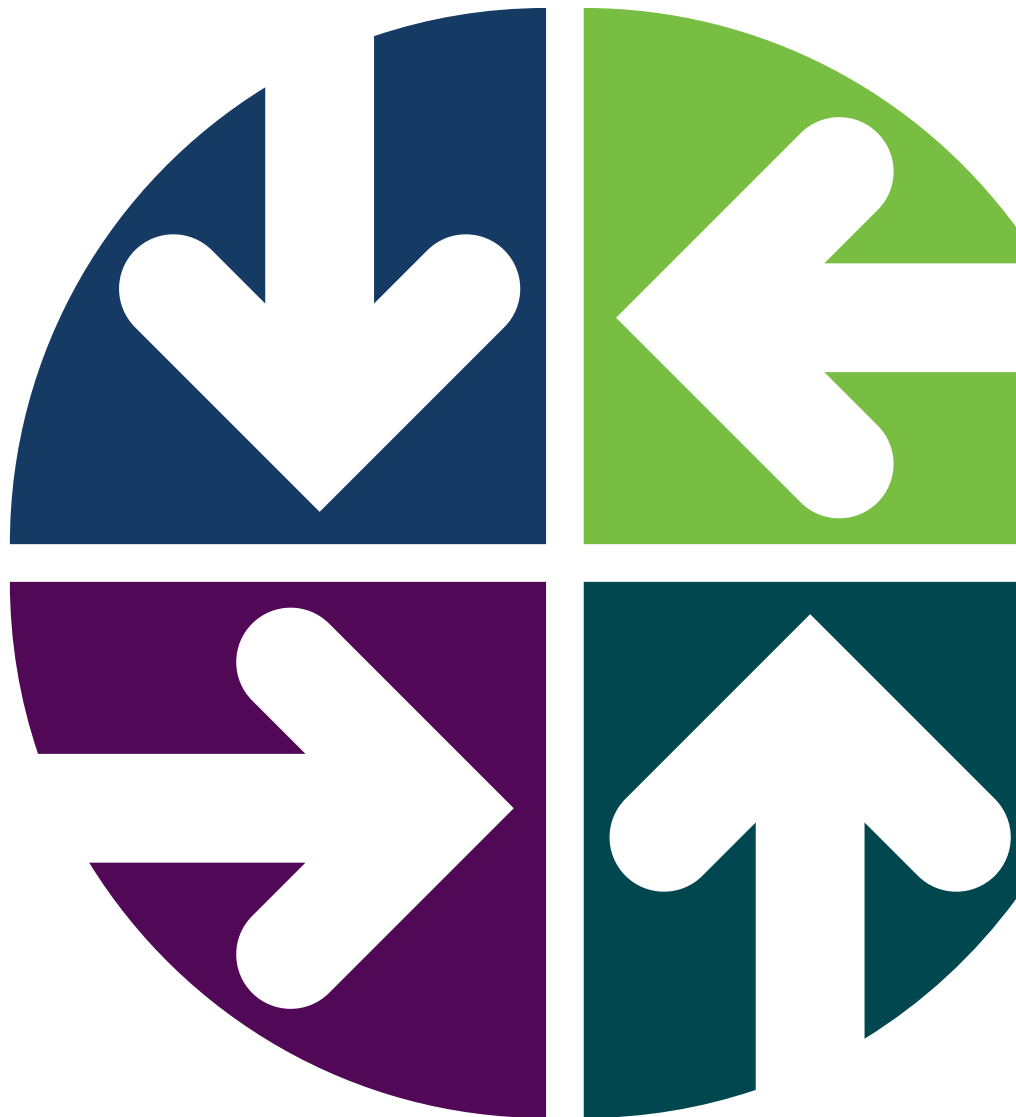




# JUVENILE JUSTICE

## BENEFIT-COST ANALYSIS



**RESULTS FIRST**  
FEBRUARY 2018



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# Acknowledgments

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## Results First Advisory Committee

**Myron Frans**, Commissioner, Minnesota Management & Budget

**Emily Johnson Piper**, Commissioner, Minnesota Department of Human Services

**Tom Roy**, Commissioner, Minnesota Department of Corrections

**Larry Pogemiller**, Commissioner, Office of Higher Education

**Michelle Benson**, Senator, Minnesota Senate

**Ron Latz**, Senator, Minnesota Senate

**Tony Lourey**, Senator, Minnesota Senate

**Diane Loeffler**, Representative, Minnesota House of Representatives

**Marion O'Neill**, Representative, Minnesota House of Representatives

**Clark Johnson**, Representative, Minnesota House of Representatives

**Dawn Torgerson**, Deputy State Court Administrator, Minnesota Judicial Branch

**Toni Carter**, Commissioner, Ramsey County

**Kelly Harder**, Director of Community Services, Dakota County

**Gary Hendrickx**, Commissioner, Swift County

**Tim Houle**, County Administrator, Crow Wing County

## Report Authors

Weston Merrick, Kristina, Shuey, and Pete Bernardy. For more information, contact:

[ResultsFirstMN@state.mn.us](mailto:ResultsFirstMN@state.mn.us)

The Minnesota Legislature instructed Minnesota Management & Budget to conduct benefit-cost analyses for state investments, using the Pew-MacArthur Results First framework. This framework allows Minnesota to estimate the cost-effectiveness of services using the best national evidence. Under this initiative, MMB does not evaluate the impact of services as currently implemented in Minnesota. Rather, MMB estimates the expected benefits if outcomes resemble those found in previous evaluations. Insights generated from the work help inform state and local decision-makers on evidence-based services.

## Results First Juvenile Justice Analysis - Executive summary

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This report examines evidence-based practices in juvenile justice offerings and associated benefits and costs. State agencies, counties, private service providers, courts, and local law enforcement support a broad, decentralized network of programming for delinquent or at risk youth. These activities have the potential to keep youth in their home, enhance public safety, and improve educational outcomes, thereby generating benefits to participants and taxpayers. These interventions seek to cultivate and strengthen healthy relationships that support a better future for youth in Minnesota.

Over the last two decades, use of the juvenile justice system has declined significantly in Minnesota and nationally. In Minnesota, juvenile arrests fell 70 percent from 75,000<sup>1</sup> in 2000 to 21,000 in 2016. From 2000 to 2012, juvenile court filings dropped from 24,700 to 16,000. In spite of progress, work remains to reduce delinquent behavior, foster positive outcomes for youth who interact with the juvenile system, and ensure equitable treatment. Increased adoption of evidence-based practices can help deliver these outcomes.

State and local investments already support a number of evidence-based services, but opportunities exist to increase access. Minnesota Management and Budget (MMB) found differences in the use of treatment services by correctional agencies across the state. For example, proven, cost-effective services like Aggression Replacement Training and Functional Family Therapy have limited adoption, especially outside the metropolitan area. There are opportunities to increase the use of evidence-based interventions—like diversion—that decrease contact with correctional authorities for low-risk youth. By doing so, the state can improve low-risk participant outcomes and free resources to focus on rehabilitating higher-risk youth. Importantly, evidence-based treatments can generate positive outcomes, but these practices must also be delivered to the right person, at the right intensity, at the right time.

Appropriate prevention and interventions for at-risk youth are critical to future success, because evidence indicates that arrest as an adolescent triples the odds of arrest as a young adult. Research shows delinquent activity is the result of complex societal and socioeconomic factors; in addition to treatment, increased awareness and prevention of adverse childhood events and poverty alleviation have positive impacts on correctional system involvement. While this report focuses on existing interventions that reduce new crimes for those already in the system, many other institutions and systems play a role in supporting delinquency-free youth.

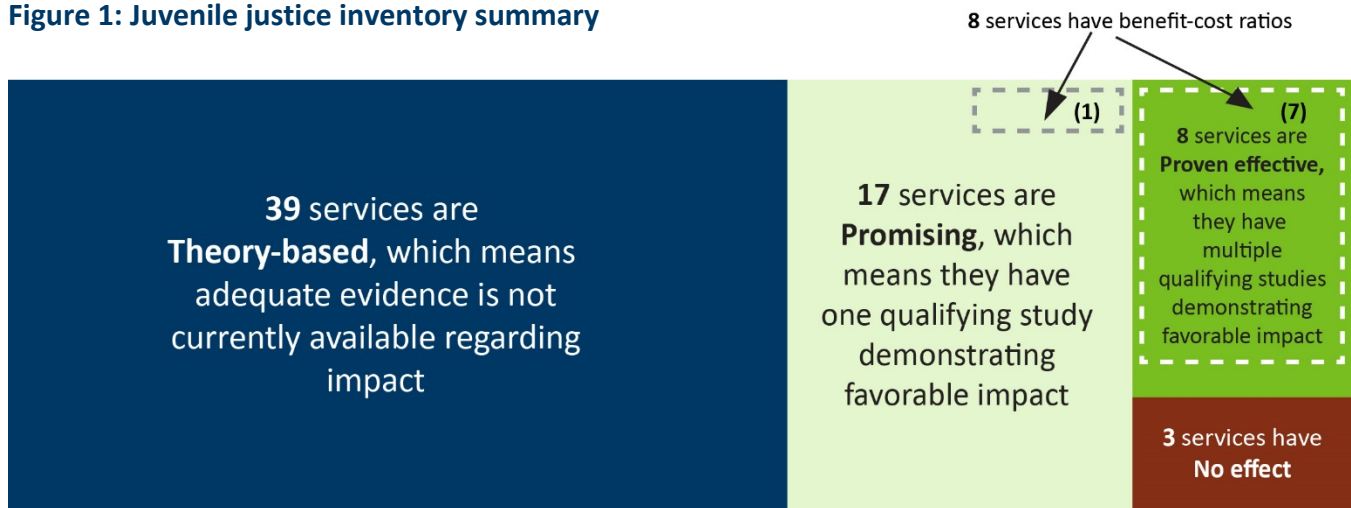
To identify and estimate the effectiveness of juvenile justice services, MMB collaborated with county correction departments, state agencies, the courts, providers, and a range of other stakeholders from across the state for over a year. This analysis found nearly seventy different juvenile justice services or interventions in use; a little less than half (25) have high-quality evidence to support their efficacy (Figure 1; Appendix A).

MMB conducted a benefit-cost analysis for eight of these services (Section 5. Findings). Of those, seven have overall benefits to Minnesotans that exceed their cost. Five also have taxpayer benefits that exceed the investment. To estimate the benefit-cost ratios, MMB uses a statistical model that assigns dollar values to the benefits of recidivism reductions and improvement in labor market and health outcomes. Benefit-cost analysis is a valuable tool for informing decisions about how to deploy public resources, but cost-effectiveness is only one factor to consider when evaluating public investments. Equity, innovation, justice, and the public safety of communities are other key factors policy makers weigh when deciding how to allocate limited resources.

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<sup>1</sup> More than 70 percent of these offenses were for non-violent person or property offenses, like possession of alcohol.

**Figure 1: Juvenile justice inventory summary**



**Figure 2: Juvenile justice benefit-cost ratios summary**

Service or Practice	Per participant benefit minus cost	Benefit-cost ratio (A+B)	Taxpayer ratio (A)	Other societal ratio (B)
<b>Diversion with services</b>	\$2,550	Service is less expensive than the standard alternative service and generates benefits from reducing recidivism.		
<b>Diversion without services</b>	\$4,830	Service is less expensive than the standard alternative service and generates benefits from reducing recidivism.		
<b>Aggression Replacement Training (ART)</b>	\$6,730	\$12.10	\$2.30	\$9.80
<b>Cognitive Behavioral Therapy</b>	\$5,150	\$6.00	\$1.20	\$4.80
<b>Mentoring</b>	\$8,190	\$3.90	\$0.80	\$3.10
<b>Vocational programming</b>	\$3,840	\$2.70	\$1.30	\$1.40
<b>Functional Family Therapy</b>	\$5,870	\$1.80	\$0.40	\$1.40
<b>Multisystemic therapy (MST)</b>	(\$6,410)	\$0.50	\$0.10	\$0.40

**Per participant benefit minus cost** is the difference between the present value of cash inflows (anticipated benefits) from a given service and the present value of cash outflows (costs).

**Benefit-cost ratio** is the net present value of anticipated benefits to state residents for every dollar invested in the service.

**Taxpayer benefits (blue)** accrue from avoided health care costs, criminal justice costs, and increased tax revenues related to labor market earnings for state and local taxpayers.

**Other societal benefits (green)** accumulate to society through increased labor market earnings, avoided property damage, avoided victimization costs, and in some cases avoided premature deaths related to homicide.

# 1. Minnesota Results First

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## A. Background

A bipartisan provision enacted during the 2015 legislative session directed Minnesota Management and Budget (MMB) to implement an evidence-based policy framework. Through the *Results First Initiative*, MMB uses high-quality evidence to estimate the extent to which publicly funded services generate positive, cost-effective outcomes for Minnesotans. MMB collaborates with state, local, and national entities to identify and estimate the benefits and costs of a range of public services that support the well-being of Minnesotans.

As policymakers face difficult budget choices, knowing which services have proven outcomes that lead to taxpayer savings is valuable. When applied consistently, these insights improve outcomes and maximize benefits for Minnesotans.

## B. Results First framework

Minnesota's Results First Initiative implements a framework based on research synthesis and benefit-cost modeling developed by the [Pew Charitable Trusts and MacArthur Foundation](#) and the [Washington State Institute for Public Policy \(WSIPP\)](#). The approach enables us to identify opportunities for investment that generate positive outcomes for citizens and achieve long-term savings. Minnesota is one of a growing number of states that are customizing this approach to their state-specific context and using its results to inform policy and budget decisions.

