

A RECLAIMING FUTURES
NATIONAL EVALUATION REPORT

Cost-Benefit Analysis of Reclaiming Futures

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RECLAIMING FUTURES

Communities helping teens
overcome drugs, alcohol and crime

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Executive Summary

In this study, we report the costs and benefits of the Reclaiming Futures Initiative. The national evaluation of Reclaiming Futures found strong evidence that the systems change initiative created a foundation for improving substance abuse interventions for youth. Results from the stakeholder surveys found improvements in the target communities in treatment delivery and effectiveness, cooperation and information-sharing among youth service providers, and family involvement in youth care.

Positive findings such as these naturally lead to questions about whether the program was also cost-beneficial. That is, given that Reclaiming Futures improved the quality of services and relationships, is there enough of a return in the investment in the form of decreased juvenile crime, to justify expenditures?

To answer this question, we collected cost data about 10 Reclaiming Futures communities planning and operational activities between March 2002 and October 2007. The national evaluation of the initiative focused on measures of systems change, rather than changes in individual outcomes. In order to estimate the benefits of Reclaiming Futures we forecasted improvements in individual, client-level behavior that prior research has shown to be associated with the improvements observed in the stakeholder survey. Thus, we are able to indirectly estimate the benefits of the initiative. If a relatively small change in youth delinquency would be needed to offset the costs of the demonstration, then it would be reasonable to presume that Reclaiming Futures was cost-effective. If, on the other hand, a relatively large change in juvenile

offending was required to generate off-setting benefits then it would be reasonable to presume that the program was not cost-effective.

In general, we found that there were increasing returns to scale from Reclaiming Futures. That is, the more youth who were served by the investment in the initiative, the greater the benefit of Reclaiming Futures. We estimated that on average about 200 juveniles per year per site would have to be served to offset operating costs. Overall, we estimate that Reclaiming Futures would have needed to reach at least 8,000 juveniles to be cost-effective. The national programs office estimates that about 15,000 youth were served by the Initiative during this period, which supports the conclusion that Reclaiming Futures was cost-effective.

SECTION ONE

Introduction

Launched in 2002, Reclaiming Futures was a multimillion dollar initiative of the Robert Wood Johnson Foundation to develop community-based solutions to juvenile drug use and delinquency. Reclaiming Futures was designed as a collaborative partnership between juvenile justice practitioners, treatment providers, and communities with the common goal of developing comprehensive and integrated systems of care for drug-involved youth.

Ten communities across the United States participated in the demonstration between 2002 and 2007:

- Anchorage, Alaska
- Santa Cruz County, California
- Cook County (Chicago), Illinois
- Southeastern Kentucky
- Marquette, Michigan
- State of New Hampshire
- Montgomery County (Dayton), Ohio
- Multnomah County (Portland), Oregon
- Sovereign Tribal Nation of Sicangu Lakota in Rosebud, South Dakota
- King County (Seattle), Washington.

Although the 10 sites focused on their own unique goals and strategies, all relied on judicial leadership, court/community collaborations, inter-organizational performance management, enhanced treatment quality, and multi-agency partnerships to improve their systems of care for young offenders with substance abuse issues. All sites received oversight and direction from the Reclaiming Futures national program office. The national program office actively encouraged sites to incorporate fundamental principles of evidence-based practices and promising

approaches into their respective strategies.

The 10 Reclaiming Futures demonstration sites operated within a set of Robert Wood Johnson Foundation-defined objectives:

- Improve the quality and quantity of rehabilitation services, especially substance abuse treatment, provided to young offenders.
- Increase the coordination and cooperation between social services and the juvenile justice system.
- Increase community involvement and investment in services that address substance-abusing young offenders.
- Decrease service gaps and barriers to services for young offenders and their families.
- Develop a seamless continuum of care that is efficient, appropriate, and provides evidence-based treatment.
- Evaluate the delivery of care and the effectiveness of programming.

A national evaluation of Reclaiming Futures suggested that the 10 communities involved in the pilot phase of the initiative were generally successful. The evaluation was based at the Urban Institute in Washington, D.C., and involved collaborating researchers from Chapin Hall

at the University of Chicago. The study showed significant improvements in the 10 sites overall. Researchers conducted biannual surveys that tracked how and whether a jurisdiction's efforts under Reclaiming Futures led to system change.¹

The national evaluation focused on each community's ability to implement the objectives of the initiative but it did not test the behavioral impact on youth of any particular intervention or treatment technique. Rather, the evaluation aimed to document the development and evolution of Reclaiming Futures in each community and the lessons learned from this experience. Researchers tracked whether and how the service systems in each Reclaiming Futures community changed and whether they changed as intended by the Reclaiming Futures program. The outcomes tracked by the national evaluation team focused on the processes, policies, leadership dynamics, and personal relationships hypothesized to produce positive system change.

FINDINGS FROM THE NATIONAL EVALUATION

Results from the national evaluation of Reclaiming Futures suggest that Reclaiming Futures is a promising strategy for improving substance abuse interventions for youth. Positive changes were reported in all 10 Reclaiming Futures communities regarding treatment delivery and effectiveness, cooperation and information-sharing among youth service providers, and family involvement in youth care.

Survey responses showed that Reclaiming Futures communities improved significantly on 12 of 13 quality indicators during the course of the initiative (*Table 1*). Improvements were especially dramatic in ratings for treatment effectiveness, use of client information in support of treatment, use of screening and assessment tools, and overall systems integration. Overall findings suggest that substance abuse interventions for young offenders improved during the Reclaiming Futures initiative.

In addition, a network analysis of Reclaiming Futures communities used measures such as network density, cohesion and proximity, and power equity to show that network

strength and performance increased over time.² As a whole, Reclaiming Futures communities appeared to achieve positive improvements across many indicators of network cooperation and interaction among youth service agencies.

EVALUATING COST-EFFECTIVENESS

Results from the stakeholder surveys conducted for the national evaluation support the idea that there were substantial improvements in the quality of the collaborations in the 10 Reclaiming Futures demonstration sites. Positive findings such as these naturally lead to questions about whether the program was also cost-beneficial. That is, given that Reclaiming Futures improved the quality of services and relationships, is there enough of a return in the investment in the form of decreased juvenile crime, to justify expenditures?

To answer this question, researchers collected cost data about the 10 Reclaiming Futures communities planning and operational activities between March 2002 and October 2007.

To measure the benefits of Reclaiming Futures, the study next estimated improvements in individual, client-level behavior that could be expected to result from the improvements indicated in the stakeholder survey. Thus, this study is able to estimate indirectly the cost-effectiveness of Reclaiming Futures.

In order to answer cost-effectiveness questions directly, it would be necessary to have individual-level data describing how participation in Reclaiming Futures changed individual behavior. Since the national evaluation studied the effect of Reclaiming Futures on systems changes, those data are not available for this analysis. However, systems-level data can be augmented with data

¹ For definitions of scale indicators and additional results, see Butts JA and Roman J. *Changing systems: Outcomes from the RWJF initiative on juvenile justice and substance abuse*. Portland, OR: Reclaiming Futures, Portland State University, 2007.

² For definitions of network terms and additional results, see Yahner J and Butts JA. *Agency relations: Social network dynamics and the RWJF Reclaiming Futures initiative*. Portland, OR: Reclaiming Futures National Program Office, Portland State University, 2007.

Table 1:

CHANGE IN AVERAGE SCORES ACROSS RECLAIMING FUTURES COMMUNITIES,
RANKED BY TOTAL CHANGE

	Rank	Average Survey Score		Statistically Significant?
		Dec. 2003	June 2006	
Treatment Effectiveness	1	0.3	2.8	Yes
AOD Assessment	2	2.6	4.7	Yes
Pro-social Activities	3	-0.02	1.8	Yes
Data Sharing	4	0.3	2.0	Yes
Family Involvement	5	2.1	3.9	Yes
Client Information	6	2.8	4.5	Yes
Systems Integration	7	1.1	2.8	Yes
Targeted Treatment	8	-2.2	-0.7	Yes
Resource Management	9	2.7	3.9	Yes
Access to Services	10	-1.8	-0.7	Yes
Cultural Integration	11	1.6	2.6	Yes
Agency Collaboration	12	3.7	4.6	Yes
Partner Involvement	13	5.8	5.7	No

SOURCE: National Evaluation of Reclaiming Futures. Washington, DC: Urban Institute.

NOTE: Scale scores ranged from -10 to +10. The indices are ordered from largest to smallest change. A t-test was used to determine whether the change in average score between December 2003 and June 2006 was significantly different from zero. All scales except *Partner Involvement* showed a statistically significant positive change.

from other studies to answer a corollary question: what kind of reduction in juvenile criminality did Reclaiming Futures have to produce to be cost-effective? If a relatively small change in offending would be needed to offset the costs of the demonstration, then it would be reasonable to presume that Reclaiming Futures was cost-effective. If, on the other hand, a relatively large change in juvenile offending was required to create the benefits necessary to offset the costs than it would be reasonable to presume that the program was not cost-effective.

The general analytic strategy in this study is to compare the ratio of program costs to the

benefits from improved participant outcomes as follows:

$$\text{Total Cost} = \frac{\text{Program Benefits} \times}{\text{Number of Juveniles Served}}$$

To estimate total costs, the researchers reviewed budgets provided by the Reclaiming Futures national program office and the Robert Wood Johnson Foundation and conducted semi-structured interviews with key staff.

Next, the study estimated the benefits of the program in two steps. First, changes in survey indicators were linked to prior research that

describes how individual behavior changes when systems improve. Using the survey responses on the Treatment Effectiveness Index, researchers estimated the change in criminal offending that would have been expected to occur given the reported improvement in treatment effectiveness from the survey. Second, findings from prior research of the harms to victims from criminal offending were used to estimate the size of the program's benefits. These benefits included savings to the police (from not having to investigate new crimes), savings to the juvenile justice system (from not processing juveniles involved in these crimes) and benefits to private citizens (who experience less crime and thus experience less harm).

Using this information, the study could then solve the above equation. In this case, the total cost of Reclaiming Futures could be obtained from the interviews and budget reviews. The expected benefit per juvenile involved in Reclaiming Futures was estimated with data from the national evaluation. By estimating or observing the number of juveniles served by the program, researchers were able to estimate whether the benefits were larger than the costs. It is not possible to say exactly how many youth were served directly by Reclaiming Futures in each project site, but it is possible to estimate how many youth *would have to be* served for the demonstration to be cost-effective. That is, the study can ask and answer the question, "How many juveniles would have to have been served by the program for it to be cost-effective, given the costs and expected outcomes for all youth participants?"

The analysis described in this report found that the Reclaiming Futures communities would have to reach, on average, 204 juveniles per year to offset operating costs. We note that this is an average across all levels of intervention. The average includes sites that became deeply engaged with a small number of juveniles as well as sites that may have had less contact with individual youth but affected many more juveniles. These findings do not suggest one approach is superior to any other, rather, averaged across those different levels of intervention about 200 juveniles would need to be engaged in each site to break-even.

This analysis shows that the Reclaiming Futures project sites were engaged in program operations (rather than planning) for an average of four years during the evaluation period. In total then, we estimate that Reclaiming Futures would have needed to reach at least 8,000 juveniles to be cost-effective. Thus, the estimated participant improvement resulting from improvements in treatment effectiveness produce large enough benefits to offset costs if the programs serve a manageable number of juveniles.

By estimating or observing the number of juveniles served by the program, researchers were able to estimate whether the benefits were larger than the costs.

