**Alaska Justice Information Center**
**UNIVERSITY of ALASKA ANCHORAGE**

# Alaska Results First Initiative

## Adult Criminal Justice Program Benefit Cost Analysis

## Executive Summary

## September 29, 2017

# Executive Summary

In 2015, Alaska's community of criminal justice policymakers, practitioners, and researchers committed to partnering with the Pew-MacArthur Results First Initiative (RF Initiative) to develop comprehensive and rigorously derived estimates of the benefits and costs of the state's adult criminal justice programs. All three branches of Alaska's state government supported Alaska's application to join the RF Initiative. With this strong support, Alaska became the 19th jurisdiction to partner with the RF Initiative. The Alaska Justice Information Center (AJiC) at the University of Alaska Anchorage was tasked with coordinating Alaska's RF Initiative, data collection, executing all preliminary data analyses as well as deriving Alaska-specific estimates using the RF benefit cost model, and dissemination of the initiative's results.

Why undertake such an initiative? Two reasons. First, Alaska's adult criminal justice system costs – and the state's correctional costs, in particular – have exploded in recent decades. Since 1995, Alaska's adult correctional costs have increased by an estimated 160 percent. Second, Alaska's recidivism rates have remained persistently high. Approximately two out of every three offenders released from Alaska prisons will return within three years, according to the Alaska Criminal Justice Commission. These two features of the Alaska adult criminal justice landscape – exploding costs and persistently high recidivism – suggest that Alaska is not getting much return for its substantial investments in criminal justice programs. But, is such a suggestion accurate? To what extent are Alaska's adult criminal justice programs performing to expectation and providing adequate levels of return? The goal of Alaska's RF Initiative was to provide answers to these and other questions.

AJiC adapted the RF model to Alaska using a three-phase compile-cost-compare process. The compile process involved developing a program inventory of the state's investment in adult criminal justice programs, and identifying the programs to be included in Alaska's RF model. The cost phase monetized the costs and benefits of each program included in the model. Finally, in the compare phase, the RF model was used to produce a ratio of programmatic benefits to programmatic costs for these programs. This benefit cost ratio is a monetary measure of return on investment.

Importantly, the RF process is not a direct evaluation of Alaska's adult criminal justice programs. Rather, it is an economic model that estimates the benefits and the costs of Alaska adult criminal justice programs using a combination of national and state-specific data.

## Program Inventory

Within the context of Alaska's RF Initiative, the term program inventory refers to the procedures and criteria used for compiling the state's roster of adult criminal justice programs.
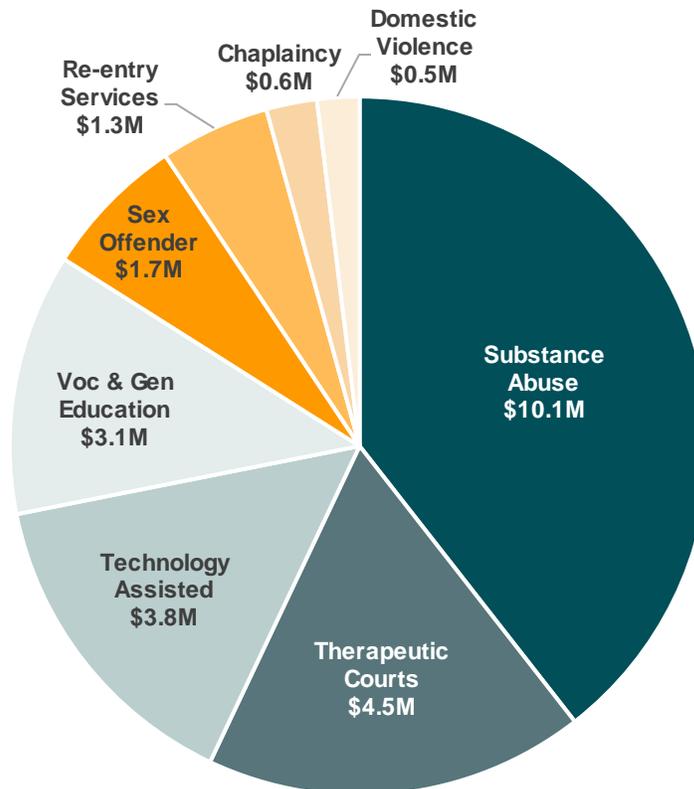
Alaska's RF adult criminal justice program inventory was a collaborative effort of the Alaska RF Programs Working Group and AJiC. Members of the working group identified and provided descriptive, budgetary, and participant data about programs overseen by their organizations. AJiC facilitated and coordinated the group's efforts, and collected, consolidated, and analyzed the program data provided.