### Figure 3: A framework for evidence-based decision-making

The nationally recognized Results First Initiative framework uses a three-step process:

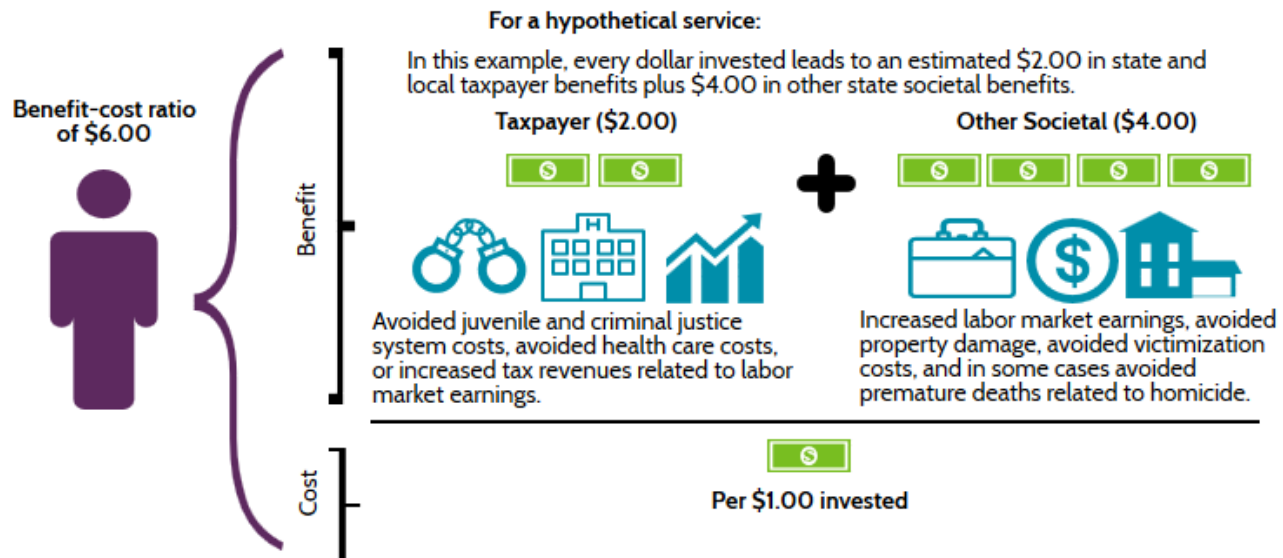
1. **Use high-quality research** from across the nation to identify what works
2. **Use this research and state-specific data** to project the effect
3. **Compare services' costs and projected benefits** to identify the best return on investment of public dollars

The Results First framework has two major products: the inventory of services and the benefit-cost analysis. The juvenile justice inventory identifies the degree to which there is evidence of effectiveness—defined as reduced juvenile delinquency and adult crime—for each of the services implemented in Minnesota. MMB developed an inventory of sixty-seven juvenile justice services and conducted in-depth benefit-cost analyses on eight services for which there is sufficient research and fiscal data available (Appendix A and B). The benefit-cost analyses estimate the monetary value of a given change in recidivism. Changes in these outcomes affect taxpayer expenses. For instance, through avoided costs to the juvenile and criminal justice system, reduced health care costs, and increased tax revenues related to labor market earnings. The benefit-cost ratio compares per-participant benefits to the per-participant cost of the service.

The benefit-cost ratio means “for every dollar invested in this service, there are X dollars in benefits”.



**Figure 4: Explanation of a benefit-cost ratio**



### Assumptions

MMB did not directly evaluate service outcomes or effectiveness of services delivered in Minnesota. Rather, MMB estimated the benefits the state can expect if services have the same impact found in high-quality evaluations previously conducted in Minnesota or elsewhere in the country. Confirming that Minnesota juvenile justice offerings actually achieve these outcomes would require conducting separate impact evaluations. To achieve the estimated benefit reported in the profile pages of this report, evidence-based services in Minnesota must be implemented effectively. Additionally, this analysis compares evidence-based models to treatment as usual; it does not compare it to no treatment. Treatment as usual varies depending on how comparison groups are set-up in the underlying academic research.

MMB collected program data from publicly and privately run residential facilities and a sample of Minnesota counties: Blue Earth, Carver, Cass, Dakota, Dodge, Fillmore, Hennepin, Isanti, Itasca, Olmsted, and Department of Corrections (DOC) Contract Counties<sup>2</sup>. This sample includes counties of varying size and proximity to metro areas, but it is not necessarily representative of all counties throughout the state that administer juvenile justice services. MMB also relied on aggregate state data from the DOC, Department of Public Safety, Department of Employment and Economic Development, and the Minnesota courts.

The juvenile justice system is complex and interconnected. Before reviewing the report findings, it is important to understand the context of the system, the funding and governance of juvenile delinquency, and how juveniles move through Minnesota's system (Appendix C).

<sup>2</sup> The Department of Corrections provides juvenile and misdemeanor services in 26 counties. These counties, referred to as contract counties, are billed for service costs, including agent salary and fringe benefits. Counties are reimbursed for a portion of these costs with funds appropriated by the state legislature.

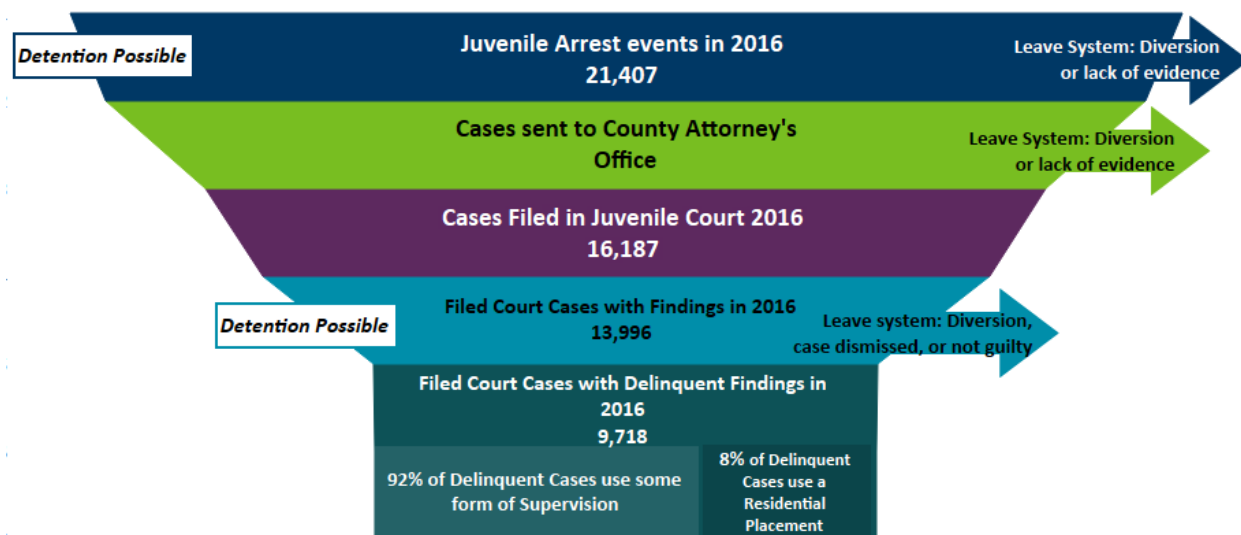
## 2. Juvenile justice in Minnesota

### A. Overview

The juvenile justice pendulum has swung between a punitive approach and a rehabilitative approach since the beginning of the twentieth century. Many national and local factors influenced the focus of the system during periods of institutionalization, movements toward family preservation, rising drug use, violent crime peaks in the 1990s, and most recently, a movement towards restorative justice, evidence-based practices, and gender or culturally-specific programming (Swayze, 2015). In the last fifteen years, Minnesota juvenile crime trends have significantly declined as the pendulum swung back toward rehabilitation.<sup>3</sup>

Each part of the system—law enforcement, county attorneys, juvenile courts, correctional facilities, and probation—has a specialized role in cultivating positive youth outcomes, but they are interconnected. Understanding how a youth moves through the system helps illustrate the complexity of juvenile justice in Minnesota, the population size relative to the previous stage, and where there are opportunities to increase the use of evidence-based practices. The rest of this section lays out the system levels in Figure 5.

**Figure 5: Minnesota Juvenile Justice System 2016**



**Source:** MN BCA Uniform Crime Report (2016), MN DOC Probation Survey (2016), MMB Analysis of Minnesota Courts 2016 data, Sickmund, M., Sladky, T.J., Kang, W., and Puzzanchera, C. (2017) **Arrest:** An arrest is a count of one event, not one person. **Detention:** Law enforcement may detain a juvenile upon arrest or during their court case. **Diversion opportunities**<sup>4</sup>: See page 29. **County Attorney:** In Minnesota, there is not a database which collects number of cases sent to the county attorney's office. The image uses an estimate of 20,000. **Filed Cases:** The number of filed juvenile court cases includes felonies, gross misdemeanors, and misdemeanors, but not status offenses.<sup>5</sup> **Cases with findings:** A court case with findings is a court case with a disposition. **Delinquent findings:** Include the following dispositions: Adjudicated delinquent, adjudicated juvenile traffic offender, Adjudicated petty offender, Continued without adjudication, Continued without findings, Convicted, Statutory stay of adjudication, and Stay of adjudication. **Supervision:** may include sentence components such as probation, conditions, fees, home monitoring, service, or monitoring (i.e., probation) after a residential placement. **Residential placements:** use some form of supervision after placement.

<sup>3</sup> Minnesota Department of Public Safety, Office of Justice Programs has more crime trends in a [2014 report](#).

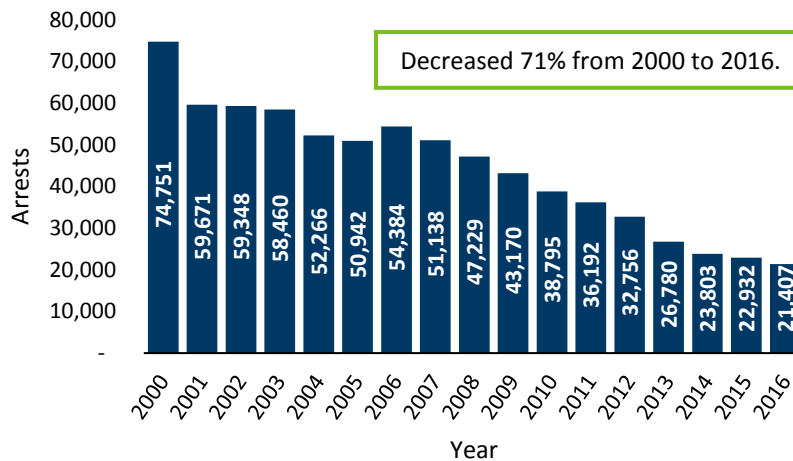
<sup>4</sup> Depending on the means of diversion, some "diverted" youth remain in the juvenile justice system until successful completion of probation or conditions.

<sup>5</sup> Judges determine if a juvenile will certify to appear in adult court. Very few youth are certified to adult court.

## Arrest

A juvenile arrest is a response by law enforcement to delinquent activity or events where there is probable cause for delinquent activity. Because arrest is the primary mechanism of entry to the juvenile justice system, it also affects the volume of individuals forwarded to other parts of the judicial system (Swayze & Buskovich, 2013). In 2016, there were 21,407 arrests; 67 percent were male and 75 percent were for larceny, disorderly conduct, liquor laws, drug abuse, or simple/minor assault (Bureau of Criminal Apprehension, 2017). Consistent with national trends, Minnesota's juvenile arrest rate has declined in the past sixteen years (OJJDP Statistical Briefing Book, 2017; Swayze & Buskovich, 2013).<sup>6</sup> These declines occurred across all racial groups, yet youth of color still experience disproportionate contact with law enforcement officials. See Figure 6 below.

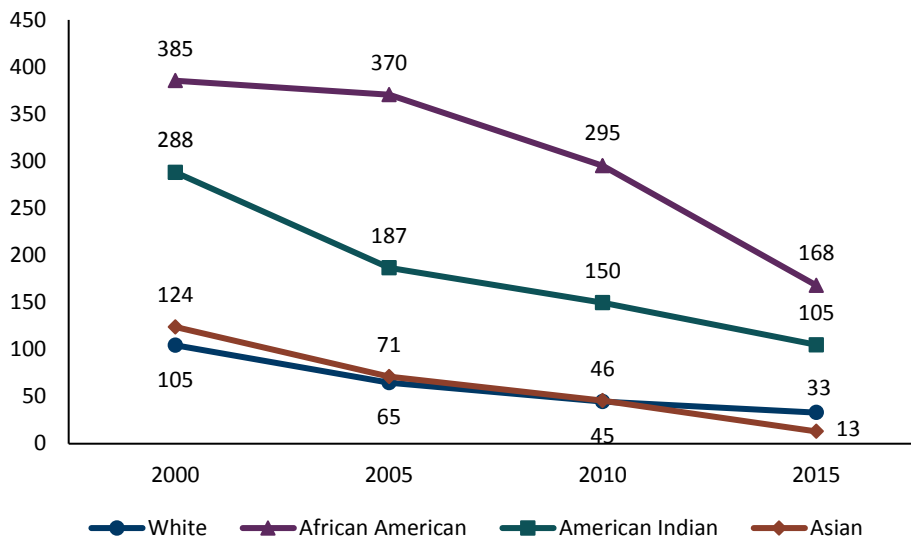
**Figure 6: Total arrests of youth under 18 in Minnesota (2000 - 2016)**



**Source:** Swayze and Buskovich 2013; MN BCA, UCR 2012-2015

**Note:** An arrest is a count of one event, not one person. An arrest is not necessarily “physically detained.”

**Figure 7: Arrests in Minnesota per 1,000 youth ages 10-17 by race (2000, 2005, 2010 and 2015)**



**Source:** Swayze and Buskovich 2013; Minnesota Bureau of Criminal Apprehension (MMB data request 2017)

**Note:** A data point on the line graph indicates arrests per 1,000 Minnesota youth of that particular race. The Department of Public Safety collects this data each year for the Uniform Crime Report, but does not separate juveniles and adults for Hispanic or Latino ethnicity. The four racial categories include youth of Hispanic or Latino ethnicity. See page 16 for the rate of disproportionate system contact.

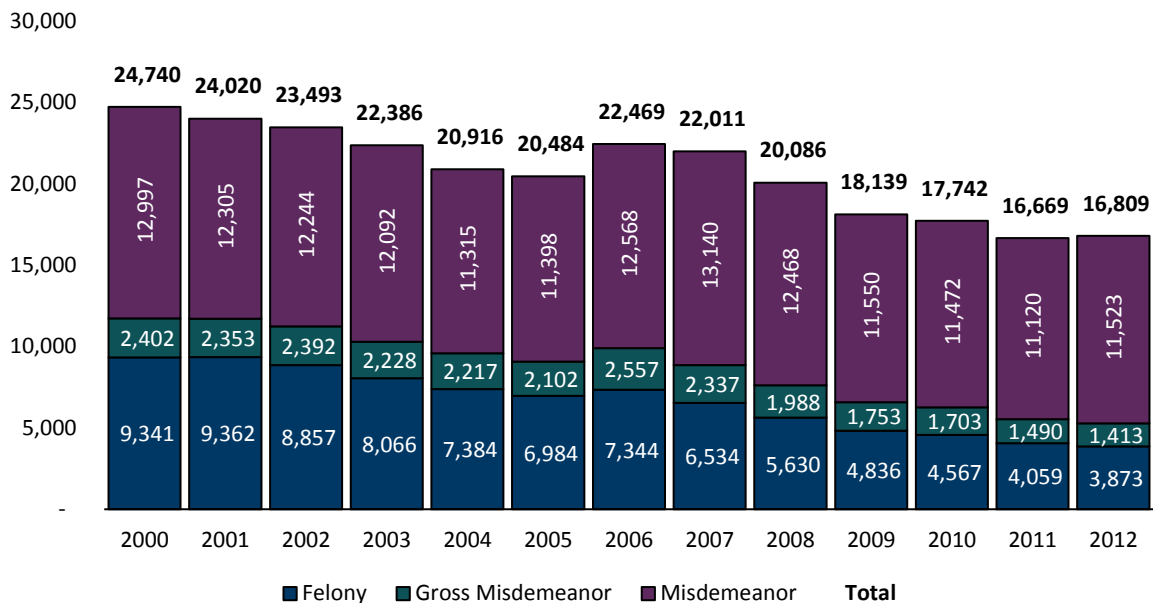
<sup>6</sup> More appropriate system responses, alternative sanctioning practices, increased funding in prevention, and an improving economy are just a few factors influencing the decline in juvenile crime. See this MN DPS [2014 report](#) for more details.

## Juvenile court

Not every arrest results in a juvenile court case. To continue through the juvenile justice system, a law enforcement officer needs to forward the case to the county attorney. The county attorney's office determines the legal standing for prosecution; whether justice or community safety is served through prosecution; the level at which the case will be charged; and whether the youth involved should be afforded diversion. If the attorney decides to prosecute, they petition the delinquency case to juvenile court.<sup>7</sup> In Minnesota, children under ten years old that commit delinquent acts or petty offenses are usually not charged with juvenile offenses; instead, they are referred to the child welfare system.<sup>8</sup>

The following figure reflects the trend of felony, gross misdemeanor, and misdemeanor delinquency cases forwarded (or petitioned) to juvenile court between 2000 and 2012.<sup>9</sup> Each category of delinquency court cases declined from 2000 to 2012: misdemeanor cases (-11%), gross misdemeanor cases (-42%), and felony cases (-59%).

**Figure 8: Juvenile delinquency court case petitions filed in Minnesota, by offense (2000-2012)**



**Source:** Swayze and Buskovich 2013

**Note:** Petitioned delinquency court cases are all delinquency cases brought to juvenile court in a given year, regardless of when the case comes to conclusion or whether there is a legal finding of guilt. These cases do not include status offenses, which are illegal because of age, or petty misdemeanors.

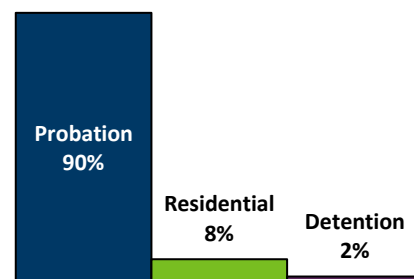
<sup>7</sup> There are some exceptions for especially violent crimes, when the juvenile offender is 14 years old or older. In these cases, the prosecutor can request to try a juvenile as an adult, and the judge makes the decision to certify them as an adult (Freeman, 2017). County attorneys also decide whether or not to use Minnesota's blended sentencing option: Extended Jurisdiction Juvenile (EJJ).

<sup>8</sup> Minnesota Statutes 2017, section 260C.007 subdivision 6. Children in need of protection or services (12) "has committed a delinquent act or a juvenile petty offense before becoming ten years old".

<sup>9</sup> Minnesota has 293 trial court judges spread across 10 districts (Minnesota Judicial Branch 2017). Juvenile court procedures are separate from the adult criminal cases, but include felony, gross misdemeanor, misdemeanor, and petty misdemeanor charges.

The philosophy of juvenile court is to: rehabilitate youth alleged or adjudicated delinquent, reduce juvenile delinquency by returning the youth to law-abiding behavior through means that are fair, and recognize the unique characteristics and needs of children.<sup>10</sup> The focus at sentencing is on identifying services that will help the juvenile rather than issuing a sentence to punish. If the juvenile admits guilt, or if a charge is proven in court, the case results in an adjudication.<sup>11</sup> Most juvenile cases require the youth to be monitored and meet conditions (probation). Probation can occur immediately after sentencing, after a residential placement, with diversion, and with non-adjudicated cases. Compared to the daily out-of-home placement population, the probation population is much larger (Figure 9).

**Figure 9: One-day Minnesota juvenile justice population (2015)**



**Source:** Minnesota Department of Corrections-2015 Probation Survey; Sickmund, M., Sladky, T.J., Kang, W., and Puzzanchera, C. (2017) Available: <http://www.ojjdp.gov/ojstatbb/ezacjrp/>

### Out-of-home placements and detention

Out-of-home placements are any form of 24-hour care for minors substituting care from a parent or guardian (Minnesota Department of Human Services, 2017c). These placements seek to promote the safety, permanency, and well-being of children in Minnesota, and they are generally short-term.<sup>12</sup> This report only reviews court-ordered, residential program placements in delinquency cases or detention placements by law enforcement, even though there are other ways children enter out-of-home placements as a result of child protection cases (e.g., parental drug abuse, neglect, child abuse) or child treatment needs (e.g., drug abuse, mental health, family conflict, disability).<sup>13</sup> The majority of out-of-home placements in Minnesota are under the jurisdiction of child welfare agencies (Minnesota Department of Human Services, 2017b, 2017c).<sup>14</sup>

#### Detention

Placements immediately after arrest are short-term stays before a youth's first court appearance. These are called detained placements or detention. The facility where the juvenile stays could be secure (locked) or non-secure. Depending on the location of the arrest, and that county's available facilities and beds, the facility could be a jail for up to 24 hours (with sight and sound separation from adult offenders)<sup>15</sup>, a regional juvenile detention facility, or a residential facility also licensed for detention services (Swayze & Buskovich, 2013).

The National Center for Juvenile Justice (NCJJ) prepares the Census of Juveniles in Residential Placement (CJRP) biennially. The census does not include placement data from adult facilities, or facilities exclusively for drug or

<sup>10</sup> Minnesota Statutes 260B.001. Title, Intent, and Construction. Subdivision 2. Delinquency.

<sup>11</sup> Unlike adult court, in juvenile court, a defendant is not "found guilty" of a crime. Instead, they are "adjudicated delinquent". In some cases, when a case is proven in court, the judge can impose non-adjudication for up to 180 days while the juvenile meets conditions or is on probation.

<sup>12</sup> Out-of-home placements longer than 72 hours must have court-approval or a signed voluntary agreement by the parent (Minnesota Department of Human Services, 2017c).

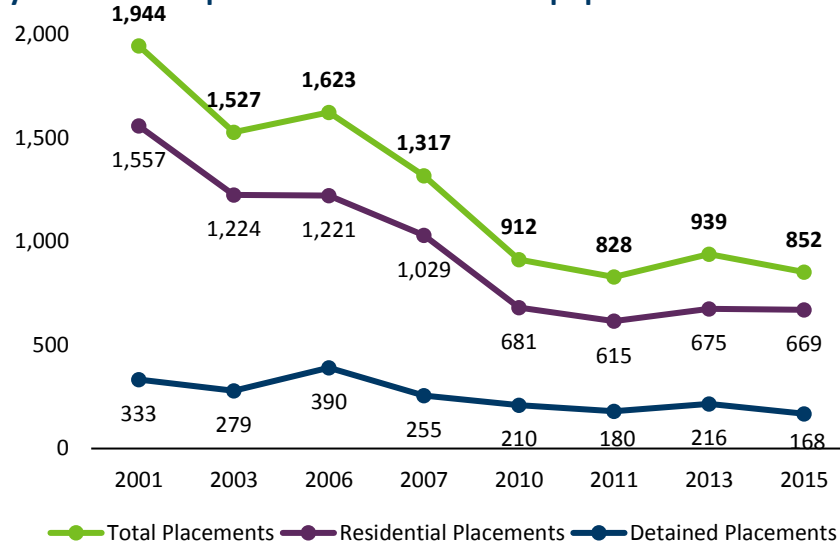
<sup>13</sup> Minnesota Statutes 2017, section 260C.201 Dispositions; Children in need of protection or services or neglected and in foster care & Minnesota Statutes 2017, section 260D. Child in voluntary foster care for treatment.

<sup>14</sup> Includes both county social services and tribal social services.

<sup>15</sup> The Juvenile Justice and Delinquency Prevention (JJDP) Act of 1974 requires Metropolitan Statistical Area (MSA) counties have a 6-hour limit, while non-MSA counties have a 24-hour limit. MSA is a geographical region with relatively high population density and is defined by the federal Office of Management and Budget.

mental health treatment, or abused or neglected children. A one-day population count in 2015 reports 852 total placements in Minnesota. This includes 168 detention and 669 residential placements. Eighty-eight percent of detention placements and 81 percent of residential placements reported to CJRP were male (Sickmund, Sladky, Kang, & Puzzanchera, 2017). Figure 10 breaks down the census data by race.

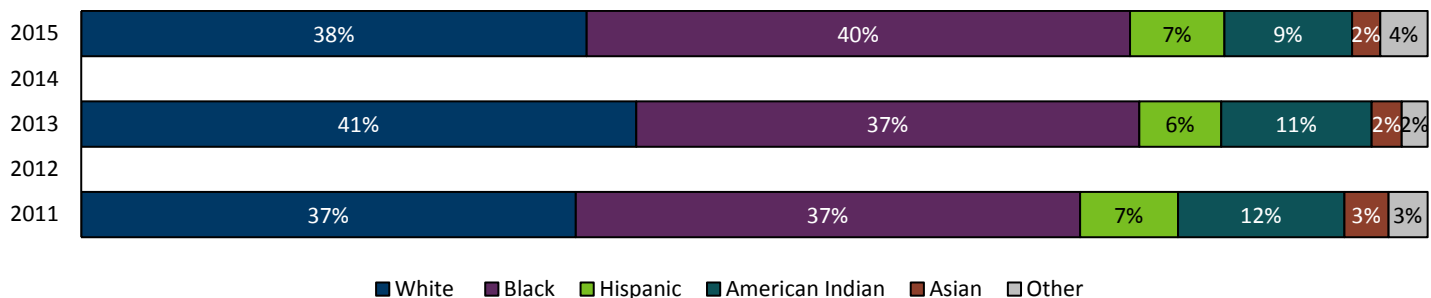
**Figure 10: One-day out-of-home placement and detention population in Minnesota (2001-2015)**



**Source:** Sickmund, M., Sladky, T.J., Kang, W., and Puzzanchera, C. (2017) "Easy Access to the Census of Juveniles in Residential Placement." Online. Available: <http://www.ojjdp.gov/ojstatbb/ezacjrp/>

**Note:** Residential Placements (purple) are part of a court sentence. Detained Placements (blue) occur when the juvenile is awaiting a court hearing, adjudication, disposition, or placement elsewhere. Total Placements (green) adds residential and detained placements. It also includes diversion placements. Because NCJJ administers a biennial census, there is not data for every year.

**Figure 11: One-day out-of-home placement and detention population in Minnesota, by race (2011, 2013, and 2015)**



**Source:** Sickmund, M., Sladky, T.J., Kang, W., and Puzzanchera, C. (2017) "Easy Access to the Census of Juveniles in Residential Placement." Online. Available: <http://www.ojjdp.gov/ojstatbb/ezacjrp/>

**Note:** Because NCJJ administers a biennial census, there is not data for every year. See page 16 for the rate of disproportionate system contact.

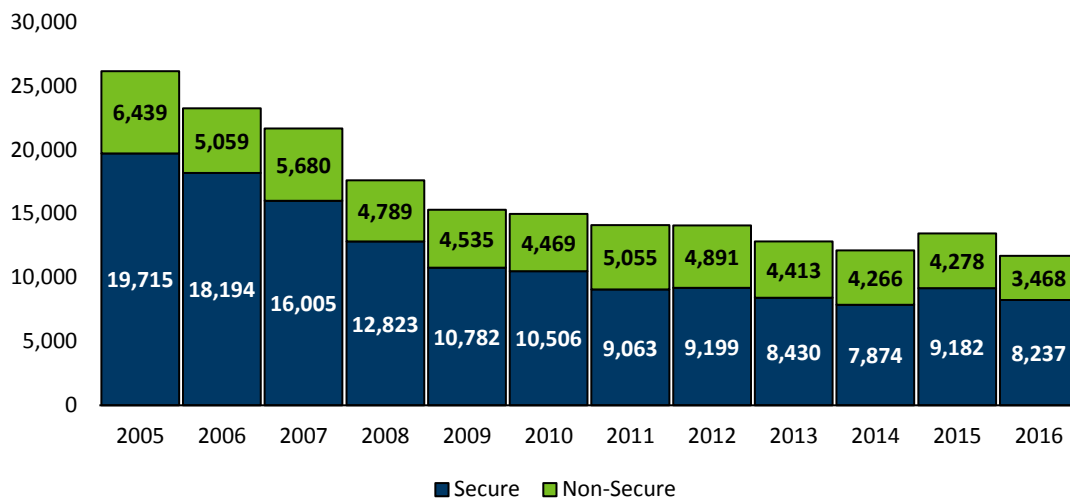
### *Out-of-home placements for delinquency*

Placements that occur as part of a court disposition (residential placements) can be secure or non-secure, but must be licensed by the Department of Corrections or Department of Human Services, as a children's residential facility.

Children's residential facilities (CRF) can provide correctional program services, chemical dependency treatment services, mental health treatment services, shelter care services, and/or transitional services. In some facilities with an appropriate license, restrictive procedures limit the movement of individuals (Minnesota Department of Human Services, 2017a). The Department of Corrections (DOC) licenses secure and non-secure facilities that provide correctional program services. Example services include cognitive-behavioral therapy, substance use treatment, individual and family therapy, and education programs.<sup>16</sup> Typically these facilities receive juveniles directly from law enforcement agencies or juvenile court.

In Minnesota, many children's residential facilities provide beds for both residential and detention placements. Different units within the building have licensed secure or non-secure programs. In a secure program, locks secure the whole building or the part of a building where the juvenile resides. Only the DOC licenses these programs.<sup>17</sup> The DOC administers a facility census each year providing data on the use of secure and non-secure beds, which has declined in recent years (Inspection and Enforcement Unit, 2016; Swayze & Buskovich, 2013).

**Figure 12: Total admissions per year to DOC-licensed facilities in Minnesota (2005-2016)**



**Source:** Swayze and Buskovich 2013; MN DOC Inspection and Enforcement Unit (MMB data request 2017)

**Note:** The data only represents facilities licensed by the Department of Corrections. The DOC does not collect race data on the facility census form.

The Department of Human Services (DHS) also licenses children's residential facilities. Youth coming from the juvenile justice system use DHS facilities for treatment (chemical dependency and mental health) or as a shelter placement. DHS-licensed children's residential facilities mostly serve youth in need of a placement related to child protection (CHIPS) (Minnesota Department of Human Services, 2017c).<sup>18</sup>

<sup>16</sup> DHS licenses CRFs that are treatment providers. Additional information on licensing jurisdictions is available [here](#).

<sup>17</sup> The Department of Corrections also licenses twenty-one foster family programs which are similar to a group home, but are for corrections placements.

<sup>18</sup> A forthcoming (2018) Results First report will examine the Child Welfare system in more detail.



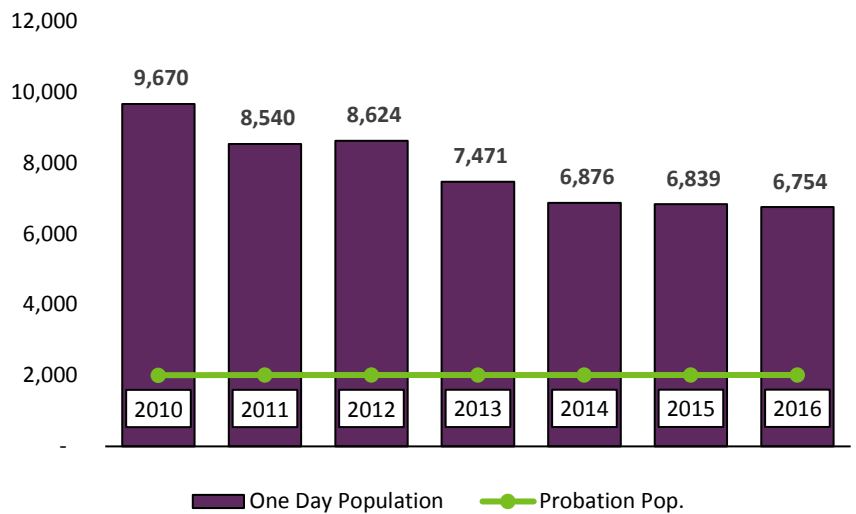
## Supervision

The majority of adjudicated cases and some non-adjudicated cases use other juvenile justice resources such as community service, counseling, home detention, meeting conditions to remain law-abiding, chemical dependency treatment, diversion, or probation.

## Probation

Juvenile probation is a community-based strategy to provide supervision and services to adjudicated and non-adjudicated youth, and in some cases youth participating in diversion programs. The majority of juvenile adjudications have immediate probation sentences, but youth with residential placements will also have probation after an immediate placement. The Department of Corrections and county corrections agencies administer probation supervision and services in Minnesota (M. Jones, Clark, & Quiros, 2010).

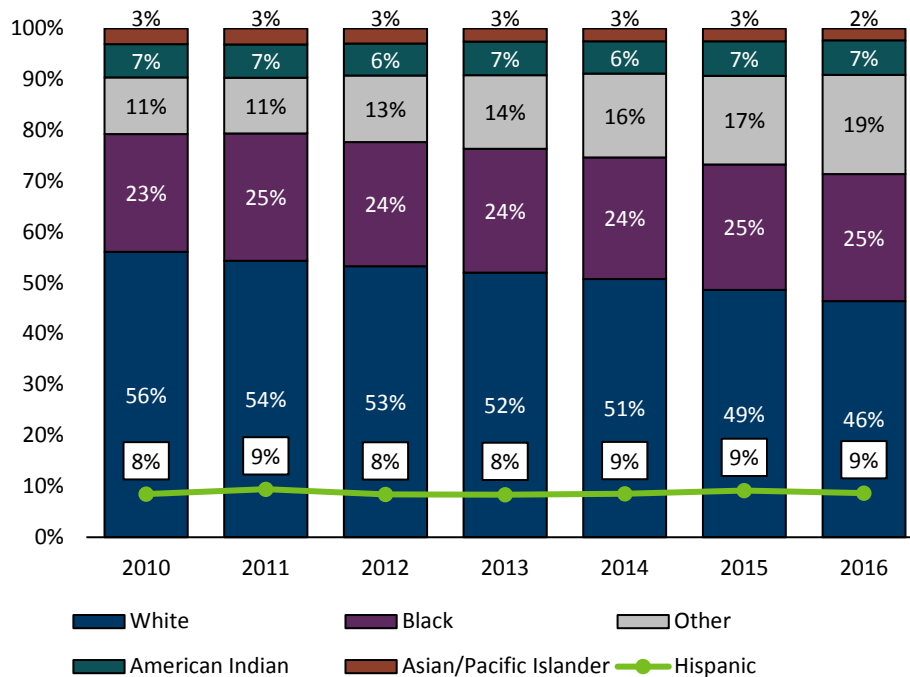
**Figure 13: Juvenile probation population in Minnesota (2010-2016)**



**Source:** Minnesota Department of Corrections, 2010 - 2016 Probation Surveys.

**Note:** New Probationers (purple bars) are the total number of juveniles starting probation for that year. It can include one person more than once. One Day Population (green dotted line) is measured on December 31 of each year listed.

**Figure 14: Probation population by race and Hispanic ethnicity, one-day population (2010 - 2016)**



**Source:** Minnesota Department of Corrections, 2010 – 2016 Probation Surveys

**Note:** Survey respondents report Hispanic as an ethnicity within any race category. See page 16 for the rate of disproportionate system contact.



## B. Overrepresentation in system contact for youth of color

High rates of racial disparities exist at each point in the Minnesota juvenile justice system (Minnesota Department of Public Safety, 2017; Swayze & Buskovich, 2012b, 2013).<sup>19</sup> Many factors contribute to overrepresentation of youth of color in system contact: inequitable distribution of resources in communities, bias within policies and practices of juvenile justice agencies, and underlying social conditions of communities, especially poverty (U.S. Department of Justice, 2009). To assess the level of overrepresentation, state agencies around the United States, including the Minnesota Department of Public Safety, use a Relative Rate Index (RRI). The RRI compares the rate of activity for youth of color to the rate of activity for white youth, at each major stage of the juvenile justice system, beginning with arrest.<sup>20</sup>

*Three things to know about the Relative Rate Index (RRI):*

- 1. The RRI is calculated for each major stage within the juvenile justice system:** A youth enters at arrest, and with each subsequent interaction, goes “deeper” into the system. There is an RRI for each major stage; it is recalculated at each stage, changing the base population at each point to reflect the population involved at that stage. For example, the base population for the arrest RRI is the total population under eighteen. The base population for the secure residential placement RRI (eight stages “deeper” in the system) is different; it is the number of cases with delinquent findings. The base population (e.g., arrest or secure detention) is relative to the stage that immediately precedes it.
- 2. It compares rates of involvement of different race groups to white youth population:** The RRI does not compare a race grouping’s activity to the total population at the specific stage in the system. First it compares the youth of color activity (e.g. black arrests) to the appropriate base population (e.g., black youth population in MN). Then, that rate is compared to the white youth activity (e.g., white youth arrests per white youth population in MN). This provides a single rate of disparity.
- 3. RRI can be used to measure overrepresentation and underrepresentation within a stage:** An RRI of one means no disproportionality exists and the rate of system involvement is the same for youth of color as it is for white youth, at that specific decision point in the system. An RRI over one shows an overrepresentation; an RRI under one shows an underrepresentation. Underrepresentation, expressed in decimals, is as severe in magnitude as overrepresentation expressed in integers. For example, an RRI of 0.25 and 4.00 are the same magnitude of disparity, only the directionality is different.

### Interpretation of Minnesota’s 2015 RRI data

#### *Rates greater than one*

From the total population under eighteen, there is overrepresentation of youth of color in arrests. Using 2015 data, youth of color are two times more likely to be arrested than white youth in Minnesota. Within race groups, the highest disparity is among Black youth (four times more likely than a white youth to be arrested) followed by American Indian (three times more likely). The next decision point in the system is between law enforcement

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<sup>19</sup> Juvenile Justice and Delinquency Prevention Act of 1974 (JJDP) requires states to report Disproportionate Minority Contact (DMC). DMC specifically measures disproportionality related to delinquency level offenses; meaning, charges that are illegal for both minors and adults. System contact for behavior that is unlawful for minors (curfew, tobacco, runaway, etc.) are excluded to the best ability of data systems for all DMC reporting. The acronym “DMC” by definition requires the use of the term “minority” when describing non-white, non-Hispanic populations. This report uses the phrase “youth of color” instead of minority terminology.

<sup>20</sup> The DMC Coordinator at the Minnesota Department of Public Safety provided all the Relative Rate Index figures for 2015. The Relative Rate Index (RRI) is calculated by dividing the rate of involvement of five race subpopulations (Black, American Indians, Asians, Native Hawaiian/Pacific Islanders, and Hispanic or Latinos) and all youth of color populations combined, to the rate of involvement by white youth, at specific system contact points (Swayze & Buskovich, 2012b). See Appendix D for more information on federal reporting and RRI calculations, or read this [2012 DPS report](#)

diversion programs or referring the case to the county attorney where the attorney can also recommend diversion or petition the case to juvenile court. Minnesota does not collect aggregate county data on how many youth crimes are referred to the county attorney or are diverted by law enforcement or county attorneys. The following decision points proceed to secure detention, petitioned cases to juvenile court, and transferred cases to adult court.

Youth of color and young American Indians have high rates of activity for secure detention, petitioned cases to juvenile court, and transferred cases to adult court. Youth of color are two times more likely to be detained in a locked facility than white youth in Minnesota; American Indian youth are five times more likely. American Indian youth are also overrepresented in juvenile court with a rate of three (all race groups are two times more likely).<sup>21</sup> Youth of color are two times more likely to be transferred to adult court, with varying gaps by race/ethnicity.<sup>22</sup>

### American Indian Youth compared to White Youth

3 times more likely to be arrested  
5 times more likely to be placed in secure detention  
3 times more likely to be referred to juvenile court  
38% less likely to be sentenced directly to probation  
3 times more likely to be referred to adult court

Source: Department of Public Safety

#### *Rates less than one*

A rate less than one (<1.00) is different than how one describes the overrepresentation of youth of color. Read as a percentage, these rates demonstrate activity for a race group as a fraction of white activity; for example, a rate of 0.53 in Figure 15 means that Black youth with a delinquent finding are 47 percent less likely, or about half as likely, as white youth with a delinquent finding to be on probation ( $1.00 - 0.53 = 0.47$ ). Youth of color with a delinquent finding are underrepresented in probation placement and confinement in secure juvenile correctional facilities (49% less likely than white youth with a delinquent finding to be on probation and 34% less likely than white youth with a delinquent finding to be in a secure placement).

### Black Youth compared to White Youth

4 times more likely to be arrested  
2 times more likely to be referred to adult court  
50% less likely to be sentenced directly to probation

Source: Department of Public Safety

One perspective of underrepresentation in probation and secure placement asserts that it is better to not be on probation, and not be placed in a secure facility placement; arguing that the less system contact the better (Swayze & Buskovich, 2012b). But, the Department of Public Safety notes that probation and placement offer services

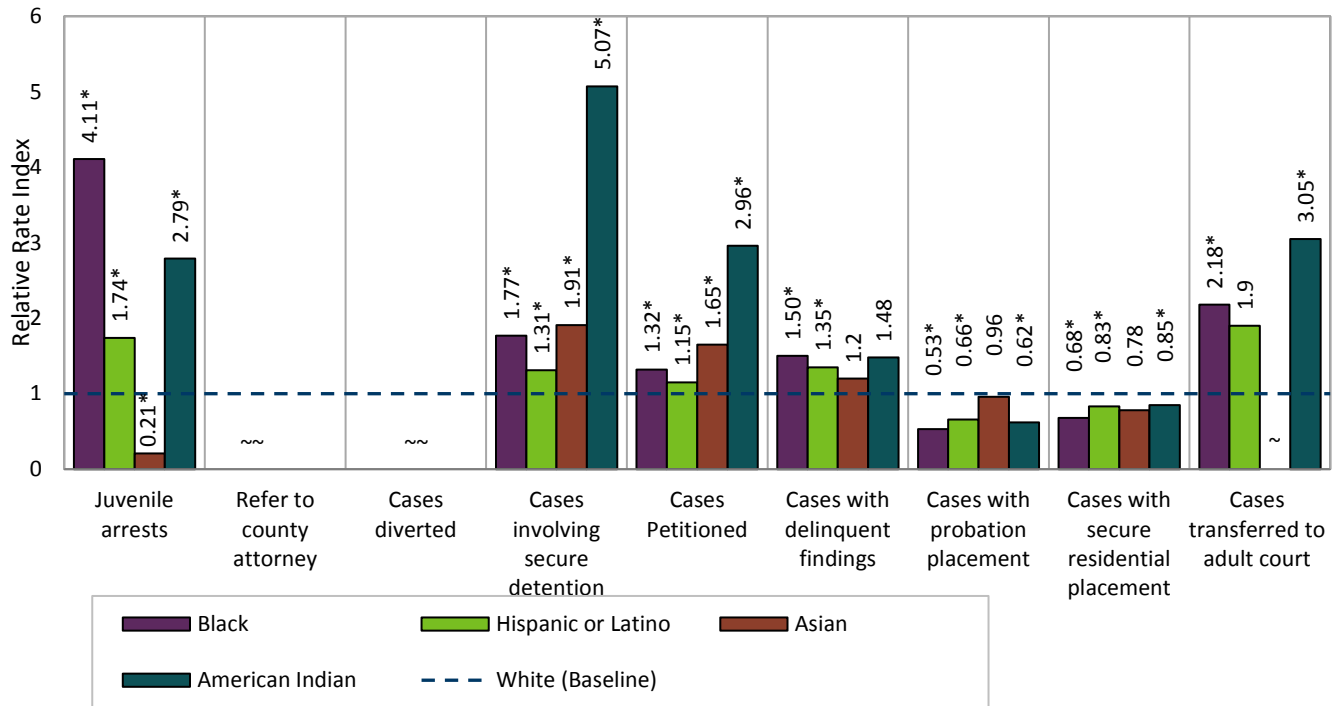
beneficial to building protective factors and addressing delinquency risk factors while also providing intensive treatment in appropriate circumstances; for example cognitive-behavioral interventions, chemical dependency/mental health treatment and referral or other family-based services. (Swayze & Buskovich, 2012b). The appropriateness of probation and placement is dependent on the risk and need of juveniles.

The evidence-based services in this report use research that measures the impact of a service on a general population, no matter race or ethnicity. The juvenile justice field needs more research to evaluate services within specific racial or ethnic communities.

<sup>21</sup> Using a baseline population of juvenile arrests since there is no statewide data on cases referred to juvenile court by county attorneys.

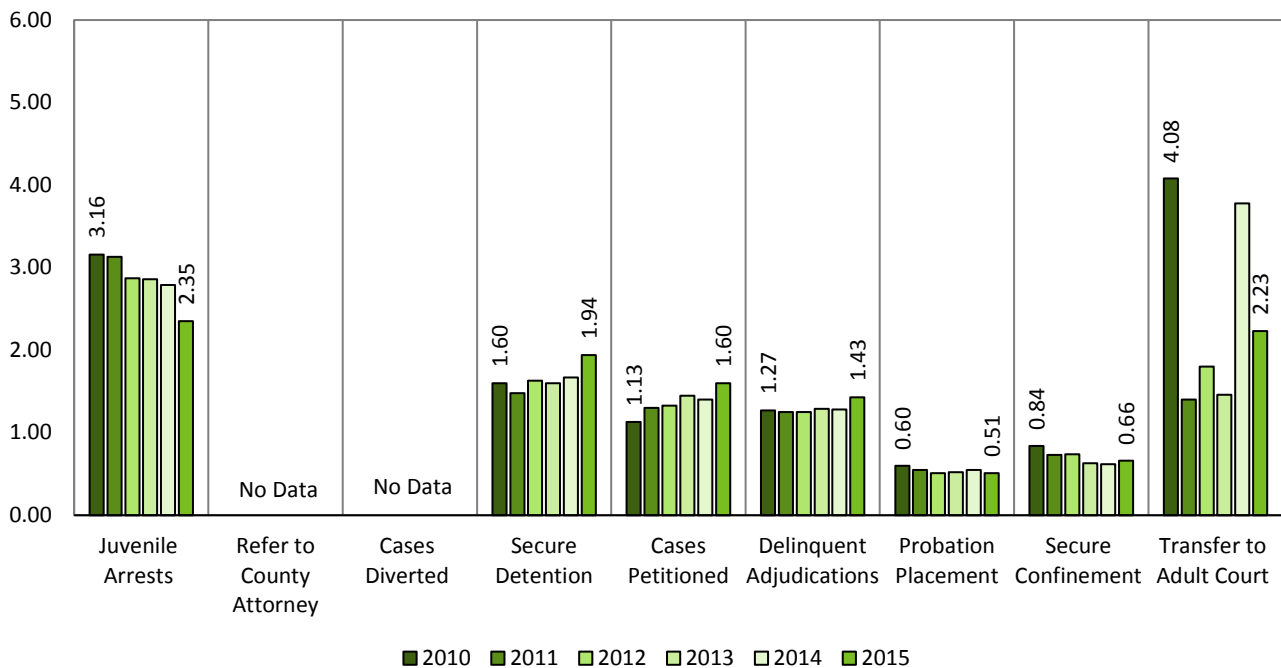
<sup>22</sup> Judges determine if a juvenile will certify to appear in adult court. Very few youth are certified to adult court.

**Figure 15: Relative rate of juvenile justice activity in Minnesota, by race (2015)**



**Source:** Department of Public Safety, Office of Justice Programs (2017 MMB data request) **Note:** A rate of involvement equal to one means the white rate and that particular race group's rate are equal; \* = the difference between the race group rate and white rate is statistically significant at the 95 percent confidence level; ~ = insufficient number of cases to be analyzed; ~~ = data collection does not exist at this time.

**Figure 16: Rate of juvenile justice activity in Minnesota for all minorities, by year (2010-2015)**



**Source:** Department of Public Safety, Office of Justice Programs (2017 MMB data request) **Note:** All minorities includes Black, Hispanic or Latino, Asian, and American Indian. Each rate of activity for each year is compared to a White population baseline of 1.00. The chance of juveniles being certified as adults is extremely rare, and may be the reason for such high variation in the last column, "Transfer to Adult Court."

Even as the juvenile delinquency trend overall declines over time, overrepresentation persists for youth of color. Many stakeholders in the juvenile justice system have identified these disparities and are working to reduce overrepresentation of arrests, secure detention, and petitioned cases for youth of color.

For example, the Department of Public Safety (DPS) lists several disproportionality reduction strategies in their 2012 report, “On the Level: DMC in Minnesota’s Juvenile Justice System.” The Minnesota Juvenile Justice Advisory Committee (JJAC)—an eighteen-member committee to provide oversight and recommendations on juvenile justice—is housed in DPS and monitors the federal disproportionality reporting. JJAC awards and monitors federal Title II funds and Juvenile Accountability Block Grants which aim to prevent or divert youth involvement in the juvenile justice system and to eliminate or minimize disproportionality (Juvenile Justice Advisory Committee, 2016; Office of Justice Programs, 2017a).

Four Minnesota counties implement the Juvenile Detention Alternative Initiative (JDAI), a national reform model developed in 1992 by the Annie E. Casey Foundation to respond to overuse and inequitable outcomes of the juvenile justice systems. One of their eight core strategies is to reduce racial and ethnic disparities. Data from the first three pilot counties (Dakota, Hennepin, and Ramsey) indicates the youth of color average daily facility population declined by 45 percent (Office of Justice Programs, 2010).

In the spring of 2017, the Minnesota legislature appropriated \$12 million for the Minnesota Police Training Board to provide local in-service training in crisis intervention and mental illness crises; conflict management and mediation; and implicit bias training to recognize and value community diversity and cultural differences (Minnesota Board of Peace Officer Standards and Training, 2017b).<sup>23</sup> In 2016, Governor Dayton established the Council on Law Enforcement and Community Relations with the goals of improving the relationship between law enforcement agencies and the communities they serve, supporting the adoption of best practices, recommending specific system reforms, and expanding access to law enforcement training programs.<sup>24</sup> After a year of work group collaboration and community input, the taskforce released seventeen recommendations in September 2017. These recommendations involve action at various levels of government to improve community relations with the criminal justice and social reform system, implement best practices in community policing, and recruit and retain diverse law enforcement personnel (Governor’s Task Force on Law Enforcement and Community Relations, 2017).

## C. Factors and consequences

For many youth, the juvenile justice system is the end of a continuum of family and children’s programs and services and the beginning of adult criminal activity. Lopes et al. (2012) examined direct and indirect effects of youth interaction with police and found that experiencing an arrest as an adolescent (ages 14-19) *triples* the odds of being arrested as a young adult (ages 21-23), and has a significant effect on drug use later in adulthood (measured around age 30). Many risk factors contribute to the likelihood of delinquent behavior including trauma, adverse childhood experiences, and intergenerational factors like poverty. Supporting safe, stable, nurturing families and environments through promotion, prevention, and engagement strategies can limit the number of juveniles entering the system through arrest and delinquency.

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<sup>23</sup> Minnesota Statutes 2017, section 626.8469 Training in crisis response, conflict management, and cultural diversity.

<sup>24</sup> Minnesota Executive Order 16-09.

## Trauma and adverse childhood experiences

A traumatic experience threatens someone's life, safety, or well-being; eliciting intense feelings such as fear, terror, helplessness, hopelessness, and despair that overwhelm their capacity to cope (Buffington, Dierkhising, & Marsh, 2010). There are different types of trauma, such as sexual, physical, and emotional abuse or assault; neglect; forced displacement; and many others (Hurley Swayze & Buskovic, 2015). Long-term effects of trauma during youth have negative effects on physical and emotional development (Adams, 2010; Ford, Chapman, Hawke, & Albert, 2007; National Child Traumatic Stress Network, 2009) and social and behavioral development (American Academy of Child and Adolescent Psychiatry, 2011; Ford et al., 2007). As an adult, the physical effects of trauma may develop into health problems such as obesity, headaches, cancer, heart disease, liver disease, depression, domestic violence, alcoholism, illicit drug use and suicide attempts (Adams, 2010; Center on the Developing Child at Harvard University, 2017; Felitti et al., 1998). Trauma also increases the likelihood of developing life-long psychiatric conditions (Adams, 2010; National Child Traumatic Stress Network, 2017). Since the 1990s researchers have conducted hundreds of studies to understand how trauma during childhood, officially termed adverse childhood experiences (ACEs), affects adult health and wellness.

Youth with ACEs have an increased likelihood of participating in delinquent behavior (Buffington et al., 2010; Burrell, 2013; Ford et al., 2007; Hurley Swayze & Buskovic, 2015; Mersky & Reynolds, 2007). In 2015, the Department of Public Safety analyzed a set of questions in the Minnesota Student Survey to explore how commonly youth in correctional facilities report ACEs and what effect ACEs have on health and wellness.<sup>25</sup> They found that an ACE is more prevalent among youth in correctional facilities compared to a matched sample of peers as well as compared to Minnesota adults, and they are more likely to report exposure to multiple types of trauma (Hurley Swayze & Buskovic, 2015). This supports the notion that youth with ACEs are more likely to enter the justice system.

## Parental factors

Parental behavior is a risk factor for trauma when there is drug use, untreated mental health conditions, incarceration, or maltreatment and neglect (Minnesota Department of Human Services, 2017c, 2017b). For all Minnesota youth under eighteen, parental causes were the primary reason for removal for more than three out of every four out-of-home placements; children under the age of one are most affected (Minnesota Department of Human Services, 2017b, 2017c).<sup>26</sup> Adult substance abuse and misuse can compromise the ability of parents to effectively care for their children. In 2016, parental drug use—especially the use of opioids—became the most common primary reason for new out-of-home care episodes, surpassing parental neglect (Minnesota Department of Human Services, 2017c).

Poverty functions as a significant stressor for families such that any additional source of stress (a substance use disorder, a behavioral problem, depression, a health crisis) overwhelms the limited capacity of a family to confront that stress. For parents, poverty is a risk factor for drug addiction and maltreatment which can be a source of trauma for their children (Minnesota Department of Human Services, 2017b, 2017c). For youth, family and neighborhood poverty may be a moderating factor for delinquent and criminal behavior (Hay, N. Fortson,

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<sup>25</sup> The Minnesota Student Survey is a comprehensive questionnaire administered every three years to students in grade 5, 8, 9 and 11. The survey asks a variety of questions related to youth attitudes, behaviors, and health indicators. DPS used the 2013 survey results to compare a group in juvenile correctional facilities (n=383) to a matched sample of youth respondents in the mainstream school population (n=383).

<sup>26</sup> Combines all out-of-home placements for child welfare or juvenile justice.

Hollist, Altheimer, & M. Schaible, 2007; Lopes et al., 2012; Lynam et al., 2000; Santiago, Wadsworth, & Stump, 2011).

### **The adolescent brain**

Recent research in the field of developmental neurobiology of adolescence is informing policy and courts as sentences focus on rehabilitation versus punishment. Cohen and Casey (2014) outline neuroscience research cited in four recent Supreme Court cases.<sup>27</sup> Together the studies cited in the Court's opinions explain developmental and situational effects on brain and behavior during adolescence lead youth to more risky behavior (Cohen & Casey, 2014). The authors note that the studies demonstrate "in the heat of the moment, as in the presence of peers, potential threat, or rewards, emotional centers of the brain hijack less mature prefrontal control circuits during adolescence, leading to poor choice behaviors" (2014). Youth may have the cognitive ability to recognize risk, but they may not have the cognitive ability to override impulses, rewards, or acceptance from a peer group (Chein, Albert, O'Brien, Uckert, & Steinberg, 2011; Cohen-Gilbert & Thomas, 2013; Grose-Fifer, Rodrigues, Hoover, & Zottoli, 2013; Somerville & Casey, 2010; Steinberg, 2009; Steinberg & Monahan, 2007; Steinberg & Scott, 2008).

As researchers continue to study adolescent development, policy makers are pulling them into conversations around age, development, and accountability. Unfortunately, neuroscientists cannot answer when a brain is sufficiently developed. Both adult and younger brains develop at different rates, but there is no average. The brain volume may stop growing around age 10, but the mix of brain areas working in concert for higher level functioning can continue developing at age 30 and older (Somerville & Casey, 2010; Zimmer, 2016).

### **Consequences of juvenile justice system contact**

Contact with the juvenile justice system can have negative consequences on the young person, their family, the community, and taxpayers. Studies show that involvement in the juvenile justice system—including arrests, court appearances, conviction, and confinement—negatively reduce the likelihood of high school completion (Cavendish, 2014; Hjalmarsson, 2008; Keeley, 2006; Osgood, Foster, & Courtney, 2010; Sweeten, 2006). Without a high school diploma, there can be significant loss of income. Youth in juvenile residential facilities and on probation also experience significant disparities in teen pregnancy, HIV, and sexually transmitted infections (Gowen & Aue, 2011).

#### *Youth in confinement*

Confinement can be a traumatic experience. Some youth experience physical, sexual, and emotional trauma in confinement (Mendal, 2011), with an even higher risk if a judge certifies them as an adult resulting in confinement in an adult institution (Centers for Disease Control and Prevention, 2007). The same effects of ACEs on youth development referred to in the previous section can also occur from traumatic experiences in confinement. The families of confined youth also experience emotional burden and in some cases incur travel expenses to visit the youth in confinement (Justice Policy Institute, 2014).

Taxpayers pay the immediate financial costs of maintaining youth correctional facilities, but there are also long-term economic impacts of youth confinement (Holman & Ziedenberg, 2006; Justice Policy Institute, 2009, 2014).

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<sup>27</sup> Miller v. Alabama (2012); Jackson v. Hobbs (2012); Graham v. Florida (2010); Roper v. Simmons (2005).

### 3. Governance and funding

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Minnesota does not have a centralized system that governs juvenile justice. Instead there are more than four hundred state and local law enforcement agencies that deal with juvenile arrests, eighty-seven county attorneys, over two hundred judicial district court judges, eighty-one licensed residential facilities, the state Department of Corrections, and thirty-five counties and eight groups of counties that administer juvenile probation services. In addition, the Department of Human Services and county child protection agencies interact with the juvenile system and offer services to many of the same individuals. There are numerous advisory boards and committees, initiatives, nonprofits, school districts, and local public health agencies that provide services, information, and research in the juvenile justice field. Each agency has different control over system decision points and different funding streams, which makes it difficult to track total spending on delinquent youth.

According to the Juvenile Justice Advisory Committee (JJAC), fragmentation of services and lack of coordination are significant barriers to improving outcomes for youth (Juvenile Justice Advisory Committee, 2015, 2016).

#### A. Public safety, courts, and corrections

##### Law enforcement

In many cases, an arrest is a juvenile's first contact with the juvenile justice system.<sup>28</sup> There are over three hundred municipal police departments, eighty-seven county sheriff's offices, and nine tribal police departments (Minnesota Board of Peace Officer Standards and Training, 2017a). Law enforcement officers identify delinquent crime and arrest youth participating in delinquent activity. Some law enforcement officers and school resource officers operate formal diversion programs prior to any submission of charges to the county attorney.<sup>29</sup>

Revenue from state and local taxes, fines, and fees pay salaries and benefits of police officers, support personnel, and cover the cost of maintaining police stations, equipment, and vehicles. The U.S. Department of Justice awards state and local units the Edward Byrne Memorial Justice Assistance Grants (JAG), for policing programs, training and equipment (Office of Justice Programs, 2017b; Parlapiano, 2014). These federal grants pass through the Minnesota Department of Public Safety. In 2016, twelve programs in Minnesota were awarded JAG Recidivism Reduction grants to improve public safety and better serve youth and adults returning to communities from correctional placements (Office of Justice Programs, 2016).

##### Department of Public Safety

The Office of Justice Programs (OJP) in the Minnesota Department of Public Safety provides resources to reduce crime, improve the criminal justice system, and assist crime victims. The Justice and Community Grants unit assists state and local governments, public and nonprofit agencies, community organizations, and the legislature. They administer seven state grant programs: Youth Intervention Program, Community Crime Prevention Grants, Life Savers Grants, Narcotic and Violent Crime Enforcement, Sex Trafficking Investigations and Training Grants, and Community Justice Reinvestment Grants. These grants assist non-profits, law enforcement agencies, counties, and community organizations in funding youth and community crime

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<sup>28</sup> The vast majority of juvenile citations come from law enforcement, but schools, social services or community members can initiate complaints against youth.

<sup>29</sup> There are also "informal" diversion programs, whereby police use street-level discretion to unofficially warn, release, and/or ignore minor offenses. With so many departments across the state, there is also great variability and discretion.



prevention and intervention including juvenile delinquency prevention, drug abuse and child abuse (Office of Justice Programs, 2017a). OJP also trains crime victim service providers and juvenile practitioners to improve program services.

The Minnesota Governor appoints eighteen members to a supervisory Juvenile Justice Advisory Committee (JJAC) to oversee federal reporting requirements under the Juvenile Justice and Delinquency Prevention Act (JJDP) and administer federal grants. JJAC also has the responsibility to advise and make recommendations on juvenile justice issues to the Governor and Legislature. DPS houses JJAC in the Office of Justice Programs. JJAC administers two federal grants: Title II formula grants and Juvenile Accountability Block Grant (JABG). Title II provides funds for prevention, intervention, and aftercare programs to youth-serving and community-based organizations. In federal fiscal year 2016, ten Minnesota grantees received \$534,940 in Title II grants (Juvenile Justice Advisory Committee, 2016; Office of Justice Programs, 2017a). JABG funding provides support for juvenile justice at local units of government. In fiscal year 2016, there was a little over \$100,000 available from the last federal block grant (grant program ended in 2013) (Juvenile Justice Advisory Committee, 2016; Minnesota Management and Budget, 2017).

### **County attorney's office**

There is an elected county attorney for each county in Minnesota (Minnesota County Attorneys Association, 2017). The county attorney and their office decide which juvenile arrests have legal standing for prosecution, decline cases when there is not legal standing, refer the youth to other child services, and give diversion opportunities in lieu of prosecution.<sup>30,31</sup> The county attorney's office decides the level at which a case will be charged, and petitions the case to the district court in that county.<sup>32</sup> The county board provides the budget for the county attorney, any assistants and employees in their office, any fees for attorneys or firms employed by county attorney, other expenses necessary to perform duties of office, and payment of premiums of any bonds required of the county attorney or their office.<sup>33</sup>

### **Juvenile court**

There are 104 District Court locations across the state, divided into ten judicial districts. District Court judges oversee criminal and civil cases, with many having separate divisions for juveniles.<sup>34</sup> These judges make sentencing decisions, determine if the juvenile should be transferred to adult court, and decide if the juvenile should participate in a diversion program. Judges can also order the youth to complete certain conditions or complete a period of supervision as a second chance to remain law abiding and keep the charges off their permanent record.<sup>35</sup> The state funds most of the District Court system for both adult and juvenile cases, with the counties responsible for any court capital outlays and facility costs.

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<sup>30</sup> There are no statewide data sources presently available to document these decisions made by county attorneys.

<sup>31</sup> See page 29-30 for more information on county attorney diversion programs.

<sup>32</sup> Minnesota Statutes 2017, Chapter 388.09. Other Attorney Employed. In some petty misdemeanor, misdemeanor, or gross misdemeanor prosecutions, the county board may enter into agreements with other attorneys outside of the county attorney's office (except in Hennepin and Ramsey county), without making these attorneys employees of the county.

<sup>33</sup> Minnesota Statutes 2017, section 388.18 Compensation schedule, salaries.

<sup>34</sup> Minnesota Statutes 2017, section 260.019-260.021. In counties with a population more than 200,000, the probate court is the juvenile court, except in Hennepin and Ramsey counties where the District Court is the juvenile court, as is the case in all other counties.

<sup>35</sup> See page 29-30 for more information on post-trial diversion strategies.



## Children's Residential Facilities licensed by the Department of Corrections

There are several stages within the juvenile justice system where law enforcement or a judge may place a youth in an out-of-home placement: after arrest (if necessary), pending the outcome of court proceedings (if necessary), or as a dispositional outcome (if court-ordered). Minnesota standards (Minnesota Rules, Chapter 2960) govern children's residential care providers for treatment, detention, and foster care services. The rule governs programs licensed by the Minnesota Department of Human Services or Department of Corrections. There are eighty-one active Children's Residential Facilities (CRF) license holders in twenty-four counties.<sup>36</sup> Hennepin, Ramsey, and St. Louis County all have ten or more CRFs. The following analysis focuses on facilities licensed by the Department of Corrections (DOC).

The cost of an out-of-home placement for delinquency is borne by the county. On average, out-of-home placements for delinquency cost around \$220 per day for a secure placement and \$180 per day for a non-secure placement.<sup>37</sup> There are large differences in per diem costs across counties. Minnesota Management and Budget (MMB) estimates that counties and correctional agencies pay an estimated average of \$145,000 for out-of-home care for delinquency in Minnesota.<sup>38</sup> The annual cost to each county depends on how many juveniles have detention or residential stays, the length of those stays, and the per diem cost of their county facility or another county facility. For example, chemical dependency or specialized treatment can be more expensive than general correctional programs.

2015 DOC-licensed facilities	
<b>Total Capacity of DOC-licensed facilities</b> (includes non-delinquent and DOC foster placements)	1,695 beds
<b>Average Daily Population</b> (includes non-delinquent and DOC foster placements)	980 (58%)
<b>Capacity of DOC-licensed facilities for delinquent placements</b> (secure and non-secure detention or residential, but no foster bed types)	1,572
<b>Average Daily Population for delinquent placements</b> (secure and non-secure detention or residential, but no foster bed types)	711 (45%)
<b>Range of days for a typical detention stay</b> (secure and non-secure detention)	2 - 18 days
<b>Range of days for a typical residential stay</b> (secure and non-secure residential)	30 - 150 days

**Source:** Minnesota Management and Budget analysis of In State Juvenile Placement Data 2015, Department of Corrections.

### *Minnesota Correctional Facility-Red Wing*

Built in 1890, the Red Wing facility is the only remaining DOC-operated facility currently operating as a licensed children's residential facility. It houses juveniles who have exhausted all other local and regional placement options, and a small amount of cases where the courts have committed juveniles to the Commissioner of Corrections.<sup>39,40</sup> The facility provides beds for both long-term residential placements as part of a court sentence, and temporary stays for arrest and detention holds. For residential placements, staff administer a risk/need

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<sup>36</sup> A license holder can run more than one program. For example, some programs have both secure and non-secure units.

<sup>37</sup> Average of all DOC-licensed facilities with a residential or detention bed type. Average excludes DOC-licensed foster care placements. Figures from MMB analysis of DOC-licensed facilities.

<sup>38</sup> MMB analysis of DOC-licensed facilities.

<sup>39</sup> Minnesota Statutes 2017, section 260B.199 Placement of juvenile offenders at Minnesota Correctional Facility-Red Wing.

<sup>40</sup> Minnesota Statutes 2017, section 260B.201 Mandatory commitment to commissioner of corrections.

assessment which directs what services to provide to meet individual outcome goals. Dependent on their needs, juvenile residents at Red Wing participate in a range of treatment and programming, including academic and vocational programs, restorative justice, cognitive behavioral treatment, and mental health/substance use counseling. In addition, the facility runs a community re-entry program to help youth better reintegrate into their communities. The DOC projects 2017 cost per day per youth of around \$280 with an average daily population of 90 to 100 juveniles.

## Supervision

The structure of juvenile supervision (juvenile probation) in Minnesota is similar to the structure of adult supervision (adult probation and supervised release after a prison placement). Minnesota statute allows counties to determine the extent to which they administer community supervision services. As a result, a county can have one of three supervision models: Department of Corrections Contract (DOC counties), County Probation Officer (CPO counties), or Community Corrections Act (CCA jurisdictions).

**Department of Corrections Contract (DOC):** In DOC counties, the Department of Corrections provides juvenile supervision services under contract with the county. For juvenile probation, the counties are billed for service costs, and the state reimburses a portion of this cost. The DOC also provides adult misdemeanor, gross misdemeanor, and felony supervision in DOC counties. In 2016, 14 percent of juvenile probation entries were under DOC county jurisdiction (Minnesota Department of Corrections, 2017).

**County Probation Officer (CPO):** In CPO counties, juvenile supervision is under county authority, as well as adult misdemeanor and gross misdemeanor supervision. A state funding subsidy administered by the DOC reimburses up to 50 percent of salary and fringe benefits of the director and probation officers in CPO counties.<sup>41</sup> The size of the funding pool is fixed, and current appropriations for reimbursement compensate an estimated 30 percent of actual costs (Minnesota Management and Budget, 2016). The state also funds grants for reducing workloads.<sup>42</sup> In 2016, 19 percent of juvenile probation entries were under CPO jurisdiction (Minnesota Department of Corrections, 2017)

**Community Corrections Act (CCA):** In CCA counties, the county administers all levels of supervision: juvenile, misdemeanor, gross misdemeanor and felony. Funding for CCA supervision and probation is a mix of a state subsidy and county tax dollars with the size of the county investment varying between counties. The DOC administers the state subsidy, which is a legislatively determined formula. Components of the formula include case filings, county population, number of convicted felons sentenced to probation, and adjusted net tax capacity.<sup>43</sup> In 2016, 67 percent of juvenile probation entries were under CCA jurisdiction (Minnesota Department of Corrections, 2017).

## B. Child welfare

The juvenile justice system and child welfare system are interconnected in governance, funding, and populations served.<sup>44</sup> In 2016, over 15,000 children in Minnesota experienced one or more episodes of out-of-home care (Minnesota Department of Human Services, 2017c).<sup>45</sup> Out-of-home care occurs when a parent is unable to care

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<sup>41</sup> Minnesota Statutes 2017, section 244.19, subdivision 6. Reimbursement of counties.

<sup>42</sup> Minnesota Statutes 2017, section 244.22 Probation Service Providers; Caseload Reduction Grant Money.

<sup>43</sup> Minnesota Statutes 2017, section 401.01; historically as 1973 c 354 s 1.

<sup>44</sup> Minnesota Administrative Rules, Chapter 2960, Licensure and Certification of Programs for Children.

<sup>45</sup> Although this statistic includes placements for delinquency, the overwhelming majority are for child welfare (90%).

for their child (most often because of parental drug use or neglect) or because the child's actions warrant removal (most often child delinquency). Although removal from the home due to parental reasons (child protection cases) occurs at higher rates than child reasons, and at younger ages, it can have consequences for children and later involvement with the juvenile justice system. Maltreatment can have adverse outcomes on youth including physical, psychological, behavioral problems, teen pregnancy, low academic achievement, and delinquency (Centers for Disease Control and Prevention, 2016). A National Institute of Justice study indicated that child abuse or neglect increased the likelihood of juvenile arrest by 59 percent, and increased adult criminal behavior by 28 percent, and violent crime by 30 percent (Widom & Maxfield, 2001).

As with juvenile justice, there are racial disparities in child welfare. In 2016, American Indian children were seventeen times more likely than white children to experience out-of-home care (Minnesota Department of Human Services, 2017c). Black children were three times more likely to experience out-of-home care, and children who identify as two or more races were five times more likely (Minnesota Department of Human Services, 2017c). The Minnesota legislature approved grant funding to eight tribal, county and community agencies to develop, implement, and evaluate activities to address these disparities in the child welfare system (Minnesota Department of Human Services, 2016).

### **Funding and expenditures**

In 2016, the federal government, the state of Minnesota, and counties spent over \$500 million on child welfare services for Minnesota children.<sup>46</sup> This includes, costs related to case management, investigations and assessments, out-of-home care, adoptions, and all of the administrative functions necessary to support these activities. Local property taxes and other county resources typically provide around half of the needed funding (\$226 million).

Counties retain much of the control and direction of child protection, with oversight and training provided by the Department of Human Services (DHS). County social workers investigate maltreatment, provide and refer youth to support services, facilitate and monitor out-of-home care, participate in court proceedings, provide ongoing case management services, and report crime to law enforcement if necessary. As with juvenile justice, Courts oversee out-of-home placements (residential facilities) and parental rights decisions. DHS oversees adoption support.

A forthcoming (2018) Results First report will examine the Child Welfare system in more detail.

## **C. Additional organizations**

A range of other organizations fund, provide oversight, and recommend best practices for the Juvenile Justice system. For example, the Minnesota Association of County Probation Officers (MACPO) is an organization for probation officers statewide that provides training and legislative monitoring. The Minnesota Association of Community Corrections Act Counties (MACCAC) is an organization of thirty-three CCA counties that seek to coordinate with the Department of Corrections and develop policy recommendations for members and the

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<sup>46</sup> Expenditures were based primarily on the Children's Program data in the 2016 Social Services Expenditure and Grant Reconciliation Report (SEAGR). Additional costs paid by the state or federal government were added including state contracts, adoptions and kinship assistance, and personnel costs for the Department of Human Services' Child Safety and Permanency Division. Not included in the cost estimate are payments made by the federal government to American Indian tribes and county court costs, as this data is unavailable. For more detail on this estimate, see the forthcoming (2018) Results First Child Welfare report.

Legislature regarding the implementation and operation of the Community Corrections Act of 1973.<sup>47</sup> The Children’s Justice Initiative (CJI) is a collaboration between the Department of Human Services and the Minnesota Judicial Branch with the objective of finding stable environments for children and improving child well-being.

## 4. Evidence-based practices in juvenile justice

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Effectively implementing juvenile justice services enables state and local governments to decrease recidivism and produce other positive outcomes. There is extensive research on prevention and particular intervention programs that reduce recidivism, increase school attendance, strengthen family and peer relationships, increase employment, and improve mental health symptoms (Lipsey, Howell, Kelly, Chapman, & Carver, 2010). Besides having favorable effects on outcomes, evidence-based services can generate cost savings. When a juvenile delinquent participates in an evidence-based service or practice (EBP), returns to the community, and does not re-offend, the system avoids costs for arrest, courts, children’s residential facilities or supervision, as well as adult criminal justice system costs for prison, jail, or supervision.

Many analyses, including this report, focus on individual programs or program areas. Lipsey and colleagues (2010) took an alternative approach and synthesized available, high-quality research (over five hundred evaluation studies) on the effects of interventions. They found four critical factors of effectiveness:

1. Provide the most effective programs possible to the highest risk cases.
2. Use programs that take a therapeutic approach to changing behavior by focusing on constructive personal development.
3. Favor program types that have shown large effects in research studies when matching programs to the needs and problem areas of the juveniles served.
4. Monitor each program to ensure that it is delivered as intended and that all the juveniles assigned to it receive at least an amount of service that corresponds to the average reported in the evaluation research on that type of program.<sup>48</sup>

The fourth factor is critical to achieving desired outcomes. The mere use of evidence-based practices will not reduce recidivism for a juvenile population. Lipsey and colleagues (2010) caution: “the availability of research evidence is not in itself sufficient for taking the effective programs it identifies to scale in a way that retains their effectiveness when they are widely implemented in routine practice.” Trained personnel must deliver evidence-based practices according to a specific plan and design. Research indicates that incomplete or poorly implemented programs delivered by untrained personnel to offenders who spend only a minimal amount of time in the program will not successfully reduce recidivism (Altschuler, Armstrong, & MacKenzie, 1999; Lipsey & Cullen, 2007; Sherman et al., 1998).

In Minnesota, counties are taking steps to monitor and train practitioners. In 2008, Hennepin County began assessing correctional practices using the Evidence-Based Correctional Program Checklist (CPC) developed by the University of Cincinnati Corrections Institute (UCCI).<sup>49</sup> The CPC has two areas of measurement: the capacity

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<sup>47</sup> Minnesota Statutes 2017, section 401.01; historically as 1973 c 354 s 1.

<sup>48</sup> Lipsey et al. also created an instrument to allow local jurisdictions to rate how closely their programs match the evidence-based profile: The Standardized Program Evaluation Protocol for Assessing Juvenile Justice Programs (SPEP).

<sup>49</sup> The University of Cincinnati Corrections Institute (UCCI) [website](#).

area and the content area. The capacity area measures whether a correctional practice has the capability to deliver evidence-based interventions, and the content area focuses on the extent to which the practice aligns with research-based principles of effective intervention. Assessors collect information at site visits through interviews with staff and participants, observation of services, and review of materials.

The Minnesota Department of Corrections and six additional counties began using the checklist in 2015 and formed the Minnesota CPC Collaborative.<sup>50</sup> By June 2016, the collaborative had assessed sixty-seven corrections programs with only 38 percent highly adherent to evidence-based practices. Of these programs, twelve have since gone through a re-assessment and showed 5 percent average improvement. Ensuring programs are implemented correctly is difficult work, but it is critical to achieving anticipated outcomes. Counties in the collaborative continue to work towards this goal.

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<sup>50</sup> Anoka, Dakota, Hennepin, Olmsted, Ramsey, Scott, and Stearns counties.

## Diversion

One evidence-based practice, diversion, has rapidly increased in use over the last decade. The Minnesota Department of Public Safety estimates that one-quarter of all juvenile arrests are in some way diverted (Swayze & Buskovich, 2012a). Law enforcement officers, county attorneys, schools, and probation officers can decide to divert a youth from the system. There are two theoretical foundations for establishing diversion. First, processing youth in the system stigmatizes and ostracizes them for committing relatively minor crimes. This occurs through both how society perceives them and how they define themselves (Dick, Pence, Jones, & Geertsens, 2004; Klein, 1986). Second, spending time with more advanced delinquent youth can increase the probability of reoffending (Loeb, Waung, & Sheeran, 2015). Designed to minimize contact with the system, diversion strategies target first time, low-risk youth who are the least likely to reoffend (Kreager, 2011; Office of Juvenile Justice and Delinquency Prevention, 2017a).<sup>51</sup>

For these eligible youth, there are many advantages to diversion over the traditional court process: avoid formal charges and a court record, more timely or appropriate response to delinquent activity, and several studies show that diversion works to reduce recidivism versus traditional system processing for the same population (Collins, Lonczak, & Clifasefi, 2015; Petrosino, Buckenburg, & Turpin-Petrosino, 2010; Smith, Wolf, Cantillon, Thomas, & Davidson, 2004; Wilson & Hoge, 2012). Diversion also has time and cost savings, freeing resources for more serious cases (Kreager, 2011; Swayze & Buskovich, 2012a). Local research indicates potential cost savings in schools, courts, victimization, and incarceration (Anton & Temple, 2007). It may also reduce need for social services like family counseling and public assistance (Anton & Temple, 2007).

### Pre-trial diversion

Officers have the discretion to withhold a citation, so they never forward the case to the county attorney. This is a diversion strategy, but some law enforcement agencies also have formal programs. In 2011, the Department of Public Safety surveyed Minnesota diversion providers at the county level regarding their interventions and services (Swayze & Buskovich, 2012a). Thirteen percent of all counties reported having law

## What Works in Diversion?

**Providing community- and strength-based services.** Research indicates that diversion programs have greater reductions in recidivism than the formal juvenile justice system for similar populations (Hodges, Martin, Smith, & Cooper, 2011; McCord, Widom, & Crowell, 2001; Petrosino, Buckenburg, & Turpin-Petrosino, 2010; Washington State Institute for Public Policy, 2017; Wilson & Hoge, 2012). Several studies find that the most successful diversion programs provide community-based and strength-based services (Davidson, Redner, Blakely, Mitchell, & Emshoff, 1987; Dryfoos, 1991; Petrosino et al., 2010; Shelden, 1990; Smith, Wolf, Cantillon, Thomas, & Davidson, 2004). For example, Smith and colleagues (2004) found that after one year, participants in a diversion program with services had a 22 percent recidivism rate, compared to participants in a diversion program with no services who had a 32 percent recidivism rate, and a traditional court-processing group who had a 24 percent recidivism rate. Such services include family counseling, restorative justice conferencing, behavioral interventions, education programs, employment support, mentoring, among others.

**Individually tailoring diversion requirements to the needs and risks of each youth.** Research suggests correctional services are most effective at reducing recidivism when they are based on risk, need, and responsivity (D. A. Andrews & Bonta, 2010; Crime and Justice Institute, 2004; National Association of Pretrial Services Agencies, 2008). Juvenile justice system interventions are most effective when they are individualized to the risks and needs of the youth (Andrews 2006; August, Piehler, & Bloomquist, 2016; Jones & Wyant, 2007). Program staff should determine risk with a valid and reliable risk assessment tool (Lipsey, Howell, Kelly, Chapman, & Carver, 2010; National Association of Pretrial Services Agencies, 2008) and follow the “risk-responsivity principle”; meaning, the lowest-risk youth should receive the fewest formal interventions and (Andrews 2006). For example, if a youth is not at risk for chemical use, there is no need for drug testing.

<sup>51</sup> Most common offense types for juveniles on diversion: alcohol, shoplifting, marijuana, theft, tobacco, curfew, Juvenile Justice Benefit-Cost Analysis

disorderly conduct, other drugs, assault, bully/harassment/stalking (Swayze & Buskovich, 2012a).



enforcement agency diversion programs. Eleven counties reported police department property crime, tobacco, traffic, and “street level” diversion as well as school resource officer diversion. In the remaining seventy-six counties, law enforcement officers can still refer a juvenile to a diversion program administered by the county attorney.

In 1995 the Minnesota Legislature required county attorneys to establish at least one pretrial diversion program for juvenile offenders in each county.<sup>52</sup> Community Corrections Act counties may participate in a pretrial diversion program in conjunction with the other counties within its jurisdiction. To participate in diversion, a county attorney, law enforcement agent, school staff, or probation officer must refer the youth to diversion while county attorneys or probation officers make the diversion determination (Swayze & Buskovich, 2012a). Programs *may* include: (1) Screening services for the court and the prosecuting authorities to help identify likely candidates for pretrial diversion; (2) Establishing goals for diverted offenders and monitor performance of these goals; (3) Performing chemical dependency assessments of diverted offenders where indicated, making appropriate referrals for treatment, and monitoring treatment and aftercare; (4) Providing individual, group, and family counseling services; (5) Overseeing the payment of victim restitution by diverted offenders; (6) Assisting diverted offenders in identifying and contacting appropriate community resources; and (7) Providing educational services to diverted offenders.<sup>53</sup>

Diversion activities vary across programs. Community service is the most common program requirement, indicated by seventy-six counties (87%). Maximum hours range from ten to twenty or more, and the site could be a work crew option or a non-profit or government site chosen by the participant or assigned by the diversion program. Other possible program requirements include an apology letter, restitution payments, homework assignments, chemical dependency curriculum, cognitive skills groups, call-in/check-ins, urine analysis for drug testing, individual counseling, victim-offender mediation, family counseling, community supervision, anger management, and Electric Home Monitoring (EHM). Forty-one counties indicated their diversion programs provide education components. The most reported

topics were alcohol and drugs, shoplifting and theft, general delinquency, tobacco, or a specialty curriculum. Some diversion programs have class fees, ranging from \$10 - \$100, with an average between \$40 and \$55 (Swayze & Buskovich, 2012a). Diversion completion occurs when a youth has met all their contract conditions or in some cases diversion is a pre-determined length of time. Counties reported the main reasons their programs prematurely discharged youth from diversion were failure to attend meetings or classes, and getting a new citation or charge while on diversion (Swayze & Buskovich, 2012a). If a youth fails to meet the requirements of their diversion contract, the diversion staff explore the reasons for failure and determine if they should refer the youth to the court system (Kreager, 2011).

### Post-trial diversion

Some youth are not eligible for pre-trial diversion or elect not to participate. Three diversion opportunities exist for youth who make an initial court appearance: continuance for dismissal, stay of adjudication, and diversion dispositions. A continuance for dismissal is not a finding or admission of guilt, but rather the youth and the trial attorneys agree to suspend the court proceedings for a period of time, typically 180 days (Swayze & Buskovich, 2012a). During this time, the youth must remain law-abiding, and the trial judge may also impose conditions like victim restitution, community service, fees, and participation in treatment, counseling, or education. These conditions are similar to pretrial diversion program components. The benefit of a continuance is no delinquency offense record if conditions are completed. With a stay of adjudication disposition, a trial judge determines sufficient evidence of guilt, but rather than find the youth delinquent, the judge withholds the adjudication for a maximum length of 180 days (Swayze & Buskovich, 2012a). During this period the youth may have court-required sentence components to fulfill: probation, fines, community service. At the end of 180 days, the judge must adjudicate the juvenile or dismiss the case.

Finally, there are diversion dispositions in juvenile court. Court staff select these types of diversions, and may include other sentence components like community service or monitoring. If a youth successfully completes the diversion program, the judge dismisses the charge.

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<sup>52</sup> Minnesota Statutes 2017, section 388.24 Diversion Programs for Juveniles.  
Juvenile Justice Benefit-Cost Analysis

<sup>53</sup> Minnesota Statutes 2017, section 388.24.3 Program components.

## 5. Juvenile justice benefit-cost ratios

### A. Definitions

Figure 17: Benefit-cost analysis terms

Term	Definition
<b>Benefits</b>	Services shown to reduce crime produce benefits to taxpayers and society. Total benefits are the sum of taxpayer benefits, such as the cost of crime, plus other benefits to society, such as increased labor market earnings. <i>Estimates are rounded to the nearest ten dollars.</i>
<b>Benefit-cost analysis</b>	An estimate of the cost effectiveness of alternative services by comparing expected benefits to expected costs. Service profiles note which outcomes the model monetizes.
<b>Benefit-cost ratio</b>	The net present value of anticipated service benefits to state residents for every dollar in programmatic costs. <i>Ratios are rounded to the nearest ten cents.</i> The overall ratio shows the impact for the combined supervision and residential treatment center cohort.
<b>Cohort(s)</b>	Different groups of youth receive different services and recidivate at different rates. Using court data, MMB built four cohorts to better estimate expected benefits. These cohorts are: juveniles with immediate supervision (probation-only), juveniles released from residential treatment centers (residential + probation cohort), a combined cohort of the previous two, and juveniles receiving diversion after a court appearance.
<b>Evidence-based</b>	A service or practice whose effectiveness has been rigorously evaluated using studies with treatment and control group designs.
<b>Funding source</b>	Entities involved in funding the intervention (including monitoring, evaluation, administration, and technical assistance).
<b>Impact on outcomes</b>	Impact on outcomes reflects the degree to which there is evidence of effectiveness for a given service, as reflected in one or more of eight national clearinghouses or literature review by Minnesota Management & Budget (see appendix A for definitions). The categories mirror the levels of evidence defined by <a href="#">The Pew Charitable Trusts and MacArthur Foundation</a> .
<b>Net costs</b>	The incremental cost of providing the service to one individual minus the cost of the likely alternative. For example, the cost of providing diversion minus the cost of monitoring that the individual would otherwise receive. Estimates are rounded to the nearest ten dollars.
<b>Net present value</b>	The difference between the present value of cash inflows and outflows.
<b>Other societal benefits</b>	Benefits that accumulate to society are increased labor market earnings and decreased health care use and crime. Estimates are rounded to the nearest ten dollars.
<b>Service</b>	A state- or county-implemented intervention to reduce juvenile delinquency.
<b>Source of evidence</b>	The source is the entity whose research was used to determine effectiveness. We use WSIPP effect sizes for benefit-cost estimates.
<b>Taxpayer benefits</b>	Estimated taxpayer benefits accrue from reductions in criminal justice system use, as well as decreases in health care expenses and taxes (from increased earnings) related to changes high school graduation. Estimates are rounded to the nearest ten dollars.



## Aggression Replacement Training (ART)

A cognitive behavioral intervention that targets chronically aggressive and violent youth. Treatment focuses on improving social skills, moral reasoning, as well as anger and emotional management. ART teaches participants to control impulsiveness and anger and to use more appropriate pro-social behaviors, as well as group discussions to correct anti-social thinking. Long-term program goals include reducing criminal behavior and recidivism, increasing in-community functioning, and improved pro-social behavior. ART is one of many cognitive behavioral therapy (CBT) models available for practitioners.

Impact on outcomes	Source of evidence	Participant (cohort) type	Funding Source
<b>Proven effective</b>	<u>Crime Solutions</u>	Residential; supervision	County, DOC

### Benefit-cost analysis (compared to treatment as usual):

Estimated overall Minnesota ratio	Type	Minnesota total	State and local taxpayer	Other Minnesota societal benefits	Federal
<b>\$12.10</b>	Benefits	\$7,340	\$1,400	\$5,940	\$110
	Net costs	\$610	\$610	\$610	n/a
	B/C ratio	\$12.10	\$2.30	\$9.80	n/a

Benefit cost ratio based on participant (cohort) type	Estimated Minnesota ratio: probation-only cohort	Estimated Minnesota ratio: residential + probation cohort
	<b>\$10.50</b>	<b>\$18.40</b>

**Cost and effectiveness:** We estimated costs using data collected from a sample of county correction agencies, residential treatment facilities, and mental health providers. We saw variation in cost dependent on whether this was delivered in a correctional facility by correctional staff or by a provider during a session. When delivered by an eligible provider to an eligible participant Medical Assistance covers this service. For the purpose of this analysis, we assumed that all costs were covered by state and local stakeholders, even though the federal spending from Medicaid covers a portion of the cost.

**Benefits, monetized outcomes, and cohorts:** Benefits accrue from decreases in crime, decreases in health care expenses, and increases in employment from changes in high school graduation. Since participants in both residential and probation-only context receive this service, we modeled three cohorts: probation, residential, and these two combined. The overall estimate reflects the combined cohort and remains nearer to probation because the residential cohort is a smaller share of the total delinquent youth. Though not monetized, this analysis also found positive impacts on social skills and moral reasoning.

**Implementation and demand:** As discussed above, we saw differences in the type of providers that offer this service. While the research does not indicate a preferred setting, it does note practitioners should be trained in the model, execute the components consistently, and ensure the proper intensity of treatment.

## Cognitive Behavioral Therapy (CBT)

Refers to a variety of combinations of cognitive and behavioral therapies, which are often adapted to address specific diagnoses. Programming focuses on discussing and restructuring individual perceptions and behaviors in challenging situations. The therapist may provide guidance on emotional regulation, communication skills, and problem solving. Many models are used by juvenile justice agencies to meet varying needs of clients, including Thinking for a Change, Becoming a Man, Carey Guides, Dialectical Behavioral Therapy (for those with co-occurring disorders), sex-offender specific CBT, and trauma-focused CBT.

Impact on outcomes	Source of evidence	Participant (cohort) type	Funding Source
<b>Proven effective</b>	<u>Crime Solutions</u>	Residential; supervision	County, DOC

### Benefit-cost analysis (compared to treatment as usual):

Estimated overall Minnesota ratio	Type	Minnesota total	State and local taxpayer	Other Minnesota societal benefits	Federal
<b>\$6.00</b>	Benefits	\$6,190	\$1,180	\$5,020	\$140
	Net costs	\$1,040	\$1,040	\$1,040	n/a
	B/C ratio	\$6.00	\$1.20	\$4.80	n/a

Benefit cost ratio based on participant (cohort) type	Estimated Minnesota ratio: probation-only cohort	Estimated Minnesota ratio: residential + probation cohort
	<b>\$5.20</b>	<b>\$9.10</b>

**Cost and effectiveness:** CBT is one of the most common treatments offered by correctional agencies. In general, the service is provided by supervision agents in a group setting. Using the average cost from six county correctional agencies, we find an average cost of \$1,040 per participant.

**Benefits, monetized outcomes, and cohorts:** Benefits accrue from decreases in crime, in health care costs, and increases in employment resulting from changes in high school graduation. Since participants in both residential and probation-only context receive this service, we modeled three cohorts: probation-only, residential + probation, and these two combined. Though not monetized, this analysis also found positive impacts on mental health and risky behavior.

**Implementation and demand:** There are a range of correctional services that use principles of CBT; each of which entails their own specialized model, training, and effectiveness. Since these practices are generally provided by probation officers, correctional agencies should ensure high-quality training and that services are implemented correctly in the field. While most juveniles who need this service appear to be receiving it, we did hear a need for more gender, cultural, and trauma-orientated CBT curriculums. Providing these programs can be challenging for agencies with smaller juvenile populations.

## Diversion with services

Seeks to redirect youths away from formal processing in the juvenile justice system and provide an alternate means for holding offenders accountable. Youth, who meet the local criteria for diversion (generally, first time or low-risk minor offenders) participate in restorative and therapeutic programming.

Impact on outcomes	Source of evidence	Participant cohort	Funding Source
<b>Proven effective</b>	<u>Crime Solutions</u>	Diversion	County, DOC supervision, Courts, DPS

### Benefit-cost analysis (compared to treatment as usual):

Estimated overall Minnesota ratio	Type	Minnesota total	State and local taxpayer	Other Minnesota societal benefits	Federal
<b>n/a</b>	Benefits	\$1,830	\$1,000	\$830	\$40
	Net costs	(\$720)	(\$720)	(\$720)	n/a
	B/C ratio	n/a	n/a	n/a	n/a

**Cost and effectiveness:** We estimated the cost of diversion using the administrative cost associated with processing diversion and a representative set of services. In our discussion with counties, this set often included sentencing to service, restorative justice programming, and substance use/mental services. We find that diversion saves correctional agencies money, in addition to offering benefits, because it reduces the amount agencies need to spend on detention, probation, and programming for diverted youth.

**Comparison group, benefits, monetized outcomes, and cohorts** Benefits accrue from decreases in crime, in health care expenses, and increases in employment resulting from changes in high school graduation. Because diversion saves money compared to the alternative sentence, probation, we find a negative cost. Therefore, total benefits are \$1,830 (\$280 in taxpayer benefits + \$830 in other societal benefits + \$720 in taxpayer cost savings). