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188867

FINAL REPORT

MONITORING THE MARIJUANA UPSURGE WITH DUF/ADAM ARRESTEES

(99-IJ-CX0020)

to the National Institute of Justice

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ABSTRACT

Marijuana use nationwide had continually dropped from a peak around 1979 until the early 1990s. Starting in 1991, most of 23 ADAM locations experienced a rapid increase in use among youthful (age 18-20) arrestees from an average low of 25% in 1991 up to 57% in 1996. Two national surveys (MTF and NHSDA) also recorded rapid but more modest increases in youthful marijuana use within the mainstream population starting a year later. From 1996 to 1999, most ADAM locations as well as the national surveys recorded stable but relatively high levels of youthful marijuana use suggesting that by 1999, the Marijuana Epidemic had plateaued nationwide. Marijuana itself appears to be the drug-of-choice for a new generation of ADAM arrestees, especially when smoked as a blunt in an inexpensive cigar. Members of this Marijuana/Blunts Generation (arrestees born since 1970) have been much less likely to become involved with crack or heroin injection than their predecessors.

INTRODUCTION

Various surveys have identified a rapid increase in marijuana use during the 1990s, especially among youths. This raises a variety of questions about the future of the Nation's drug problems. On the one hand, there is the gateway theory (Kandel 1975). It has been widely found that youthful substance use tends to progress through a series of stages from non-use, to use of alcohol and/or tobacco leading to potential use of marijuana and then other illicit drugs like crack and heroin. The recent increase in youthful marijuana use has fueled speculation that a new "epidemic" of hard drug abuse may be imminent (ONDCP 1997, p. 23) and that the burden of drug abuse will be dramatically increasing in the near future (Gfroerer and Epstein, 1999). On the other hand, the start of this new epidemic coincides with the decline in the popularity of crack cocaine, especially among youths. This suggests that youthful subcultures may have shifted from the destructive nature of crack abuse to use of less dangerous drugs.

This report used the term "epidemic" in a scientific sense. Research in a wide variety of fields has documented that new innovations often spread within a population following a pattern similar to a disease epidemic (Rogers, 1995). The term "epidemic" is employed in this report as a synonym for "diffusion of innovation" and refers to the rapid and broad spreading of a practice (such as smoking marijuana) within a population or subpopulation (such as among 16- to 25-year-olds).

This report examines the dynamics of trends in marijuana use detected at 23 locations across the nation served by the Arrestee Drug Abuse Monitoring Program [ADAM] from 1987 through 1998. The analysis provides insight into prevailing trends among youths who tend to get in trouble with both drugs and the law. The report also examines trends prevailing in the general population, nationwide, with data from the National Household Survey on Drug Abuse

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[NHSDA] and the Monitoring the Future [MTF] programs. The remainder of this section describes the theoretical foundation for this work: the epidemiology of drug use trends, and the nature of the gateway theory.

Structure of a Drug Epidemic

Much research suggests that drug epidemics tend to follow a predictable course. This analysis employs a conceptual model that distinguishes the characteristics of four phases: incubation, expansion, plateau and decline. This model was originally operationalized to explain the course of the Crack Epidemic (Golub and Johnson 1994, 1997). It has since been used to study the Heroin Injection Epidemic and has been adapted for the study of the recent increase in marijuana use (Golub and Johnson 1999; Johnson and Golub 2001). This study found that the dynamics of recent increase in marijuana use followed a similar pattern as the Crack and Heroin Injection Epidemics suggesting all three epidemics were the result of a similar phenomenon.

This report examines the dynamics of the Marijuana/Blunts Epidemic over time and across locations. Theoretically, the passing of each phase should result in a distinguishable pattern for the prevalence of marijuana use detected by the ADAM program within the overall population of adult arrestees (all arrestees age 18 and above) and the population of youthful arrestees (age 18-20).

Much historical evidence suggests that a drug epidemic typically grows out of a specific social context; the Heroin Injection Epidemic grew out of the jazz era (Johnson and Golub 2001) and the Crack Epidemic started among inner-city drug dealers (Hamid 1992; Johnson, Golub, and Fagan 1995). In both of these cases, there was an initial *incubation phase* during which the new drug use practice was developed and nurtured among a relatively small cohesive group of adult users. Marijuana use has been widespread since the 1960s, however the prevalence of its use had been declining since 1979 (Johnston, O'Malley and Bachman 1999; SAMHSA 1999). During the incubation phase, the ADAM program would be expected to detect relatively low levels of marijuana use overall and among youthful arrestees.

Ethnographic research suggests that the re-emergence of interest in marijuana use especially in blunts was pioneered as part of the youthful, inner-city, predominately black, hip-hop movement (Furst, Johnson, Dunlap, and Curtis 1999; Golub and Johnson 1999; Sifaneck and Kaplan 1996; Sifaneck and Small 1997). These youths celebrated marijuana/blunts use in their music and on T-shirts. This led to an *expansion phase* in which use spread to more inner-city youths and other groups of youths. In this manner, the Marijuana/Blunts Epidemic primarily grew out of an indigenous youth subculture. In contrast, the Crack and Heroin Injection Epidemics spread first among adults and only afterwards to youths. This dynamic suggests that during the expansion phase the ADAM progrqm would be expected to detect rapidly increasing rates of marijuana use

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among youthful arrestees and more modest increases overall. The rate of detected marijuana use among older arrestees would have subsequently increased as 1) the use of marijuana/blunts spread to older users, perhaps former marijuana users; and 2) youthful marijuana users aged into the older categories. Consequently, the rate of detected marijuana use among all adult arrestees was expected to have increased more slowly and for a longer period of time than the rate among youthful arrestees.

By about 1996 (as determined in this study), the Marijuana/Blunts Epidemic entered a *plateau phase*. During this period, those youths coming of age and getting involved with illegal drugs were primarily using marijuana and not crack or heroin. Indeed, a series of focus groups across the nation found that much of the increased interest in cigars among youths was for their use as blunts (DHHS, 1999). Unfortunately, major national surveys such as Monitoring the Future [MTF], the National Household Survey on Drug Abuse [NHSDA], and ADAM, do not distinguish among ways of consuming marijuana. Such information would have been able to more accurately identify the extent to which the recent increases in youthful marijuana use are associated with the use of blunts. During the plateau phase, the ADAM Program would be expected to detect stable and high levels of marijuana use among youthful arrestees and slowly increasing rates overall.

As determined in this study, marijuana was the premier drug of choice among youthful arrestees in the 1990s. This is good news to the extent that the marijuana use is associated with a rejection of crack and heroin due to the potentially devastating consequences of their use (Furst, Johnson, Dunlap, and Curtis 1999; Golub and Johnson 1999). This rejection of other drugs may not be as characteristic of the broader population. From 1992 to 1997, the proportion of high school seniors reporting lifetime use of LSD increased from 8.6% up to 13.6% its highest recorded level since the start of the MTF program in 1975 (Johnston, O'Malley, and Bachman 1999). Use of hallucinogens in England and the U.S. has been frequently associated with the *rave* or dance party scene typically involving white youths from middle and upper-class suburban enclaves (Parker, Aldrige and Measham 1998; Hunt, 1997).

In the 1990s, both the Heroin Injection and Crack Epidemics were experiencing their *decline phases*. During this period, a decreasing number of youths coming of age used crack or injected heroin. Yet these two practices were still quite widespread because many older users have persisted in their habits. By analogy, the decline phase of the marijuana epidemic should be characterized by fewer youths coming of age using marijuana. During the decline phase, the ADAM program would be expected to detect a rapid decrease in marijuana use among youthful arrestees but slower declines in overall marijuana use as the arrestee population becomes less dominated by individuals who came of age during the plateau phase of the Marijuana/Blunts Epidemic.

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The Gateway Theory

Kandel (1975) identified that most American youths tend to progress through as many as four stages of substance use: 1) non-use, 2) alcohol/tobacco, 3) marijuana, and 4) other drugs including cocaine and heroin. Individuals who do not use substances associated with one stage rarely use those associated with later stages, but not all users at one stage progress to the next. This sequencing of substances has been widely replicated (Kandel, 2001). Because of their intermediary role, alcohol, tobacco, and marijuana have come to be regarded as "Gateway Drugs." Today, much substance use prevention policy seeks to forestall or delay youthful use of gateway drugs in order to reduce subsequent abuse of drugs like heroin and crack.

This strategy may no longer be so appropriate. Several analyses suggest the gateway sequence may not be as relevant to the inner-city populations that disproportionately generate youths who get in trouble with both drug abuse and the law (Golub and Johnson, 2001b). The gateway sequence may no longer characterize the experiences of mainstream youths either. Calculations with NHSDA data suggest that the probability of progression from one stage of substance use to the next have varied substantially over time (Golub and Johnson, 2001a). The probabilities increased steadily after World War II reaching a peak among persons born in 1960. Among persons born in the 1970s, so far the risk of progression to marijuana use increased but the risk of progression to cocaine powder, crack and/or heroin injection has not.

These recent studies suggest that youthful substance use progression reflects cultural or subcultural norms among youths about which substances are acceptable and that these norms vary over time and across locations. Thus, it seems essential to monitor not just which substances youths are using but what that substance use represents to them.

METHODS

Three techniques were used to analyze trends in detected marijuana use at each ADAM location: 1) graphical analysis of trends in use by age over time; 2) age-period-cohort analysis; and 3) graphical analysis of variation in lifetime use of crack, lifetime heroin injection, and recent marijuana use by birth year. To examine whether parallel trends occurred in the general population, similar analyses were performed with data from two widely cited ongoing survey programs: NHSDA and MTF. This section describes each of these data sources and the analytic procedures employed. ADAM data (as well as NHSDA and MTF data) were obtained from the National Archive of Criminal Justice Data [NACJD] maintained by the Inter-university Consortium for Political and Social Research [ICPSR] at the University of Michigan.

The Arrestee Drug Abuse Monitoring Program

In 1987, the National Institute of Justice established the Drug Use Forecasting [DUF] program to measure trends in illicit drug use among booked arrestees in most large cities (or counties) with a

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total population of at least 1 million, as well as many smaller cities for geographical diversity. In 1997, the program evolved into the Arrestee Drug Abuse Monitoring [ADAM] program. The ADAM 1998 annual report describes improvements and expansion plans that accompanied this name change (NIJ 1999). The program plans to grow to 75 locations over the next few years. The program collects urine samples (along with self-reported information) from about 300 adult arrestees, each quarter, at each location. Female arrestees are oversampled at many locations and comprise about 30% of the total. Some locations also recruit samples of juvenile arrestees. This study examines trends at the 23 locations operating in 1997 and is based on information from over 300,000 arrestees at these sites from 1987 through 1999 but excludes sites added in 1998. The 1999 data was obtained late in the study, hence several tables and figures only provide ADAM data through 1998.

ADAM samples are typically not representative of the general communities where data collection occurs. Given the drugs-crime nexus, ADAM data provide excellent information about drug use among many of the most serious drug abusers at each location. This information is of particular interest to criminal justice and other agencies. Analyses of the ADAM data may be of even broader interest to the extent that drug use among arrestees tends to parallel or perhaps even lead trends in the general population.

Throughout the life of the DUF and ADAM programs, the urine testing and many of the core questions have remained constant allowing for analysis of trends over time. Urine test results provide a particularly valid indication of recent marijuana use. Marijuana metabolites tend to remain in the body. Marijuana consumption can be detected by the EMIT urinalysis screen used by ADAM up to 10 days after last use for infrequent users and 30 days or longer for chronic users. In contrast, the drug detection period for opiates (such as heroin) and cocaine is only 2 to 3 days. In 1996, the cutoff level for determining recent marijuana use was lowered from 100 down to 50 nanograms (NIJ, 1997). More than 34,000 samples from 1995 were tested at both cutoff levels. Overall the prevalence of detected marijuana use increased 5% to 7% using the lower cutoff level. The difference was most pronounced among very young arrestees (under age 15) and older arrestees (over age 30) who tend to be less frequent users of marijuana.

The National Household Survey on Drug Abuse Program

The NHSDA was established in 1971 to measure the prevalence and correlates of illegal drug use and monitor trends over time in the non-institutionalized population of the United States (SAMHSA 1999). The survey tends to undersample many of the most serious drug abusers who are prone to incarceration, residence in other institutions, and unstable living arrangements. The survey was conducted in 1971 and 1972 and then every 2 or three years until 1990 when it became an annual survey. Analyses presented in this report are based on over 200,000 responses provided in public use data files available for surveys conducted in 1979, 1982, 1985, 1988, and

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1990-1997. The study employs a complex sampling design and oversamples Hispanics, blacks, and youths age 12 to 17. Sample weights were used in all calculations to obtain unbiased estimates.

The Monitoring the Future Program

Each spring since 1975, the University of Michigan's Institute for Social Research has conducted a survey to estimate the prevalence of drug use among high school seniors in the United States and monitor trends over time (Johnston, O'Malley and Bachman, 1999a). Starting in 1991, the program also surveyed 8th and 10th graders. The survey tends to undersample many of the most serious drug users who are disproportionately likely to drop out of school or be absent on the day of the survey. Analyses presented in this report are based on over 350,000 responses from high school seniors included in public use data files for surveys conducted 1976-1997 and findings from published reports for 1998-99 when available (Johnston, O'Malley and Bachman, 1999b). The study employs a complex sampling design. Sample weights were used in all analyses in order to obtain unbiased estimates of substance use.

Graphical Trend Analysis

The conceptual model for a drug epidemic leads to very explicit predictions about changes in the prevalence of marijuana use over time. To examine these predictions and the timing of the various phases, a graph of detected marijuana use over time was prepared for each of the 23 locations served by the ADAM program in 1997. Each chart displays the rate of detected marijuana use among all recent adult arrestees age 18+ as well as specific rates for a comprehensive series of non-overlapping age categories (18-20, 21-24, 25-29, 30-39, 40+). This allows for the identification of when and how much each age group was affected by the Marijuana/Blunts Epidemic. A similarly constructed chart presents the trends in self-reported marijuana use within the past 30 days for the general population as recorded by NHSDA program, and the current marijuana rates among 8th, 10th and 12th graders as recorded by the MTF program.

These charts contain numerous lines. However, two lines are of primary importance according the epidemic model: youthful arrestees (age 18-20), and overall prevalence (all arrestees age 18+). The charts display these two quantities as solid lines. The prevalence rates within other age categories are displayed as dotted lines. Visual inspection was employed to compare the trend at each ADAM location to the epidemic model. The prevalence among youthful arrestees was examined to determine if and when the expansion phase had occurred (characterized by a rapid increase among youths) and whether it had evolved into the plateau phase (characterized by stable high levels). Next, the changes in prevalence in other age categories were examined to

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determine which age groups were most affected in the early part of the expansion phase. Lastly, the impact over time of this epidemic on the overall prevalence of detected marijuana was examined.

Random year-to-year fluctuations in the rates of marijuana use confounded efforts to identify the dynamics of the Marijuana Epidemic. In general, small variations from one year to the next were disregarded as potentially attributable to the limited precision of the ADAM estimates. The greatest credence was placed on large changes that were confirmed by consistent trends across multiple years. The standard errors for the ADAM estimates provided a guide to the potential magnitude of random year-to-year variations. Standard errors for the detected prevalence of recent marijuana use within each age category in each year were typically on the order of 3%. Standard errors for all arrestees 18+ combined were about 1.3%. Thus substantial random variations from year to year were expected. A year-to-year difference in any age category needs to be at least 11% to be statistically significant at the α=.01 level in a two-tailed z-test. A difference in the overall rate would need to be at least 5%. Trends smaller than these threshold values might reasonably be attributed to random variation.

Age-Period-Cohort Analysis

Discerning age, period, and cohort effects is complicated by the multicolinearity of these parameters—specifically, age = (interview year) – (birth year). Hence, it is not possible to naively include all three factors as independent variables in an algebraic equation such as employed in regression analysis. However, all three types of effects result in a distinctive pattern of birth cohort participation over time that can be detected in a two-way ANOVA table for detected marijuana use as a function of birth year down the rows and interview year across the columns.

Each row traces the marijuana use history of persons born in a given year, known as a birth cohort. The entries in each row reflect changes in a birth cohort's level of marijuana use as they age, to the extent that the ADAM program recruits from roughly the same population in a similar way each year. *Age effects* are those behaviors that develop with growing older. For example, to the extent that individuals give up marijuana use in adulthood the prevalence would decline as a cohort passes through their twenties and thirties. Because successive birth cohorts reach a given age in successive years, such age effects result in similarities of detected marijuana use on the various downward diagonals of an age-period-cohort table. To facilitate identification of age effects, the age-period-cohort tables in this report explicitly highlight those diagonals associated with ages 18, 25, and 30. Continuing with the hypothesized maturation effect, the prevalence levels of detected marijuana among older persons (as displayed above and to the right of the diagonal line corresponding to age 30) could be expected to be lower than those of younger persons below and to the left.

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The use of marijuana can be affected by various *period effects*, historical changes in its popularity, its availability, and the risk of sanctions. Period effects result in decreased (or increased) levels of use among persons of all ages as indicated as a variation across columns in the age-period-cohort analysis. To facilitate detection of period effects, the age-period-cohort tables in this report provide column averages at the bottom of each table that summarize marijuana use among persons age 18 and above, and among persons age 18-20. Persons under age 18 were excluded from these averages as still at risk for initiating marijuana use.

Some historical events permanently affect individuals at an impressionable age. Users of some drugs like crack and heroin often persist in their habits throughout much of their lives. In this manner, the Heroin Injection and Crack Epidemics heavily influenced those individuals who came of age at the time and use of these drugs became associated with members of a particular birth cohort, a *cohort effect*. Marijuana use may have a similar effect on this new generation of drug users. Cohort effects can be identified in an age-period-cohort analysis as variation down the rows. This variation is summarized by the row averages for detected marijuana prevalence among arrestees age 18 and above at the right of each table.

An age-period-cohort analysis can examine a wider range of possible variations than the graphical trend analysis. Indeed, the primary data included in the graph (prevalence overall and among youthful arrestees) are provided on the bottom of the table. Visual inspection of these tables was employed to determine whether the timing of various historical changes affected each birth cohort similarly.

The flexibility of the age-period-cohort analysis comes at a price. The individual estimates of each birth cohort's marijuana use in each year are of limited accuracy. Estimates based on fewer than 25 respondents were excluded from the tables in this report in order to guarantee a maximum standard error of 10%.[1] Older arrestees were grouped into multi-year birth cohorts: those born before 1940, 1940-44, 1945-49, 1950-54, and 1955-59.

Three Generations Of Drug Use Among Arrestees

Golub and Johnson (1999) used ADAM data for Manhattan to identify three generations of arrestees with distinct drug use patterns: The Heroin Injection Generation (born 1945-54), The Cocaine/Crack Generation (born 1955-69), and the Marijuana/Blunts Generation (born 1970+). These differences were eminently visible in a graph of the variation in substance use across birth years. This report presents a three-generations graph for all 23 ADAM locations, as well as the NHSDA and MTF data.

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[1] The formula for the standard error of a prevalence rate estimate is as follows: S.E. = $[P\times(1-P)/N]^{1/2}$. It reaches a maximum at P=50%. Thus, an estimate based on N=25 respondents will have a maximum standard error of 10%.

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The results of the three-generations graph can be ambiguous. Variations of substance use across birth years can be caused by age, period or cohort effects. Golub and Johnson (1999) confirmed that the heroin injection, crack smoking, and marijuana use among ADAM-Manhattan arrestees were the result of period effects in three separate age-period-cohort analyses for detected use of opiates, cocaine, and marijuana. This report presents age-period-cohort analyses for detected use of marijuana at each location. Golub, Hakeem and Johnson (1996) presented age-period-cohort analyses that suggest the Crack Epidemic resulted in a cohort effect at most of the ADAM locations.

For each ADAM location, a graph of drug use as a function of birth year was created. The precision of the estimate for each birth year was enhanced by use of multiple years of data. Three substances were plotted corresponding to each of the three drug generations: heroin injection, crack, and marijuana. The proportion of heroin injectors (former or current) was estimated from their self-reports of lifetime heroin use and lifetime injection of illicit drugs. Individuals had to report both. This calculation was necessary because the ADAM questionnaire did not ask explicitly about heroin injection in all years of the survey. At some locations many individuals reported injection drug use but not heroin use (they may have been injecting cocaine or amphetamines) and others reported heroin use but no injection drug use (many of these were presumably sniffers). Individual self-reports of lifetime crack use were used to indicate former or current involvement with this drug. Detected marijuana use was used to indicate current marijuana use. Presumably many of these current marijuana users were smoking blunts. This usage could not be determined however since the ADAM questionnaire does not explicitly ask about use of blunts.

RESULTS

This section presents results of graphical trend analyses for each ADAM location and for the general population as a whole based on the NHSDA and MTF national data. The section also presents a summary of findings from the age-period-cohort and three-generation analyses that identifies both similarities across locations and exceptions. The complete results of all three analyses are included in Appendices A-C.

Graphical Trend Analysis

Nationwide, overall marijuana use steadily declined from 13% in 1979 down to a low of 4% in 1992. Marijuana use among high school seniors decreased from a peak of 37% back in 1978 to a low of 12% in 1992. The NHSDA recorded a remarkably similar decline among youthful household members (age 18-20) for this period. Then from 1992 to 1996, the rate among high school seniors steadily increased up to 22%; the rate among youthful household members rose

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more modestly to 17%. Relatively stable rates were subsequently recorded through 1999 for high school seniors and 1998 for household members, which suggests that the epidemic in the general population may have reached a plateau around 1996.

The table below summarizes the status of the Marijuana Epidemic at each location across the nation. By 1999, the Epidemic had reached the plateau phase in most locations. The similarity in findings across most of the 23 ADAM locations suggests that the Marijuana/Blunts Epidemic was national in scope. Based on this finding, an ADAM Program Average was calculated to facilitate presentation of the general characteristics of the phenomena by simply averaging the prevalence of detected marijuana use at each age in each year across locations. This ADAM program average does not necessarily represent the average across arrestees nationwide. Furthermore, it is not necessarily a good idea to focus on this type of an average for use of other drugs like cocaine/crack, amphetamines, and heroin for which use varies widely across locations. Indeed, even for marijuana use there were important local differences. The remainder of this section presents the general trends in marijuana use detected by the ADAM Program Average, NHSDA, and MTF data.

1999 Status of the Marijuana Epidemic by ADAM Location

Region	Location	1999 Status		Region	Location	1999 Status
Westcoast	Los Angeles	Plateau/exp		**Northeast**	Manhattan	Plateau
	Portland (OR)	Expansion			Philadelphia	Plateau
	San Diego	No Epidemic			Washington, D.C.	Plateau
	San Jose	Plateau				
				Midwest	Chicago	Plateau
Southwest	Dallas	Plateau			Cleveland	Plateau
	Denver	Plateau			Detroit	Plateau
	Houston	Plateau			Indianapolis	Plateau
	New Orleans	Plateau			Omaha	Plateau
	Phoenix	Plateau			St. Louis	Plateau
	San Antonio	Plateau				
				Southeast	Atlanta	Plateau/exp
					Birmingham	Plateau/exp
					Ft. Lauderdale	Plateau/exp
					Miami	No Epidemic

From 1988 to 1990, detected marijuana use among adult arrestees (age 18+) declined, on average, from 35% down to 19%, and among youthful arrestees (age 18-20) from 44% to 24%. Subsequently, the rate among youthful arrestees increased steadily from 25% in 1991 up to 57% in 1996, suggesting that the expansion phase occurred among arrestees from 1991 to 1996, on

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average. From 1996 to 1999, both the overall rate and rate among youthful arrestees held relatively steady at around 60% and 37%, respectively. Thus, the plateau phase among arrestees appears to have set in by 1996 and lasted at least through 1999, on average.

All three major national surveys (NHSDA, MTF and ADAM) recorded a similar overall pattern in youthful marijuana use: a decline in the 1980s followed by a rise and stabilization in the 1990s. These findings along with the ethnographic information cited previously strongly suggest that a new nationwide epidemic in marijuana use passed through its expansion phase by 1996 and was in its plateau phase through 1999.

There were several important differences across survey findings. The increase in marijuana use started among youthful arrestees (ADAM) a year or two before it started within the general population (NHSDA and MTF). Additionally, the peak rate of reported past month use among high school seniors occurring during the plateau phase (about 22%) was far below the previous peak (37%) recorded back in the late 1970s. It was also far below the peak rate of detected marijuana use among youthful arrestees in the same period (about 57%) as well as their rate of reported past-month use (about 60%).[2] This suggests that the Marijuana/Blunts Epidemic started among those individuals who tend to get in trouble with the law and spread more widely within this group than among youths in the general population. Conceivably, the prevalence of marijuana use in the general population could undergo another expansion if use spread to other youthful subpopulations. Further research is clearly needed to identify which groups of mainstream youth have been most affected so far. The following sections examine geographic variation among arrestees across ADAM locations according to the following regions: Northeast, Midwest, Southeast, Southwest, and West Coast.

The Marijuana/Blunts Epidemic Among Arrestees in the Northeast

Manhattan-plateau since 1996. Marijuana use in Manhattan had dropped from 27 percent overall (i.e., among all adult arrestees) in 1987 to 16 percent in 1991. From 1991 to1993, the popularity of marijuana started to rise among youthful adult arrestees (hereinafter referred to as "youthful arrestees"). Assessing the start date of the increase in the rate of use is difficult because the upward trend was quite slow at first and a 1-year dip in youthful marijuana use occurred in 1993. Subsequently, the popularity of marijuana among youthful arrestees increased to a peak of 61 percent in 1996. From 1996 to 1999, the rate of marijuana use among youthful arrestees held steady at about 60 percent, with the overall rate holding at about 30 percent.

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[2] The rate of self-reported past month use among youthful arrestees was calculated separately to support this comparison. Across all sites and interview years, most (80%) youthful arrestees detected as recent marijuana users via urinalysis also reported past month use. The non-disclosers were more than offset by individuals who tested negative for marijuana but still reported use.

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Philadelphia- plateau since 1995. Marijuana use among all adult arrestees in Philadelphia dropped precipitously from 30 percent in 1988 to16 percent in 1990. From 1990 to 1993, marijuana use among youthful arrestees expanded rapidly and the rate among all adult arrestees returned to its former level. In 1993, the rate among youthful arrestees appeared to have entered a plateau at about 52 percent, but it subsequently inched up to 59 percent in 1995. The rate among youthful arrestees remained around 60 percent from 1995 through 1999, and the overall rate held steady around 35 percent.

Washington, DC-plateau since 1996. In 1990, only 7 percent of all Washington, D.C., adult arrestees were detected as recent marijuana users. The rate increased rapidly among youthful arrestees and then among older arrestees. By 1996, about 60 percent of youthful arrestees and 35 percent of all arrestees were detected as recent marijuana users. These rates remained relatively stable from 1996 through 1998. (This location did not collect a full sample in 1999.)

The Marijuana/Blunts Epidemic Among Arrestees in the Midwest

Chicago-plateau since 1996. Marijuana use among all adult arrestees in Chicago dropped from 48 percent in 1988 to 23 percent in 1991. In 1993, however, the overall rate bounced up to about 40 percent, where it approximately remained through 1999. The rate of recent marijuana use detected among youthful arrestees rose dramatically from 27 percent in 1992 to 75 percent 1996, where it approximately remained through 1999.

Cleveland- plateau since 1998. Marijuana use among all adult arrestees in Cleveland dropped from 26 percent in1988 to 11 percent in 1991. Subsequently, the rate among youthful arrestees began a steady rise from 14 percent in 1991 to 72 percent by 1998. The overall rate reached just below 40 percent in 1997, where it remained through 1999. The rate of marijuana use detected among youthful arrestees in 1999 dipped slightly, suggesting that the epidemic in Cleveland had entered a plateau in 1998.

Detroit-plateau since 1995. Marijuana use among all adult arrestees in Detroit dropped from 32 percent in 1988 to 13 percent by 1990. Subsequently, the rate among youthful arrestees increased steadily from 25 percent in 1990 to 73 percent in 1995. The rate of marijuana use detected among youthful arrestees fluctuated in a broad range from 62 percent to 75 percent from 1995 through 1999. The rate of recent marijuana use detected among all adult arrestees inched upward from 38 percent in 1995 to 46 percent in 1999.

Indianapolis-plateau since 1996. Marijuana use among all adult arrestees in Indianapolis dropped steadily from 41 percent in 1988 to 23 percent in 1991. Subsequently, the rate among youthful arrestees increased steadily from a low of 27 percent in 1991 to 70 percent in 1996 and remained around that level through 1999. Overall, the rate of recent marijuana use ranged from 39 to 45 percent from 1995 through 1999.

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Omaha- plateau since 1996. Marijuana use among all adult arrestees in Omaha dropped from 45 percent in 1988 to 21 percent in 1990. Subsequently, that rate rose steadily to 39 percent in 1992 and to 49 percent by 1996. The rate among youthful arrestees rose from 25 percent in 1990 and then held steady around 55 percent from 1993 through 1995. In 1996, the rate of marijuana use detected among youthful arrestees jumped to 71 percent, where it approximately remained through 1999. This change was probably not attributable to a change in the ADAM cutoff standard for determining recent marijuana use. (The prevalence of marijuana use among Omaha's youthful arrestees in 1995 increased only slightly from 53 percent under the previous 100 nanogram cutoff to 56 percent under the new 50 nanogram standard.)

St. Louis-plateau since 1996. Marijuana use among youthful arrestees in St. Louis rose steadily from a low of 15 percent in 1990 to 72 percent in 1996, where it approximately remained through 1998. The rate of overall use increased from a low of 14 percent in 1991 to a steady 45 percent by 1996, where it remained through 1998. (This ADAM location did not collect a sample in 1999.)

The Marijuana/Blunts Epidemic Among Arrestees in the Southeast

Atlanta-plateau/possibly expansion. In 1990, the prevalence of recent marijuana use detected among youthful (6 percent) and all adult (3 percent) arrestees in Atlanta was the lowest of any ADAM location. The rate among all adult arrestees increased to 33 percent by 1996. The epidemic did not appear centered on youthful arrestees only; rather, the rate of recent marijuana use detected increased among all adult arrestees as early as 1991. The rate among youthful arrestees, however, did increase the most, reaching 69 percent in 1996. From 1996 to 1998, the rate among youthful arrestees drifted slightly downward to 62 percent. The rate of use among all adult arrestees also decreased, from 33 percent in 1997 to 25 percent in 1998. Both rates bounced back to new peaks in 1999, suggesting the New Marijuana Epidemic in Atlanta could still have been in its expansion phase. On the other hand, the relatively steady rate observed from 1996 to 1998 suggests that the epidemic might have plateaued by 1996 and that the 1999 jump was an anomalous fluctuation.

Birmingham- plateau/possible expansion. Marijuana use among all adult arrestees in Birmingham dropped precipitously from 33 percent in 1988 to 12 percent by 1990. Subsequently, the rate among youthful arrestees increased dramatically from 15 percent in 1990 to 64 percent in 1996. The overall rate reached 40 percent in 1996. In 1998, the rate among youthful arrestees declined modestly to 57 percent and then jumped to 69 percent in 1999. This suggests that the expansion phase may have continued through 1999. On the other hand, the lack of any increase in the rate of use from 1996 to 1998 suggests that the epidemic may have plateaued by 1996 and that the 1999 jump was an anomalous fluctuation.

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Fort Lauderdale -plateau/possible expansion. Marijuana use among all adult arrestees in Fort Lauderdale dropped from 42 percent in 1988 to 20 percent in 1990. The rate of detected marijuana use among youthful arrestees started a very slow but steady increase from a low of 28 percent in 1990 to 63 percent in 1998. The overall rate increased even more slowly, from 20 percent in 1990 to 38 percent in 1998. The modest dip in the rate in 1999 suggests that the epidemic might have reached a plateau in 1998. On the other hand, the relatively slow expansion and a history of 2 previous years in which the expansion appeared to have halted (1992–93 and 1996–97) suggest that the expansion may not have plateaued by 1999.

Miami- no epidemic. From 1988 through 1999, marijuana use among all adult arrestees in Miami fluctuated around 30 percent. The rate among youthful arrestees fluctuated within a wider range—between 31 and 66 percent. The dramatic 1-year jump in marijuana use among youthful arrestees, from 45 percent in 1998 to 66 percent in 1999, may have been caused by changes to the ADAM sampling procedures. The data suggest no sustained trend in marijuana use has occurred among arrestees. Miami experienced neither a sustained decline in marijuana use among arrestees nor the epidemic-like growth in use among youthful arrestees observed at other ADAM locations.

The Marijuana/Blunts Epidemic Among Arrestees in the Southwest

Dallas- plateau since 1996. Marijuana use among all adult arrestees in Dallas had dropped steadily from 32 percent in 1988 to 17 percent in 1991. The rate of detected marijuana use among youthful arrestees subsequently increased from 22 percent in 1991 to 57 percent in 1996. The overall rate increased to 38 percent. Both rates remained stable from 1996 through 1999.

Denver- plateau since 1994. In Denver, the rate of detected marijuana use among youthful arrestees rose rapidly from 26 percent in 1991 to 60 percent in 1994, dropped modestly to 54 percent in 1995, and inched up to 62 percent by 1999. The overall rate rose more slowly, from 23 percent in 1991 to 41 percent by 1999.

Houston- plateau since 1995. The rate of detected marijuana use among all adult arrestees in Houston dropped precipitously from 43 percent in 1988 to 14 percent by 1991. The rate among youthful arrestees bounced back from a low of 19 percent in 1992 to 43 percent in 1995. In 1996 and 1997, the rate among youthful arrestees dipped to about 31 percent and then returned to 49 percent by 1999. This increase in marijuana use among youthful arrestees—well above the previously established plateau level in 1995—may have been attributable to changes in ADAM sampling procedures. By 1999, the rate of detected marijuana use overall had returned to 31 percent, still far below the rate observed in the late 1980s and below the ADAM program average.

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New Orleans- plateau since 1995. Marijuana use among all adult arrestees in New Orleans dropped precipitously from 46 percent in 1987 to 14 percent by 1991. Marijuana use among youthful arrestees subsequently increased from 17 percent (1991) to 54 percent (1995) and then fluctuated in the 50 percent to 60 percent range. The overall rate of detected marijuana use inched up to 35 percent by 1999, still well below the rate observed in the late 1980s.

Phoenix- plateau since 1998. The rate of detected marijuana use among all adult arrestees in Phoenix dropped steadily from 42 percent in 1987 to 19 percent in 1991. Subsequently, the rate among youthful arrestees entered a slow but steady expansion, increasing from 22 percent in 1991 to 40 percent in 1995. At that time, the marijuana epidemic appeared to have entered a plateau. However, youthful marijuana use jumped to 54 percent in 1998, where it remained in 1999. This increase suggests that the marijuana epidemic may have spread in the 1997–98 period to another portion of youths who tend to get arrested. This change could have also been caused by changes in police priorities or ADAM sampling procedures.

San Antonio- plateau since 1996. Marijuana use among all adult arrestees in San Antonio decreased from 34 percent in 1988 to 18 percent by 1991. The rate among youthful arrestees then slowly increased from 20 percent in 1991 to 45 percent in 1996, where it remained through 1999. Overall marijuana use had increased to 32 percent by 1996 and fluctuated around this rate through 1999.

The Marijuana/Blunts Epidemic Among Arrestees on the West Coast

Los Angeles- plateau/possible expansion. It is difficult to determine the timing of a New Marijuana Epidemic in Los Angeles because the rate of increase in detected marijuana use among youthful arrestees was very slow in the early 1990s and because it took a dip in 1994, which suggests the rate had plateaued. However, the increase in detected marijuana use among youthful arrestees from 22 percent in 1991 to 49 percent in 1996 strongly suggests that a marijuana epidemic took place. In 1997, the rate among youthful arrestees declined modestly to 46 percent and inched up to 54 percent by 1999. This continued increase suggests that the epidemic may not yet have plateaued by 1999. However, it is possible that the modest increase in youthful marijuana use from 49 percent (1998) to 54 percent (1999) was caused by changes in ADAM sampling procedures. If this was the case, the marijuana epidemic among youthful arrestees in Los Angeles may have plateaued as early as 1996. The overall rate of marijuana use inched up from 16 percent in 1991 to a high of 30 percent in 1999.

Portland (OR)- expansion 1992–99. Marijuana use among all adult arrestees in Portland decreased from 47 percent in 1988 to 25 percent in 1992. The rate of detected marijuana use among youthful arrestees subsequently expanded from 28 percent in 1992 to 57 percent in 1999. The overall rate increased only modestly to a peak of 33 percent in 1998.

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San Diego- no epidemic. Marijuana use among San Diego's youthful arrestees remained steady and relatively high from 1987 through 1999, ranging from 37 to 55 percent. Marijuana use among all adult arrestees exhibited a modest drop from 44 percent in 1988 to 29 percent in 1991. The rate then fluctuated around 34 percent through 1999. The rate of detected marijuana use among youthful arrestees exhibited a modest 1-year increase from 37 percent in 1991 to 47 percent in 1992. The rate among youthful arrestees subsequently fluctuated in the mid-40-percent range. The modest dip and recovery in youthful marijuana use from 1989 to 1992 seem much too small to constitute a new drug epidemic, although their timing is consistent with that of the New Marijuana Epidemic at other ADAM locations. Another steady but short increase in youthful marijuana use occurred from 1997 to 1999, when the rate among youthful arrestees inched up from 44 to 55 percent. Again, the short period and rather modest increase suggest that this change was not part of a longer, sustained epidemic.

San Jose- plateau. Since 1995, overall marijuana use among San Jose arrestees was relatively stable at about 24 percent from 1989 through 1998. The rate among youthful arrestees increased from 21 percent in 1992 to 43 percent in 1995, where it roughly remained through 1998. The sharp increase to 56 percent in 1999 may be an anomalous 1-year fluctuation.

Age-Period-Cohort Analysis

An age-period-cohort analysis of the NHSDA data indicates that recent increases in marijuana use within the general population have been largely restricted to youths. This contrasts with the Crack Epidemic which first spread among older users and only afterwards spread to youths first coming of age (Golub and Johnson 1994, 1997). The rate of past-month marijuana use among 18 year-olds increased from 9% in 1992 (for the 1974 birth cohort) up to 16% in 1997 (for the 1979 birth cohort). This table also indicates that in the general population marijuana use generally declines with age. For example, the 1967 birth cohort reached age 18 in 1985. At that time, 25% reported past month use of marijuana. By age 25 (in 1992) only 12% reported past month use, and by age 30 (in 1997) the rate had decreased to 6%. This maturation from age 25 to 30 for this birth cohort coincided with the expansion period of the Marijuana/Blunts Epidemic, 1992-1997. The maturation effect proved to be much more powerful than the period effect. The rate of decline in marijuana use with age experienced by this cohort was comparable to the experiences of those born in preceding years from 1960 to 1966. Among the oldest birth cohorts (persons born before 1960) the rate of past month marijuana use had already declined to well below 10%. These rates remained relatively constant throughout the 1990s further suggesting that the Marijuana/Blunts Epidemic within the mainstream was restricted to youths.

Reading the trends among arrestees is more complicated. The age-period-cohort analysis for the ADAM Program Average suggests that distinct period and cohort effects both occurred simultaneously along with a modest age effect. Among the youngest birth cohorts, the prevalence of marijuana use increased in their late teens. For example, among the 1977 birth cohort the rate of detected marijuana use increased steadily from 32% at age 16 to 55% at age

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18. Desistance of use in adulthood was much less evident than among the NHSDA respondents. This could be a selection effect associated with analyzing rates among arrestees; those drug-using criminal offenders who desist from drug use might tend to simultaneously desist from criminal offending.

Among arrestees from each birth cohort, it appears that marijuana use became less popular from 1988 to 1990 and then returned to its former level of popularity from 1990 to 1993. This appears to be a period effect perhaps caused by increased drug law enforcement, greater involvement with other drugs such as crack, or decreased availability of marijuana. The rate of overall detected marijuana use dropped from 35% (1988) to 19% (1990) and then returned to 28% (1993). This dip in usage was reflected in each birth cohort's marijuana use experiences during this period. For example, the marijuana use among arrestees born in 1960 declined from 39% (1988) to 17% (1990) and then returned to 24% (1993) where it approximately remained through 1998. The nature of this decline suggests that for this birth cohort the period effect had an immediate effect of reducing marijuana use by 22% (from 39% down to 17%) and a somewhat smaller long-term effect of reducing marijuana use by 15%. All of the older birth cohorts experienced sharp short-term declines and more modest long-term declines from 1988 to 1993 except for the oldest arrestees. Arrestees born 1901-1939 had a relatively low level of marijuana use in 1988 of 9% that declined to 5% (1990) but then returned to a slighter higher level of 11% in 1993.

The 1972 birth cohort reached age 18 in 1990, right at the lull in marijuana use among arrestees. Their rate of marijuana use dropped from 30% at age 17 (in 1989) to 21% at age 18 (1990) but then continued to increase up to 47% by 1996. For this birth cohort, the period of lower marijuana use led them to postpone but did not forestall their involvement with marijuana. Unlike in previous birth cohorts, which had established their peak level of marijuana use by age 18, arrestees from the 1972-1976 birth cohorts exhibited a rise in their marijuana use in their early twenties. It would appear that more and more of them became involved with marijuana during the expansion phase of the Marijuana/Blunts Epidemic.

A solid plateau period was established by 1996. Approximately 60% of arrestees who reached age 18 from 1996 to 1998 (the 1978-1980 birth cohort) were detected as marijuana users in 1996 and as they aged in subsequent years. From 1996 to 1998, the rate of marijuana use within each birth cohort remained relatively constant or declined modestly.

Discerning trends at individual ADAM locations from age-period-cohort tables was made even more difficult by the relative unreliability of the entries in each cell resulting in dramatic but random variations from year to year. A broad visual analysis suggested that the Marijuana/Blunts Epidemic had affected marijuana use among older arrestees much less than it had youths, at most ADAM locations.

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To quantify this observation, the percent growth in detected marijuana use from 1991 to 1998 among arrestees from older birth cohorts (those born before 1967) was calculated. The overall prevalence in 1991 was calculated as the average of the prevalence within each birth cohort (as provided in the age-period-cohort tables) weighted according to each birth cohort's representation among arrestees in 1991. Similarly, the overall prevalence of detected marijuana use in 1998 was calculated as the prevalence in 1998 weighted according to each birth cohort's representation in 1991. The formula for this calculation is presented below. Standardizing to the 1991 distribution of arrestees by birth cohort controlled for any changes caused by demographic shifts in the composition of the arrestee sample over time.

$$\begin{pmatrix}\text{Percentage of 1998 arrestees}\\ \text{born before 1967 detected}\\ \text{as recent marijuana users}\\ \text{weighted according to the}\\ \text{1991 distribution of arrestees}\\ \text{by birth cohort}\end{pmatrix} = \sum_{\substack{i = \text{index of}\\ \text{birth cohorts}}} \left[\begin{pmatrix}\text{Percentage of 1998}\\ \text{arrestees from birth}\\ \text{cohort } i \text{ detected as}\\ \text{recent marijuana users}\end{pmatrix} \times \frac{\begin{pmatrix}\text{Number of 1991}\\ \text{arrestees born in}\\ \text{year } i\end{pmatrix}}{\begin{pmatrix}\text{Number of 1991}\\ \text{arrestees born}\\ \text{before 1967}\end{pmatrix}} \right]$$

The table below presents the change from 1991 to 1998 in prevalence of recent marijuana use detected among older birth cohorts and youthful arrestees for each ADAM location. At a few locations on the West Coast, the rate among older birth cohorts actually declined. At other locations the increase ranged as high as 14%. In contrast, many ADAM locations experienced an increase among youthful arrestees as high as 30-50%. The increase among youthful arrestees far exceeded the increase among older birth cohorts at every location identified as experiencing a Marijuana/Blunts Epidemic (this excludes Miami and San Diego).

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Variation in Detected Marijuana Use from 1991 to 1998 for Older Birth Cohorts (born before 1967) and Youthful Arrestees (age 18-20), by ADAM Location

	Change 91 to 98 (in percentage points)			Change 91 to 98 (in percentage points)	
Location	Older Arrestees (born <1967)	Youthful Arrestees (age 18-20)	**Location**	Older Arrestees (born <1967)	Youthful Arrestees (age 18-20)
Westcoast			**Northeast**		
Los Angeles	+4	+26	Manhattan	+10	+26
Portland (OR)	-5	+25	Philadelphia	+4	+39
San Diego	-1	+16	Washington, D.C.	+13	+49
San Jose	-2	+11			
			Midwest		
Southwest			Chicago	+5	+38
Dallas	+9	+37	Cleveland	+11	+58
Denver	+6	+33	Detroit	+12	+47
Houston	+5	+22	Indianapolis	+7	+39
New Orleans	+9	+37	Omaha	+6	+31
Phoenix	+4	+32	St. Louis	+14	+52
San Antonio	+5	+27			
			Southeast		
			Atlanta	+8	+47
			Birmingham	+9	+40
			Ft. Lauderdale	+2	+30
			Miami	+2	+5

Those individuals who came of age during the early part of the Marijuana/Blunts Epidemic tended to persist in their use. Members of the 1972-74 birth cohort were age 18-20 in 1992, right around the start of the Marijuana/Blunts Epidemic at most ADAM locations. The table below compares the prevalence of detected marijuana use for this cohort at ages 18-20 (in 1992) and 24-26 (in 1998). At most ADAM locations, the rate remained relatively constant or even increased. The declines at a few locations were typically modest. The largest declines (6% and 7%) occurred in Miami and San Diego, which were identified as not having experienced a Marijuana/Blunts Epidemic. Increases identified the extent to which the Marijuana/Blunts Epidemic affected members of the 1972-1974 birth cohort, further . These increases were most pronounced in Cleveland (28%), Indianapolis (21%), Birmingham (30%), and New Orleans (21%).

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Variation in Marijuana Use among Arrestees Born 1972-74 as Detected at age 18-20 (in 1992) and at age 24-26 (in 1998)

	% Detected as marijuana users				% Detected as marijuana users		
Location	**1992**	**1998**	**change**	**Location**	**1992**	**1998**	**change**
Westcoast				**Northeast**			
Los Angeles	28	25	-3	Manhattan	41	37	-5
Portland (OR)	28	40	12	Philadelphia	39	34	-5
San Diego	44	38	-7	Washington, D.C.	35	44	8
San Jose	21	23	1				
				Midwest			
Southwest				Chicago	28	42	14
Dallas	34	35	1	Cleveland	25	53	28
Denver	41	40	-1	Detroit	40	52	13
Houston	19	29	10	Indianapolis	31	52	21
New Orleans	21	42	21	Omaha	47	42	-5
Phoenix	28	41	13	St. Louis	30	43	12
San Antonio	25	38	13				
				Southeast			
				Atlanta	30	42	12
				Birmingham	25	55	30
				Ft. Lauderdale	47	49	2
				Miami	45	40	-6

Three-Generations Analysis

The three generations analysis reproduced the key findings from Golub and Johnson (1999) at virtually every ADAM location and even with the NHSDA data. The findings with the MTF data were less conclusive because heroin injection was exceedingly rare among high school seniors and because the question about lifetime use of crack cocaine was only first asked of the 1969 birth cohort (it was introduced in 1987). The MTF findings are therefore quite limited, but not inconsistent with the findings from the other data sources.

In general, the prevalence of lifetime heroin injection peaked with persons born around 1950 and exhibited a sustained decline starting somewhere around the 1954 birth cohort. The prevalence of lifetime crack cocaine use reached a peak among persons born around 1960 and started to decline around the 1964 birth cohort. Recent marijuana use exhibited a dramatic and continuous increase with successive birth cohorts starting around the 1970 birth cohort. Persons born since 1970 were likely to be detected or report recent marijuana use and unlikely to report lifetime heroin injection or crack use.

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Two ADAM locations experienced slightly different trend. In Phoenix, persons born since 1970 reported rates of lifetime crack use around 30% which were comparable to the rates of 40% reported by persons born 1954 to 1969. It would appear that the Crack Epidemic had not ended in Phoenix by 1998. This was consistent with a previously published observation that as of 1996 the crack epidemic was in decline in most of the country except in Phoenix where it was still experiencing its plateau phase (Golub and Johnson 1997). The other modest exception occurred in San Antonio where the rate of lifetime crack use barely ever reached 15%. By the 1979 birth cohort, the rate was still close to 10%. This is consistent with the previously published observation that San Antonio had not experienced a significant Crack Epidemic as of 1996.

SUMMARY

This study identified that the increase in marijuana use in the 1990s generally conformed to a theoretical model for a drug epidemic. This model provided a powerful framework for interpreting the recent trends in marijuana use among arrestees using data from the ADAM program and within the general population. This section presents the major findings about the Marijuana/Blunts Epidemic organized to correspond to the four phases of the conceptual model.

Incubation Phase

- **The Marijuana/Blunts Epidemic followed a long-term decline in youthful marijuana use.** The NHSDA and MTF programs reported substantial and continuous declines in marijuana use starting back in 1979. The ADAM program was started in 1987, but not at all 23 locations. From 1988 to 1990, the rate among arrestees declined substantially at most locations in the program. Conceivably, the start of these declines in marijuana use among arrestees may date back to earlier in the 1980s.

- **The expansion phase of the Marijuana/Blunts Epidemic coincides with the decline phase of the Crack Epidemic.** Arrestees born since 1970 have been increasingly unlikely to report any lifetime crack smoking or heroin injection. They have been increasingly likely to be detected as recent marijuana users.

Expansion Phase

- **The Marijuana/Blunts Epidemic among arrestees started 1990-92.** At nearly every ADAM location, the rate of detected marijuana use among youths age 18-20 had been at its all time lowest level in 1990-91. Starting in 1991-92, the rates started a steady increase lasting to 1996 on average.

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- **Local differences are important.** The Marijuana/Blunts Epidemic followed a typical pattern at most ADAM locations. However, there were exceptions at a few locations to every one of the major regularities observed: Some locations did not observe an epidemic, some epidemics were not limited to younger arrestees, some epidemics started later, and some epidemics expanded more slowly.

- **The Marijuana/Blunts Epidemic was initially centered among persons age 18-24 who tend to get in trouble with the law.** The rate of increase among arrestees 18-20 and 21-24 exhibited parallel increases in the early 1990s. However, increases among older arrestees typically did not occur until later years. This delayed increase among older arrestees suggests that among those who tend to get in trouble with the law that the marijuana (epidemic) was centered primarily among persons age 18-24. In a few locations the Marijuana/Blunts Epidemic affected arrestees of all ages including Omaha, Saint Louis, and Atlanta.

- **The Marijuana/Blunts Epidemic started among youths who tend to get in trouble with the law and then spread to the broader population.** The increase in youthful marijuana use within the general population did not start until 1993. The increases were modest and restricted primarily to persons 18-20. The NHSDA recorded a modest increase among 18-20 year-olds from 1992 to 1996. The MTF recorded a steady increase among high school seniors from 1992 to 1997. These elevated rates in the general population were still substantially lower than peak levels prevailing around 1979.

Plateau Phase

- **The epidemic entered a plateau around 1996 at most ADAM locations—with some notable exceptions scattered around the country.** The MTF and NHSDA exhibited relatively stable rates among youths since 1996. By 1999, the Marijuana/Blunts Epidemic was possibly still expanding in Atlanta, Birmingham, Fort Lauderdale, and Los Angeles. Miami and San Diego did not experience a Marijuana/Blunts Epidemic within the observation period. However, marijuana use among youthful arrestees was consistently high at both locations typically at about 40% throughout the period. A more complete interpretation would be that these locations never experienced the full decline nor epidemic like growth in marijuana use among youthful arrestees experienced elsewhere.

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- **The Marijuana/Blunts Epidemic resulted in massive increases in marijuana use among youthful arrestees.** At locations experiencing an epidemic, marijuana use among youthful arrestees (age 18-20) typically rose from 15-30% in 1990 up to 50-80% by 1996. The program average across all ADAM locations more than doubled in six years, increasing from 24% in 1990 to 57% in 1996. Several locations recorded much smaller increases including Fort Lauderdale, Dallas, Houston, Phoenix, San Antonio, Los Angeles, Portland, and San Jose.

- **By the mid 1990s, marijuana itself was the drug of choice of the new generation of youths that tend to get in trouble with drugs and the law.** Youthful arrestees in the 1990s (especially those born 1974-79) were using marijuana more than their predecessors had. Unlike their predecessors, however, few (generally under 10%) reported any lifetime crack use or heroin injection. This suggests that viewing marijuana as a gateway drug may be inappropriate for this new generation. Indeed, their use of marijuana may be an act of resilience and the direct result of cultural and subcultural norms against the use of crack and heroin.

- **Modest increases in the overall rates of detected marijuana use may continue as the new generation of marijuana users comes to comprise a larger portion of the arrestee population.**

Decline Phase

- **By 1999, the Marijuana/Blunts Epidemic had shown little evidence of abating.** The rates of detected marijuana use among youthful arrestees at most ADAM location and nationwide seemed relatively stable. Members of the Marijuana/Blunts Generation appear to be persisting in their marijuana use, at least well into their twenties.

- **The theoretical model for the Marijuana/Blunts Epidemic suggests that further monitoring of marijuana use is essential.** This monitoring is needed to: 1) Monitor the extent to which the Marijuana/Blunts Epidemic continues to affect youths coming of age in the future and thereby identify when if and when the decline phase commences; 2) Monitor the extent to which members of the Marijuana/Blunts Generation continue to avoid other illicit drugs in contrast to the gateway theory; and, 3) Monitor how long members of the Marijuana/Blunts Generation persist in their drug use and thereby determine how long the decline phase may last.

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POLICY IMPLICATIONS

There are numerous ways to attempt to control drug abuse including prevention, treatment, interdiction, and law enforcement, among others. Setting public policy is further complicated by the variety of choices regarding the focus within each of these domains. Understanding drug abuse trends can help guide the efficient allocation of resources. This study indicates that illegal drug use is still rampant, especially among those who tend to get in trouble with the law. Over time, but mostly across generations, the illegal drug of choice among arrestees has shifted from heroin to crack and now marijuana.

In response, drug abuse control policies might logically shift much of their focus to marijuana. However, this is not as simple as just targeting marijuana use and users instead of crack or heroin users. For one, there is not a standard treatment for marijuana use. Grinspoon and Bakalar (1997) report that proportionately fewer marijuana smokers become dependent than users of alcohol, tobacco, heroin or cocaine. They suggest that the most appropriate treatment for the abusive user may be to treat the underlying psychopathology and not the substance use. They further suggest that the health risks of marijuana use are much less profound than those for cocaine or heroin use.

A standing argument for controlling marijuana use based on the gateway theory is that it can lead to use of more dangerous drugs. However, members of the Blunts Generation (persons born in the 1970s and coming of age in the 1990s) have been much less prone to progress to other drugs than their predecessors. This suggests that the gateway theory may be less relevant to their substance use experiences. Indeed, the norms against crack and heroin use prevailing in the inner-city suggest that persons are using marijuana instead of becoming involved with more dangerous drugs. The ongoing collection of drug use data through programs like ADAM and NHSDA will confirm whether these persons continue to resist drugs like cocaine and heroin in the future.

It would appear that more has changed than the prevailing drug of choice among arrestees. Ethnographic studies in inner-city communities suggest that there has been a dramatic shift in the subculture of drug use and that interpersonal interactions have become more congenial and less violent (Johnson, Golub and Dunlap 2000). In this way, drug using members of the Blunts Generation are damaging themselves less physically and socially than the preceding Crack And Heroin Injection Generations. They are also causing much less harm to the broader non-drug abusing members of society. In this regard, the potential for integrating persons from distressed inner-city communities into the mainstream culture seems more promising than in the 1970s and 1980s. Perhaps, this is the time to de-emphasize "tough" drug policies in favor of indirect drug abuse control through the reduction of the economic, educational, and social barriers to establishing a healthy and productive mainstream lifestyle faced by many inner-city youths. Providing youths struggling in distressed inner-city households with a greater stake in society

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may help create a more productive labor force and assure further declines in drug abuse and its attendant criminality. If inner-city youths born in the 1970s who get in trouble with the law could be transformed into fully employable workers, then their marijuana use might also decline as they assume conventional adult roles just as it tends to among members of the general population (Bachman et al. 1997).

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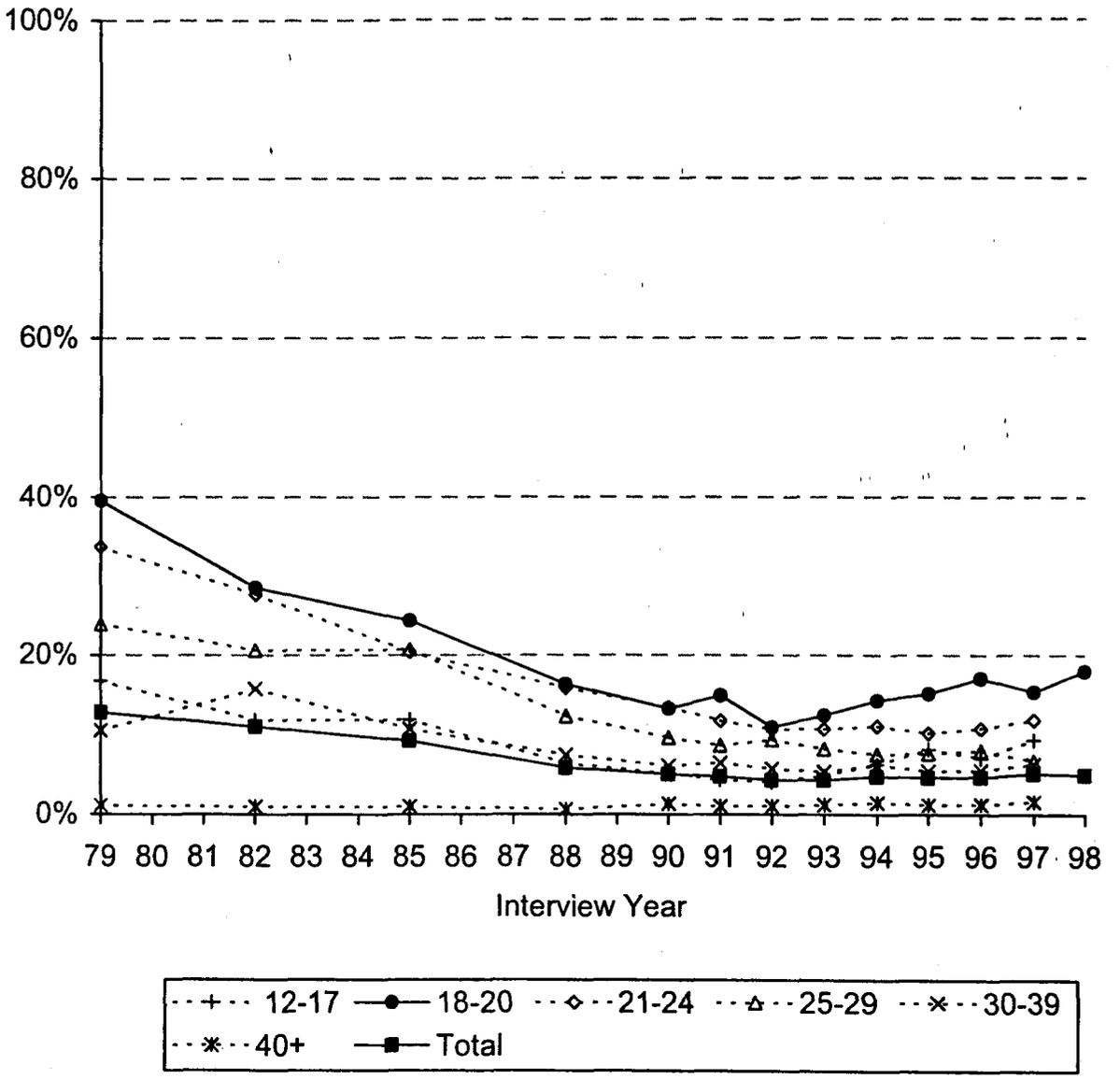
U.S. General Population, NHSDA



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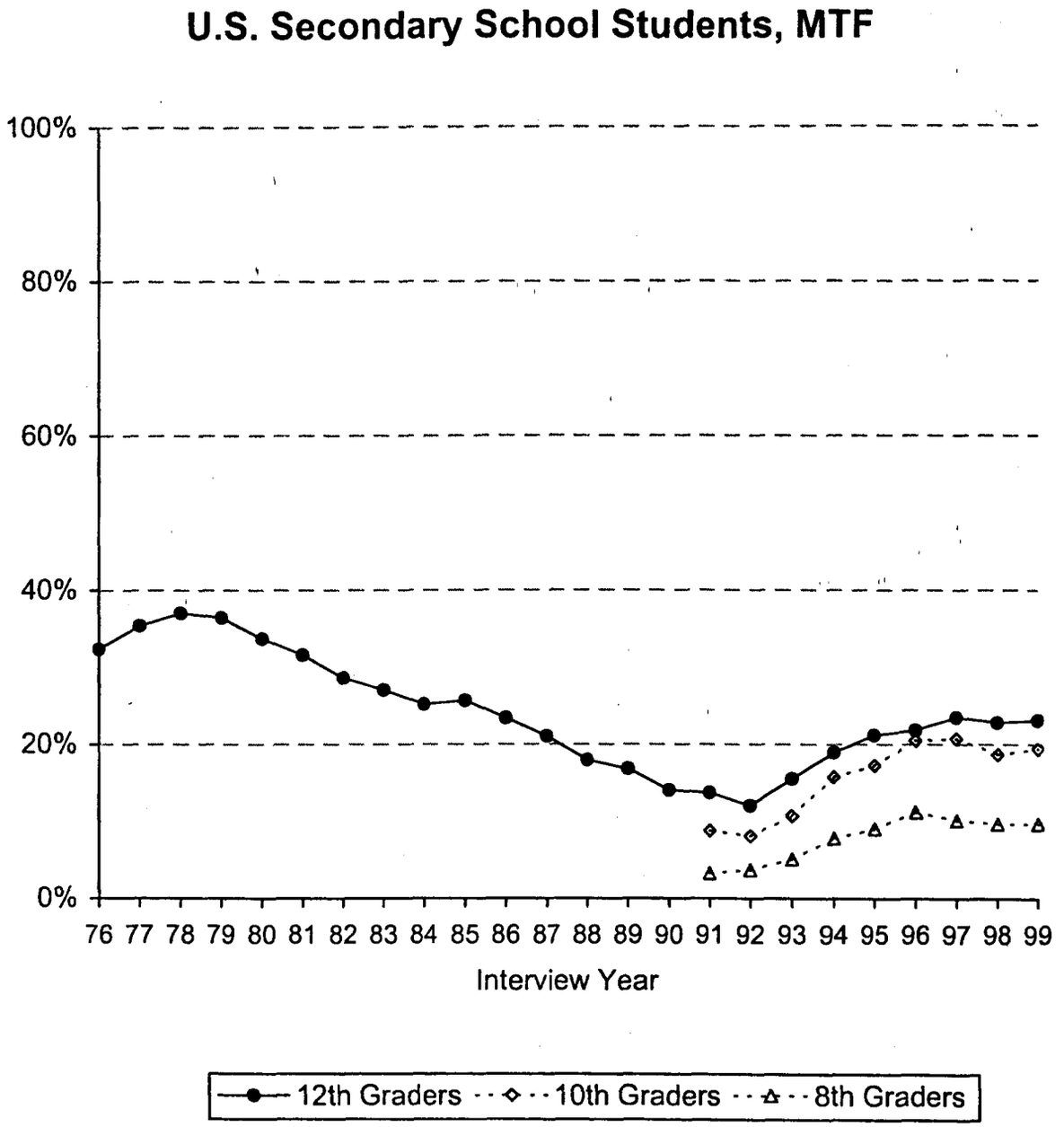

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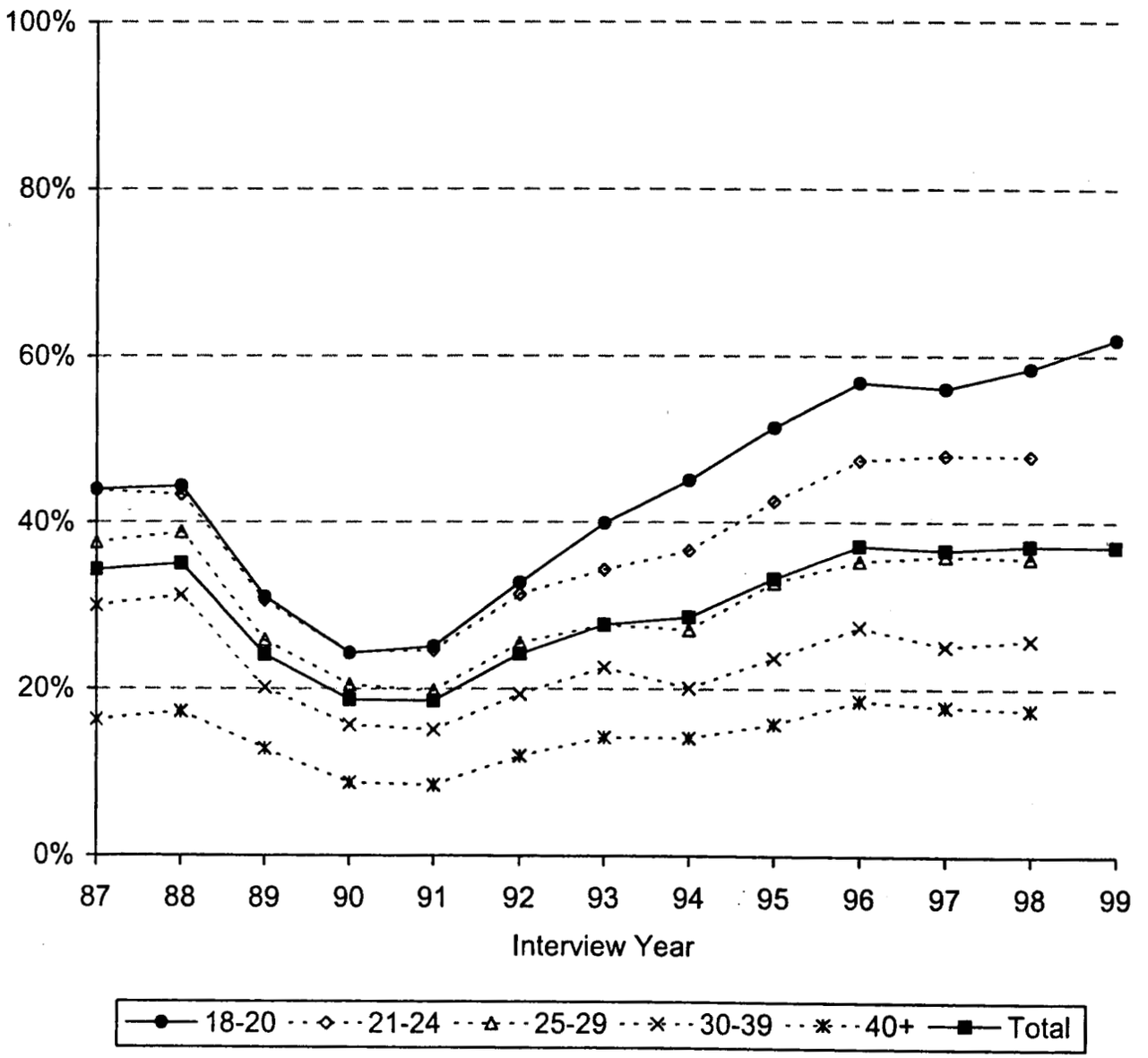
U.S. Arrestee Population, ADAM Program Average



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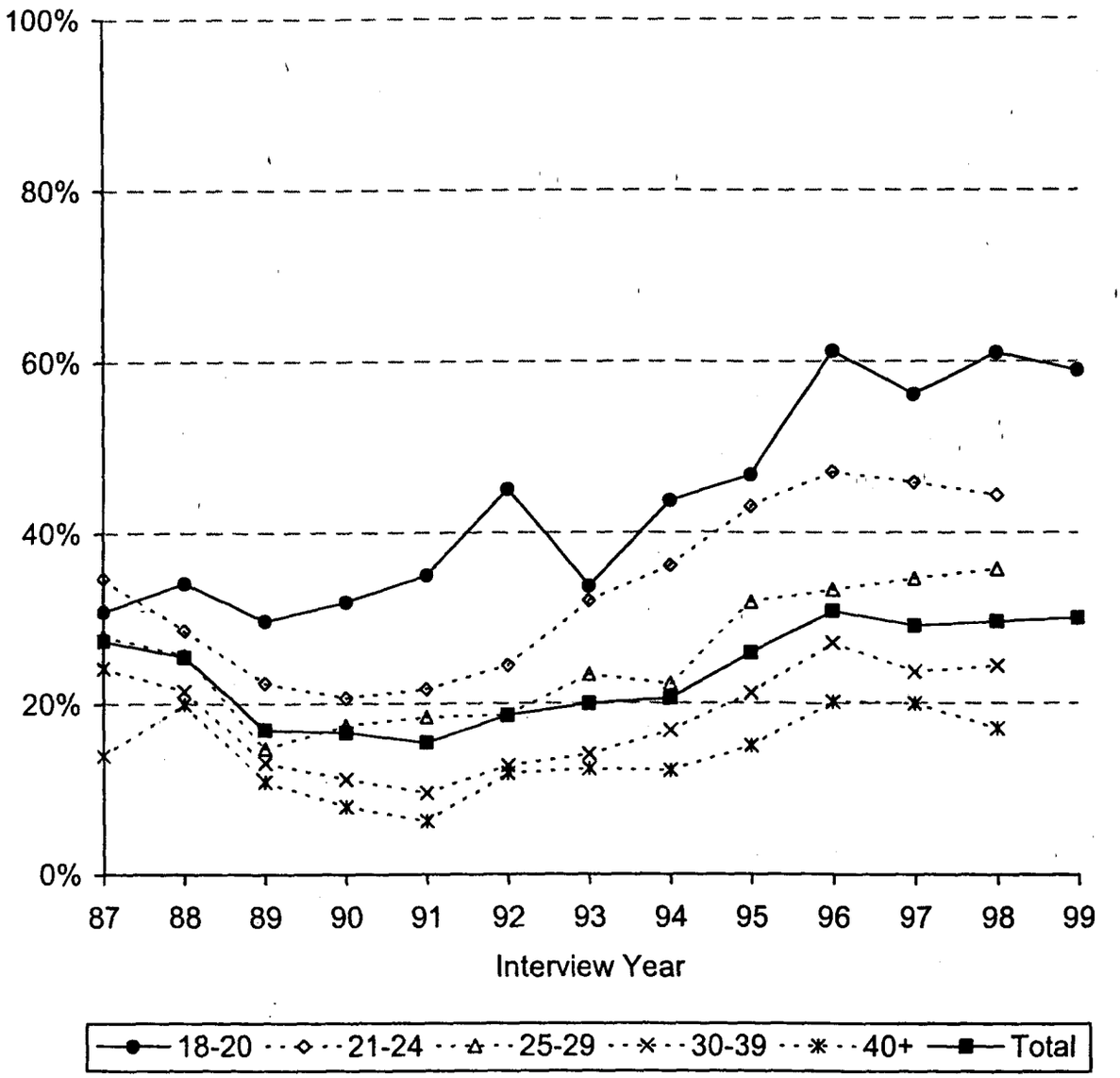
Manhattan



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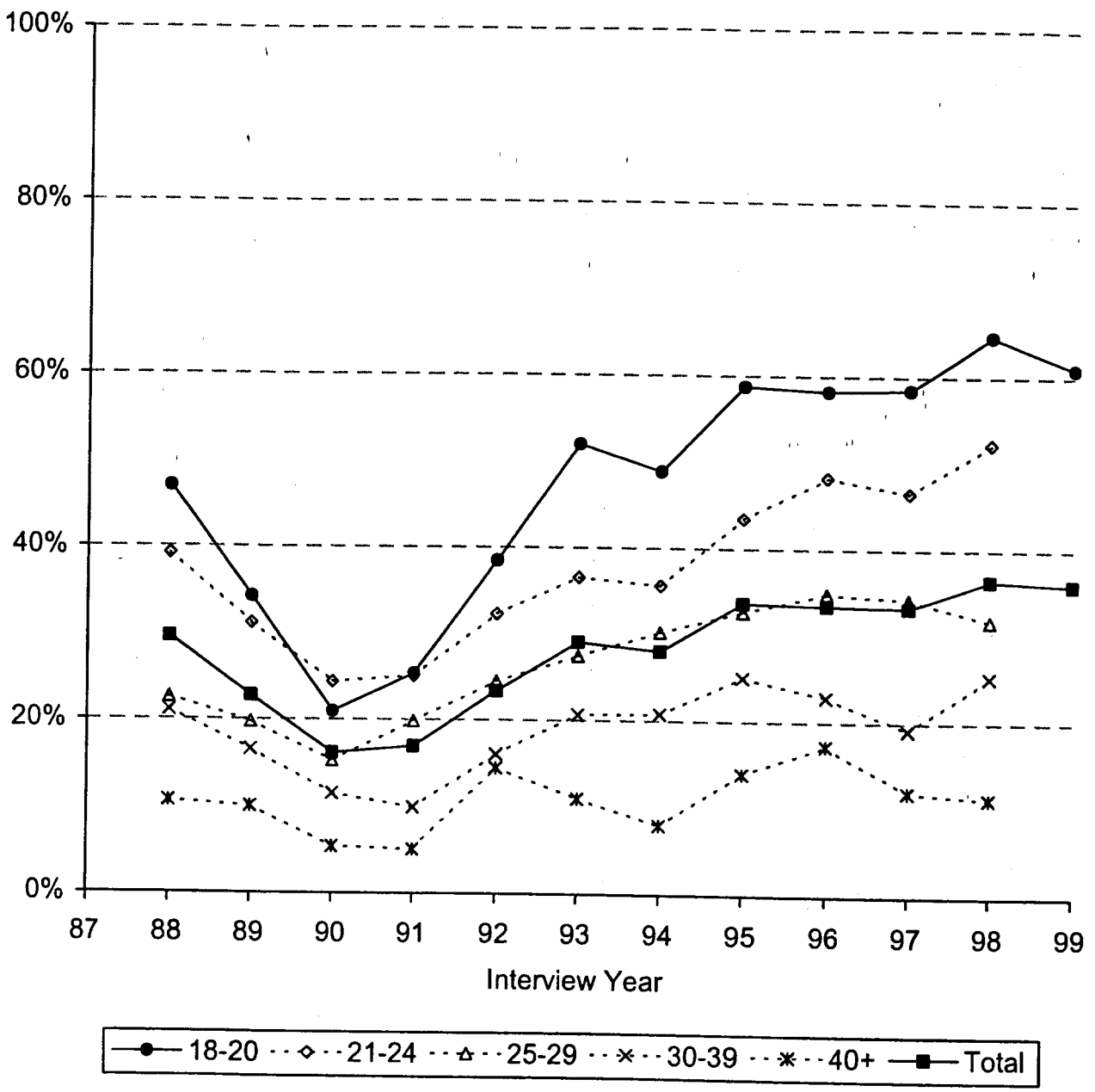
Philadelphia



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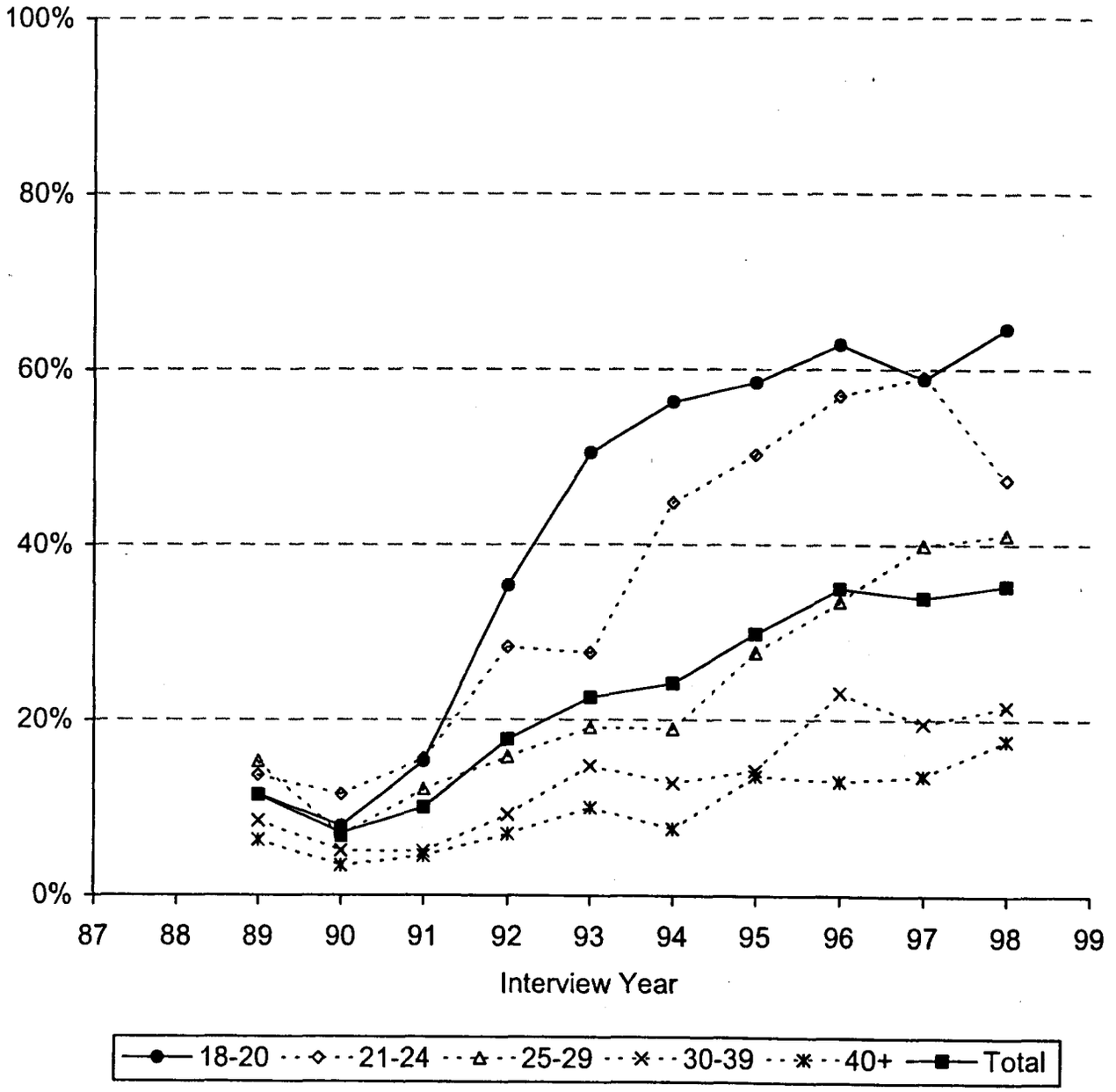
Washington, D.C.



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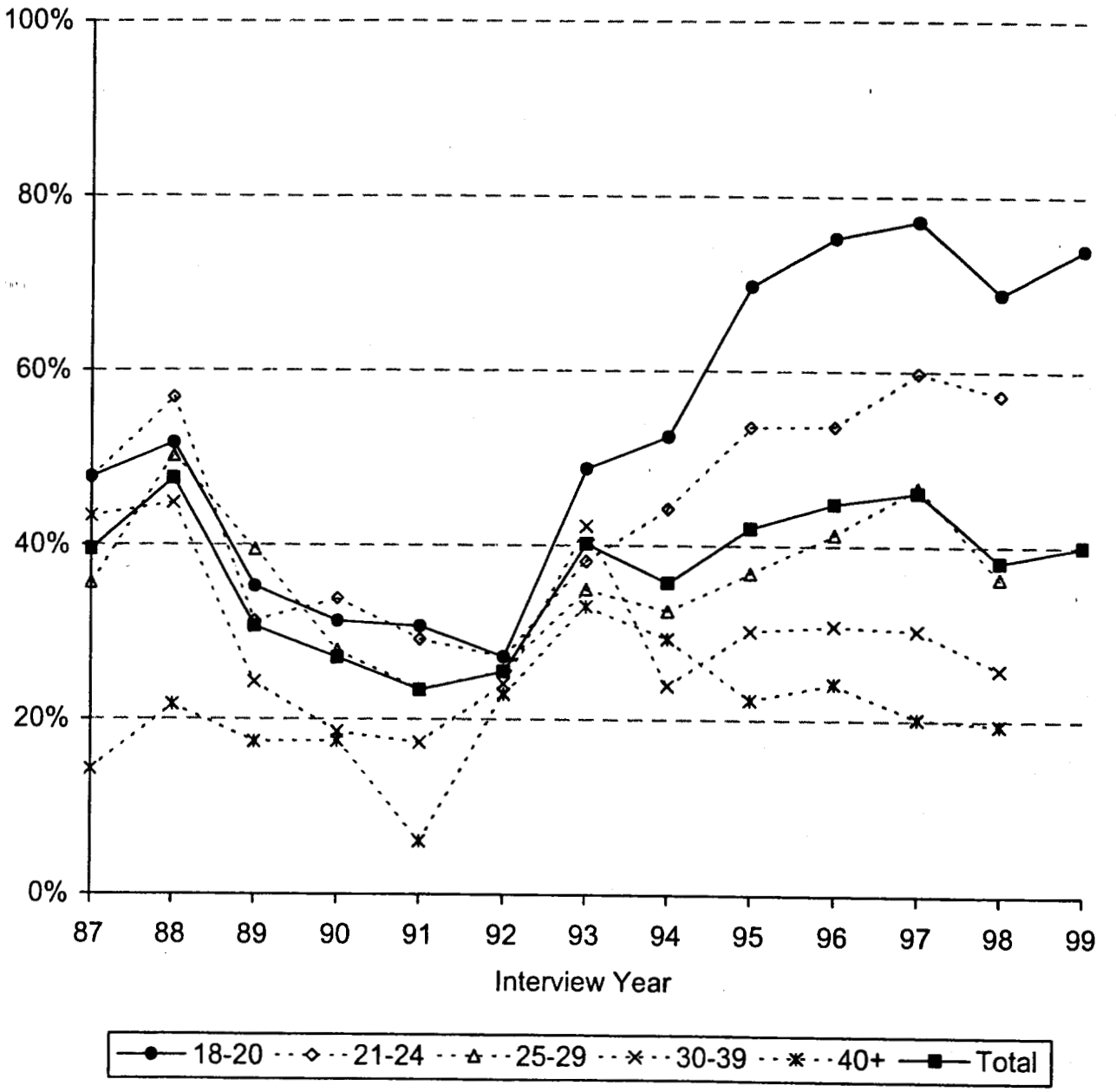

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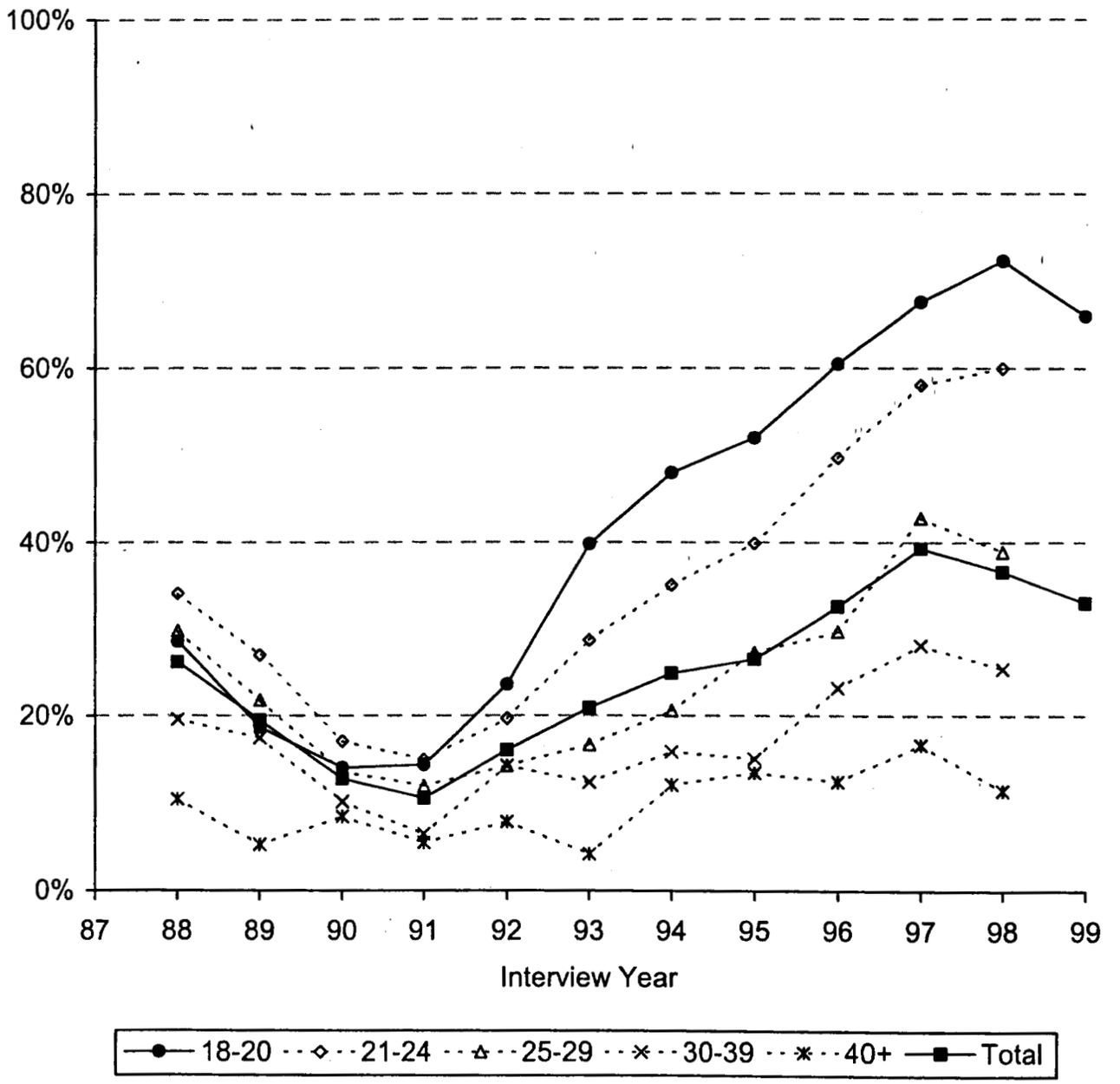
Cleveland



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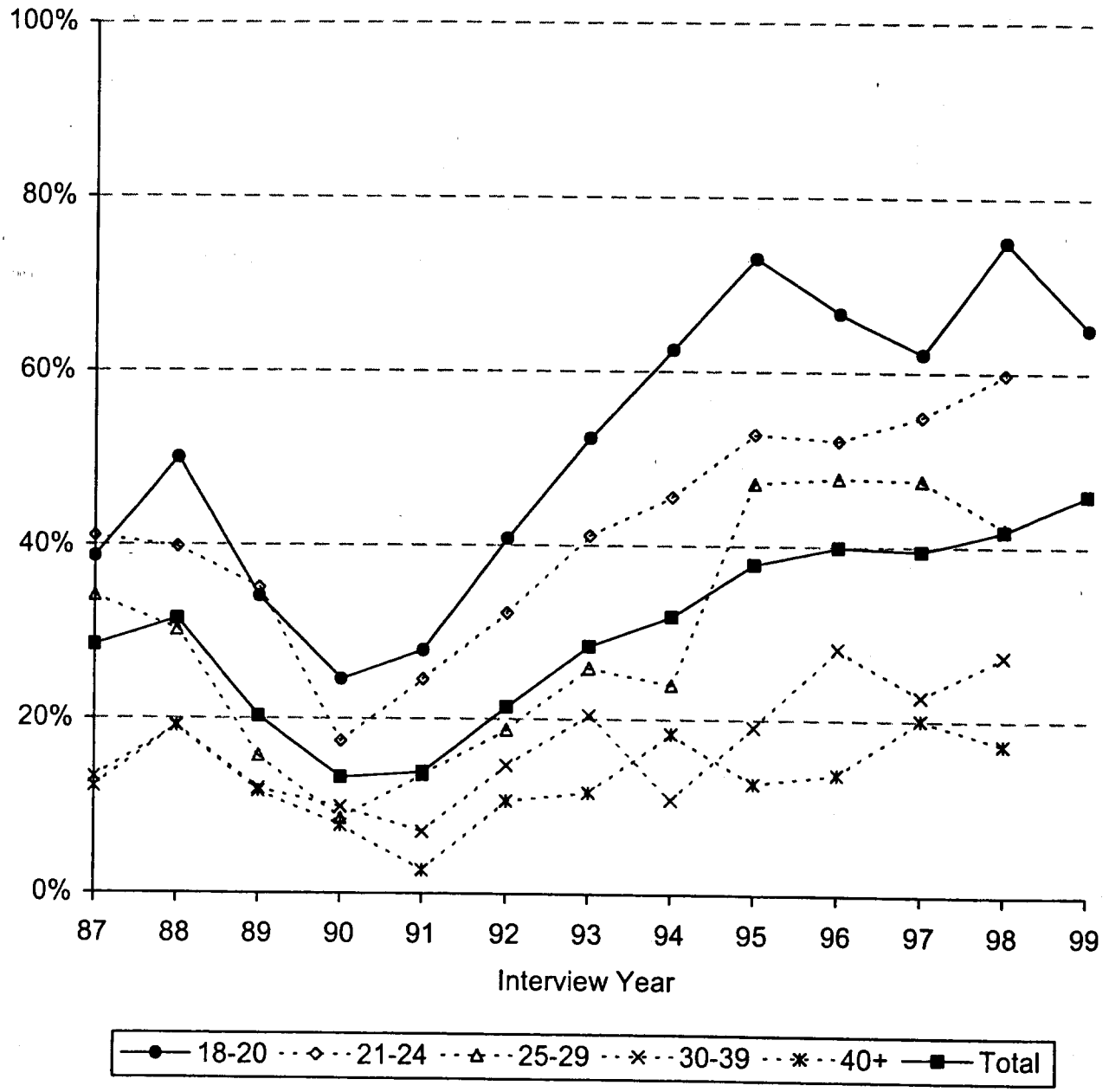

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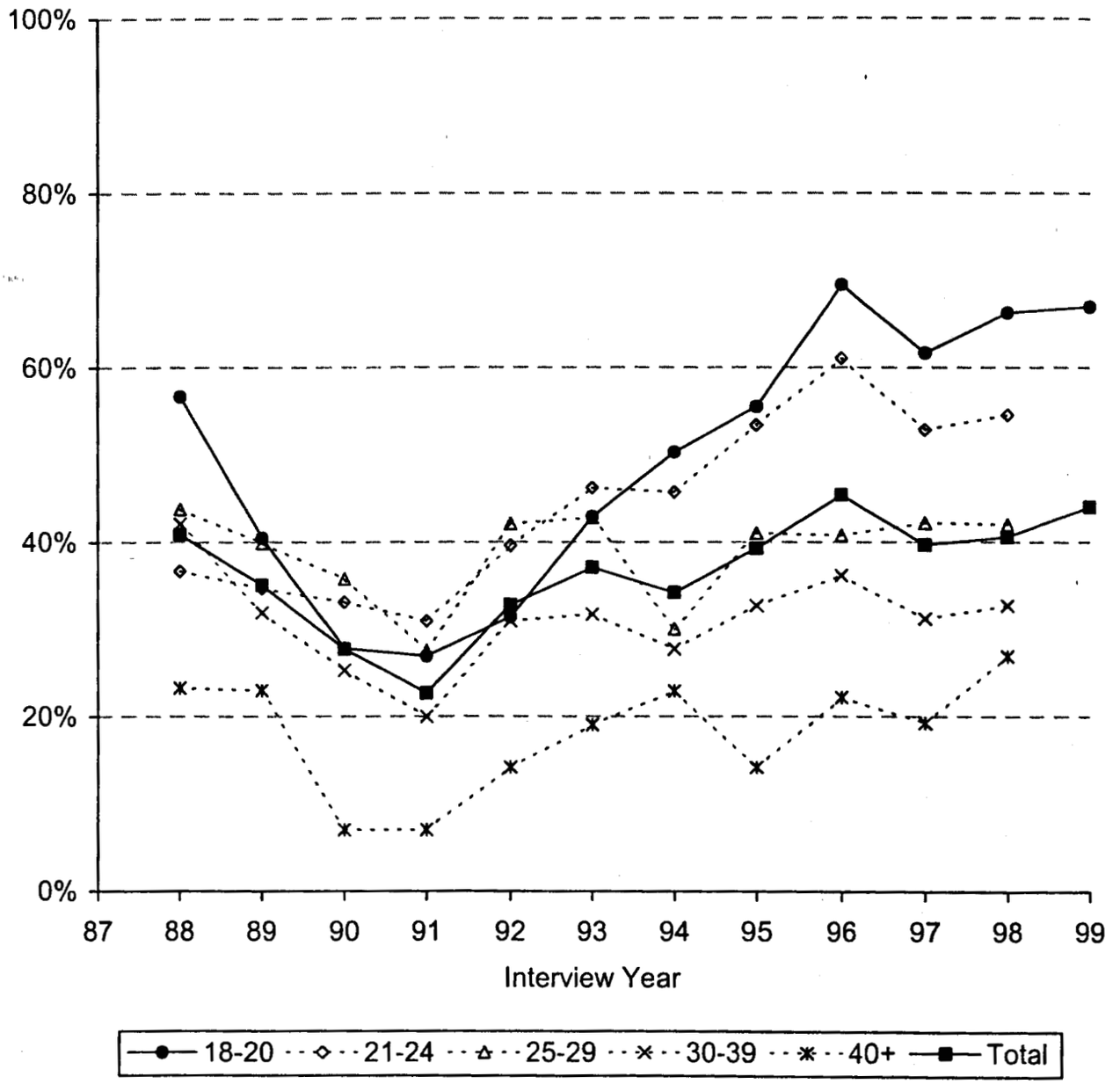

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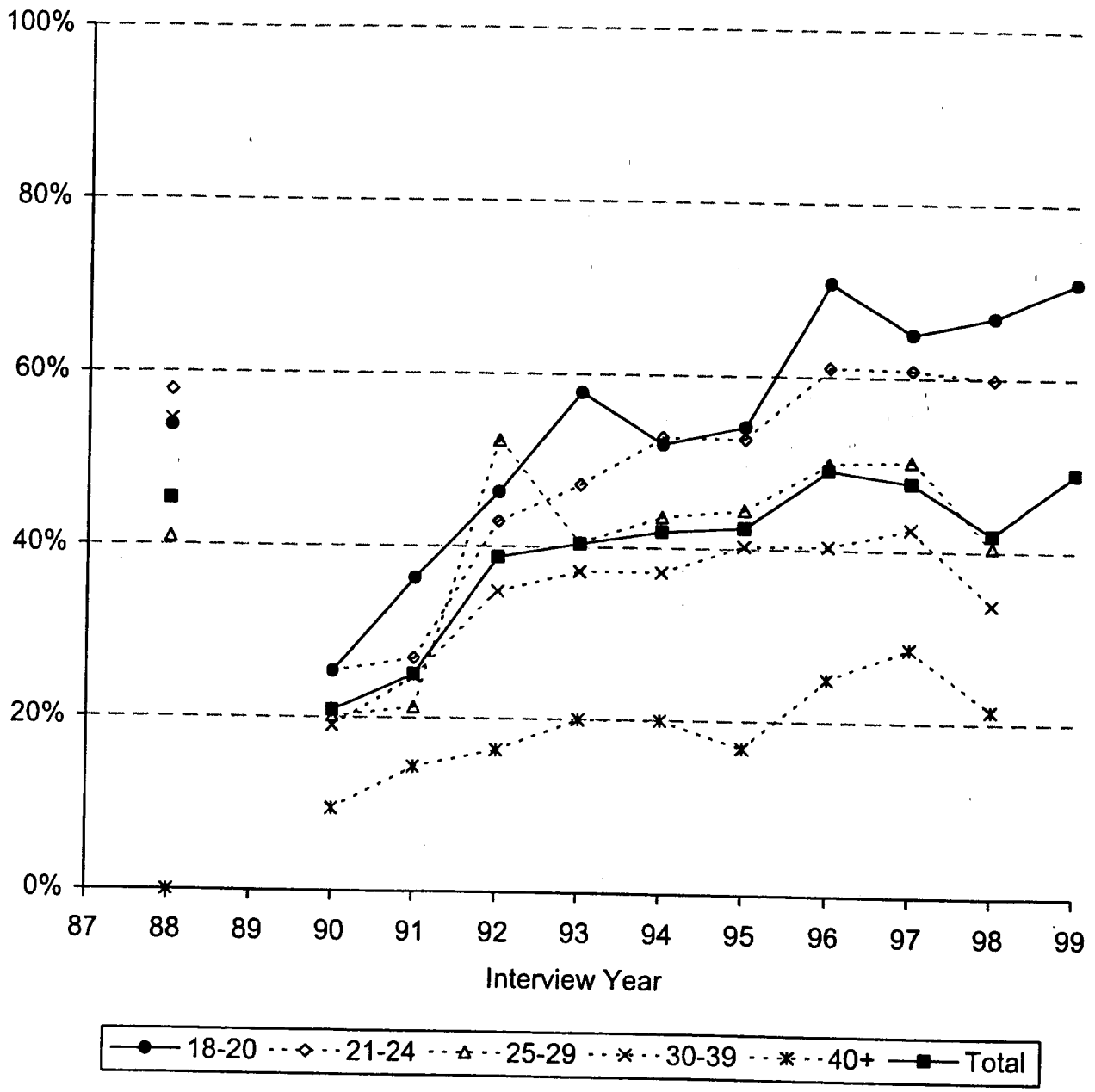
Omaha



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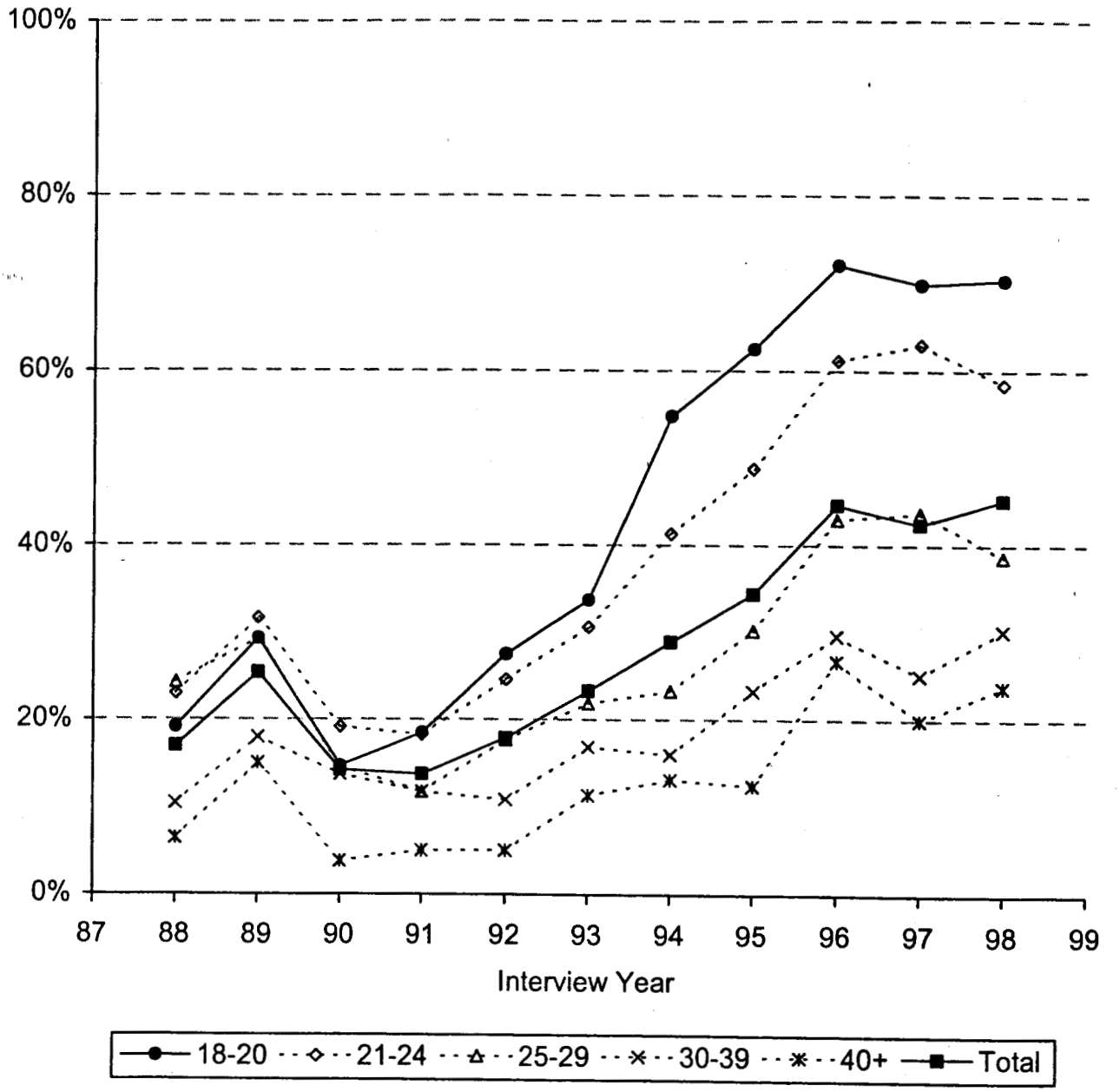

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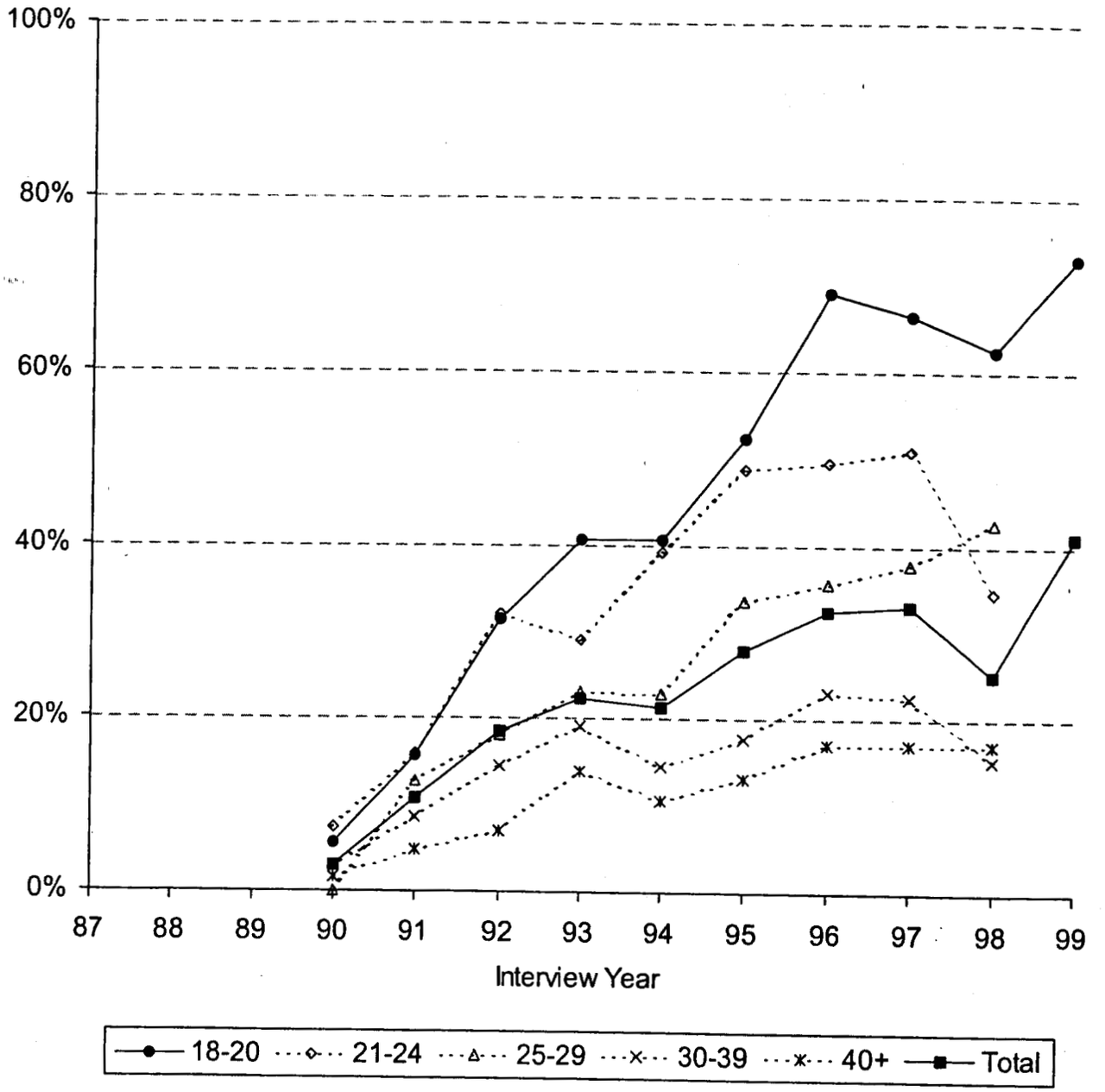
Atlanta



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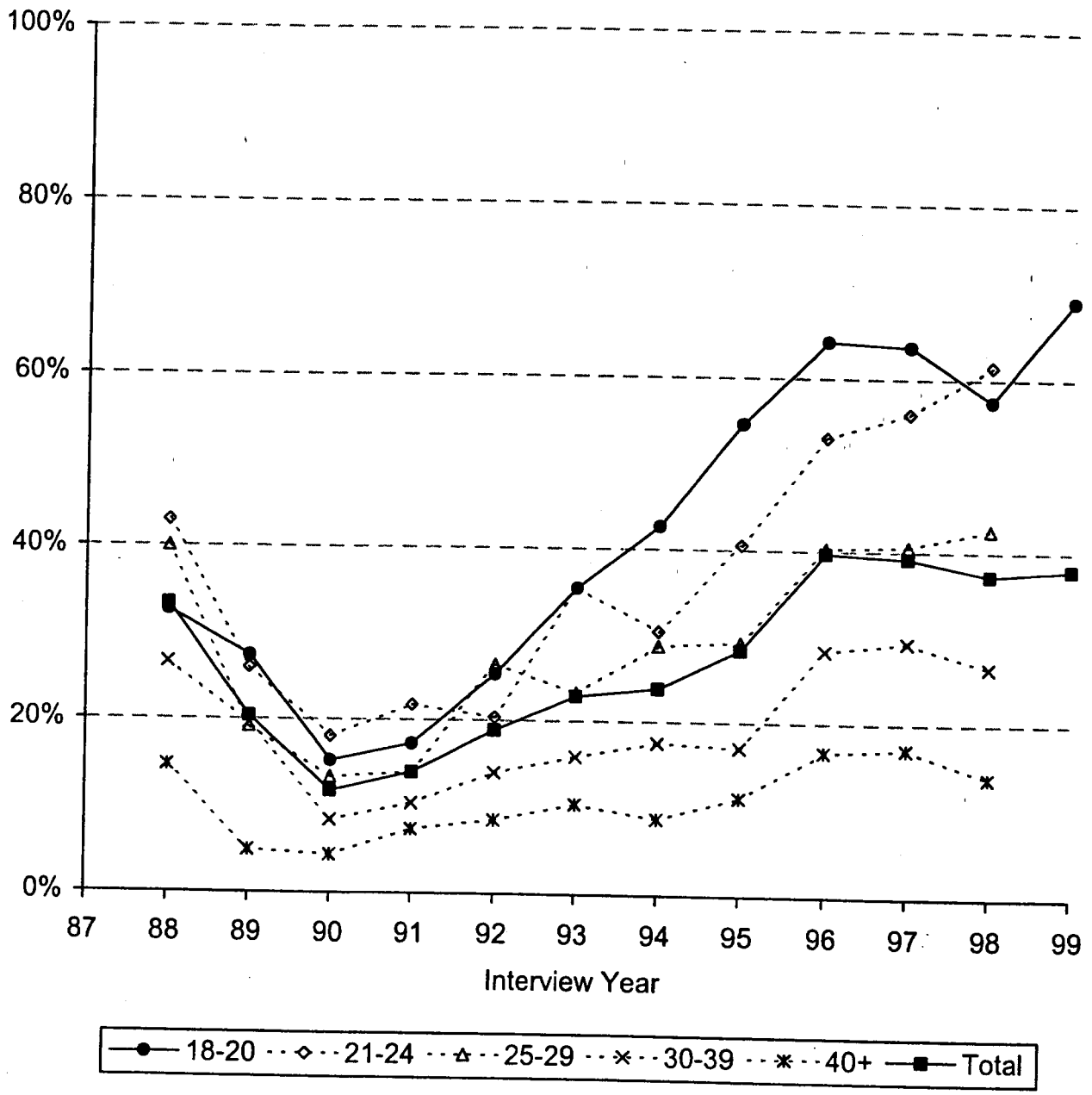

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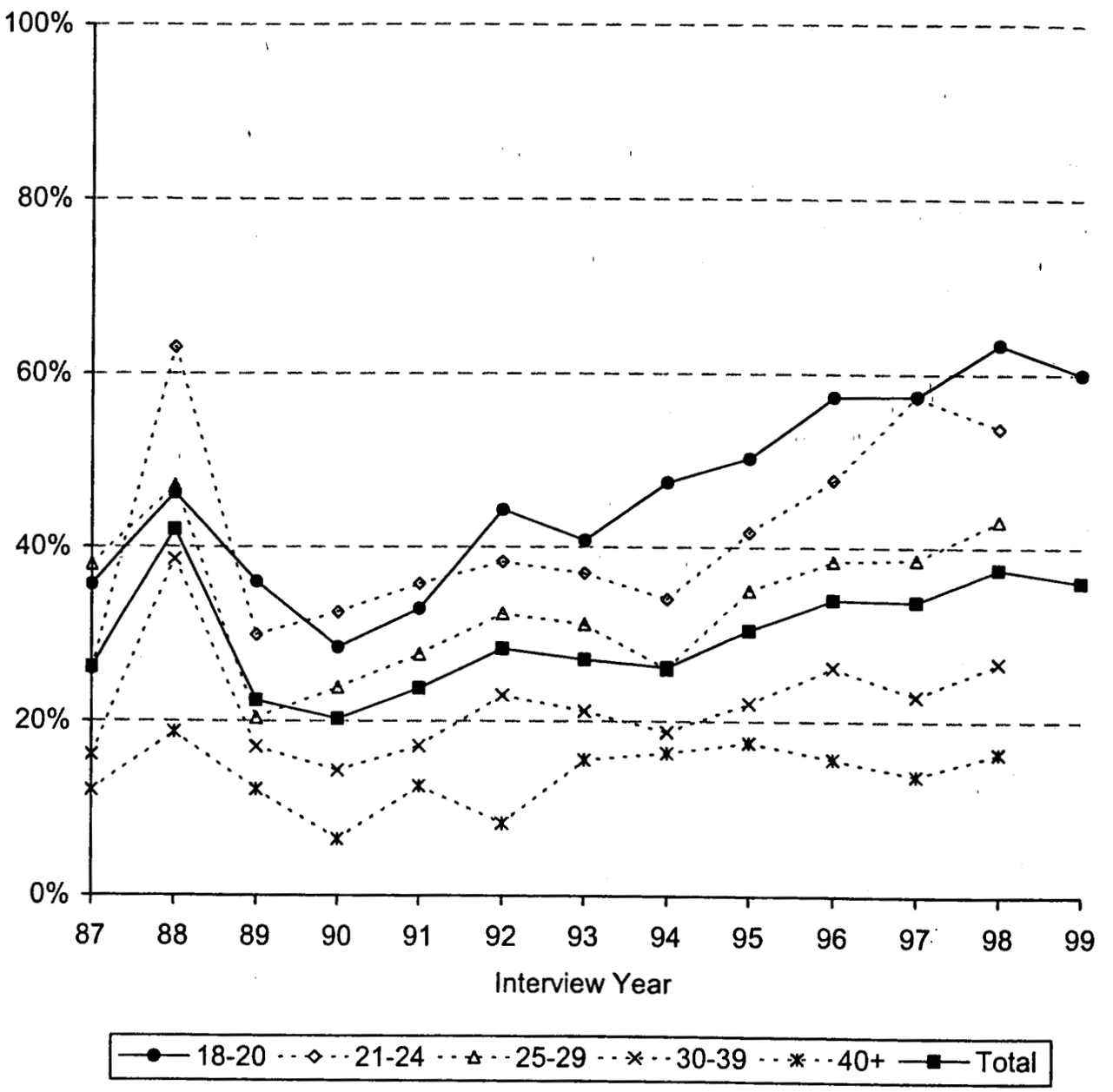

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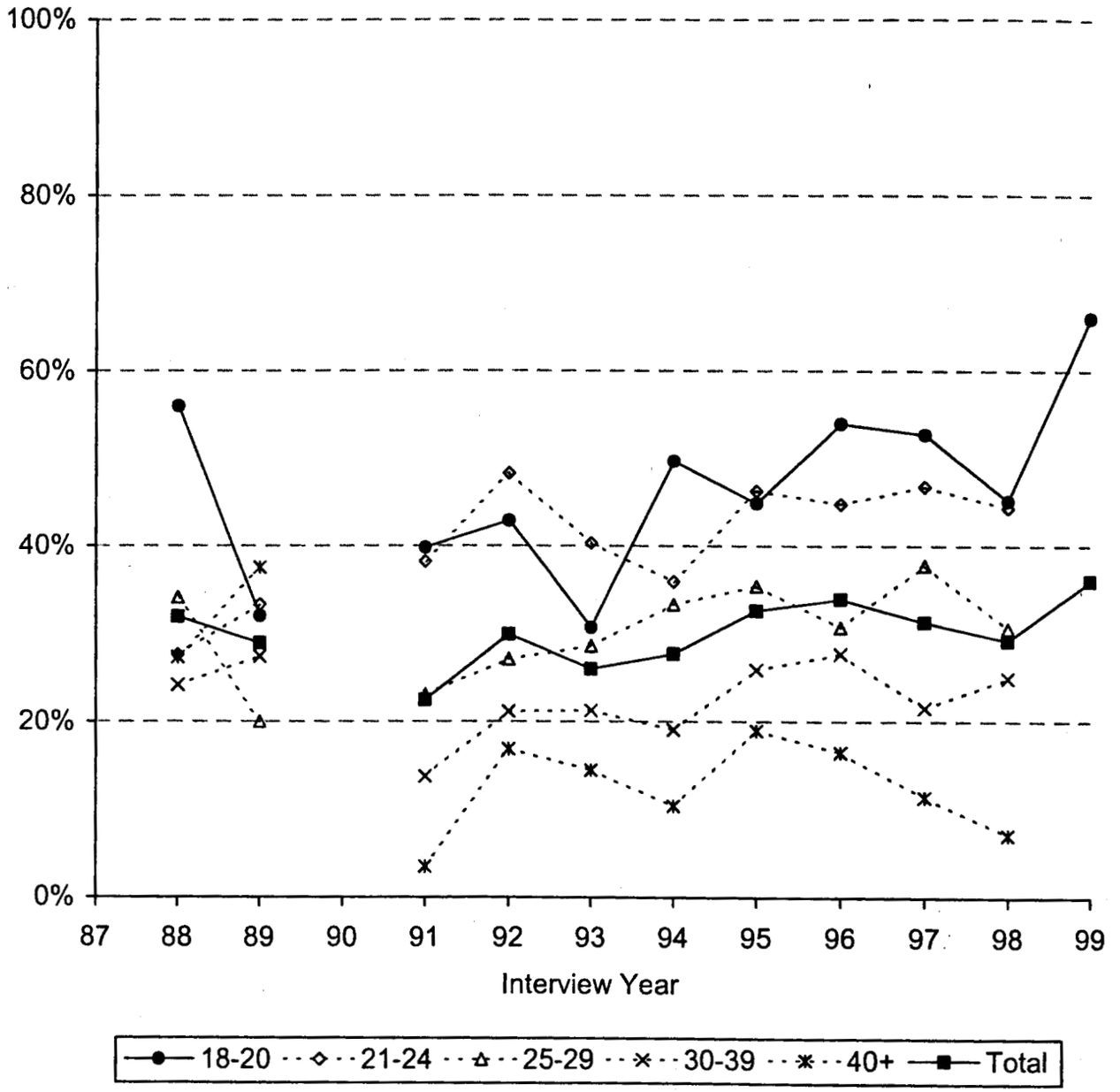

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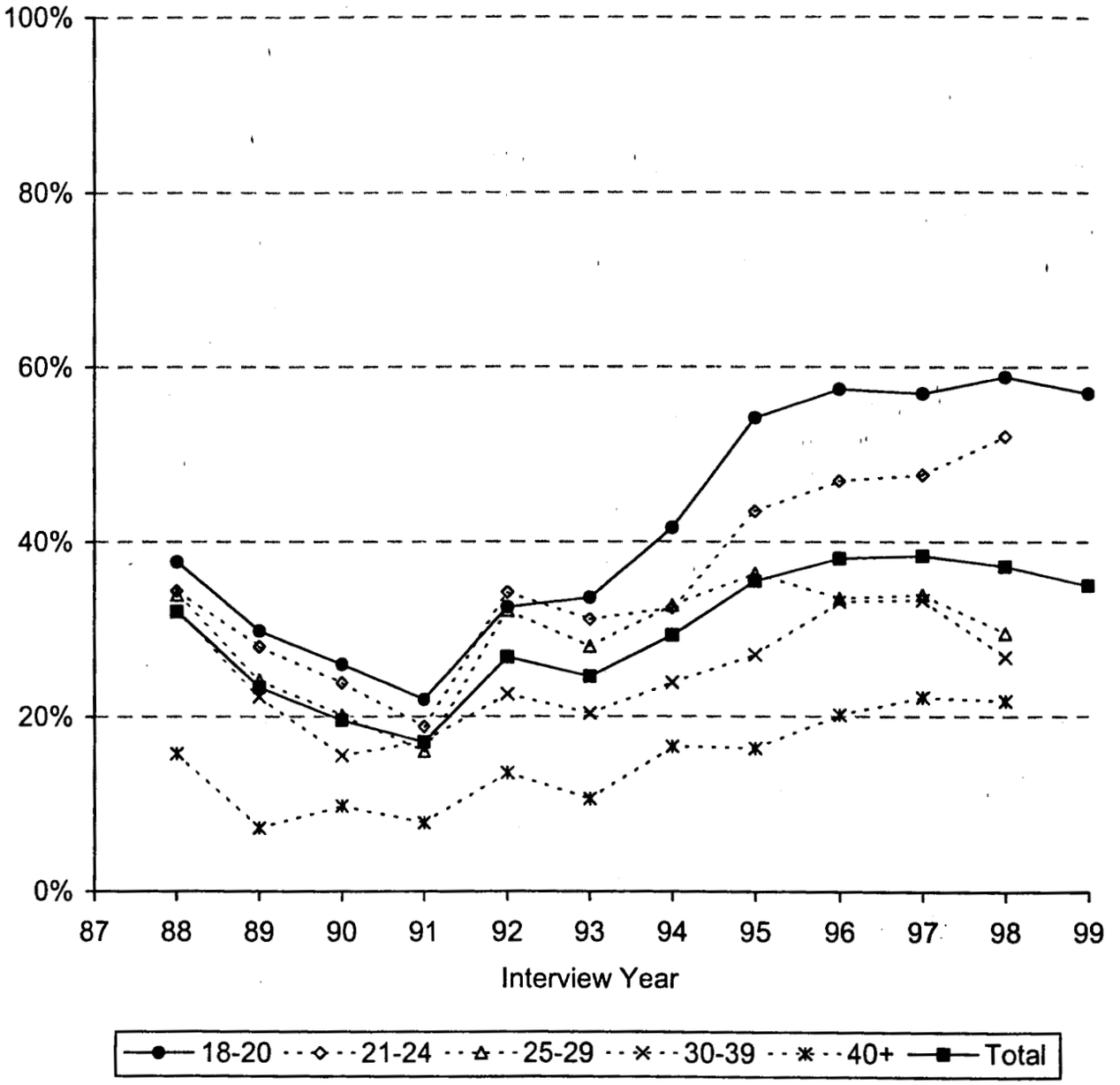

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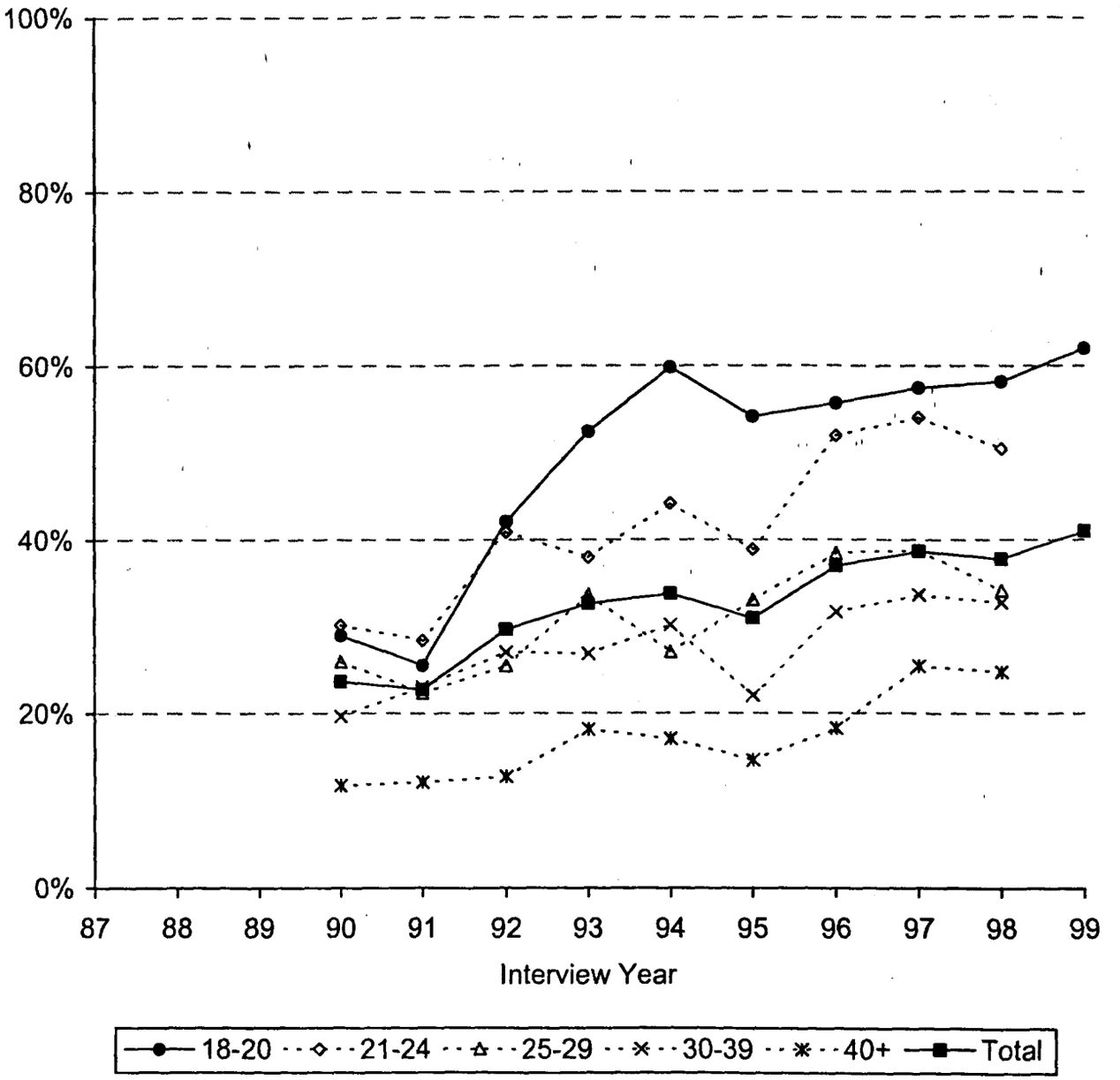

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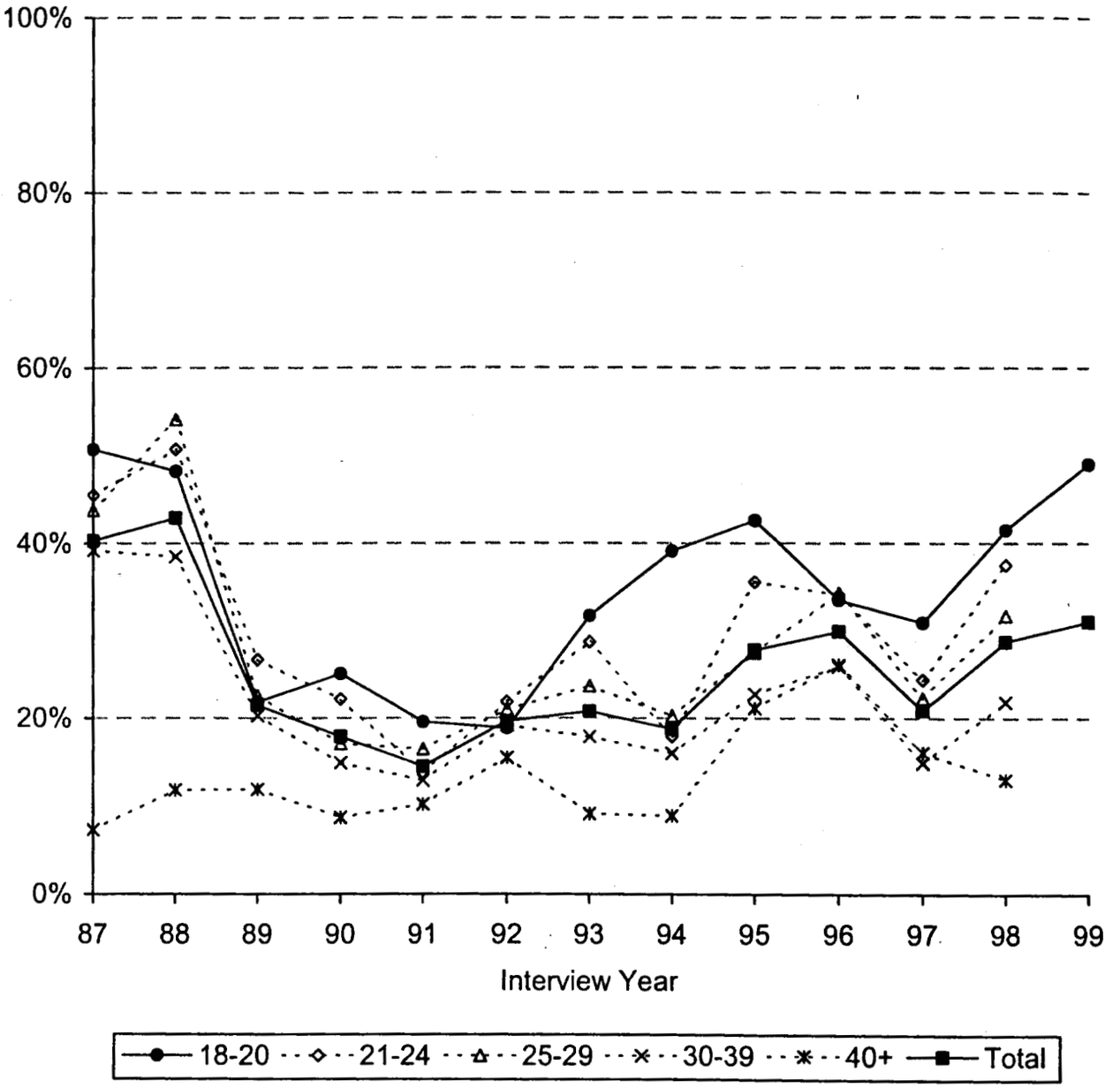

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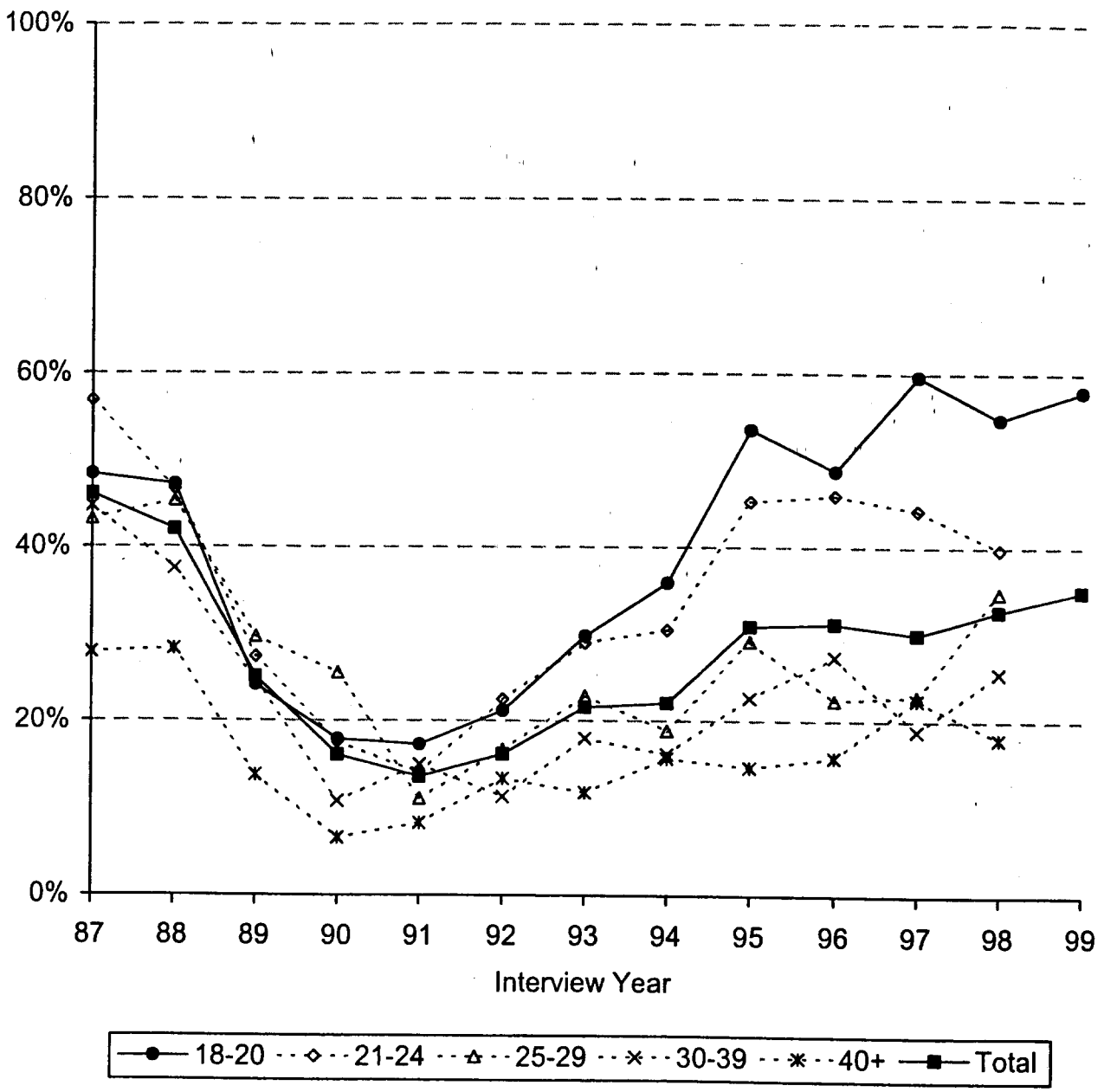

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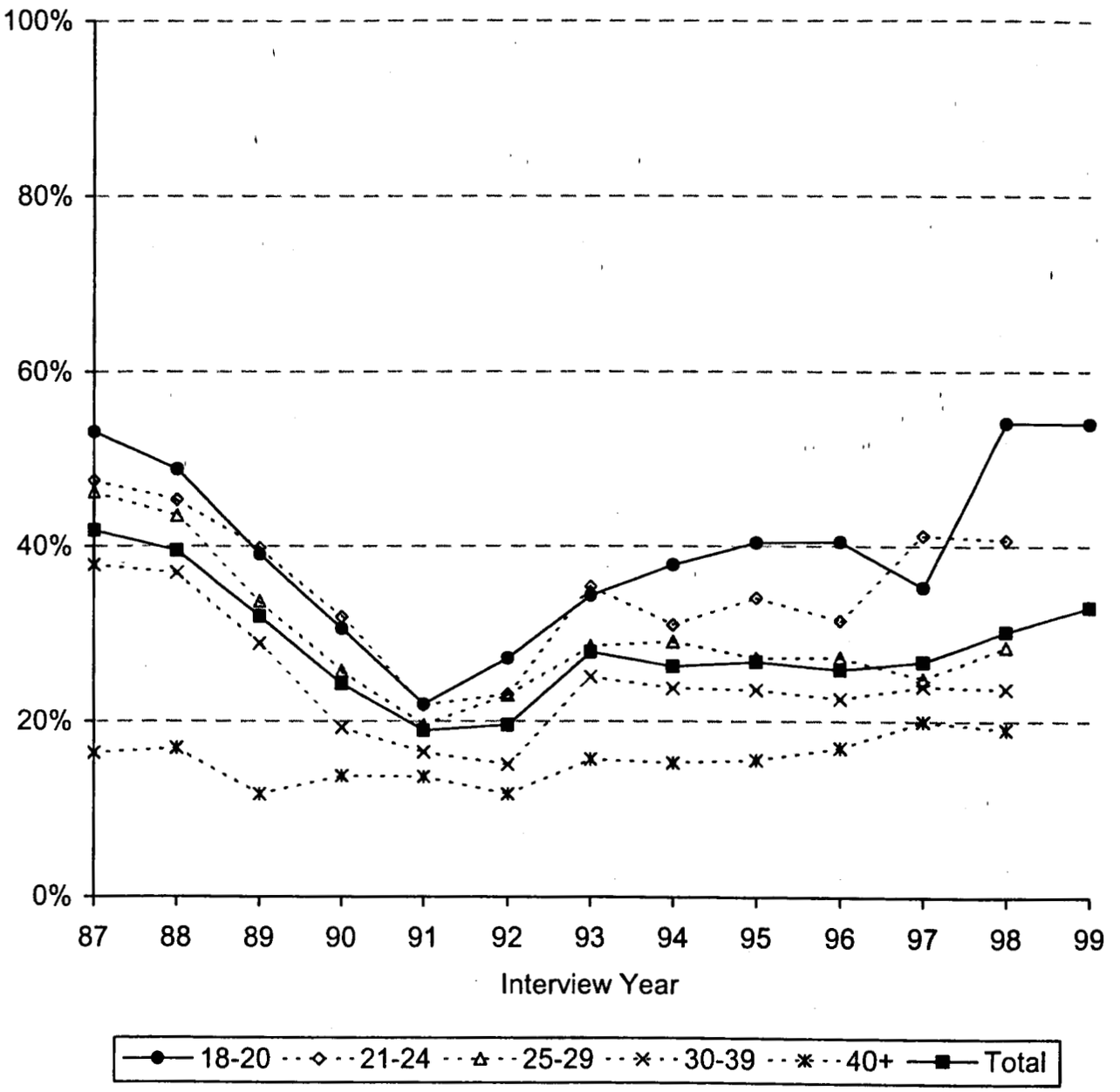

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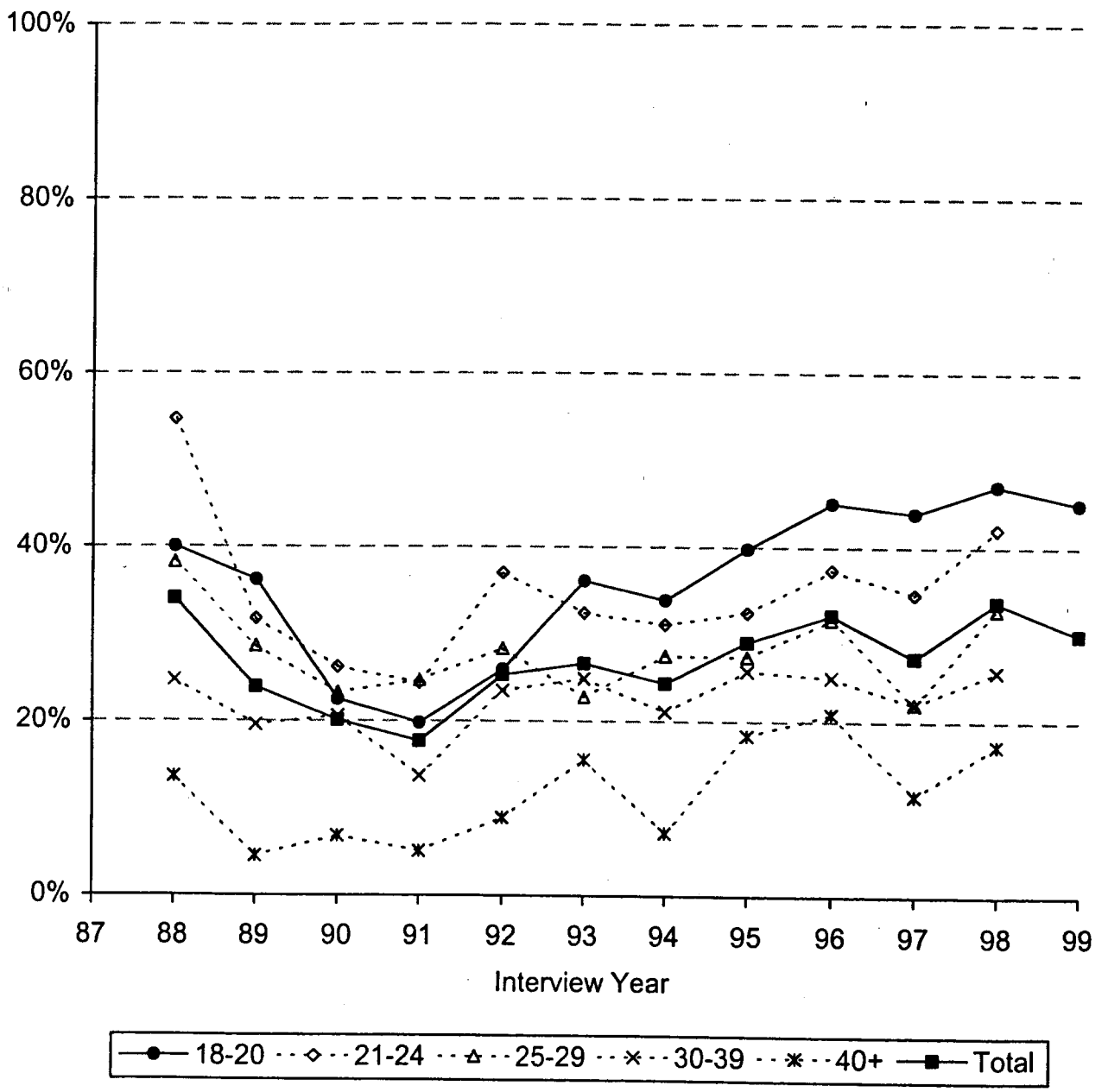

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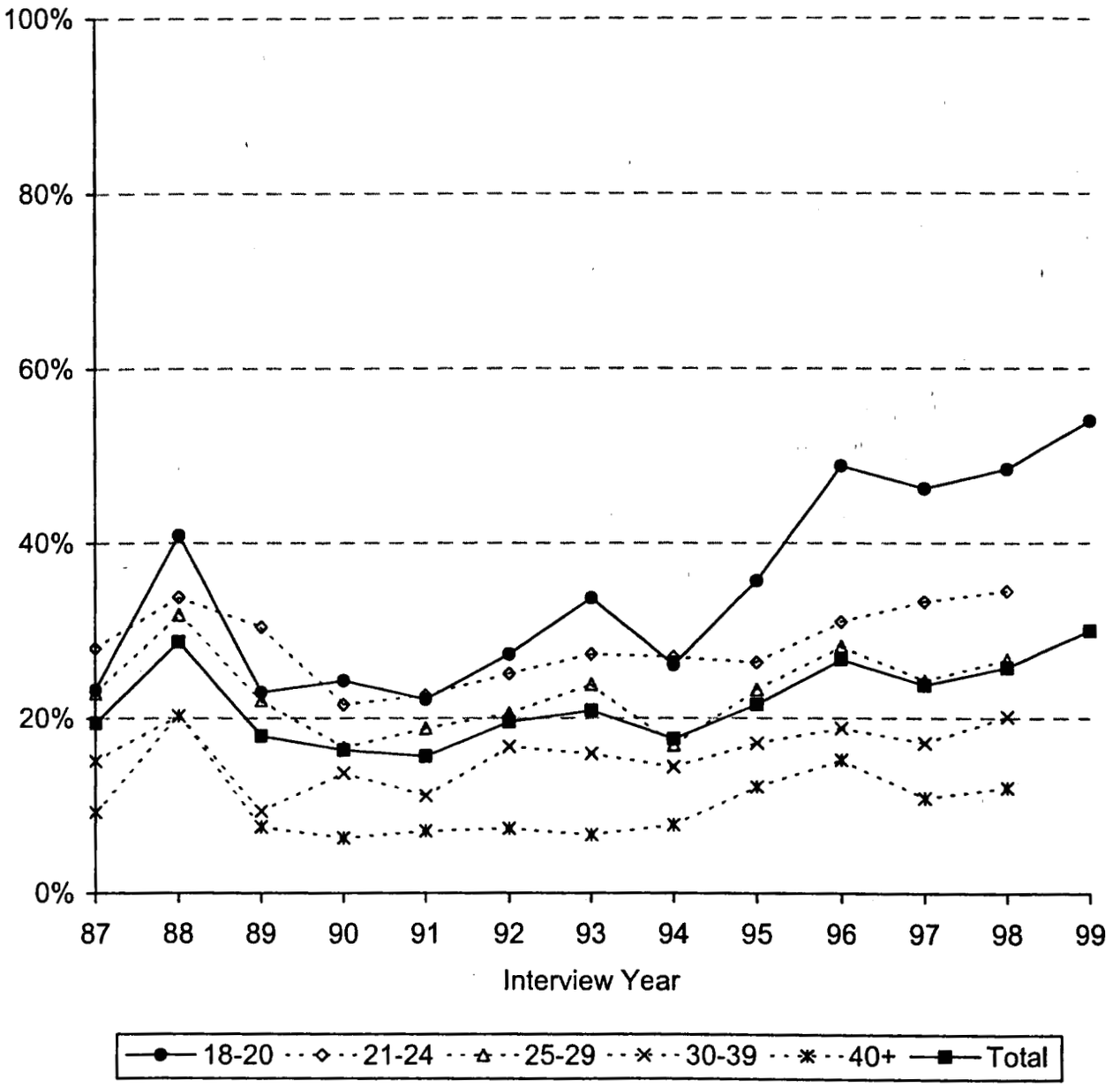
Los Angeles



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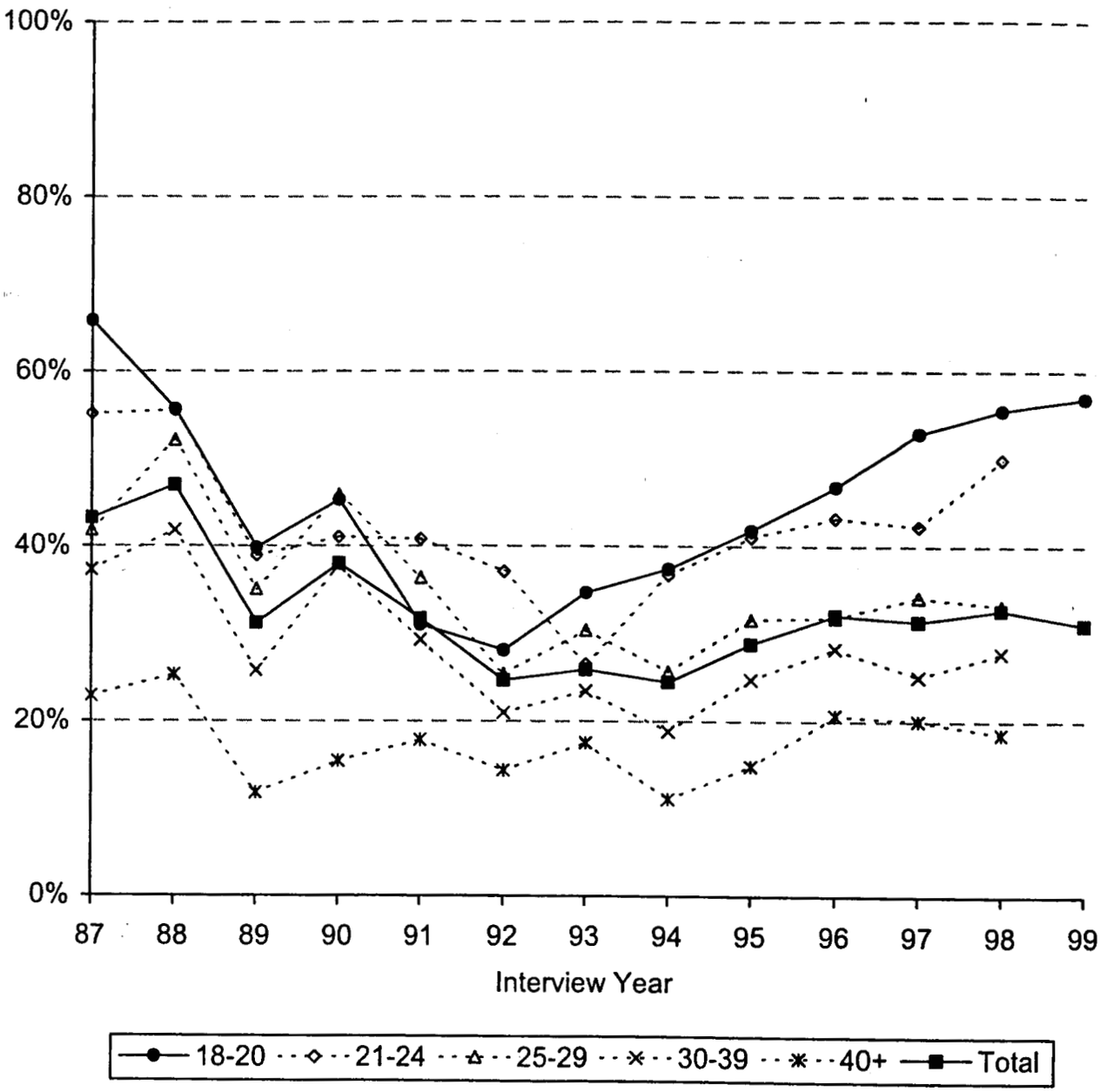
Portland



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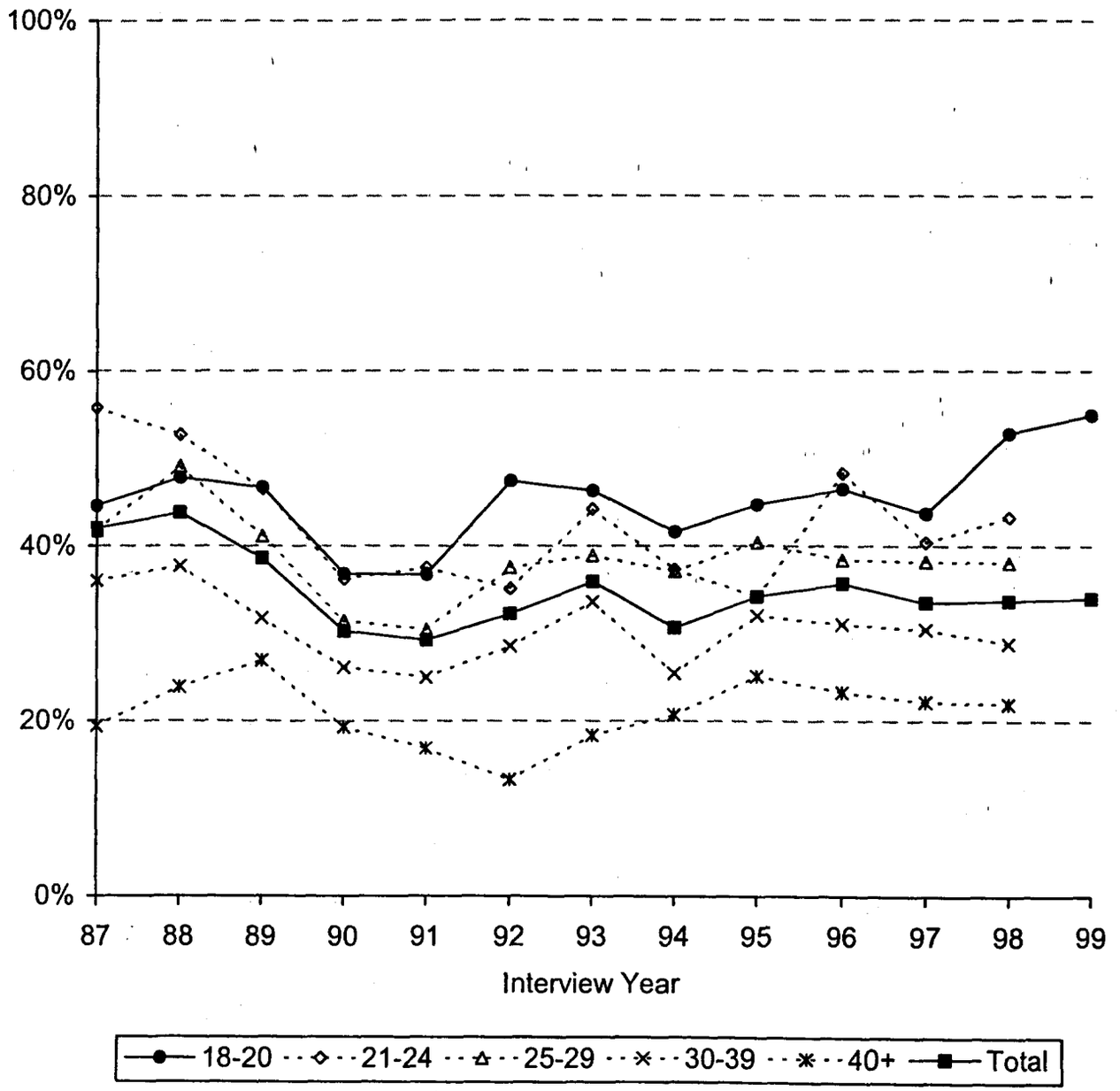
San Diego



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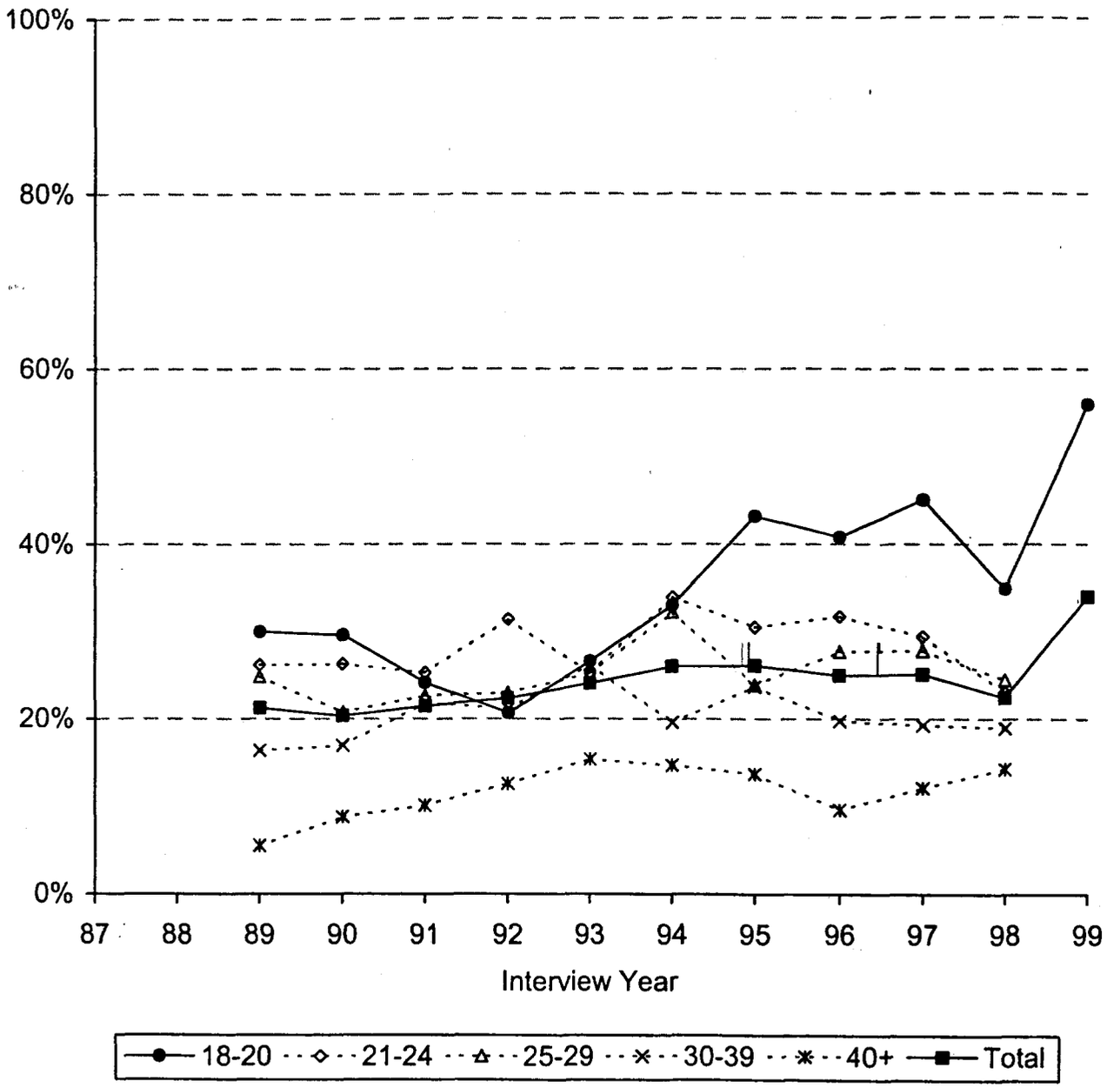
San Jose



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U.S. General Population, NHSDA

Percent Reporting Past Month Marijuana Use

Birth Year	1979	1982	1985	1988	1990	1991	1992	1993	1994	1995	1996	1997	Tot 18+
1901-39	1.2	.5	.5	.7	.6	.3	.4	.4	.5	.5	.3	.1	.4
1940-44	8.0	5.9	3.5	.1	1.5	1.8	.6	.4	.8	.2	.3	2.4	1.6
1945-49	12.9	18.7	7.1	1.6	3.4	2.4	2.1	2.4	3.0	1.4	2.0	1.5	3.3
1950-54	23.9	18.0	12.7	5.5	4.7	6.0	4.2	4.6	3.8	3.4	2.8	4.4	5.9
1955-59	35.3	21.3	20.2	11.0	7.8	6.0	5.8	4.5	6.2	3.8	4.5	3.7	7.7
1960	41.0	34.5	**22.9**	15.0	**4.7**	8.3	6.9	6.0	6.1	8.5	6.7	9.7	10.1
1961	**36.0**	29.3	13.7	11.3	10.2	**7.5**	8.2	5.7	5.4	6.6	5.3	7.4	9.2
1962	33.3	26.2	24.8	9.9	9.2	9.2	**9.7**	6.7	4.5	6.8	4.4	8.8	9.1
1963	24.1	33.4	17.9	**12.2**	11.8	8.3	6.7	**7.9**	8.0	7.9	6.4	5.2	8.9
1964	21.8	**27.0**	28.1	16.6	10.2	7.1	10.7	7.5	**7.1**	4.7	6.1	9.3	9.6
1965	11.9	26.5	21.9	17.1	**10.5**	11.9	8.2	7.9	8.0	**7.1**	6.0	4.1	9.0
1966	7.6	20.5	24.4	18.8	10.9	**9.1**	10.1	10.2	6.3	5.7	**7.0**	3.9	9.1
1967	.9	13.4	**24.8**	10.7	9.9	13.8	**11.6**	7.9	8.3	5.9	7.7	**5.8**	9.6
1968		4.4	19.8	13.8	13.6	12.4	7.7	**9.3**	7.0	7.1	5.7	6.8	8.8
1969		3.9	18.3	20.0	24.0	10.8	11.8	9.1	**9.7**	11.1	7.6	4.4	10.6
1970		.0	10.9	**14.6**	14.8	12.9	11.8	8.7	10.4	**8.2**	9.5	8.4	10.7
1971			9.7	11.6	7.0	16.8	11.7	13.6	9.9	11.0	**11.0**	6.2	11.7
1972			1.8	12.0	**12.8**	15.5	11.8	13.2	11.7	10.0	8.8	**8.9**	12.0
1973			.0	6.8	8.3	**10.8**	9.0	12.7	16.2	12.4	13.2	10.2	12.1
1974				2.8	10.3	8.2	**9.1**	11.9	13.1	12.7	12.5	13.6	12.5
1975				1.9	2.7	4.7	7.6	**11.5**	14.8	18.2	11.5	13.4	13.8
1976				1.1	.8	3.5	7.3	11.0	**13.3**	14.2	21.0	11.8	15.2
1977					.3	1.0	3.2	6.4	11.6	**12.6**	15.1	15.6	14.4
1978					.0	.3	2.4	4.2	10.0	13.7	**15.4**	17.3	17.5
1979						.0	.5	1.3	6.0	11.0	12.5	**16.2**	13.4
1980							.1	.6	3.5	9.4	13.2	16.5	
1981								.3	1.4	6.2	5.9	11.7	
1982									.6	1.4	2.9	10.0	
1983										1.1	1.5	4.9	
1984											.2	2.7	
1985												.8	
Total 18-20	39.5	28.5	24.3	16.3	13.3	15.0	11.0	12.5	14.3	15.2	17.1	15.4	16.2
Total 18+	12.2	10.9	8.9	5.8	5.1	4.8	4.4	4.3	4.6	4.2	4.4	4.6	5.2

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ADAM Program Average

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39	8.1	9.1	8.8	5.3	5.1	8.0	11.2	8.1	9.9	10.3	8.8	8.8	8.0
1940-44	22.4	19.2	12.5	9.1	6.9	9.2	11.7	11.9	12.8	15.0	10.7	10.3	11.9
1945-49	22.0	22.0	15.3	9.5	9.4	12.2	15.4	15.3	13.1	14.5	16.3	13.9	14.4
1950-54	28.0	30.3	18.3	14.8	12.8	15.9	15.9	15.9	17.9	21.0	18.7	17.5	18.3
1955-59	33.2	34.7	21.4	16.2	14.7	19.1	21.2	18.1	20.9	22.1	21.3	20.7	21.1
1960	37.1	39.3	23.2	**17.4**	16.8	20.1	23.6	19.0	23.6	26.3	23.2	23.1	23.4
1961	38.1	37.7	26.9	20.0	**17.7**	21.2	25.7	20.3	25.1	27.7	26.6	25.9	25.2
1962	**44.1**	37.2	26.3	21.6	17.9	**22.0**	25.8	20.5	24.7	27.5	24.0	24.7	25.2
1963	42.7	**40.8**	28.1	20.4	20.1	24.1	**23.9**	24.4	26.6	33.3	24.9	25.1	26.8
1964	46.9	43.1	**26.1**	21.0	20.0	24.8	25.8	**24.6**	26.1	27.5	27.1	23.7	26.8
1965	43.3	45.6	27.6	**21.6**	18.9	25.7	25.4	27.0	**29.4**	32.0	28.0	29.4	28.5
1966	44.3	45.4	29.1	23.8	**22.0**	27.6	31.6	25.6	31.6	**32.6**	26.9	29.9	29.9
1967	38.6	42.0	30.1	23.6	21.8	**26.8**	28.7	28.4	31.7	31.7	**31.3**	32.2	29.9
1968	52.2	47.5	34.3	26.4	25.3	29.1	**30.6**	25.8	33.0	36.0	33.0	**29.8**	32.3
1969	**37.2**	43.9	31.8	24.1	27.4	31.4	33.0	**30.2**	34.3	38.2	35.1	34.4	33.2
1970	53.2	**39.2**	30.4	25.5	24.3	31.6	33.1	32.8	**34.7**	37.6	38.2	36.1	33.0
1971	18.8	32.1	**31.1**	23.9	26.4	34.6	34.7	35.1	40.1	**39.6**	37.5	34.8	34.0
1972		6.3	30.0	**20.5**	24.5	33.4	38.2	39.2	43.0	47.4	**40.2**	38.8	36.1
1973			8.5	22.1	**23.5**	34.8	38.5	40.7	46.1	44.2	46.4	**38.2**	39.0
1974				3.7	13.6	**29.8**	38.6	43.4	47.2	49.8	48.4	44.5	42.8
1975					14.2	29.1	**40.9**	46.6	49.8	52.7	52.2	49.5	49.2
1976						22.6	36.2	**46.1**	53.1	54.1	50.8	51.4	51.1
1977							32.3	46.8	**54.9**	59.2	53.6	53.0	55.4
1978								38.9	51.0	**58.5**	58.9	56.9	57.3
1979									51.2	62.2	**58.6**	62.1	53.4
1980										55.1	57.4	**58.7**	62.1
1981											59.2	56.2	60.0
1982												53.6	
Total 18-20	43.9	44.3	31.0	24.3	25.1	32.7	39.9	45.0	51.4	56.8	56.1	58.5	42.4
Total 18+	34.3	35.0	24.1	18.7	18.6	24.2	27.7	28.6	33.2	37.1	36.6	37.1	29.6

All cell entries (including row and column totals) were determined by calculating the value for each ADAM location and then averaging across locations with a non-missing value.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-Manhattan

Birth Year	Percent Detected as Marijuana Users												
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39	12.0	18.6	6.1	6.5	3.1								13.2
1940-44			10.5	6.5	6.1		20.0		20.0	19.5	29.6		14.6
1945-49	15.2	19.7	13.1	8.3	7.4	15.6	8.9	16.0	10.0	13.2	12.9	20.0	12.9
1950-54	27.4	20.0	12.4	9.0	7.4	12.2	11.1	11.1	16.3	23.0	16.2	19.0	14.7
1955-59	19.4	25.0	13.1	11.8	10.8	13.5	13.7	11.4	21.6	17.2	21.5	14.6	16.2
1960	32.4	22.2	11.3	**16.1**	9.2	5.9	13.5	16.1	26.0	23.9	27.7	25.0	18.7
1961		23.6	17.9	23.3	**7.4**	8.7	16.7	18.6	17.7	25.4	23.6	20.0	19.5
1962	**30.0**	27.1	19.7	14.5	10.9	**24.1**	19.3	21.2	20.4	40.4	20.0	21.7	21.7
1963	21.4	**19.4**	14.6	18.5	16.7	17.0	**15.2**	24.1	23.5	30.3	27.1	35.4	21.3
1964	45.9	34.0	**10.4**	21.1	18.2	23.1	16.5	**24.1**	16.2	31.3	22.5	22.4	22.4
1965	32.0	30.2	21.2	**6.2**	20.0	15.1	16.9	25.4	**22.6**	34.7	40.0	36.0	24.1
1966	35.7	28.4	26.0	18.4	**26.6**	28.2	31.5	12.5	20.3	**37.5**	12.8	35.4	26.7
1967		35.8	20.6	16.1	22.0	**15.2**	33.3	16.2	40.6	34.6	**28.1**	15.4	25.8
1968	40.7	40.8	28.8	29.0	21.6	18.4	**25.4**	25.6	29.4	29.3	20.8	**20.6**	27.4
1969		34.2	37.5	28.8	29.1	29.2	21.8	**30.0**	27.3	24.4	30.0	40.4	30.3
1970		**20.5**	24.1	35.6	14.3	23.3	36.8	24.2	**42.9**	49.1	48.1	34.1	32.9
1971			**26.7**	32.6	35.6	33.3	41.5	37.9	40.0	**26.2**	37.5	28.6	34.0
1972			25.7	**20.5**	25.7	46.2	23.7		47.4	58.1	**40.0**	37.9	36.9
1973				31.8	**42.5**	45.7	44.4	46.2	50.0	48.1	54.8		46.2
1974				13.3	18.9	**33.3**	18.5	37.9	37.5	44.0	33.3	35.7	36.0
1975					26.9	40.0	**36.0**		45.2	52.4	51.7	43.9	48.3
1976										52.5	50.0	51.7	52.6
1977										64.3	60.5	54.1	61.0
1978									48.3	**71.0**	51.2	63.9	59.0
1979										68.6	**62.2**	67.6	63.9
1980												**57.1**	
1981												50.0	
Total 18-20	30.8	34.1	29.7	31.9	35.0	45.1	33.7	43.8	46.8	61.2	56.2	61.0	41.8
Total 18+	27.4	25.5	17.0	16.7	15.5	18.7	20.0	20.6	25.9	30.8	29.1	29.6	23.0

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30.**

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ADAM- Philadelphia

Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
		Percent Detected as Marijuana Users											
1901-39		8.1	6.2	5.3	2.5	11.8	.0						5.3
1940-44			15.6	5.7	3.0	18.8		3.7					8.3
1945-49		18.2	12.2	4.3	7.9	6.7	13.0	7.7	11.6	12.0			9.4
1950-54		22.9	11.8	7.7	9.0	18.6	16.7	11.3	15.1	21.2	16.7	17.0	14.1
1955-59		19.8	18.0	12.0	8.1	13.3	20.4	21.3	21.5	19.8	17.1	15.0	16.3
1960		29.0	16.3	**20.3**	13.7	19.7	22.2	19.6	20.7	24.3			19.3
1961		10.3	24.4	14.5	**12.1**	19.3	12.7	22.9	20.3	26.9	34.5		19.6
1962		18.5	16.9	6.6	15.9	**22.8**	24.2	19.4	33.3	9.7	13.3	17.2	18.4
1963		**30.4**	19.5	14.9	18.6	15.8	**22.6**	17.2	37.5	19.2	3.6		20.3
1964		41.0	**26.7**	24.3	20.9	26.0	25.4	**19.7**	21.7	28.6	25.0		24.7
1965		27.8	31.0	**20.0**	20.9	25.0	26.2	34.4	**32.6**	24.3	21.1	29.4	26.2
1966		37.5	22.1	22.4	**22.2**	26.6	33.3	28.4	33.3	**28.6**			27.3
1967		48.9	28.2	26.7	21.7	**32.4**	28.4	34.0	29.6	33.3		37.1	31.1
1968		50.9	35.2	20.5	26.8	28.6	**27.4**	27.3	35.7	35.7	31.7	**45.7**	31.9
1969		45.5	42.6	26.7	25.0	22.4	38.8	**35.5**	28.9		30.8	24.0	33.4
1970		**43.2**	34.8	17.8	26.8	35.9	32.9	28.4	**45.9**	42.5	21.9	22.6	31.6
1971			**23.1**	21.7	24.2	37.9	30.9	32.8	30.0		38.7	33.3	29.1
1972				**25.6**	26.4	41.3	50.0	44.1	42.9	55.2	**48.5**	35.7	39.4
1973					**25.7**	39.1	43.0	40.0	41.7	39.3	44.0	**30.8**	38.9
1974							61.6	55.2	58.3	44.7	40.0	35.3	51.9
1975							**51.1**	49.5	55.4		43.1	55.3	52.5
1976								**37.8**	63.2	48.8	56.2	62.0	54.7
1977									**63.6**	63.8	57.9	57.1	60.1
1978											63.6	77.1	67.6
1979												55.7	54.8
1980												**67.7**	70.0
Total 18-20		47.0	34.3	21.0	25.4	38.5	52.0	48.9	58.8	58.3	58.5	64.7	44.1
Total 18+		29.6	22.8	16.2	17.0	23.4	29.1	28.1	33.7	33.5	33.3	36.5	26.3

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-Washington, D.C.