These estimates are very conservative. In this study, we were only able to monetize outcomes associated with changes in criminality. If the program concurrently improved other indicators, such as educational attainment and reductions or abstinence from substance use, than we will have underestimated the real program effects, and over-estimated how many juveniles would need to be served for the program to be cost-effective. In addition, because the effects of criminal behavior have costs that extend beyond the offender (to their friends, family and community) the costs of Reclaiming Futures likely underestimate the true benefits.

In the remainder of this paper, we first describe the costs associated with Reclaiming Futures. Next, we detail how changes in recidivism were calculated using the findings of the surveys conducted by the national evaluation. Finally, we conclude with a discussion on the sensitivity of the study design to critical assumptions as well as several limitations of the approach.

SECTION TWO

The Reclaiming Futures Initiative

The Reclaiming Futures initiative was a demonstration project designed to improve collaboration between the juvenile justice system and treatment providers. The project sought to improve the assessment and treatment of juveniles whose involvement in the juvenile justice system was related to substance use. Thus, the costs of Reclaiming Futures are not limited to the direct cost of service provision, but also include the total cost of designing and disseminating the Reclaiming Futures model and evaluating the effectiveness of the model.

The total cost of the Reclaiming Futures initiative was \$28.8 million, including the costs of evaluation. This reflects the cost of operating the Reclaiming Futures sites—the true cost of Reclaiming Futures—the national program office and the national and local evaluations. Slightly more than half of the costs were for the operation of the project once established (\$16.7 million), while the development of the demonstration project—the Reclaiming Futures model—cost \$8 million and all evaluation activities cost \$4 million. Another way to understand the costs is to compare the portion of total expenditures dedicated to oversight and support of Reclaiming Futures (costs to the national program office) to the total expenditures dedicated to the sites. These costs were also roughly equivalent: \$11.4 million for the national program office and \$15.3 million for the 10 demonstration sites.

STUDY DESIGN

Typically, a cost-benefit analysis of a new policy or program will measure individual-level costs and benefits that result from individual participation in a program. Those costs and benefits are then compared with other individuals who did not receive the program. Thus, the analysis requires the collection of individual-level data relating individual service receipt to individual outcomes.

Because Reclaiming Futures was a collaborative initiative to facilitate the coordination of 10 community-justice partnerships, the traditional data collection model was not adequate for measuring the effectiveness of the program. That is, because the program's mission was focused on integrating community and system change, a focus solely on individual behavioral change would not capture the full range of program costs and benefits. As a result, no individual-level data were collected, and data collection focused instead on surveys of stakeholders who could report on the initiative's successes and failures at an organizational, community, and systemic level. This cost-benefit analysis seeks to tie



those stakeholder reports to the total costs of the program.

Estimates of the cost of Reclaiming Futures were also more involved than is the case for a typical cost-benefit analysis. In the typical analysis, budgets can be used to determine how much spending occurred. A substantial portion of Reclaiming Futures spending, however, was not directed towards program operations, but was used to develop and implement the inter-organizational, performance management model known as the Reclaiming Futures 6-Step Model.³

The development of the Reclaiming Futures Model required substantial start-up activities, first to identify “business-as-usual” practices and then to identify opportunities for creating and improving community-justice partnerships that integrated business-as-usual actors into the new model. Substantial expenditures were required to develop and implement the model before any youth could be affected directly by Reclaiming Futures.

The goal of Reclaiming Futures, however, was not just to create a new model of youth justice; it was to promulgate the new model as a vehicle of system change.

Outcomes of the Reclaiming Futures initiative—e.g., the benefits—included proving the viability of new juvenile justice-community partnerships and successfully advocating for long-lasting change in the service delivery structure. Importantly, all costs associated with these objectives were in addition to the cost of operating the demonstration projects.

In a typical cost analysis of a new policy or program, the costs associated with demonstration activities are excluded and the focus is entirely on the benefit received from operational costs—the dollars spent on individual program participants. Thus, a typical cost analysis excludes the cost of setting up programs, implementing the programs, evaluating effectiveness and

disseminating results. However, in this case, it is important to understand those elements as well as the costs of operating the program since development of new models is a core mission of the Robert Wood Johnson Foundation. Thus, the cost analysis seeks both to identify the costs of providing services to substance involved youth in the juvenile justice system and to estimate the costs of implementing the system-level changes inspired by Reclaiming Futures.

Overview and Definitions

The Robert Wood Johnson Foundation funded the national program office at Portland State University to develop and implement the Reclaiming Futures model. The national program office engaged in four central activities: model development, advocacy and dissemination, operations and training, and general administration. The Urban Institute was funded separately to conduct the national evaluation of Reclaiming Futures in collaboration with Chapin Hall at the University of Chicago. All evaluation costs are noted in the analysis. These costs include the evaluation activities carried out by the project sites and funded by the national program office, the national evaluation based at the Urban Institute, and the four local evaluations funded separately by the Robert Wood Johnson Foundation.

The 10 demonstration sites engaged in four central activities: model development, advocacy and dissemination, operations and training, and local evaluation (in five sites). Project activities evolved over time, moving gradually from demonstration-related activities to operations. In the early years of the demonstration, first the national program office and then the 10 sites were focused mainly on developing and implementing the Reclaiming Futures model. Over time, activities became service-oriented as the programs became more fully operational.

³ For a description of the 6-Step Model and its development, see Nissen LB, Butts JA, Merrigan D, et al. “The RWJF reclaiming futures initiative: Improving substance abuse interventions for justice-involved youth.” *Juvenile and Family Court Journal*, 57(4): 39–51, 2006.



This analysis separates activities in Reclaiming Futures into “demonstration” and “operations” components to distinguish the costs associated with the demonstration portion of the initiative (model development, advocacy and dissemination) from the costs of operating the program in the 10 communities. Demonstration costs are included to highlight the resources required to develop a full-scale systems change initiative. Operational costs are used to calculate the costs and benefits of the project operations.

During the first year of Reclaiming Futures, the national program office focused its efforts on the analysis and modification of standard procedures in the 10 project communities. During this stage, the national program office and the sites collaborated to envision a new way of doing business and a new model for building and maintaining community-justice partnerships. These early efforts, which lasted until 2003, are viewed as model development in this study. The goal of Reclaiming Futures, however, was not just to create a new model of youth justice; it was to promulgate the new model as a vehicle of system change. Activities related to promulgation are categorized here as advocacy and dissemination. Together, these two categories—(1) model development and (2) advocacy and dissemination—comprise the core elements of the Reclaiming Futures demonstration. The demonstration component counts only the costs of implementing community and system change. It excludes the costs of service provision.

In the second year of site activities, the communities moved into their implementation phase and began to change the way they delivered services to youth and families. The national program office, acting as liaison between the Robert Wood Johnson Foundation and the project sites, facilitated the flow of ideas and ensured the availability of financial resources. This period saw increasing costs in “operations,” or the facilitation and delivery of services and supports to youth and their families. Thus, the second year of the initiative marked a shift in focus, from developing the model to implementing the model. Likewise, the national program office shifted from facilitating model development to facilitating the

operations of service provision among sites. The national program office’s training and administrative support of the 10 communities in terms of service-delivery are included under the umbrella of operations. The operations element, therefore, describes the total cost of all client service efforts, whether those of the sites themselves or the national program office.

The distinction between demonstration activities and operational activities is somewhat time-dependent. Generally, demonstration costs were incurred during the first three years of the initiative. The exception is the cost of advocacy and dissemination activities, which occurred throughout the life of the initiative. Operations costs were incurred only during years four through seven. Local evaluation costs were also incurred during years four through seven, but the national evaluation continued throughout the project. The analysis includes all costs to the Robert Wood Johnson Foundation beginning in 2000 when the national program office began to operate in Portland, through the end of Phase I of the Reclaiming Futures initiative, or March 31, 2007.

Data Sources

Cost data for the national program office in Portland, Oregon were drawn from budget reports provided by national program office staff. The records included itemized financial expenditure reports, annual narrative reports, and meeting agendas. Taken together, these materials provided the basis on which the analysis estimated the costs of national program office activities.

The costs of the national program office were categorized by type of grant. These included technical assistance and direction grants (years 1-7), leadership grants, and communications grants. Grants were the primary source of the national program office’s funds. They financed the national program office’s efforts in facilitating the development, dissemination, implementation and operations of the Reclaiming Futures model. Leadership grants funded all advisory and community fellowship meetings. Communications grants funded the national program office’s dissemination and advocacy efforts and part of its operations and training costs.



Cost data for the 10 Reclaiming Futures sites were drawn from budget reports provided by the Robert Wood Johnson Foundation. The site-specific financial reports are analogous to the national program office's reports. Five of the 10 sites—Santa Cruz, Chicago, New Hampshire, Kentucky, and Seattle—received five grants each, including: (1) a planning grant, (2) an implementation grant, (3) a treatment enhancement grant, (4) a communications grant, and (5) a local evaluation grant. The other five sites—Anchorage, Rosebud, Portland, Dayton and Marquette—did not perform (funded) local evaluations and received four grants each.

Another type of grant that provided funding for the project site's use of the Global Appraisal of Individual Needs was not administered by the national program office. Instead, these grants were administered at the site level where funds were used to develop and facilitate the use of the assessment tool used to diagnose juvenile offenders.

To ensure the accuracy of site expenditure reports, the expenditures from each grant's report were cross-checked with the total expenditures listed on the Robert Wood Johnson Foundation *National Program Detail Report*. All reports were compiled for each site and sent to that site for confirmation. Discrepancies were found in just six instances (of 46 grants). Five discrepancies were due to unspent funds that had been cancelled and returned. The last discrepancy could not be confirmed or disconfirmed as the final financial report of expenditures for the grant was still pending at the time of the analysis. In this case, the smaller of two possible amounts was used.

Researchers from the Urban Institute met with staff from the national program office to create a protocol for studying the costs of Reclaiming Futures. The Urban Institute research team worked with national program office staff to determine the total allocation of expenditures for demonstration purposes (model development, dissemination and advocacy and corresponding administrative support), operations (program operations, training, and corresponding administrative support), and evaluations. The Urban Institute research team then worked collaboratively with the national program office to con-

struct a set of decision rules to categorize expenditures. These rules were consistently applied with one exception: communications expenditures were not easily addressed by the decision rules. Additional interviews determined whether each grant expenditure under communications actually pertained to the operations or demonstration category. In addition, the UI team developed a protocol for assigning general national program office expenditures to the demonstration or operations category, according to the year in which the funds were spent. General expenditures that occurred early in the initiative were usually allocated to demonstrations, while later expenditures were mainly allocated to operations. Semi-structured interviews were conducted with the directors of the project sites to confirm their initial site-specific expenditure estimates.

Methods

For the purposes of this analysis, the researchers assumed that observed prices, in the form of accounting costs, could serve as proxies for real market prices and are therefore a fair approximation of the true costs of the resources used in the Reclaiming Futures initiative. We were also attentive to the notion that costs are specific to geographic location, the agencies involved, and other variations across sites.

It is possible that different site costs could be observed if Reclaiming Futures were expanded to other sites. However, the diversity of existing sites allowed for a fair approximation. As discussed in more detail in the sections that follow, all non-labor costs (indirect costs, fringe benefits, supplies and utilities) were allocated proportionately for each grant. Equipment expenditures were summed and allocated proportionately across each year to avoid an upward bias for years one and two, during which the vast majority of equipment purchases took place.

