he or she is in possession of an illegal substance; thus, certain behaviors frequently trigger a stop.

The following observations highlight two different types of drug dealer behavior that pique police suspicion. The arresting officers worked in different jurisdictions. These particular incidents resulted in marijuana arrests.

*Observation:*

The PO waited for the male to replenish his supply of marijuana. The black male went into an alley to gather more marijuana. The PO followed the male. The male found his hidden marijuana supply and placed more marijuana in one of his shoes. When the black male started to return to his selling post he noticed the PO following him. The male ran to escape the PO. The PO gave chase through an alley. The PO could not find the male. The RAO joined other officers at the scene to look for the black male and to find the drugs the male may have discarded. The black male was apprehended.

This observation suggests that police officers know the drug behavior of dealers on the street. The officer in the quote waited for the suspected drug dealer to replenish his supply of marijuana in order to secure an arrest. This also suggests that the officer sought to apprehend the dealer with a larger quantity of marijuana in his possession. Officers may attempt to combat what they believe is the court's leniency on drugs with improved tactics. In order to combat the

perceived leniency of the court, officers may wish to apprehend drug dealers with a large quantity of illegal substance in their possession, thus securing a stiffer sentence.

Another tell tale sign that a person on the street may be in possession of an illegal substance is erratic behavior such as turning away from an officer quickly and walking the opposite way. Usually the officers more experienced with drug arrests know what to look for in determining if a person is in possession of an illegal substance. Officers experienced with drug arrests referred to the movements as “the dance”.

*Quote:*

-9:08pm RAO stopped a young black male. Black male is 14 y.o. RAO searches male. Male has five bags of marijuana in his possession.

**Q:** How did you know he had drugs in his possession?

**A:** Did you see how he did the dance? When he saw us coming he put his hand in his pocket and turned around real quick and tried to walk the opposite way. Usually people in possession of drugs will try not to look at you (Police Officer) or, they will turn their heads. They will also start walking the opposite way and not even know where they are going. If you watch them long enough you can tell they don't know where they're going. I just locked this guy's cousin up for ten bags of crack.

This particular officer observed the black male earlier during the ride-along and made the same remark about his arresting the male's cousin earlier in the week for cocaine possession. The officer later said that when he observed the young man earlier, he did not believe he was in possession of any illegal substances at that time. At the time this officer arrested the 14 year-old black male, it was too dark for the officer to recognize the youth. Still, his movements and behavior were sufficient to raise the officer's suspicions.

Though there are many other reasons that officers suspect a person is in possession of illegal substances the reasons illustrated above seemed to be the most commonly mentioned.

#### **Why Make Marijuana Possession Arrests?**

The predominant reasons given by police officers to explain their motivations for drug arrests included individual recognition and economic motivations, the drug-crime nexus, and the zero-tolerance approach to policing. Individual recognition and economic motivations are closely related. Drug arrests can be very high profile arrests, at times monitored by peers and command staff. Officers seeking promotion to a narcotics unit within their own department or

even a position in a federal drug agency (an incentive that may be especially salient in the Maryland/D.C. area) can demonstrate their skills by making multiple drug arrests.<sup>11</sup>

A number of officers in the sample referred to the drug-crime nexus as a motivation for making drug arrests. Some officers believe that more than 90 percent of crime in their jurisdictions is drug-related. These officers feel that by locking up drug dealers they are disrupting not only the flow of drugs but also crime in general, including gun-related crime (since many dealers carry firearms). Those officers that made reference to the drug-crime nexus as their motivator for drug arrests sometimes also alluded to the "stepping stone" theory and the belief that marijuana is a gateway drug.

It became obvious from the qualitative data collected that most often a marijuana arrest was incidental to drug or traffic enforcement activities. Police were quick to point out that they did not concentrate their arrest efforts on one specific drug.<sup>12</sup> Ride-along officers typically reported that they made arrests for offenses involving any type of drug whenever possible.

#### *Explaining the increase in arrests*

One other reason officers offered to explain increased marijuana arrests (unrelated to police tactics) is the popularity of marijuana relative to other drugs. Marijuana arrests result in lesser sanctions than crack or heroin arrests. Marijuana is cheaper than crack and heroin and generally produces a longer high. Crack and heroin now have negative images in the minds of adolescents and young adults, some officers explained. Thus, several officers believe that the increase in marijuana arrests can be attributed to the increased popularity of the drug, especially among adolescents.

#### *Interview Notes:*

**Q:** Why have marijuana arrests increased in the last few years?

**A:** RAO listed a number of reasons.

-Mother and father's behavior drew the adolescents away from crack and heroin. (explanation): Children saw their mothers prostituting themselves for crack. They also saw their fathers leave the home and rob people and subsequently be sent to prison for a crack addiction. RAO believes the adolescents who have experienced these things are averse to crack use. Subsequently these same adolescents use marijuana. Needless to say the adolescents are turned off by the addictive qualities of crack. RAO also said that marijuana is more accepted in almost every community.

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<sup>11</sup>Our emphasis on patrol officers ignore one important generator of drug arrests—narcotics squads and other special enforcement teams.

<sup>12</sup>Montgomery County may be an exception. Silver Spring officers gathered intelligence on marijuana and expected to make mainly marijuana arrests, even as a consequence of DUI stops.

- Marijuana is cheap.
- Marijuana produces a longer high.
- Marijuana is an alternative to beer and other alcohol that underage youth cannot purchase.

*Interview:*

**Q:** Why do you think marijuana arrests have increased?

**A:** Marijuana was big for a long time, then came crack. Crack got people addicted. People saw all the addicts suffering from AIDS due to injections. A lot of people got scared because of all of the problems they witnessed that were due to crack. So, a lot of people went back to marijuana.

