



## The Multi-site Evaluation of the Serious and Violent Offender Reentry Initiative

### Approach for Conducting Cost, Cost-Effectiveness, and Benefit-Cost Analyses of SVORI Programs

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In 2003, the US DOJ, DOL, ED, DHUD, and DHHS funded 69 agencies to implement reentry programs for prisoners. The SVORI funding supports 89 programs nationwide that are being evaluated by RTI International and the Urban Institute.

The Multi-Site Evaluation team provides frequent, brief, and practical information on SVORI programs and interim evaluation findings through our *Reentry Research in Action* (RRIA) series of topical briefs. In this brief, we provide an overview of the cost analyses.

Decision-makers planning and funding reentry activities need to know how much reentry services cost and what benefits accrue to society as a result of these services. The multi-site evaluation of the Serious and Violent Offender Reentry Initiative (SVORI) provides an opportunity to examine different reentry programming models for the impact, costs, and benefits of reentry programming. This report outlines the cost analysis methodology that is being used as part of the multi-site evaluation.

Because of state-to-state variation, we will conduct separate analyses for each of the seven programs included in the cost analysis, focusing largely on the resources underwritten by taxpayers.

#### Goals of the Study

The study aims to answer the following interrelated questions:

- What is the cost of providing services to SVORI participants and comparable, non-SVORI offenders?
- What is the difference in costs between the services used by SVORI participants and those used by comparable, non-SVORI offenders?
- Given any improvements in outcomes identified in the SVORI impact evaluation, what is the dollar value associated with each improvement?
- Do the benefits of the services received by SVORI participants outweigh the costs?

#### Question 1: What is the cost of providing services to SVORI offenders and comparable, non-SVORI offenders?

Most SVORI programs either offer services directly to the offender—such as case management, counseling, or housing assistance—or assist the offender in obtaining services for which he is eligible. Given the scope of the Initiative, the varied uses of SVORI funds and the provision of services through other funding sources, we measure resources actually used in delivering services to SVORI participants rather than track grant funds allocated to SVORI.

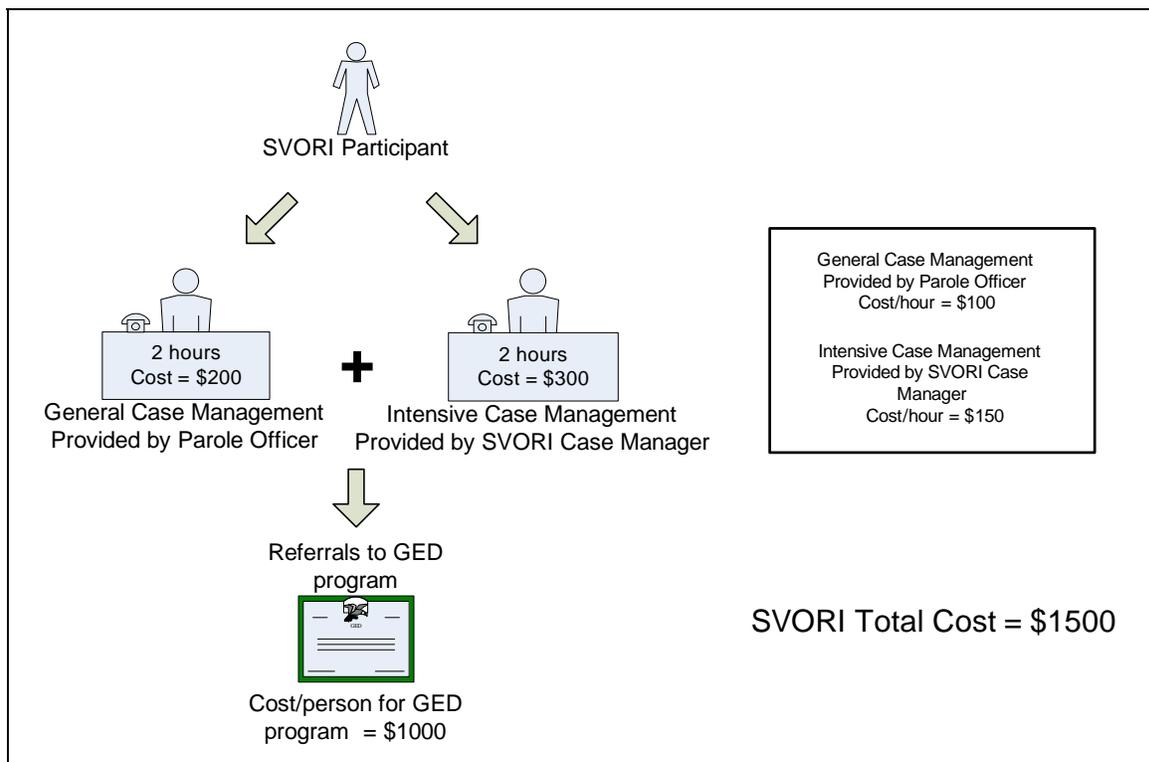
The following programs are participating in the cost analysis:

