
Effects on Violence of Laws and Policies Facilitating the Transfer of Juveniles from the Juvenile Justice System to the Adult Justice System

A Systematic Review

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Abstract: The independent, nonfederal Task Force on Community Preventive Services (Task Force), which directs development of the *Guide to Community Preventive Services (Community Guide)*, has conducted a systematic review of published scientific evidence concerning the effectiveness of laws and policies that facilitate the transfer of juveniles to the adult criminal justice system, on either preventing or reducing violence (1) among those youth who experience the adult criminal system or (2) in the juvenile population as a whole.

This review focuses on interpersonal violence. Violence may lead to the juvenile's initial arrest and entry into the justice system and, for those who are arrested, may be committed subsequent to exiting the justice system. Here transfer is defined as the placement of juveniles aged less than 18 years under the jurisdiction of the adult criminal justice system, rather than the juvenile justice system, following arrest. Using the methods developed by the *Community Guide* to conduct a systematic review of literature and provide recommendations to public health decision makers, the review team found that transferring juveniles to the adult justice system generally increases, rather than decreases, rates of violence among transferred youth. Evidence was insufficient for the Task Force on Community Preventive Services to determine the effect of such laws and policies in reducing violent behavior in the overall juvenile population. Overall, the Task Force recommends against laws or policies facilitating the transfer of juveniles from the juvenile to the adult judicial system for the purpose of reducing violence.

(Am J Prev Med 2007;32(4S):S7–S28) © 2007 American Journal of Preventive Medicine

Introduction

The purpose of this review was to determine whether laws or policies that facilitate the transfer of juveniles to the adult criminal justice system reduce interpersonal violence, either specifically, among those juveniles who have experienced the adult justice system, or generally, in the juvenile population as a whole.

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Although the legal term “juvenile” is defined differently among the states, for purposes of this review, a juvenile is a person aged less than 18 years. One rationale for facilitating the transfer of juveniles to the adult justice system is that this may deter juveniles from committing crimes, because they perceive the adult justice system as more severe and punitive than the juvenile system. For purposes of this review, “transfer” refers to placing juveniles under the jurisdiction of the adult criminal justice system, rather than the juvenile justice system, following arrest. Transfer is also referred to as “waiver,” denoting the waiver of authority by the juvenile court that allows for transfer of a juvenile defendant to an adult criminal court; juveniles not transferred to the adult court system are often said to be “retained” in the juvenile system.

Background

Violence by juveniles is a major public health problem in the United States. Rates of violent crime, including

simple and aggravated assault, robbery, and rape, are greater among people aged 12 to 20 years than in all age groups except those aged 21 to 29 years, as assessed in a 2003 national survey of crime victims, the National Crime Victimization Survey, which is based on victims' experiences and therefore excludes homicide.¹ Although they constitute only about 25% of the population, youth aged less than 18 years have been responsible for committing approximately 30% of all violent crime (which includes homicide, rape and other sexual assault, robbery, and simple and aggravated assault) and 40% of serious violent crime (which excludes simple assault) in the past 20 years.² Rates of youth homicide are higher in the United States than in most developed countries.³ In a representative national survey in 2002, U.S. adults reported more than 1.87 million incidents of victimization by perpetrators estimated to be between the ages of 12 and 20 years—a rate of approximately 5.1 incidents of victimization per 100 juveniles in this age group.^{4,5} Although arrest and victimization data show declines among juveniles for violent acts in general following a peak reached in 1993–1994, self-report of offenses continues to indicate high rates of violence.⁶

The first juvenile court in the United States was established in 1899 in Chicago. By 1925, all states except Maine and Wyoming had separate juvenile systems.⁷ In the United States, juvenile and adult criminal law are principally handled at the state level; consequently, states have diverse mechanisms to allow juveniles to be transferred to the adult criminal justice system.^{2,6,8} Although states have their own juvenile and adult criminal systems and laws, common trends are discernible across states.

A separate judicial process for juveniles has been justified on several grounds related to psychosocial development in the juvenile population.⁹ In general, juveniles differ from adults in their biological development and mental processes and capacities. These differences are cited to justify the recent Supreme Court decision to ban capital punishment for crimes committed when the offender was aged less than 18 years at the time the crime was committed.¹⁰ First, it has been argued that juveniles are less aware of consequences, less responsible, and thus less culpable for their actions.⁹ For these reasons, juveniles cannot be held as accountable as adults and should receive different and more lenient punishment. It has also been argued that juveniles have less ability than adults to understand and thus participate in the standard, adult judicial process, and, therefore also, should be subject to a separate judicial process. A recent study of juveniles¹¹ (both in juvenile detention and in the community) indicates that at less than 16 years of age, juveniles on average lack the cognitive competence to understand and participate in the judicial process as required by law; furthermore, they make judgments comparable to

those of adults found incompetent to stand trial. Finally, it has been argued that juveniles are more malleable and amenable to reform of their behavior, and thus, the judicial response to their deviant behavior should, “in the interests of the child,” emphasize reform of the juvenile rather than, or in addition to, punishment—in contrast to the punitive focus of the adult criminal system.¹² Individual juveniles vary greatly in their degree of cognitive development and there are few clear dividing lines by age. Policy regarding the shift of jurisdiction from juvenile to adult court remains controversial.

From its inception, the philosophy of the juvenile court has been “*parens patriae*,” meaning that the state acts as a parent for those who cannot take care of themselves.^{2,7,13} Transfer of a juvenile from juvenile to adult court jurisdiction required an individualized determination of lack of amenability to treatment.^{7,14} This philosophy was practiced through informal court procedures with weak safeguards for the legal rights of the juveniles, until a series of Supreme Court cases, beginning in the late 1960s, imposed additional safeguards already established in adult justice systems.¹⁵ Recent changes in the law, however, extend the juvenile court's mission to include protection of the community as well as the interests of the child.¹⁶

Following the increases in violent juvenile crime in the late 1980s and early 1990s, most states modified their laws to facilitate the transfer of juveniles to the adult justice system.^{2,7} Between 1992 and 1998, all but three states expanded their transfer provisions to facilitate prosecuting juveniles charged with certain crimes in the adult criminal court system^{17–20}; this trend has continued, but slowed, in recent years.²¹ Bishop¹⁷ estimates that 20% to 25% of all juvenile offenders—210,000 to 260,000 juveniles—were prosecuted as adults in 1996.

There are six main mechanisms by which youth aged less than 18 may be tried in the adult criminal justice system. In “judicial waiver,” the traditional mechanism, a juvenile court judge may waive a youth to the adult system, generally based on perceived lack of amenability to treatment, which in turn is often based on considerations such as age, seriousness of the current offense, and prior delinquency.²¹ In “prosecutorial waiver,” the prosecutor has the discretion to file a case in the juvenile or the adult criminal court system. In “statutory exclusion,” youth of particular ages charged with particular crimes are excluded from juvenile justice system jurisdiction. When particular charges are excluded by law from juvenile court by statutory means, discretion also reverts to prosecutors, who decide which charges are filed.^{22,23} The increases in transfer due to the preceding three mechanisms may be amplified by a policy of “once an adult, always an adult,” whereby youth once transferred to adult court are also transferred for any future offending.²¹ With “lowered age of

adult court jurisdiction,” states set the age at which one is considered responsible for criminal actions, and no longer eligible for juvenile court, to an age younger than the traditional age of 18. Finally, in many states, juvenile who are married or otherwise “emancipated” (i.e., released from parental authority) are excluded from juvenile court. For youth who have not reached the age of adult court jurisdiction, the adult court often has the authority to transfer juveniles back to the juvenile court when cases are deemed inappropriate for the adult criminal court system. This is generally referred to as “reverse waiver.”

Finally, states are experimenting with “blended sentencing,” which allows a juvenile to be sentenced to both juvenile and adult sanctions by one court. Blended sentencing by the juvenile court allows the court to monitor youth beyond the traditional end of juvenile jurisdiction.²⁴ This frequently involves juvenile incarceration until the age of adult court jurisdiction, followed by adult incarceration. This greater sentencing flexibility may reduce the pressure to transfer court jurisdiction, but little research has yet been conducted on how blended sentencing is used in practice.²⁵

Specific Versus General Deterrence

Reductions in violence are hypothesized to occur through transfer by two means: “specific deterrence” and “general deterrence.” In specific deterrence, juveniles who have been subject to the adult justice system are thought to be deterred from committing subsequent offenses. In general deterrence, all youth in the population who would be subject to transfer provisions are thought to be deterred from offending by the perceived severity of sanctions they would face under the adult criminal justice system. Note that “deterrence” here refers to the behavioral outcome of reduced initial or subsequent offending and not to decision making processes which may accompany such outcomes. In addition, if juveniles in adult detention settings serve longer sentences than they would serve in juvenile settings, then strengthened transfer policies may also reduce the violence of transferred juveniles (i.e., violence outside of the prison setting) by increasing incapacitation, the inability of convicts to commit crime against the public during incarceration. Incapacitation as a deterrent, however, depends on the assumption that longer sentences would be given in adult courts compared with juvenile courts.

Research on the effectiveness of specific deterrence and general deterrence requires different study designs and effect measures. In specific deterrence research, outcome measures are derived from comparing the recidivism of those youth who have experienced the adult criminal justice system with the recidivism of youth retained in juvenile court. In general deterrence research, the outcome measures are rates of offense in

the intervention population, such as the number of juveniles per 100,000 arrested for violent crimes. Comparison groups for general deterrence must necessarily be drawn from another place, from a time before enactment of the policy, or from a different age group among whom the transfer laws are weaker or absent. Researchers strive for comparison groups unaffected by the law but who are otherwise as similar as possible and similarly affected by many of the other social forces influencing offending.

In our assessment of general deterrence, studies comparing rates of violence before and after implementation of a strengthened transfer policy without concurrent comparison groups (e.g., Rislér et al.²⁶) are not included. Juvenile offending rates change over time for many reasons, as evidenced by the dramatic rise and then decline in crime in general, and in juvenile violence in particular during the late 1980s and early 1990s.^{27,28} Thus, we considered the use of comparison groups unaffected by the law to be a critical design feature in evaluating the general deterrent effect on crime of this particular law. Without such concurrent comparison groups, any law enacted during a period of decline in crime would seem to have a deterrent effect, as indicated by simple before-and-after differences in rates of offending.

This review focused on violent outcomes, as measured by rates of arrest; one study assessed violent crime convictions. Some studies report violent and nonviolent offending arrests together and do not distinguish violent from other offending. For the purposes of this review, such studies are included, but this broader focus is considered a limitation (see Assessing Study Design and Execution section).