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39			2.9	.0		3.3							4.3
1940-44			6.9	.0	3.6		11.1						6.8
1945-49			7.5	6.0	.0	3.8	12.5	6.8	17.9	12.2	9.8		8.1
1950-54			8.6	4.2	7.5	9.3	11.5	7.8	13.8	16.7	14.7	15.6	10.0
1955-59			8.5	6.3	5.9	9.0	14.0	11.1	9.6	17.3	17.8	20.3	11.1
1960			11.1	**7.8**	.0	10.2	8.6	17.1	11.1	28.6	15.4		11.8
1961			13.3	3.3	**5.0**	6.1	18.2	7.8	20.9	19.1	12.0		12.2
1962			20.0	6.9	.0	**14.3**	8.7	12.5	13.9	23.4	26.7		14.3
1963			12.5	7.4	17.6	16.1	**25.0**	23.4	20.8	29.7	17.5		18.0
1964			**20.3**	9.5	15.7	20.0	13.6	**14.3**	16.0	27.7	24.5		18.1
1965			10.8	**8.2**	11.3	17.6	19.6	14.9	**17.0**	25.6	20.0		15.5
1966			12.1	5.7	**14.3**	9.3	22.5	18.5	16.7	**24.3**	24.2		15.7
1967			16.1	12.3	6.1	**12.3**	28.6	18.9	31.8	14.3	**26.7**	20.0	17.7
1968			17.6	14.7	18.8	25.5	**18.6**	22.4	35.6	29.2	30.4	**27.6**	23.0
1969			12.0	7.9	16.3	34.9	30.0	**20.0**	24.3	41.0	35.7		22.9
1970			11.8	5.6	19.4	20.0	24.0	36.2	**36.4**	41.0	40.0		24.3
1971			**5.4**	10.0	8.2	40.4	23.7	43.8	42.3	**39.6**	48.0		27.4
1972				**8.6**	17.9	29.4	40.7	52.6	47.1	51.1	**53.8**		37.7
1973					**27.3**	35.5	41.2	56.6	53.7	58.9	47.8		45.5
1974						**39.8**	48.3	53.7	64.7	65.2	63.6		56.5
1975						39.1	**52.9**	54.9	52.6	56.5	71.4		57.8
1976						26.8	51.1	**65.6**	64.6	54.8	55.6	62.1	59.9
1977						28.2	63.3	75.0	**63.5**	69.9	59.2	60.0	60.5
1978						17.1	43.3	63.3	65.4	**68.9**	54.5	54.5	58.7
1979							21.4	47.5	62.2	71.4	**70.8**	72.2	68.7
1980								55.8	55.7	73.4	72.9	**58.7**	
1981									26.5	59.6	58.0	67.9	
1982										60.6	66.7		
Total 18-20			11.5	7.9	15.3	35.3	50.5	56.3	58.5	62.8	58.9	64.6	40.3
Total 18+			11.4	7.1	10.0	17.8	22.6	24.2	29.8	35.0	33.9	35.3	22.0

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-Chicago

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39		14.6											16.2
1940-44													19.5
1945-49		31.1			.0	38.5	44.0	32.0	14.3			28.6	24.7
1950-54		44.2	20.0	19.7	12.0	21.0	27.5	31.3	25.0	30.4	25.6	14.7	26.3
1955-59	39.4	45.0	26.0	16.8	15.3	23.0	44.9	25.0	30.5	19.4	22.5	22.1	29.1
1960		58.0		**25.7**	20.0	14.8	46.9	20.0		30.8		10.8	31.1
1961		58.7		22.5	**25.7**		33.3	28.1		26.7		21.4	31.4
1962		35.4		32.3	16.2	**40.0**		16.7	27.6			17.3	30.5
1963		**54.0**		25.0	24.2	24.1	**28.0**	26.9	31.0	38.5	30.8	18.9	31.1
1964		63.9		25.6	24.1	11.8				24.0	44.0	19.6	31.0
1965		50.0		**32.6**	19.5	24.3	30.6	26.7	**32.4**	41.4		43.5	34.1
1966		52.7		37.0	**35.5**	31.4	33.3		45.7	**43.7**		31.6	37.6
1967		69.8		31.4	34.1	**39.1**	39.5	37.1	18.8	46.2		44.4	40.7
1968		56.8	34.4	33.3	26.3	21.1	**50.0**	20.0	36.7	48.1		**33.3**	37.0
1969		54.5	26.9	42.9	41.2	17.4	34.5	**39.1**	50.0			46.2	41.0
1970		**50.7**	44.4	34.0	16.9	32.7	45.7	38.3	**38.7**	36.7		32.4	35.6
1971		50.0	**34.7**	34.3	35.2	30.4	23.5	50.0	37.5	**42.9**		42.3	37.0
1972			32.4	**25.0**	31.1	36.5	49.0	44.9	50.0	54.5		29.8	37.8
1973					**26.6**	23.1	47.8	47.8	64.3	49.0		**40.0**	41.2
1974					17.5	**24.1**	49.1	49.1	56.1	60.0	57.7	57.1	49.3
1975						40.0	**39.4**	66.7	61.2	68.1	68.6	56.8	60.6
1976								**46.2**	78.0	74.1	68.6	66.1	66.1
1977								72.0	**65.1**	79.7	71.1	57.8	70.7
1978									73.3	**73.2**	69.2	72.1	72.4
1979										67.5	**85.7**	70.5	74.5
1980												**57.1**	56.0
1981												67.7	
Total 18-20	47.8	51.7	35.3	31.3	30.7	27.2	48.8	52.5	69.8	75.3	77.2	68.9	51.5
Total 18+	39.5	47.6	30.7	27.1	23.4	25.5	40.2	35.8	42.0	44.8	46.1	38.2	36.8

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-Cleveland

Percent Detected as Marijuana Users

Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39				9.7		4.0							6.0
1940-44					.0								9.9
1945-49			7.9	7.8	4.3	8.9	6.7	18.2	16.7	17.6			10.0
1950-54			15.3	8.7	7.1	12.7	8.2	9.7	7.3	7.5	17.3	17.5	10.9
1955-59		21.2	18.8	10.5	5.9	11.4	10.6	14.8	14.2	18.0	22.8	12.1	13.6
1960			20.0	**11.5**	13.6	14.3	16.7	16.7	10.8	25.8	19.2		16.7
1961			24.1	17.6	**4.9**	23.9	12.2	13.6	11.4	21.6	19.4	16.0	16.5
1962			19.6	16.3	14.0	**14.0**	15.4	16.1	16.7	20.0	28.6	24.0	18.7
1963			22.2	7.3	11.6	9.8	**6.3**	22.9	20.5	37.1	32.5		18.7
1964			**23.9**	16.7	11.1	13.3	23.3	**15.7**	19.0	21.3	29.4	27.6	20.0
1965			20.9	**20.7**	8.3	10.6	6.5	15.6	**23.1**	26.5	37.9		18.9
1966			25.0	12.8	**15.3**	21.3	25.0	29.7	18.4	**19.5**	37.8	40.0	23.2
1967			25.8	22.9	22.5	**17.6**	23.7	18.2	22.6	34.4		20.0	23.2
1968			37.8	15.9	12.3	17.2	**11.8**	17.0	36.0	33.3	30.6		22.2
1969			17.6	8.8	14.0	21.1	25.5	**23.0**	30.2	18.2			22.2
1970			20.0	24.6	13.9	19.7	27.1	34.0	**23.8**	36.6	50.0		27.0
1971			**13.8**	10.5	18.1	27.3	33.9	32.7	48.6	**35.1**	46.7	36.0	27.9
1972				**3.8**	12.7	23.7	37.0	32.5	43.6	45.5	**52.0**		28.5
1973					**10.0**	22.7	42.9	40.4	50.0	42.1	62.5		39.3
1974						**27.6**	32.4	40.6	48.8	65.3	64.9	59.4	44.6
1975						20.5	**38.5**	52.2	46.2	52.2	55.1		51.2
1976						10.8	32.6	**53.9**	50.0	64.0	50.0	53.8	54.1
1977						5.9	32.9	54.6	**63.2**	58.8	64.4	58.3	60.3
1978						13.2	7.8	40.7	54.1	**64.7**	82.1	67.5	72.2
1979							15.8	39.2	59.3	75.2	**63.0**	78.9	73.6
1980								18.6	37.2	63.5	75.9	**79.6**	
1981									30.3	54.4	62.3	71.9	
1982										32.0	52.2	63.2	
1983												42.6	
Total 18-20		28.6	18.7	14.1	14.4	23.6	39.8	48.0	52.0	60.5	67.6	72.3	38.2
Total 18+		26.2	19.5	12.8	10.6	16.1	20.9	24.9	26.5	32.6	39.3	36.6	23.3

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-Detroit

Percent Detected as Marijuana Users

Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39						15.4							11.8
1940-44			15.2		4.0	10.7							14.1
1945-49		17.9	10.2	8.5	.0	9.0	10.7		3.6				10.0
1950-54		15.5	12.5	8.8	4.8	10.0	6.2	17.6	13.5	16.4	20.3	17.5	11.4
1955-59	26.7	26.9	11.8	10.7	8.5	13.4	16.0	8.1	14.3	22.4	14.2	20.9	14.8
1960			12.9	**9.1**	8.5	20.4	20.7		30.0		28.0		18.1
1961		25.8	15.4	4.0	**4.9**	23.1	22.2		17.9				19.2
1962		18.5	15.4	4.9	10.0	**14.3**	30.8				25.0		16.0
1963			24.1	11.1	15.0	20.4	**33.3**				22.6		25.2
1964			**24.4**	12.5	12.5	13.7			12.8		17.1		18.4
1965		34.6	33.3	**11.5**	16.2	25.0							23.0
1966		46.7	29.7	20.3	**14.8**	23.1			50.0	**27.6**	27.3		27.3
1967		38.6	33.3	22.8	18.2	**15.0**	32.0		41.2	44.4			30.6
1968		46.5	35.1	14.3	25.6	33.3	**46.4**			54.5	60.7		37.8
1969		51.1	31.1	12.0	24.6	27.1			54.5	40.0	42.9		33.8
1970		**52.4**	35.0	28.6	28.1	27.5	48.6		**42.1**	48.6	41.7		37.1
1971			**42.2**	17.2	25.0	50.9	31.0		55.3		42.4		37.3
1972			29.4	**28.1**	36.5	35.6			58.1		**46.7**		42.4
1973				14.3	**18.4**	47.7	48.6		52.8	66.7	56.5	**51.6**	47.2
1974						**34.0**	51.7		65.0	45.7	48.6		48.4
1975							**44.4**		72.9	52.8	61.2	62.1	62.7
1976									73.7	60.5	62.0	68.0	66.1
1977									**80.4**	72.5	66.7	70.0	70.4
1978									73.3	**64.1**	63.6	75.0	66.3
1979											**58.8**	85.0	68.8
1980												**71.1**	
Total 18-20	38.7	50.0	34.1	24.6	27.9	40.8	52.3	62.5	73.0	66.7	62.1	75.0	48.6
Total 18+	28.5	31.5	20.3	13.3	13.9	21.4	28.4	31.8	37.9	39.9	39.5	41.8	27.1

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-Indianapolis

Percent Detected as Marijuana Users

Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39			17.5	.0	2.4	2.6							7.5
1940-44				6.5	11.1	8.8	20.0						17.1
1945-49			26.8	14.9	8.5	19.1	15.6	30.2	11.6	13.5	16.1	32.3	18.8
1950-54			30.8	32.7	9.6	24.7	21.3	21.6	19.0	25.6	21.2	17.3	22.3
1955-59		48.1	32.0	20.9	21.8	28.5	26.3	21.5	33.1	21.4	27.8	32.8	26.3
1960			39.1	**31.1**	23.3	28.9	42.6	25.5	38.5	33.3	29.4	35.0	33.0
1961			35.3	16.3	**25.5**	43.1	42.9	33.3	37.3	50.9	23.9	30.0	35.2
1962			43.1	31.5	32.7	**34.0**	36.1	41.9	30.6	46.3	29.0	26.9	35.5
1963			46.7	42.6	23.5	31.5	**33.3**	36.7	19.7	35.0	31.8	23.5	31.8
1964			**34.9**	48.3	36.8	34.5	50.0	**26.8**	36.4	26.5	34.0	33.3	36.2
1965			43.3	**37.5**	20.5	44.4	43.1	32.7	**42.0**	50.0	31.0	34.6	39.1
1966			24.1	31.8	**24.5**	62.5	49.0	26.1	40.5	**44.9**	35.9	33.3	36.9
1967			34.3	31.5	28.3	**41.2**	31.4	30.8	37.8	40.0	**37.0**	42.9	34.7
1968			41.8	36.5	30.6	39.5	**39.6**	29.2	37.5	39.3	42.6	**46.9**	37.8
1969			37.9	32.1	36.2	39.7	44.7	**42.0**	43.2	38.6	41.5	43.3	40.0
1970			38.0	28.6	28.6	32.3	44.3	41.0	**45.2**	42.6	43.1	38.7	38.0
1971			**42.0**	24.4	43.8	47.8	47.1	31.5	58.3	**50.0**	48.4	28.6	42.5
1972				**22.5**	8.8	29.1	53.1	60.4	45.6	64.9	**35.1**	44.4	40.8
1973					**22.2**	39.7	46.7	46.2	60.4	60.3	56.5		49.5
1974						**27.1**	47.1	43.7	50.0	59.8	51.0	58.3	46.1
1975						16.4	**32.9**	56.3	53.2	64.8	50.0	56.7	52.6
1976						12.2	29.8	**42.0**	65.2	68.1	62.7	57.4	62.1
1977						6.8	15.0	41.9	**51.6**	67.9	66.2	58.6	63.0
1978						1.4	8.6	27.7	49.0	**62.1**	60.6	63.3	64.8
1979						2.3	1.4	24.8	40.7	61.6	**50.6**	76.9	64.1
1980							2.0	6.3	23.8	42.8	45.9	**53.6**	
1981								5.6	22.4	27.2	43.7	44.4	
1982								.0	4.1	20.4	34.7	55.9	
1983									8.0	10.5	17.5	38.2	
1984											10.4	22.2	
1985											20.0		
Total 18-20		56.7	40.5	27.8	26.9	31.4	42.9	50.3	55.5	69.5	61.7	66.3	46.4
Total 18+		40.9	35.1	27.7	22.7	32.8	37.1	34.2	39.3	45.4	39.7	40.6	35.7

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30.**

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ADAM-Omaha

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39					.0								7.4
1940-44					10.3	11.1							11.6
1945-49					23.7	26.3	8.3	5.3	13.8		28.6		18.1
1950-54				25.0	28.1	24.6	26.8	28.3	17.8	30.5	34.4	25.9	27.5
1955-59				19.0	22.4	39.3	34.0	35.6	38.1	33.3	37.0	22.6	31.9
1960				**6.9**	23.1	34.1		38.5	30.8	32.4	48.3		32.8
1961					**31.0**	29.0	53.8	41.2	56.1		40.0	41.4	40.0
1962				3.6	27.3	**32.4**	36.4	48.5	38.5	46.2	41.5	29.6	34.7
1963				32.0	24.4		**41.2**	34.4	40.0	37.8	42.3	50.0	39.3
1964					9.4	52.9	40.5	**35.3**	34.1	54.3	44.0	16.0	35.4
1965					18.7	34.2	37.5	37.9	**40.6**	35.7	30.3	48.3	34.6
1966				31.0	**24.0**		47.2	36.4	40.5	**53.1**	53.8	29.6	41.5
1967				25.6	23.1	**52.6**	41.2	48.4	58.5	40.5	**40.5**	25.0	40.1
1968				32.1	13.9	35.5	**45.2**	43.7	34.6	43.7	50.0	**51.2**	40.0
1969				15.8	36.7	45.1	38.2	**63.2**	48.5	61.5	32.4	48.1	42.2
1970				20.8	28.8	47.5	36.6	52.4	**40.0**	53.1	62.9		41.3
1971				32.3	41.9	42.9	47.7	54.5	52.8	**60.0**	51.5	31.3	46.2
1972				**25.7**	31.2	50.0	52.4	49.1	53.2	61.9	**52.1**	44.0	47.3
1973				3.8	**36.4**	48.4	67.3	46.5	53.2	58.3	69.8	**32.6**	50.8
1974					38.7	**41.7**	55.3	47.3	49.0	63.6	58.5	57.1	53.2
1975							**61.3**	55.4	48.4	58.6	60.9	57.9	55.8
1976								**51.9**	59.1	66.2	60.0	69.6	62.5
1977								59.3	**59.6**	74.2	61.8	59.6	64.2
1978										**71.9**	66.0	65.6	68.0
1979										61.3		68.3	68.1
Total 18-20		53.8		25.4	36.3	46.3	57.9	52.0	54.1	70.8	65.0	67.0	53.4
Total 18+		45.3		20.9	25.1	38.8	40.4	41.9	42.4	49.2	47.8	41.9	39.8

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-St. Louis

Percent Detected as Marijuana Users

Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39			8.3	8.3	.0								6.0
1940-44				.0									8.2
1945-49			17.5	3.6	13.5	3.3	20.7	21.6	6.7	25.0			13.5
1950-54		7.9	17.5	13.0	8.4	13.1	12.7	9.8	12.9	32.0	17.2		14.1
1955-59		21.3	18.1	14.2	9.0	7.8	16.7	17.2	15.0	24.5	21.8	22.7	15.6
1960			28.3	**9.8**	14.8	17.0	8.9	23.3	25.5	38.9	29.4		21.0
1961			23.5	15.6	**19.6**	11.9	17.1	8.7	19.6		17.9		18.1
1962			23.7	20.0	11.5	**10.3**	19.0	11.8	19.5	29.0	32.4		18.9
1963			33.8	11.5	13.6	16.2	**19.2**	18.8	35.6	20.5	16.1	38.5	22.4
1964			**38.7**	17.4	14.0	20.8	18.7	**12.0**	36.5		26.5	33.3	23.1
1965			25.4	**16.2**	11.5	15.7	22.4	26.7	**32.1**	32.6	34.9		23.5
1966			43.5	15.7	**8.8**	20.0	20.0	25.0	28.1	**28.6**	25.7	36.0	24.1
1967			29.8	23.1	10.7	**15.7**	31.6	31.5	28.6	39.4	**35.7**	50.0	27.8
1968			25.5	25.9	20.7	13.5	**20.4**	14.0	35.6	57.1	50.0		26.6
1969			27.7	7.9	19.2	27.6	41.9	**25.9**	37.8	48.1	52.6		30.4
1970			28.6	18.6	21.1	29.0	25.0	27.9	**22.6**	50.0	40.4		26.6
1971			**30.6**	17.6	21.3	27.3	27.5	36.7	43.2	**51.2**	35.7	50.0	31.3
1972			26.9	**13.2**	20.0	32.5	33.3	50.6	48.2	51.3	**46.5**	41.2	34.1
1973				14.3	**12.7**	30.9	29.2	55.6	55.6	44.2	50.0		38.2
1974					17.2	**26.7**	34.5	56.9	57.4	85.7	68.8	52.8	52.2
1975						7.9	**34.8**	56.2	63.0	75.0	70.0	64.7	61.3
1976						6.4	27.8	**46.4**	62.9	63.4	66.0	68.9	61.0
1977						3.6	18.1	44.2	**65.0**	87.5	70.1	64.2	70.5
1978						8.3	16.7	44.3	47.8	**66.0**	74.1	72.2	71.2
1979						3.3	15.4	36.9	49.4	75.0	**76.5**	72.5	69.7
1980							.0	19.1	42.4	68.4	78.6	**66.7**	
1981									31.3			55.2	
1982									33.3				
Total 18-20		19.2	29.3	14.7	18.5	27.5	33.7	54.8	62.5	72.1	69.9	70.4	41.7
Total 18+		17.0	25.4	14.2	13.7	17.9	23.3	28.9	34.4	44.6	42.4	45.2	27.2

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**..

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ADAM-Atlanta

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39					2.2	7.1		4.0					4.9
1940-44					2.0	5.6		7.4					6.6
1945-49				.0	4.7	9.6	11.3	7.1	10.6	13.2	14.9		8.7
1950-54				1.9	8.3	10.7	20.3	14.8	18.3	22.1	15.2	21.6	14.4
1955-59				2.6	7.3	11.5	15.6	14.4	16.0	16.0	28.4	17.0	14.0
1960				**4.0**	11.5	14.7	18.6	10.9	15.3	14.3	12.8		13.6
1961					**14.5**	25.4	10.9	10.9	14.3	17.2	24.4		16.1
1962				.0	13.2	**9.4**	23.2	8.7	20.0	17.9	21.4		14.9
1963				.0	13.3	16.7	**23.8**	20.0	19.4	28.9	19.6		18.1
1964				.0	12.0	13.3	19.6	**22.4**	26.1	33.3	16.7		17.0
1965					14.5	26.6	25.0	16.7	**27.3**	36.6	28.6		22.9
1966					**7.5**	20.4	28.6	11.5	24.5	**31.4**	14.3		18.4
1967					15.9	**20.3**	20.5	22.6	32.6	39.5	**29.7**		23.2
1968					13.6	23.6	**25.6**	33.3	38.2	29.7	36.8		25.9
1969					11.6	35.7	20.0	**30.8**	41.4	34.4	34.4		26.0
1970					30.2	26.8	25.7			30.0			29.4
1971					12.8	42.9	40.5	26.5	43.5	**56.0**	51.5		35.6
1972					12.8	28.6	34.4	41.9	45.2	40.0	**42.5**		30.9
1973					**18.2**	38.6	42.1	51.4	53.3		51.7		39.9
1974						**21.8**	31.8	41.9	56.4	55.3	51.4		42.7
1975							**43.5**	37.5		66.7	63.0		55.6
1976							52.0	**41.3**	48.9	72.7	63.9		53.6
1977									**54.5**	68.3	59.6		59.3
1978									59.3	**62.2**	70.3		66.0
1979											**58.7**		
Total 18-20				5.6	15.7	31.5	40.5	40.5	52.3	69.0	66.5	62.5	41.6
Total 18+				2.9	10.8	18.5	22.3	21.2	27.8	32.5	33.0	25.1	21.6

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**..

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ADAM-Birmingham

Percent Detected as Marijuana Users

Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39					3.7	3.8							6.2
1940-44		15.4	7.1	4.3	14.3	9.8	15.7	10.9	12.8	10.3	19.5	11.1	5.4
1945-49		28.6	15.8	6.2	5.8	9.1	10.2	10.7	11.0	20.0	18.2	17.6	11.8
1950-54		26.8	21.8	10.6	10.6	16.8	16.0	12.6	18.7	19.9	21.3	13.2	12.5
1955-59			12.3	6.8	17.1	8.6	17.9	8.0	16.7	26.2	21.6		16.3
1960			22.0	**15.9**	6.8	17.5	19.4	16.7	4.1	31.7	40.0		16.8
1961		25.9	22.6	13.3	**6.9**	18.6	20.0	18.6	15.4	29.4	19.0		19.3
1962			20.4	13.2	9.3	**22.0**	16.3	38.9	25.6	48.8	32.4		18.3
1963		**32.0**	20.0	10.2	20.4	32.3	**27.8**	35.3	18.2	15.4	35.3	42.3	26.6
1964		55.6	**29.3**	22.0	11.7	34.7	26.1	**29.3**	30.6	38.3	32.5		24.8
1965			13.8	**20.4**	24.0	14.7	21.6	26.8	**40.5**	44.2	33.3		28.7
1966			19.6	19.4	**20.3**	18.2	20.5	14.7	23.8	**36.1**	39.3		28.4
1967			35.1	16.7	14.0	**20.5**	25.0	26.8	20.0	22.6	**47.7**		24.8
1968			35.5	13.9	29.7	26.3	**35.9**	33.3	30.4	54.3	37.1	**37.0**	25.7
1969			28.1	17.5	22.2	20.7	21.1	**22.9**	28.3	36.2	39.5	54.3	33.1
1970			17.2	13.2	19.4	21.1	41.5	31.9	**36.4**	48.2	39.5		27.4
1971				13.5	15.0	24.6	42.6	43.5	39.5	**47.1**	53.1	53.6	30.4
1972						24.5	32.0	24.0	57.4	50.0	**50.0**	43.3	35.2
1973						25.0	32.8	47.5	55.7	58.7	54.2	**69.0**	39.0
1974						**15.8**	37.3	41.7	59.6	65.6	59.3	60.7	46.6
1975						14.0	**29.3**	47.3	50.0	65.6	60.5	58.7	55.4
1976						7.2	17.8	**33.6**	52.2	64.3	61.8	67.5	57.8
1977						10.0	4.1	31.1	**41.3**	72.9	70.6	52.6	64.6
1978							10.4	28.6	43.0	**56.2**	67.1	47.6	64.3
1979								11.6	34.1	55.6	**72.6**	69.1	47.2
1980									17.5	29.6	53.1	**42.9**	
1981										20.0	46.8	42.2	
1982												37.9	
Total 18-20		32.6	27.4	15.3	17.3	25.4	35.4	42.7	54.7	64.2	63.7	57.5	40.6
Total 18+		33.3	20.4	11.8	14.0	18.9	22.9	23.9	28.4	39.7	39.2	37.3	25.8

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-Ft. Lauderdale

Percent Detected as Marijuana Users

Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39			4.0	.0	11.8	.0	6.9						7.2
1940-44				5.9	21.4		7.7	8.0					10.3
1945-49			23.5	8.4	9.2	6.8	21.2	15.9	6.4	5.0	6.7	18.7	11.5
1950-54		37.9	12.0	11.6	15.2	19.4	16.5	18.9	25.2	20.3	17.6	15.2	17.5
1955-59	32.0	45.0	21.2	16.3	16.1	22.1	22.9	18.9	21.1	22.2	19.9	20.8	20.4
1960			16.1	**16.0**	17.9	23.1	20.0	17.9	13.5	26.5	20.9	22.9	20.1
1961			21.4	11.1	**22.6**	28.3	26.7	15.4	31.4	25.0	28.6	23.3	23.9
1962			25.7	28.4	25.4	**21.6**	9.8	20.0	18.2	10.7	11.4	27.6	20.6
1963			20.6	29.3	25.4	25.5	**28.1**	17.7	21.0	35.8	27.7	24.1	26.4
1964				28.6	27.3	27.7	25.5	**22.0**	26.3	38.5	21.4	25.9	26.3
1965			19.0	**27.0**	26.2	32.7	30.6	9.8	**28.0**	24.5	24.5		26.4
1966			41.2	31.6	**34.5**	50.0	38.2	33.9	33.3	**26.4**	29.6	32.1	35.2
1967			23.3	19.1	33.3	**33.3**	28.2	39.0	44.1	35.0	**29.4**	30.8	31.8
1968			39.3	41.4	32.6	24.6	**30.4**	31.4	42.0	38.3	26.2	**32.3**	34.5
1969				31.3	37.0	44.3	40.5	**22.9**	31.7	31.7	30.0	31.0	34.0
1970			41.0	32.8	39.7	45.5	38.9	27.8	**26.0**	39.6	44.9		37.4
1971			**28.0**	28.3	30.4	34.2	38.1	33.3	55.2	**50.0**	42.6	50.0	38.7
1972					32.8	37.3	30.4	34.4	44.4	38.9	**58.1**		37.7
1973					**39.3**	52.8	42.9	46.7	34.0	36.6	55.6	**57.1**	44.7
1974						**60.0**	44.0	42.6	48.9	60.0	61.1		50.6
1975							**39.3**	41.1	56.1	54.7	63.3	58.8	52.4
1976								**60.6**	40.6	51.5	43.1	59.3	49.2
1977									**60.6**	59.6	53.2	65.8	59.0
1978										**67.6**	65.7	48.9	60.5
1979											**53.3**	69.9	64.4
Total 18-20	35.7	46.2	36.0	28.5	32.9	44.3	40.8	47.5	50.3	57.4	57.5	63.4	46.8
Total 18+	26.2	42.0	22.4	20.3	23.8	28.3	27.1	26.2	30.4	33.9	33.7	37.5	28.6

All cell entries based on at least 25 responses.
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ADAM-Miami

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39					6.3	20.5	17.9	4.7	18.9	8.6	7.3		7.5
1940-44		23.3			13.3	17.7	16.4	13.4	22.6	19.2	15.5	13.8	10.6
1945-49		25.6	25.6		14.6	15.4	14.4	19.2	19.8	25.5	17.9	10.2	13.8
1950-54					9.1	40.0	25.0	17.1	13.3		13.8		17.4
1955-59					12.1	31.4	34.6	9.7	37.0		23.1		18.4
1960					17.2	30.4	32.3	14.0	35.5		11.1		19.7
1961					**31.3**	24.3	18.5	27.3	29.0	25.9	29.6		25.9
1962					10.3	**20.0**	24.0	31.4	27.8	27.8			25.0
1963					29.7	27.7	**27.3**	48.5	31.3	31.8			27.1
1964					24.1	29.0		**16.2**	32.4	30.0	12.0		25.1
1965					36.0	34.4		37.0		20.0			31.3
1966						43.2			35.3	**34.6**	18.8		27.2
1967					39.3	**51.4**		40.0	32.0	34.5	**43.8**		32.7
1968					29.6	51.3	**46.9**	46.7	37.8	34.5	48.0		36.1
1969					47.5	39.6	42.4	**33.3**	43.3	46.9	37.1		41.6
1970					31.0	53.3	38.5	28.6	**41.0**	48.9	43.9		42.4
1971					42.3	47.4	24.1	41.3	66.7	**34.5**	45.7		39.3
1972						30.3	28.0	53.2	39.5	41.9	**54.1**		40.0
1973								49.1	50.0	58.3	63.3		43.5
1974									46.2	54.7	35.0		41.2
1975										58.9	47.7		51.0
1976										35.7	51.1	48.1	45.9
1977											65.4	52.0	49.6
1978										**64.3**	60.5	54.1	46.0
1979												57.1	60.4
Total 18-20		56.0	32.0		39.8	42.9	30.7	49.7	44.9	54.0	52.8	45.2	46.1
Total 18+		31.9	28.9		22.5	29.9	26.0	27.7	32.6	33.9	31.3	29.2	29.5

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30.**

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ADAM-Dallas

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39		9.4	7.9	9.7		6.9	4.0						6.6
1940-44		18.5	4.8		7.4	20.0	14.8	8.0					11.2
1945-49		21.5	9.2	7.4	7.3	11.1	15.2	26.5	19.5	25.8	31.6		16.4
1950-54		27.7	19.5	15.4	12.5	15.3	12.3	17.9	20.7	21.5	19.2	17.1	18.1
1955-59		30.8	23.6	16.5	19.5	21.4	18.1	20.8	23.0	24.2	24.7	20.3	21.9
1960		42.6	20.0	**14.6**	6.3	31.3	22.4	21.6	21.4	34.1	30.8		23.2
1961		28.9	24.6	18.6	**24.5**	26.5	25.0	21.2	32.5	29.8	38.9		26.9
1962		46.3	28.8	30.4	16.3	**26.0**	19.4	29.6	13.5	34.2	32.6	15.4	26.9
1963		**32.0**	26.4	15.6	14.0	37.2	**19.6**	27.9	30.8	41.7	38.6	40.6	28.5
1964		33.3	**23.5**	17.2	24.2	32.7	29.5	**26.2**	29.4	29.4	36.5	31.0	28.0
1965		31.1	22.1	**20.5**	8.7	30.2	27.4	37.3	**47.7**	36.2	29.2		28.3
1966		40.4	27.3	29.8	**14.5**	20.8	23.4	40.7	43.8	**35.8**	45.5	34.5	32.0
1967		31.8	31.1	15.7	19.6	**36.7**	33.3	30.2	27.3	27.3	**25.6**		28.3
1968		44.6	36.9	24.6	13.0	37.3	**27.3**	32.8	37.5	37.9	40.0	**32.1**	32.2
1969		26.4	27.9	23.8	24.6	39.0	37.1	**18.2**	38.1	34.0	34.1	29.7	29.8
1970		**41.5**	28.8	32.9	18.7	30.3	21.1	29.8	**35.6**	32.6	34.5	32.1	30.8
1971		43.7	**28.8**	24.3	29.6	29.0	38.9	38.7	41.9	**43.4**	37.0		33.8
1972			21.4	**20.8**	25.0	29.1	29.9	33.8	40.3	47.6	**37.0**	38.5	33.1
1973				23.3	**11.1**	30.9	30.9	39.3	39.5	43.8	35.1		31.1
1974					9.5	**39.4**	30.8	35.5	44.6	42.6	52.0	35.3	39.5
1975						20.7	**37.0**	43.7	47.1	60.0	58.6	52.0	50.0
1976							33.3	**41.7**	57.1	55.1	54.9	60.0	54.5
1977								43.2	**66.3**	57.0	45.6	59.4	57.7
1978									51.4	**65.0**	60.5	54.3	58.4
1979										40.0	**63.3**	57.9	60.0
1980												**65.1**	64.5
Total 18-20		37.7	29.8	26.0	22.0	32.5	33.6	41.6	54.2	57.5	57.0	58.9	40.8
Total 18+		32.0	23.4	19.6	17.1	26.8	24.6	29.3	35.5	38.1	38.4	37.2	28.9

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30.**

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ADAM-Denver

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39				8.6	3.1	13.8							8.7
1940-44				16.1	11.1	13.2	16.2	11.5					13.7
1945-49				9.3	13.2	5.1	21.3	16.7	10.3	15.2	28.2	12.5	14.2
1950-54				21.7	18.5	19.8	22.1	20.9	16.9	22.2	25.5	27.3	21.5
1955-59				18.9	22.6	29.5	25.1	29.6	18.4	28.0	29.8	26.5	25.1
1960				**25.8**	40.8	19.3	21.1	21.8	16.9	41.7	34.5	25.0	26.5
1961				16.7	**15.9**	22.4	30.2	37.0	16.4	29.8	22.2	35.1	25.1
1962				31.5	18.9	**34.0**	25.4	25.4	37.0	30.0	44.7	40.0	31.6
1963				25.4	28.2	20.0	**29.3**	30.6	29.3	39.0	27.5	20.9	27.9
1964				29.7	18.1	27.4	34.4	**37.7**	31.7	27.4	25.0	36.8	29.5
1965				**23.2**	17.5	32.7	37.0	28.9	**31.9**	34.0	37.8	32.1	30.3
1966				30.0	**28.1**	26.0	46.0	38.6	33.9	**28.3**	46.7	32.7	34.2
1967				32.2	23.6	**31.4**	31.7	23.8	37.5	32.1	**37.5**	44.7	32.0
1968				26.8	45.3	42.6	**32.0**	22.9	27.1	29.8	34.1	**32.4**	32.3
1969				39.4	23.0	52.7	30.0	**29.4**	33.3	48.7	37.8	41.0	37.1
1970				19.1	24.2	26.3	42.1	38.2	**38.3**	46.3	52.9	35.3	35.0
1971				33.8	21.4	40.3	31.7	47.6	35.5	**43.5**	28.9	35.6	35.4
1972				**6.9**	27.9	38.9	48.4	41.2	40.3	51.1	**50.0**	37.5	39.7
1973					**28.9**	51.8	48.1	50.9	35.6	52.8	40.4	**30.6**	44.2
1974						**33.3**	53.1	62.3	57.1	47.5	57.1	50.0	51.2
1975						51.3	**59.4**	58.8	45.6	51.2	53.5	63.3	55.7
1976						36.4	59.4	**61.5**	59.7	57.4	64.4	43.9	56.3
1977						30.5	50.7	55.0	**57.3**	54.2	53.6	50.8	53.2
1978						21.6	46.7	50.9	57.5	**59.5**	62.7	60.0	62.1
1979						12.9	37.3	49.0	49.3	71.9	**61.6**	59.3	57.9
1980							12.5	33.3	36.1	61.4	61.0	**60.3**	63.6
1981								26.7	35.7	43.4	64.8	66.7	
1982										37.0	57.9	60.4	
1983											47.1	64.6	
1984												35.7	
Total 18-20				29.0	25.6	42.1	52.5	59.8	54.2	55.7	57.5	58.2	47.8
Total 18+				23.7	22.8	29.7	32.7	33.8	31.0	37.0	38.7	37.8	31.9