- Florida juvenile program
- Iowa adult program
- Maryland adult program
- Ohio adult program
- Pennsylvania adult program
- South Carolina adult and juvenile programs

To calculate the per-offender cost of delivering SVORI services at a given study site, we will first compile a comprehensive list of services provided at each of the sites (see inset box for the list of sites). For each service in that list we will then collect information on how much a unit of the service costs (the “price”) and how many units were provided to an average offender (the “quantity”). The price of a service is equal to the cost of all labor, materials, utilities, space, and administrative support used to provide a unit of that service. We will use data from a variety of sources—including key stakeholders (such as financial officers), program budgets, and published estimates in the literature—to estimate prices of SVORI services. The quantity data, or the number of units of service received by offenders, will come from offender interview data, program records, and stakeholder

interviews. Offender interview data come from the longitudinal study of approximately 1,436 SVORI and comparable, non-SVORI offenders in the seven sites for which the cost analysis is being conducted.<sup>1</sup> Figure 1 illustrates how we will estimate the costs of hypothetical services for a typical offender in a SVORI program.

**Figure 1. Estimating SVORI Offender Costs**



In this example, the offender receives 2 hours of general case management and an additional 2 hours of case management provided by the SVORI program. Moreover, the offender is referred to a GED program. Although the GED program is not delivered directly with SVORI funds, the cost of participating in the program is included in our cost estimate, consistent with our methodology of focusing on activities resulting from SVORI and not on SVORI budget allocations. We will apply this methodology to estimate the costs for every offender in the SVORI group and every offender in the comparison group.

**Question 2: What is the difference in costs between the services used by SVORI participants and those used by comparable, non-SVORI offenders?**

A rigorous benefit-cost study recognizes that in the absence of the program being evaluated, its participants would frequently be subject to other, preexisting policy interventions that have their own costs (and benefits). Thus, we are interested in learning the *difference* in costs of SVORI per offender and the costs of a comparison intervention per offender. This difference is also known as the program’s additional cost. Above, we outlined our methodology of estimating the absolute costs per offender in SVORI. To calculate the additional cost of SVORI, we need to calculate the per-offender cost of the treatment received by a comparison group of reentrants.

For example, let us compare the cost of the services used by SVORI offenders with those used by a comparison group of offenders. In this example, four offenders are participating in SVORI and receive services that cost between \$1000 and \$2000 per offender. The four offenders in the comparison group receive services that cost between \$200 and \$500. The average cost per SVORI offender in the example is \$1450, while the average cost per comparison offender is \$300. The treatment provided to an average SVORI offender then incurs costs that are \$1150 more than the status quo treatment provided to an average comparison offender.

<sup>1</sup> For additional information about the longitudinal offender study (and other components of the Multi-site Evaluation of SVORI), please see: [http://svori-evaluation.org/documents/reports/RRIA-Evaluation\\_Overview.pdf](http://svori-evaluation.org/documents/reports/RRIA-Evaluation_Overview.pdf)

### Question 3: Given any improvements in outcomes identified in the SVORI impact evaluation, what is the dollar value associated with the improvement?

To address the third research question we will conduct a cost-effectiveness analysis (CEA) that will combine the information on the additional cost of the program (Question 2) with information on the difference that SVORI makes to key outcomes such as rearrest and employment. The impact evaluation component of the multi-site evaluation will provide estimates of the impact that SVORI has on these outcomes ([http://svori-evaluation.org/documents/reports/RRIA-Evaluation\\_Overview.pdf](http://svori-evaluation.org/documents/reports/RRIA-Evaluation_Overview.pdf)). Figure 2 uses as an example the 1-year rearrest rate to demonstrate how the cost-effectiveness ratio (CER) is calculated.

**Figure 2. Computing Cost-Effectiveness Ratio (CER) for Rearrest**

$$CER = \frac{\text{Difference in Cost}}{\text{Difference in Effectiveness}}$$

Where "Difference in Effectiveness" is from the impact evaluation and defined as

$$\% \text{ of SVORI participants rearrested} - \% \text{ comparison offenders rearrested}$$

Therefore

$$\begin{aligned} CER &= \frac{\$1150}{10} \\ &= \$115 \end{aligned}$$

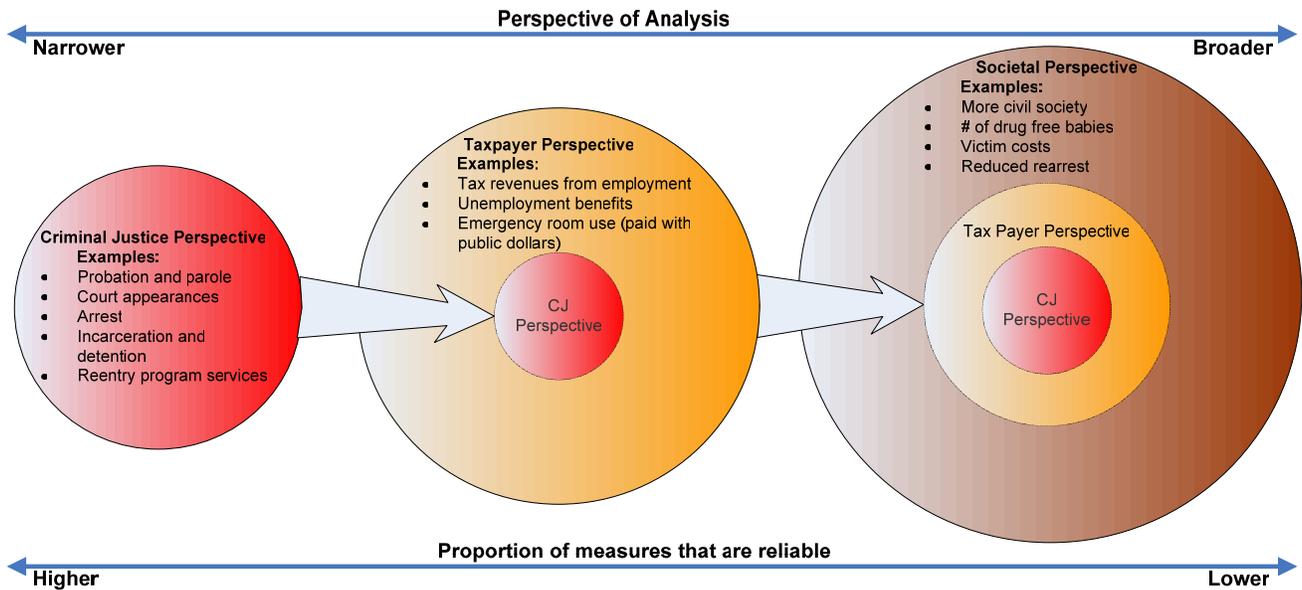
In this hypothetical example, the SVORI group has an average rearrest rate that is 10 percentage points less than the comparison group. From the example provided in Question 2, we know the SVORI cost per offender is \$1,150 more on average; thus the CER of SVORI is \$115. Such a finding would suggest that to reduce an offender's likelihood of being arrested within a year of his release by 1 percentage point, SVORI and its associated programs spend \$115.

The advantage of CEA is that it provides detailed information on the trade-off between the resources used through SVORI and improvements in outcomes. However, using CEA to make policy decisions has two limitations. First, the results by themselves do not indicate whether the benefits outweigh the costs. Second, because outcomes are left in their natural units, they cannot be readily combined. The response to Question 4 below addresses both of these limitations.

### Question 4: Do the benefits of the services received by SVORI participants outweigh the costs?

To address Question 4 we will estimate the monetary value of all relevant outcomes (e.g., reduced rearrests, increased employment), combine all monetized outcomes together with the costs of delivering the program, and estimate the net benefit of SVORI. We will determine the set of outcomes to monetize based on the chosen perspective of the analysis and the reliability of available data. For instance, although improved community cohesion may be an important benefit of SVORI programs, reliable data may not be available to allow us to place a dollar value on this outcome; in this case, we would not monetize it. Figure 3 demonstrates the typical trade-offs in such an analysis.

**Figure 3. Trade-off between the Breadth of Perspective and the Feasibility of Collecting Data**



For a benefit-cost analysis with a relatively narrow perspective, such as that of the criminal justice system, many of the measures required will be reliable and straightforward to obtain (e.g., number and resource cost of arrests). A broader perspective requires measures from a wider set of stakeholders; thus, the measures can be difficult to obtain. For example, taking the societal perspective may require us to estimate the value of “making a more civil society.” Both the impact and value of a civil society are difficult to measure.

For the cost component of the SVORI multi-site evaluation, we will present results for all three perspectives (criminal justice, taxpayer, and societal). Figure 3 continues the example from Figures 1 and 2. For simplicity in the hypothetical example, reduced rearrest is the only societal benefit of SVORI. In this hypothetical example, the average cost of rearrest was estimated to be \$20,000, so the average benefit for each SVORI offender is \$2,000 (again, based on a hypothetical 10-percent difference in rearrest rates between SVORI and comparison offenders). The average net benefit is the difference between the average benefit and the average cost; because in our example SVORI alone costs \$1,150 more per offender, the average net benefit is \$850 (which is \$2,000-\$1,150). Thus, in this example, on average the societal benefits of SVORI outweigh the costs by \$850 per offender.

Ultimately, the cost analysis will provide information on the resources used to help offenders reenter society. The analysis will also help decision makers understand the trade-off between spending scarce public resources and improving the communities to which these offenders are returning.

**Multi-site Evaluation of SVORI Principal Investigators**

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