The Guide to Community Preventive Services

The systematic reviews in this report represent the work of the independent, nonfederal Task Force on Community Preventive Services, which is developing the *Community Guide to Preventive Services* (*Community Guide*) with the support of the U.S. Department of Health and Human Services in collaboration with public and private partners. The Centers for Disease Control and Prevention (CDC) provides staff support to the Task Force for development of the *Community Guide*. More information about the *Community Guide* and the Task Force can be found at www.thecommunityguide.org and in previous publications.^{29,30}

Healthy People 2010 Goals and Objectives

Using interventions that are effective in reducing violence may help to reach several objectives specified in *Healthy People 2010*,³¹ the disease prevention and health promotion agenda for the United States. These objectives identify some of the significant preventable threats to health and focus the efforts of public health systems,

Table 1. Selected *Healthy People 2010* objectives related to violence prevention

Objective	Population	Baseline (year)	2010 objective
Injury prevention			
Reduce firearm-related deaths (Objective 15-3)	All people	11.3 deaths/100,000 people (1998) ^a	4.1 deaths/100,000 people
Reduce nonfatal firearm-related injuries (15-5)	All people	24.0 injuries/100,000 people (1997)	8.6 injuries/100,000 people
Extend state-level child fatality review of deaths due to external causes for children aged <14 years (15-6)	Children aged <14 years	Developmental	
Violence and Abuse Prevention			
Reduce homicides (15-32)	All people	6.5 deaths/100,000 people (1998) ^a	3.0 deaths/100,000 people
Reduce the rate of physical assault by current or former intimate partners (15-34)	Persons aged >12 years	4.4 assaults/1000 people (1998)	3.3 assaults/1000 people
Reduce the annual rate of rape or attempted rape (15-35)	Persons aged >12 years	0.8 rapes or attempted rapes/1000 people (1998)	0.7 rapes or attempted rapes/1000 people
Reduce sexual assault other than rape (15-36)	Persons aged >12 years	0.6 sexual assaults other than rape/1000 people (1998)	0.4 sexual assaults other than rape/1000 people
Reduce physical assaults (15-37)	Persons aged >12 years	31.1 physical assaults/1000 people (1998)	13.6 physical assaults/1000 people
Reduce physical fighting among adolescents (15-38)	Adolescents in grades 9–12	36% engaged in physical fighting in past 12 months (1999)	32% engage in physical fighting
Reduce weapon carrying by adolescents on school property (15-39)	Adolescents in grades 9–12	6.9% carried weapon on school property in past 30 days	4.9% carry weapon on school property

^aAge adjusted to the year 2000 standard population.

legislators, and law enforcement officials for addressing those threats. Many of the proposed *Healthy People* objectives in Chapter 15, “Injury and Violence Prevention,” related to this intervention and relevant to juvenile transfer are shown in Table 1.

Methods

General *Community Guide* methods for systematic reviews have been discussed in detail elsewhere.³² This section briefly describes the specific methods used in this review.

In *Community Guide* systematic reviews, evidence is summarized about the effectiveness of interventions in changing one or more outcomes (here, violence), as well as other positive or negative effects of the intervention. If an intervention is found to be effective, then available evidence is also summarized regarding the applicability of the findings (i.e., the extent to which available data indicate that the intervention might be effective in diverse populations and settings), economic impact, and barriers to the implementation of interventions. If an intervention is found to result in harm, available evidence may also be summarized regarding the applicability of the finding of harm (i.e., the extent to which available data indicate that the intervention might or might not be harmful to specific populations and settings), and any applicable barriers to reducing the harms or substituting other choices that are more effective or less harmful. Economic impact is not considered for interventions found to be harmful or if effectiveness is not established, unless the intervention is widespread and economic analysis may illuminate its ongoing consequences.

As with other *Community Guide* reviews, the process used to systematically review evidence and then translate that evidence into conclusions involved forming a systematic review development team; developing a conceptual approach to organizing, grouping, and selecting interventions; selecting interventions to evaluate; searching for and retrieving evidence; assessing the quality of and abstracting information from each study; assessing the quality of and drawing conclusions about the body of evidence of effectiveness; and translating the evidence of effectiveness into recommendations.

Systematic Review Development Team

Three groups of individuals served on the systematic review development team: the coordination team, the abstraction team, and the consultation team. The coordination team—consisting of a Task Force member, methodology experts in systematic reviews and economics from the Community Guide Branch of the CDC’s National Center for Health Marketing, and experts on violence from the CDC’s National Center for Injury Prevention and Control, the National Institutes of Health, and the National Institute of Justice—drafted the conceptual frameworks for the reviews, coordinated the data collection and review process, and drafted evidence tables, summaries of the evidence and the reports. The abstraction team collected and recorded data from studies for inclusion in the systematic reviews. The consultation team, comprised of national experts on violence-related topics, was involved in the initial selection of interventions to be reviewed, provided ongoing advice by request, and reviewed the final product.

Search for Evidence

Electronic searches for published research were conducted in databases from the National Criminal Justice Reference Service, Education Resources Information Center, PsycINFO, Wilson Social Sciences Abstracts, Social SciSearch, National Technical Information Service, Medline, and Lexis/Nexis. Search terms used included “juvenile transfer” and its synonyms, as well as “efficacy” and “recidivism.” Additionally, references listed in retrieved articles were evaluated and, where relevant, obtained and abstracted. Consultations with experts were held to find additional published reports of studies. Finally, the review team conducted Internet searches to seek additional studies not found through these traditional search methods. Journal articles, governmental reports, books, and book chapters were eligible for inclusion.

Articles published before February 2003 became candidates for inclusion in the systematic review if they evaluated the specified policy or law, assessed a transfer-related violent outcome (i.e., arrest, conviction, or re-arrest), were conducted in a high-income country,^a reported on a primary study rather than, for example, a guideline or review, and compared a group of people exposed to the intervention (i.e., law or policy) with a comparison group not exposed or less exposed to the intervention. Studies that provided relevant data for review were examined, even if the authors’ research goals differed from those of the review. While searching for evidence, the team also sought information about effects of transfer on outcomes not related to violence, such as reductions in property crime and overrepresentation of minorities among transferred juveniles.

Multiple articles were treated as a single study if they reported on the same transfer policy applied to the same population in the same time period. Conversely, one article was treated as multiple studies if it reported separately on multiple transfer policies, multiple populations, or time periods that did not overlap. If separate research teams assessed the same policy in the same population and time frame, the study that received a better rating by *Community Guide* design and execution criteria was chosen to represent this effect.

Assessing Study Design and Execution

Each study that met *Community Guide* criteria for a candidate study was read and rated by the abstraction team. Disagreements among the abstractors were presented to the coordination team for reconciliation, and all candidate studies were presented for discussion by the coordination team. Standard *Community Guide* criteria were used to assess the study design and execution. Only data from qualifying studies (for this review, those with greatest or moderate design suitability,

^aHigh-income countries as designated by the World Bank are Andorra, Antigua and Barbuda, Aruba, Australia, Austria, The Bahamas, Bahrain, Barbados, Belgium, Bermuda, Brunei, Canada, Cayman Islands, Channel Islands, Cyprus, Denmark, Faeroe Islands, Finland, France, French Polynesia, Germany, Greece, Greenland, Guam, Hong Kong (China), Iceland, Ireland, Isle of Man, Israel, Italy, Japan, Republic of Korea, Kuwait, Liechtenstein, Luxembourg, Macao (China), Malta, Monaco, Netherlands, Netherlands Antilles, New Caledonia, New Zealand, Norway, Portugal, Puerto Rico, Qatar, San Marino, Singapore, Slovenia, Spain, Sweden, Switzerland, Taiwan (China), United Arab Emirates, United Kingdom, United States, and Virgin Islands (U.S.).

comparison population, and good or fair execution) were used to determine the effectiveness of the reviewed intervention.

Design suitability was assessed for each candidate study. Our system may result in classification of study design differing from that of study authors. According to *Community Guide* criteria, “greatest design suitability” refers to studies with a concurrent comparison group and prospective data collection, “moderate design suitability” refers both to retrospective studies and studies with multiple pre- or post-intervention measurements but no concurrent comparison group, “least suitable design” refers to cross-sectional studies or studies with only single pre- and post-intervention measurements and without concurrent comparison groups.

The review team assessed limitations in execution for the purposes of our review, and may differ from an assessment of limitations for the study’s original purposes. Following *Community Guide* methods, the execution of candidate studies was assessed and coded for each of nine specific limitations. Limitations may be assigned for the study’s failure to describe the study population and intervention (1 limitation), failure to describe sampling (1 limitation), failure to measure exposures or outcomes effectively (1 limitation each), failure to demonstrate effective follow-up (1 limitation), failure to use appropriate analytic methods (1 limitation), failure to control for either confounding or other bias (1 limitation each), or for some other problem in study execution (1 limitation). All limitations are counted equally. The *Community Guide* uses good execution to refer to studies with 0 to 1 limitations, fair execution to refer to studies with 2 to 4 limitations, and limited execution to refer to studies with ≥ 5 limitations. We did not assign a limitation for failure to provide demographic details for studies of general deterrence comparing states or cities since this information is readily available from other sources.

Outcome Measures and Effect Size Calculation and Summary

Unless otherwise noted, results of each study are given as point estimates for the relative change in the violent crime rates attributable to the interventions. The team calculated baselines and percent changes using the following formulas for relative change.

For studies with before-and-after measurements and concurrent comparison groups,

$$(I_{\text{post}}/I_{\text{pre}})/(C_{\text{post}}/C_{\text{pre}}) - 1 \quad (1)$$

where:

I_{post} = last reported outcome rate in the intervention group after the intervention;

I_{pre} = reported outcome rate in the intervention group before the intervention;

C_{post} = last reported outcome rate in the comparison group after the intervention;

C_{pre} = reported outcome rate in the comparison group before the intervention.

In specific deterrence studies, intervention groups were defined as juveniles experiencing transfer to the adult justice system, and control groups as juveniles retained in the juvenile system. In general deterrence studies, intervention

groups were defined as populations (e.g., in states or cities) exposed to a changed transfer policy, and control groups as populations not exposed to such a change.

For studies with post-intervention measurements only and concurrent comparison groups,

$$(I_{\text{post}} - C_{\text{post}})/C_{\text{post}} \quad (2)$$

If modeled results were reported from logistic regression, odds ratios were adjusted^{33,34} for comparability to relative rate changes estimated from other studies:

$$RR = OR / ([1 - P_0] + [P_0 \times OR]), \quad (3)$$

where:

RR = relative risk;

OR = odds ratio to be converted;

P_0 = incidence of the outcome of interest in the unexposed population (i.e., juveniles retained in the juvenile justice system).

In the case of specific deterrence studies, a positive value for the effect measures calculated using one of these formulas indicates that there is a greater rate of violence among transferred than among comparison (retained) juveniles. In the case of general deterrence studies, a positive value indicates a greater rate of violence in the population subject to the strengthened transfer law than in the comparison population.

In the reporting of study findings, the standard two-tailed p value ≤ 0.05 was used as a measure of statistical significance. When available, effect measures that were adjusted for potential confounders through multivariate analysis were preferred over crude effect measures. Follow-up periods of <1 year were considered a limitation. If effect measures reported by the authors could not be converted into percentage changes (e.g., results were presented only in graphical form, without statistics or numerical assessments), the reported findings are described in the text.