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-Houston

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39			8.1	12.2		17.9							11.0
1940-44				7.4	.0		6.7	3.7					6.9
1945-49		22.2	16.0	7.8	16.9	17.1	9.5	6.3	18.2	28.1	8.1		14.0
1950-54	31.6	35.8	20.9	11.4	13.8	14.2	10.9	12.4	22.3	26.2	19.1	11.1	17.1
1955-59	41.9	46.7	20.0	16.6	11.4	20.7	17.6	16.2	18.9	26.4	10.6	18.9	19.8
1960			22.0	**10.0**	19.2	19.0	19.3	14.8	32.8	13.0	22.5	30.8	21.0
1961			28.3	18.8	**9.2**	20.8	21.8	10.0	18.5	30.8	30.0		21.8
1962			14.9	21.3	15.4	**15.0**	21.7	24.0	24.7	36.7	10.7	21.9	23.4
1963		**50.0**	25.0	12.1	17.0	25.8	**16.7**	12.8	17.6	36.4	25.9	16.2	22.8
1964			**22.0**	17.6	17.0	21.4	26.4	**27.1**	23.8	13.3	13.5	20.7	23.1
1965			21.3	**16.7**	13.7	20.3	15.9	15.8	**32.7**	25.5	11.8	20.0	20.2
1966			31.7	22.1	**19.2**	25.0	23.1	20.0	21.4	**32.4**	6.7		26.0
1967			20.5	16.7	11.7	**13.7**	22.4	22.7	17.6	29.3	**17.6**		22.4
1968	57.7	34.6	31.8	26.6	13.6	22.2	**31.5**	14.3	28.6	31.0	20.0	**12.1**	25.6
1969	**50.0**	40.6	16.0	25.8	18.3	17.9	33.3	**16.4**	30.9	40.6	20.3	25.9	25.9
1970		**46.4**	23.4	20.6	12.0	23.1	24.2	17.6	**29.3**	37.5	24.5	27.8	23.8
1971			**24.6**	26.9	21.3	29.3	31.9	15.7	30.0	**48.9**	27.9	51.5	29.3
1972			19.4	**30.7**	12.7	21.9	25.0	18.2	33.9	25.0	**27.3**	31.8	25.3
1973					**23.8**	15.1	26.7	25.5	45.1	25.0	26.1	**20.0**	26.0
1974					7.4	**20.3**	27.5	29.0	32.7	34.0	22.7	32.6	27.7
1975							**39.6**	53.8	47.4	32.0	23.7	51.2	41.5
1976								**45.5**	40.0	38.3	24.6	34.7	34.8
1977									**47.7**	33.3	32.9	38.5	37.2
1978										**33.3**	25.9	35.6	31.5
1979										53.8	**30.8**	50.0	44.0
1980												**41.1**	40.7
Total 18-20	50.7	48.2	21.9	25.1	19.6	18.9	31.7	39.1	42.6	33.5	30.9	41.5	31.6
Total 18+	40.3	42.9	21.5	17.9	14.5	19.7	20.8	18.8	27.8	29.9	20.9	28.7	22.9

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-New Orleans

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39		11.5	9.1	6.5	5.4	7.4		16.0					9.6
1940-44		34.2	9.4	10.3	4.0				15.4				15.2
1945-49	35.7	34.6	17.9	6.0	9.4	15.4	8.6	19.2	20.0	9.6	19.0	9.7	16.9
1950-54	38.5	40.3	20.0	10.3	15.0	13.4	15.4	15.1	15.4	16.9	28.6	22.0	19.5
1955-59	50.6	39.4	26.7	10.3	14.4	12.2	17.6	15.7	16.8	20.1	15.0	19.9	20.3
1960	41.0	48.4	29.2	**15.8**	12.2	6.4	14.5	11.7	27.1	24.4	15.7	29.3	22.8
1961		42.6	22.4	34.1	**19.6**	10.0	13.5	22.2	26.4	23.1	29.4	24.1	25.0
1962		47.1	37.7	26.4	8.7	**12.5**	27.8	17.0	26.2	24.5	14.6	22.2	24.9
1963		**46.5**	37.3	22.2	16.7	18.3	**23.5**	15.9	26.4	36.5	12.1	20.0	25.4
1964	55.6	46.6	**26.4**	20.3	7.1	17.0	26.4	**20.6**	24.1	30.8	16.1	23.4	25.0
1965	53.6	48.2	29.1	**28.0**	15.2	18.2	17.4	13.7	**27.8**	26.3	24.3	38.9	27.5
1966	56.3	54.1	34.4	12.7	**8.3**	12.0	18.2	24.0	31.0	**42.2**	30.0	25.0	28.7
1967		37.5	8.3	32.3	11.1	**18.2**	15.9	24.4	24.4	13.5	**19.6**	33.3	22.7
1968	51.9	52.1	34.5	7.7	21.1	16.3	**34.1**	7.7	23.1	30.2	22.0	**20.9**	27.2
1969		41.8	25.0	19.4	15.7	23.2	27.5	**21.4**	40.0	22.2	20.0	40.4	27.6
1970		**47.2**	22.4	17.5	9.7	25.9	25.9	17.0	**26.3**	23.7	24.5	27.7	24.4
1971		25.0	**25.0**	20.7	25.0	23.6	34.0	20.8	41.9	**33.3**	28.4	37.5	27.7
1972			34.3	**13.1**	15.8	29.6	30.0	41.5	62.7	36.7	**32.7**	39.2	32.4
1973					**12.0**	15.1	27.3	40.3	38.5	45.3	42.0	**39.3**	30.9
1974					2.7	**17.9**	30.0	35.2	42.6	65.4	53.4	47.9	40.7
1975						11.1	**29.3**	33.3	47.2	41.4	37.9	33.9	37.7
1976							29.3	**37.5**	58.0	54.7	53.3	42.4	48.6
1977									**51.2**	52.5	54.8	40.0	52.3
1978										**46.0**	66.7	47.3	53.0
1979										60.0	**56.4**	62.1	59.6
1980												**65.6**	59.0
Total 18-20	48.4	47.2	24.2	17.9	17.3	21.2	29.8	35.9	53.6	48.8	59.7	54.8	36.9
Total 18+	46.1	42.0	25.1	16.1	13.6	16.2	21.6	22.1	30.9	31.2	30.0	32.7	26.1

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-Phoenix

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39		10.4		3.8									8.3
1940-44		12.2	5.4	21.4	15.4	13.5							14.4
1945-49	29.7	25.3	15.9	13.5	11.7	9.1	10.6	18.5	9.8	21.4	14.3		15.9
1950-54	44.6	35.5	29.0	16.9	13.2	13.7	14.2	14.7	17.9	14.9	22.9	18.4	20.5
1955-59	35.1	41.8	29.1	21.4	18.3	17.6	26.0	20.5	21.4	20.8	22.5	23.6	24.2
1960	48.1	43.5	27.5	**17.8**	13.8	7.8	27.5	20.6	19.4	22.7	18.6	34.5	23.4
1961		48.1	37.0	27.0	**18.4**	20.6	27.4	27.3	25.6	16.1	25.4		27.5
1962	**33.3**	40.6	41.8	29.9	24.4	**10.8**	27.6	26.2	22.9	21.4	30.7	25.0	26.6
1963	45.2	**40.7**	31.9	25.4	13.0	23.3	**24.7**	30.7	22.6	26.8	22.2	18.8	25.8
1964	46.4	38.3	**37.7**	24.4	15.2	19.4	31.5	**25.3**	36.8	25.7	24.0	25.0	27.9
1965		50.0	37.3	**25.0**	23.7	22.8	23.2	34.2	**28.6**	19.7	27.5	29.7	29.9
1966	43.2	48.6	42.0	31.7	**23.4**	24.7	34.5	17.5	28.8	**23.1**	20.0	21.4	30.1
1967	64.5	46.0	31.9	27.0	24.7	**27.9**	28.3	37.5	24.7	27.3	**27.4**	24.4	31.0
1968	38.2	47.9	40.7	34.6	21.6	17.2	**20.9**	27.8	30.6	23.6	18.9	**17.6**	27.2
1969		50.7	44.7	34.5	23.3	20.5	42.9	**26.8**	23.2	33.3	35.4	24.0	33.2
1970		**46.4**	32.3	35.1	18.9	21.4	36.5	31.7	**28.0**	28.2	20.7	21.6	27.9
1971			**51.6**	26.4	14.9	40.7	28.9	30.9	23.3	**32.1**	23.1	23.5	28.2
1972				**20.7**	30.0	33.3	36.2	28.4	33.3	40.6	**30.2**	45.5	33.3
1973						24.6	32.3	35.2	41.0	25.5	30.9	**31.3**	31.1
1974						**26.3**	28.6	36.5	40.4	28.6	46.3	46.2	34.5
1975						33.9	**38.4**	42.1	36.5	28.8	57.1	39.4	41.5
1976						25.5	40.4	**50.8**	42.6	38.0	33.3	45.9	39.3
1977						11.2	28.7	38.7	**46.5**	35.7	28.9	50.0	37.8
1978						4.4	20.3	31.5	41.4	**60.8**	41.8	45.5	47.3
1979							12.2	33.6	37.9	58.1	**56.6**	63.2	53.3
1980							15.4	32.6	35.5	45.9	48.9	**62.5**	
1981									37.0	53.3	54.1	64.4	
1982										38.2	31.4	58.2	
1983											34.0	57.8	
Total 18-20	53.1	48.8	39.1	30.6	22.0	27.2	34.4	37.9	40.4	40.5	35.3	54.1	37.0
Total 18+	41.8	39.5	32.0	24.3	19.0	19.6	27.9	26.3	26.8	25.9	26.8	30.2	27.0

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-San Antonio

Percent Detected as Marijuana Users

Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39			.0	2.1	3.1	5.4	3.7	.0	7.1	8.0			3.3
1940-44			4.1	7.1	7.4		17.1	7.1					8.0
1945-49		17.2	8.1	6.3	6.8	.0	13.8	11.5	14.3	12.2	8.8	10.0	9.4
1950-54		25.0	19.2	12.9	8.8	20.2	19.2	10.3	25.6	23.5	12.0	15.9	17.1
1955-59		30.2	20.6	25.1	11.9	23.8	26.5	16.5	19.9	21.8	16.1	22.8	21.0
1960			28.6	**32.0**	14.3	27.6	22.9	29.3	30.2	30.0	15.2	17.9	25.7
1961			29.4	36.8	**23.3**	17.6	31.8	24.5	25.0	23.7	25.0	20.7	27.0
1962			25.0	26.2	21.4	**26.9**	25.0	34.4	27.8	21.3	23.5	42.4	27.3
1963			23.6	19.1	31.0	20.9	**16.3**	21.2	28.6	21.9	15.2	18.2	22.4
1964			**35.9**	15.6	36.8	38.2	13.5	**16.3**	25.0	22.5	26.3	25.7	26.1
1965			37.0	**18.6**	12.5	14.8	24.1	30.6	**26.2**	39.5	20.5	34.4	27.1
1966			39.6	28.3	**17.9**	37.8	30.4	26.3	30.6	**41.0**	22.7	31.3	32.5
1967			23.0	21.1	12.5	**29.3**	22.7	29.3	39.3	17.1	**33.3**	27.0	26.2
1968			27.4	28.3	30.6	38.3	**32.2**	22.5	27.3	44.6	22.5	**32.4**	31.9
1969			46.6	25.0	26.2	37.8	22.4	**25.9**	19.6	38.3	17.5	24.5	29.1
1970			30.8	21.7	25.9	40.0	34.8	40.5	**26.4**	25.4	22.0	40.0	29.7
1971			**40.3**	24.2	29.3	32.7	32.8	34.9	37.9	**31.7**	21.6	26.2	31.3
1972			35.0	**30.9**	22.2	20.0	32.4	21.1	35.1	43.6	**22.2**	33.3	28.0
1973				31.3	**11.1**	29.0	41.9	31.6	27.0	42.6	29.8	**36.7**	30.9
1974					7.5	**25.5**	37.5	35.9	28.4	33.3	50.0	46.5	36.7
1975						15.4	**28.2**	36.8	36.7	30.4	31.3	41.2	34.7
1976						16.7	28.3	**35.2**	47.3	39.8	36.1	37.5	38.8
1977						10.2	25.7	28.7	**38.7**	47.8	39.4	44.4	43.4
1978						9.8	24.3	27.7	50.5	**48.4**	45.0	50.6	49.0
1979							17.9	25.4	40.4	49.4	**53.5**	40.0	45.2
1980							23.5	12.9	36.2	48.9	46.4	**55.9**	57.4
1981								11.1	26.4	38.1	53.6	50.0	
1982										34.7	51.5	53.1	
1983										20.6	26.1	45.3	
1984											16.7	23.9	
1985												29.5	
Total 18-20		40.0	36.2	22.5	19.8	25.9	36.1	33.9	39.8	45.1	43.9	47.1	36.6
Total 18+		34.0	23.9	20.1	17.7	25.3	26.6	24.4	29.1	32.2	27.3	33.7	26.6

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-Los Angeles

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39		10.2		1.8	2.6	7.5		10.7					5.9
1940-44		20.8	.0	5.5	7.0	9.4	8.3	3.3	2.8	16.0			9.6
1945-49	12.1	22.7	12.5	9.7	7.7	5.2	4.4	6.5	15.3	13.8	8.2	7.5	10.9
1950-54	10.2	21.1	5.7	10.3	11.0	9.6	9.3	8.9	13.7	14.6	10.3	10.7	11.6
1955-59	14.8	26.9	12.1	14.0	8.9	16.5	15.1	11.3	16.1	14.0	16.9	19.0	15.8
1960		35.2	13.2	**22.4**	16.0	17.9	19.5	13.8	26.7	19.7	12.2	15.0	20.3
1961		35.5	13.6	19.1	**14.1**	20.0	15.7	15.3	17.3	18.5	12.2	17.7	18.7
1962		23.4	31.4	18.2	18.2	**20.0**	21.6	12.7	15.6	18.4	14.6	21.0	19.5
1963		**26.2**	27.5	18.5	20.4	14.5	**17.8**	21.4	17.2	20.6	17.5	19.4	19.9
1964	41.4	43.0	**22.6**	12.5	16.3	19.8	25.0	**21.3**	16.7	22.1	23.6	17.4	22.6
1965		33.3	26.8	**14.1**	18.9	27.5	24.3	22.6	**22.0**	34.5	17.6	25.8	24.6
1966	15.6	22.0	21.7	12.6	**20.7**	16.7	23.9	14.9	17.1	**26.1**	19.2	27.8	19.6
1967		38.7	33.3	21.3	14.3	**24.5**	25.0	12.7	26.7	30.9	**12.2**	18.2	23.7
1968		41.8	39.5	25.6	24.1	27.4	**20.0**	12.2	17.5	28.6	18.2	**20.3**	25.8
1969		39.6	23.4	31.9	25.6	24.5	27.3	**20.6**	29.0	30.2	22.2	20.7	27.5
1970			14.6	29.1	24.5	30.4	24.1	24.2	**26.9**	27.9	29.3	29.9	26.8
1971			**36.0**	18.2	24.5	23.9	28.8	34.0	27.4	**27.3**	33.3	32.8	26.8
1972			q*	[illegible]	[illegible]	22.2	32.5	27.7	27.8	25.0	25.5	**30.4**	25.7	26.9
1973					**17.4**	22.0	32.4	23.6	27.9	37.0	21.2	**20.4**	25.2
1974						**29.6**	34.0	24.1	29.4	29.4	29.5	28.2	29.0
1975						20.9	**35.1**	24.4	35.8	40.3	40.7	31.6	35.0
1976						15.3	23.3	**28.6**	37.2	47.6	35.2	37.8	36.8
1977						18.8	22.2	33.3	**41.1**	53.0	44.3	50.6	50.0
1978						6.5	25.6	37.1	44.1	**49.0**	52.2	54.7	51.6
1979							16.7	27.1	35.8	55.6	**57.1**	45.3	47.8
1980								27.6	36.3	56.7	57.3	**51.9**	43.2
1981									28.1	44.4	58.7	61.8	
1982										37.1	51.9	53.1	
1983											39.0	59.4	
Total 18-20	23.3	40.9	23.0	24.3	22.2	27.3	33.7	26.1	35.7	48.9	46.3	48.5	34.5
Total 18+	19.5	28.7	18.0	16.4	15.7	19.6	20.9	17.7	21.6	26.7	23.8	25.8	21.4

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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ADAM-Portland (OR)

Percent Detected as Marijuana Users

Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39		12.8	5.3		13.8	8.0	10.0						10.3
1940-44		31.6	.0	8.6	6.3	15.4	6.7	.0	10.3				12.3
1945-49	41.4	25.3	19.1	21.5	19.7	12.9	19.6	9.8	9.1	24.1	28.6	9.3	19.2
1950-54	27.5	41.7	20.9	33.6	26.6	21.0	20.0	13.8	17.2	15.7	8.9	15.2	22.5
1955-59	41.9	48.6	28.3	37.1	27.1	18.6	16.7	16.5	21.7	26.8	22.1	27.5	27.6
1960		49.4	28.6	**40.0**	43.2	25.0	17.9	23.0	31.2	20.0	25.6	25.6	30.5
1961		50.8	42.6	40.9	**29.8**	16.7	32.7	20.0	21.4	31.2	26.1	32.6	32.2
1962		47.8	23.3	64.2	31.4	**26.8**	37.1	18.2	32.7	23.9	35.3	28.1	34.4
1963		**55.6**	39.8	42.9	24.6	25.6	**35.3**	23.0	25.0	35.7	27.3	20.9	33.5
1964		55.0	**39.7**	51.0	41.7	23.3	21.7	**20.9**	26.1	32.7	29.0	11.8	34.0
1965		48.9	33.9	**36.4**	39.6	21.1	34.0	32.7	**25.0**	28.8	31.0	39.4	34.2
1966		61.0	19.1	42.6	**46.3**	20.0	28.9	30.5	37.1	**33.3**	21.6	37.1	36.7
1967		55.1	53.6	46.4	34.1	**38.3**	36.8	13.6	32.2	38.1	**25.7**	27.3	38.1
1968		50.0	37.7	45.8	41.2	44.2	**32.1**	26.9	33.3	34.5	32.6	**48.6**	40.4
1969		67.1	33.7	29.0	51.9	25.5	18.1	**29.0**	23.5	29.8	34.8	38.6	34.6
1970			45.9	49.0	36.5	47.4	34.7	35.6	**37.1**	40.0	41.9	30.0	39.8
1971			**53.8**	46.2	26.3	28.8	27.9	25.5	34.3	**27.1**	32.4	20.5	31.5
1972				**40.0**	37.8	31.1	24.2	45.9	47.2	45.2	**22.0**	19.4	35.7
1973						29.2	25.0	31.1	47.7	48.9	61.3	**60.7**	40.2
1974						**21.1**	38.8	43.1	43.4	33.3		42.4	37.4
1975						3.3	**45.9**	32.4	52.1	49.3	52.9	22.2	42.6
1976						14.0	21.1	**40.5**	37.5	45.0	44.2	58.3	44.9
1977						5.4	12.8	21.5	**28.8**	43.1	62.1	52.3	49.0
1978							9.6	16.1	23.6	**51.6**	55.3	65.0	57.4
1979							6.2	12.2	26.4	43.0	**37.5**	56.0	50.0
1980							.0	7.3	8.0	33.8	53.1	**50.0**	
1981								9.4	9.1	31.0	39.7	54.5	
1982									2.4	15.5	32.1	54.7	
1983										25.8	20.9	48.1	
1984												40.7	
Total 18-20	65.8	55.7	39.8	45.3	31.0	28.1	34.7	37.4	41.8	46.8	53.0	55.6	43.1
Total 18+	43.2	47.0	31.2	38.0	31.7	24.7	25.9	24.5	28.8	32.1	31.4	32.7	31.7

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30.**

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ADAM-San Diego

Percent Detected as Marijuana Users													
Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39		16.7	28.6	8.8									13.2
1940-44		18.5	23.1	28.6	20.0	8.0							17.0
1945-49	26.7	28.8	28.6	16.1	7.7	10.6	23.9	13.0	25.6	13.3	19.4	12.9	19.2
1950-54	42.1	36.0	26.9	28.8	25.2	20.5	20.2	26.9	25.2	29.3	23.3	19.4	26.7
1955-59	30.5	44.4	35.5	26.7	23.7	28.7	34.1	23.4	29.1	33.8	28.3	32.2	30.9
1960		50.0	44.8	**21.9**	24.2	29.5	36.4	30.0	39.6	27.3	30.6	33.3	33.2
1961		43.9	38.2	35.1	**30.5**	32.2	37.5	35.1	42.2	29.3	31.6	26.8	35.3
1962	**57.7**	36.7	41.3	32.8	22.8	**34.4**	30.5	23.1	39.1	29.8	22.7	16.7	31.3
1963	51.7	**58.0**	37.7	35.5	42.2	35.2	**36.1**	19.1	28.6	38.6	35.3	25.6	37.5
1964		53.7	**45.5**	22.2	32.3	52.0	32.8	**27.7**	35.0	23.3	36.8	22.9	36.3
1965	40.0	54.0	33.9	**37.1**	30.4	34.4	30.9	41.1	**30.0**	37.8	27.7	31.7	36.0
1966		49.3	50.0	37.9	**25.9**	35.7	46.2	35.0	34.1	**20.6**	26.3	29.3	38.4
1967	50.0	52.4	52.5	26.2	40.9	**25.0**	41.2	47.1	29.1	38.9	**38.5**	44.8	39.9
1968		52.8	53.1	46.4	39.0	41.5	**50.0**	32.6	34.8	42.1	39.1	**34.6**	43.3
1969		41.8	41.4	32.1	31.3	30.9	35.6	**30.4**	53.1	48.6	36.5	36.7	37.5
1970			52.6	39.3	38.8	42.5	43.9	35.2	**54.5**	34.2	38.1	32.4	41.7
1971			**34.5**	36.0	30.0	38.5	40.7	35.3	33.9	**28.6**	38.6		35.9
1972				**30.3**	40.9	44.4	52.5	36.8	32.6	59.5	**38.2**	38.9	42.4
1973						55.3	42.6	45.9	35.6	55.0	46.5	**35.7**	45.1
1974						**35.0**	47.1	46.3	38.3	40.4	35.1	37.5	40.2
1975						40.3	**48.5**	34.8	34.2	48.0	30.6	44.8	40.7
1976						26.6	30.7	**28.2**	46.6	36.8	58.3	53.1	48.0
1977						31.9	41.1	44.5	**47.9**	54.4	37.3	50.0	47.2
1978						5.7	31.9	38.6	59.4	**43.3**	43.5	61.5	50.5
1979							26.2	31.5	59.2	53.2	**56.5**	53.8	54.5
1980								22.7	50.8	51.7	49.6	**47.3**	
1981									44.2	48.5	62.1	58.6	
1982										34.6	50.0	41.5	
1983											39.5	47.7	
Total 18-20	44.6	47.8	46.7	36.8	36.7	47.4	46.3	41.6	44.7	46.5	43.7	52.9	44.5
Total 18+	42.0	43.8	38.6	30.2	29.2	32.2	35.9	30.6	34.2	35.7	33.5	33.7	34.4

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**..

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ADAM-San Jose

Percent Detected as Marijuana Users

Birth Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Tot 18+
1901-39				2.7	3.6		.0	2.9	4.0		7.7		3.5
1940-44				7.3	6.1	11.4	6.7	3.3	17.9	17.9	15.4		10.2
1945-49			3.1	9.6	16.9	15.3	20.8	19.7	3.4	4.4	12.8		12.7
1950-54			15.9	14.9	14.4	15.0	17.8	18.5	18.2	13.5	9.8	14.8	15.3
1955-59			16.7	18.0	24.1	24.7	24.3	15.6	20.9	14.5	13.6	22.5	19.5
1960			31.6	**16.9**	14.0	26.2	30.0	20.5	22.4	26.3	22.2		22.5
1961			25.9	25.8	**28.8**	20.7	35.1	28.1	26.7	20.5	16.7		25.5
1962			24.3	15.2	33.3	**13.3**	36.5	11.4	19.1	9.4	21.1		21.1
1963			21.6	20.0	11.9	27.3	**19.3**	29.8	31.0	27.8	17.4		21.8
1964			**20.0**	19.2	19.2	10.7	24.4	**25.0**	26.7	19.2	14.8		20.0
1965			21.9	**28.6**	26.1	35.4	18.2	31.0	**25.5**	22.2	34.1		26.4
1966			20.6	18.6	**25.0**	22.2	29.2	29.8	23.8	**27.3**	21.2		24.0
1967			31.7	23.4	15.7	**23.9**	25.9	31.0	22.6	18.0	**27.3**		23.8
1968			28.9	28.1	26.2	37.1	**27.4**	30.4	30.2	29.4	31.5		29.4
1969			31.8	34.2	29.6	28.6	17.6	**40.6**	18.9	34.8	26.4	44.0	30.2
1970			21.9	32.0	31.0	27.4	20.3	32.0	**29.1**	27.7	26.4		27.8
1971				27.3	22.7	32.1	33.3	32.8	29.9	**17.4**	26.2		27.6
1972				**29.0**	26.6	18.6	29.4	34.8	31.7	40.4	**23.3**		28.2
1973					**20.0**	30.7	27.3	27.0	28.6	21.2	35.0	**14.3**	26.7
1974						**15.3**	24.2	37.7	41.4	41.2	24.5		29.3
1975						17.8	**28.4**	31.8	40.3	36.4	32.7		34.1
1976						19.6	26.9	**35.9**	41.2	35.0	30.8	16.0	35.3
1977						16.3	24.5	37.4	**48.0**	41.9	34.3	25.9	39.1
1978						13.5	21.1	20.5	34.1	**49.3**	58.8	22.2	46.8
1979							14.5	23.9	40.4	37.5	**43.8**	51.3	48.1
1980							16.0	15.0	41.1	48.6	43.8	**41.9**	37.6
1981								22.6	39.5	36.5	43.4	33.3	
1982										35.4	35.8	38.1	
1983											17.9	29.6	
Total 18-20			30.0	29.6	24.2	20.7	26.6	33.0	43.2	40.8	45.1	34.9	32.9
Total 18+			21.3	20.4	21.5	22.4	24.1	26.0	26.1	25.0	25.1	22.5	23.6

All cell entries based on at least 25 responses.
Shading indicates age at interview: **18**, **25**, **30**.

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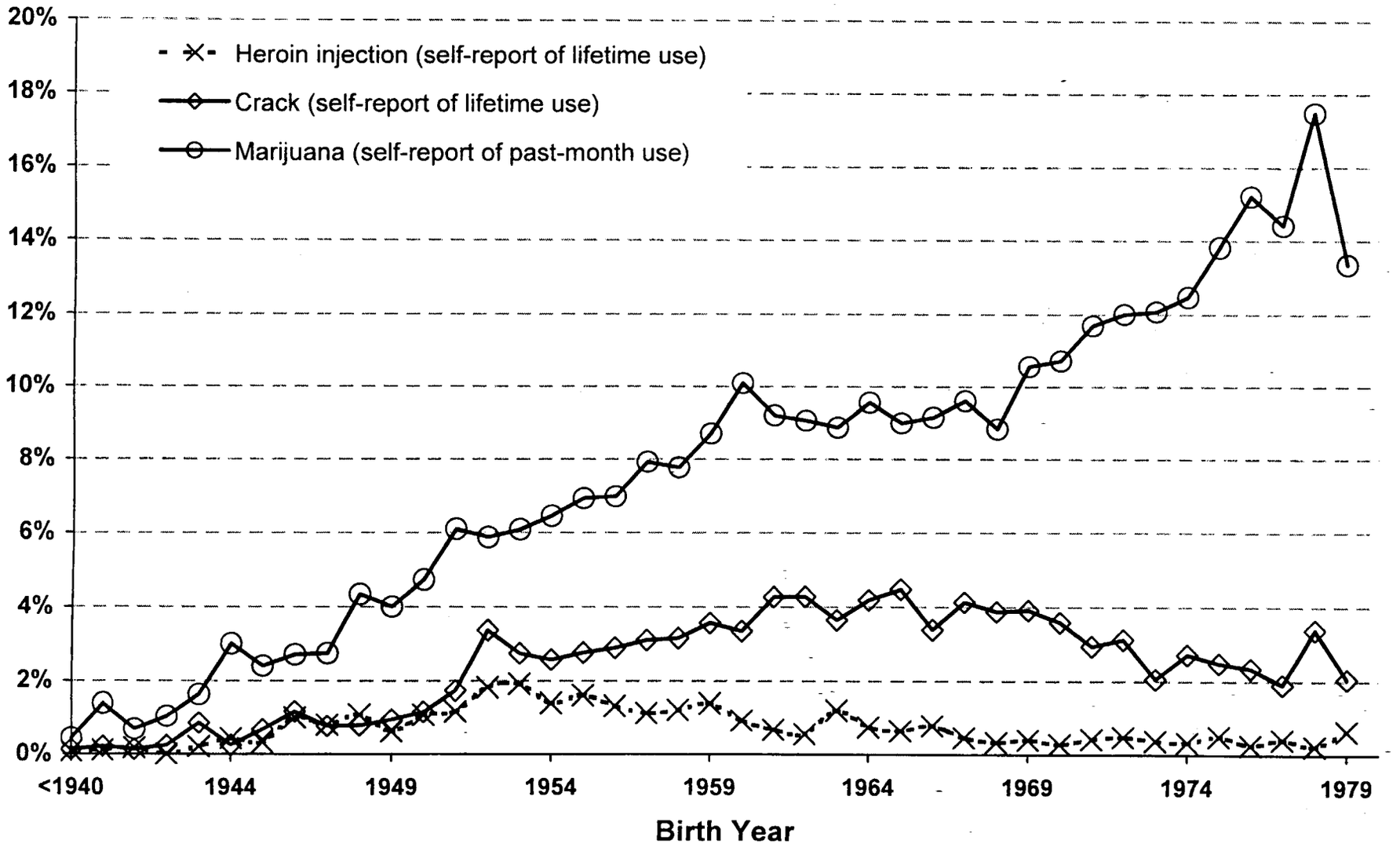
U.S. General Population, NHSDA



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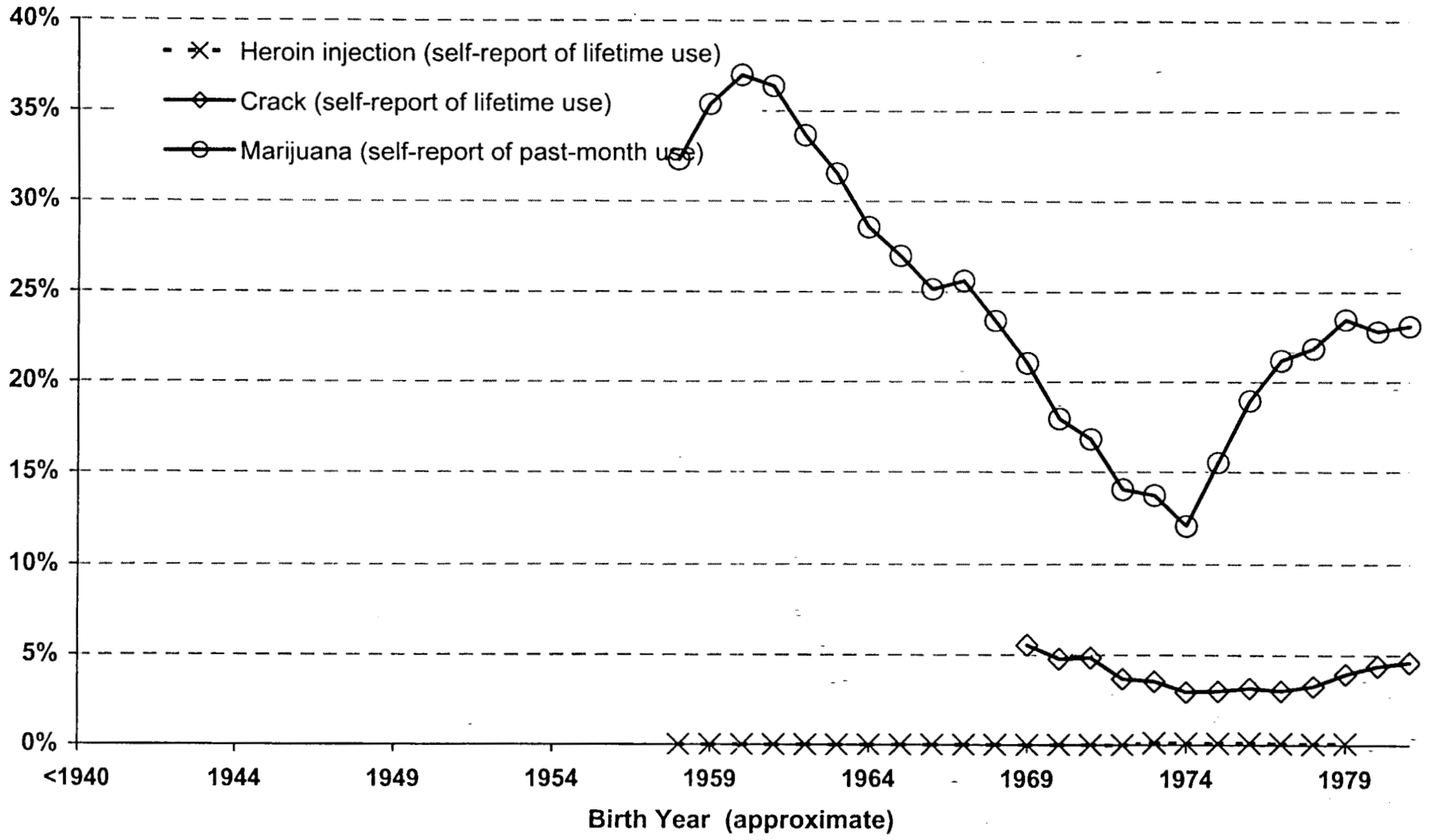
U.S. High School Seniors, MTF



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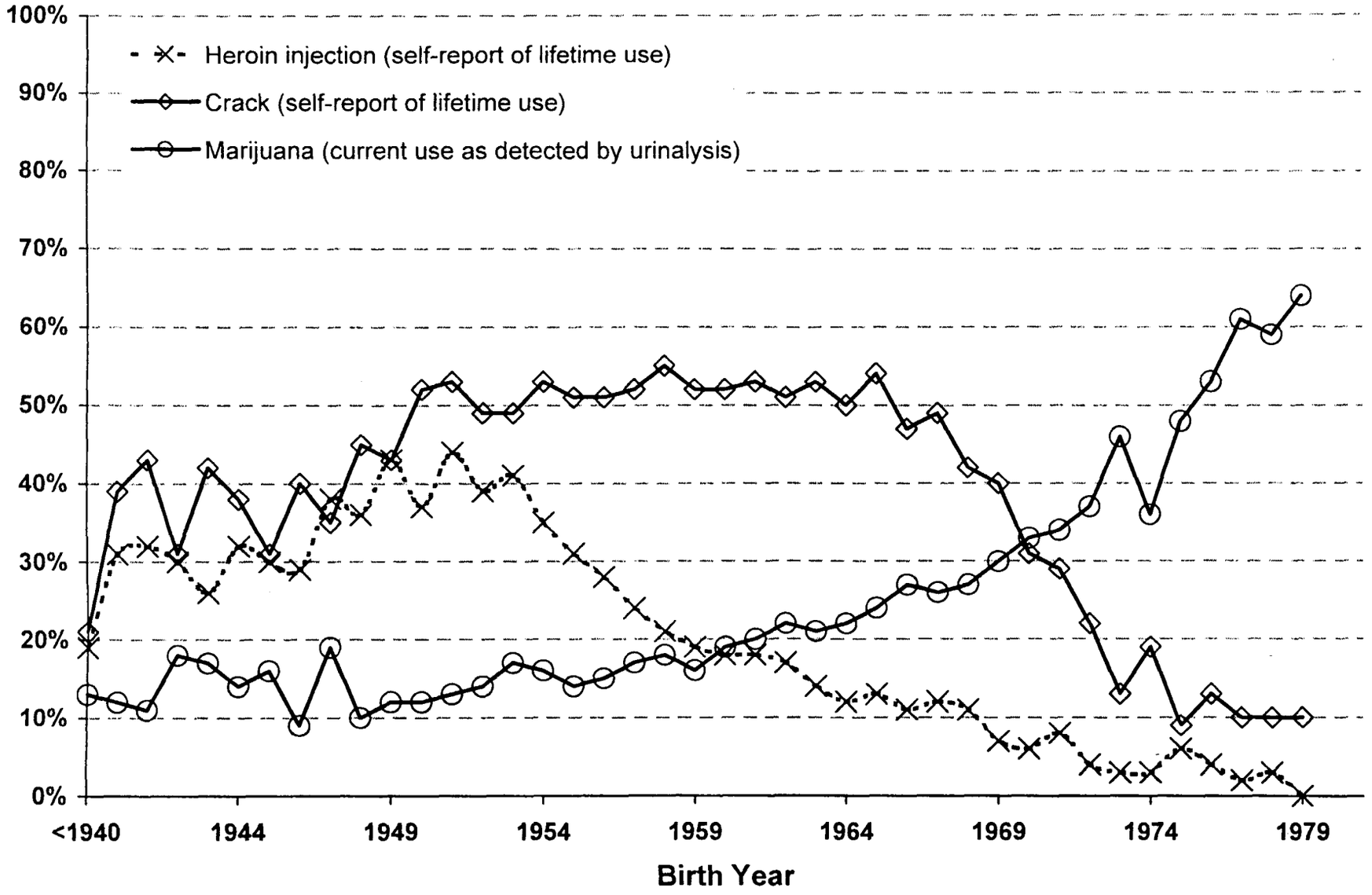
Manhattan



