

Knowledge Brief

How Can We Know If Juvenile Justice Reforms Are Worth the Cost?

With governments at every level facing grim budget forecasts, policymakers need to know as much as possible about what juvenile justice activities yield the greatest social good for a given level of spending. This is the very question benefit-cost analysis seeks to answer. **This policy brief summarizes the benefit-cost analysis of a set of reforms intended to make juvenile detention more developmentally productive: residential centers that provide youths with group-based cognitive behavior therapy.** The researchers found preliminary evidence that this program may decrease recidivism rates in the 15 months following release, and that the minimal costs of the program (a few hundred dollars per youth per detention spell) may be outweighed by the monetized benefits of reduced crime and punishment. Their hunch is that progress is most likely to come from the cumulative effect of relatively inexpensive changes like this one, each generating benefits in excess of costs and reducing recidivism incrementally.

Background

The U.S. relies on detention much more than do other nations as a way to control juvenile delinquency and crime. Between 300,000 and 600,000 youths spend time in a juvenile detention facility each year, a number that increased by 44 percent between 1985 and 2002.

But research now shows that detention by itself does not fix the underlying problems that lead youths to delinquency and violence. In particular, it does not address the skill deficits that are strongly correlated with delinquency, such as difficulties with self regulation, impulse control, social information processing, and

moral reasoning—what psychologists call socio-emotional and behavioral skills, and economists tend to call non-cognitive skills.

At present, relatively few youths in detention have access to therapeutic interventions designed to address even the most serious of these deficits, including mental health problems. The state of Illinois spends more than \$100 million each year on juvenile prisons and detention centers, but only one-tenth of that amount on services specifically related to juvenile re-entry and aftercare. It should therefore not be surprising that in places like Chicago, nearly two-thirds of youths leaving detention never re-enroll in school,

those who do often drop out quickly, and around half are rearrested within three years. Similarly high recidivism rates are found all across the country.

At the same time, governments at every level in the U.S. face grim budget forecasts for the foreseeable future. Juvenile justice budgets are as likely to be cut as expanded in the coming years, which means that any additional spending on therapeutic programs will require reductions in spending on other potentially beneficial activities. Policymakers need to know more about what juvenile justice activities yield the greatest social good for a given level of spending—exactly the sort of question that benefit-cost analysis (BCA) seeks to answer.

This policy brief summarizes preliminary findings from a BCA of therapeutic reforms underway at the Cook County, Illinois, Juvenile Temporary Detention Center. It is part of a larger project whose goal is to use data and economic analyses to help guide and improve juvenile justice policymaking and practice.

Applying benefit-cost analysis to juvenile justice programs

The goal of benefit-cost analysis is to help policymakers understand which programs generate benefits to society that are large enough to justify their costs. In order to do that, both sides of the ledger need to be converted to the same metric: dollars. The costs of most juvenile justice programs are already denominated in dollars and tabulated on government spreadsheets. Estimating the benefits of these programs is less straightforward. To begin with, it's not always obvious what should be counted as a benefit. And once that hurdle is met, monetizing benefits that are measured in units like "juvenile arrests averted" can get quite complicated.

What should count as a benefit? For some juvenile justice programs, benefits should include not simply the impact on recidivism but any outcome that society cares about. In principle, any juvenile justice or social policy intervention that effectively reduces a youth's propensity to commit crime may also have salutary effects on other

behavioral outcomes, such as schooling attainment, mental and physical health, and success in the formal labor market. Ignoring these broader impacts may lead to a substantial understatement of the benefits of putting youths into more developmentally productive environments.

What can be monetized? The benefits of any given policy can be much more difficult to quantify than the costs; aside from earnings, many of the key benefits of juvenile justice policies are the consequence of youth behaviors that are measured in non-dollar terms. Furthermore, while the value of stolen property and the costs of medical treatment for victims are concrete, there is likely to be considerable controversy about whether it makes sense to include the value of intangible costs, such as the reduction in well-being that comes from crime victimization or the threat of victimization. The researchers believe it would be a grave mistake to exclude these intangible costs of crime in a benefit-cost analysis. Even though they are difficult to monetize, there is no question that they account for the most important share of the overall social cost of crime.