Using *Community Guide* methods described elsewhere,³² the team then combined the individual studies reviewed into a single body of evidence and summarized its strength on the basis of the number of qualifying studies, the strength of their design and execution, and the size and consistency of effects. For evidence to be considered sufficient to merit recommendation of the intervention, the magnitude of the effect must be deemed of public health importance. Statistical significance is generally considered only when there is only one qualifying study. A single study of greatest design suitability and good execution can provide sufficient evidence, if the effect is statistically significant ($p < 0.05$). Three studies of moderate design suitability and fair execution can provide sufficient evidence of effectiveness if findings are consistent in direction and size. Results that are deemed sufficient to draw a conclusion are summarized both graphically and statistically.

Reviews of Evidence

Results of studies on specific and general deterrence are presented separately because they examine different populations and use different methods.

Results, Part I

Specific Deterrence Effects

Our search identified six studies^{14,35–40} that examined the effects of juvenile transfer on subsequent violent offenses by those juveniles who have been transferred. Descriptive information about design suitability, limitations of execution, and outcomes evaluated in these studies is provided in Appendix A. More detailed descriptions and evaluations of these studies are provided at the website, www.thecommunityguide.org. All six studies that evaluated specific deterrence were of greatest design suitability and good execution. Follow-up times for evaluating risk for re-offending ranged from 18 months¹⁴ to 6 years.⁴⁰

A major methodologic concern in studies of specific deterrence is selection bias—transfer to adult criminal court is generally intended for youth who are more serious offenders than youth who are retained in the juvenile court system, although this may not occur in practice.⁴¹ To the extent that those transferred are more serious offenders, transferred youth would be expected to have greater risk of subsequent violence, independent of any effect of their experience with the adult criminal system. Most studies of the specific deterrent effect of transfer have been conducted in single jurisdictions, thus making it difficult to find control populations, since all juveniles are subject to the same law or policy. To control for possible selection bias, study authors generally restrict the cases considered for inclusion in the study to serious crimes among those eligible for transfer, and then compare the violent outcomes of juveniles in cases actually transferred with those in cases retained in the juvenile system. Statistical controls for factors that may play a role in transfer decisions (e.g., criminal history) may also be used to further control selection bias.^{14,42} Two studies conducted in single jurisdictions go to greater lengths to control selection bias, by limiting comparisons to pairs of cases that are matched on critical case variables.^{37,40}

To date, one published study has used a different approach to control for selection bias. Rather than compare similar cases within a jurisdiction, Fagan^{36,43} compared recidivism between similar juvenile cases in two adjacent jurisdictions (i.e., regions within bordering states) with different transfer provisions. In contrast to studies within jurisdictions, in which a judge may transfer more serious juveniles while retaining the less serious ones, this design eliminates any decision maker from selecting cases for the adult versus the juvenile justice system, but makes the selection of jurisdictions comparable in background characteristics and potential confounders a critical task. The threat to this design is that arrest criteria as interpreted by law enforcement officials in different jurisdictions may differ. Fagan

compares criteria across jurisdictions to assess this problem.

An additional methodologic concern was the possibility of ascertainment bias (i.e., that juveniles who had initially committed more serious crimes and thus were subject to the adult judicial system, would also be more intensely monitored for subsequent criminal behavior and more likely to be re-arrested, regardless of intervening judicial process). However, this seems implausible in the large urban jurisdictions in which most of this research has been conducted, where most law enforcement officials would be unlikely to have knowledge of a youth's court experience when making an arrest.

Effectiveness

In a prospective cohort study, Fagan⁴³ examined the re-arrest of 15- to 16-year-old youth who were initially arrested in 1981–1982 for robbery or burglary (which is not regarded as violent), in the New York City Metropolitan Area (including the highly urbanized northern counties of New Jersey). He compared re-arrest of these youth in similar counties in New York and neighboring New Jersey.^b In New York, the age of adult court jurisdiction is 16 years, and under the 1978 Juvenile Offender Law, 15-year-olds are legislatively excluded from trial in juvenile court for 15 felonies, including first- and second-degree robbery and burglary. In New Jersey, 18 years is the age of adult court jurisdiction and there is no legislative exclusion. The age of adult court jurisdiction is the age at which the state holds a person legally responsible for behavior, including criminal behavior. Thus, Fagan's intervention (New York) sample of arrested juveniles was transferred to adult court, while the comparison (New Jersey) sample was retained in juvenile court. Fagan followed the 1981–1982 arrest cohorts through June 1989. The minimum time "at risk" (while not incarcerated) for committing new crimes in the community was 2 years.³⁶

To estimate recidivism, Fagan³⁶ used competing hazard models, which control for time at risk. He included age, time from arrest to disposition (i.e., judicial decision), and sentence length as covariates, and explored the interaction of transfer with sentence length. If their sentences did not include time in prison, Fagan found that transferred juveniles were 39% more likely than retained juveniles to be re-arrested on a violent offense. This effect (greater violent recidivism among transferred juveniles) was magnified for sentences that included incarceration.³⁶ For example, among transferred juveniles receiving prison sentences of a year, there was a 100% greater rate of violent recidivism,

compared with those retained. The majority of those arrested and tried in both adult and juvenile courts received sentences not requiring incarceration, such as probation, restitution, or suspended sentences.³⁶

A team of researchers evaluated Florida's juvenile transfer laws in separate studies of two different cohorts.^{37,40} The first study compared the overall re-arrest rates of juveniles who were initially arrested in 1987 and then either transferred or retained.^{40,41} Each youth transferred to adult court was matched to a youth retained in the juvenile court on six factors (most serious offense, number of counts, number of prior referrals to the juvenile system, most serious prior offense, age, and gender) and, when possible, on race as well.

An early follow-up report from this first study examined re-arrest through the end of 1988. When controlled for time available to commit further crime following release, the estimated re-arrest rate per year of exposure was 54% for transferred youth compared with 32% for retained youth.⁴¹ In a later report,⁴⁰ the same youth were followed through November 15, 1994 to determine re-arrest rates. Overall, although transferred youth were re-arrested sooner, the two groups were re-arrested at similar rates (42% for transferred juveniles vs 43% for retained juveniles).

However, results differed for juveniles who were initially arrested for misdemeanors versus those initially arrested for felony offenses. Among those initially arrested for misdemeanors (22.6% of the sample), re-arrest rates were higher for transferred than for retained youth. In contrast, among those initially arrested for felonies (77.4% of the sample), and specifically among those initially arrested for property felonies (32.8% of the sample), re-arrest rates were somewhat lower for transferred than for retained youth. The numbers in these reported results, however, were not easily converted to the effect estimates we generally report (i.e., relative change). Winner et al.⁴⁰ confirmed these results by logistic regression, which controlled for age, gender, and criminal history. Survival analyses, which assess the relative rates of outcome (in this instance re-arrest for any crime) over time in intervention and control populations, found a significant effect among misdemeanants, who were re-arrested earlier when transferred than when retained, but this effect was not statistically significant among felons. Overall, the results of this study were inconsistent, indicating increased recidivism over the short term among transferred juveniles, but over the longer term, reduced recidivism for some transferred juveniles and increased recidivism for others.

The second study of juvenile transfer to adult justice systems in Florida³⁷ essentially replicated the design in the previous study, following implementation in 1990 and 1994 of juvenile laws that increased the breadth of prosecutorial waiver. This study followed youth arrested

^bFagan⁴³ matched counties on key crime and socioeconomic indicators including crime and criminal justice, demographic, socioeconomic, labor force, and housing characteristics (differing by <10%). The counties selected were Queens and Kings (Brooklyn) in New York, and Essex (Newark) and Hudson (Jersey City) in New Jersey.

in 1995–1996 and matched pairs of transferred and retained youth on the same factors as those matched in the earlier study, with the addition of race. Additional factors (e.g., weapon use) were also used to create a “seriousness” index. A subset of “best-matched pairs” was identified, in which each transferred juvenile was matched with a retained juvenile with at least as high a seriousness score (rather than an equivalent score). Because it is possible that retained subjects in comparison pairs might have higher seriousness scores, this criterion may bias the analysis against finding increased recidivism among transferred youth. The outcome compared was felony re-arrest, including nonviolent as well as violent felonies. In this study, the recidivism examined was restricted to felony offenses committed after age 18, on the grounds that this would ensure equivalent records of subsequent offending. Among the best-matched pairs, transferred youth showed 34% more recidivism than retained youth.

Another study^{38,42} measured the effects of transfer in Hennepin County, Minnesota. All cases in which the prosecutor filed a motion to transfer a juvenile between 1986 and 1992 were examined. Among juveniles assessed, 60% were transferred. Recidivism rates for youth who were transferred to the adult system were then compared with rates for those who were retained in the juvenile justice system. In this study, recidivism was measured by conviction or by adjudication, its equivalent in the juvenile justice system. Youth were considered “at risk” for a new crime, arrest, and conviction, and followed for at least 2 years while in the community (i.e., not incarcerated).

One of the authors of this study (Podkopacz)⁴² reported the results of logistic regression analyses of the effects of transfer on subsequent conviction for violent and nonviolent crimes combined. The analyses controlled for potential confounders including gender, criminal history, and whether the case resulted in incarceration. In their report³⁸ on subsequent conviction for violence alone (i.e., separated from more general crime), the researchers did not control for confounding. Given the potential for bias associated with the transfer of more serious offenders, the review team regarded controlling for confounding by the seriousness of initial crime as more critical than specific violent outcomes, for which controlled results were not available. The logistic regression analyses showed transfer associated with a 26.5% increased likelihood of further crime (OR=1.93 [b = 0.66], $P_0 = 0.565$).

Myers¹⁴ studied males aged 15 to 18 years arrested in Pennsylvania in 1994 for robbery, aggravated assault, or both, involving use of a deadly weapon. Subsequent arrests for violent crime through 1997 were examined, comparing transferred juveniles to those retained in the juvenile court system. Before 1996, transfer was largely a matter of judicial discretion; however, under 1996 juvenile justice statutes, these cases would have

been legislatively excluded from juvenile courts. By using a cohort of juveniles arrested before the statutory change, Myers¹⁴ attempted to anticipate the effects of the new transfer provisions before their implementation. Multivariate analyses controlled for race, urbanicity, home and school settings, and prior offense history, including age at first arrest. Over a mean period of approximately 18 months, the estimated probability of arrest for a subsequent violent felony was 13% for retained juveniles and 23% for transferred juveniles. Thus, transfer was associated with a 77% greater likelihood of post-dispositional violent felony arrest.