ALLOCATING NATIONAL PROGRAM OFFICE COSTS

Researchers from the Urban Institute worked with staff from the national program office to outline a strategy for distinguishing between demonstration and operations costs. Demonstration costs were associated with the development and dissemination of the model and general administration functions during the first three years of the initiative (approximately May 2000 to October 2003). Operations costs were associated with general administration during years four through seven (approximately October 2003 to March 2007) and the actual operation of the Reclaiming Futures program.

The Reclaiming Futures project sites were established two years after the national program office began its operations, or in year three of the initiative. During year three (midyear 2002 to midyear 2003), the 10 project sites and the national program office were functioning in the demonstration phase and transitioned to the operations phase in year four (midyear 2003 to midyear 2004).

The adopted strategy established the key categories of national program office costs (see Figure 1) and a simplifying series of decision rules (see sidebar page 11). National program office costs fall into one of four categories:

1. General administration
2. Operations and training
3. Dissemination and advocacy
4. Model development.

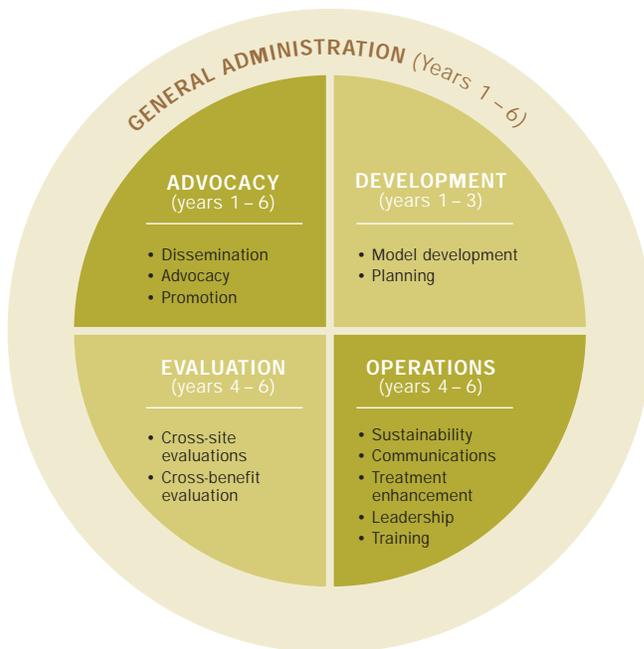
Line item expenditures from all national program office grants were assigned to these categories.

General administration includes the costs associated with staffing the national program office and providing coordination and general support for the endeavors of the project sites. Administrative costs are counted with the demonstration category during the first three years of the initiative and with the operations category during subsequent years.

Operations and training costs include leadership assistance, training, treatment enhancement grants, communications aimed to ensure program sustainability, and other expenditures associated with service provision.

Figure 1:

CATEGORIES FOR ESTIMATING THE COSTS OF THE RECLAIMING FUTURES NATIONAL PROGRAM





Dissemination and advocacy includes efforts to inform and influence policymakers and the community at large as well as efforts to disseminate the Reclaiming Futures model to other practitioners. Model development costs include expenditures associated with the planning and development of the Reclaiming Futures initiative during its first three years.

These categories were developed to isolate the costs of Reclaiming Futures by the function of each activity and can be aggregated into the more general categories of operations and demonstration as described below. Only operations costs were considered in the estimation of Reclaiming Futures cost-effectiveness.

General administration, operations and training fall under the operations cost of Reclaiming Futures—or the cost of running the national program office (see Figure 2). The applicable general administration costs, dissemination and advocacy, and the costs of developing the Reclaiming Futures model are captured under the demonstration element of Reclaiming Futures.

Line item expenditures from all national program office grants were allocated to one or more of these categories on the basis of a series of decision rules. In collaboration with the staff at the national program office, the Urban Institute team determined that general administration, dissemination and advocacy, and evaluation could occur at any point during the seven years of relevant national program office activities.

By contrast, costs related to the development of the Reclaiming Futures model occurred only during the first three years of the national program office, and operations and training occurred only during subsequent years until the seventh and last year of Phase I of Reclaiming Futures.

The only caveat to these decision rules related to communications, which could fall either into the dissemination and advocacy category (if dissemination and advocacy was the only purpose of the expenditures) or into operations and training (if the expenditures were intended to secure program sustainability and future funding, or if they were used to facilitate service provision).

Indirect costs, fringe benefits, supplies and utilities are allocated proportionately for each grant.

Decision Rules

- Demonstrations costs do not reflect the actual cost of providing services; these costs are not counted in the cost-benefit analysis.
- Operations costs reflect the actual cost of providing services.
- National program office demonstrations costs (i.e., planning/development) occur only during years one through three.
- National program office operations costs (operations/general administration) occur only in years four through seven.
- Costs outlined in site expenditure reports after the model development years, except for local evaluations, are generally attributable to operations.
- No costs after the March 31, 2007 budget period are included.
- Treatment improvement grants are included as site operations costs.
- Communications costs are determined on a site-by-site basis with the consideration that local communications may be attributable to operations (on the basis and advocacy).
- Year one (beginning May 2000) was the first year of Reclaiming Futures work for the national program office and year three (beginning March 2002) was the first year of work for the sites.
- General administration and management costs incurred during years one through three are attributable to demonstration; costs during years four through seven are attributable to operations.

Equipment expenditures (e.g., computers, furniture, televisions) occurred during the beginning stages of Reclaiming Futures, even though the equipment (durable goods) was actually consumed over a seven-year period. Thus, we summed equipment expenditures for all seven years and allocated the total proportionately across each year. These decision rules yielded the initial cost estimates. Initial estimates for all national program office grants were then sent to key national program office staff for review.

ALLOCATING COSTS FOR THE TEN RECLAIMING FUTURES SITES

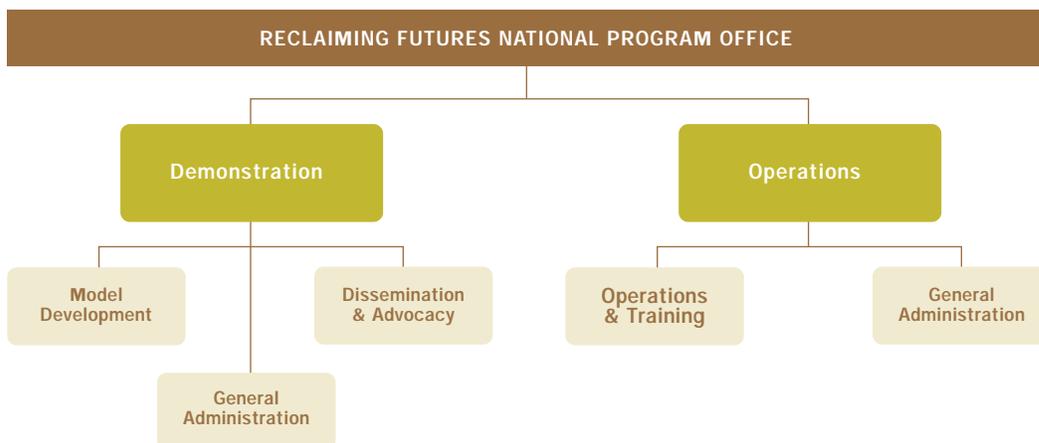
The strategy for addressing site-level costs is analogous to the strategy adopted for measuring national program office costs, with a few important differences. Each Reclaiming Futures project site received at least one planning grant, an implementation grant, a treatment enhancement grant, and a communications grant. Five of the original 10 sites received an additional grant to support their local evaluation activities. Separate grants were also awarded for implementation of the Global Appraisal of Individual Needs assessment tool. Site-level costs are counted for this study only if they were incurred during phase I of the Reclaiming Futures initiative (i.e., through March 31, 2007).

The decision rules for allocating costs within the project sites was similar to the rules used to allocate national program office costs (Figure 3). Model development expenditures were defined as those occurring between March 2003 and October 2003, depending on the particular site. Operations and training expenditures occurred only during subsequent years and included treatment enhancement grants, and where applicable a uniform portion of the activities pursued with Global Appraisal of Individual Needs grants (not all sites utilized this funding). Dissemination and advocacy costs occurred over the entire grant life of each project site.

The expenditures associated with the local evaluations carried out by five sites are allocated separately in a local evaluation category. As with the national program office, communications expenditures could fall either into the dissemination and advocacy category (if dissemination and advocacy was the only purpose of those expenditures) or into the operations and training category (if the expenditures were intended to secure program sustainability and future funding). Sites usually used communications grants for dissemination and advocacy while using their operations and training grants for sustainability-oriented activities.

Figure 2:

ACTIVITIES UNDER THE JURISDICTION OF THE RECLAIMING FUTURES NATIONAL PROGRAM OFFICE



As discussed above, site-level activities lag the national program office activities by about two years (*Figure 4*). Thus, the first two years of site activity correspond to years three and four of the overall initiative. Unlike the national program office, the project sites did not have a cost allocation category for general administration—these expenditures were accounted for either by the national program office or by site-level administrative overhead that was already provided by existing institutions. The operations category covers the operational elements of site activities and the model development and dissemination and advocacy categories describe the demonstration element of the sites.

As noted, there were some activities undertaken by the local sites that were funded by grants not administered through the national program office. Grants supporting the coordination of local evaluations and those associated with implementation of the Global Appraisal of Individual Needs assessment tool were not administered through the national program office. In sites that received Global Appraisal of Individual Needs grants, the funds were used to develop and operationalize new screening and assessment tools. In those six sites (Chicago, Kentucky, New Hampshire, Multnomah County, Rosebud and Santa Cruz), an additional \$38,224 was allocated to the operations and training category. Additional local evaluation coordination grants

awarded to Chapin Hall at the University of Chicago were allocated in equal portions (\$11,598) to the evaluation category in the five sites that participated in local evaluations—Chicago, Kentucky, Santa Cruz, Seattle and New Hampshire.

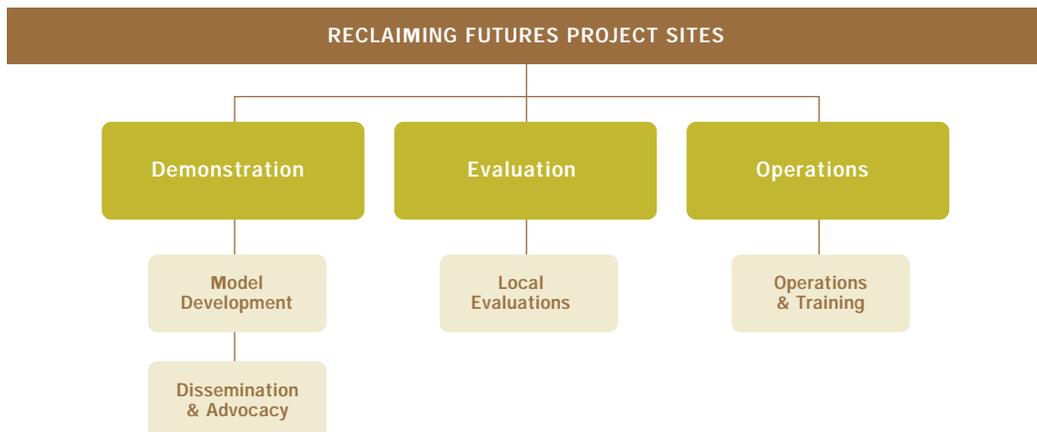
Occasionally, project sites requested that some of their unused funds be transferred or adjusted to the subsequent grant period. For example, a site that did not use all of the funds from its planning grant could request permission to transfer the unused funds to the subsequent implementation grant.