How should costs be quantified? The most appropriate way to measure the comprehensive costs of crime, including intangible as well as tangible costs, is what researchers call the "top down" or "ex ante" approach. This defines the social cost as what the public is willing to pay (WTP) to achieve a specified reduction in crime. A number of studies have tried to estimate WTP for changes in crime risks by looking at what people are willing to pay for houses in safer neighborhoods, or by using surveys to ask people hypothetical questions about their willingness to pay for a specified change in crime. Neither of these methods is perfect, so any estimate dealing with the social cost of crime will also be imperfect.

The Cook County JTDC study

The Cook County Juvenile Temporary Detention Center (JTDC), on the West Side of Chicago, is one of the largest facilities of its kind in the nation, with a capacity of 498 beds and an average daily attendance of 357. The JTDC is for juveniles who are awaiting trial, sentencing, or transfer

to a juvenile prison. Most of the youths in detention are 14 to 16 years of age and are disproportionately male, low-income, and either African-American or Hispanic. The average length of stay is 23 days, although around 10 percent of the youths will be tried in adult criminal court and will stay for 9 to 12 months while they await trial. In 2007 in Illinois, 33 percent of admissions to detention for youths ages 10 to 16 were for offenses against a person, 26 percent were for property offenses, and 37 percent were for outstanding warrants (youths who had failed to appear for their court date); the numbers for Chicago and Cook County are likely similar.

The JTDC had been the focus of long-standing criticism. Reports of ineffective operations and abuse of youths in detention led to a federal lawsuit filed in 1999 by the ACLU, and eventually to a federal takeover of the facility in 2007. Earl Dunlap, a nationally recognized expert in juvenile corrections, was appointed by the court to be Transitional Administrator; under his oversight, the facility was divided into ten separate residential centers of around 50 beds each.

Between 2008 and 2009, about half of the residential centers were re-designed to provide youths with group-based cognitive behavior therapy (CBT) during their stays. These “CBT centers” use behavior training principles that include a token economy system in which good behavior earns points that can be redeemed for privileges like extra exercise time or snacks from the commissary. The CBT centers also incorporate some of the therapeutic activities at the public school located within the JTDC. In contrast, neither CBT nor behavior training is used in the other residential centers, where youths spend most of their non-school time hanging out and watching television.

Cognitive behavior therapy

Cognitive behavior therapy (CBT) is a time-limited intervention designed to reduce behavior problems and strengthen social, emotional, and behavioral skills by teaching people to relate to their thoughts in a more realistic and effective way. In CBT, youths learn new, more effective patterns of thinking and relating to their environment, including problem-solving and conflict-resolution skills.

Originally, the new JTDC intake center staff assigned male youths to a residential center based on bed space availability, unless some combination of professional judgment or a specific rule indicated a CBT or non-CBT center. In November 2009, after discussions with the research team, they began randomly assigning new residents to one of the four CBT centers or to one of the four status quo units. (While randomization determines the original assignment, intake staff is allowed to override the decision, provided they record a reason for the override.)

The random assignment of youths to CBT or non-CBT units means that the two types of residential centers serve populations of youths that should on average be identical. As a result, any differences in post-detention outcomes between the two groups of youths can be confidently attributed to the effects of being placed in a CBT center within the JTDC. The fact that intake staff can override randomization does not compromise the strength of the experimental design, since the investigators will still be able to carry out an unbiased “intent to treat” analysis—that is, an analysis that takes into account how the youths were originally assigned.

CBT makes a difference in recidivism

During the study period, from November 2009 to March 2011, a total of 1,518 male youths were admitted to the JTDC facility and randomly assigned to CBT or non-CBT units. This is less than the total number of youths admitted to the facility, since female youths were not randomized and some male youths were excluded for various reasons, such as physical or emotional immaturity or safety concerns due to gang affiliation. The most common reason youths are excluded from randomization (and hence the study sample) is that they had been in the JTDC before and assigned to a CBT center; these youths were automatically assigned to a CBT center when they re-entered the facility.