Finally, like Myers, Barnoski³⁵ studied the effect of Washington State’s 1994 Violence Reduction Act by examining the effects of discretionary transfers prior to implementation of the new law. The 1994 act legislatively excluded from original jurisdiction in juvenile court those 16- and 17-year-olds charged with any of nine “serious violent felonies” or those with specified offending histories. Barnoski³⁵ compared recidivism rates for transferred versus retained youth arrested on these same felonies in the 2 years before enactment of the 1994 act, when transfer was discretionary. Controlling for offenses charged in the case, prior record of offenses, gender, and ethnicity, no difference in recidivism was found between transferred and retained juveniles (11% of both retained and transferred juveniles were arrested for a subsequent violent felony within 18 months of release from prison; effect size was 0.00). Barnoski³⁵ also examined juveniles transferred after passage of the 1994 law. However, these data are not reviewed here, because follow-up time for the post-law cohort was short and data were available for only a small proportion of the population.

In summary, only one of the reviewed studies showed any evidence that transfer of juveniles to the adult justice system deterred either violent or other re-offending. Winner⁴⁰ found that transfer of juveniles initially arrested for property crimes was associated with a decrease in recidivism compared with juveniles initially arrested for similar crimes and retained in the juvenile system. In this study, among juveniles initially arrested for crimes other than property crimes, greater recidivism was found among those transferred than among those retained. One reviewed study³⁵ found no effect. The remaining four studies^{14,36,37,39,42,43} all found a harmful effect, in which transferred juveniles committed more subsequent violent and total crime than retained juveniles. Overall, among studies for which a single effect can be calculated, effect sizes ranged from 0.00 to 0.77 with a median effect size of 0.337 (Figure 1). This positive effect size indicates that the weight of evidence shows greater rates of violence among transferred than among retained juveniles; transferred juveniles were approximately 33.7% more likely to be re-arrested for a violent or other crime than were juveniles retained in the juvenile justice system.

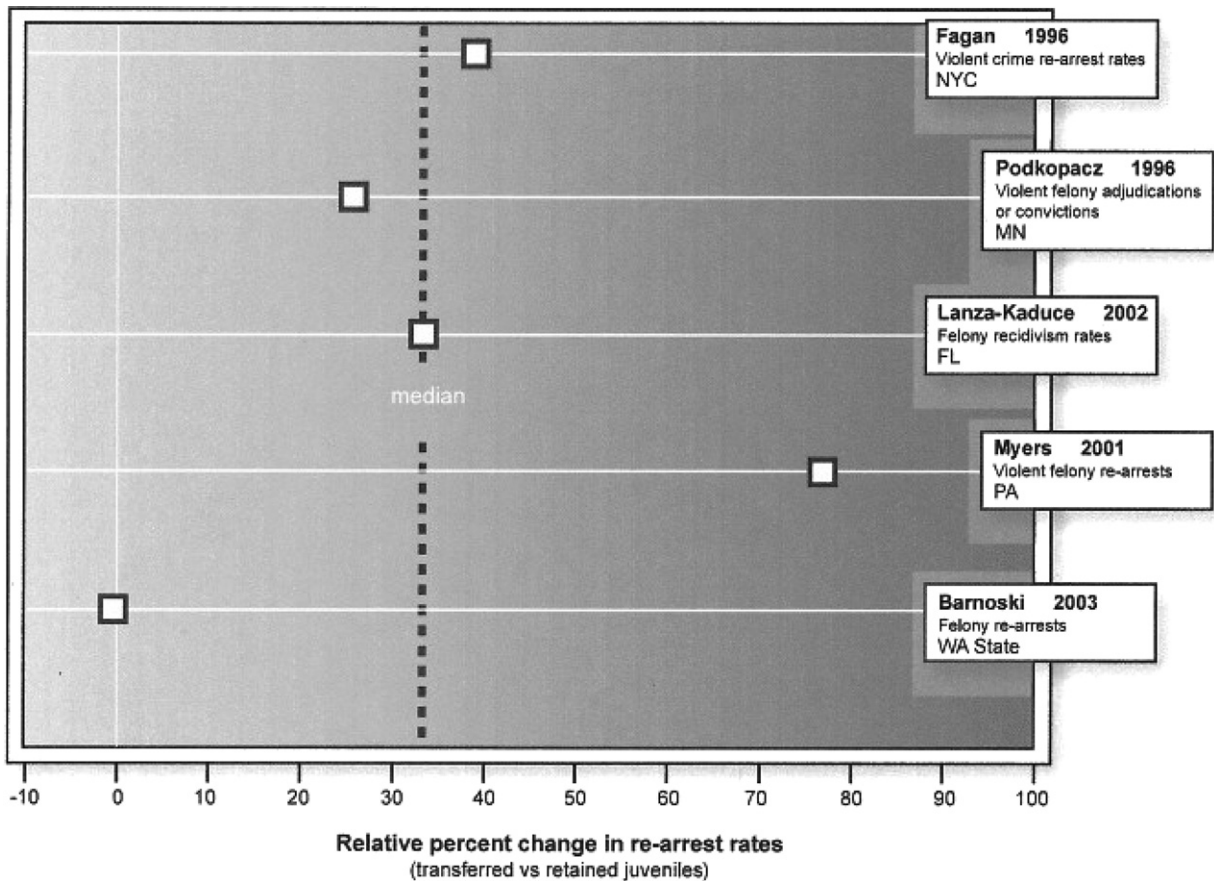


Figure 1. Effects of transfer on re-arrests of transferred juveniles. (Results of study by Winner et al. (1997) were not presented here because of complex effect modification by initial offense and other status characteristics.)

These studies used different strategies to control for selection bias. One study used a cross-jurisdiction design to control for selection bias.⁴³ Among the studies conducted within single jurisdictions, two used carefully matched pairs to control for selection bias,^{37,40} and three relied on the strategy of multivariate statistical controls.^{14,35,39} If selection bias had been a major confounding factor in these results, effect sizes adjusted for confounders should be smaller than crude effect sizes. However, in a study that assessed this matter by providing bivariate and multivariate analyses,¹⁴ the effect adjusted for confounders was greater than the unadjusted effect, indicating that, if selection bias was present, it was less influential than confounders acting in a contrary direction. Finally, the level of consistency in results across diverse design strategies provides assurance that the findings are not primarily due to characteristics of study design.

Conclusion

On the basis of strong evidence that juveniles transferred to the adult justice system have greater rates of subsequent violence than juveniles retained in the

juvenile justice system, the Task Force on Community Preventive Services concludes that strengthened transfer policies are harmful for those juveniles who experience transfer. Transferring juveniles to the adult justice system is counterproductive as a strategy for deterring subsequent violence.

Results, Part II General Deterrence

Three studies^{35,44–46} met our inclusion criteria for an assessment of the general deterrence effect of transfer laws or policies; all evaluated the effects of changes to a state's transfer laws. We also reviewed the tangential evidence from a study⁴⁷ that examined the effect of the transition to the age of adult court jurisdiction on rates of juvenile offending, as measured by offending rates in the general juvenile population within that state. Descriptive information about design suitability, limitations of execution, and outcomes evaluated in these studies is provided in Appendix B. More detailed descriptions of the studies included in this review, and how they were evaluated, are provided at the *Community Guide* website, www.thecommunityguide.com.

Three studies^{35,44–46} that met our inclusion criteria evaluated the effects of state transfer laws on violent outcomes among the general juvenile population. All were of greatest design suitability and fair execution. We did not compute effect sizes for these studies because the necessary data were not provided.

Effectiveness

As noted above, Washington State's 1994 Violence Reduction Act legislatively excluded from initial jurisdiction in juvenile court all 16- and 17-year-olds charged with specified violent felonies or criminal histories. A 1997 amendment expanded the original list of offenses and combinations of offending histories that would exclude 16- and 17-year-olds from jurisdiction in juvenile court. Barnoski³⁵ examined the effect on state arrests for violent crime from 1989 to 2000 among 10- to 17-year-olds. Results, presented only graphically in the report, clearly showed that violent offenses peaked in 1994 and then declined. Barnoski³⁵ used national juvenile offending trends as a comparison. Without this, one might have concluded that the 1994 law deterred juvenile violence; the Washington trend, however, clearly parallels the national trend in arrests for violent crime, which also peaked in 1994 and subsequently declined.² Therefore, Barnoski³⁵ concludes that "we cannot attribute the decrease in juvenile arrests for violent crimes in Washington State solely to the automatic transfer statutes."

Jensen and Metsger⁴⁴ examined the deterrent effect of a 1981 Idaho law mandating automatic transfer to the adult criminal justice system of 14- to 18-year-olds charged with any of five violent crimes. Statewide juvenile violent crime arrest rates for the population aged less than 18 years were averaged for the previous 5 years (1976–1980) and for the 5 years following the legislative change (1982–1986). Changes in the number of arrests of 14- to 18-year-olds for violent offenses in Idaho were compared with those in Wyoming and Montana over the same periods. In Idaho, average arrest rates actually increased from the period before to the period after the legislation, while rates decreased in the comparison states. Thus, the new transfer law was associated with subsequent increases in violence in Idaho. Jensen and Metsger⁴⁴ conducted a second analysis of trends of juvenile violent crime in Idaho, controlling for potential confounders, but without comparing the trends in Idaho to trends in a population without comparable laws. For reasons noted above (i.e., the absence of a concurrent control population), we did not include findings from this second analysis and used the interstate comparison instead.

As described in our review of specific deterrence, New York's 1978 Juvenile Offender Law excluded from initial jurisdiction of the juvenile court 13- to 15-year-olds arrested on several specified felonies. Singer and

McDowall⁴⁵ used interrupted time series methods to examine monthly arrest rates for 13- to 15-year-olds on four violent crimes—homicide, assault, robbery, and rape—between 1974 and 1984 (spanning the change in law). Arson was also examined in the study, but is not classified as a violent crime and is thus not included in our analysis.

In this study, New York City (NYC) was analyzed separately from the rest of the state. For NYC, two comparison populations were examined, neither of which was subject to the changes in transfer legislation. Study authors first compared arrest data for 13- to 15-year-old offenders with data for 16- to 19-year-old offenders in NYC. (Because 16 years is the age of adult court jurisdiction in New York, the older offenders were already too old for the juvenile justice system and, thus, unaffected by the Juvenile Offender Law.) The second comparison was of arrest data for 13- to 15-year-old NYC youth to data for Philadelphia youth in the same age range.

Using arrest data from the two comparison groups makes alternative explanations for changes in arrest rates in the intervention group less likely. Conceptually, if changes in arrest rates for the intervention group (13- to 15-year-olds in NYC) were paralleled by similar outcomes for either comparison group, this would suggest that something other than the intervention caused the change. Only changes in the intervention group not paralleled in either comparison group could plausibly be attributable to the change in law.

However, no consistent pattern of results was found across offenses. Only for rape was a statistically significant decrease shown for the intervention group. The NYC comparison group (16- to 19-year-olds), however, showed a larger decrease in rape, which was also statistically significant. The decline was considerably smaller in the Philadelphia comparison group, suggesting a local confounding effect, not attributable to the change in transfer, in NYC.

