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The Transfer of Juvenile Offenders to Adult Court: Panacea or Problem?*

ELIZABETH W. MCNUITY

Recent increases can be seen in both the number of transferred juveniles and the number of juveniles that meet transfer criteria. Advocates of expanding the parameters for transferring juvenile offenders to adult court claim that it is an effective method of dealing with serious juvenile offenders. Little empirical evidence supports the idea that adult court sentencing of juvenile offenders is consistent, equitable or effective. This study utilizes data from a recent cohort of 472 transferred juvenile offenders in Arizona to explore the sentencing of juveniles in adult court. Logistic regression is employed to identify criminal history, offense-related variables, and demographic variables related to both an incarcerative sentence and a sentence to probation.

1. INTRODUCTION

From its inception, the juvenile court has aspired to "resolve the wayward youth's family, social, and personal problems and prepare the youth to be a healthy, productive and law abiding adult" (Fagan & Deschenes 1990: 318). This separate court for juvenile offenders, first established in Illinois in 1899, employed the doctrine of *parens patriae*, eschewing the punitive focus of criminal court and focusing instead on a rehabilitative course. Even so, early proponents of a separate court for juvenile offenders recognized that some juveniles, intractable to earlier rehabilitative efforts, did not warrant the protection of the juvenile court when their actions compromised public safety (Bortner, et al. 1990). The ability to transfer juveniles to adult (criminal) court has always existed. Traditionally, it has been reserved for serious juvenile offenders deemed beyond the court's rehabilitative capacity, as well as those who were

* Opinions expressed in this document are those of the author and do not necessarily represent the official position or policies of the Arizona Supreme Court, Administrative Office of the Courts.

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so close in age to "adults" that there was insufficient time for rehabilitation prior to attaining the age of majority. There is considerable variation from state to state in specific parameters that qualify youth for prosecution in adult court (see Szymanski 1994 for a complete description of age and offense restrictions of each state). In addition, there are several possible routes available for transferring juveniles to the adult court. All states allow for at least one, with some allowing for more than one route (Snyder & Sickmund 1995).

As confidence in the rehabilitation potential of juveniles – portrayed in the media as younger and more violent than their predecessors – has declined, the "retributive justice" model has increasingly been offered as the solution to the perceived ineffectiveness of the earlier model (Bazemore & Umbreit 1995; Fagan 1995). Nowhere is this more evident than in attempts to ease restrictions to the prosecution of juvenile offenders in adult court. "Beginning in 1976, over half the states made it easier to transfer youth to adult court" (Krisberg & Austin 1993: 50). Evidence of increasing prominence of the transfer process nationwide includes attempts to lower the qualifying age, to increase the scope of qualifying offenses and to provide for more certain routes to adult court (Jones & Krisberg 1994). The net result of this increasing use of the transfer process is an increase in the number of juveniles incarcerated in adult prisons (Poulos & Orchowsky 1994).

The campaign to increase the prosecution of juveniles in adult court carried with it the expectation that criminal sanctions would afford "greater community protection, more effective deterrence of future crime, and more proportionate, retributive responses to serious crimes" (Fagan 1995: 238). In addition, the process has been portrayed as a more cost-effective one that allows less serious offenders to be rehabilitated using resources within the juvenile court system while dealing harshly with more serious offenders. Empirical studies suggest that neither objective nor equitable criteria play a major role in the selection of juveniles to be transferred. This is evidenced by the offenses of transferred youth – less than half of those transferred in 1992 were charged with crimes against persons – as well as the racial disparity within the transferred population (Bishop & Frazier 1991; Bortner 1986; Feld 1987; Jones & Krisberg 1994; Singer 1993; Snyder & Sickmund 1995).

This study focuses on the sentences that transferred juveniles receive in adult criminal court. The paper begins with an overview of the transfer process in Arizona, followed by a review of previous findings on adult court sentencing outcomes for transferred juveniles. Next, the methodology section describes the research design, variables considered in the analysis and the focus of the analysis. Analysis results include variables predictive of both an incarcerative sentence and a sentence to probation. Finally, the conclusions evaluate the utility of the transfer process in light of these findings.