On average, the youths who are part of the sample are around 16 years of age and are entering the JTDC for about their third time. Their median length of a stay is

Percentage of Youths Returning to JTDC

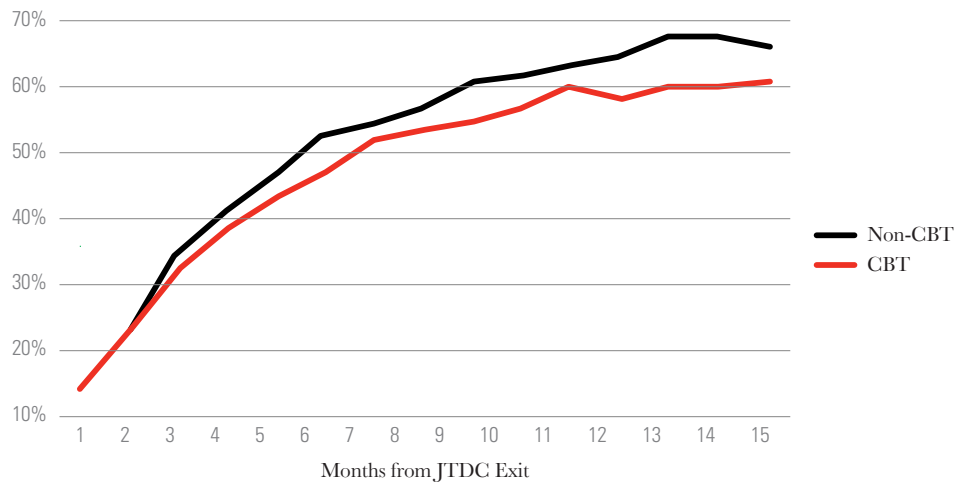


figure 1

24 days, with a mean of 34.6 days (pulled up by several year-plus stays).

Figure 1 presents some very preliminary findings, showing the percentages of treatment and control groups that return to the JTDC in each consecutive month after release. It appears that the youths assigned to CBT and those assigned to non-CBT units have similar rates of recidivism in the first few months post-release, after which the non-CBT group returns more than the CBT group. By 12-15 months after leaving the JTDC, the risk of returning is around 5 percentage points lower for the CBT group. It is also interesting to note how high the return rates are: about two-thirds of detainees during the early part of the study return to detention within the following 15 months.

Implications for policy and practice

The preliminary findings from this study highlight the value of using randomized experimental methods to evaluate juvenile justice interventions. The impact of the CBT reforms underway at the Cook County JTDC would be nearly invisible to front-line staff, whose main impression would surely be that most youths in both the CBT and non-CBT groups wind up re-offending and returning to the

detention facility. Only a careful empirical study, particularly one that uses the method of randomized clinical trials, is capable of detecting the modest impacts of the CBT intervention on the risk of return to the JTDC.

These findings raise the question: Is the preliminary estimate of a 5 percentage point decline in recidivism at 12 to 15 months large enough to be relevant to policy and practice? In the researchers' view, the answer to this question hinges critically on what is known about the cost of the intervention and the potential benefits to society. Preliminary calculations suggest that the CBT intervention that was implemented at the JTDC will have very low costs—perhaps a few hundred dollars per youth. On the other side, research suggests that the costs of crime to society are so large that even modest impacts on crime can be enough to outweigh program costs. Indeed, given the budget problems at every level of government, real progress is likely to come from the cumulative effect of multiple, relatively inexpensive changes, each of which reduces recidivism incrementally. In the case of the reforms at JTDC, the researchers' estimates—though very tentative at this point—suggest the CBT program may well generate benefits in excess of costs, and could be a part of that change.

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This brief is one in a series describing new knowledge and innovations emerging from Models for Change, a multi-state juvenile justice initiative. Models for Change is accelerating movement toward a more effective, fair, and developmentally sound juvenile justice system by creating replicable models that protect community safety, use resources wisely, and improve outcomes for youths. The briefs are intended to inform professionals in juvenile justice and related fields, and to contribute to a new national wave of juvenile justice reform.