In the analysis for upstate New York, Singer and McDowall⁴⁵ used 16- to 19-year-olds in the region as the comparison group. For 13- to 15-year-olds (the intervention group), none of the violent crimes examined declined significantly, while assault increased significantly. Similar trends were found for the comparison group. In sum, Singer and McDowall⁴⁵ found no consistent pattern of evidence to suggest a general deterrence effect of the strengthened New York transfer law.

Finally, we reviewed a study⁴⁷ that assessed the general deterrent effect of reaching the age of adult court jurisdiction in various states. Levitt⁴⁷ assumed that if a state's adult criminal system were relatively more punitive than its juvenile system, juveniles would be deterred from committing crimes when they reached the age of adult court jurisdiction. Levitt⁴⁷ did not directly examine the effects of transfer laws or changes in transfer laws. He examined the effect of the transition to the age

of adult court jurisdiction on year-to-year changes in arrest rates, as a function of the relative punitiveness of the adult versus juvenile system in each state. To gauge relative punitiveness, Levitt⁴⁷ used the ratio of people incarcerated in each system—juvenile and adult—relative to age-specific offending rates; offending rates were measured as the proportion of reported crimes for which a suspect is arrested.

Levitt⁴⁷ analyzed seven age-specific offending rates (for ages 15 through 21) in a regression model that also controlled for state demographic factors. He found that the effect of the age of adult court jurisdiction was conditional on the relative punitiveness of the juvenile and adult/criminal systems. In states with especially punitive criminal versus juvenile justice systems, the age of adult court jurisdiction was associated with a relative decrease (or slower increase) in offending between years preceding transition to the age of majority and the transition to the age of adult court jurisdiction. However, in less-punitive states and at the average level of punitiveness across all states in the study (as calculated by the review team), transition to the age of adult court jurisdiction was actually associated with an increase in violence.^c Levitt⁴⁷ speculated that this apparently counterdeterrent effect of the age of adult court jurisdiction “may be driven by the fact that a large fraction of juveniles are released from custody just prior to attainment of the age of adult court jurisdiction” and may therefore be able to commit additional crimes.

Levitt’s⁴⁷ complex results have mixed implications for the possible deterrent effects of transfer laws and policies. Results for the most punitive states show a deterrent effect of the age of adult court jurisdiction, while the results for most states seem to show a counterdeterrent effect. While Levitt⁴⁷ speculated about a confounding effect that may account for the latter result, the empirical results regarding the actual deterrent effect remain ambiguous.

Conclusion

According to *Community Guide* rules of evidence, there is insufficient evidence to conclude whether laws or policies facilitating the transfer of juveniles to the adult criminal justice system are effective in preventing or reducing violence in the general juvenile population. While the number and quality of studies are sufficient, their findings are inconsistent. One study of general deterrence reports no apparent effect,³⁵ one reports mixed effects,³⁹ and one reports a counterdeterrent effect.⁴⁴ A study examining the effect of transition to the age of adult court jurisdiction suggests the possibil-

ity of general deterrence, but provides ambiguous evidence of whether, on average, reaching the age of adult court jurisdiction deters or increases violence among potential offenders.^d

Additional Issues Regarding Strengthened Transfer Laws and Policies

The remainder of this review addresses conclusions pertaining to both specific and general deterrence.

Applicability. The studies reviewed here assessed specific deterrence in Washington State, Pennsylvania, and regions of New York, Minnesota, and Florida. Studies of general deterrence included Washington state, regions of New York, and Idaho; Levitt’s⁴⁷ study included information from multiple states. These states are geographically and demographically diverse, suggesting broader applicability of the findings reported here.

Other positive or negative effects. Five additional outcomes that may be associated with the transfer of juveniles to the adult judicial system are worthy of mention, although they are not systematically reviewed here. First, youth under court jurisdiction may be released from custody before disposition of their case, even if arrested for serious violent crimes. Rates of release may be associated with subsequent transfer. For example, in 1990–1994, among youth charged with violent offenses in the nation’s largest 75 counties, 44% of youth subsequently transferred were released before disposition, whereas 57% of retained youth were released before disposition.⁴⁸ However, the cases may not be of comparable seriousness. Increased release rates, in turn, could allow youth to commit additional offenses, including violent offenses, before their cases reach disposition.

Second, transfer may also be associated with the victimization of juvenile offenders themselves during incarceration. Evidence on this topic from the studies reviewed is mixed. One study of four cities between 1981 and 1984 reported rates of victimization of 37% in juvenile training schools (i.e., residential schools where delinquents receive vocational training), compared with 46% for those in adult prison.⁴⁹ Rates of inmate suicide among detained juveniles may also differ between those in juvenile and adult judicial institutions, although there are few good estimates. Memory⁵⁰ estimated 1978 suicide rates as 2041 per 100,000 for youth

^cThe relevant equations are shown in Levitt,⁴⁷ table 5. Model 3 gives the change in violent offending at adulthood as follows: $(-0.121 \times \text{relative punitiveness}) + 0.241 = (-0.121 \times 1.42) + 0.241 = 0.069$. The mean relative punitiveness in Levitt⁴⁷ is 1.42 (p. 1178).

^dAs this review was going to press, a new article was published on the general deterrent effects of increased legislative exclusion.⁴³ Although we did not formally include it in our review because it was outside our publication date cutoffs, it is one of the stronger studies to date regarding the general deterrence effect of increasing transfer. The study used time series methods, similar to those used by Singer and McDowall (1988),⁴⁵ to examine the effects of increased statutory exclusion in 22 states between 1979 and 2003. Of the 22 states, only one showed a general deterrence effect, leading the authors to conclude that transfer laws do not promote the general deterrence of violent crime.

in adult detention facilities, 57 per 100,000 for those in juvenile detention centers, and 12.4 per 100,000 for all those aged 12 to 24 years in the U.S. population. On the other hand, more recent analyses of suicides in juvenile correctional facilities suggest that suicide rates for incarcerated juveniles are similar to rates for juveniles in the general population.⁵¹

Third, incarcerated violent juveniles are “incapacitated” (i.e., prevented from committing subsequent violent acts in the community) during their period of incarceration. The studies reviewed provided some evidence on the relative length of incarceration of juveniles convicted in adult versus juvenile courts. Fagan³⁶ reported that juveniles retained in the juvenile system received slightly longer sentences, although the difference was not statistically significant. In contrast, Myers¹⁴ found that transferred juveniles received substantially longer sentences, both in bivariate analysis and controlling for background differences. Barnoski³⁵ also reported longer sentences for transferred juveniles than for retained juveniles. Finally, Podkopacz⁴² reported longer sentences for juveniles convicted of offenses that required a prison commitment in the adult system (e.g., a crime committed with a weapon), but shorter sentences for juveniles transferred for other crimes. Thus, the apparently conflicting data from this small sample of studies do not clearly indicate greater incapacitation for transferred than for retained juveniles.

More generally, research is mixed on whether adult courts are more punitive than juvenile courts to youth with comparable criminal profiles, and punitiveness may depend on the type of offense. Many studies have found the adult court to be more punitive than the juvenile court, but some have found the adult court to be more lenient.^{52,53} Relative to older defendants in the adult court, juveniles may appear less threatening and their cases may appear less severe to those hearing their cases. In addition, although juvenile criminal records have become increasingly available,² their offending histories have in the past been less available to the adult court because of privacy provisions, possibly allowing the impression that a juvenile is a less-serious or less-hardened offender than his or her actions would indicate. In combination, these factors may lead to less-punitive sanctions in the adult than in the juvenile court. While national statistics indicate that, overall, adult courts are more punitive to juveniles than juvenile courts, much of this disparity is due to differences in severity of crimes or criminal histories of defendants or other specific factors between the cases in the two court systems.⁵⁴ This problem of selection, which challenges research on the specific deterrence effects of transfer, also challenges research seeking to establish the relative punitiveness of the two courts. Feld⁵⁵ has suggested that the adult court may respond differently to juveniles charged with property crimes than those

charged with violent crimes, being more lenient to the former and more punitive to the latter. For violent offenders, a recent review concludes that “most transferred youth convicted of violent offenses receive sentences far more severe than could be imposed in the vast majority of the nation’s juvenile courts.”¹⁷

Fourth, while this review focuses on effects on violent crime, researchers have also examined recidivism of juveniles charged with crimes not regarded as violent (e.g., burglary). Four of the reviewed studies report on outcomes among nonviolent offenders, with inconsistent findings. In analyses controlling for background characteristics of offenders, Fagan³⁶ found no significant effects of transfer on overall re-arrests among nonviolent offenders. Transferred youth showed higher rates of subsequent arrest for nonviolent misdemeanors and lower rates for drug-related crimes. Similarly, Barnoski³⁵ found no overall effect of transfer on nonviolent felony recidivism. In table 6 of Podkopacz and Feld,³⁸ they report that transferred youth had a lower rate of felony drug convictions and a lower rate of misdemeanor convictions, but a higher rate of felony convictions for property crimes; however, these analyses did not control for confounders. The multivariate analysis by Myers¹⁴ similarly indicates greater overall recidivism among transferred juveniles—including both violent and nonviolent re-offending. In sum, the effects of transfer on crimes not regarded as violent are not yet clear, although transferred youth seem to show lower rates of later drug offenses.

Fifth, the question of differential treatment of minorities in the justice system overall has long been an issue.² Although the relationship of race to transfer is not generally a focus of the studies reviewed here, several of the studies of specific deterrence provide information on race. Among the reviewed studies, the design of the Florida studies by Bishop,⁴¹ Winner et al.,⁴⁰ and Lanza-Kaduce et al.^{37,40,41} precludes consideration of this matter, because they matched transferred and retained cohorts on race. Myers¹⁴ and Podkopacz and Feld,³⁸ who studied transfers that were largely discretionary, found that the cases of whites were slightly, albeit not significantly, more likely to be transferred. In contrast, Fagan³⁶ studied the effects of transfer when it was largely nondiscretionary (i.e., determined by some combination of age and severity of crime), and found no significant association between race and transfer. Barnoski³⁵ examined changes over time as transfer policy became less discretionary as it expanded legislative exclusion of certain crimes from juvenile courts. A more proportional representation of minorities was found among transferred cases following the statutory change. That is, the proportion of blacks among those transferred decreased from 31% to 22%, while the proportion of whites increased from 51% to 63%. The proportion of women transferred after the expanded exclusion laws took effect increased from 2% to

7%, suggesting a previous selection bias against women. For a recent review of this topic, see Bortner et al.¹⁶

Barriers to reducing the use of transfer policies. While this review found that strengthened transfer policies generally result in greater re-arrest for crime, including violent crime, among those who are transferred than among those who are retained in the juvenile system of justice, strengthened transfer policies may nonetheless be favored by some policymakers or the public for other reasons (e.g., retribution against serious crime or incapacitation of serious offenders). Policymakers will have to weigh competing interests in making policy decisions. The recent Supreme Court decision, *Roper v. Simmons*,¹⁰ which bans capital punishment for offenders who committed their crimes while minors, suggests a growing sentiment for treating juveniles in a separate system on the basis of their developmental stage.

Results, Part III

Research Issues

Although the Task Force found evidence of harm in the transfer of juveniles to adult courts as an intervention for the purpose of preventing violence, transfer policies are currently in effect, and the following important research issues remain insofar as these policies remain in place. Available studies may provide data allowing for additional analyses.

- We found insufficient evidence regarding general deterrence. Excepting one study,⁴⁷ which examined the associations of age of adult court jurisdiction and rates of arrest rather than the effects of transfer per se, the studies reviewed here assessed limited geographic areas and, in general, used simple methodologies. Data may be available to apply time series methods to a broader array of regions and to adjust for confounding variables with ecologic designs (see footnote c).
- It is not clear whether the effect of increased violence among juveniles who experience the adult versus the juvenile justice system is attributable to the overall judicial process, to the differences in sanctions experienced, or to some other component of the process. Among the studies reviewed, analyses by Fagan³⁶ and Podkopcak⁴² indicate that the effects of transfer are not exclusively attributable to incarceration, but also involve the overall justice system, which may result in acquittal or parole. This issue merits further exploration.
- The effectiveness of transfer policies on violence across levels of severity (e.g., murder versus assault) should also be examined. While several studies reviewed indicate different effects for differing initial offenses, other studies do not stratify effects by initial offense.
- Systematic comparison of state transfer laws should be undertaken to determine the extent to which the specific provisions of state laws included in the review

are representative of all state transfer provisions. Differences in the application and enforcement of provisions should also be assessed.

- Exploration of the costs of transferring youth to the adult criminal system versus retaining them in the juvenile system are rare.⁵⁶ In some sense, evaluating costs of interventions (e.g., transfer) that cause net harm seems unnecessary; because any spending on harmful interventions appears wasteful, the more spending, the more waste. On the other hand, however, documenting the variability and relative costs of the two judicial and correctional systems, the distribution of responsibility for these costs across different levels of government and society, and the net balance of program costs, the costs of subsequent crime, and the costs of opportunities lost to the juveniles themselves might allow a constructive discussion of the economic consequences of change.

Discussion

Certain limitations in our findings should be noted. First, the intervention assessed here, namely transfer policy, varies substantially from state to state. The reviewed studies of specific deterrence and general deterrence cover a small number of states (excluding Levitt's⁴⁷ study of a related topic with a national sample). These reviewed studies were the only ones that met our standards and may not represent transfer laws among all states.

Second, the outcome measures in all these studies result from official records of violent offending, either arrest or conviction, rather than from direct measures of violence. However, there are many determinants of who gets arrested for crimes and may then be convicted. The perpetrators of most crimes are not arrested,⁵⁷ and there are errors in arrests as well. Studies measuring violence by self-report were not available; however, the review team would have preferred them. Nevertheless, arrest rates are among the best available and most commonly used indicators of crime, and thus the best available outcome for assessment in this review.

Third, given the impossibility of experimental trials in policies such as transfer laws, the challenges of controlling for potential confounding are great. The studies of specific deterrence reviewed here have used several approaches to control confounding, including matched pairs within jurisdictions, cross-jurisdictional comparisons with control of sociodemographic and criminologic variables, and analytic control for background characteristics. The convergence of results across these studies suggests that increased violent recidivism following transfer is a robust finding in spite of these challenges to controlling for potential confounders.

Fourth, the effects of transfer policies on violence and other crime may differ across levels of juvenile crime severity (e.g., misdemeanors or felonies) and should be examined. To ensure comparability, the studies reviewed

here control for the severity of the crime for which the juvenile is at risk of being transferred and, where possible, for the juvenile's criminal history as well. They have not generally assessed whether the effects of transfer differed for juveniles with more or less serious offenses and offense histories; perhaps transfer might be argued to be more effective or less harmful if restricted to the most serious offenders. In fact, the Florida studies^{37,40,41} document a large number of misdemeanants transferred to adult court, and find greater harm for these offenders. In any case, the possibility of transferring the most serious juvenile offenders was available in all court systems before the strengthening and formalizing of the transfer policies reviewed here. What has resulted from the changes assessed in this review is the broad lowering of thresholds for the seriousness of crimes for which juveniles are transferred.

This review, along with the accompanying recommendation from the Task Force on Community Preventive Services, is expected to provide guidance and serve as a useful tool for public health and juvenile justice policymakers, for program planners and implementers, and for researchers. Review of the evidence on effect of transfer laws on subsequent violence among those transferred to adult criminal justice systems indicates that transfer of juveniles to the adult criminal system generally results in increased rather than decreased subsequent violence, compared with violence among juveniles retained in the juvenile system. In addition, the evidence on whether transfer laws deter juveniles in the general population from violent crime is inconclusive. Overall, available evidence indicates that use of transfer laws and strengthened transfer policies is counterproductive for the purpose of reducing juvenile violence and enhancing public safety.

We are grateful for information and comments provided by Melissa Sickmund, PhD, senior research associate, National Center for Juvenile Justice, Pittsburgh PA, and Steven Levitt, PhD, Department of Economics, University of Chicago.

Points of view are those of the authors and do not necessarily reflect those of the Centers for Disease Control and Prevention, the National Institute of Justice, the Department of Justice, or the National Institutes of Health.

No financial conflict of interest was reported by the authors of this paper.

References

1. Maguire K, Pastore AL, eds. Sourcebook of criminal justice statistics 2003. Washington DC: U.S. Department of Justice, Bureau of Justice Statistics, 2005.
2. Snyder HN, Sickmund M. Juvenile offenders and victims: 1999 national report. Washington DC: Office of Juvenile Justice and Delinquency Prevention, National Center of Juvenile Justice, 1999 (NCJ 178257).
3. Krug EG, Dahlberg LL, Mercy JA, Zwi AB, Lozano R. World report on violence and health. Geneva: World Health Organization, 2002.
4. Maguire K, Pastore AL, eds. Sourcebook of criminal justice statistics 2002. Washington DC: U.S. Department of Justice, Bureau of Justice Statistics, 2004.

5. U.S. Census Bureau. Statistical abstract of the United States. Washington DC: U.S. Department of Commerce, 2001.
6. U.S. Surgeon General. Youth violence: a report of the Surgeon General. Washington DC: U.S. Department of Health and Human Services, 2001.
7. Commission on Behavioral and Social Sciences and Education. Juvenile crime, juvenile justice. Washington DC: National Academy Press, 2000.
8. Sickmund M, Snyder HN, Poe-Yamagata E. Juvenile offenders and victims: 1997 update on violence. Washington DC: Office of Juvenile Justice and Delinquency Prevention, National Center of Juvenile Justice, 1997 (NCJ 165703).
9. Steinberg L, Cauffman E. A developmental perspective on jurisdictional boundary. In: Fagan J, Zimring FE, eds. The changing borders of juvenile justice: transfer of adolescents to the criminal court. Chicago: University of Chicago Press, 2000:379–406.
10. Roper, Superintendent, Potosi Correctional Center v. Simmons, 543 U.S. 551 (2005).
11. Grisso T, Steinberg L, Woolard J, et al. Juveniles' competence to stand trial: a comparison of adolescents' and adults' capacities as trial defendants. *Law Hum Behav* 2003;27:333–63.
12. Allen FA. Foreword. In: Fagan J, Zimring FE, eds. The changing borders of juvenile justice: transfer of adolescents to the criminal court. Chicago: University of Chicago Press, 2000:IX–XVI.
13. Tanenhaus DS. The evolution of transfer out of the juvenile court. In: Fagan J, Zimring FE, eds. The changing borders of juvenile justice: transfer of adolescents to the criminal court. Chicago: University of Chicago Press, 2000:13–44.
14. Myers DL. Excluding violent youths from juvenile court: the effectiveness of legislative waiver. New York: LFB Scholarly Publishing, 2001.
15. Butts JA, Mitchell O. Brick by brick: dismantling the border between juvenile and adult justice. In: Friel CM, ed. Criminal justice 2000. Vol. 2. Boundary changes in criminal justice organizations. Washington DC: National Institute of Justice, 2000:167–213.
16. Bortner MA, Zatz MS, Hawkins DF. Race and transfer: empirical research and social context. In: Fagan J, Zimring FE, eds. The changing borders of juvenile justice: transfer of adolescents to the criminal court. Chicago: University of Chicago Press, 2000:277–320.
17. Bishop DM. Juvenile offenders in the adult criminal justice system. In: Tonry M, ed. Crime and justice. Chicago: University of Chicago Press, 2000:81–167.
18. Griffin P, Torbet P, Szymanski L, National Center for Juvenile Justice. Trying juveniles as adults in criminal court: an analysis of state transfer provisions. Washington DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention, 1998 (NCJ 172836).
19. Torbet P, Gable R, Hurst IH, Montgomery I, Szymanski L, Thomas D. State responses to serious and violent juvenile crime. Washington DC: Office of Juvenile Justice and Delinquency Prevention, 1996 (NCJ 161565).
20. Torbet P, Szymanski L. State legislative responses to serious and violent juvenile crime: 1996–97 update. Washington DC: Office of Juvenile Justice and Delinquency Programs, 1998 (NCJ 172835).
21. Griffin P. Trying and sentencing juveniles as adults: an analysis of state transfer and blended sentencing laws. Pittsburgh PA: National Center for Juvenile Justice, 2003.
22. Bishop D, Frazier C. Consequences of waiver. In: Fagan J, Zimring FE, eds. The changing borders of juvenile justice: transfer of adolescents to the criminal court. Chicago: University of Chicago Press, 2000:227–76.
23. Zimring FE. American youth violence. New York: Oxford University Press, 1998.
24. Redding RE, Howell JC. Blended sentencing in American juvenile courts. In: Fagan J, Zimring FE, eds. The changing borders of juvenile justice: transfer of adolescents to the criminal court. Chicago: University of Chicago Press, 2000:145–80.
25. Cheesman II FL, Cohen T, Dancy D, Kleinman M, Mott N, Green H. Blended sentencing in Minnesota: on target for justice and public safety? An evaluation. Williamsburg VA: National Center for State Courts, 2002.
26. Risler EA, Sweatman T, Nackerud L. Evaluating the Georgia legislative waiver's effectiveness in deterring juvenile crime. *Res Soc Work Pract* 1998;8:657–67.
27. Blumstein A, Rivara FP, Rosenfeld R. The rise and decline of homicide—and why. *Annu Rev Public Health* 2000;21:505–41.
28. Cook PJ, Laub JH. After the epidemic: recent trends in youth violence in the United States. In: Tonry M, ed. Crime and justice, a review of research. Vol. 29. Chicago: University of Chicago Press, 2002:1–37.