Following the accounting methodology used by the Robert Wood Johnson Foundation, this adjustment appeared as a positive expenditure in the financial report for the first grant and as a negative expenditure in the financial report for the subsequent grant. For the purposes of this study, positive expenditures indicating such adjustments are disregarded while negative expenditures are listed as positive contributions in the grant to which they were transferred.

This amounts to translating the expenditure from an accounting cost to an economic cost. For sites that had adjustments, one side effect of this decision is that the economic costs described in this report may not match exactly the amount of expenditures listed in the project’s financial reports.

After all costs were identified and allocated across categories, the resulting estimates were sent

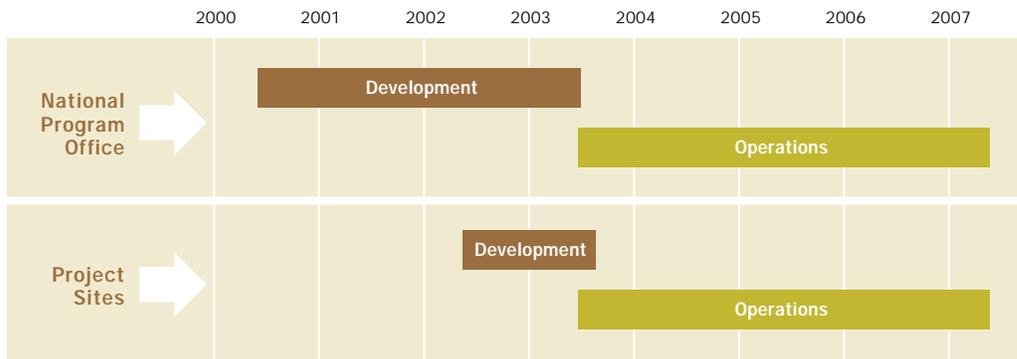
Figure 3:
ALLOCATION OF SITE-SPECIFIC COSTS



to each of the project sites for review. Project directors were asked to confirm both the amounts of the expenditures and the allocations of the expenditures into categories. Changes to the initial allocations were few and relatively small in magnitude, perhaps signifying the appropriateness of the decision rules.⁴ A follow-up call was made to each of the directors to discuss and clarify estimates, particularly communications expenditures.

4 Correspondence with the project sites indicated possible discrepancies between the Robert Wood Johnson Foundation financial records and site financial records in Santa Cruz (\$49,596) and Alaska (-\$32,548). The source of the Santa Cruz discrepancy could not be determined, but the difference in Alaska appeared to be due to corrections pending at the time of reporting. For the purposes of the analysis, in the interest of consistency and given the relatively small magnitude of the discrepancies, this report relied on the amounts provided by the Robert Wood Johnson Foundation.

Figure 4:
PROJECT TIMELINES



3

SECTION THREE

Costs

The Reclaiming Futures initiative cost \$28.8 million (Table 2). All national program office expenditures added to \$11.4 million, including \$5.6 million on operations and \$5.8 million in demonstration costs. Site-level expenditures total slightly more, \$15.3 million. Expenditures occurred primarily in operations (\$11.1 million) in addition to \$2.3 million for demonstration and \$1.9 million for evaluation. In addition to national program office and site expenditures, \$2.1 million was spent on evaluation activities funded directly by the Robert Wood Johnson Foundation. The \$16.7 million in operations expenditures is used as the cost estimate in this cost-effectiveness analysis.

Table 2:

DISTRIBUTION OF RECLAIMING FUTURES COSTS

Description	Operations	Demonstration	Evaluation	TOTAL
National Program Office	\$5,601,570	\$5,784,787	–	\$11,386,357
Ten Reclaiming Futures Sites	\$11,117,671	\$2,301,901	\$1,905,790	\$15,324,552
National Evaluation	–	–	\$2,100,247	\$2,100,247
TOTAL	\$16,719,241	\$8,085,878	\$4,006,037	\$28,811,156

NOTE: Costs were allocated according to a set of decision rules jointly agreed upon with the national program office. Site-level costs include grants awarded to the sites directly from the Robert Wood Johnson foundation that did not pass through the national program office, including grants to implement the Global Appraisal of Individual Needs and local evaluation grants in five sites.

3

Costs

COSTS ASSOCIATED WITH THE NATIONAL PROGRAM OFFICE

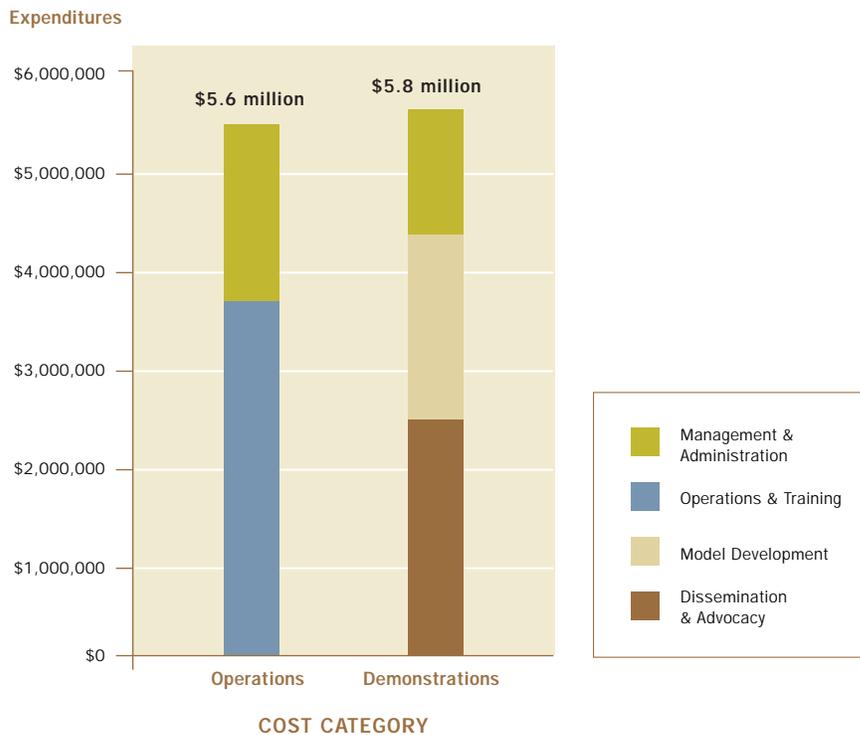
As discussed above, the national program office incurred costs in both the demonstration and operations components of Reclaiming Futures (Figure 5).

The demonstration element of Reclaiming Futures includes model development and planning activities, dissemination and advocacy activities and administrative activities during years one through three. Model development and planning activities were undertaken during the first three years until approximately mid-2003. Advocacy and dissemination of the Reclaiming Futures model transpired throughout each of the program's seven years. Costs associated with demonstration total to \$5.8 million, including \$1.9 million for model develop-

ment, \$2.5 million for dissemination and advocacy and \$1.4 million for administrative activities.

The operations element includes operations and training activities as well as general administration and management of the national program office (years four through seven). Operations activities occurred only during the last four years of the program until approximately mid-2007. Operations costs formed the largest portion of national program office expenditures and total \$5.6 million, including \$3.8 million for operations and training and \$1.8 million for general administration and management of the national program office.

Figure 5:
NATIONAL PROGRAM OFFICE COSTS



NOTE: Demonstration costs for the 10 Reclaiming Futures sites generally include those costs that occurred during the first year the demonstration site was in operation (these costs generally occurred in the second year of the Reclaiming Futures demonstration).

3

Costs

COSTS ASSOCIATED WITH THE TEN RECLAIMING FUTURES SITES

As with the national program office, the 10 project sites incurred costs in the demonstration and operations components of Reclaiming Futures (*Figure 6*).

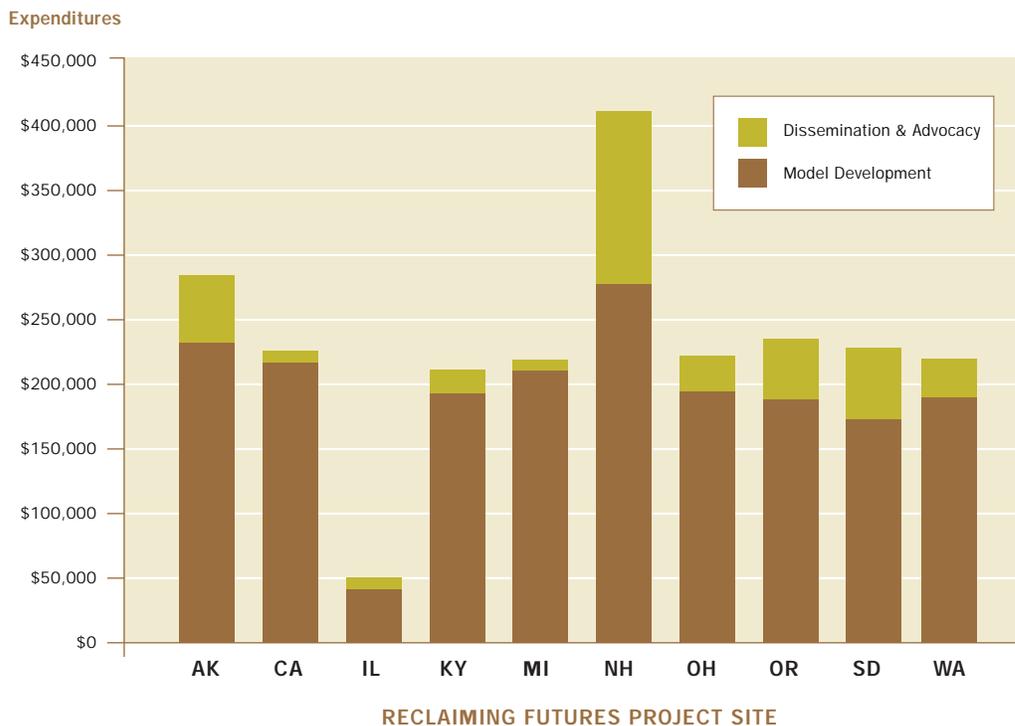
The demonstration element of Reclaiming Futures sites includes model development and planning activities and dissemination and advocacy activities. Model development and planning expenditures were incurred only during the first year of the sites, or until midyear 2003. Dissemination and advocacy expenditures were incurred over the entire span of each site's activities, from approximately March 2002 to March 2007 or later. Costs associated with demonstration total to \$2.3 million, including \$1.9 million on model development and \$.4 million on dissemination and advocacy. Some variation occurred in the level of expenditures across sites

because each site enjoyed some degree of latitude in its activities. Demonstration costs range from \$56,050 to \$409,346 with a mean of \$230,109.

The operations element of Reclaiming Futures sites includes operations and training activities (*Figure 7*). Operations expenditures were incurred only during the last four years (mid-year 2004 to late 2007). Site-level operations costs total \$11.1 million and range from \$799,815 to \$1.2 million across all the sites, with a mean of \$1.1 million and a standard deviation of \$142,561.

Evaluation expenditures for the five sites that received local evaluation grants—Santa Cruz, New Hampshire, Kentucky, Cook County and Seattle—sum to \$1.9 million (*Figure 8*). Site-specific expenditures range from \$261,862 to \$468,072, with a mean of \$381,158.