These statements come from two different officers. Both allude to the negative images police believe have been etched into the minds of youth. Such images are believed to have tarnished the allure of crack and heroin, while making marijuana more attractive by comparison. However, no empirical evidence exists to substantiate the officers' belief that the increased popularity of marijuana has led to increased marijuana arrests.

Other explanations officers offered for the increase during the interviews included the following: greater use of consent searches (resulting perhaps from a directive from command staff and more training in procedures to follow during consent searches) and the rise in zero-tolerance policing. One officer stated that he tries to make drug arrests to prove his worthiness for the Narcotics Enforcement Division (NED). An officer from Prince George's County offered the following list of explanations for the rise:

- 1) The switch to a centralized booking system cut much time out of the arrest process (from 3-4 hrs. down to 1-2 hrs.), thereby reducing the disincentive to make petty drug arrests.
- 2) "Overtime units". If officers are able to collect more overtime through making more arrests and attending the court proceeding stemming from the arrests they will do so.<sup>13</sup>
- 3) The "no tolerance" approach, which was which just surfacing as he began policing. This gave officers less discretion as they were told to arrest people even if they had only a marijuana seed.
- 4) People increasingly switched to pot after Clinton got elected. Kids felt it was the cool thing to do.
- 5) An increase in the number of police.

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<sup>13</sup> The officer was not clear about why overtime pay may explain the increase in marijuana arrests. Two possibilities seem reasonable and merit further investigation. First, the police union may have negotiated greater rates of overtime pay, thereby increasing the incentive to make arrests that lead to court cases. Second, overcrowded court dockets, themselves the product of increased drug arrests, may create an incentive for further arrests by increasing officer time spent in court per arrest—a self-perpetuating feedback loop.

6) Many of the new officers are coming from the federal COPS program. These officers are trained well and may be fairly productive. They are also community oriented. Community oriented policing may be more likely to generate citizen tips which may also help explain the arrest increase.

Clearly, policy shifts can have dramatic consequences. For example, an officer from Anne Arundel County, who showed up in connection with a drug arrest in one our observation counties, said that under a zero-tolerance chief, drug enforcement "got totally out of hand" He described how cars were being seized after officers found even one seed of marijuana, which may have accidentally and unknowingly been ropped by one the driver's friends. He also stated that such policies overcrowd the courts, exacting a large financial toll in "police overtime and court time."

### *Summary*

This kind of observational research by its very nature generates hypotheses rather than conclusions. Three interesting hypotheses about marijuana arrests emerge from the ride-alongs and conversations:

1. A substantial fraction of marijuana arrests are incidental to other kinds of policing, such as traffic enforcement or response to disorderly conduct. Increases in the number of marijuana possession arrests may be generated by apparently unrelated policy emphases.

2. Drug enforcement is largely generic. Police target specific places and people, rather than specific drugs. Increases in the number of marijuana arrests may be the consequence of shifts in the behavior of drug market participants and not in total prevalence of marijuana use.

3. Some of the rise is probably generated by senior management decisions to give higher priority to marijuana arrests, increasing the incentives for officers to follow up if a small amount of marijuana is found in the course of a stop.

### *Characteristics of Arrests*

The observational research provided some insight (but hardly conclusions) about what has driven the increased arrest activity. We supplemented that by analyzing police department data on arrests in the same three jurisdictions: Baltimore City, Montgomery County and Prince George's County. Each jurisdiction provided different information, so frequently we can report findings for only one or two of them. The analysis focused on how marijuana possession arrests fit into policing more generally; to what extent did it appear to be incidental to other policing activities? The analysis covers three topics:

1. The pattern of other charges accompanying marijuana possession.
2. The circumstances of marijuana possession arrests.
3. The extent to which these arrests were concentrated in a small number of locations.

**. Marijuana and other offenses.**

Marijuana possession is frequently only one of a number of charges at the time of arrest. This is consistent with the police interviews and observations.

In Baltimore City, the only jurisdiction for which we have specific data, over half of the arrests involving marijuana possession had more than one charge (see Table 8). Where there were multiple charges, marijuana possession was the primary charge in only one sixth of the cases. According to the FBI hierarchy, it was less serious than some other charge in the remaining cases. Eighty-five percent of arrests in which marijuana was a secondary charge involved other drug offenses; of the 554 arrests in this category, 60 percent were for marijuana distribution and 20 percent for cocaine possession. Where marijuana was the primary charge and there were other charges, they were overwhelmingly quality-of-life-charges (e.g., possession of an open container of alcoholic beverage, loitering) or possession of drug paraphernalia. In summary, either marijuana was the only charge or it was generally secondary; if it was secondary, the other charges were usually drug offenses. Marijuana possession was very rarely associated with arrest for a property or violent crime.

**Table 8**  
**Charges Accompanying Marijuana Possession Arrest Incidents in Baltimore City**

	<b>Marijuana only</b>	<b>Marijuana primary</b>	<b>Marijuana secondary</b>
<b>Total</b>	1213	242	648
<b>Percent of all marijuana possession arrests</b>	46%	9%	25%
<b>Primary or secondary Charges Q of L (%)</b>	N/A	105 (43)	4 (.6)
<b>Primary or secondary charges drugs (%)</b>	N/A	115 (48)	554 (85)
<b>Primary or secondary charge weapons or violent</b>	N/A	0	56 (9)

*Numbers in first row do not add up to 100% because in 17-20% of the marijuana possession arrest cases (N=2631) the marijuana possession is listed as the third, fourth, or fifth most serious offense. Q of L is quality of Life*

These data suggest that marijuana possession arrests were mostly made either for themselves alone or in support of enforcement against activities involving other drugs. Only

about five percent of the Baltimore City arrests were associated with quality-of-life charges. This finding may not apply to Montgomery and Prince George's Counties.