29. Task Force on Community Preventive Services. Introducing the Guide to Community Preventive Services: methods, first recommendations, and expert commentary. *Am J Prev Med* 2000;18(suppl 1):1-142.
30. Zaza S, Briss PA, Harris KW, eds. *The guide to community preventive services: what works to promote health?* New York: Oxford University Press, 2005.
31. U.S. Department of Health and Human Services. *Healthy people 2010*, 2nd ed. Washington DC: U.S. Department of Health and Human Services, 2000.
32. Briss PA, Zaza S, Pappaioanou M, et al. Developing an evidence-based guide to community preventive services—methods. *Am J Prev Med* 2000; 18(suppl 1):35-43.
33. Liberman AM. How much more likely? The implications of odds ratios for probabilities. *Am J Eval* 2005;26:253-66.
34. Zhang J, Yu KF. What's the relative risk? A method of correcting the odds ratio in cohort studies of common outcomes. *JAMA* 1998;280:1690-1.
35. Barnoski R. Changes in Washington State's jurisdiction of juvenile offenders: examining the impact. Olympia: Washington State Institute for Public Policy, 2003 (03-01-1203).
36. Fagan J. The comparative impacts of juvenile and criminal court sanctions on adolescent felony offenders. *Law Policy* 1996;18:77-119.
37. Lanza-Kaduce L, Frazier CE, Lane J, Bishop DM. *Juvenile transfer to criminal court study: final report*. Tallahassee: Florida Department of Juvenile Justice, 2002 (1-8-2002, 02-02).
38. Podkopacz MR, Feld BC. Judicial waiver policy and practice: persistence, seriousness and race. *Law Inequal* 1995;14:74-178.
39. Podkopacz MR, Feld BC. The end of the line: an empirical study of judicial waiver. *J Crim Law Criminol* 1996;86:449-92.
40. Winner L, Lanza-Kaduce L, Bishop DM, Frazier CE. The transfer of juveniles to criminal court: reexamining recidivism over the long term. *Crime Delinq* 1997;43:548-63.
41. Bishop DM, Frazier CE, Lanza-Kaduce L, Winner L. The transfer of juveniles to criminal court: does it make a difference? *Crime Delinq* 1996;42:171-91.
42. Podkopacz MR. *The juvenile court's final decision: an empirical examination of transferring juveniles to adult court*. Minneapolis: University of Minnesota, November 1996.
43. Fagan J. Separating the men from the boys: the comparative advantage of juvenile versus criminal court sanctions on recidivism among adolescent felony offenders. In: Howell JC, Krisberg B, Hawkins JD, Wilson JJ, eds. *A sourcebook: serious, violent, and chronic juvenile offenders*. Thousand Oaks CA: Sage, 1995:238-60.
44. Jensen EL, Metzger LK. A test of the deterrent effect of legislative waiver on violent juvenile crime. *Crime Delinq* 1994;40:96-104.
45. Singer SI, McDowall D. Criminalizing delinquency: the deterrent effects of the New York Juvenile Offender Law. *Law Soc Rev* 1988;22:521-35.
46. Singer SI. *Recriminalizing delinquency: violent juvenile crime and juvenile justice reform*. Cambridge, England: Cambridge University Press, 1996.
47. Levitt SD. Juvenile crime and punishment. *J Polit Econ* 1998;106:1156-85.
48. Strom KJ, Smith SK, Snyder HN. *Juvenile felony defendants in criminal courts: state court processing statistics, 1990-94*. Washington DC: Office of Juvenile Justice and Delinquency Prevention, 1998 (NCJ 165815).
49. Forst M, Fagan J, Vivona TS. Youth in prisons and training schools: perceptions and consequences of the treatment-custody dichotomy. *Juv Fam Court J* 1989;40:1-14.
50. Memory J. Juvenile suicides in secure detention facilities: correction of published rates. *Death Stud* 1989;13:455-63.
51. Snyder HN. *Juvenile arrests 2003*. Washington DC: Office of Juvenile Justice and Delinquency Prevention, 2005 (NCJ 209735).
52. Houghtalin M, Mays GL. Criminal dispositions of New Mexico juveniles transferred to adult court. *Crime Delinq* 1991;37:393-407.
53. Thomas CW, Bilchik S. Prosecuting juveniles in criminal courts: a legal and empirical analysis. *J Crim Law Criminol* 1985;76:439-79.
54. Kupchik A. Prosecuting adolescents in criminal courts: criminal or juvenile justice? *Social Problems* 2003;50:439-60.
55. Feld BC. Juvenile and criminal justice systems' responses to youth violence. In: Tonry M, Moore MH, eds. *Youth violence: crime and justice, a review of research*. Vol. 24. Chicago: University of Chicago Press, 1998:2-27.
56. Roman J, Butts JA. *The economics of juvenile jurisdiction. A white paper from the Research Roundtable on estimating the costs and benefits of the separate juvenile justice system*. Washington DC: Urban Institute, 2005.
57. Dunford FW, Elliott DS. Identifying career offenders using self-reported data. *J Res Crime Delinq* 2005;21:57-87.

Appendix A. Studies measuring specific deterrence effects of juvenile transfer policies.

Author (year) Design suitability: design Limitations of execution (#) Specific limitations Analytic methods	Historical Context	Location Study population Sample size (N) Sample demographic characteristics	Intervention population Comparison population	Results		
				Reported effect measure Follow-up time; % sample or N with sufficient time at risk for recidivism analysis ^a	Reported effect	Value used in review) ^b
Barnoski (2003) ¹ Greatest: prospective cohort study with concurrent comparison Good (0) • No limitations Multivariate analysis, controlling for demographics, charge, and offending history	Washington State expanded automatic transfer provisions in 1994 & 1997. This study examined an earlier cohort arrested on charges that would have made them eligible for automatic transfer had they been arrested after the 1994 law.	Washington state Youth 16–17 years old arrested 1/1/1992–7/1/1994 N = 913 <u>Retained youth, n = 738</u> Age: 16 yrs 54%; 17 yrs 46% Sex: F 7%; M 93% Race: white 56%; black 20% <u>Transferred youth, n = 175</u> Age: 16 yrs 26%; 17 yrs 74% Sex: F 2%; M 98% Race: white 51%; black 31%	Youth arrested on any of nine serious felonies, or with specified offending histories, and transferred to criminal justice system Youth meeting same arrest and offending history criteria, but retained in juvenile justice system	Violent felony re-arrests during 18 mos follow-up after release from confinement, adjusted for confounders by logistic regression Retained youth: 81% (600 of 738 followed up) Transferred youth: 51% (90 of 175 followed up)	Transferred youth = 11% Retained youth = 11%	% increase in recidivism associated with transfer, compared with retention Effect size = 0.0%
Bishop et al (1996); ² Winner et al (1997) ³ Greatest: prospective, with matched comparison Good (1) • Proxy measure of outcome (i.e., re- arrest for any crime) Analysis of discordant pairs; logistic regression, controlling for background and history; time to and frequency of re-arrest		Florida Youth arrested 1/1/1985– 12/30/1987. N = 2887 matched pairs Demographics: Male: 92% Age: 17 yrs 60%; 16 yrs 25%; 15 yrs 25%; <15 yrs 3% ^c Race: Transferred youth (53% white; 47% nonwhite) Non-transferred youth (58% white; 42% nonwhite)	Youth transferred from the Florida juvenile justice system to the adult justice system Youth retained in the juvenile system, matched with transferred youth on six criteria: most serious current charge, number of counts, most serious prior offenses, number of prior referrals, age, gender (race matched when possible)	Re-arrest for any crime through Nov 15, 1994; over 6 years 93% (2700 pairs [2887 total pairs – 187 lost])	Probability of any rearrest among transferred juveniles, compared with retained juveniles: 0.95 (p=0.332)	Because significant effect modification by initial arrest (misdemeanor vs. felony and felony type) was found in logistic regression analysis, and because full model coefficients were not published, effect sizes were not calculated.

Author (year) Design suitability: design Limitations of execution (#) Specific limitations Analytic methods	Historical Context	Location Study population Sample size (N) Sample demographic characteristics	Intervention population Comparison population	Results		
				Reported effect measure Follow-up time; % sample or N with sufficient time at risk for recidivism analysis ^a	Reported effect	Value used in review) ^b
<p>Fagan (1995, 1996)^{4,5} Greatest: prospective cohort study with comparison Good (1) • Sample demographics not described Proportions re-arrested and re-incarcerated; time to first re-arrest Re-arrest rate; proportional hazards of specific types of subsequent crime, including violent crime</p>	<p>New York Juvenile Offender Law of 1978 legislatively excludes from juvenile processing 14–15 yr olds on 15 charges, and 13 yr olds on non-capital murder In NY 16 yrs is age of adult court jurisdiction In NJ, age of adult court jurisdiction is 18; no legislative exclusion</p>	<p>New York City metro area 15 and 16 yr olds arrested 1/1/1981–12/31/1982 on either felony robbery or burglary N = 800 youth (200 in each of 4 counties) Sampled on age (15 or 16); other demographics not stated</p>	<p>Youth arrested in 2 counties in NY on either felony robbery or burglary Youth arrested in 2 socio-demographically similar counties in NJ on equivalent charges</p>	<p>Re-arrest and time to re-arrest Follow-up through 6/30/1989; at least 2 years “at risk” following release</p>	<p>Proportional hazard model for violent crime re-arrest: Exp (B) = 0.72 (p<.05), (juvenile vs. adult court associated with 28% decreased rate of re-arrest for violent crime) Note: The model includes a significant interaction of transfer with sentence length; the transfer effect increases with longer sentences</p>	<p>Effect size used is based on transfer main effect term alone, and underestimates the effect for those with sentences including incarceration. Increased violent recidivism for transfer = 39% (1/0.72) ? 1 Note: Most of the sample in each court was not incarcerated.</p>
<p>Lanza-Kaduce (2002)⁶ Greatest: prospective matched pair comparison Fair (2) • Sample demographics not provided • Proxy measure of outcome (i.e., re-arrest for any felony Study compared felony recidivism rates and assessed discordant pairs in “best matched” pair data subset (i.e., retained pair member at least as serious as transferred member)</p>	<p>1994 changes in Florida law extended prosecutorial waiver for 14- and 15-year olds, and also for certain repeat and violent offenders of any age</p>	<p>Florida (6 out of 20 judicial circuits, both urban and rural) Youth arrested in 1995–1996 N = 475 matched pairs N = 315 “best matched pairs” (Best matched pairs exclude pairs in which transferred youth had a worse criminal background than retained youth on a 12-item index. Possibility of worse criminal background among retained youth not noted.)</p>	<p>Youth transferred to adult court system Youth retained in the juvenile system who were matched on 7 criteria: most serious current charge, number of counts, most serious prior offenses, number of prior referrals, age, gender, race</p>	<p>Felony recidivism after age 18 Recidivism data collected through early 2001 Depending on age at arrest, the recidivism periods after age 18 ranged from <1 to over 4+ years, equivalent within matched pairs</p>	<p>Best-matched pairs: Felony recidivism higher among transferred than retained juveniles (49.2% vs 36.8%) Ratio of discordant pairs among the best-matched = 1.76 Only transferred youth re-arrested (90 pairs) vs only retained youth re-arrested (51 pairs)</p>	<p>% increase in felony recidivism for transferred vs. retained youth Effect Size: 33.7% (49.2/36.8) – 1</p>