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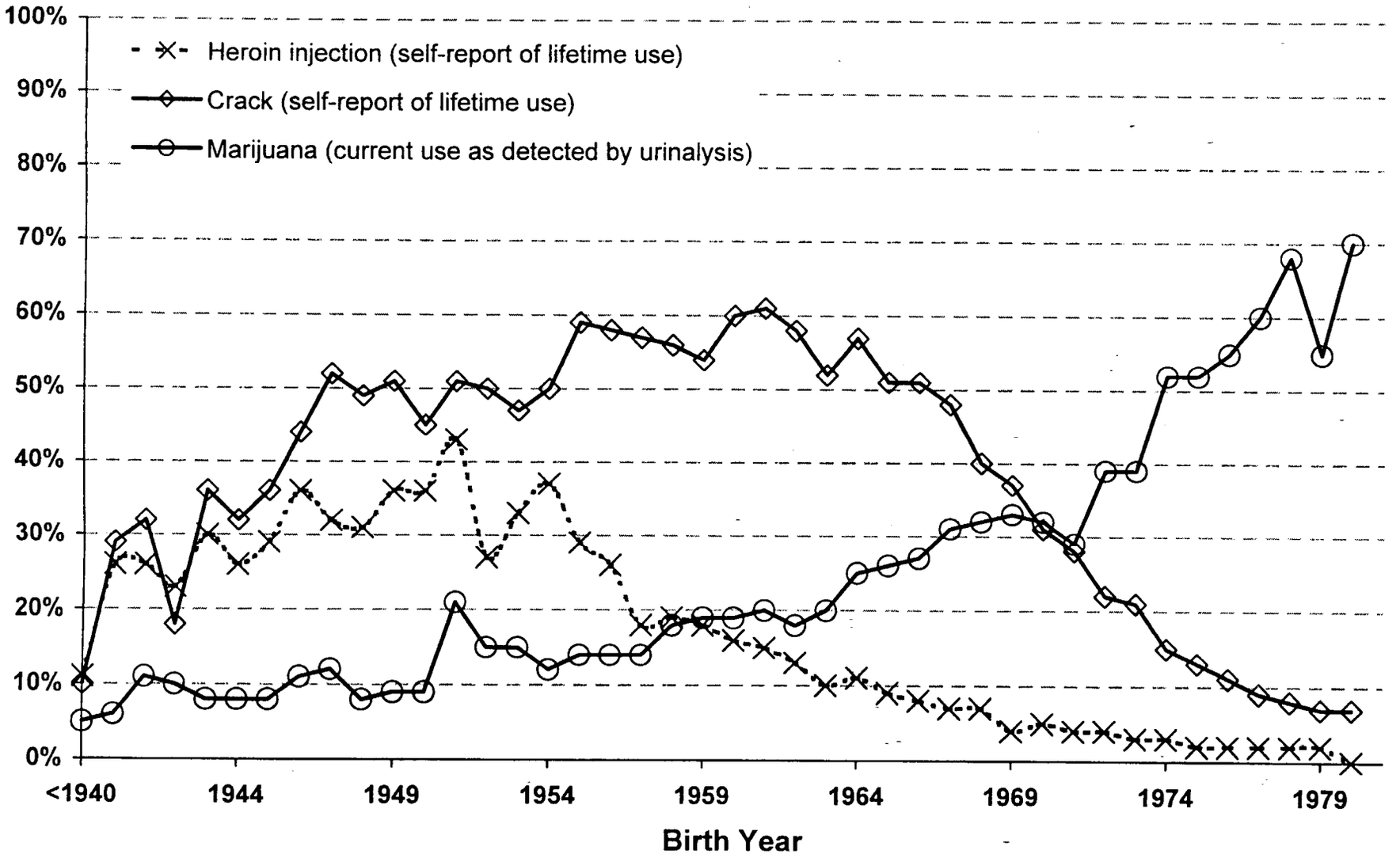
Philadelphia



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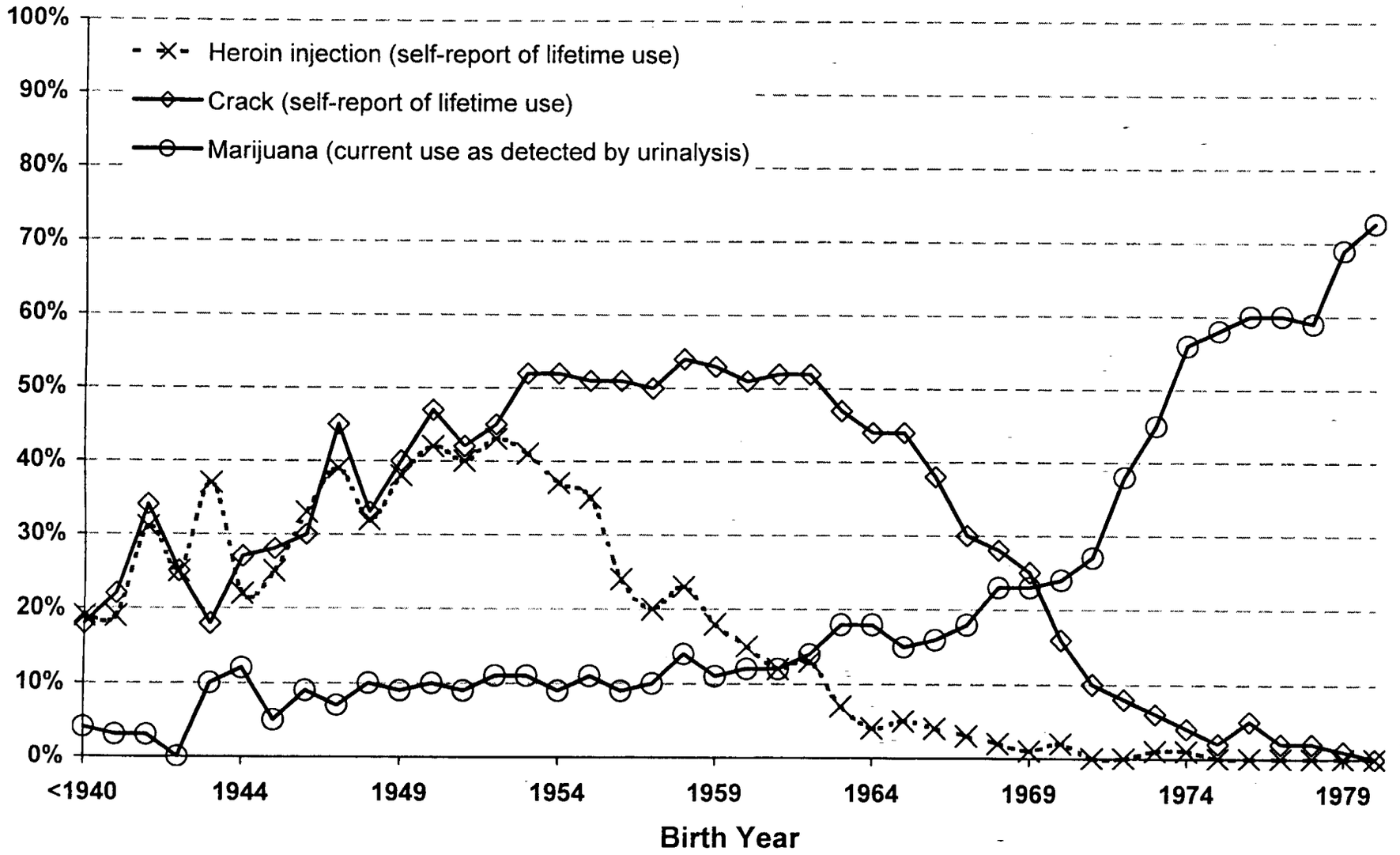
Washington, D.C



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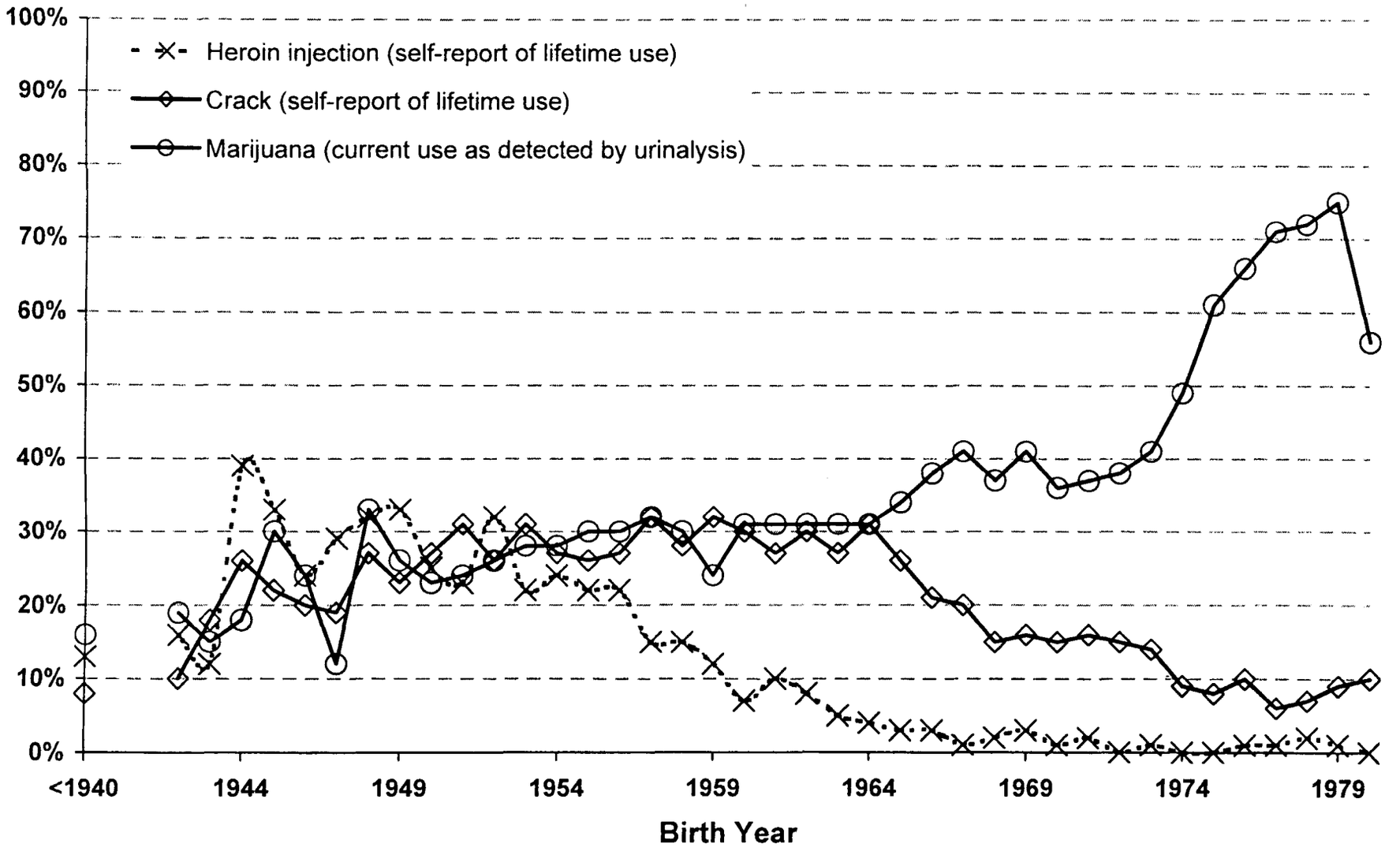
Chicago



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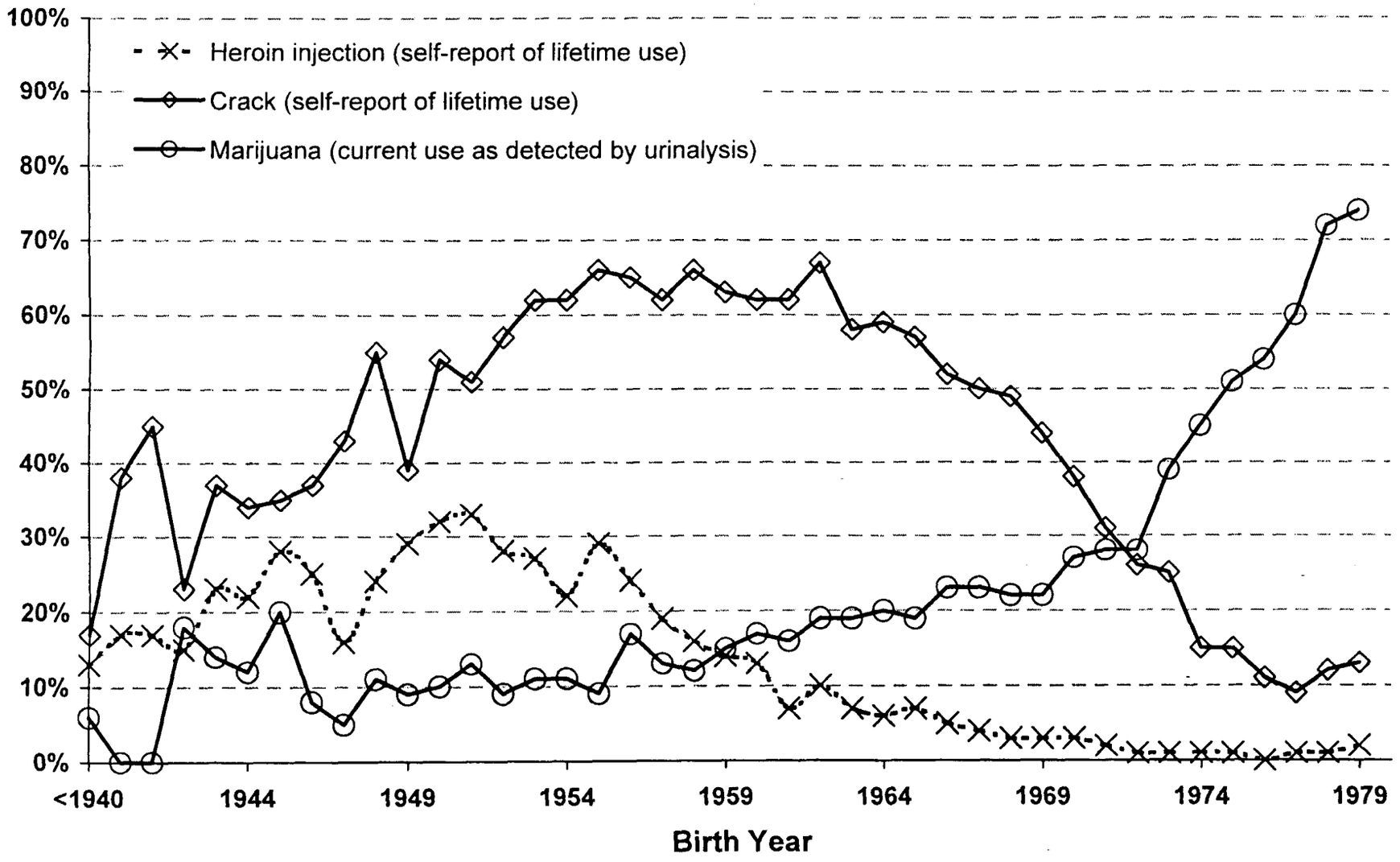
Cleveland



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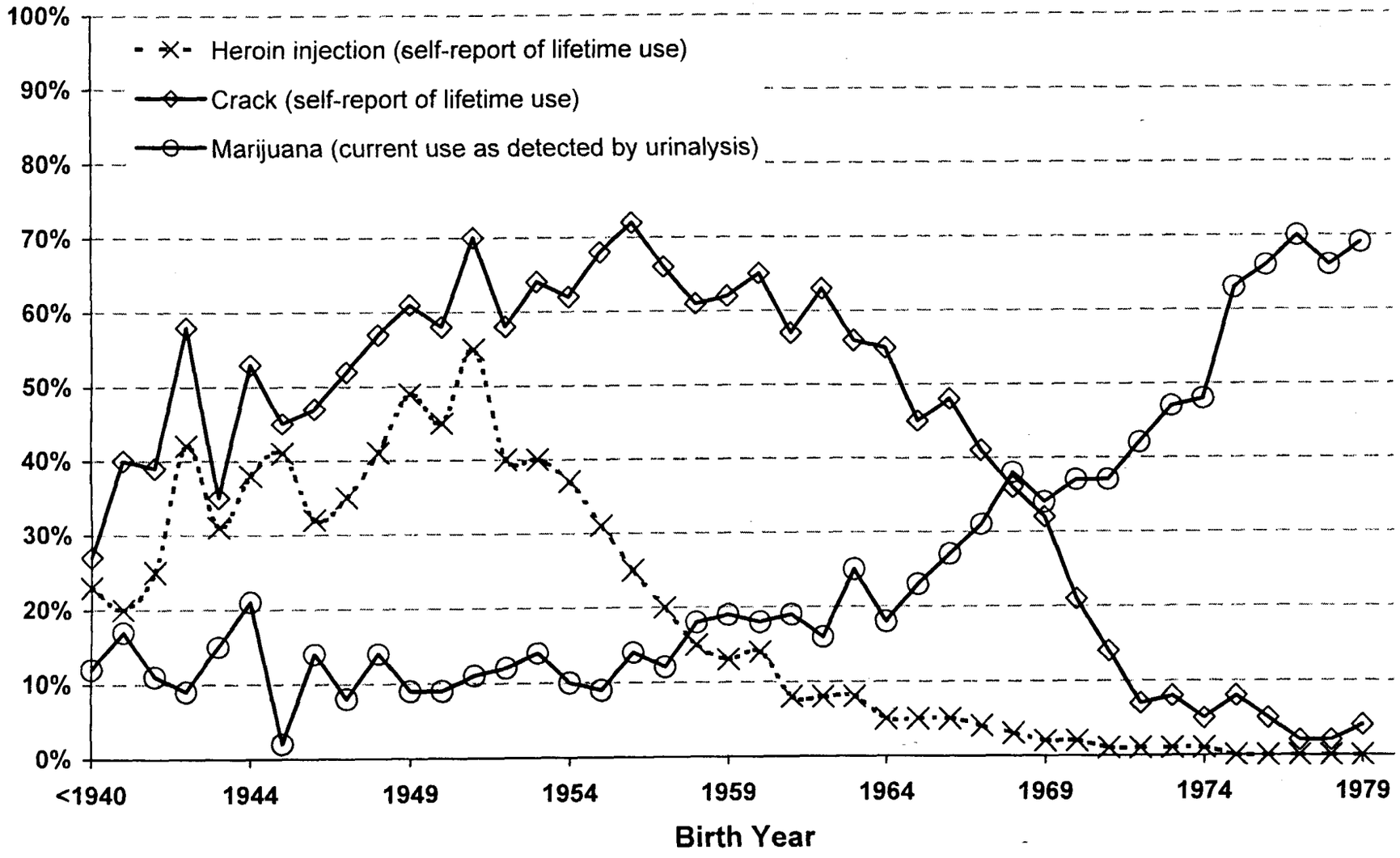
Detroit



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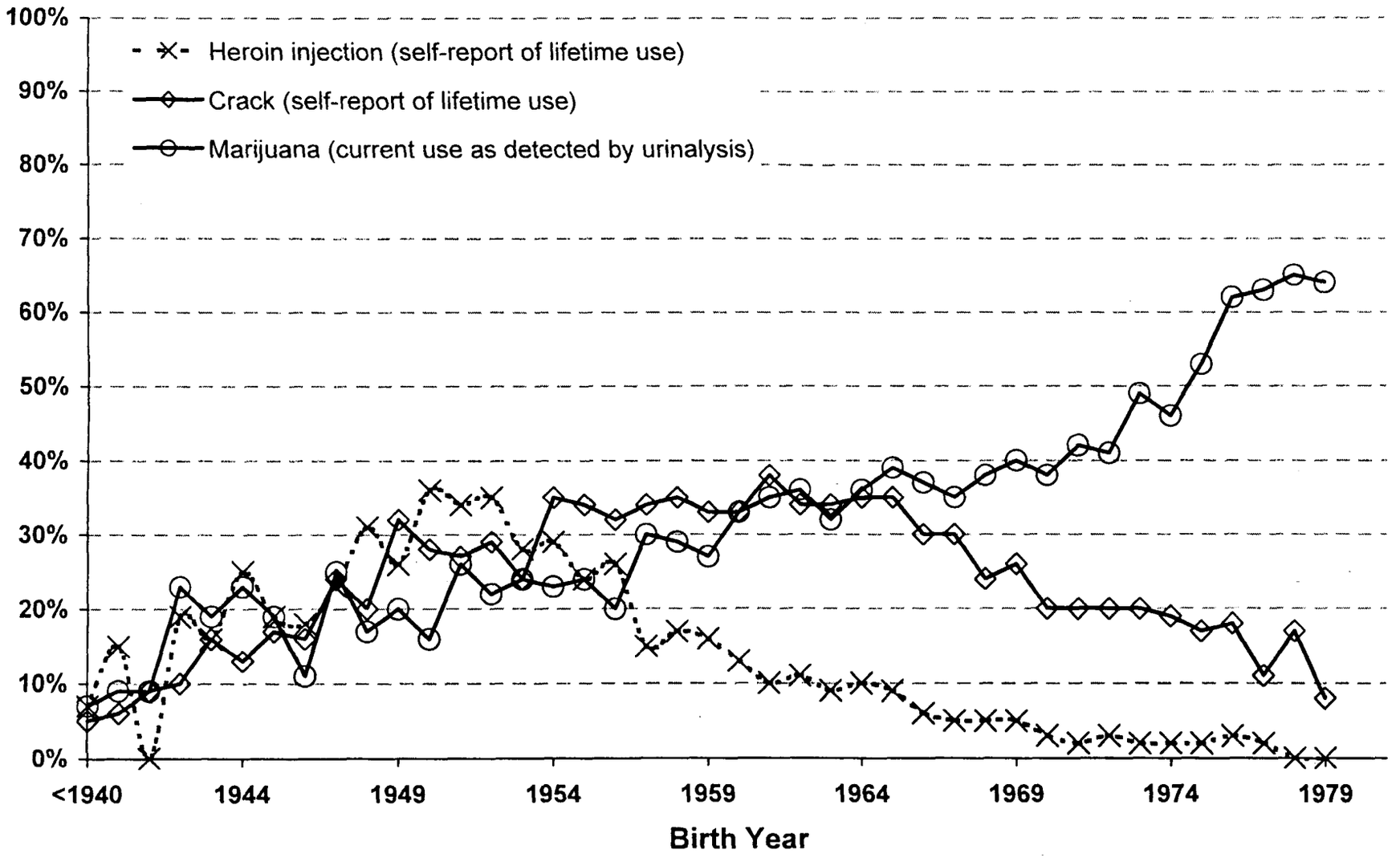
Indianapolis



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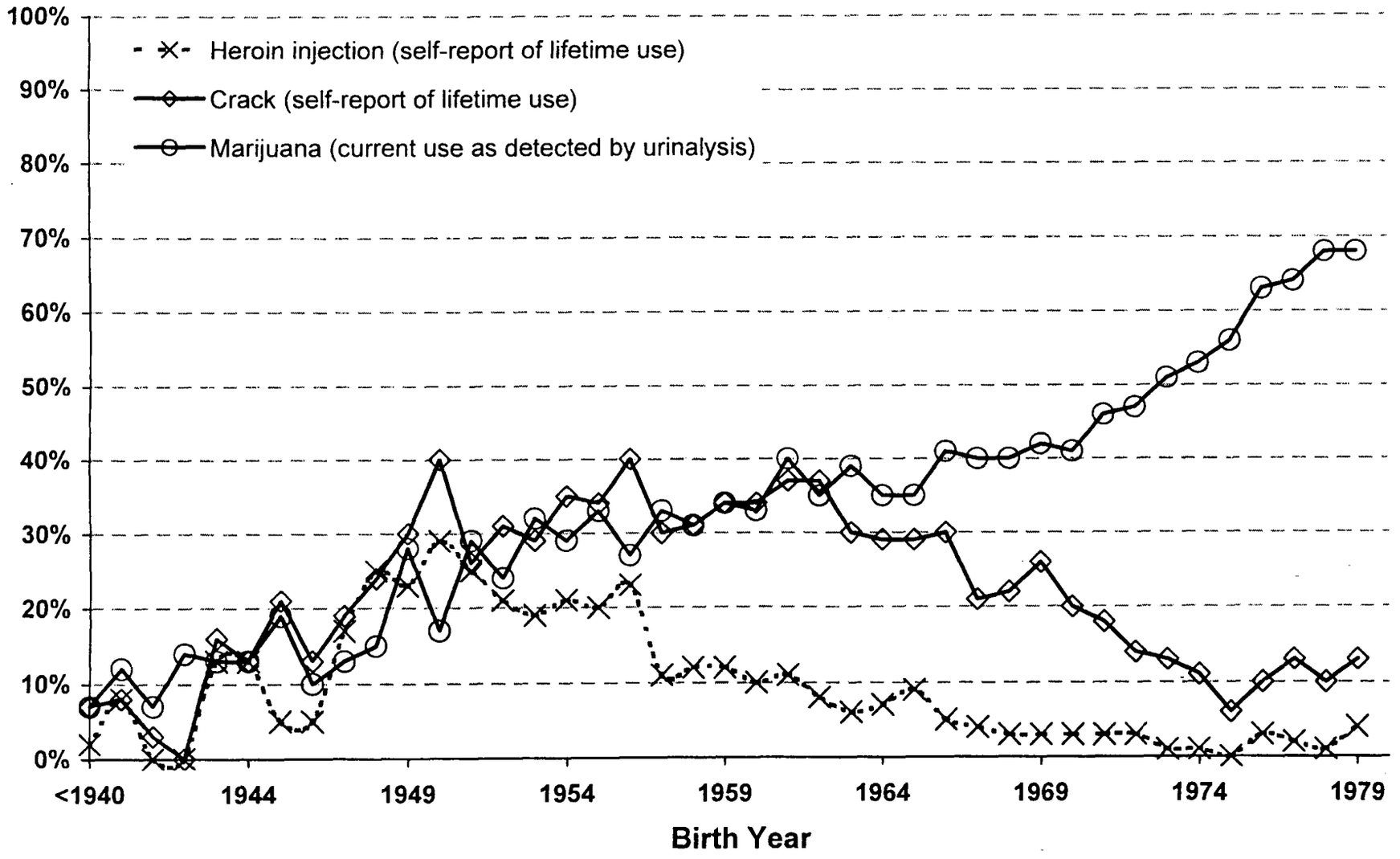
Omaha



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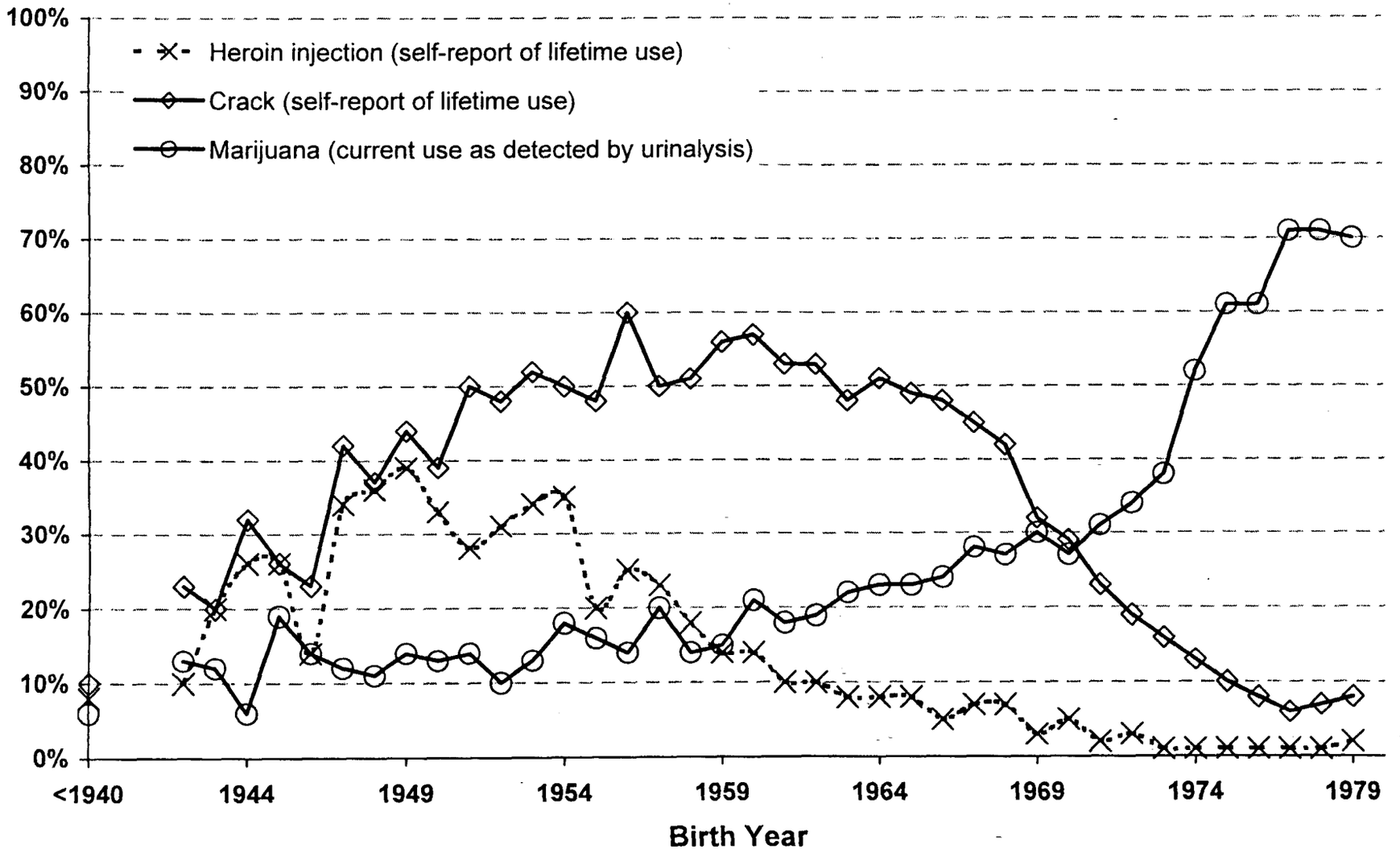
St. Louis



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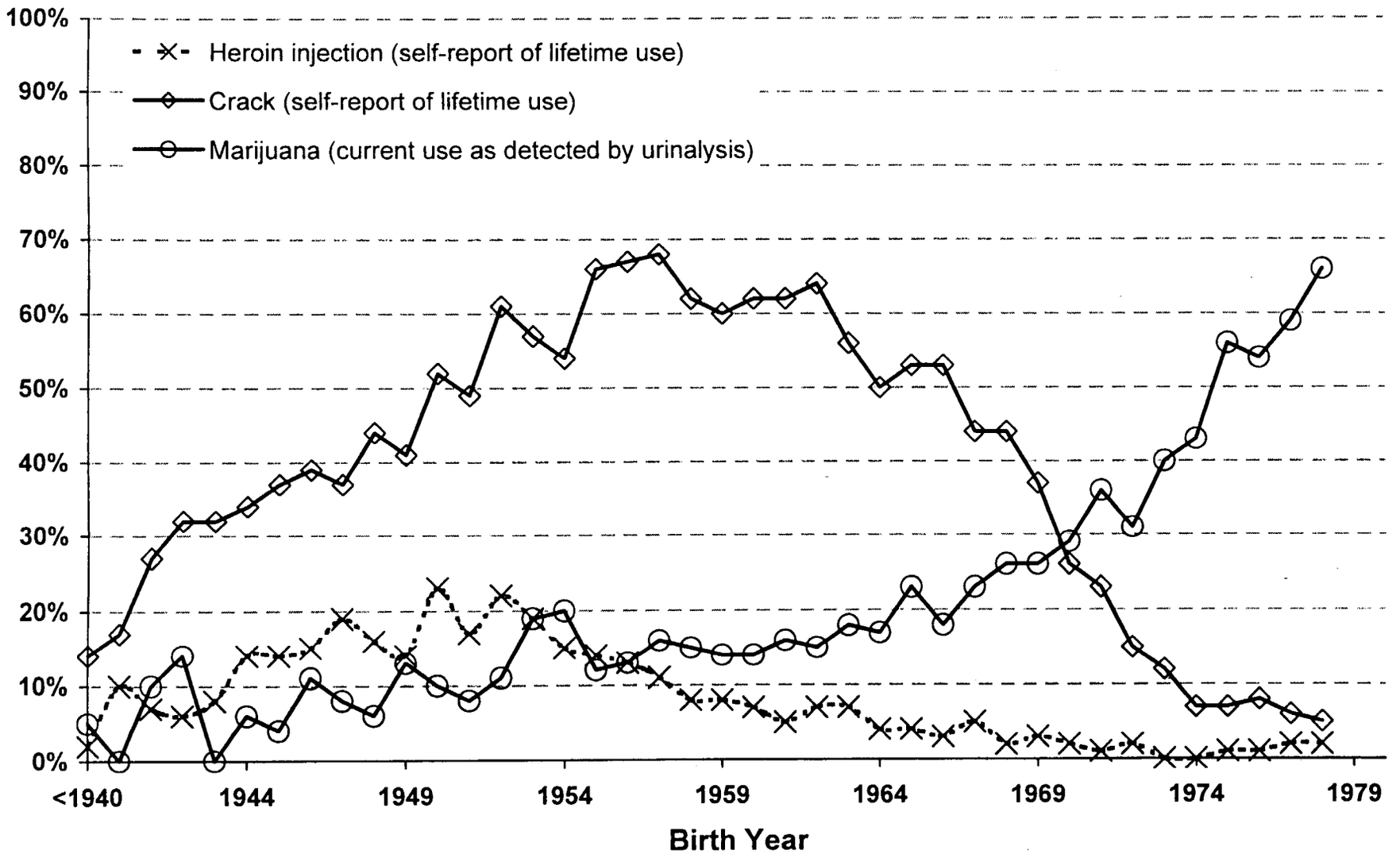
Atlanta



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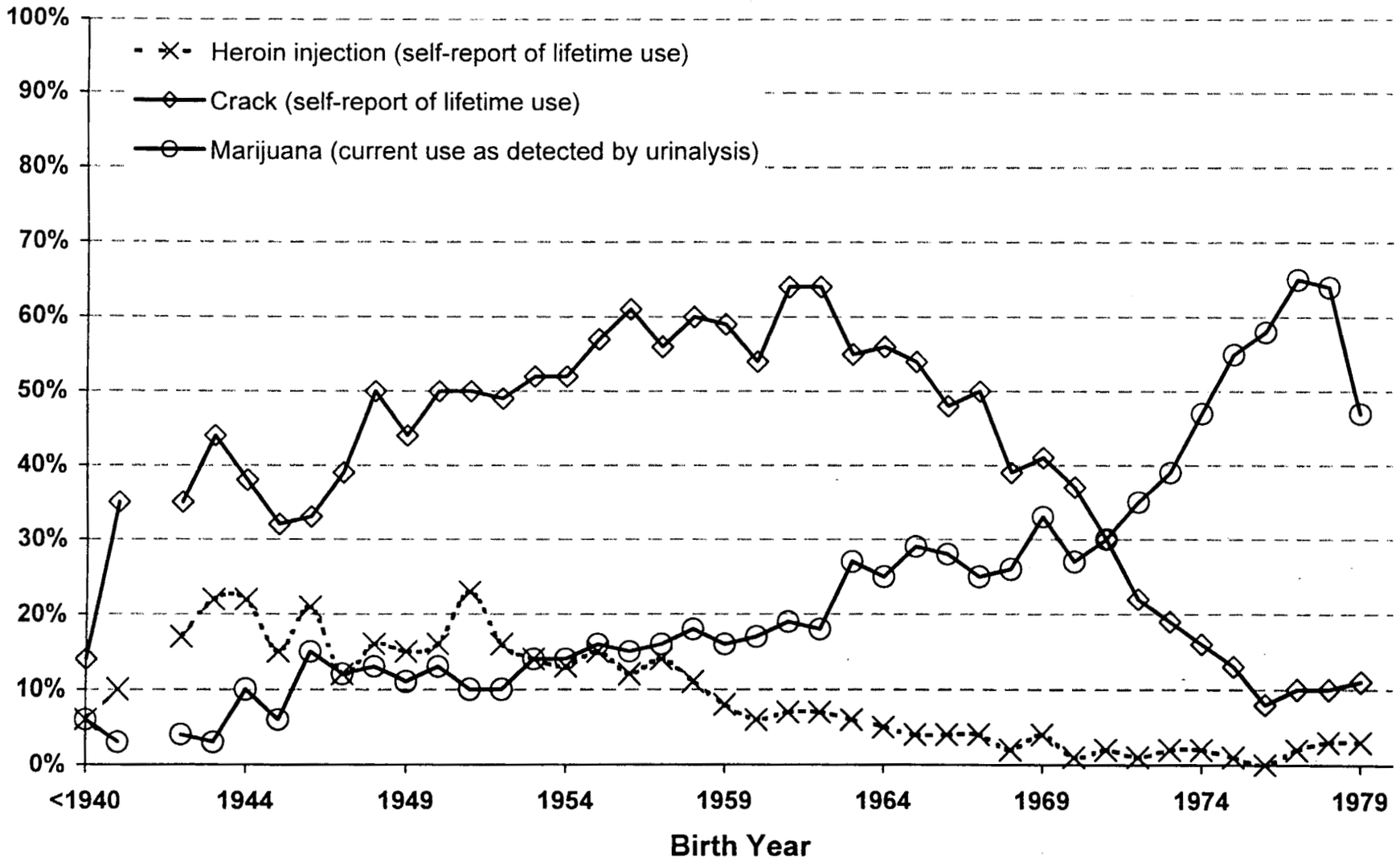
Birmingham



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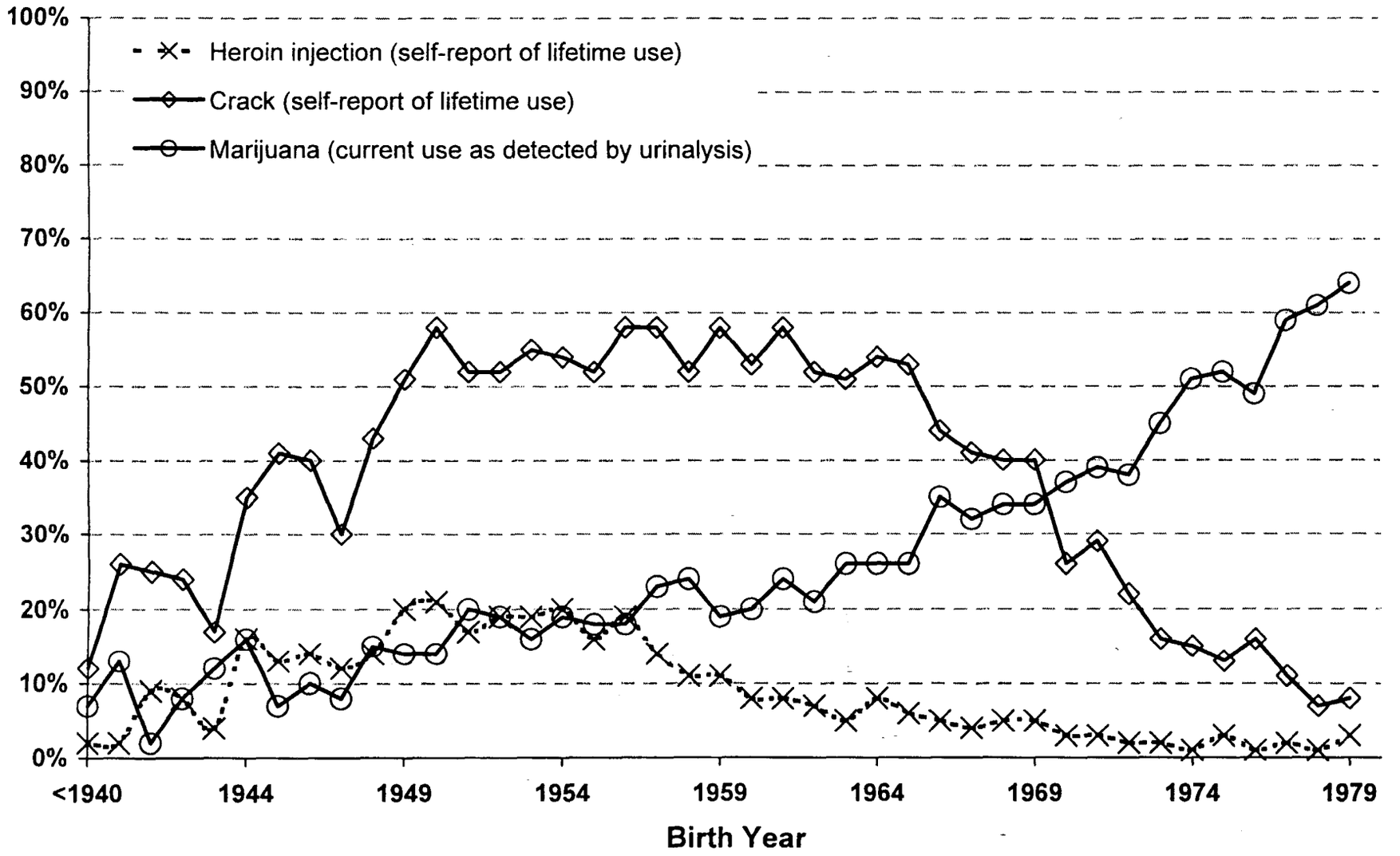
Ft. Lauderdale