### *Circumstances*

The Montgomery County data included a brief description of the circumstances of arrest. There was an immense variety: school incidents (e.g., four individuals "exited a vehicle and entered school together smelling of marijuana. Security officials searched the car."); loud parties (e.g., "Officers were called to loud party where marijuana was in plain view. Several adolescents present"); direct observation of individuals smoking ("Surveillance on lookout for juveniles reportedly smoking marijuana. Suspects observed entering work closet. Officers followed and discovered suspects with marijuana cigar freshly rolled"); or other kinds of order maintenance ("Suspects were observed walking with open beer in hand. Suspects were under age. Search revealed marijuana and pipes").

Table 9 provides the official categorization of the circumstances of marijuana possession arrests in Montgomery County. Most marijuana arrests were either the result of direct observation (50 percent) or of traffic stops (41 percent); few were made pursuant to arrests for other offenses or as the result of a search warrant. This contrasts sharply with arrests for cocaine or heroin possession. These were only half as likely as marijuana possession arrests to be made as the result of traffic stops and nearly one-third were made as the result of a search warrant or search pursuant to an arrest for another charge. The importance of traffic stops as a source of marijuana arrests suggests that a large share of marijuana arrests are not part of a "quality of life" policing strategy.

**Table 9**

### **Circumstances of Arrests for Montgomery County**

<b>Circumstance</b>	<b>Marijuana possession</b>		<b>Heroin or cocaine possession</b>	
	Frequency	Percent	Frequency	Percent
<b>Unknown</b>	2	.2	0	0
<b>Direct observation</b>	616	50	167	41
<b>Found drugs</b>	3	.2	1	.2
<b>Search pursuant</b>	167	14	88	21
<b>Search warrant</b>	13	1	40	10
<b>Traffic stop</b>	436	35	114	18
<b>Total</b>	1237	100	410	100

Given the concern about racial disparities, we also examined the circumstances of arrest for each racial group in Montgomery County (Table 10). For whites and African-Americans there were no substantial differences in circumstances; in particular, the share that were traffic stops were almost identical for the two groups. There were too few Asian and Hispanic arrests to permit us to draw any conclusions.

**Table 10**  
**Share of Montgomery County Marijuana Possession Arrests Within Each Racial Group by Circumstances of Arrest.**

Circumstance	Race (%)				
	Black	White*	Asian	Hispanic	Total
Direct observation	46	51	52	63	50
Found drugs	.2	.2		1	0
Search pursuant to Arrest	14	13		13	14
Search warrant	1	1		1	1
Traffic stop	37	35	48	21	35
Total %	100	100	100	100	100
Total N	541	600	21	75	1237

*\* The "White" category includes an unknown number of Hispanics, because some Latinos are labeled white.*

Finally, we also examined the types of location at which possession arrests were made; Table 11. African-Americans were more likely than whites to be arrested on the street; correspondingly, African-Americans were less likely to be arrested in their residences. Surprisingly, heroin and cocaine possession arrests were twice as likely as marijuana possession arrests to occur at a residence. This may reflect the fact that with fairly small populations of cocaine and heroin users in this county, there are not well developed outdoor markets for those drugs; that is not true for marijuana.

Of the traffic stops, only 10 percent involved speeding; the majority were related to suspected equipment defects. This is an offense category in which officers have very substantial discretion as to whether an arrest should be made.

**Table 11**  
**Share of Montgomery County Marijuana Possession Arrests Within Each Racial Group by**  
**Location of Arrest.**

Location	Race (%)				Drug Totals	
	Black	White*	Asian	Hispanic	Marij Possess.	Heroin/Cocaine Posses.
Residence	8	13	0	8	10	23
Parking lots or garages	9	13	24	8	11	18
Park or yard	5	4	0	4	4	1
School	5	8	5	5	6	
Street**	66	57	62	63	61	47
Other (Metro, construction)	3	2	0	7	2	1
Business	3	3	10	1	3	6
Unknown	1	2	0	4	2	3
<b>N</b>	541	600	21	75	1237	663
<b>Percent</b>	100	100	100	100	100	100

*Percentages do not always add up to 100 due to rounding*

*\* The "White" category includes an unknown number of Hispanics, because some Latinos are labeled white.*

*\*\* Note also that "street" arrests primarily result from traffic stops but frequently are made as people exit, enter, or remain in parked cars on the street or are standing or running on the street. Parking lot arrests, though rarely coded as traffic stops, can also be of people who exit, enter, or remain in parked cars.*

### **Location**

In recent years there has been considerable interest in the discovery that some locations are crime "hot spots" — a modest number of locations within a city account for a large share of all crimes (Sherman et al. 1997). For drugs there is no equivalent of a victimization report. One can only observe the spatial distribution of arrests.

We examined the distribution of arrests by location in Montgomery County and Baltimore City. To our surprise, despite the broad distribution of marijuana use across all socio-economic groups, marijuana possession arrests were almost as concentrated in a few places as are arrests for other drugs. For example, in Baltimore City one beat (out of 489 beats in Baltimore City) accounted for 5 percent of all marijuana arrests. It was not otherwise a drug hot spot, so the explanation does not appear to lie in the association of drug selling with marijuana possession. Approximately 8 percent of beats accounted for 50 percent of all marijuana arrests; that was almost the same as the fraction accounting for 50 percent of other drug arrests in Baltimore City. In Montgomery County we found more of what we expected; 15 percent of

police beats accounted for 50 percent of non-marijuana drug arrests and 30 percent of beats accounted for 50 percent of marijuana arrests.<sup>14</sup>

### *Summary*

Because we have different data for individual jurisdictions, we cannot generalize across Maryland. In Baltimore City, marijuana possession often occurs along with other charges but it is rarely associated with violent or property crimes. It usually appears as an adjunct to other drug enforcement. In Montgomery County many of the arrests are in the context of traffic enforcement. Finally, arrests appear to be concentrated in a few neighborhoods in Baltimore City but not in Montgomery County.