Author (year) Design suitability: design Limitations of execution (#) Specific limitations Analytic methods	Historical Context	Location Study population Sample size (N) Sample demographic characteristics	Intervention population Comparison population	Results		
				Reported effect measure Follow-up time; % sample or N with sufficient time at risk for recidivism analysis ^a	Reported effect	Value used in review) ^b
Myers (2001) ⁷ Greatest: prospective cohort study Good (0) Logistic regression of overall re-arrest, and violent felony re-arrest, controlling for demographics, criminal history, current offense and case processing; Survival models of time to recidivism following release	1996 Pennsylvania law expanded transfer by excluding from juvenile court murder and several violent crimes committed with a deadly weapon by juveniles between 15 and 18 yrs of age at the time of offense. This study examined a sample from an earlier cohort, who were arrested on charges that would have made them eligible for automatic transfer had they occurred after the legal change	Pennsylvania Males aged 15–18 yrs, arrested 1/1/1994– 2/31/1994 N = 557 males Transferred: 138 Retained: 419 Mean age: 16.7 yrs transferred juveniles; 16.0 yrs retained juveniles Race: 72% transferred nonwhite; 82% retained nonwhite	Youth transferred to adult court Youth retained in juvenile court	Violent felony re-arrests Follow-up until 6/30/1998 (mean time “at risk” in the community for committing a subsequent crime: 17.9 months) Follow-up for those not still incarcerated as of Dec. 31, 1997, 89% (494 of original 557)	Logistic regression of violent recidivism following final disposition B = .692 (SE .463), (p>0.10) OR = 2.0	% increase in violent felony recidivism for transferred compared with retained juveniles, calculated from reported modeled proportions of violent recidivism Transferred youth: 0.2305 Retained youth: 0.1304 Effect size = 77% (0.2305 / 0.1304) – 1
Podkopacz & Feld (2001) Podkopacz (1996) Greatest: prospective cohort study Good (1) No analysis assessing violent outcome while controlling background confounding Logistic regression		Minnesota (Hennepin County) Juveniles arrested in 1986– 1992 for whom a motion was filed for transfer to adult court; some were transferred, others retained. N = 330 youth Transferred = 215; Retained = 115 Age at offense: mean 16.5 yrs Race: 55% African American, 28% white; 17% other	Youth transferred to adult court system Youth motioned for transfer, but retained in juvenile court system	New adjudicated or convicted offense Follow-up: at least 2 yrs of “at risk” time N = 290 (excluding 40 youth with insufficient time at risk)	Reconviction for any offense, controlled for criminal history, gender, age at transfer decision, type of sentence: Transfer OR : 1.93, p<.05. (i.e., reconvicted youth more likely to have been transferred than retained)	% increase in reconviction among transferred juveniles compared with retained juveniles: Effect size: 26.5% (OR was applied to retained reconviction rate, to generate RR)

Key: mo month; N sample size; NA not available; yr year; NJ New Jersey; NY New York ; OR odds ratio; vs versus

- ^a Assessment of attrition is not applicable in these studies, as they report re-arrest in the presence of re-arrest records and assume no re-arrest in the absence of records.
- ^b If results were reported from logistic regression models, odds ratios were transformed into relative rate changes (21,41) so that these effect measures could be more appropriately compared with other studies in the body of evidence.
- ^c Percentages add to >100% (error in original data)

References for Appendix A

1. Barnoski R. Changes in Washington State's jurisdiction of juvenile offenders: examining the impact. Olympia: Washington State Institute for Public Policy, 2003, 03-01-1203.
2. Bishop DM, Frazier CE, Lanza-Kaduce L, Winner L. The transfer of juveniles to criminal court: does it make a difference? *Crime Delinq* 1996;42:171-91.
3. Winner L, Lanza-Kaduce L, Bishop DM, Frazier CE. The transfer of juveniles to criminal court: reexamining recidivism over the long term. *Crime Delinq* 1997;43:548-63.
4. Fagan J. Separating the men from the boys: the comparative advantage of juvenile versus criminal court sanctions on recidivism among adolescent felony offenders. In: Howell JC, Krisberg B, Hawkins JD, Wilson JJ, eds. *A sourcebook: serious, violent, and chronic juvenile offenders*. Thousand Oaks, CA: Sage, 1995:238-60.
5. Fagan J. The comparative impacts of juvenile and criminal court sanctions on adolescent felony offenders. *Law Policy* 1996;18:77-119.
6. Lanza-Kaduce L, Frazier CE, Lane J, Bishop DM. *Juvenile Transfer to Criminal Court Study: final report*. Tallahassee: Florida Department of Juvenile Justice, 1-8-2002, 02-02.
7. Myers DL. Excluding violent youths from juvenile court: the effectiveness of legislative waiver. McShane M, Williams IFL, eds. New York: LFB Scholarly, 2001.
8. Podkopacz MR. *The juvenile court's final decision: an empirical examination of transferring juveniles to adult court*. 1996.

Appendix B. Studies measuring general deterrence effects of juvenile transfer policies.

Author (year) Design suitability: design Limitations of execution (#) Specific limitations Analytic methods		Location Study period Unit of analysis Sample size (N) Sample demographics	Intervention group Comparison group	Reported effect measure Comparison period	Results Reported effect	Value used in review ^a
Barnoski (2003) Greatest: before-and-after population-based study Good (1) • No control for confounding Graphical comparison of Washington State and national violent crime arrest rate trends	Washington State expanded automatic transfer provisions in 1994 & 1997 16 and 17 yr olds with specified criminal offenses and histories were automatically transferred	Washington state Late 1980s to late 1990s Juveniles 10 – 17 yrs of age Population-based (not sampled) Demographics NA	Juveniles (10–17) in Washington state in yrs following law changes Graphically compared with: Juveniles (10–17) in Washington state in yrs preceding law changes. Juveniles (10–17) in U.S. in yrs preceding and following Washington law changes	Violent arrest rates among juveniles (10–17 yrs) per 1000 juveniles Comparison period: late 1980s–late 1990s	“Thus, we cannot attribute the decrease in juvenile arrests for violent crimes in the state solely to the change in WA’s jurisdiction statute.”	No effect Quantitative effect cannot be computed from the graphical analysis
Jensen, Metsger (1994) Greatest: before-and-after intervention with concurrent comparison (Additional analysis—before-and-after design without concurrent comparison—not considered in this review.) Fair (2) • Selection of comparison populations not well justified • No control of confounding Comparison of changes in rates of violent crime before and after law in intervention and comparison states	1981 Idaho law transferred more juveniles to adult court. There were no comparable changes in comparison states, Wyoming and Montana.	Idaho 1976 – 1986 States (Idaho, compared with Wyoming and Montana) Population-based (not sampled) Demographics NA	Juveniles <18 yrs of age in Idaho in yrs following law changes, 1982–86 Compared with: Juveniles <18 yrs of age in Idaho in yrs preceding law changes, 1976–80 Juveniles <18 yrs of age in Wyoming and Montana in yrs preceding and following law changes in Idaho	Changes in mean juvenile arrest rates, 1982–86 compared with 1976–80	Before-and-after differences of means juvenile violent crime arrest rates <u>ID</u> 12.8 p<0.005 <u>WY</u> –4.2 p<0.025 <u>MT</u> –14.1 p<0.005	Increase in violent crime arrest rates in state with strengthened transfer law, in comparison with neighboring states without this law Effect size not computed because population data not provided

Author (year) Design suitability: design Limitations of execution (#) Specific limitations Analytic methods		Location Study period Unit of analysis Sample size (N) Sample demographics	Intervention group Comparison group	Reported effect measure Comparison period	Results Reported effect		Value used in review ^a	
Historical Context					Ω	t		
Singer & McDowell (1988) Singer (1996) Greatest: prospective cohort study Good (0) • No limitations Interrupted time series analysis and rate comparisons		New York Juvenile Offender Law of 1978 legislatively excludes from juvenile processing 14–15 yr olds on 15 charges, and 13 yr olds on non-capital murder	New York City and Upper New York State Jan. 1974 – Dec.1984 Regions/cities NYC and NYS are compared. Philadelphia is used as an additional comparison for NYC Population-based (not sampled) Demographics NA	Two different sets of intervention and comparison groups: A. Juveniles in New York City ages 13–15 yrs Compared with: Juveniles in New York City ages 16–19 yrs Juveniles in Philadelphia, ages 13–15 yrs B. Juveniles in upper New York State, ages 13–15 yrs compared with: Juveniles in upper New York State, ages 16–19 yrs	Time series of monthly arrests for homicides, assaults, robberies, and rapes, with 1978 date of New York law as intervention point. Comparison period: January 1974 – December 1984	Shift in level of crime following introduction of law in 1978 <u>Homicides</u> NYC 13–15 NYC 16–19 Phil 13–15 <u>Assaults</u> NYC 13–15 NYC 16–19 Phil 13–15 <u>Robberies</u> NYC 13–15 NYC 16–19 Phil 13–15 <u>Rapes</u> NYC 13–15 NYC 16–19 Phil 13–15 <u>Homicides</u> NYS 13–15 NYS 16–19 <u>Assaults</u> NYS 13–15 NYS 16–19 <u>Robberies</u> NYS 13–15 NYS 16–19 <u>Rapes</u> NYS 13–15 NYS 16–19	–0.9633 –1.62 2.0370 1.55 –0.6586 –2.71 0.0230 0.81 –21.3500 –1.49 –4.7540 –3.32 ^b 16.0100 0.63 17.3400 0.35 7.4100 1.95 –4.1570 –3.12 ^b –6.4120 –3.14 ^b –.5748 –0.92 –0.0104 –0.37 0.0012 0.00 4.4320 4.42 2.2520 1.48 2.6180 1.38 9.9870 3.08 0.4211 1.34 0.8510 1.39	Effect size not computed because heterogeneous results within the study

Key: aggr aggravated; N sample size; NA not available; NS not significant; NYC New York City; NYS Upper New York State; Phil Philadelphia; t t-test; vs versus; yr year; Ω time series estimate of shift in the level of crime associated with introduction of the law

^a Because of heterogeneous methodologies and the absence of requisite and commensurate data among studies, we did not calculate an overall effect size for this body of evidence.

^b $p < 0.05$

References for Appendix B

1. Barnoski R. Changes in Washington State's jurisdiction of juvenile offenders: examining the impact. Olympia: Washington State Institute for Public Policy, 2003, 03-01-1203.
2. Jensen EL, Metsger LK. A test of the deterrent effect of legislative waiver on violent juvenile crime. *Crime Delinq* 1994;40:96-104
3. Singer SI, McDowall D. Criminalizing delinquency: the deterrent effects of the New York Juvenile Offender Law. *Law Soc Rev* 1988;22:521-35.
4. Singer SI. *Recriminalizing delinquency: violent juvenile crime and juvenile justice reform*. Cambridge, England: Cambridge University Press, 1996.