The primary goal of the program inventory was to identify evidence-based programs to be entered into the RF model. Secondary goals were to identify and describe the full range of adult criminal justice programs in Alaska, and to estimate the annual costs of those adult criminal justice programs that were funded wholly, or in part, by the State of Alaska.

## *Key Findings*

The state's investments in adult criminal justice programs total approximately $25.5 million annually to state agencies. The table below breaks out the investment into eight program groupings (explained in Chapter 2).

**Figure 2-1. Distribution of Annual State Funding by Program Category**



We were able to conduct benefit cost analyses on 19 programs. These Alaska's RF model programs accounted for 82.3 percent ($21.0 million) of the state's total investment in adult criminal justice programming ($25.5 million).

An additional 7.7 percent ($2 million) was allocated to programs identified in the evidence base but for which robust effect sizes could not be computed or where the evidence was not about recidivism. Taken together, 90 percent of the funds allocated by the state to adult criminal justice programs ($23.0 million out of $25.5 million) were for programs backed by evidence.

## Programmatic Costs

In order to derive benefit cost ratios for Alaska's adult criminal justice programs, AJiC and its criminal justice agency partners had to first estimate incremental, per-participant program costs that excluded fixed costs such administrative overhead. AJiC staff worked closely with program managers and coordinators to identify the appropriate expenditures, and to obtain the most detailed expense and treatment data available. AJiC was able to derive Alaska-specific cost estimates for 17 of the 19 programs included in the Alaska RF model. Cost estimates for the other 2 programs were based on Washington data.

## Key Findings

Annual per-participant program marginal costs ranged from $404 for the PsychEd program to $30,577 for the felony DUI court.

## Programmatic Benefits: Baseline Recidivism

The RF model calculates the monetary benefits of an adult criminal justice program based on its expected effect on recidivism. Benefits are determined by estimating future criminal justice system administration costs and future costs to victims that are avoided due to recidivism reduction.

To establish baseline recidivism parameters, we first identified groups of offenders (cohorts) similar to participants in Alaska RF programs and then determined their pattern of new convictions (recidivism) over time. Alaska RF cohorts consisted of convicted offenders discharged from Alaska Department of Corrections (DOC) facilities in 2007. A total of nine offender cohorts were selected. AJiC tracked the recidivism of each cohort for a period of eight years.

Within the model, recidivism is defined as any new criminal offense that results in a conviction.

Four recidivism parameters were calculated for use in the RF model: cumulative recidivism rate, hazard rate, most serious recidivism offense, and average number of trips through the criminal justice system. Each parameter was computed for each of the seven RF crime categories: homicide, felony sex offense, felony robbery, felony assault, felony property, felony drug and other, and misdemeanor.

## Key Findings

Cumulative recidivism rates were highly variable, depending on offender cohort. For example, the highest cumulative recidivism rate observed was that of the domestic violence cohort. More than 7 out of 10 members of this cohort were reconvicted of at least 1 new criminal offense (any offense) within 8 years following release from a DOC institution. In contrast, the lowest cumulative recidivism rate observed was that of the sex offense cohort. Approximately 5 out of 10 members of this cohort were reconvicted of at least 1 new criminal offense (any offense) within 8 years following release from prison.

In general, the risk of recidivism is highest in the first year following release from prison, and declines in a linear fashion after 3 years. However, there is considerable variability across offender cohorts.

For all but 1 offender cohort, the most serious recidivism offense during the follow-up period was most likely a misdemeanor. In most cohorts, misdemeanors accounted for approximately 45 percent to 65 percent of most serious recidivating offenses. The percentage was even higher for the sex offender (69.1%) and DV (87.1%) cohorts.

## Programmatic Benefits: Recidivism Costs

Within the RF framework, the benefits of Alaska's adult criminal justice programs are measured in two ways: (1) avoided future criminal justice system administration costs, and (2) avoided future victimization costs.

With respect to criminal justice system administration costs, the Alaska RF model required four parameters: the average cost of an arrest (policing cost), the average cost of adjudication (prosecutors, public defenders, courts), the average annual cost of incarceration, and the average annual cost of community supervision. Each of these criminal justice system administration costs was estimated for each of seven RF crime categories. Importantly, although all convictions incur arrest and adjudication expenses, not all result in incarceration or community

supervision. Therefore, the Alaska RF model also required estimation of the probability of resource use, and the average duration of resource use for incarceration and community supervision.