### **Incarceration**

Arrest is just the first step in the criminal justice process. At least as interesting as the number and characteristics of arrests for marijuana possession, and how they are changing, is estimating how much time these arrestees spend in correctional facilities. Our data cover only those arrested or charged as adults.

Since 1997 it has been possible to obtain data on how many Maryland state prison commitments are for marijuana offenses. Prison commitments are made only for sentences with a maximum time of one year or more. The numbers of marijuana offenders entering prison have been very small; in August 2000 the Department of Corrections reported that for 14 prisoners the most serious offense was distribution of marijuana and that for 38 it was the possession of marijuana; for another 248 prisoners, marijuana possession was lesser charge in the conviction. The total prison population then was 22,000. In addition it is possible to obtain figures on how many persons were sentenced in federal court in Maryland to jail time for marijuana offenses. But prison time, particularly in the federal system, is predominantly for distribution rather than possession offenses, so the numbers are very small.

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<sup>14</sup> In Baltimore City, 487 reporting grids reported one or more drug arrests. For any arrest containing a marijuana possession charge, the top 38 (7.8%) grids accounted for 1175 of 2343 arrests (50.1%). For any arrest containing a heroin or cocaine possession charge, the top 41 (8.4%) grids accounted for 3230 of 6410 arrests (50.4%). In Montgomery County 41 beats had a non-marijuana and marijuana drug arrests (none had only one type). Six of these 41 (14.6%) accounted for 392/778 (50.4%) of non-marijuana drug pos. arrests. Twelve of these 41 (29.3%) accounted for 611/1237 (49.4%) of marijuana pos. arrests. Also, In Montgomery County 184 Primary Reporting Areas (PRA) had a non-marijuana drug possession arrests compared to 359 with a marijuana possession arrest. Twenty two of these 184 (12% but 6.1% of all PRA's) accounted for 388/778 (49.9%) of non-marijuana drug possession arrests. Sixty seven of the 359 (18.7%) PRA's with marijuana possession arrests accounted for 619/1237 (50%) of marijuana possession arrests.

Those charged with possession offenses are much more likely to spend time, if any, in county jails in pre-trial detention. However, no state-wide figures are available for county jails, which account for one-third of the correctional population in the state at any one time; 11,000 were in jail on August 28, 2000.

From a variety of data sources (described in Appendix A), we were able to develop estimates of the probability of jail time for arrestees of different races in each county. These data come primarily from a commercial service, Courtlink, which provided data on approximately 400 arrestees in each of the three jurisdictions we studied. Since fewer than 1 percent of arrestees spent time in jail after sentencing we present data only on pre-trial commitments.

Table 12 presents basic statistics for the Courtlink sample for each of the three jurisdictions.

**Table 12**  
**Characteristics of a Sample of Marijuana Arrestees**

	<b>Baltimore City</b>	<b>Montgomery County</b>	<b>Prince George's County</b>
Sample size	414	376	442
Male	87%	89%	91%
Female	13%	11%	9%
Black	85%	52%	84%
White	14%	46%	15%
PWID most serious charge	18%	11%	10%
Possession most serious Charge	63%	76%	73%
No jail time	68%	74%	69%
Mean jail time	9 days	6 days	10 days

These data are heterogeneous in age, race, sex and severity of charge. Table 13 is an effort to control for these variables; it presents data from the Courtlink sample of all males for which marijuana possession, including PWID was the most serious charge (usually the only charge) further broken down by race. Though PWID is a more serious charge legally, analysis of data on quantities of marijuana from Prince George's County suggested that such arrests were

often indistinguishable from simple possession charges. Table 13 includes only males because the female samples are small, particularly when broken down by race, and females may well receive systematically different sentences. We focus on race differences because the question of disparate impact is so prominent in the debate about drug enforcement.

**Table 13**  
**Jail Time for a Sample of Male Adult Marijuana Possession and Possession with Intent to Distribute (PWID) Arrests by Jurisdiction**

	Baltimore City		Montgomery County		Prince George's County	
	<u>Black</u>	<u>White</u>	<u>Black</u>	<u>White</u>	<u>Black</u>	<u>White</u>
Sample size	248	40	147	142	279	48
0 days	75%	90%	71%	80%	69%	83%
1 day	4%	5%	7%	7%	8%	8%
2-10 days	6%	0%	9%	5%	14%	7%
11-50 days	10%	5%	10%	6%	3%	0%
>50 days	5%	0%	3%	2%	6%	2%
Mean	8	1	6	4	9	3
Adjusted mean*	6	1	5	3	5	1
Longest	241	36	71	200	273	110

\*Mean was calculated by setting all detentions of more than 50 days as exactly 50 days.

*Source: Authors' analysis of Courtlink data*

It is important to note the limitations of the analyses presented in Table 13. Neither individual offenders' criminal records nor their current criminal justice status at the time of arrest is taken into account. Those spending long periods in jail may have had lengthy criminal records making a judge reluctant to grant bail. In addition, some of the pre-trial jail time may have resulted not from the marijuana charge but from violations of the conditions associated with the arrest, such as failure to appear. We recorded these as part of the arrest incarceration burden because they would not have occurred without the initiating marijuana possession arrest.

To get a better understanding of whether long jail times were a function of prior charges, Table 13a identifies the numbers serving 5 or more days after excluding any arrestee who had a pending charge from the prior two years; the most serious current charge had to be possession of marijuana or PWID.

**Table 13a**

**Jail Time for a Sample of Male Adult Marijuana Possession and PWID Arrests by County and Race of Those with Five or More Days and Excluding Those with Pending Charges**

*(These calculations are presented in raw numbers)*

	<b>Baltimore City</b>		<b>Montgomery County</b>		<b>Prince George's County</b>	
	<u>Black</u>	<u>White</u>	<u>Black</u>	<u>White</u>	<u>Black</u>	<u>White</u>
Sample size	31	1	15	9	27	2
5-10 days	6	0	0	0	9	1
11-50 days	17	1	13	7	9	0
>50 days	8	0	2	2	9	1
Mean	45	21	38	53	49	59
Adjusted mean*	30	21	36	36	30	29
Longest	241	21	68	200	224	110

\*Mean was calculated by setting all detentions of more than 50 days as exactly 50 days.

*Source: Authors' analysis of Courtlink data*

Tables 12 and 13 show the strikingly high fraction of arrestees spending some time in jail for this offense. In each jurisdiction 25 to 30 percent spend at least one night in the county jail (Table 12). Among males whose most serious charge is possession or PWID, the figures in Table 13 show that between 23 and 29 percent are jailed in the three jurisdictions. Of those who do spend time in jail, a substantial fraction spend more than 10 days. In Baltimore City about 10 percent of all adult male marijuana possession arrestees spend more than five days; the figure is almost identical for Montgomery County (9 percent) and Prince George's County (12 percent), even when those with pending charges or conditions of supervision are not included in the figures. The mean jail times are driven by a few who spend very long periods; a very small number spend more than three months. Statistical outliers drive up the mean jail time figures. Consequently, we also present adjusted means in which all detentions of more than 50 days are made exactly equal to 50 days.

The data for each county show that black arrestees are more likely than white arrestees in all counties to be jailed, though the difference is modest in Montgomery County. Among those jailed, black males spend more time in each jurisdiction, even with the outliers removed. Those males who spend more than five days in jail are even more likely to be black.

We note again the very important caveats to this analysis. The original jail records available for this research provided no information on prior histories, education or employment<sup>15</sup> etc. A higher fraction of black arrestees, as compared to white arrestees, may have more serious criminal histories or represent higher risk of "Failure to Appear" for court cases as consequence of weaker employment records or ties to the community.

It is possible to use these data to make very rough estimates of the total jail time state-wide associated with marijuana possession. In 1997 about 10,000 adults were arrested in Maryland for possession of marijuana. Approximately one-third of these spent some time in jail. Taking out the outliers, whose jail time may be a function not of the marijuana charge but of other pending charges at the time of arrest, we estimate jail time averages about seven days per arrestee. With 3,000 arrestees spending a week each in jail, about 60 of Maryland's jail cells devoted full-time to marijuana possession cases.

#### **Treatment**

Both Maryland and the nation have seen a marked increase in the number of admissions to drug treatment facilities for which marijuana is the primary drug of abuse. These admissions are also a rising share of all treatment admissions. Nationally the figure rose from 91,000 (6.1 percent of admissions) in 1992 to 192,000 (13.0 percent) in 1997. Both nationally and for the state, only cocaine and heroin each accounted for more admissions in 1997. In Maryland there were 2718 marijuana admissions in 1992 (one-eighth as many as for cocaine or heroin) and 7245 in 1998 (two-fifths as many as for cocaine or heroin) in 1997 (Table 14).

Particularly striking was the rise in youth admissions for marijuana, again both nationally and in Maryland.<sup>16</sup> Since 1992 marijuana admissions of those under 18 have risen more than six-fold in Maryland; whereas in 1992 they constituted less than 20 percent of those admitted with marijuana as the primary drug of abuse, by 1998 they constituted almost half of such admissions. The share of marijuana admissions who were black rose modestly over the period from one third in 1992 to two fifths in 1998. The number of admissions seems to have plateaued in 1996.

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<sup>15</sup> To produce such information, it would be necessary to link arrest and correctional records, which is not possible with current data systems.

<sup>16</sup> Nationally half of all under 19 admissions for treatment listed marijuana as primary drug of abuse in 1997; alcohol, or alcohol and another drug, accounted for most of the remainder.

**Table 14**  
**Maryland Marijuana Treatment Admissions 1992-1998<sup>17</sup>**

<b>Year</b>	<b>Total</b>	<b>Ratio to cocaine/ heroin admissions</b>	<b>Under 18 (%)</b>	<b>Black (%)</b>	<b>White (%)</b>	<b>Justice system referred (%)</b>	<b>Individual referral (%)</b>
1992	2718	.12	496 (18)	904 (33)	1768 (65)	1680 (62)	419 (15)
1994	4077	.17	1585 (39)	1386 (34)	2595 (64)	2134 (52)	683 (17)
1996	7307	.29	3526 (48)	2900 (40)	4233 (58)	3962 (54)	1150 (16)
1998	7245	.43	3206 (44)	2941 (41)	4151 (57)	4240 (59)	1066 (15)

One explanation for this increase is that more adolescents are using marijuana and that abuse and dependence are rising correspondingly. Though folk wisdom now doubts marijuana's potential for creating dependence, a number of studies have shown that it is quite a common experience. Whether dependence symptoms are likely to manifest themselves by age 18 is less clear<sup>18</sup>.

The rise in adolescent treatment admissions may thus represent the fact that more kids are becoming marijuana-dependent and that, through arrest, more are being detected, albeit by a system which is not therapeutically oriented. However, it is also possible that treatment is being used as a method for keeping arrestees (particularly young ones) out of the criminal justice system, including juvenile court. A majority of adolescents admitted to treatment (54 percent in 1996) are recorded as entering because of justice related considerations; that is probably an undercount because many of the others may be entering treatment on the advice of lawyers who believe it will reduce the risk of adjudication and/or detention for their clients.