Figure 6:
DEMONSTRATION COSTS

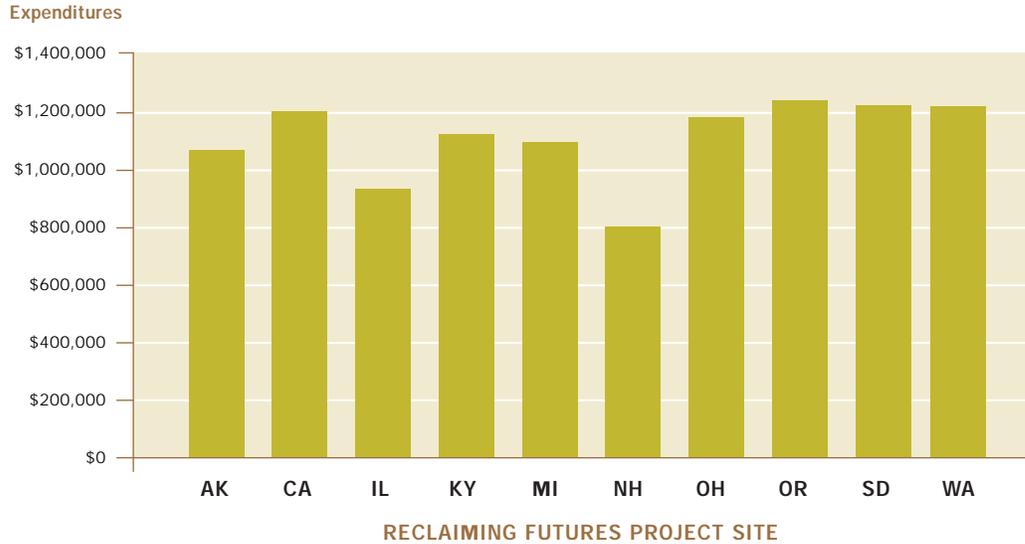


NOTE: Demonstration costs for the 10 Reclaiming Futures sites generally include those costs that occurred during the first year the demonstration site was in operation (these costs generally occurred in the second year of the Reclaiming Futures demonstration).

3

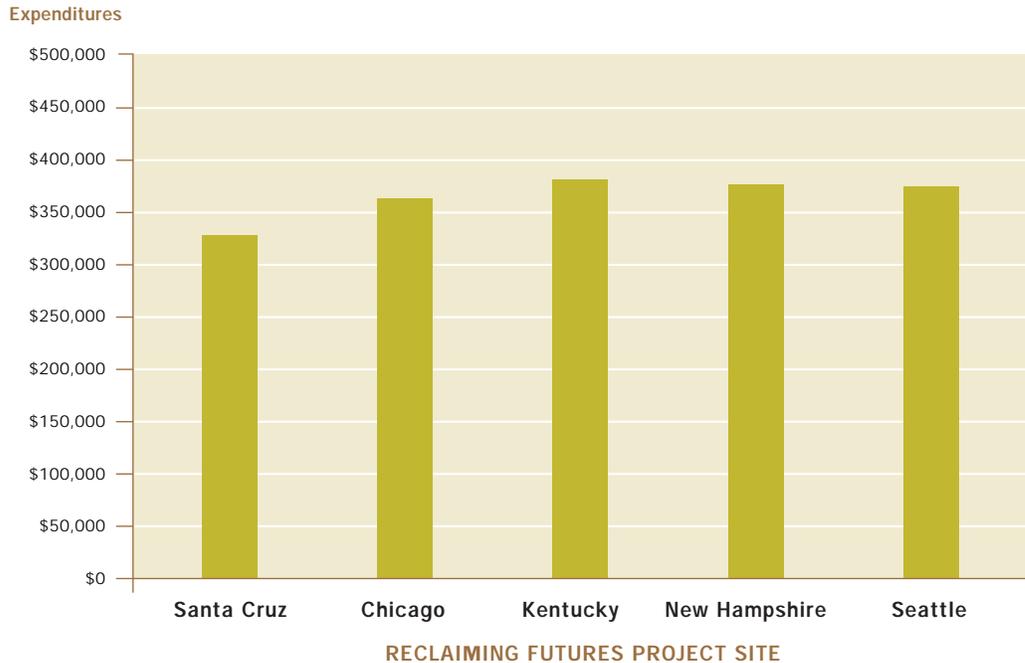
Costs

Figure 7:
OPERATIONS COSTS



NOTE: Operation costs for the 10 Reclaiming Futures sites generally include those costs that occurred during the second through fifth year of operation (these costs generally occurred in the third through sixth year of the Reclaiming Futures demonstration).

Figure 8:
EVALUATION COSTS



NOTE: Five reclaiming Futures sites received funding for a local evaluation. The local evaluation efforts were coordinated by Chapin Hall at the University of Chicago and were not directly linked to the national evaluation. In addition to the five sites that received funding for a local evaluation, a sixth site—Anchorage, Alaska—conducted its own local evaluation (costs associated with that evaluation are not included in this graphic).

4

SECTION FOUR

Benefits

Reclaiming Futures worked with youth who were involved in the juvenile justice system and were experiencing problems associated with their use of alcohol and other drugs. Intervening with this population would be expected to yield an array of benefits if the intervention led to more pro-social behavior, less crime, and less drug use.

The benefits could include desistance from substance use, engagement with more pro-social peers, improved family functioning, improved school attendance and other intermediate outcomes. In turn, these intermediate outcomes may yield many long-term outcomes, including better health, improved educational attainment, and higher wages.

All of these effects have potentially important consequences. However, only juvenile justice outcomes can be directly linked to changes in the ratings of system impact that were obtained from the stakeholder surveys conducted for the national evaluation of Reclaiming Futures. There is a large body of research literature linking participation in social service programs to changes in criminal activity, and this literature provides guidance on monetizing those benefits.

While there is literature linking the receipt of social services to changes in other (non-justice) behavioral outcomes, there is no analogous literature that provides guidance on monetizing such behavioral outcomes. As a result, this study concentrates on the benefits of Reclaiming Futures only in terms of its effects on criminal desistance.

If, as is likely true, the improvements reported in the stakeholder survey are associated with other improvements in functioning, then this analysis may severely underestimate the true benefits of Reclaiming Futures. While the disadvan-

tage of this very conservative approach is clear, it provides one small advantage—if Reclaiming Futures is found to be cost-effective in this analysis, even though important benefits are excluded, then our confidence in that finding can be even higher than would be true if a less conservative approach had been used.

The analysis proceeds as follows. First, it addresses how benefits from reduced offending are measured in the research literature. Then, it turns to the research literature itself to estimate the typical pattern of offending in a young population, such as the group served by Reclaiming Futures. Next, the report develops estimates of the costs associated with each component of offending—victims' cost, costs of arrest, adjudication, and detention. Ultimately, the analysis uses these data to construct an estimate of the total harm likely to have been caused by an individual once they have been arrested. Once this estimate has been determined, the analysis turns again to research literature to develop an estimate of the changes in criminal behavior that may have occurred as a result of Reclaiming Futures given the results of the stakeholder surveys. The final section of this analysis estimates the overall cost-effectiveness of the Reclaiming Futures initiative.

4

ESTIMATING THE BENEFITS FROM REDUCTIONS IN CRIMINAL ACTIVITY

Unlike private sector ventures, the goal of Reclaiming Futures is not to yield a return on investment by increasing revenues as a result of expenditures. Rather, the goal is to improve the outcomes for at-risk juveniles and, as a result, to reduce the burden on the public from offending. The appropriate benefits to consider, therefore, are those associated with reduced offending, even though those benefits do not accrue to Reclaiming Futures.

There are two principal groups that would benefit from reduced offending: (1) private citizens, whose harms are reduced as the number and/or severity of crimes are reduced; and (2) public agencies, who would have to spend less to investigate, arrest, and supervise the individual participants who desist earlier from expected offending.

New crimes committed by juveniles generate large costs for both the public and the juvenile justice system. These costs include victimization costs, which accrue to private citizens, and costs associated with the arrest, prosecution, and incarceration of the offender. Estimates of the cost of crime committed by youth are based upon the framework and methodology developed by Cohen (1998).

The total costs of crime are estimated as follows:

$$\text{Cost of Crime} = \text{Victim Cost}_i + \text{Pre-Sentence Cost}_i + \text{Post-Sentence Cost}_i$$

where Victim Costs include all of the harms including tangible (out-of-pocket) and intangible (quality of life) costs of victimization, Pre-Sentence Costs include the costs of investigating, arresting and adjudicating a youth, and Post-Sentence Cost is the present value of detaining an adjudicated youth. The subscript *i* denotes that the total cost is summed over all types of crime.

Types of Offenses Committed by Juvenile Offenders

The first step in estimating the benefits of crimes averted by Reclaiming Futures is to identify how youth crime is distributed across crime types. Ultimately, the goal is to estimate how many arrests *do not* occur, and to apply that number to a cost-per-arrest estimate obtained from research literature. Moreover, for each 1,000 arrests, the analysis needs to determine how many are arrests for robbery (an expensive crime) compared to vandalism (a much less expensive crime). The distribution of crimes is estimated using national data (*Table 3*). Given a single arrest, for example, the analysis assumes that there is a 14.8 percent chance that the arrest was for a larceny and a 2 percent chance it was for motor vehicle theft.

The next step is to multiply each type of crime by the costs associated with that particular crime. Before doing so, the analysis adjusts the data in *Table 3* to account for two issues. First, the rate at which an arrest occurs varies by crime type, and this rate must be factored into the analysis. Second, there are more crimes committed than crimes reported. Thus, the analysis must convert the number of arrests to actual offenses committed, and then correct for arrest rates to yield the estimated cost per arrest.

First, the distribution of arrests by offense type, along with a five-year average of arrest clearance rates reported by the FBI Uniform Crime Reports, is used to estimate the likely number of reported offenses per arrest. The FBI clearance rate provides the number of cases closed per reported offense. The analysis makes three assumptions in using this data. First, it assumes just one arrest per case closed—although a single case closure may result in multiple arrests—and conversely, that a single arrest may result in the closure of multiple cases.

Second, the study relies on clearance rates for adults (age 18 and older) as there are no national data on juvenile clearance rates. The analysis assumes that juveniles have the same clearance rate as adults.

Third, in order to include the highest possible number of crime categories, the study assumes that simple assaults have the same clearance rates

Table 3:
DISTRIBUTION OF CRIMES PER ARREST

Crime Category	Likelihood	Crime Category	Likelihood
Sexual Assault/Rape	0.2 %	Other Assaults	10.8 %
Robbery	1.2	Stolen Property	1.1
Aggravated Assault	2.8	Vandalism	4.8
Burglary	3.8	Drug Abuse Violations	8.7
Larceny	14.8	Weapons	1.7
Motor Vehicle Theft	2.0	Other	47.7
Arson	0.4		

SOURCE: Federal Bureau of Investigation (2006).

NOTE: 'Other' crimes represent status offenses (alcohol violations, run-aways) and minor offenses.

as other assaults, and that arson, other property crimes, and drug abuse violations have the same clearance rates as property crimes.

Next, the analysis must account for unreported crimes using data from the National Victimization Survey. Data from the survey are used to calculate the ratio of reported crimes to all crimes, by type (National Victimization Survey, 2004). Crimes are broken down into person and property offenses. Some crime types are more likely to go undetected as opposed to unreported. For instance, weapon and drug violations are not reported in the same way a robbery is, as there is no victim. Thus, the analysis relies on other data sources to account for crimes likely to go undetected. With respect to drugs, the study uses Bhati, et al. (2008), which places the number of drug offenses (i.e., each use of illegal drugs) per arrest at approximately 4,000.