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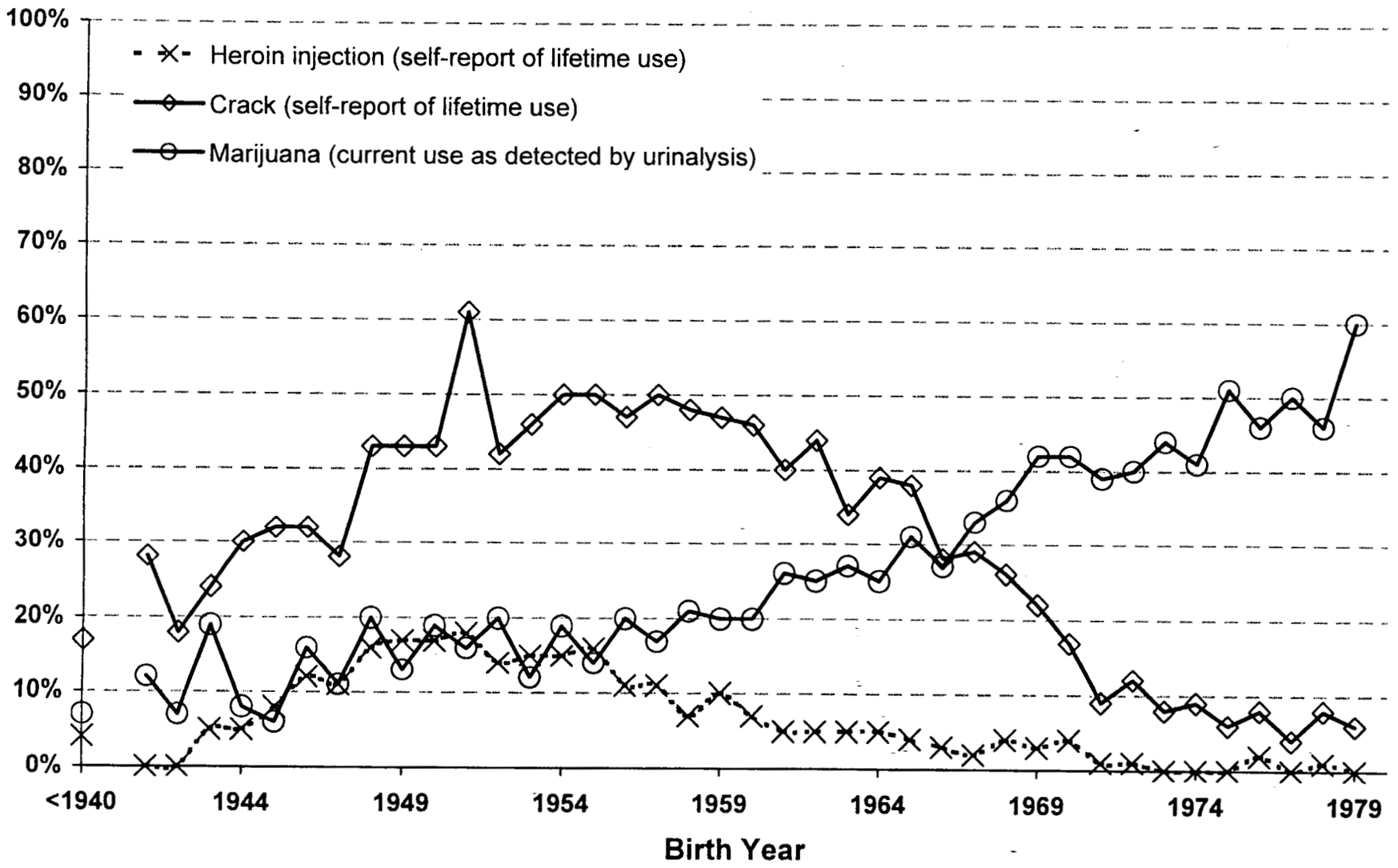
Miami



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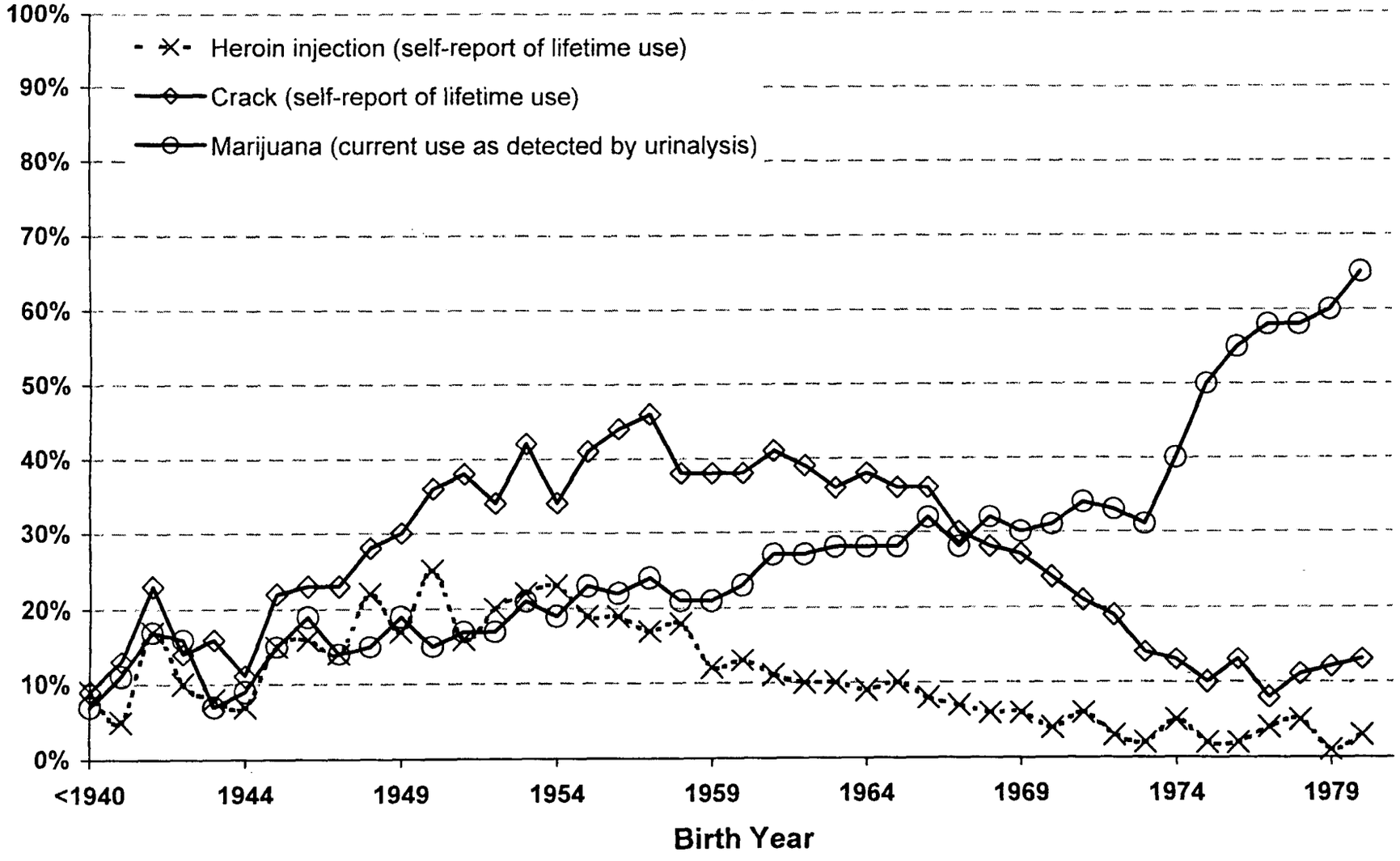
Dallas



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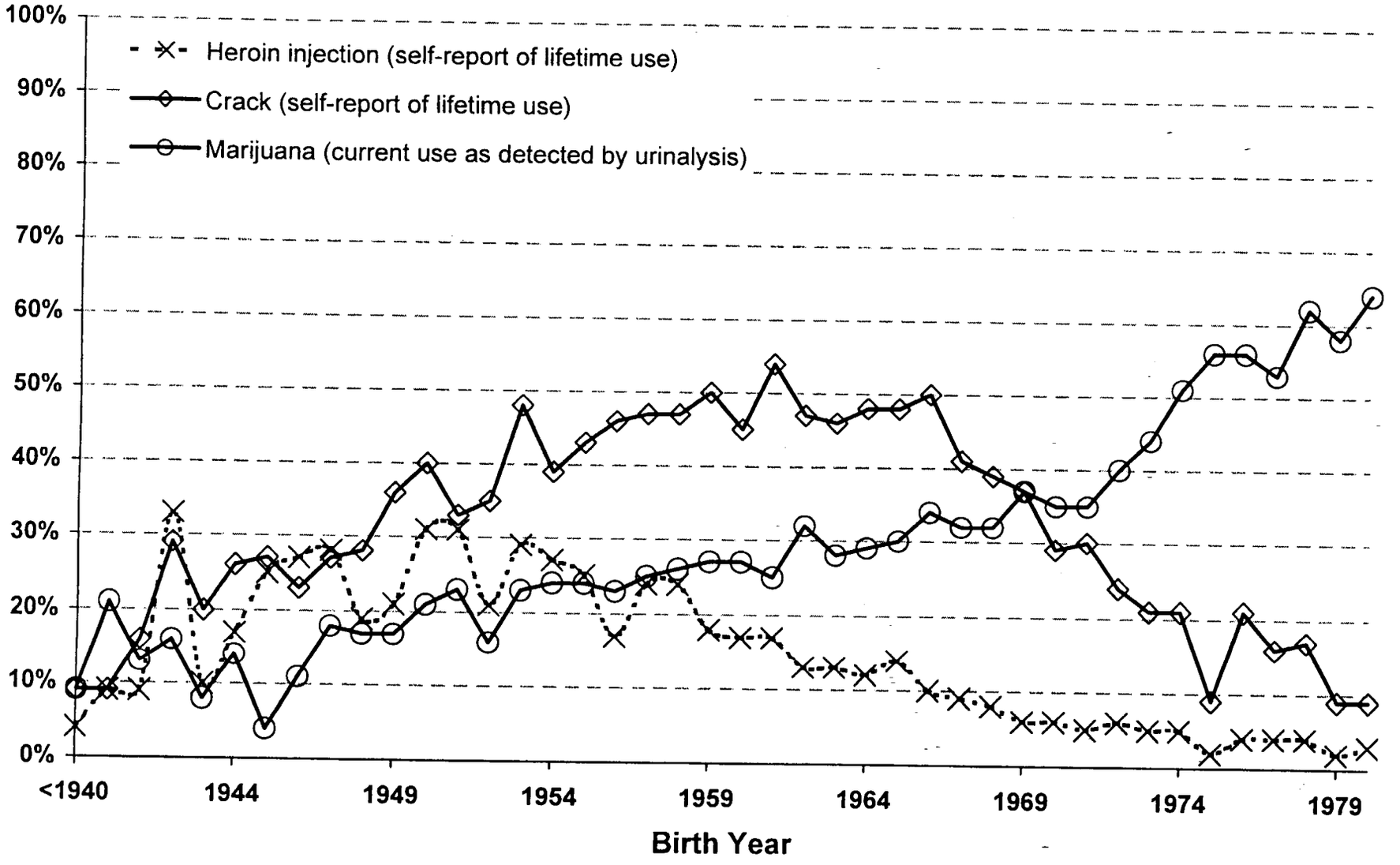
Denver



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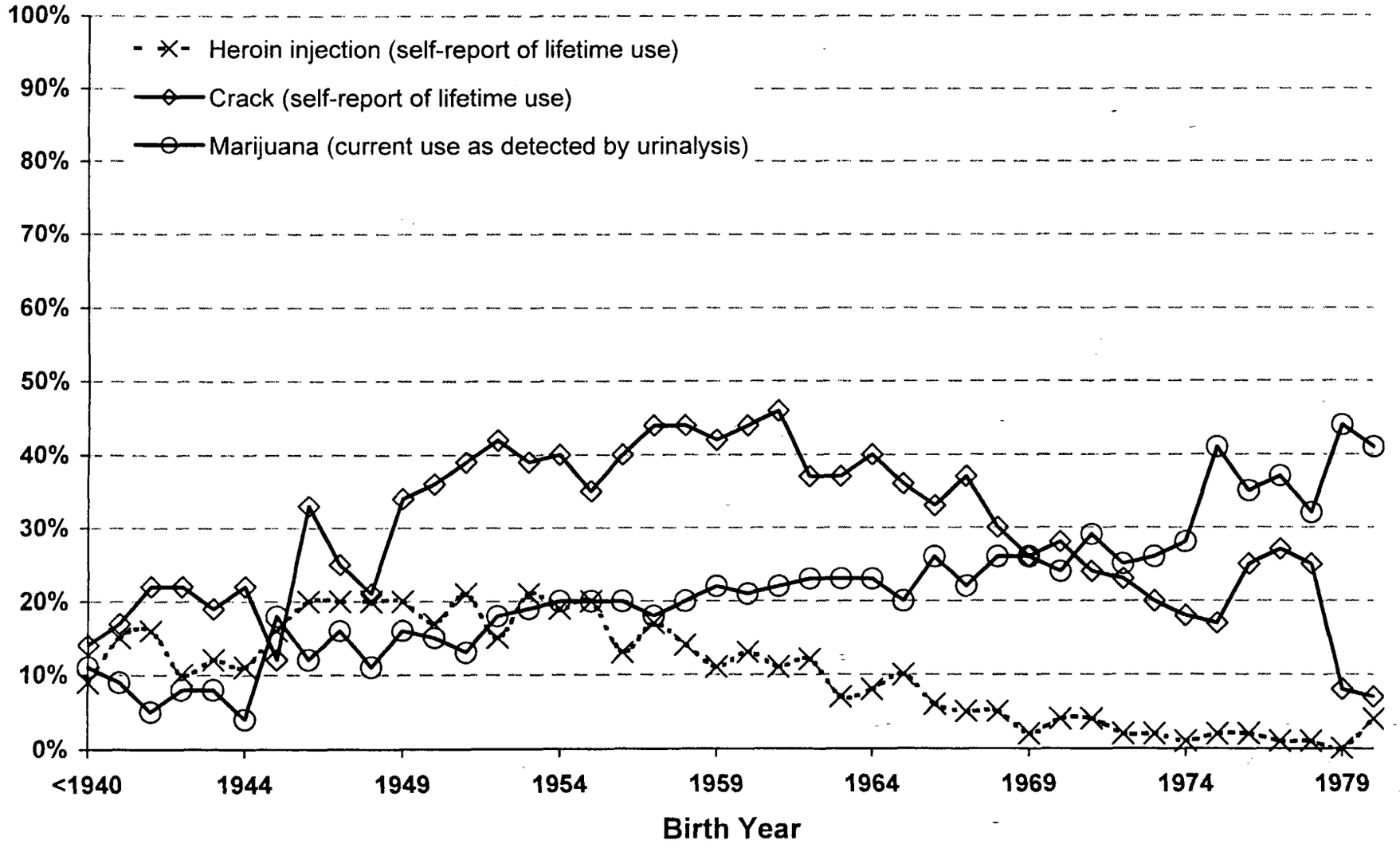
Houston



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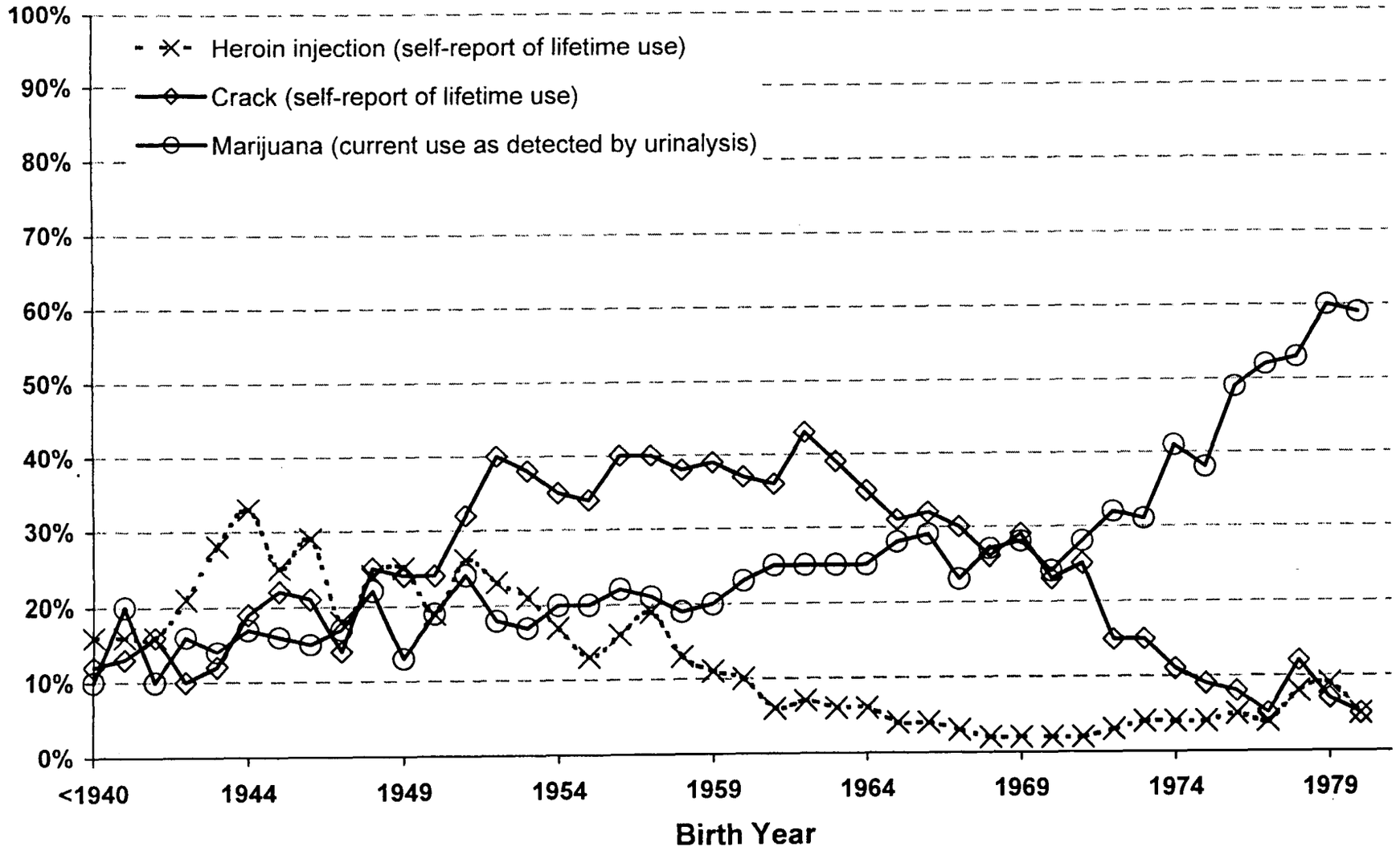
New Orleans



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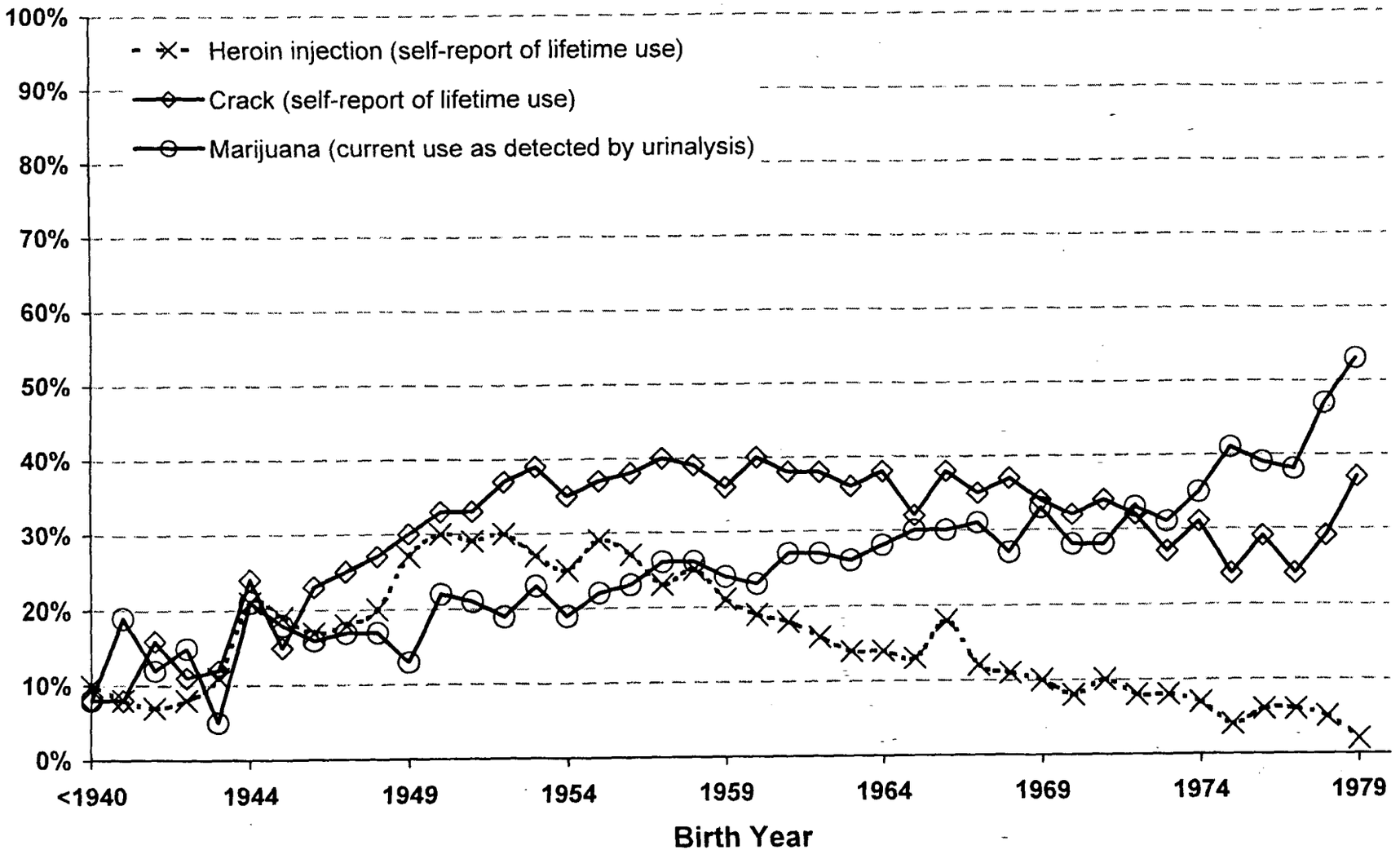
Phoenix



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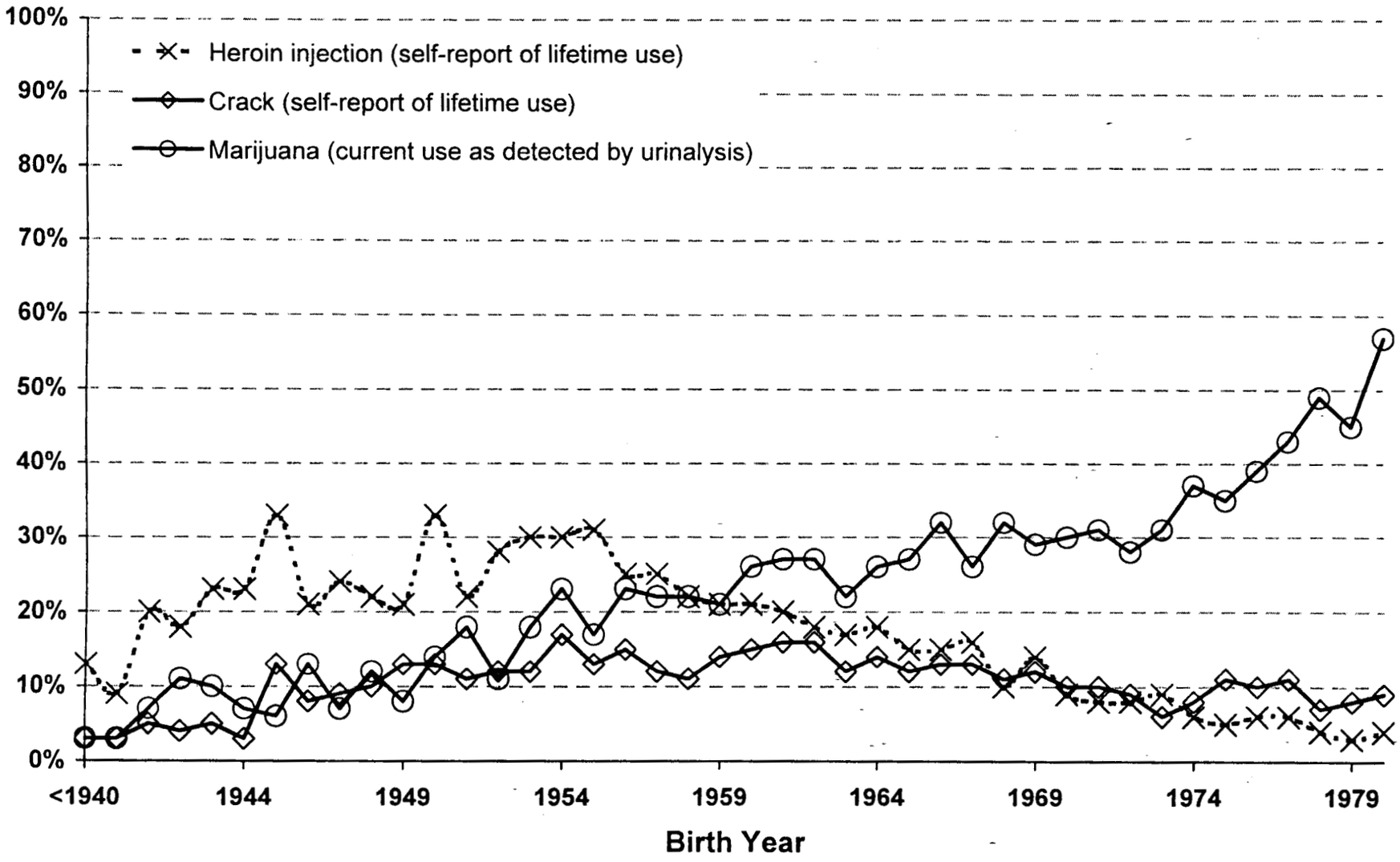
San Antonio



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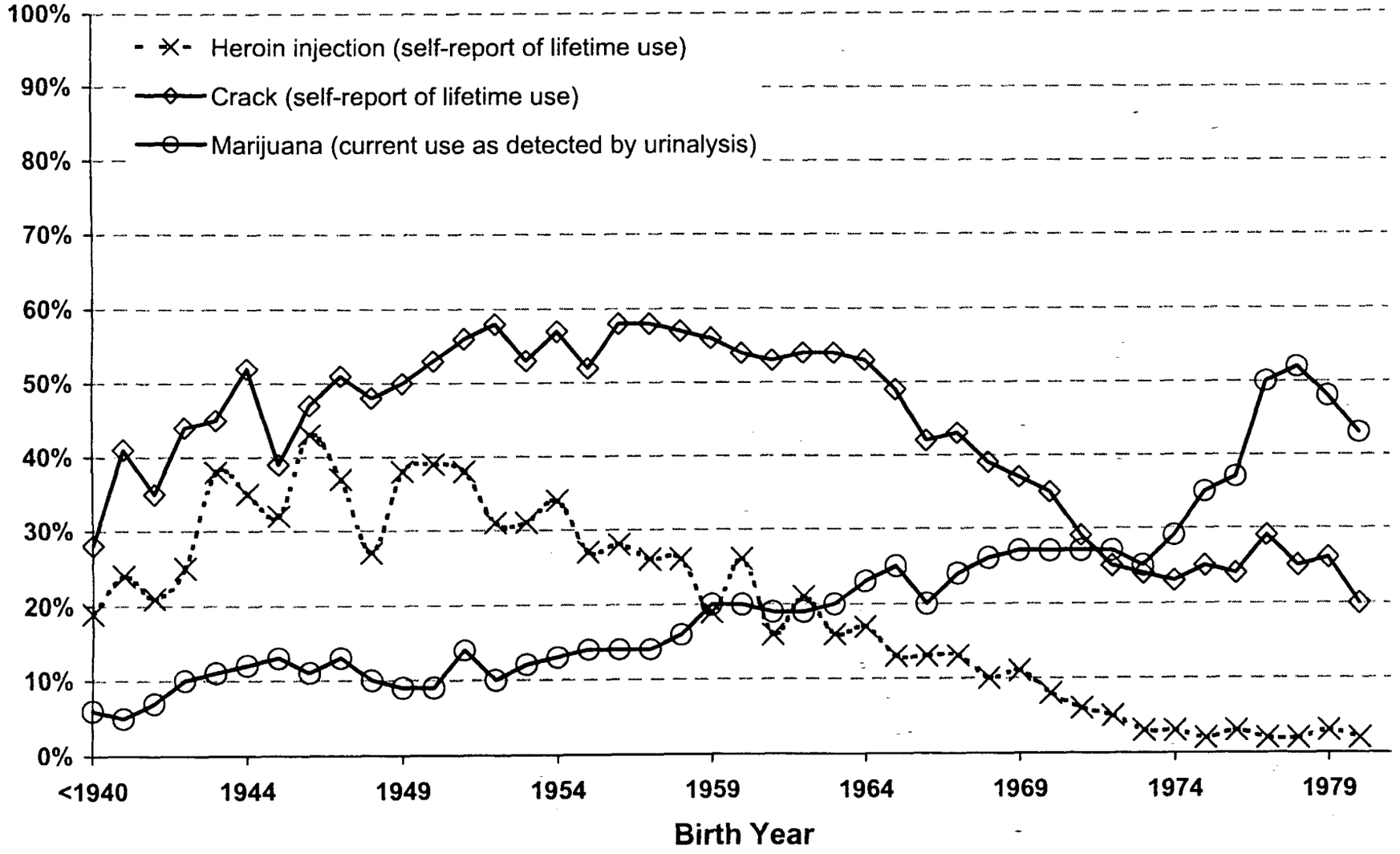
Los Angeles



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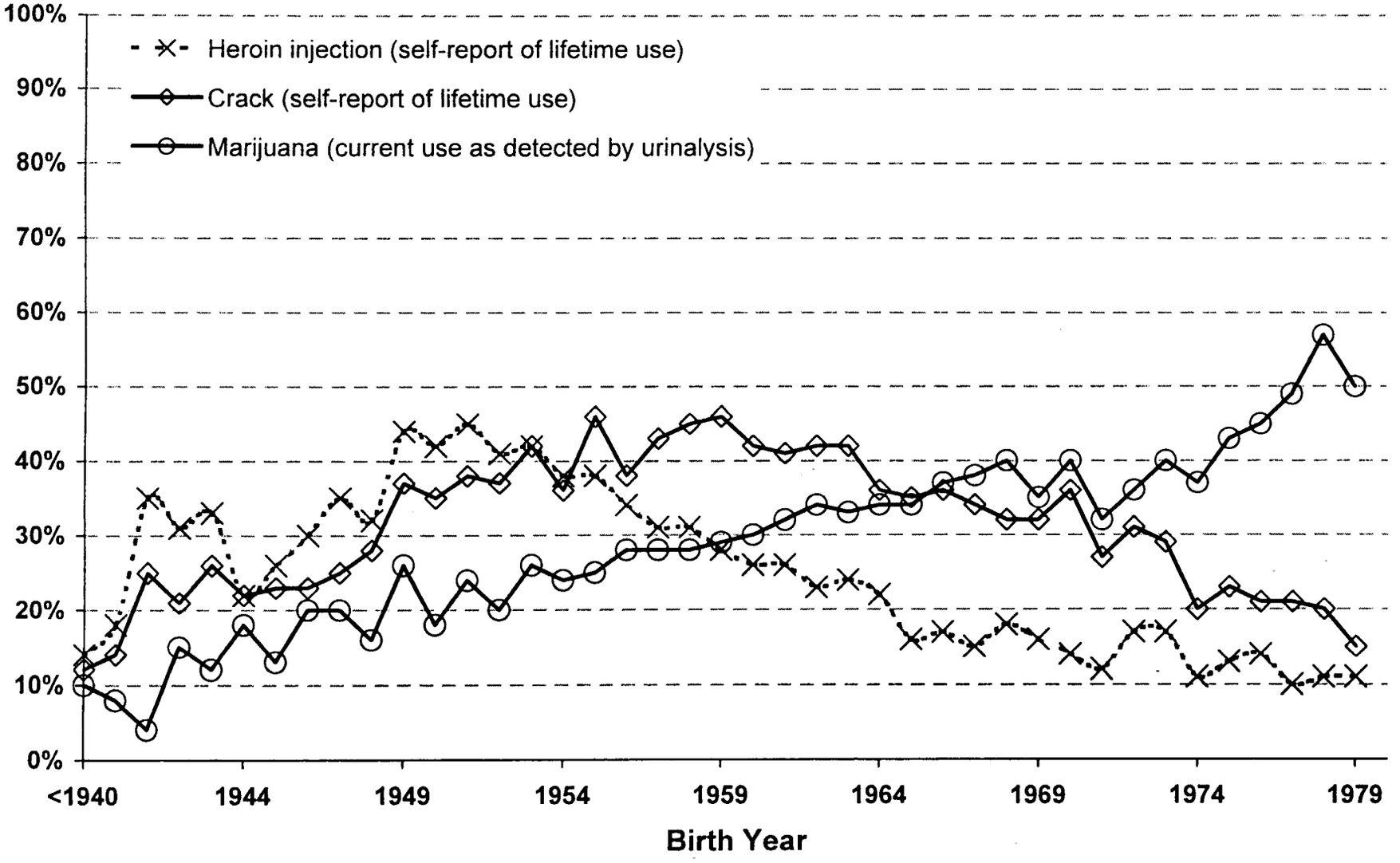
Portland (OR)



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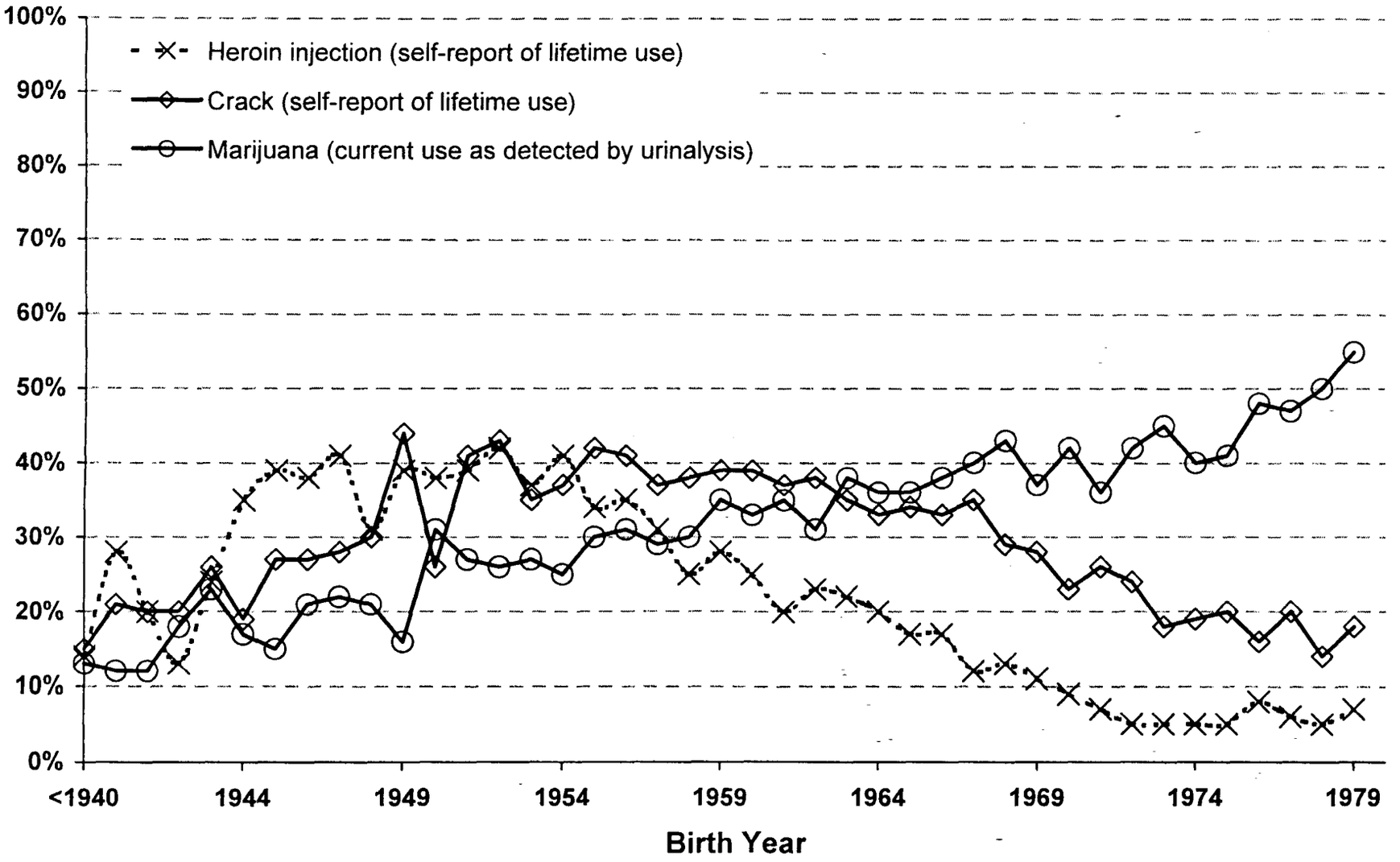
San Diego



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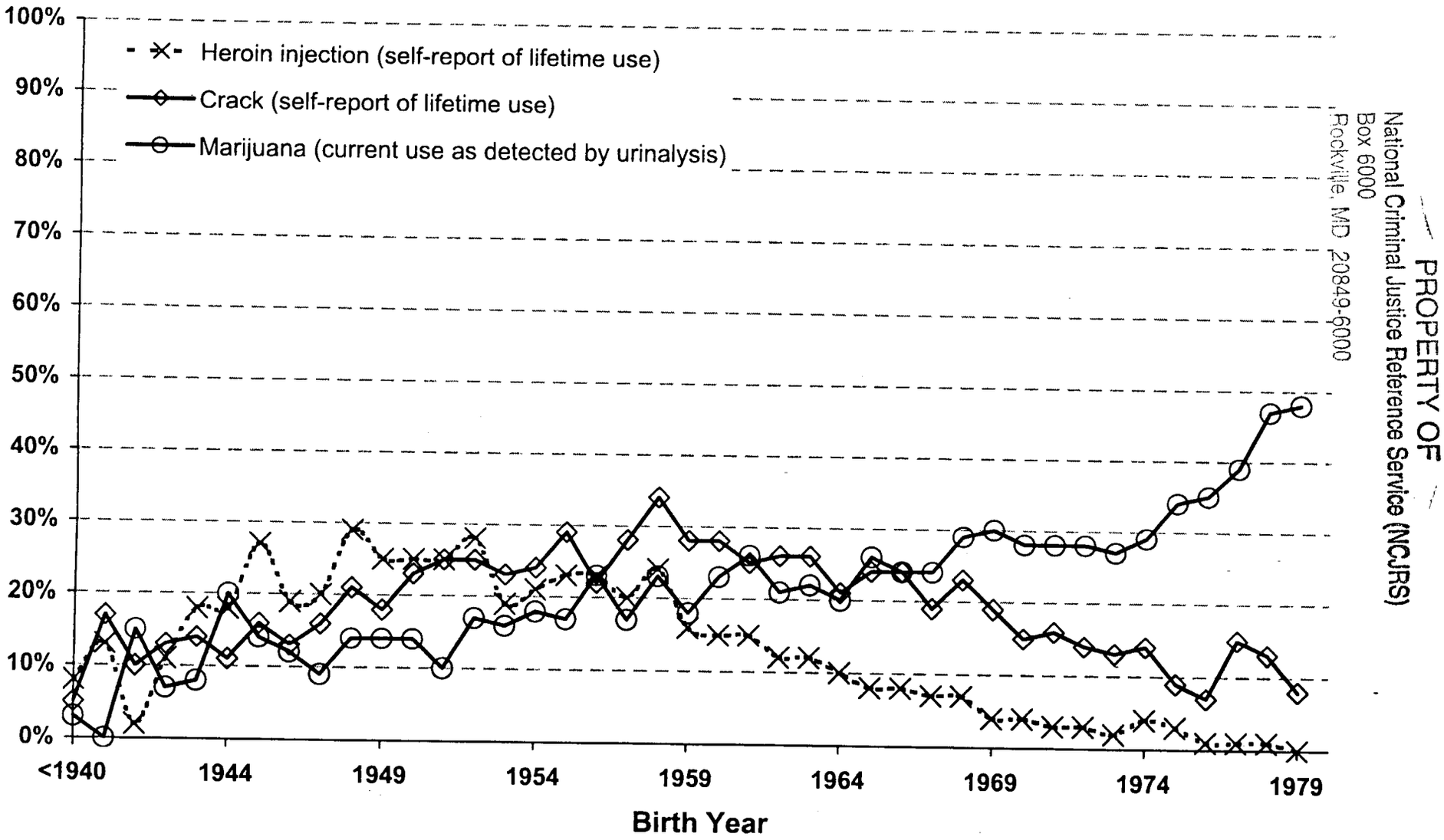
San Jose



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