II. TRANSFER TO ADULT COURT IN ARIZONA

Criteria used to qualify juveniles for transfer and the available mechanisms for transfer vary from state to state, although the scope of both has increased lately (Chanen 1995). Newly approved revisions in transfer procedures in Arizona exemplify this expansion. The Arizona juvenile court normally retains jurisdiction until age eighteen. Until recently, Arizona's vehicle for transfer was judicial waiver, although Bortner (1986) observes that much of the transfer decision actually resided with the prosecutor. County attorneys could request that the juvenile court waive jurisdiction for selected juveniles. In those cases, following the establishment of probable cause, the juvenile court considered selected criteria related to the offense, the juvenile's delinquent history, and the potential for rehabilitation within the juvenile system in light of public safety. In addition, effective 1 December 1994, an amendment established "presumptive" transfer for juveniles ages sixteen or older who committed violent, serious, or repetitive offenses (Ariz. Juv Ct Rules of Proc, Rule 14).¹

Not all considered the existing transfer procedures sufficient to address the perception that younger and more violent offenders were not being punished. The emotional appeal of a campaign promising harsh, swift, and predetermined punishment of violent repetitive juvenile offenders continued to strengthen. An unsuccessful attempt during the 1995 legislative session sought to establish automatic transfer for all juveniles ages fourteen and older charged with any felony who have three prior delinquency felony adjudications (Juvenile Justice Reform Bill 1996). This was followed by the "Stop Juvenile Crime Initiative," proposed by the governor, which sought to mandate transfer to adult court for all juveniles ages fifteen or older who commit murder, forcible rape, or armed robbery, along with repeat offenders (Arizona. Executive Office 1995). This initiative, Proposition 102, appeared on the November 1996 ballot and was overwhelmingly approved by the voters. Implementation of these far-reaching automatic transfer provisions is currently being considered by the Arizona legislature.

A recent report by the Office of Juvenile Justice and Delinquency Prevention found a sixty-eight percent increase nationwide in the number of juveniles transferred to adult court through judicial waivers between 1988 and 1992 (Snyder & Sickmund 1995). In Arizona, the number of juveniles transferred in the two largest counties (Maricopa and Pima, containing 73% of the population aged eight to seventeen) between 1989 and 1993 increased substantially.² However, as with the national data, it is not known whether these increases reflect a similar increase in transfer requests or merely an increase in the proportion of requests for transfer that are granted. Similarly, it is not known to what extent increases in the at-risk juvenile population have affected this increase.

III. ADULT COURT SENTENCING RESEARCH

Concern for public safety underlies much of the discussion and empirical examination of the transfer process. Research on the transfer process focuses on *who* is transferred, the *results* of prosecution in adult court and the *recidivism* of transferred juveniles. Much of this research is comparative, looking for differences between those who are transferred and those for whom a request for transfer is denied or dismissed; between juvenile and adult court sentences; and recidivism rates of those adjudicated in juvenile court and those prosecuted in adult court. Methodological differences, differences in state transfer procedures and difficulties stemming from the collection of data from different jurisdictions (juvenile and adult court) limit the generalizability of much research on the transfer process.

While various studies examined the decision to transfer, somewhat less attention has been paid to the sentencing of juveniles in adult court. Most recently, Fagan notes that "there has been little systematic research to determine whether sanctions in criminal court are in fact harsher and more consistent" (1995: 239). Chanen (1995) notes that existing research challenges the idea that criminal courts impose harsher sanctions than juvenile courts. A recent comparative analysis of sentences received by juveniles in juvenile and adult court reaffirmed earlier results, specifically, that "(a)ccountability . . . in criminal courts was no greater than for those in the juvenile courts" (Fagan 1995: 253).

In general, studies considering adult court dispositions of juveniles show that juveniles transferred and convicted in criminal court often "receive sentences of probation, a sanction that just as easily could be applied by the juvenile courts" (Poulos & Orchowsky 1994: 5). Most studies confirm that less than half received incarcerative sentences (Bortner 1992; Snyder & Sickmund 1995; Jones & Krisberg 1994). One recent exception to this was the finding of high incarceration rates by the U.S. General Accounting Office (1995), although it appears as if methodological differences may explain the difference. This latter study looked only at sentences received by those convicted of "serious" offenses, unlike other studies that considered the sentencing of all transferred youth.

IV. METHODOLOGY

This study identifies characteristics of transferred juvenile offenders related to prosecution outcomes in adult criminal court. Specifically, the analysis considers variables that alter the likelihood that a transferred juvenile offender will receive an incarcerative sentence or a placement to adult probation. The study utilized data on all juveniles (ages eight to seventeen) referred to the juvenile court in 1994 and subsequently transferred to the adult court for prosecution.