Weapons violations pose an additional dilemma. Since no estimates exist for the number of weapons violations per arrest, the study uses the percentage of weapons violations among juveniles. The analysis employs the Rochester Youth Development Study, a longitudinal study investigating the development of delinquent behavior,

drug use, and related behaviors among a group of urban adolescents. According to the Rochester Youth Development Study, 5 to 10 percent of urban youth are carrying a gun on the street at any given time (Lizotte, 2001). The study compared a 7.5 percent carrying rate with the rate of arrests for weapons violations among juveniles (Synder, 2006) to obtain the likely number of weapons violations per arrest (*Table 4*).

The first column in *Table 4* provides the distribution of arrests, which is the same as in *Table 3*. The next column contains the number of arrests per offense, and the third column includes the percentage of crimes reported. The final column provides the number of crimes committed per arrest. For example, for every 100 arrests, 15 will be for larceny. However, only 18 percent of reported larcenies result in a larceny arrest. Therefore, the 15 larceny arrests actually represent about 82 reported larcenies. Moreover, only 38 percent of larcenies are reported. Therefore, the 82 reported larcenies represent 216 larcenies that actually occurred for every 100 general arrests. Thus, for every general arrest, there are 2.16 larcenies.

Table 4:
DISTRIBUTION OF RECLAIMING FUTURES COSTS

Type of Crime	Distribution of Arrests ¹	Reported Offenses Per Arrest ¹	Percent Crimes Reported ²	Crimes per Arrest
Rape	0.0019	0.53	0.48	0.0075
Robbery	0.0116	0.44	0.38	0.0694
Aggravated Assault	0.0279	0.56	0.48	0.1038
Simple Assault	0.1078	0.26	0.38	1.0911
Burglary	0.0384	0.18	0.13	1.6410
Larceny	0.1479	0.18	0.38	2.1623
Motor Vehicle Theft	0.0197	0.13	0.38	0.3988
Arson	0.0037	0.15	0.38	0.0649
Stolen Property	0.0112	0.15	0.38	0.1965
Vandalism	0.0475	0.15	0.38	0.8333
Other	0.477	0.15	0.38	8.3684
Drug	0.0873	–	0.0003	349.2000
Weapons	0.0174	–	0.012	1.4494
TOTAL	1.00	–	–	365.6000

¹ Federal Bureau of Investigation ² National Crime Victimization Survey.

Based on such estimates, it is possible to conclude that there were more than 365 crimes reported for each arrest. However, these numbers are driven largely by drug and weapons crimes. Excluding those crimes, there are 14.9 crimes per arrest. This number is similar to estimates in the research literature. For example, Cohen (1998) estimated an average of 15 offenses per police contact for Philadelphia youths through age 26.

COSTS ASSOCIATED WITH NEW JUVENILE OFFENDING

In order to estimate the cost of a general arrest, the analysis sequentially estimates the costs of each stage of case processing for a given type of crime. First, victimization costs are estimated for

each crime. Second, the total cost of a processing a crime through the juvenile justice system is estimated. Third, the total cost of sentencing, including the costs associated with the use of detention, rehabilitation and parole are estimated.

Cost to Victims of New Offending

As discussed above, one of the key benefits of reduced criminal activity among the youth served by Reclaiming Futures was the benefit to private citizens when they experience declines in the rate and/or severity of crimes. To estimate these benefits, the study first estimates the unit cost (per crime cost) of crime victimization. The unit cost of victimization has two components: tangible costs and intangible costs.

Table 5:
VICTIMIZATION COSTS

	Victim Costs (Tangible and Intangible)
Rape	\$104,550
Robbery	30,250
Aggravated Assault	37,460
Simple Assault	4,660
Burglary	2,070
Larceny	819
Motor Vehicle Theft	5,700
Arson	60,000
Stolen Property	820
Vandalism	820
Other (status offense)	0
Drug Abuse Violations	0
Weapons Violations	0

NOTES: Estimates in this table generally follow Cohen, Miller and Rossman (1994). Where data were unavailable, the analysis used Bhati (2008) and Cohen (1998). "Police/fire services" costs are subtracted from victim costs in order not to double count with the estimation of criminal justice costs. In addition, Cohen's costs include the risk of homicide that exists across violent crime categories. Thus, homicides are included indirectly through the risk of homicide that exists in armed robberies, assaults, etc.

Tangible costs of crime include direct costs of victimization such as medical bills, rehabilitation costs, and lost wages from being unable to work. Intangible costs include psychological harm associated with victimization, such as fear, pain, and suffering. The study uses data from prior research to estimate the costs of victimization and to estimate the benefits of Reclaiming Futures. The true costs of victimization cannot be empirically observed (for this or any other study) given exist-

One of the key benefits of reduced criminal activity among the youth served by Reclaiming Futures was the benefit to private citizens when they experience declines in the rate and/or severity of crimes

ing data. In particular, the intangible costs of victimization—costs associated with fear or changes in behavior due to crime—are hard to measure. Debate continues as to the best method to estimate the cost of crimes to victims, and different methods have been employed including using aggregate data (Anderson, 1999), data from jury verdicts (Cohen, Miller and Rossman, 1994), and surveys of the general population (Cohen, 2004).

The most vetted method relies on estimates developed from jury award data. This analysis uses an average of the victim cost estimates from two of the most widely cited studies (Cohen, Miller and Rossman, 1994; Cohen, 1998). As the studies do not estimate a cost of crime to victims for all crime categories, the analysis also follows the estimates in Bhati, Roman and Chalfin (2008) to estimate victim costs for vandalism, stolen property and drug offenses. In addition, it assumes that victimless crimes (e.g., status offenses, weapons possession violations and drug possession) have a victim-cost of zero (Table 5).

Table 6:**PRE-SENTENCE COST OF ARREST**

Offense	Cost of Arrest	Cost of Detention	Cost of Adjudication	Percent Detained	TOTAL
Rape	\$4,910	\$699	\$11,725	24.9%	\$14,230
Robbery	2,863	699	5,862	24.9	\$8,078
Aggravated Assault	2,819	699	5,862	24.9	\$7,038
Simple Assault	687	699	5,862	24.9	\$4,085
Burglary	687	515	5,862	17.2	\$5,348
Larceny	687	515	2,931	17.2	\$2,065
Motor Vehicle Theft	687	515	5,862	17.2	\$5,407
Arson	687	515	5,862	17.2	\$4,703
Stolen Property	687	515	2,931	17.2	\$2,974
Vandalism	687	515	2,931	17.2	\$2,300
Other	687	515	2,931	21.6	\$2,528
Drug Abuse Violations	687	552	5,862	19.6	\$4,371
Weapons	687	552	5,862	21.6	\$4,323

SOURCE: Roman, et al. (1998); Snyder and Sickmund (2006:169).

Pre-Sentence Costs

The benefits of Reclaiming Futures for public agencies are estimated in this analysis as the average unit cost of investigating, arresting, adjudicating and detaining juvenile offenders.

Pre-sentence costs include the cost of arrest, detention and adjudication. Costs per arrest are taken from Roman and his colleagues (1998). The study assumes an arrest cost of \$687 for other offenses, adjusted for 2008 dollars (*Table 6*).

Post-Sentence Costs

Post-sentence costs include those associated with detention and adjudication (*Table 7*). The study obtained national data on the probability of detention and the length of detainment per offense (Snyder, 2006) and the daily cost of detention (Aos, 2001). To calculate adjudication costs, the analysis employed data on the probability of adjudication per offense (Snyder, 2006) and the costs of adjudication (Roman et al., 1998). Sentencing costs include those associated with juvenile probation and placement in residential facilities and correctional institutions (*Table 8*). The study estimated the probabilities of all forms of supervision and placement per offense (Snyder, 2006) as well as the costs per facility (Aos, 2001). For cases in which a juvenile is adju-

Table 7:
CASE PROCESSING PROBABILITIES

Offense	Percent of Cases Petitioned	Percent of Petitioned Cases Adjudicated Delinquent	Percent Placed on Probation	Percent Detained	Percent Placed (Institutional Rehabilitation)	Other (Community Service, Restitution)
Rape	78.0	68.0	39.0	15.0	24.0	22.0
Robbery	86.0	64.0	42.0	16.1	25.9	16.0
Aggravated Assault	69.0	67.0	28.0	10.8	17.2	44.0
Simple Assault	55.0	61.0	22.0	8.4	13.6	56.0
Burglary	78.0	75.0	27.0	10.4	16.6	46.0
Larceny	44.0	67.0	19.0	7.3	11.7	62.0
Motor Vehicle Theft	79.0	71.0	35.0	13.4	21.6	30.0
Arson	67.0	63.0	21.0	8.1	12.9	58.0
Stolen Property	75.0	62.0	30.0	11.5	18.5	40.0
Vandalism	52.0	65.0	17.0	6.5	10.5	66.0
Other	59.0	69.0	24.0	9.2	14.8	52.0
Drug Violations	61.0	68.0	18.0	6.9	11.1	64.0
Weapons	60.0	69.0	22.0	8.4	13.6	56.0

SOURCE: Snyder and Sickmund (2006), pages 172–174. The probabilities of adjudication and placement are used to calculate total expected cost of placement.

icated delinquent, yet given a lesser sentence such as community service or restitution, the analysis assumes a sentencing cost of zero.

To calculate the total cost of an average juvenile arrest, case-processing and incarceration costs were weighted by the distribution of offense types per arrest. Victim costs were weighted by the distribution of actual crimes committed per arrest. Thus, the cost of a general arrest takes into account the costs of processing, sentencing, and incarceration for a robbery, weighted by the likelihood that a general arrest will be for a robbery, as well as the victim costs for the number of actual robberies that occur which do not result in an arrest (Table 9). Using national data for the distribution of offenses (Snyder, 2006), the study then calculated the total expected cost to society for the typical arrest of a typical juvenile, or \$28,815.

The final step in assessing the cost effectiveness of Reclaiming Futures is to estimate the change in arrests that can be attributed to Reclaiming Futures. The study developed estimates of the probability of subsequent arrests (or, recidivism) for youthful offenders and the expected change in that probability for Reclaiming Futures participants across all project sites.

4

Benefits

Table 8:
EXPECTED COST OF PLACEMENT

Offense	Mean Days of Placement			Cost of Placement per Day			TOTAL COSTS
	Detention	Rehab/ Institution	Probation	Detention	Rehab/ Institution	Probation	
Rape	19	148	207	\$161	\$191	\$10	\$5,945
Robbery	19	148	207	\$161	\$191	\$10	\$6,644
Aggravated Assault	19	148	207	\$161	\$191	\$10	\$3,720
Simple Assault	19	148	207	\$161	\$191	\$10	\$2,121
Burglary	14	105	207	\$161	\$191	\$10	\$3,318
Larceny	14	105	207	\$161	\$191	\$10	\$1,177
Motor Vehicle Theft	14	105	207	\$161	\$191	\$10	\$4,124
Arson	14	105	207	\$161	\$191	\$10	\$1,862
Stolen Property	14	105	207	\$161	\$191	\$10	\$2,930
Vandalism	14	105	207	\$161	\$191	\$10	\$1,207
Other	14	51	207	\$161	\$191	\$10	\$1,104
Drug Violations	15	97	207	\$161	\$191	\$10	\$1,461
Weapons	5	97	207	\$161	\$191	\$10	\$1,782

SOURCE: Snyder and Sickmund (2006: 215); Aos (2001: Table IV-H, IV-D). Total expected cost of placement calculated by multiplying the total cost of each placement option by the probability of receiving that placement option if arrested, and then summing across the options. Probabilities of placement are in table 2.5.