Except for adjudication costs, which were based on adjusted Washington state costs, all other criminal justice system administration system estimates were based on Alaska-specific data. Costs to victims were based on national data on tangible victim costs and jury awards for intangible costs.

### Key Findings

Average criminal justice system costs were $287,712 for an offender convicted of homicide. They were $2,612 for someone whose most serious conviction was a misdemeanor.

The value of an avoided conviction for an offender previously convicted of a felony (any type) was estimated to be between $115,755 and $150,694. Estimated victimization costs varied widely, depending on crime type.

## Benefits: Recidivism Reduction Percentage

The monetary value of recidivism reduction based on the expected recidivism reduction percentage expected by the program. This percentage reduction is applied to the baseline recidivism pattern for the Alaska cohort similar to participants in the program. The cost of the avoided offenses is the monetary benefit due to the program's effect on recidivism.

### Key Findings

Overall, Alaska offers adult criminal justice programs with impressive recidivism reduction effects. Notably, the expected percentage recidivism reduction for community-based sex offender treatment was 32.4 percent. Eight programs, including all the therapeutic courts were expected to reduce recidivism between 20.0 percent and 26.3 percent. All but 4 of the 19 modeled programs were expected to reduce recidivism by more than 10 percent.

## Benefit Cost Ratio

The benefit cost ratio (program benefits divided by program costs) should be thought of as **future benefits relative to current costs**. It is a measure of a program's efficiency with respect to delivering recidivism reduction.

Importantly, a program's benefit cost ratio is not fixed. It can be improved by increasing program benefits, by decreasing program costs, or both. Benefits can be increased modifying features to allow match to a more effective program, or by targeting the program to a cohort with a more costly pattern of recidivism.

Three factors contributed to higher per person program costs for multiple programs: where the program is delivered, whether the program operated at capacity, and its contract structure. Changes in these areas would reduce average per person costs and improve a program's benefit cost ratio.

### Key Findings

The benefit cost ratios for Alaska's 19 RF model programs ranged from $23.80 for PsychEd to ($0.13) for Community BIPs. (See table on the next page.)

Fourteen programs had benefit cost ratios ranging from $1.08 to $23.80. A ratio of greater than $1 means that programs generated monetary benefits exceeding costs.

Four programs had benefit cost ratios ranging from $0.34 to $0.80. A ratio greater than zero but less than $1 means the program generated positive return with tangible monetary benefits, but the return was not equal to

the amount invested. All programs in this range were highly effective with respect to recidivism reduction, but they were costly to deliver.

One program, had a benefit cost ratio of -$0.13. A ratio less than zero indicates a negative return.

The table below shows Alaska RF model programs ranked by benefit cost ratio (on the left) and by expected recidivism reduction percentage (on the right). It is meant to give the range of results for these two key measures.[1] The table is explained in more detail in Chapter 6. (See Appendix C for an explanation of program identifiers and names.)