Criminal justice referral is a more important source of treatment admissions for black adolescents than for whites (Table 15). In 1996, 65 percent of blacks were admitted to treatment were recorded as having been criminal justice referred, as compared to 47 percent of whites. However this may be a statistical artifact and may not reflect any difference in the number generated by criminal justice-related pressure, as opposed to the formal referral. White juveniles may be more frequently represented by lawyers who get their clients into treatment without it being recorded as a criminal justice referral.

<sup>17</sup> These are admissions for which marijuana is the primary drug of abuse. About one third list another, more dangerous drug other than alcohol, as a secondary factor; it may be used infrequently.

<sup>18</sup> The percentage of marijuana users in 12<sup>th</sup> grade who report that they have tried to quit and been unsuccessful is about 5 percent.

**Table 15**  
**Justice System-Referred Marijuana Treatment Admissions, 1992-1998**

<b>Year</b>	<b>Total</b>	<b>Juvenile Services (%)</b>	<b>Adult Criminal Justice (%)</b>	<b>Black (%)</b>	<b>White (%)</b>
1992	1680	152 (9)	1528 (91)	668 (40)	983 (59)
1994	2134	546 (26)	1588 (74)	937 (44)	1155 (45)
1996	3962	1377 (35)	2585 (65)	1894 (48)	1971 (50)
1998	4240	1383 (33)	2857 (67)	2029 (48)	2122 (50)

**Source:** Maryland Alcohol and Drug Services Administration

To determine the effects of use and enforcement separately on treatment admissions, we examined county level variation in adolescent marijuana treatment admissions as a function of self-reported use in school surveys and the number of arrests for marijuana offenses, aged 12-17; the details are presented in Appendix B. We found that changes in arrest rates between 1992 and 1998 explained much more of the variation than did the prevalence of marijuana use. Across jurisdictions, having a change in the rate of juvenile marijuana possession arrests of an additional 5 per 1000 is associated with an increase in the rate of juvenile treatment admissions of almost 10 per thousand. Changes in use rates had no impact on admissions. This result on arrests is hardly surprising given that referral to treatment is a common outcome for marijuana possession arrests. It is important because adolescent arrests have risen much faster than the prevalence of adolescent marijuana use. We also examined non-criminal justice referrals to marijuana treatment and found that they too were influenced by arrests, at least from 1992 through 1994, which tentatively suggests that official figures underestimate the share of marijuana treatment referrals resulting from criminal justice involvement.

There is a dearth of research on marijuana treatment, particularly surprising given that this drug is responsible for several hundred thousand admissions for drug treatment each year. The National Institute on Drug Abuse (NIDA) funds almost no projects specifically concerned with this topic. A literature search turned up but a handful of articles published in the last decade.

That so many marijuana admissions were criminal justice referred and that there is so little information on treatment of marijuana users raise a question as to whether the young arrestees are receiving treatment services that are useful to them or merely ensuring that they can avoid more serious sanction. Treatment, then, may be more a form of sanction than the provision of needed services.

The Maryland Alcohol and Drug Abuse Services Administration provides a limited amount of data on the characteristics of those admitted for treatment for marijuana abuse and the nature of the services provided. Patients admitted with marijuana as their primary drug of abuse stay about as long as those admitted for other drugs, approximately four months. They also were just as likely to be admitted to residential or inpatient services (18 percent) as those admitted for other drugs.

**Table 16**  
**Treatment Setting by Drug, Maryland**

<b>Treatment Setting</b>	<b>1998 All Drugs<sup>19</sup></b>		<b>1998 Marijuana</b>		<b>1992 Marijuana</b>	
Residential/inpatient	8,132	18%	1,250	18%	355	13%
Outpatient	34,870	79%	4,947	73%	2,198	79%
Correctional	1,263	3%	573	8%	240	9%
Total	44,265		6,770		2,793	

### Conclusions

Our findings for Maryland are easily summarized. Adolescent use of marijuana has increased substantially, as it has across the nation. There has been a very large increase in arrests, more than can be explained by the rise in adolescent marijuana use. African-Americans have been particularly affected by this increased arrest activity. About one-quarter of all those arrested spend at least one day in jail and perhaps as many as one-sixth spend a week or more. Adult African-Americans are more likely to be detained pre-trial if arrested and to spend longer in jail if detained. Analogous figures were not available for juvenile detention.

Many other arrests generate admission to treatment programs; indeed the number of criminal justice referred admissions to treatment programs was approximately one-third of the total number of arrests, including both juveniles and adults. Though we have no data that bear directly on the matter, it is quite possible that many of those admissions are merely to avoid criminal justice proceedings and provide little service of value to the individual.

It is hard to identify what has generated these changes in marijuana enforcement. Certainly it is not a response to increased marijuana use. Our statistical tests of the relationship of marijuana enforcement to quality of life policing were not strong but were generally inconsistent with the hypothesis that the rise in marijuana arrests was generated by increased

emphasis on order maintenance. In Baltimore City marijuana enforcement appeared to be an adjunct to drug enforcement generally, while in Montgomery County it was importantly a part of traffic enforcement, though more likely to involve cars with apparent equipment problems rather than unsafe driving.

Marijuana enforcement is only modestly expensive in dollar terms; \$30 million is certainly a generous estimate of the costs of policing, incarceration and criminal justice generated treatment. More important is that it adversely affects many thousands of individuals each year.

Is this justified? Marijuana is not a harmless drug. It causes a variety of harms to users and others, through intoxication and associated accidents and as a consequence of dependence (Hall and Solwijn, 1998). Enforcing prohibition could be justified if it led to reductions in marijuana use.