4

Benefits

Table 9:
TOTAL COST OF AN ARREST

Offense	Pre-Sentence		Post-Sentence		Arrest	Victim	TOTAL
	Total Cost	Exp. Cost	Total Cost	Exp. Cost	Exp. Cost (Pre + Post)	Exp. Cost	
Rape	\$14,230	\$27	\$5,945	\$11	\$38	\$781	819
Robbery	8,078	94	6,644	77	171	2,099	2,269
Aggravated Assault	7,038	196	3,720	104	300	3,888	4,188
Simple Assault	4,085	440	2,121	229	669	5,084	5,754
Burglary	5,348	205	3,318	127	333	3,397	3,730
Larceny	2,065	305	1,177	174	479	1,771	2,250
Motor Vehicle Theft	5,407	107	4,124	81	188	2,273	2,461
Arson	4,703	17	1,862	7	24	3,895	3,919
Stolen Property	2,974	33	2,930	33	66	161	227
Vandalism	2,300	109	1,207	57	167	683	850
Other	2,528	1,206	1,104	526	1,732	0	1,732
Drug Violations	4,371	382	1,461	128	509	0	509
Weapons	4,323	75	1,782	31	106	0	106
TOTAL							\$28,815

5

SECTION FIVE

Changes in Offending

The final step in assessing the cost effectiveness of Reclaiming Futures is to estimate the change in arrests that can be attributed to Reclaiming Futures. The study developed estimates of the probability of subsequent arrests (or, recidivism) for youthful offenders and the expected change in that probability for Reclaiming Futures participants across all project sites.

The first task was to estimate the baseline recidivism rate and to compare it with the final recidivism rate. Next, responses from national evaluation surveys were used to estimate the change in recidivism that would be expected in a community with a given quality of treatment. The Treatment Effectiveness Index from the first set of surveys (Wave 1) was employed to adjust the baseline recidivism rate. Then, a final recidivism rate was estimated from the measured changes in the Treatment Effectiveness Index, from Wave 1 to Wave 6 of the survey.

ESTIMATING RECIDIVISM WITH THE SURVEY INDEX

The Treatment Effectiveness Index provides an estimate of how well the treatment resources available in each community met substance abuse, mental health, and other related needs of youth involved with the juvenile justice system. Higher scores on this index suggest better outcomes for youth, while lower scores suggest poorer outcomes. While this index provides important information on how the effectiveness of treatment changed over the course of Reclaiming Futures, it is insufficient by itself to conduct a formal cost-benefit analysis. To conduct such an analysis, these expert perceptions of treatment effectiveness are linked to estimates of,

and changes in, recidivism. Costs can be monetized using the arrest costs estimated earlier in this report.

One way of establishing the link between the survey's Treatment Effectiveness Index and recidivism rates is to rely on meta-analyses of delinquency interventions (Lipsey and Wilson, 2001). Vanderbilt University researchers have compiled a comprehensive database of controlled studies on the impact of treatment effectiveness on delinquent and criminal activity. The outcomes of the studies are measured as a change in recidivism when compared to a control group (or, effect size). The key outcome is whether or not an individual was arrested, 12 months after receipt of an intervention. The Vanderbilt dataset provides a full range of recidivism rates across a variety of programs and across programs with varying effectiveness. Effect sizes can be negative when programs are associated with an increase in recidivism, or positive when programs result in less recidivism. To be conservative, this study used the 10th and 90th percentiles of the effect size distribution (10th = -0.09, 90th = 0.23), thereby removing outliers which have extreme positive or negative impact. The analysis used effects in this range to convert the expert perceptions of treatment effectiveness into estimates of recidivism.

5

To begin the conversion, the analysis first assumed that the range of the Treatment Effectiveness Index (-10 to +10) corresponds to the full range of outcomes captured by the Vanderbilt database. In other words, the study assumed that the worst score in the Treatment Effectiveness Index would correspond to the worst effect size in the Vanderbilt database. Since the lowest effect size implies the lowest degree of treatment effectiveness, this appeared to be a valid assumption. Given this assumption, the study then assigned effect sizes for the 10th and 90th percentiles to the end points of the scale (i.e., the worst effect size becomes -10 and the best effect size becomes +10).

Next, effect sizes were converted into recidivism rates. An effect size represents the recidivism of a treatment group relative to a control group. To estimate the recidivism rate at baseline across each Reclaiming Futures site, the study estimated an expected recidivism rate for the control group. The analysis assumed a national average recidivism rate of 55 percent (Synder, 2006), meaning that slightly more than half of arrested juveniles will be arrested again within one year.

This method was used to calculate a baseline recidivism rate for each project site. For example, if a hypothetical site had reported a Treatment Effectiveness Index of -10 at baseline, the analysis would assume that the site had the worst effect size of treatment from the Vanderbilt database (-0.09), which would mean that juveniles engaged in a particular program would do worse than the control group after the program. Assuming that a control group would have had a recidivism rate of 55 percent, it is possible to conclude that juveniles who went through the program would have a recidivism rate of 64 percent. Conversely, if a site had a +10 at baseline, the analysis would assume an effect size of (0.23) and estimate a recidivism rate of 22 percent.

The final step in the conversion between expert perceptions and estimates of recidivism requires estimating recidivism at the end of the survey. In order to do this, the study mapped the project sites' movement along the Treatment Effectiveness Index onto the movement between the boundary values of recidivism. The analysis

adopted the most straightforward approach. It assumed that this relationship was linear, and re-scaled the two indexes so that a one-unit change in the Treatment Effectiveness Index equaled a one-unit change in expected recidivism, regardless of where a site began along the treatment effectiveness scale.

At the conclusion of all calculations, the study had calculated the mean, expected recidivism rates for Reclaiming Futures participants at each survey wave (*Table 10*). The study estimated that recidivism had been reduced across the 10 Reclaiming Futures sites from one to eight percentage points. Baseline recidivism rates range from 45 to 52 percent. By Wave 6, recidivism rates would have ranged from 40 to 46 percent.

5

Changes in Offending

Table 10:

PREDICTED RECIDIVISM PROPORTIONS

Site	2003	2004		2005		2006	Change
	Dec	Dec	June	Dec	June	June	
Alaska	0.47	0.46	0.45	0.44	0.45	0.42	-0.05
California	0.45	0.44	0.43	0.44	0.44	0.44	-0.01
Illinois	0.47	0.45	0.43	0.43	0.40	0.40	-0.07
Kentucky	0.46	0.47	0.43	0.43	0.43	0.41	-0.05
Michigan	0.47	0.44	0.42	0.43	0.45	0.44	-0.03
New Hampshire	0.49	0.49	0.48	0.48	0.46	0.45	-0.04
Ohio	0.49	0.50	0.45	0.45	0.43	0.41	-0.08
Oregon	0.47	0.46	0.47	0.43	0.43	0.44	-0.03
South Dakota	0.52	0.43	0.46	0.48	0.47	0.46	-0.06
Washington	0.48	0.46	0.46	0.44	0.45	0.45	-0.03

6

SECTION SIX

Economic Impact

As discussed above, a typical cost-benefit analysis estimates the ratio of costs and benefits. In order to estimate total benefits, it is necessary to multiply the amount of the benefit by the number of individuals who experienced the benefit. This analysis estimates that a one-unit improvement in recidivism (i.e., one averted juvenile arrest) is valued at \$28,000. The study, however, cannot observe how many youth were actually served by Reclaiming Futures because the initiative was based on a broad, system-reform strategy. Thus, the analysis cannot directly estimate the ratio of costs and benefits. It can, however, solve for the number of youth who *would* have had to be served by Reclaiming Futures in order for the demonstration to break even, or for its benefits to have matched its costs.

In this section, the analysis develops estimates for the break-even number of youth who would have had to be served by Reclaiming Futures-related programs in order for the Reclaiming Futures initiative to be cost-effective. To do so, the discussion compares the costs of service provision with the social costs of the crimes prevented by the estimated reductions in the recidivism rate in each project site. Given that there is some uncertainty in the results due to the number of assumptions required by the analysis, this section presents three estimates of break-even juvenile arrest rates by site. The study also performed sensitivity analyses to test the assumptions about the baseline recidivism rates in each site.

ESTIMATING THE BREAK-EVEN RATE

The study calculates costs and benefits from a social welfare perspective, which considers benefits that accrue to society as a whole from a decrease in recidivism due to the program. Cost-effective-

ness is reached when the annual cost of operations matches the social benefits of reduced crime.

Thus, the break-even youth engagement rate (i.e., the number of juveniles who the program had to reach in order to be cost-effective) can be calculated with equation 6.1:

$$\text{Number of Youth} = \frac{\text{Cost of Operations}}{\Delta \text{ Recidivism Rate} \times \text{Arrest Rate} \times \text{Cost per arrest}}$$

where Number of Youth is the break-even youth engagement rate (e.g., the number of juveniles reached per year), Cost of Operations is the annual operations cost for each site, Recidivism Rate is the change in the recidivism rate, Arrest Rate is the number of arrests per juvenile for youth arrested at least once, and Cost per Arrest is the estimated social cost to society of a single arrest. The last three terms that make up the denominator represent the benefits of Reclaiming Futures.

In equation 6.1, the study calculates the number of youth as the ratio of costs to benefits of Reclaiming Futures. Thus, all else being equal, as the operating cost of Reclaiming Futures grows an ever-larger number of youth would have to be served by the program to break even. Alternatively, as the value of the harm prevented by Reclaiming Futures grows, fewer youth would have to be served for the initiative to offset its costs.

The study can observe all components of the cost and benefit estimates from available data, although the analysis must make some assumptions about how costs and benefits vary over time. The calculations assume that reductions in recidivism are constant; that is, each site has the same reduction in recidivism each year the pro-

gram is operating. By contrast, since the study has detailed budget data, it can allow the operating costs for each site to vary. Thus, the first step in calculating the break-even number of juveniles is to calculate the operations costs for each site, for each year (*Table 11*).

In *Table 11*, the study assigned operations costs to each period of the Reclaiming Futures initiative. The years 2003–2004, 2004–2005, and 2005–2006 each began in April and ended the following March, and thus are equivalent to an annualized cost. The final period includes costs between April 2006 and September 2007, or about 18 months of program operation. The costs shown in *Table 11* are costs to each site from both the site’s operations and the national program office’s costs for the period. While the sites costs were calculated directly from budget data, national program office costs could not be allocated in a similar manner. Instead, the study used

the total of all national program office operations costs between April 2003 and September 2007 and then proportionately allocated those costs across each site for each time period.

Next, the study calculated the number of offenses prevented by Reclaiming Futures to calculate the numerator in equation 6.1—i.e., the total value of prevented harm. In *Table 10*, the study reported the average reduction in recidivism across the 10 program sites. To determine the value of all harm from crime prevented by Reclaiming Futures, the analysis multiplied this recidivism rate by the average total costs associated with a single arrest (or, \$28,815).