### Table 6-2. Comparison of Program Ranks: Benefit Cost Ratio versus Expected Recidivism Reduction

| 6-2a. 'Ranked by benefit cost ratio | | | | 6-2b. 'Ranked by expected recidivism reduction | | | |
|---|---|---|---|---|---|---|---|
| Rank | Report ID | Alaska program name | Benefit cost ratio | Rank | Report ID | Alaska program name | Average recidivism reduction |
| 1 | SAP-1 | PsychEd | $23.80 | 1(t) | SX-1B | SOTX-community (FY17) | 32.4% |
| 2 | VGE-1 | General Ed. | $10.58 | 1(t) | SX-1A | SOTX-community (FY15) | 32.4% |
| 3 | VGE-2 | Vocat. Ed. | $7.11 | 3(t) | TC-4 | Felony Drug Court | 26.3% |
| 4 | SX-1B | SOTX-community (FY17) | $6.33 | 3(t) | TC-3B | Hybrid Courts as Drug Courts | 26.3% |
| 5 | SAP-3 | IOPSAT-DD | $4.89 | 5 | VGE-1 | General Ed. | 23.4% |
| 6 | SAP-2 | IOPSAT-prison | $4.87 | 6 | VGE-2 | Vocat. Ed. | 21.9% |
| 7 | SX-1A | SOTX-community (FY15) | $4.43 | 7 | SAC-2 | PACE | 21.8% |
| 8 | SAC-2 | PACE | $3.07 | 8 | TC-5 | Mental Health Courts | 20.6% |
| 9 | TA-1 | EM-sentenced * | $3.03 | 9 | TC-1 | Misd. DUI Court | 20.2% |
| 10 | SX-2 | SOTX-prison outpatient | $2.38 | 10(t) | TC-3A | Hybrid Courts as DUI Courts | 20.0% |
| 11 | SAP-4 | RSAT | $1.97 | 10(t) | TC-2 | Felony DUI Courts | 20.0% |
| 12 | SAC-3 | ASAP | $1.51 | 12(t) | SX-2 | SOTX-prison outpatient | 17.7% |
| 13 | SAC-1B | IOPSAT-community (FY17) | $1.32 | 12(t) | SX-3 | SOTX-prison TC | 17.7% |
| 14 | TC-4 | Felony Drug Court * | $1.22 | 14(t) | SAP-3 | IOPSAT-DD | 17.4% |
| 15 | TC-5 | Mental Health Courts * | $1.16 | 14(t) | SAP-2 | IOPSAT-prison | 17.4% |
| 16 | SAC-1A | IOPSAT-community (FY16) | $1.08 | 16 | SAP-1 | PsychEd | 15.2% |
| 17 | TC-3B | Hybrid Courts as Drug Courts * | $0.80 | 17 | SAP-4 | RSAT | 11.9% |
| 18 | SX-3 | SOTX-prison TC | $0.72 | 18 | SAC-3 | ASAP | 8.9% |
| 19 | TC-3A | Hybrid Courts as DUI Courts * | $0.69 | 19 | TA-1 | EM-sentenced | 3.2% |
| 20 | TC-2 | Felony DUI Courts * | $0.60 | 20(t) | SAC-1B | IOPSAT-community (FY17) | 2.5% |
| 21 | TC-1 | Misd. DUI Court * | $0.34 | 20(t) | SAC-1A | IOPSAT-community (FY16) | 2.5% |
| 22 | DV-1 | Community BIPs | ($0.13) | 22 | DV-1 | Community BIPs | -0.7% |

(t) indicates tied rank.

## Using the Results First Findings

Benefit cost ratios should be considered alongside evidence of a program's effectiveness and within the context of state budget allocations for adult criminal justice programs overall —not just the ones in the model. Managers of state funds can use RF findings at a number of levels. Policymakers, who allocate funds in broad categories, can get a portfolio-like sense of adult criminal justice program investment. They can compare the number of

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[1] The table shows 22 programs. This is because 3 programs were modeled twice, for reasons explained in Chapter 6. For purposed of this overview, the "A" versions (as denoted in the report id) can be ignored. The "B" versions did not change the main findings.

evidence-based programs and range of effectiveness and efficiency ratings delivered in their allocations to agencies. Agency staff can use results to make tactical decisions about the programs within their budget allocation.

The Alaska RF results provide a decision-making *tool* not a decision-making *rule*. Reducing recidivism is a strategic goal for the state. A program's expected impact on recidivism—an evidence-based finding provided by the model—must be considered alongside the benefit cost ratio. As well, other strategic needs that impact the program must be considered. Detailed findings can be used to improve program efficiency and/or identify more effective programs.

The Alaska RF model provides policymakers with a tool for analyzing the potential monetary effectiveness of programs being considered for addition to current adult criminal justice programming. What-if analysis based on Alaska's costs and recidivism patterns of Alaska offenders can be used to estimate the level of recidivism reduction that might be achieved with programs that are not currently in our program inventory. It is also possible to compute a break-even point for an evidence-based program to be implemented in Alaska.

Underutilized program capacity increases a program's per person cost and lowers its benefit cost ratio. At the other extreme, programs that operate with higher demand than available capacity prevent future avoided costs from being realized. Several effective and efficient programs have higher demand than current capacity, notably, sex offender programs. The state can maximize future avoided costs while supporting recidivism reduction, by correcting barriers that prevent maximum deployment of such programs to all eligible participants.

Model estimates could be improved at the **program level**, by collecting and compiling data with research and evaluation in mind, and at the **policy level**, by establishing a program and culture of rigorous program evaluation and assessment, and institutionalizing a paradigm of continual process improvement.