Previous research indicates that not all cases *considered* for transfer actually result in a transfer to adult court. Some requests for transfer are later withdrawn, while other requests are denied by the juvenile court judge. An earlier study in the two largest Arizona counties found that the majority of youth (approximately 65%) considered for transfer during 1990 were not, in fact, transferred (Bortner 1992). Currently, the statewide juvenile court automated data system does not allow for the identification of transfer requests along with their subsequent outcomes. These data limitations preclude any assessment of the transfer population selection process. Thus, it is not known what distinguished those retained in the juvenile system from those actually transferred.

Juvenile court records indicated that 530 juveniles were transferred to adult court in Arizona during 1994. At the time of the subsequent data collection from the adult court, the outcome of 10.9% (N=58) of these cases was unknown because the cases were still pending prosecution in adult court. Analysis is limited to the 472 juveniles for whom the sentence in adult court was known.

Data were obtained from both the juvenile court and adult probation departments. Criminal history, demographic and offense information on Arizona juveniles transferred in 1994 was obtained from each county's Juvenile On-Line Tracking System (JOLTS). This automated juvenile court management system has been operational statewide since 1994. Further information on each juvenile subsequent to the transfer to adult court was provided, upon request, by each county's Adult Probation Department. This included information on adult court sentencing, current status of those placed on probation, and treatment services ordered in adult court and received.

Logistic regression is employed to determine the variables of influence. This multivariate technique utilizes maximum likelihood estimates (MLEs) to "directly estimate(s) the probability of an event occurring" (Norusis 1990: 45).³ Two separate models are specified, one for incarceration and one for probation. In the first model, the dichotomous dependent variable "Incarcerative Sentence" is defined as a sentence to the Arizona Department of Corrections (DOC), jail, or "shock" incarceration.⁴ This binary variable is coded 1 if the juvenile received an incarcerative sentence in adult court, and 0 if no incarcerative sentence was imposed. In the second model, the dichotomous dependent variable "Probation Sentence" includes placement to either standard probation or Adult Intensive Probation Supervision (AIPS). As before, this binary variable is coded 1 if the juvenile was placed on standard or AIPS, and 0 if no probation sentence was imposed. Of the 472 juveniles for whom adult court sentencing outcome was known, 43% (N=203) received an incarcerative sentence and 49.2% (N=232) received a sentence to probation. The outcome of the remaining 7.8% (N=37) included dismissal (N=34), acquittal (N=1) and deferred prosecution (N=2).⁵

The same independent variables were included in both models. The importance of each of the independent variables to sentencing outcomes has been posited, although not all have been demonstrated empirically. For example, age is frequently specified as one of the objective criteria that qualify a juvenile for the process. However, clearly age alone provides little explanation for who is transferred, as not all nearly-eighteen-year-olds are transferred. Similarly, transfers do not result for all of the older juveniles who are considered for them. In this analysis, it was anticipated that age would carry little impact in light of the other variables. Age was retained as a continuous variable. Thus, a positive finding would indicate that the older the juvenile, the more likely they would be to receive the sentence under analysis.

On the other hand, ethnicity has emerged as a significant correlate of criminal justice decisions, although numerous reasons have been proposed (Beck & Brien 1995). In particular, studies point to the overrepresentation of African-Americans, Hispanics and Native Americans throughout the juvenile justice system (Krisberg & Austin 1993). Studies in Arizona have noted the overrepresentation of minorities in the juvenile justice system (Bortner, et al. 1990; Burgess, Kennedy & McCarthy 1994). Similar distributions have been noted in the adult system. For example, an earlier study on adult court sentencing practices found that a higher percentage of African-American (40%) and Hispanic (34%) adult offenders were incarcerated than Anglo adult offenders (28%) (Institute for Rational Public Policy 1991). In this analysis of the adult court sentencing outcomes for transferred juveniles, ethnicity consists of three groups: Anglo, Hispanic and African-American, with Anglo as the reference category. Thus, the findings are interpreted as being Hispanic compared to Anglo and being African-American as compared to Anglo.

Discussions of the transfer process frequently note that transferred juveniles represent a "failure" of the juvenile court. As such, these juveniles are portrayed as having cycled through the system, unresponsive to a host of services aimed at rehabilitation. Criminal history, specifically repetitiveness and seriousness, is another criterion used to qualify a juvenile for transfer. While the data did not include the seriousness of transferred juveniles' criminal history, it did include the extent of the criminal history. A prior referral to the juvenile court (measured as a continuous variable from 0 to 20-or-more) is expected to increase the likelihood of an incarcerative sentence.

Despite the perception that transferred youth have exhausted juvenile court services, this was not correlated with the decision to transfer in Bortner's study (1992). Although no parallel study of adult court sentencing suggests the role that prior juvenile services play, they are included in these models and are not expected to change the likelihood of adult court sentencing. These prior services (coded 1 for service received and 0 for not received) include a diversion program (Progressively Increasing

Consequence Act, known as "PIC-ACT"), probation, Juvenile Intensive Probation Supervision (JIPS), and commitment to the Arizona Department of Juvenile Corrections (ADJC). While some juveniles had previously been placed on one or another service, they were not mutually exclusive.

It is possible for a juvenile to be transferred to adult court on more than one occasion. Thus, prior transfer (coded 1 for previous transfer and 0 for not) was included and was expected to increase the likelihood of a more serious sentence in adult court.

Finally, the seriousness of the current offense is perhaps the most frequently cited criterion for qualifying a juvenile for transfer. The variable "offense severity" references the severity of the most serious offense that the juvenile was charged with in juvenile court. Although a juvenile may be charged with more than one offense, charges for less serious offenses are not represented here. It is important to note that the offense severity category of "violent, crimes against persons" used in these analyses likely includes more offenses than categories of "violent" used in other research.⁶ Also, this offense information refers to juvenile court charges and it is possible that charges in adult court varied. The severity of the most serious offense at the time of the referral was recoded into this indicator variable (1 = violent and 0 = not violent). In particular, based on the recent finding of high incarceration rates for juveniles charged with serious offenses (U.S. GAO 1995), it is expected that being charged with a violent offense will increase the likelihood of a more serious sentence.

The transferred population was overwhelmingly male (95.5%). Thus, gender was not included as an independent variable.

V. ANALYSIS AND FINDINGS

A. INDEPENDENT VARIABLES

The focus of the analysis is on the relationship of selected demographic, criminal history and offense variables to sentencing patterns of juveniles in adult court. Before turning to the results of the logistic models, the distributions of these independent variables in the cohort studied are briefly examined.

1. Age

The majority (74.6% N = 352) of the transferred juveniles were seventeen years or older at the time of transfer. Eighteen percent (18.2% N = 86) were age sixteen and 6% (6.4% N = 30) were age fifteen. Less than 1% were under age fifteen at the time of transfer (age fourteen, N = 3; age thirteen, N = 1).

2. Ethnicity

Forty-four percent (43.6% N=206) were Hispanic; 39% (38.8% N=183) were Anglo; 13% (13.1% N=62) were African-American; 4% (4.2% N=20) were Native American and one juvenile was Asian. This distribution varies considerably from the ethnic distribution of Arizona's juvenile (eight- to seventeen-year-old) population: Hispanic 29%; Anglo 58%; African-American 4%; Native American 8%; Asian/Pacific Islander 2%; Other <1%. Due to the small number of Native American and Asian transferred youth, these ethnicities were not included in the analysis.

3. Prior Referrals to Juvenile Court

A small percentage of juveniles (8.3% N=39) had no previous referrals to the juvenile court. Twenty-two percent (N=105) had between one and three prior referrals. Thirty-nine percent (N=184) had between four and ten prior referrals and 30% (N=144) had more than ten prior referrals to the juvenile court.

4. Use of Prior Juvenile Court Services

The following distributions show that, on previous occasions, the majority of the transferred juveniles had been placed in services through the juvenile court, although these services are not mutually exclusive and many juveniles received multiple services.⁷ Fifty-three percent of them (N=250) had previously been placed in the diversion program, PIC-ACT. Sixty-one percent (N=288) had previously been placed on probation and twenty-six percent (N=121) had previously been placed on Juvenile Intensive Probation Services. Forty-three percent of the transferred juveniles (N=202) had previously been committed to the juvenile correctional facility, ADJC.

5. Previous Transfers to Adult Court

A small number of juveniles had been transferred to adult court on a previous occasion (8.5%, N=40). The results of these previous transfers are not known.

6. Offense Severity

Almost half (44.9%, N=212) of the transferred juveniles were charged with a violent (crimes against persons) offense in juvenile court. Thirty-nine percent (N=182) were charged with a property crime and 11% (N=50) were charged with a drug offense.

B. RESULTS

Unlike linear regression, which measures the effect that a one-unit change in the independent variable has on the dependent variable, in logistic regression "the nonlinearity of the relationship between $P(Y=1)$ and each X_k on $\text{Pr}(Y=1)$ is less straightforward" (Aldrich & Nelson 1984: 42). Logistic coefficients are best understood as "the change in the log odds associated with a one-unit change in the independent variable" (Norusi 1990: 49). The purpose of the initial analysis was to predict changes in the odds of a transferred juvenile receiving an incarcerative sentence in adult court, while controlling for the simultaneous effects of additional independent variables. Similarly, the purpose of the second analysis was to predict a change in the odds of a transferred juvenile receiving a probation sentence in adult court, while controlling for the simultaneous effects of additional independent variables.

Table 1 displays the logistic coefficient (B) and the anti-log ($\text{Exp}(B)$) associated with Model 1 ("Incarcerative Sentence").⁸ Using the stated variables to explore the predictability of an incarcerative sentence, 67.85% of the juveniles were correctly classified.

Table 1. Logistic Regression of Incarcerative Sentence in Adult Court for Transferred Juveniles

Variables	B	Sig	$\text{Exp}(B)$
Age	-.4033	.0085**	.6681
Arizona Department of Juvenile Corrections	-.0366	.8959	.9641
Ethnicity ^a		.0008***	
Hispanic	.6717	.0033**	1.9574
African-American	1.0978	.0008***	2.9976
Previous JIPS	-.1493	.5845	.8613
Previous PIC-ACT	-.3866	.0935 ⁺	.6794
Previous Probation	-.3116	.2399	.7323
Previous Transfer	.9896	.0099**	2.6903
Violent Offense	1.0971	.0000***	2.9955
Prior Referrals	.0682	.0147*	1.0706
Constant	5.5346	.0389	

^a Anglo juveniles are the reference group

⁺ $p < .10$

^{*} $p < .05$

^{**} $p < .01$

^{***} $p < .001$

Five variables significantly changed the odds of a transferred youth receiving an incarcerative sentence in adult court. Previous transfers to adult court, a violent offense, minority status, and prior referrals to juvenile court

Table 2. Logistic Regression of Probation Sentence in Adult Court for Transferred Juveniles

Variables	B	Sig	Exp(B)
Age	.2955	.0623 ⁺	1.3438
Arizona Department of Juvenile Corrections	.0717	.8005	1.0744
Ethnicity ^a		.0000***	
Hispanic	-.8406	.0002***	.4314
African-American	-1.3316	.0001***	.2640
Previous JIPS	.1650	.5513	1.1794
Previous PIC-ACT	.4561	.0513 ⁺	1.5779
Previous Probation	.2706	.3138	1.3108
Previous Transfer	-1.1628	.0044*	.3126
Violent Offense	-1.3574	.0000***	.2573
Prior Referrals	-.0563	.0471*	.9452
Constant	3.9179	.1588	

^a Anglo juveniles are the reference group

⁺ $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

older youth may be more likely to receive a probation sentence in adult court.

Minority status decreased the log of the odds of receiving a probation sentence. Hispanic youth were less likely to receive a probation sentence than Anglo youth and African-American transferred juveniles were even less likely to receive a probation sentence than Anglo juveniles.

Being charged with a violent offense also decreased the log of the odds of receiving a probation sentence. Juveniles who were charged with violent offenses were less likely to receive a probation sentence than those not charged with a violent offense. Again, a previous transfer to adult court was predictive of which transferred juveniles received a probation sentence in adult court. Juveniles with a previous transfer were less likely to receive a probation sentence than those with no previous transfer. Prior referrals to juvenile court slightly decreased the odds of receiving a probation sentence. Transferred juveniles with more prior referrals were less likely to receive a probation sentence.

VI. CONCLUSIONS

This study identifies variables related to adult court sentencing for transferred juveniles in Arizona. As with research around other aspects of the transfer process, the results of this analysis point to criminal history, offense-related and demographic characteristics that impact sentencing

increased the odds of receiving an incarcerative sentence, while age decreased the odds of receiving an incarcerative sentence. Prior services through the juvenile court (PIC-ACT, probation, JIPS and commitment to ADJC) did not significantly change the odds of receiving an incarcerative sentence. However, one of these services, the diversion program PIC-ACT, while not significant at the generally accepted $p < .05$, was significant at $p < .10$. Interpreting this with caution, the negative sign indicates that having previously been placed in PIC-ACT decreased the odds of receiving an incarcerative sentence.

Discussion on the impact of each of the independent variables follows. In terms of ethnicity, minority status increased the log of the odds of receiving an incarcerative sentence. Most notably, African-American transferred juveniles were approximately three times more likely to receive incarcerative sentences than Anglo juveniles. Similarly, Hispanic youth were almost twice as likely to receive an incarcerative sentence as Anglo youth.

Being charged with a violent offense increased the log of the odds of receiving an incarcerative sentence. Juveniles who were charged with violent offenses were almost three times as likely to receive an incarcerative sentence as those that were not charged with a violent offense. Not surprisingly, a previous transfer to adult court was predictive of which transferred juveniles received an incarcerative sentence in adult court. The data show that juveniles with a previous transfer were 2.7 times as likely to receive an incarcerative sentence as those with no previous transfer.

Prior referrals to juvenile court slightly increased the odds of receiving an incarcerative sentence. The odds that transferred juveniles would receive an incarcerative sentence were multiplied by a factor of 1.07 when prior referrals to the juvenile court were included. Finally, the log of the odds of receiving an incarcerative sentence were decreased somewhat with age. In other words, each additional age increment decreased the odds of receiving an incarcerative sentence by a factor of .6681.

Next, Table 2 lists the variables that were predictive of a sentence to probation (Model 2). In this model, 69.84% of the cases were correctly classified. With one exception, the same independent variables that significantly changed the odds that a transferred youth would receive an incarcerative sentence in adult court were significant in this model as well. As with the previous model, prior services in juvenile court (PIC-ACT, Probation, JIPS, Arizona Department of Juvenile Corrections) did not significantly change the odds of receiving a probation sentence. However, again, a previous placement in PIC-ACT, while not significant at $p < .05$, was significant at $p < .10$ and may increase the odds of a probation sentence.

Four variables significantly changed the odds of a transferred youth receiving a probation sentence in adult court. Previous transfers to adult court, a violent offense, minority status, and prior referrals to juvenile court decreased the odds of receiving a probation sentence. Age in this model was not significant at $p < .05$. However, interpreting with caution,

decisions. Prior referrals to juvenile court, a previous transfer to adult court, minority status (African-American and Hispanic) and being charged with a violent offense all significantly changed the odds of receiving an incarcerative and a probation sentence in adult court. While not significantly related to receiving a probation sentence, the age of the juvenile did change the odds of receiving an incarcerative sentence, with younger juveniles more likely to receive this sentence. Variables that indicate use of prior services through the juvenile court did not significantly change the odds of receiving either sentence in adult court.

Some explanations for the differences in adult court sentencing can be advanced from this study, but they are speculative at best. For example, the impact of age and being charged with a violent offense appears straightforward. Likely the decision to transfer an older (close to eighteen) juvenile is related to the fact of insufficient time to complete an effective sanction through the juvenile court, while the decision to transfer a younger juvenile (especially a very young juvenile) reflects a more serious "criminal profile." Similarly, more than any other "objective" criteria, the transfer to adult court is meant to reflect the seriousness of the offense. Thus, the finding that being charged with a violent offense increased the odds of receiving an incarcerative sentence is not surprising.

The relatively slight impact that the number of prior referrals has on adult court sentencing likely speaks to the range of seriousness of these referrals, a dimension not captured in the data. Further research would benefit from a variable that considered the seriousness as well as the number of prior referrals to the juvenile court. Consistent with other studies, ethnicity plays an unsettling role. Similarly disturbing is the finding that restrictive sentences following transfer are not likely to reflect the exhaustion of services through the juvenile court. Again, further research which includes additional criminal history and offense-related data is recommended.