Finally, before calculating the total number of youth needed to break even, the study must estimate how many arrests were prevented. First, the analysis estimated the proportion of youth who did not have an expected arrest due to participation in Reclaiming Futures as about 4.5 percent

Table 11:

OPERATIONS COST (PROJECT SITES AND NATIONAL PROGRAM OFFICE)

Site	2003 – 2004	2004 – 2005	2005 – 2006	2006 – 2007	TOTAL
Alaska	\$295,672	\$427,797	\$320,871	\$560,791	\$1,605,131
California	571,253	227,184	227,201	388,252	1,413,890
Illinois	478,695	388,198	398,874	526,273	1,792,039
Kentucky	443,644	454,038	439,961	358,399	1,696,042
Michigan	344,452	400,201	401,594	523,299	1,669,546
New Hampshire	102,309	286,798	409,861	403,829	1,202,797
Ohio	440,431	334,037	513,847	574,993	1,863,308
Oregon	462,919	393,102	345,240	631,496	1,832,757
South Dakota	506,277	384,139	441,008	484,533	1,815,957
Washington	495,512	498,081	445,532	388,652	1,827,776
TOTAL	\$4,141,164	\$3,793,574	\$3,943,988	\$4,840,516	\$16,719,242

NOTE: The first year column corresponds to approximately April 2003–March 2004, the second column to April 2004–March 2005, the third column to April 2005–March 2006 and the fourth column to April 2006–September 2007. Thus, the first three columns are equivalent to an annual cost, while the fourth column represents an 18-month period. Table values include the operations costs for each site for the given period and a proportionate allocation of all national program office operations costs for the same period.

across all sites and all time periods. Among the individuals who did not have an expected arrest, some likely had more than one arrest prevented, therefore, the analysis estimated an arrest rate which is number of arrests prevented for those with at least one prevented arrest.

The most conservative approach would be to assign an arrest rate of '1' for all youth, which would assume that when Reclaiming Futures prevented a youth from being arrested, it prevented one and only one arrest. It is more reasonable to assume that at least some of those who did not commit a new offense resulting in an arrest would have committed more than one new crime (and thus Reclaiming Futures prevented more than one new crime). To account for this, the study tested two arrest rates. The first rate (1.25) assumed that about 25 percent of youth with a prevented arrest actually had two prevent-

ed arrests. The second rate (1.50) assumed that about 50 percent of youth with a prevented arrest actually had two prevented arrests.

These calculations allowed the analysis to generate break-even numbers for each project site in each period of the Reclaiming Futures demonstration (*Table 12*). There are three notable sources of variation. First, it is evident that the break-even estimates are very sensitive to the study's estimates of recidivism reduction (*see Table 10*). For instance, based upon its survey results, the California site reduced recidivism by an estimated 1 percent, and thus needed to serve more than 1,000 youth each period to be cost-effective.

By contrast, the Ohio project site achieved an estimated reduction in recidivism of 8 percent, which means that it needed to serve fewer than 200 youth to be cost-effective. Second, the estimates are also sensitive to assumptions about the

Table 12:

NUMBER OF SERVED YOUTH NEEDED TO BREAK EVEN

Site	2003-2004			2004-2005			2005-2006			2006-2007		
	Crimes per Arrest 1.0	1.25	1.5									
Alaska	205	164	137	297	238	198	223	178	148	259	208	173
California	89	71	59	249	199	166	356	284	237	234	187	156
Illinois	1,757	1,406	1,171	1,333	1,066	889	1,530	1,224	1,020	1,121	897	747
Kentucky	268	214	179	227	182	152	200	160	133	244	195	162
Michigan	509	408	340	386	309	258	594	476	396	443	355	296
New Hampshire	398	319	266	463	370	309	465	372	310	404	323	269
Ohio	308	246	205	315	252	210	305	244	204	166	133	111
Oregon	208	166	138	168	135	112	173	138	115	152	122	101
South Dakota	283	227	189	113	90	75	113	90	75	128	103	86
Washington	573	459	382	576	461	384	515	412	344	300	240	200
TOTAL	3,194	2,555	2,129	2,926	2,340	1,950	3,042	2,433	2,028	2,489	1,991	1,659

NOTE: The first year columns correspond to approximately April 2003–March 2004, the second year columns to April 2004–March 2005, the third year columns to April 2005–March 2006 and the fourth column to April 2006–September 2007. Thus, the first three sets of columns are equivalent to annual figures, while the fourth set of columns represent an 18-month period. Table values are the number of youth who would have had to be served in each project site for the site to have been cost-effective (i.e., for benefits to outweigh costs).

Table 13:

BREAK-EVEN NUMBER OF YOUTHS ACROSS ALL PROJECT SITES, WITH OUTLIERS (TEN SITES), WITHOUT SITES (EIGHT SITES) AND AVERAGE

	2003–2004			2004–2005			2005–2006			2006–2007		
	Crimes per Arrest			Crimes per Arrest			Crimes per Arrest			Crimes per Arrest		
	1.0	1.25	1.5	1.0	1.25	1.5	1.0	1.25	1.5	1.0	1.25	1.5
10 Sites	319	256	213	293	234	195	304	243	203	249	199	166
8 Sites	59	99	82	148	118	99	140	112	93	124	99	83
Average	189	178	148	221	176	147	222	178	148	187	149	125

NOTE: The first year columns correspond to approximately April 2003–March 2004, the second year columns to April 2004–March 2005, the third year columns to April 2005–March 2006 and the fourth column to April 2006–September 2007. Thus, the first three sets of columns are equivalent to annual figures, while the fourth set of columns represent an 18-month period. Table values are the average number of youth who would have had to be served across all project sites for Reclaiming Futures to have been cost-effective (i.e., for benefits to outweigh costs).

number of arrests averted per youth. In general, if the averted arrest rate was 1.0, sites must serve 50 percent more youth to be cost-effective than if the averted arrest rate is assumed to be 1.5. Finally, the costs of operations include the cost of the national program office. Including the national program office costs—even though no youth were served by the national program office itself—increases the number of youth needed to be served by about 30 percent.

When analyses are very sensitive to their underlying assumptions, it is often more informative to examine the data at a more aggregated level (*Table 13*). The study adjusted the data to account for sensitivity by first averaging the break-even estimates across all sites. Second, it repeated the averaged estimates, but excluded the sites with the largest and smallest break-even numbers and then averaged the figures across the remaining eight sites.

The effect of dropping the outliers in the analysis was quite profound. When the two sites with the highest and lowest estimates are included, there is substantial variation across sites, across time periods, and across assumptions about rates of re-arrest. When the outliers are dropped, there is far less variation and the average number of break-even youth is generally stable over time.

Interestingly, the lowest break-even rate is observed in the first time period in the cell with the lowest arrest rate (which should yield the largest break even rate). This suggests that this assumption disproportionately affected the site with the largest break-even ratio. Overall, removing outliers appears to produce much more stable estimates.

BREAK-EVEN NUMBER

Given the variation by site, by time, and by assumption in this analysis, it is not prudent to identify a single estimate for the number of youth that would have to be affected by Reclaiming Futures for the initiative to be cost-effective. Instead, this study produced three estimates: high, medium and low. The high estimate is the average of the four estimates in *Table 13* of the break-even number of youth in each of the four time periods for an arrest rate of 1.0. Thus, the ‘high’ annual average is 205. Since there were 10 Reclaiming Futures sites conducting operations for four to five years, this number can be multiplied by 45 to yield a high estimate for the break-even number at about 9,200. The same procedure produces a ‘medium’ estimate of 7,700 and a ‘low’ estimate of 6,400.

SECTION SEVEN

Conclusion

The Urban Institute designed the national evaluation of Reclaiming Futures to detect change at the level of inter-organizational systems, and not at the level of individual youth behavior. This was in keeping with the goals of Reclaiming Futures itself, but it makes an economic analysis of the entire initiative quite challenging.

The potential economic benefits of the reforms inspired by Reclaiming Futures are achieved only through changes in youth behavior—i.e., from reduced delinquency and substance abuse. Previous studies, of course, have shown that it is possible to change adolescent behavior using high-quality programs and evidence-based interventions. If these interventions are provided by the agencies making up the juvenile justice and substance abuse treatment system, and if the functioning of this system improves as the result of a reform initiative, then it can be argued that the reform initiative may have an impact on youth behavior. Measuring this impact, however, is complicated at best.

The findings of the national evaluation of Reclaiming Futures suggest that the 10 communities involved in the pilot phase of the initiative did effectively change the operations of their service-delivery systems. The extent of these changes varied, but the evaluation results show that the systems for responding to justice-involved youth in most of the communities improved over time. The critical question for this study is about a cost-benefit threshold. If we infer the extent of individual behavior change from the size and direction of reported system change, and if we can estimate the number youth affected by such change, are the economic benefits of those changes sufficient to justify the costs of the reform initiative?

According to this study, the answer is “yes.” The analysis presented here suggests that even modest system changes may be enough to justify the costs of realizing those changes. The general finding from the study is that if a relatively modest number of youth had been served by the Reclaiming Futures initiative in each program site, then the reform initiative itself would likely have been cost-effective.

While there is no way to measure precisely the number of youth served by the various elements of the initiative and the extent to which their behavior actually changed, results from the national evaluation show that positive and important changes were reported in all 10 Reclaiming Futures communities regarding treatment delivery and effectiveness, cooperation and information-sharing among youth service providers, and family involvement in youth care. The preponderance of the evidence suggests that the Reclaiming Futures initiative was most likely cost-effective.

The ultimate goal of changing systems is to deliver better services to individual youth and to reduce the scope and consequences of the social problems associated with youth behavior. The causal chain is as follows:

1. Improving service systems leads to more effective policy and practice.
2. More effective policy and practice leads

- to higher-quality intervention.
3. Higher-quality intervention leads to better youth behavior.
 4. Better youth behavior leads to reduced social problems.
 5. Reduced social problems lead to economic benefits.

Most research in the field of juvenile justice and adolescent drug treatment focuses on the third, fourth, or fifth element in this causal chain. Very few studies address the first two elements, and no studies have attempted to gather sound evidence about the links between all five elements. The leaders of future system reform efforts must make the measurement of all five elements a clear objective if they wish to determine whether their programs actually achieve their goals.

Over several reports, we have documented the activities of Reclaiming Futures and the results of our studies, we believe, have supported the existence of an empirical relationship between the first two elements in the causal chain. In this report, we have used inference and estimation to connect these two elements with the latter elements.

While our results suggest that Reclaiming Futures has promising effects on behavior and that these effects are likely to produce economic benefits, there is no way for us to causally link the activities pursued as part of Reclaiming Futures to individual youth outcomes. To conduct such a study would have required far more time and resources and placed far greater administrative demands on the communities and service systems involved.

The general lesson from this study is that measuring system change without a commensurate effort to measure the individual behavioral effects associated with that system change can only produce ambiguous evaluation results. There is a common truism among program evaluators: success that cannot be measured cannot be replicated. Reclaiming Futures may have improved the lives of youth who were touched by the initiative. In fact, we believe that it did. Believing this and proving it, however, are two very different things.

In the future, reform initiatives that seek to change how agencies interact with one another

and with the public in community-justice partnerships would benefit from combining their efforts with evaluations that observe both the reform efforts and the behavior of youth affected by the reforms. Such an approach would benefit future reform initiatives in two important

The preponderance of the evidence suggests that the Reclaiming Futures initiative was most likely cost-effective.

ways. First, it would allow researchers to identify heterogeneous effects of programs. That is, in every intervention, some youth are more amenable than are others. Looking at individual outcomes allows policymakers to target scarce resources on the populations most likely to benefit. Second, looking at individual outcomes in the context of overall reform would allow policymakers and other system reformers to identify exactly how and where they are successful, and where they are not. Success stories are critical to sustainability. Avoiding repeated failures is equally important to sustainability.

SECTION EIGHT

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