This study did not include an assessment of how much the intensified enforcement has affected marijuana use and associated harms in Maryland; data for such an assessment do not exist and cannot easily be generated. For that purpose we are forced to rely on analysis at the national and international level. MacCoun and Reuter (1997) found that the removal of criminal penalties in the Netherlands in 1976 did not increase marijuana use; however when the drug became readily accessible through licensed coffee shops, use rose sharply, reaching almost U.S. levels by 1992. During the 1970s, 11 states removed criminal sanctions for possession of up to one ounce of marijuana, often only for the first offense. Research has generally found very little effect (Single, 1989). Enforcement was not very stringent at that time so that this legal change may have been a largely symbolic; nonetheless it does challenge the claim that removing the penalties sends the wrong signal.

Supporting evidence is also available from Australia, where South Australia and the Australian Capital Territory have adopted various decriminalization schemes.<sup>20</sup> A national survey of cannabis use found no difference between South Australia and other states in the prevalence of cannabis use (Donnelly, Hall, and Christie, 1995). Though its small sample size limits the strength of that finding, a longitudinal comparison of cannabis use among 421 students

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<sup>19</sup> The "All drugs" category includes homeless care (n=159) but not transitional (157) because they appear redundant and omitting transitional equaled the total of 44265. Homeless care was marked as residential.

at the Australian National University (in the Australian Capital Territory, a depenalization jurisdiction) and 470 students from the University of Melbourne (in Victoria, where marijuana possession was still subject to criminal penalties) also found no changes in use for either group (McGeorge and Aitken, 1997). The data on Spain, where marijuana and other psychoactive drugs have been depenalized for a generation, provides some support for the lack of effect of depenalization, in that the Spanish rates are comparable to those for other Western European nations (MacCoun and Reuter, 2001).

Is there any risk that, even if marijuana use does not rise much, removal of criminal sanctions will lead to a worsening of other drug problems? It is hard to find a theory or model that produces such a result; certainly it has not been observed anywhere that marijuana laws have been relaxed.

The debate about marijuana policy has been rekindled since 1996 by referenda in about ten states on medical use of marijuana. Since 1996 the proposition has passed in eight of those states, sometimes with overwhelming support. Recent enforcement of 1998 federal statutes barring those convicted of a first-time drug offense from receiving student loans for one year (with longer penalty periods for subsequent convictions) has further increased concern, since many of those who lose their loan access have been convicted only of marijuana possession. There is a sense that the populace may be willing to consider some changes in the regime governing the use of this drug, though there is surprisingly little opinion data supporting this view.

The immediate issue in front of the state of Maryland is not legal change but policy decisions. Does Maryland need to arrest and incarcerate so many of its citizens even if it retains the existing criminal sanctions? The police have enormous discretion in deciding how actively to enforce laws against marijuana possession, given the vast numbers of occasional marijuana users. Our study suggests enough troubling aspects to the intensification that a full assessment of the costs of aggressive enforcement of this prohibition, and its disparate impact across different age and race groups, that there should be a full discussion of the issue.

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<sup>20</sup> One irony of the South Australian “expiation scheme,” as it is called, is that more marijuana users have been imprisoned for non-payment of fines than were previously incarcerated for marijuana possession offenses (MacDonald and Atkinson, 1995).

## APPENDIX A

### Data Sources and Calculations

#### *Arrests*

Data on state wide and county arrest numbers were taken from the state Uniform Crime Reports tables. These data included the composition of the arrests in terms of age, race and sex; however since they were aggregates rather than individual level files, it was not possible to provide age/race etc. breakdowns.

The police departments of Baltimore City, Montgomery and Prince George's Counties provided 1998 and 1999 individual level data on all arrests. The files included no identifying data or the prior criminal record of arrestees, but did permit the more sophisticated analysis of age/race/sex characteristics of arrestees. In addition, we analyzed the distribution of arrests across time of day, day of week, and police reporting area in each jurisdiction.

#### *Calculating Probability of Arrest for Users*

We can make only rough adjustments for age of marijuana use in Maryland. We assumed that the rate of increase in marijuana prevalence (any use in previous twelve months) in Maryland was equal to that for the nation since 1990. The national population use rates were taken from the National Household Survey on Drug Abuse. We further assumed that the relative rate for the Maryland and US populations in 1990, our base year, was equal to the relative rate among high school seniors, for whom data have been collected every second year since 1992 from samples of in each Maryland county. The national rates for high school seniors were taken from the Monitoring the Future survey (Johnston, O'Mally and Bachman, 1998). We used the county figures for tenth and twelfth grades in the five major jurisdictions to produce rates for each year for seniors for the state as a whole; tenth grade rates were weighted twice as heavily as twelfth grade rates, to reflect the fact that some high school seniors are 18 years old and not in the juvenile arrest figures. That permitted an estimate of the arrest rate per user for the Maryland population aged 12-17. For those aged 18-24, we used the imputed state total population user figure and subtracted out the number of users aged 12-17; that permitted an estimate of the arrest rate per user for those aged 18-44.

#### **Calculating Probability of Arrest by Age and Race**

The estimates for Table 7 were formed first by computing the actual relative number of black male and female juvenile marijuana possession arrestees in Montgomery County in 1998.

For Prince George's County and Baltimore City 1998 and 1997 respectively adult arrest data were used to estimate the relative share of black males and females. After assigning Baltimore and Anne Arundel County the same relative share of black female and black male arrestees, we used these relative figures to estimate the number of black male marijuana possession arrestees for several years under the untested assumption that these relative shares remain stable.

The next step was to estimate the black male population aged 12-17. The number of black males aged 10-19 by county and year was available on the U.S. Census web site. Dividing these numbers for 1997 by the total 10 to 19 year-old male population for that year yielded the share of this age group who are black males. To estimate the number of black males aged 12-17, we multiplied the number of males aged 12-17 (also available on the Census web site) by the percentage of 10 to 19 year old males who are black. We also estimated the share of all 5 to 17 year olds in 1997 in each county (the data range available for each year at the time) who are black males aged 12-17. Finally, we used the estimates for black male arrestees and the black male population to compute a black male arrest rate. To estimate the black male population aged 12-17 for other years, we assumed a constant ratio of black males aged 12-17 to all 5-17 year olds and applied this ratio accordingly. This generated an estimate of the rate of marijuana possession arrests of black males aged 12-17 for several years back to 1980.

#### *Incarceration*

It proved exceedingly difficult to obtain data on the number of admissions to jail for specific offenses. No state agency maintains records on commitments to local jails. Our starting point was a listing (hard copy only) from the Maryland State Justice Information System (JIS) of all arrests for marijuana possession, identified by a case ID number in the period 1998-1999. In Montgomery and Prince George's counties the county department of corrections provided a listing (again, hard copy only) of all admissions to the jail involving violations of the Controlled Distribution Substances (CDS) laws. We used the Department of Corrections list to identify all cases also on the JIS list; that provided an unduplicated listing of all admissions to county jail that involved a marijuana possession charge. For each of these we then had information on the length of time spent in custody, which might involve multiple admissions following a single arrest (for example, pretrial and post-disposition).

Unfortunately, the JIS data set did not identify the most serious charge at time of admission to jail. Pretrial time is not allocated by charge. For a sample of 400 cases in each

county, we obtained more detailed data from a commercial data service, Courtlink, enabling us to determine which cases on the list involved charges more serious than marijuana possession.

In Baltimore City, we had only the Courtlink data, nothing from the city jail. Courtlink and county correctional jail records were consistent in the other two counties. Hence, we used the Courtlink data to generate jail time estimates for the sample of 400 cases in Baltimore City.

To estimate the time spent in jail resulting from marijuana possession charges, we had to estimate the number of arrests for which marijuana possession was the most serious charge. These data are for adults only, though it is possible that they include a small number of juveniles tried as adults, an unlikely disposition for marijuana possession arrests. The starting point was total 1998 marijuana possession arrests by county, as provided to the Maryland Department of Public Safety. We then calculated the share of Courtlink cases with marijuana possession as the most serious charge that included some time in jail. The product of these two numbers gave an estimate of how many persons passed through the county jail for marijuana possession. Courtlink also provided the estimate of mean and median jail time.

For these calculations, we excluded arrestees who were still subject to supervision for a prior charge. For each arrestee we obtained data on any arrest in the three jurisdictions in the previous two years. Records from the district and circuit courts in each county were then checked to ascertain whether any charges remained unresolved or the individual was still under probationary supervision at the time of arrest for marijuana possession. That number proved small in each county.

## **APPENDIX B**

### **Modeling Changes in Marijuana Treatment Admission Rates**

This Appendix details the statistical basis for the statements in the body of the report concerning the impact of marijuana possession arrests and adolescent marijuana use on admissions to drug treatment. Data were available at the county level on:

- Possession arrests by drug (marijuana; cocaine and heroin) and age (under 17, 18+)
- Treatment admissions by drug (marijuana; cocaine; heroin) and by age (under 17, 18+)
- Self-reported use of marijuana by sophomores and seniors.

The self-report data were available for the years 1992, 1994 and 1996 and for 21 of Maryland's 24 jurisdictions. To test the independent effect of marijuana possession arrests on treatment admissions, we used change-in-rate measures for each variable. This eliminated the need to specify a full model of the determinants of treatment admissions, at the cost of higher variance estimates; factors that change slowly can be omitted because we are examining only determinants of change.

Thus the equations fitted were of the form:

Change in marijuana admissions per thousand residents = a + b change in use rates by sophomores and seniors + c change in marijuana possession arrests per thousand residents + an error term.

## REFERENCES

Anthony, J., Warner, L., and Kessler, R. (1994). "Comparative epidemiology of dependence on tobacco, alcohol, controlled substances and inhalants: Basic findings from the National Comorbidity Study." *Experimental and Clinical Psychopharmacology*, 2, 244-268.

Donnelly, N., Hall, W. and Christie, P. (1995). The effects of partial decriminalisation on cannabis use in South Australia 1985–1993. *Australian Journal of Public Health*, 19; 281–287.

Hall, W. and N. Solowij (1998) "Adverse Effects of Cannabis" *Lancet* 352; 1611-1616.

Kelling, G. and Coles, C. (1996) *Fixing Broken Windows: Restoring Order and Reducing Crime in Our Communities*, New York, Martin Kessler Books, The Free Press.

Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (Annual). *National Survey Results on Drug Use from the Monitoring the Future Study*. Rockville, MD: National Institute on Drug Abuse. Estimates for 1991 through 1998 appear at <http://www.isr.umich.edu/src/mtf/>.

MacCoun, R., and P. Reuter (1997) "Interpreting Dutch cannabis policy: Reasoning by analogy in the legalization debate". *Science*, 278: 47-52.

MacCoun, R. and P. Reuter (2001) *Drug War Heresies: Learning from Other Vices, Times and Places* New York, Cambridge University Press.

MacDonald, D., and Atkinson, L. (1995). *Social Impacts of the Legislative Options for Cannabis in Australia: Phase I, Research*. Canberra: Australian Government Printing Office.

Sherman, L.W. (1995). "Hot Spots of Crime and Criminal Careers of Places" John E. Eck and David Weisburd, eds., *Crime and Place*, Monsey, N.Y. : Criminal Justice Press ; 35-52.

Single, E. (1989). The impact of marijuana decriminalization: An update. *Journal of Public Health Policy*, 10; 456-466.

Substance Abuse and Mental Health Services Administration. (Various years). *National household survey on drug abuse*. Rockville, MD: U.S. Department of Health and Human Services. <http://www.health.org/pubs/95hhs/app5.htm>.

Tonry, M. (1995) *Malign Neglect* Oxford, Oxford University Press.