

## Predicting Outcomes for Youth Transferred to Adult Court

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**Abstract** Extant research regarding juvenile transfer has focused primarily on the negative effects of current policies, with little consistent and rigorous work on the variation among the adolescents transferred to adult court and their later adjustment in the community. Using a sample of 193 transferred youth from Arizona, we consider how certain individual characteristics are related to four post-release outcomes (antisocial activity, re-arrest, re-institutionalization, and gainful activity). We find considerable variability in outcomes, with adjustment significantly and consistently related to certain legal and risk-need factors. These results indicate that some

transferred youth may experience negative outcomes, and that refinements to transfer policy may benefit from consideration of these factors in determining which serious adolescent offenders are most appropriate for transfer.

**Keywords** Adult transfer · Waiver · Juvenile transfer · Heterogeneity · Outcomes

There is little debate regarding the general utility of allowing for the transfer of some adolescents (the most chronic and serious juvenile offenders) from the juvenile to the adult court. An option since the inception of the juvenile court, transfer has always been available to identify and process differently those adolescents who presented particular danger to the community (or to other adolescents in juvenile facilities) and for whom treatment in the juvenile system has failed. Ongoing debate regarding transfer is primarily focused on defining *which youth* are most appropriate for transfer to criminal court and which should be retained in the juvenile court. Answering this question requires an understanding of the characteristics of youth who are currently being transferred and how these characteristics are related to later adjustment in the community. This exploratory paper examines which demographic, legal, psychological and risk-need factors are related to the occurrence and timing of four post-release outcomes (reported involvement in antisocial activity, re-arrest, re-institutionalization, and involvement in gainful activity) in a sample of adolescents transferred to adult court. We find considerable variability in outcomes among these transferred adolescents, with post-release adjustment significantly and consistently related to certain legal and risk-need factors.

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## Background

Beginning in the late 1970s and continuing through the 1990s, policy regarding the transfer of adolescents to adult court changed dramatically (Fagan & Zimring, 2000). During this time span, nearly all states adopted “get tough” juvenile justice policies which included *statutory exclusion* provisions, specifying age and crime type criteria to determine which youth to transfer (Griffin, 2003). These changes shifted discretion away from the juvenile court judge to prosecutors, who could now control transfer to a greater degree through charging practices. Rather than relying on a judgment of individual appropriateness regarding transfer, the emphasis was instead on the act, not the actor and on retribution, not rehabilitation (Griffin, 2006).

Not surprisingly, the result is that a substantial number of youth are now transferred to adult court and these youth are a heterogeneous mix of adolescents. Today, approximately 7,000 youth under the age of 18 are held in adult jails on any given day (Snyder & Sickmund, 2006), and one in 10 youth incarcerated in the United States are admitted to an adult prison or jail (National Council on Crime and Delinquency report, cited in Eggleston, 2007). This group of transferred adolescents includes “a broad range of offenders who are neither particularly serious nor particularly chronic” (Bishop & Frazier, 2000, p. 265), with youth differing in their prior legal involvement, their developmental status (since there is now a wider age span eligible for transfer), and the risk factors that brought them to the adult system.

A long line of theoretical, empirical, and policy-related research has emerged regarding the effects of transfer (Bishop, 2000; Fagan, 1996; Feld, 2000; Kupchik, 2006; Kupchik, Fagan, & Liberman, 2003; Kurlychek & Johnson, 2004; Lanza-Kaduce, Frazier, Lane, & Bishop, 2002; Mears, 2001; Myers, 2003; Zimring, 2000), and much of this work indicates that current transfer practices have very little good to offer. In their comprehensive review, Bishop and Frazier (2000) reported no evidence of any general deterrence effect from transfer policies and further assert that transferred youth are “more likely to reoffend, and to reoffend more quickly and more often, than those retained in the juvenile system” (p. 261). Subsequently, other summary reports have also reported that transfer laws are at least ineffective (i.e., they do not prevent future crime among those transferred, see Redding, 2008) and may in fact be harmful (i.e., counterproductive for the purpose of reducing crime and enhancing public safety; see McGowan et al., 2007; Redding, 2008; Young & Gainsborough, 2000).

The work upon which these conclusions were based, however, was limited in two ways. First, this work focused

on the effects of transfer in terms of only the persistence of criminal involvement, even though the impact of transfer may well spill over to other social and developmental domains. It is quite plausible that involvement with the adult court can affect other aspects of successful adjustment, such as employment and social relationships, either promoting or curtailing continued offending (Chung, Little, & Steinberg, 2005). Second, previous studies have not rigorously and consistently considered the possibility of subgroup variation. Within the transferred group, there might be identifiable subgroups with different outcomes related to case characteristics. Certain identifiable groups of transferred adolescent offenders (e.g., those charged with certain crimes) might be more likely to have positive or negative outcomes. Some types of youths may be easily deterred (e.g., those with limited prior legal histories or positive peer support), while others may not consider the possibility of a return to prison a sufficient threat to desist from crime. Alternatively, certain malleable characteristics (e.g., association with antisocial peers) may be related to positive or negative outcomes among transferred adolescents, providing guidance about factors to assess among adolescents eligible for transfer or to target for intervention in this group. Unfortunately, transfer studies to date have given only cursory attention to this issue, usually comparing two broad groups: youth retained in the juvenile system versus those transferred to adult court (Bishop, Fraizer, Lanza-Kaduce, & White, 1996; Fagan, 1996; Winner, Lanza-Kaduce, Bishop, & Fraizer, 1997). When variability is considered in these analyses, it was usually done just by comparing arrest within charge groups (Fagan, 1996; Gottfredson & Gottfredson, 1986; Petersilia, Turner, Kahan, & Peterson, 1985).

Understanding the nature and scope of variability among transferred youth is a critical first step in moving this area of research forward. If, as asserted above, transfer to adult court is an enduring component of the criminal justice process, the core question is how to refine this practice to do more good and less harm. A “new generation” of transfer research regarding the differential outcomes for transferred youth is needed to guide this statutory reform. These investigations have to consider a wider range of outcomes for subgroups within the adult transfer group and a more nuanced comparison of outcomes for transferred youth versus youth retained in the juvenile system.

Some initial, significant steps have been taken in this direction regarding the relevance of demographic differences and crime types. Lauritsen (2005), for instance, finds evidence of racial/ethnic differences in rates of serious violent crimes, and Snyder and Sickmund (2006) consider demographic factors (e.g., gender and race) as well as crime type in describing case processing and juveniles in custody. Their report highlights the importance of

considering variability in these factors for understanding current practices regarding juvenile offenders. In addition, in their examination of sentencing outcomes for offenders in the juvenile versus adult system, Kurlychek and Johnson (2004) considered the role of legal (e.g., offense type) and extra-legal (e.g., gender and race) factors and suggest that legal factors (e.g., offense severity and prior offending history) play a less significant role in sentencing decisions in the juvenile system than in the adult system. These researchers have all taken important steps that demonstrate the importance of variability as a factor to consider in work in this area. Consideration of a broader array of potentially distinguishing case characteristics will extend these efforts.

### Current Focus

Meeting the challenge of considering a richer array of individual characteristics among transferred youth is difficult because there is very little detailed information about the lives of these adolescents both pre- and post-transfer. Using data from the Pathways to Desistance (Pathways) study, a longitudinal study of serious juvenile offenders (see Mulvey et al., 2004), we have the opportunity to begin to fill the gap in the research regarding the amount of heterogeneity and the extent of differential outcomes within a group of transferred youthful offenders. Data from the Pathways study has two aspects that make it useful for this purpose. First, it captures a comprehensive array of information about serious offenders making the transition to adulthood, including indicators of individual functioning, psychosocial development, family context, personal relationships and community context—all of which have not been previously examined for this group. Second, it offers an opportunity to investigate transfer in the context of a locale (Maricopa County, AZ) with a wide net for this practice. Using the Pathways data, we explore (a) what characteristics differentiate potentially important subgroups of youth in the adult system (e.g., probation versus incarcerated, youth with no prior court involvement versus those with a history of court involvement) and (b) what predicts the post-release outcomes for youth with respect to reported involvement in antisocial activity, re-arrest, re-institutionalization, and involvement in pro-social activities such as education and employment (i.e., “gainful activity”).

### Methods

#### Study Overview

Participants were adolescents enrolled in the Pathways to Desistance study, an ongoing, multi-site, longitudinal study

of serious adolescent offenders from adolescence into early adulthood (see Mulvey et al., 2004). Between November 2000 and January 2003, 1,354 adjudicated youths from the juvenile and adult court systems in Maricopa County, AZ ( $N = 654$ ) and Philadelphia County, PA ( $N = 700$ ) were enrolled into the study. The enrolled youth were at least 14 years old and under 18 years old at the time of their committing offense and were found guilty of a serious offense (predominantly felonies, with a few exceptions for some misdemeanor property offenses, sexual assault, or weapons offenses). The proportion of male youth found guilty of a drug charge was capped at 15% to avoid an over-representation of drug offenders. All females who met the age and crime criteria were approached for enrollment as were youth being considered for trial in the adult system. Twenty percent of the youths approached for participation declined. Upon enrollment in the study, participants completed a baseline interview within 75 days after their adjudication (for those in the juvenile system) or 90 days after their decertification hearing in Philadelphia or an adult arraignment in Phoenix (if in the adult system). Follow-up interviews were conducted every six months thereafter for the first three years of the study and annually after that. Information about the study participant was also obtained from a collateral reporter at the time of the baseline interview and at annual follow-ups through the first three years. Additional details regarding the enrollment process, study procedures, and sample characteristics (for participants and excluded cases) can be found in Schubert et al. (2004). Given the focus of the current study, only offenders who were transferred to the adult court system in Arizona were included in the analyses ( $N = 193$ , 29% of the enrolled Arizona research participants). Except for a single covariate (parental education), only study participant reports (no collateral reports) were used for these analyses.

We choose to focus on youth transferred in Arizona (exclusive of the Pennsylvania transferred cases) because it provides a good test case for examining the effects of a “wide net” for transfer. In this locale, there are multiple paths (judicial, statutory and prosecutorial) by which a youth can be transferred, there is a broad range of offenses that can produce automatic transfer, and the age of exclusion from juvenile court is in some situations quite young (i.e., 8 years old). In addition, there is no automatic waive-back provision and, like most other states, once a juvenile from Arizona has been prosecuted as an adult in criminal court, all subsequent cases involving that youth, regardless of the crime, come under adult criminal court jurisdiction. Six other states (California, Florida, Georgia, Louisiana, Oklahoma, and Vermont) offer the same range of transfer mechanisms, and nearly every other state has some combination of the options available in these states (Griffin,

2006). In contrast, the Pennsylvania statute provides more mechanisms for keeping youth in the juvenile system and, as a result, very few of the enrolled research participants from Pennsylvania ( $N = 51$  of 701, 7%) were in the adult system at the study index petition.

Youth from the Pathways study who were transferred to adult court in Arizona were, on average, 17 years old, predominantly minority (59% Hispanic, 12% African American, 21% Caucasian, and 8% other) and overwhelming male (94%). This group had an average of three ( $SD = 2.60$ ) petitions to juvenile court prior to our baseline interview, with the first petition, on average, at age 15 ( $SD = 1.92$ ). Twenty-nine percent ( $n = 55$ ; 53 males and 2 females) of these transferred youth had no court petitions prior to the study index petition. Compared to the 461 participants who were retained in the Arizona juvenile court system, this transferred group was significantly older at the time of enrollment (16.98 ( $SD = .92$ ) vs. 16.24 ( $SD = 1.03$ );  $t = 8.58$ ,  $p < .001$ ), older at their first petition to court (15.19 ( $SD = 1.82$ ) vs. 14.83 ( $SD = 1.70$ );  $t = 2.40$ ,  $p = .017$ ), had more prior petitions before the study baseline interview (3.38 ( $SD = 2.60$ ) vs. 2.98 ( $SD = 2.11$ );  $t = 2.11$ ,  $p = .035$ ), was less likely to be Caucasian (test of proportions  $z = 3.93$ ,  $p = .001$ ), had parents with a lower level of education ( $t = -2.53$ ,  $p = .012$ ) and were involved with more antisocial peers ( $t = 2.56$ ,  $p = .011$ ).

Individuals studied here ( $n = 193$ ) were followed from the date of their baseline interview through their 4-year follow-up interview (average follow-up period = 1,544 days,  $SD = 218$  days). During that 4-year period, a maximum of seven follow-up interviews could have been completed. Eighty-one percent ( $n = 156$ ) of the 193 participants completed all seven follow-up interviews, 10% ( $n = 20$ ) missed one interview, 7% ( $n = 13$ ) missed two or three interviews, and 2% ( $n = 4$ ) missed four or five interviews.

### Outcome Measures

Four outcome measures were used: (1) arrest following release from the initial disposition stay, (2) subsequent overnight stay in a facility after the initial disposition stay, (3) reported participation in antisocial activities, and (4) participation in “gainful activity”, defined as either working or attending school. These outcome measures were calculated by integrating information from the interviews with the adolescents and official records. The “clock” for the follow-up period examined started in the first “community” month for each subject (i.e., the first month returning to the community following release from a disposition placement if the adolescent was sent to a facility, or the first month on probation after the official disposition date for those adolescents placed on probation).

**Re-arrest.** Official arrest records were coded for each participant. Indicators of arrest prior to the age of 18 were based on petitions to juvenile court recorded in the Juvenile Online Legal Tracking System (JOLTS) used in Maricopa County. Arrests after age 18 were based on FBI arrest records. To account for days during the follow-up period in which the youth was removed from the community, we calculated a *rate of re-arrest*, defined as the number of arrests divided by the number of days in the community in the follow-up period. Probation violations were not counted as re-arrests for our purposes here since a probation violation does not necessarily represent a new criminal act.

**Resumed antisocial activity.** We used a modified version of the Self-Report of Offending (SRO; Elliott, 1990; Huizinga, Esbensen, & Weiher, 1991) scale at each interview to measure the adolescent’s involvement in antisocial and illegal activities. As used here, the scale was composed of 22 items listing different serious, illegal activities (e.g., entered or broken into a building to steal something, taken something from another person by force, using a weapon). The research participant indicated whether he/she had done any of these activities over the recall period covered by the interview and the specific month(s) in which the act(s) occurred. This allowed for a calculation of the number and type of antisocial acts engaged in during each month (i.e., a variety score for offending for each month; see Thornberry & Krohn, 2000). For the purpose of determining an “offending” month, an adolescent had to report involvement in two of the acts listed. This conservative threshold was chosen to avoid counting an isolated slip in behavior as a return to offending.

Similar to other investigators (e.g., Lauritsen, 2005, p. 90), we have chosen to use two measures of recidivism (official record and self-report) because, used alone, each of these measures is subject to bias. The self-report measure may be biased by untruthful accounts from the research participant and the official records may be biased by a failure to account for activities that are undetected by the police. However, as might be expected, these reports do show considerable overlap. In this sample of 193 participants, those with zero re-arrests in the 4-year follow-up period also had the lowest mean self-reported offending score and those with two or more re-arrests had the highest mean self-reported offending score ( $F(2, 188) = 7.326$ ,  $p = .001$ ).

**Institutional placement.** The occurrence of an institutional stay was based on the adolescent’s report, collected using a modified version of the Child and Adolescent Services Assessment (CASA; Burns, Angold,

Magruder-Habib, Costello, & Patrick, 1992). If the youth acknowledged an overnight stay in a facility (whether for a new offense, probation violation or other reason), the length of the stay and the month(s) in which it occurred were determined. In this sample, the institutional placements reported were overwhelmingly (92%) juvenile or adult correctional facilities.

**Gainful activity.** Consistent with previous work (see Chung, Schubert, & Mulvey, 2007), we used a consolidated measure of school and work involvement to capture positive activity in the community (gainful activity). Participants were given credit for attending school in a month if they reported being enrolled in school (of any type) and not missing more than five days during the month. Youth were considered employed in a month if they reported having paid employment and working at least 21 h per week (i.e., more than part time) for at least two weeks during any given month. Gainful activity was defined as meeting either the work or school criterion.

### Case Characteristics

Because of the limited sample size for each outcome, we restricted our examination of case characteristics to legal and extra-legal factors considered regularly in prior work for their potential to influence failure or success for each of the outcomes examined.

### Legal Factors

**Offense type.** The most serious charge on the study index petition was coded into one of four categories, using a modified version of a ranking scheme suggested by Gottfredson and Barton (1993). The four categories were (1) murder/rape/arson, (2) felonious assault or felony weapon charge, (3) burglary, major property crimes, and felonies that are not part I, and (4) other, predominantly felony drug sale/possession and sex offenses.

**Legal history.** For each youth, we obtained a count of petitions to court prior to the baseline interview (*priors-ever*) and the youth's age at the time of the earliest petition (*age at first prior*). This information was based on official record files contained in JOLTS in Maricopa County. Probation violations are excluded from the count of priors.

### Extra-Legal Factors

**Demographic characteristics.** Demographic characteristics included ethnicity, age, and level of parental education (a proxy for socio-economic status). Ethnicity

was self-reported and consisted of four groups: White-Non Hispanic, African American, Hispanic and "other". Both the subject and the collateral reported on the parent's education level and the score reflects the lowest level of education reported by either source. This is the only variable used in these analyses that incorporated information from a collateral reporter.

**Psychological characteristics.** Intelligence and psychosocial maturity were measured at baseline. An estimate of the youth's general intellectual ability was obtained from the Wechsler Abbreviated Scale of Intelligence (WASI; Wechsler, 1999). The full-scale IQ score was used.

Psychosocial maturity (as conceptualized by Steinberg & Cauffman, 1996) consisted of three elements, each with two components. *Temperance* includes a consideration of impulse control and suppression of aggression, *perspective* involves consideration of others and future orientation, and *responsibility* includes personal responsibility and resistance to peer influence. Four measures were used to form the basis for these elements. This construct, defined in this way, has been used in multiple publications (e.g., Steinberg et al., 2008, 2009), and has demonstrated relations to endorsements of risk-taking behavior and involvement in antisocial activities.

Three subscales of the Weinberger Adjustment Inventory (WAI; Weinberger & Schwartz, 1990) were used: impulse control, suppression of aggression and consideration of others. The measure asks participants to assess how accurately a series of statements match their own behavior in the previous six months (5-point scale; "False" to "True"). Each subscale was found to have adequate reliability (as indexed by Cronbach's alpha) and good fit to the baseline data (as indicated by confirmatory factor analysis): impulse control (8 items,  $\alpha = .76$ ; CFI = .95; RMSEA = .07), suppression of aggression (7 items,  $\alpha = .78$ ; CFI = .97; RMSEA = .06), and consideration of others (7 items,  $\alpha = .73$ ; CFI = .99; RMSEA = .04). The measure was used for the temperance and perspective elements of psychosocial maturity.

The Future Outlook Inventory is a 15-item measure that uses items from the Life Orientation Task (Scheier & Carver, 1985), the Zimbardo Time Perspective Scale (Zimbardo, 1990), and the Consideration of Future Consequences Scale (Strathman, Gleicher, Boninger, & Edwards, 1994). The inventory asks participants to rank the degree to which each statement reflects how they usually act, on a scale of 1 ("Never True") to 4 ("Always True"). A future orientation score is calculated based on the mean of eight items from the scale. The scale showed good reliability and an excellent fit to the baseline data ( $\alpha = .68$ ;

CFI = .97; RMSEA = .03). This measure was used as part of the perspective element of psychosocial maturity.

The Psychosocial Maturity Inventory (PSMI Form D; Greenberger, Josselson, Knerr, & Knerr, 1974) includes a 30-item subscale that assesses personal responsibility. Individuals respond on a 4-point scale, from “Strongly Disagree” to “Strongly Agree.” An overall personal responsibility score is calculated as the mean across all 30 items. The measure showed excellent reliability and an adequate fit to the baseline data ( $\alpha = .89$ ; CFI = .87; RMSEA = .04). This measure was used to produce the responsibility component of psychosocial maturity.

Finally, the measure of Resistance to Peer Influence (Steinberg & Monahan, 2007) assesses the degree to which adolescents act autonomously in interactions with their peer group. Participants are presented ten scenarios with two conflicting statements, asked to choose the characterization which most closely reflects their behavior, and then to rate the degree to which the statement is accurate (i.e., on a 4-point scale from “sort of true” to “really true”). The scores from the 10 items are averaged to produce a resistance to peer influence score. The measure showed excellent reliability and adequate fit to the baseline data ( $\alpha = .73$ ; CFI = .94; RMSEA = .04). This measure was used to produce the responsibility component of psychosocial maturity.

**Risk-need indicators.** Research participants were assigned a score for each of six risk/need domains. The domains rated were ones that have appeared regularly in prior recidivism studies as indicators of increased likelihood of continued offending (Cullen & Gendreau, 2000; Gendreau, Little, & Goggin, 1996; Loeber & Farrington, 1998). The scores assigned for each domain were developed by constructing a composite from several measures administered during the baseline interview (usually using confirmatory factor analysis to determine an adequate composite, as reported below). The scores assigned to each participant were therefore indicative of the risk-need of the subject relative to the other adolescents in the Pathways sample (see Mulvey, Schubert, & Chung, 2007 for more details regarding the calculation of these scores).

The six risk/need indicators are (1) *Association with antisocial peers* (CFI = 1.00; RMSEA = .01). This score combines information regarding the reported proportion of friends arrested or jailed as well as reports of peers’ antisocial behavior and antisocial influence on the study participant (Thornberry, Lizotte, Krohn, Farnworth, & Jang, 1994); (2) *Antisocial attitudes* (CFI = .99; RMSEA = .04). This is a composite score generated from ratings regarding moral disengagement (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996), consideration of

others from the Weinberger Adjustment Inventory (WAI; Weinberger & Schwartz, 1990) and legal cynicism (Sampson & Bartusch, 1998); (3) *Parental antisocial history* (CFI = .97; RMSEA = .05). This score is derived from the adolescent’s youth’s report that their mother or father were ever arrested or jailed as well as their report that their mother had problems with drugs or alcohol; (4) *School difficulties* (CFI = .99; RMSEA = .02). This score is based on a reported history of being expelled, cheating, skipping classes or dropping out of school; (5) *Substance use problems* (CFI = 1.00; RMSEA = .01). This is a composite score based on meeting diagnostic criteria for a substance use disorder in the year prior to the baseline interview (determined using the Composite International Diagnostic Interview; CIDI, World Health Organization, 1990) or significant social consequences from alcohol or drug use (based on the Substance Use/Abuse Inventory; Chassin, Rogosch, & Barrera, 1991); and (6) *Mood/anxiety problems* (CFI = 1.00; RMSEA = .01). This score is based on a combination of items indicating that the youth meets diagnostic criteria for select mood disorders in the past year (major depression, dysthymia or mania), impairment from depressive symptoms in one’s lifetime, lifetime PTSD or significant anxiety problems (according to the CIDI; World Health Organization, 1990), and significant anxiety problems as indicated on the Revised Children’s Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985).

### Community Supervision and Services

We also investigated dimensions of court supervision and community-based services (CBSs) following release from the initial disposition stay (if incarcerated) or while on probation. During each month of the follow-up period, youth reported on the number of times they participated in four court supervision programs and six CBSs. Court supervision activities included probation (face-to-face or telephone meetings with a probation officer), community intensive supervision programs, court-ordered groups (e.g., victim awareness), and drug court. CBSs included five services (individual, group, in-home, partial hospitalization/day program, school-based), and job training/job placement.

### Analytic Approach

The analyses had two main aims. The first was to provide a descriptive overview of the transferred sample in terms of background characteristics and outcomes after processing in the adult court system. The second aim was to test whether there was significant predictability regarding which adolescents did well or continued to offend after

they were released into the community. The question here was whether the factors predictive of these outcomes in other, broader samples of adolescent offenders also operated in this more selected group of transferred adolescent offenders.

These analyses included additional consideration of outcomes for two subgroups of youth: those who entered the adult system with no prior petitions versus those with prior juvenile court petitions and those put on probation in the adult system versus those who were incarcerated. These subgroups represent ways to divide the sample that could provide guidance for statutory revision. For instance, understanding systematic differences in outcome between youth coming to the adult system with and without prior court involvement or those put on probation or incarcerated provides clues of what to expect from altering the bounds between juvenile and adult court based on offense history or imposing less severe sanctions. Both of these comparisons begin to address the current gap in the literature about the extent and impact of the heterogeneity in transferred adolescents.

The goal of identifying the case characteristics related to outcomes in the community was accomplished using Cox regression survival analyses (Cox, 1972; Tabachnick & Fidell, 2007). This approach was well suited to this task because it permitted an assessment of the impact of multiple covariates on survival time while also accounting for censored cases (cases lost to observation by removal from the community, a missed time point interview or the end of the 48-month observation period). Because the limited sample size did not allow for the inclusion of all legal and extra legal variables within a single model,<sup>1</sup> we conducted a series of Cox regressions; a separate model was estimated for each outcome (re-arrest, resumed antisocial activity, institutional placement, and gainful activity) and each of four groups of theoretically related variables: legal history, demographic characteristics, psychological factors, and risk-need indicators. The results therefore show whether particular domains of variables relate to the occurrence and timing of each outcome and which variables within each domain are most influential. Because of the large number of analyses conducted and the accompanying inflation of experiment-wise alpha, the broad patterns that emerge across all of these analyses are of most interest.

<sup>1</sup> Ideally we would have entered covariates across all domains into the model at one time to test the relative importance of these factors. However, the number of covariates (and the fact that many are categorical) exceeded the recommended ratio of sample size to covariates (12 subjects to 1 covariate; Eliason, 1993 cited in Tabachnick & Fidell, 2007, p. 509; see also Box-Steffensmeier & Jones, 2004).

## Data Considerations

**Multicollinearity and outliers.** An inspection of the correlation matrix of the independent variables used within a model showed limited collinearity. Only one relation exceeded the recommended bivariate correlations of .50 (Tabachnick & Fidell, 2007). Age at first prior petition and number of prior petitions were correlated at .652; however, for theoretical reasons they were left together in models using legal history variables. In prior research (Moffitt, 1993), these two variables have been shown to contribute independently to future offending. Finally, we screened for outliers and found only one variable (parental antisocial history) that appeared problematic. The square-root transformed value for this score was used.

**Missing data.** Sixty-four of the 193 transferred cases could not be used for the Cox regression portion of the analysis. Fifteen youth had their case dismissed once in the adult system and an additional seven cases had missing court record information so the outcome of their trial was unknown. These cases were not used since they are arguably different in unobservable ways from cases that proceeded to trial. We also could not use cases in which the follow-up period after court disposition could not be identified accurately. Eight cases had completed their court sentence prior to the beginning of our follow-up period, thus eliminating the initial section of the adjustment period that we wanted to observe. Twenty-eight individuals were not released from prison/jail by the end of the recall period (i.e., they were right censored) and, for six cases, a missing follow-up interview prevented us from knowing when the youth was first released from his/her disposition stay. Thus, the maximum number of cases available for any of the four outcomes was 129.

The differences between the cases included in the analyses and the excluded cases are presented in Table 1. Two sets of differences are presented: (a) those between the cases that were not released from their disposition stay ( $n = 28$ ) with the 129 cases eligible for inclusion in the analysis and (b) those excluded for other reasons ( $n = 36$ ) with the 129 cases eligible for inclusion.

Compared to youth included in the analysis, the youth who had not been released were more likely to be convicted of a murder/rape or arson charge (test of proportions:  $z = 3.05$ ;  $p < .001$ ), had lower scores on personal responsibility, had more antisocial peers, and higher scores on an antisocial attitudes measure. As compared to the youth excluded from the analyses for other reasons, the included group was more likely to be African American (test of proportions:  $z = 2.38$ ;  $p = .05$ ), had parents from a higher education level, and a higher IQ.

**Table 1** Mean values and standard deviations or proportions of sample with that characteristic for excluded transferred cases and those used for analysis

	Excluded: not released ( <i>n</i> = 28)	Excluded: other reasons ( <i>n</i> = 36)	Included: ( <i>n</i> = 129)	Significance of difference for column 1 vs. column 3 ( <i>t</i> or $\chi^2$ value, <i>p</i> value)	Significance of difference for column 2 vs. column 3 ( <i>t</i> or $\chi^2$ value, <i>p</i> value)
Age at baseline	16.82 (1.07)	16.93 (.86)	17.02 (.90)		
Number of prior petitions	3.00 (1.83)	3.69 (3.14)	3.40 (2.58)		
Age at first prior petition	15.12 (1.67)	14.99 (2.12)	15.26 (1.77)		
Parent education (SES)	2.31 (1.07)	2.18 (1.08)	2.64 (1.15)		<i>t</i> = -2.12, <i>p</i> = .04
Full Scale IQ	88.79 (11.34)	82.86 (11.85)	90.09 (11.69)		<i>t</i> = 3.23, <i>p</i> = .001
Ethnicity					
• White-Non Hispanic	10.7%	16.7%	24.0%	$\chi^2 = 7.906^a$ , <i>p</i> = .048	$\chi^2 = 9.550^b$ , <i>p</i> = .023
• African American	21.4%	25.0%	7.0%		
• Hispanic	64.3%	50.0%	59.7%		
• Other	3.6%	8.3%	9.3%		
Most serious charge on study index petition				$\chi^2 = 40.3982$ , <i>p</i> = .000	
• Murder/rape/arson	25.0%	2.8%	0.0%		
• Felonious assault/felony with a weapon	53.6%	58.3%	49.6%		
• Other	17.9%	19.4%	14.7%		
• Burglary, major prop/felony not Part I	3.6%	19.4%	35.7%		
Temperance	2.05 (.94)	2.67 (1.05)	2.27 (1.00)		<i>t</i> = 1.95, <i>p</i> = .05
Responsibility	2.29 (.74)	2.51 (.89)	2.68 (.84)	<i>t</i> = -2.20, <i>p</i> = .03	
Perspective	2.32 (.62)	2.81 (.77)	2.54 (.74)		
Association with antisocial peers	.48 (.74)	.12 (.80)	.15 (.78)	<i>t</i> = 2.04, <i>p</i> = .04	
Antisocial attitudes	.38 (.72)	-.16 (.74)	.04 (.70)	<i>t</i> = 2.36, <i>p</i> = .02	
Parental antisocial history (sq root)	.40 (.30)	.39 (.32)	.37 (.35)		
School difficulties	.47 (.19)	.39 (.26)	.46 (.22)		
Substance use problems	1.0 (.90)	.72 (.85)	.92 (.82)		
Mood/anxiety problems				$\chi^2 = 3.746$ , <i>p</i> = .053	
• Yes	32.1%	13.9%	16.3%		
• No	67.9%	86.1%	83.7%		

<sup>a</sup> The chi-square value is questionable because two cells had expected values <5

<sup>b</sup> The chi-square value is questionable because one cell had an expected value <5

**Sample sizes for different outcomes.** The number of cases considered for each outcome differs slightly. A few cases had to be removed if a missed follow-up interview prevented us from knowing exactly when the outcome criterion was met. Twelve, nine, and three cases were removed from the re-institutionalization, antisocial activity, and gainful activity outcomes, respectively, for this reason. The arrest outcome was not dependent upon self-report data so it was not affected by a missed follow-up interview.

**Results**

Our results are presented in four sections. First, we describe what happened to these youth once they were

transferred to the adult system. Next, we describe the frequency with which both positive and negative outcomes occur and how two policy-relevant subgroups (those transferred on their first offense and those who are given probation versus confinement) fare on these outcomes. Finally, we present the relations between case characteristics and the occurrence and timing of the outcomes.

**Descriptive Portrait of the Transferred Adolescents**

Adolescents in the sample (*N* = 193) entered the adult system for a range of serious offenses. Looking at the most serious offense connected with their current appearance, only a small proportion (4% of 193) were charged with

murder, rape, or arson. More than half of the youth (52%) were charged with a Part I felony against a person (felonious assault or felony with a weapon) followed by felony burglary (18%), a major property crime or other felony (not part I) (10%), a sex offense (10%), a felony drug sale/possession charge (6%; recall that we capped our sample of drug offenders). The greatest proportion of cases with a known court outcome (74%) were sent to jail or prison following their trial, with 19% given probation and 8% having their cases dismissed.<sup>2</sup>

Merging court record information with self-report information we found that, on average, youth served about two-thirds of their court sentence. The 92 youth sent to jail or prison at the index petition and subsequently released by the end of the 48-month follow-up period had a mean sentence of 595 days ( $SD = 1,242$ )<sup>3</sup> while the reported time served was 391 days ( $SD = 425$ ), on average. The average time served was shortest for youth with burglary, major property crimes, or other felonies that are not part I (206 days,  $SD = 410$ ), followed by other types of felonies (i.e., felony drug sale/possession and sex crimes) at 364 days ( $SD = 518$ ), and then felonious assault against a person at 569 days ( $SD = 554$ ). Murder, rape, or arson cases served, on average, 885 days ( $SD = 662$ ), but this value is skewed downward because many of those charged with these offenses were still serving their sentence at the end of the 48-month recall period.

Once in the community (either on probation or released from their institutional stay), over one-third (34%) of youth had no further court supervision or involvement with community-based services during the follow-up period. The remaining 66% ( $n = 128$ ) of the sample reported that they were on probation or parole and small subgroups of these individuals were also on specialized court services (community intensive supervision  $n = 34$ , court-ordered groups or meetings  $n = 8$ , and drug court  $n = 3$ ). Across all types of court supervision, these youth reported an average of 59 sessions ( $SD = 76$ ) over the follow-up period, either in person or on the telephone. Sixty-two percent ( $n = 79/128$ ) of the remaining sample reported having community-based services (CBSs; some social service involvement other than probation or parole) following their release, with the most common service being individual sessions with a psychologist, counselor, or social worker. Across all types of CBSs, youth reported an average of 39 ( $SD = 70$ ) sessions in the follow-up period.

<sup>2</sup> Data issues with the court records prevented us from knowing the outcome for six cases; as a result, the denominator for these percentages is 187, not 193.

<sup>3</sup> The standard deviation for this value was inflated by one case which had a 30-year sentence.

## Variability in Outcomes

Each of the individual outcomes was examined for the frequency of its occurrence in those cases with some time in the community. Regarding arrest, the majority (62%) of youth had at least one re-arrest in the follow-up period. Of those with at least one re-arrest, the mean number of re-arrests was 2.23 ( $SD = 1.79$ ; range = 1–13). The mean rate of re-arrest for this group was .004 ( $SD = .005$ ), which translates into an arrest about every eight months. Regarding return to institutional settings, 88% (90/117) of these adolescents were placed back into a facility. Within these 90 adolescents, the average number of subsequent facility stays was 4.21 ( $SD = 2.51$ ; range = 1–12) with these stays almost exclusively (92%) in jail settings. These adolescents spent over one quarter of the follow-up period in an institutional setting (proportion of days in a facility = .28;  $SD = .28$ ). With respect to resumed antisocial activity, about one half (49%; 59/120) of the sample had at least one month in the recall period during which they reported involvement with two or more antisocial activities, and the youths who reported these activities did so in almost one half (.40,  $SD = .38$ ) of the months in which they were in the community. Finally, regarding gainful activity, the overwhelming majority (86%) of youth had at least one month during the follow-up period in the community in which they either attended school (without being absent five or more days) or worked (21 or more hours per week for two or more weeks). These were not isolated occurrences. When adolescents spent time in the community, they spent the greater proportion of those months (mean = .70;  $SD = .30$ ) either in school or working.

## Subgroup Differences

Table 2 presents a comparison of a range of demographic, psychological, and legal factors for the adolescents in the sample who were transferred on their first recorded offense and for those who were given probation versus incarceration. There are only a few differences between the adolescents with no priors versus those with priors. At the bivariate level, the adolescents with no prior offenses had fewer antisocial peers, fewer school risk factors, and, not surprisingly, a later age of onset for official offending. There were no other significant differences between the groups. At the bivariate level on these same variables, the adolescents given probation only differed from those who were incarcerated in the types of crimes that precipitated the transfer to adult court. The probation group was more likely to be charged with burglary offenses (test of proportions,  $z = 4.34$ ,  $p < .01$ ) and the incarcerated group was more likely to have committed serious crimes against person (test of proportions, murder:  $z = 2.71$ ,  $p = .01$ ;

**Table 2** Mean values and standard deviations or proportion of sample with that characteristic for subgroups of Pathways youth transferred in Arizona

	Comparisons based on court outcome <sup>a</sup>		Comparisons based on prior history	
	Probation ( <i>n</i> = 35)	Incarceration ( <i>n</i> = 138)	No prior petitions before entry in study ( <i>n</i> = 55)	≥1 prior petition ( <i>n</i> = 138)
Age at baseline	17.18 (.92)	16.92 (.93)	16.90 (1.01)	17.00 (0.88)
Number of prior petitions before the baseline interview	3.54 (3.05)	3.38 (2.49)	0	3.35 (2.50)
Age at first prior petition	15.46 (1.97)	15.13 (1.73)	16.68* (.99)	14.59 (1.73)
Parent education (SES)	2.57 (1.02)	2.51 (1.16)	2.55 (1.24)	2.49 (10.2)
Full scale IQ	87.03 (11.94)	89.54 (11.63)	89.29 (10.22)	88.28 (12.57)
Ethnicity				
• White-Non Hispanic	28.6%	18.8%	23.6%	19.6%
• African American	11.4%	10.1%	09.1%	13.8%
• Hispanic	51.4%	61.6%	56.4%	59.4%
• Other	8.6%	9.4%	10.9%	7.2%
Most serious charge on study index petition	$\chi^2 = 24.98, p = .015$			
• Murder/rape/arson	0	5.1%	5.5%	3.6%
• Felonious assault/felony with a weapon	28.6%	57.2%	52.7%	51.4%
• Other	11.4%	16.7%	14.5%	16.7%
• Burglary, major prop/felony not Part I	60.0%	21.0%	27.3%	28.3%
Temperance	2.23 (0.91)	2.28 (1.01)	2.41 (1.07)	2.27 (.99)
Responsibility	2.59 (0.85)	2.60 (0.83)	2.74 (0.86)	2.53 (0.83)
Perspective	2.48 (0.66)	2.55 (0.75)	2.57 (0.76)	2.55 (0.73)
Association with antisocial peers	.17 (.73)	.19 (.77)	-.07** (.70)	.30 (.79)
Antisocial attitudes	.08 (.75)	.06 (.71)	-.10 (.65)	.11 (.74)
Parental antisocial history (sq root)	.43 (.35)	.37 (.34)	.36 (.35)	.39 (.33)
School difficulties	.47 (.22)	.45 (.21)	.39* (.20)	.47 (.23)
Substance use problems	.83 (.86)	.90 (.83)	.75 (.80)	.95 (.85)
Mood/anxiety problems				
• Yes	14.3%	20.3%	12.7%	20.3%
• No	85.7%	79.7%	87.3%	79.7%

\* *p* < .05; \*\* *p* < .01; \*\*\* *p* < .001

<sup>a</sup> Cases that are dismissed or have missing court information are not included

felonious assault:  $z = 3.29, p < .01$ ). The association between having prior petitions to court and the probation-incarceration distinction was not statistically significant.

As one might thus expect, there were also only a few differences between the subgroups in the pattern of their outcomes. The group with no prior petitions had a significantly lower rate of re-arrest compared to those with at least one prior (mean of .33 arrest/year vs. 1.07 arrest/year;  $t = -2.41; p = .017$ ). In addition, youth who were incarcerated returned to an institutional setting more quickly than the youth who were given probation ( $t = 2.42, p = .017$ ). The probation and incarceration subgroups did not significantly differ, however, in the rate of rearrest, or their time to rearrest, resumed antisocial activity, or gainful activity.

### Case Characteristics Associated with Outcomes

We conducted a series of Cox regressions to determine the case characteristics associated with quicker time to failure on each of the outcomes. Because the sample size precluded testing all available case characteristics in a single model, individual analyses were conducted for legal, demographic, psychological, and risk-need case characteristics with each of the outcomes. In each analysis, the set of variables was entered as a single block. The results of these analyses are summarized in Table 3.

Certain domains of variables were related to some outcomes and not others. Both legal and risk-need factors were related to time to re-arrest. The significant individual variables in these models (denoted with asterisks) were the

**Table 3** Cox regression model coefficients for testing of each domain of variables with each outcome

Variables	$\chi^2$ (df) <i>p</i> -value			
	Outcomes			
	Arrest ( <i>n</i> = 129)	Resumed antisocial activity ( <i>n</i> = 120)	Re-institutionalization ( <i>n</i> = 117)	Gainful activity ( <i>n</i> = 126)
Legal-model coefficients	15.152(4)	10.780(4)	15.096(4)	3.842(4)
	.004	.029	.005	.428
• Prior petitions	(.003)*			
• Age at 1st prior			(.037)*	
• Charge group		(.039)*	(.032)*	
Demographic-model coefficients	9.013(5)	6.264(5)	5.609(5)	2.594(5)
	.109	.281	.346	.762
• Age at baseline				
• Ethnicity				
• Parent education (SES)				
Psychological characteristics-model coefficients	2.955(4)	8.138(4)	6.259(4)	2.871(4)
	.565	.087	.181	.580
• IQ				
• Temperance				
• Perspective				
• Responsibility				
Risk/need-model coefficients	17.114(6)	23.888(6)	8.104(6)	5.713(6)
	.009	.001	.231	.456
• Antisocial attitudes				
• Mood/anxiety problems				
• Associate with antisocial peers	(.026)*	(.033)*		
• School problems				
• Substance use problems				
• Parent antisocial history (sq root)				

\* Significant individual predictors in the model;  $p < .05$

number of prior petitions to court ( $p < .01$ , OR = 1.18, 95% CI [1.06, 1.32]) and association with antisocial peers ( $p = .026$ , OR = 1.54, 95% CI [1.05, 2.24]). Youth with more priors and youth who associated with more antisocial peers were subsequently arrested more quickly. Legal and risk-need factors again predicted time to resumed antisocial activity. Youth charged with “other” crimes resumed antisocial behavior later ( $p = .039$ , OR = .28, 95% CI [.08, .93]) as compared to youth charged with property offenses and felonies that are not Part I. Youth who associated with more antisocial peers ( $p = .033$ , OR = 1.58, 95% CI [1.04, 2.40]) resumed antisocial activity more quickly. Returning to an institutional setting was related to legal variables. Youth who were younger at the first petition to court returned to an institutional setting more quickly ( $p = .037$ , OR = .83, 95% CI [.69, .99]). In addition, youth charged with “other” offenses returned to an institutional setting more quickly as compared to those charged with felonious assault/felony with a weapon ( $p = .014$ , OR = 2.28, 95% CI [1.18, 4.38]). No models

were significantly associated with the gainful activity outcome. At the broad level, legal and risk-need factors had a stronger association with the outcomes tested, while the demographic and psychological characteristics we selected were not related to these outcomes.<sup>4</sup>

## Discussion

This study is intended to provide a descriptive view of the variability among transferred youth and to test whether this variability is related to community outcomes for these individuals, using a sample of serious offenders from a state (Arizona) with broad transfer policies. This study

<sup>4</sup> A Bonferroni correction could be seen as applicable in this situation to account for the inflation of the experiment-wise alpha due to the multiple regressions run for each outcome. Using a “corrected” value of .0125 for each comparison, we find that only legal factors remain significant for predicting time to re-arrest. The other previously significant factors fail to reach significance under this strategy.

extends prior work by examining multiple outcomes, and including a broader set of case characteristics than typically available in other studies. The findings are important for what they *do* and what they *do not* illustrate about the adolescents included in the net of transfer under this type of statutory structure, and the relationships of case characteristics to the outcomes examined. In combination with the accompanying paper (Loughran et al., 2010), we hope to inform policy debate by adding more specific, and policy-relevant information, to what is known about youth who are being sent to adult court under existing “wide net” transfer policies.

### General Descriptive Results

The sample used for this study is not idiosyncratic; it is consistent with other reports of juveniles transferred to the adult system. Our sample is predominantly minority (79%) and male (94%) and data from the Bureau of Justice Statistics (1998) indicate that across the 75 largest counties in the United States, 69% of juveniles in adult court are racial minorities and 92% are male. The most serious petitioned charge in our sample was a person crime for more than half (56%) of the youth and a property, drug or sex offenses for the remaining 44%. Similarly, recent figures from the state of Arizona indicate that 60% of the youth transferred to adult court were charged with a felony against person, 26% with a property offense, and about 9% with a drug charge (Arizona Supreme Court, 2007). Also, the most serious charge for juvenile felony defendants in the largest U.S. counties was a person crime for 66% of the cases and a property or drug crime for 31% (Bureau of Justice Statistics, 1998). Despite rhetoric on both sides of the debate about transfer, in this sample and nationally, not all transferred youth are given “hard time” in the adult system. Although 74% in this sample were incarcerated (either in prison or jail), a non-trivial percentage were either given probation (19%) or had their case dismissed (8%). These figures are consistent with national data, showing that about 79% of transferred youth are incarcerated (Bishop, 2000). Finally, we also found that youth charged with violent person crimes served the most time and youth charged with property crimes the least time, consistent with findings in other jurisdictions (Bishop, 2000; Feld & Podkopacz, 1996).

This study provides additional information about what happens to these adolescents when they return to the community. Perhaps the most striking point is that adjustment in the community while on adult probation or following release from an adult facility is a formidable challenge for these youth. While the vast majority are engaged in gainful activity quickly (within 2.5 months) and persistently (nearly three-quarters of the months in the

community), the majority (77%) also resumed some level of antisocial activity, and two-thirds were either subsequently arrested and/or back in an institutional setting. We found very few, just 18 youth, who managed to break from this antisocial pattern completely.<sup>5</sup>

The actions taken by the adult court appeared to rely mainly on the type of charge precipitating the petition. It seems that once the decision to transfer a youth to adult court has been made, a rather formulaic approach, rooted in charge, determines what happens with these youth, with little consideration given to individual factors. Whether this focus is well placed, however, might be questioned, since the petitioned charge does not appear to be strongly and independently related to rate of re-arrest (which controls for time at risk) over the follow-up period.

The lack of differences in adjustment between those who were incarcerated and those returned to the community on probation might suggest that the time in jail or prison provides little benefit. An alternative explanation is that judicial personnel are choosing the most crime-prone individuals for incarceration and that this experience is actually dampening what would be a substantial difference in the rate of criminal involvement between these subgroups. This question can only be addressed by conducting analyses of outcomes that adequately control for selection bias in these groups. We address this issue in an accompanying paper (Loughran et al., 2010).

### Case Characteristics and Outcomes

Prior history is strongly related to outcomes in this sample. Youth who were transferred upon their first court petition were older, more mature, and had a lower risk related to association with antisocial peers. Importantly, these youth also had a lower rate of re-arrest and were more likely to return to gainful activity compared to those with prior petitions to court. In line with previous work in more heterogeneous samples of adolescent offenders (Barrett, Katsiyannis, & Zhang, 2006), level of prior offending, even in more serious, transferred adolescents, appears related to subsequent adjustment in the community.

Our results indicate that legal and some risk-need factors appear to carry the predictive power related to outcomes, whereas psychological and demographic factors fail to do

<sup>5</sup> We identified 18 adolescents who fared well on all of the outcomes assessed (i.e., those youth who, within the follow-up period, were not subsequently arrested, did not report resumed antisocial activity, were not re-incarcerated but resumed school or work at the required threshold). Comparing these 18 youth to the remaining youth with all four outcomes ( $n = 99$ ), we found only one characteristic which distinguished these groups (at the bivariate level), a lower risk-need score for antisocial attitude ( $t = -3.07, p < .01$ ). Specifically, these 18 youth had higher levels of consideration for others and lower levels of moral disengagement and legal cynicism.

so. While the type of charge is related to how a case in processed in the adult system (probation versus incarceration), but unrelated to rate of re-arrest, it is nonetheless related to other indicators of later adjustment in the community. Charge type is associated with both resuming antisocial activity and with returning to an institutional setting. Number of prior petitions, however, is related to the time to re-arrest (youth with more prior petitions to court are arrested again more quickly). Broader history, rather than type of offense, seems most relevant to the community safety standards commonly associated with court action in these cases.

In addition, youth who associate with more antisocial peers resume antisocial activity more quickly and are re-arrested more quickly. This finding demonstrates and supports Steinberg and Scott's (2003) general contention that juveniles, and in this case, even serious offenders transferred to adult court, are highly susceptible to negative peer influences and outside pressures. While these findings regarding the importance of legal factors and peers are consistent with other work (see, e.g., Kurlychek & Johnson, 2004), they also extend the scope of these findings by demonstrating that these factors are also important factors in community adjustment following an experience in the adult system.

### Limitations

As in all studies of naturalistic outcomes, there are several important limitations that should be considered when interpreting these findings. First, the sample size limits the types of analyses that could be conducted. This feature of the study has limited our ability to test variables from different domains in one model, and thus assess the importance of one set of case characteristics relative to another. This strategy of doing parsed analyses also increases the number of tests run, and thus inflates the experiment-wise error rate, increasing the chances that any particular "significant" finding might be spurious. As a result, these findings are most useful when interpreted for the broad trends seen in the findings, but they cannot be relied upon for generalizations based on particular statistically significant results.

A second limitation is possible bias in the amount of follow-up time. Observing the "natural" unfolding of events in the life of these youth leads to differing times in the community for different types of cases. This means that there is the possibility that some cases may have been censored before they had ample opportunity to have an outcome occur, thus biasing the estimates of the effects of the case characteristics in the survival models. We checked for this possibility, and found that, although the average length of the follow-up period for censored cases was at

least twice as long as the average time to each outcome, a proportion of the censored cases were still followed for less than the mean time to an outcome. It is therefore likely that some bias exists in these estimates, and that we are reporting a conservative estimate of the impact of some variables on outcomes. If all cases could be observed for the full time period, the estimates of effects would be higher than those reported.

Third, and perhaps most importantly, we are limited by the fact that 15% ( $n = 28$ ) of the transferred cases in our sample are still in their disposition stay as of the end of the 48-month recall period. We know that these 28 youth are different than the rest of the sample: they are more likely to be charged with a serious violent offense (i.e., murder, rape, or arson), they are less mature, have more antisocial attitudes, and report higher involvement with antisocial peers. Given the impact of association with antisocial peers and charge on the time to failure for several outcomes, it is likely that having these 28 youth in the sample could influence the results. If the observed effects hold up in the excluded youth, however, it again seems that the finding presented here would only become more pronounced as the outcome window expanded and these youth could be included in the sample.

Fourth, this analysis used data from only one jurisdiction. These findings provide a valuable and detailed snapshot of a jurisdiction with a broad net of transfer, using a sample with characteristics reflective of national samples. Nonetheless, replication of these findings in other jurisdictions is necessary since changes in the types of adolescents in the pool of transferred youth in a particular locale (e.g., a higher proportion of drug offenders) could substantially affect the relations observed.

### Implications

It is likely that the most serious cases involving juveniles will continue to be transferred to the adult system; some crimes are just so heinous and the conditions of the juvenile's life are so compelling regarding culpability and amenability that retributive costs cannot be dispensed in the juvenile system. It also appears that the current transfer policies, especially expansive ones, have led to the transfer of youth with a broad range of characteristics; not all of these youth are violent and repetitive offenders. This is important given that, nationally, the number of youth being transferred is not trivial. Moreover, most of the youth who are sentenced in the adult system will return to the community with varying degrees of success, and knowing what affects their continued criminality and positive adjustment is a necessary component of intervening effectively with them.

The main purpose of this study was not to resolve the question of whether transfer to adult court is a valuable policy as currently constructed. Our purpose was instead to extend our understanding of who is currently being transferred and to start a discussion of possible next steps for improving practice and policy. As suggested earlier, these findings show support for at least four points relevant for this discussion, some of which have been found in other studies: (1) being transferred does not necessarily lead to severe and long-term confinement; (2) recidivism, viewed from multiple lenses, is disturbingly high in these youth; (3) individuals who are transferred on their first offense do better relative to other transferred youth; and (4) existing court procedures that rely on legal history and risk factors appear well-placed as these factors were more predictive of later outcomes than the demographic and psychological factors we tested.

Regarding this last point, it is difficult to say exactly why other investigators have found that demographic factors (see, e.g., Hawkins, Laub, & Lauritsen, 1998; Huizinga, Weiher, Espiritu, & Esbensen, 2003) and psychological factors (see, e.g., Lipsey & Derzon, 1998) are both associated with recidivism, but we did not. The lack of predictive power of these variables in these analyses could be the result of sample differences, different variable definitions, differences in the predictive models tested, or the follow-up periods examined. Any combination of these factors could have produced differences in these findings.

These results do point to directions regarding interventions with these youth. When these youth are in the community either following release from an adult facility or while on adult probation, they are managing to return to school or work, but nearly half report engaging in persistent antisocial activity and even more are re-arrested or return to an institutional setting. Some characteristics of these adolescents may be both related to negative outcomes and be reasonable targets for intervention (e.g., antisocial attitudes, association with antisocial peers), and one has to question whether they are being affected by the existing services provided to these adolescents.

The results of this study also provide some initial insights for ongoing discussions of transfer policy. If one favors a reform approach which attempts to redefine the group for transfer, this work suggests a starting point. The consistency of the legal factors in predicting several outcomes and the substantively different profiles of the youth with a previous criminal history both point to places to begin this discussion. Trimming the group of transferred cases along these readily legislated categories could have substantial impact.

Our other analyses of these study data (Loughran et al., 2010) build on the current work to test whether similarly situated youth are more or less successful in the community

after transfer to adult court. These analyses provide clear evidence that certain case characteristics, most notably charge type and prior history, are differentially related to outcomes in even the more refined group of transferred adolescents. Taken together, these pieces provide a springboard for discussions about how current practice might be improved, and whether adolescents charged with certain types of offenses might be more successful and law-abiding if left in the juvenile system.

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