While the juvenile court has always had the ability to waive jurisdiction on selected juveniles, critics of the process note that the standards have been inconsistent (Fagan & Deschenes 1990). The majority of recent changes in transfer legislation have increased the population of juveniles who qualify for transfer (U.S. GAO 1995). As such, it seems imperative that further discussion of the transfer process, in general, and automatic transfer, in particular, must extend beyond the decision to transfer. The idea that transfer decisions necessarily result in harsh sentences has been called into question by the consistent finding that less than half of transferred juveniles generally receive a prison sentence in adult court. In particular, the paucity of empirical evidence of decisions following transfer, namely, what sentences are imposed, to whom, and the outcomes of such decisions, limits our understanding of the equity and the effectiveness of the process. As such, these findings challenge the rhetoric of rationality, accountability and equity that frequently accompanies the argument for increasing the transfer "net."

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NOTES

1. The offenses which allow for presumptive transfer include: first- and second-degree murder, aggravated assault involving a deadly weapon causing serious physical harm, sexual assault involving a deadly weapon or a felony following four or more delinquency adjudications (Ariz Juv Ct Rules of Proc, Rule 14). In addition, "transfer deferral" allows for the delay of the transfer decision while probation or treatment are attempted within the juvenile court (Rule 14.1).
2. Although the number of juveniles in the largest county transferred to adult court remained small from 1989 (N = 102) to 1993 (N = 281), this represents a 175% increase. A similar pattern occurred in the second largest county, where there has been a 157% increase in the number of juveniles transferred to adult court from 1989 (N = 28) to 1993 (N = 72).
3. The first logit model appears as: $P(Y_{ij} = 1) = Z(X_{ij})$, where $P(Y_{ij} = 1)$ is the probability that the *i*th juvenile receives an incarcerative sentence in adult court, X_{ij} is the set of independent variables predicting that likelihood for the *i*th juvenile and Z is the cumulative logistic probability function. The second logit model appears as: $P(Y_{pi} = 1) = Z(X_{pi})$, where $P(Y_{pi} = 1)$ is the probability that the *i*th juvenile receives a sentence to probation in adult court, X_{pi} is the set of independent variables predicting that likelihood for the *i*th juvenile and Z is the cumulative logistic probability function.
4. Ninety days of incarceration while undergoing intensive, regimented military-style programming, followed by a period of intensive probation.
5. It is not known to what extent these prosecution outcomes mirror those of adults charged with similar offenses. However, in 1994, there were 23,804 adult court felony dispositions. Of these, 27% received incarcerative sentences, 55% were placed on probation (some with prison or jail time included) and 17% were acquitted or dismissed (Arizona, Administrative Office of the Courts 1995).
6. A.R.S. code information was used to categorize each adjudicated offense into more general types. The following offenses are included in each severity category (number of transferred juveniles with this offense):
 - (a) *Violent (crimes against person)*
homicide (4), murder (30), attempted murder (10), manslaughter (1), negligent homicide (1), armed robbery (55), aggravated robbery (5), strong arm robbery (5), aggravated assault (72), assault (1), aggravated assault disfigurement (3), aggravated assault with a deadly weapon (27), kidnapping (7), sex with a minor (4), child molestation (4), sexual abuse (1), sexual assault (10), endangerment (5), arson occupied structure (4), leaving accident with death/injury (2), child abuse (1), gang/syndicate (2), possession of firearm (1).
 - (b) *Grand Theft (crimes against property)*
burglary (79), aggravated criminal damage (1), criminal damage (5), vehicle theft (58), fraud (1), attempted burglary (1), forgery (6), stolen property (9), attempted

theft (2), theft (29), criminal syndicate (1), fraudulent schemes (1), unauthorized use of vehicle (1).

(c) *Drugs*

possession (22), selling (16), transporting (3), trafficking (8), sniffing (4), any illegal drug - dangerous or narcotic.

(d) *Other*

escape (2), liquor violation (1), unlawful flight (6), theft (3), false report (1), trespass (2), assault (3), probation violation (1), minor consuming (1), weapons misconduct (1), conspiracy (3), runaway (1), intimidation (1), possession of prohibited weapon (2).

7. While most of these juveniles with prior referrals to the juvenile court had received at least one of the above services, some (13%, $N=65$) had received no services and only approximately one out of ten had received all services.
8. The logistic coefficient (B) displays the log of the odds of receiving an incarcerative sentence. The anti-log ($\text{Exp}(B)$) displays how many more times likely the event is to occur.

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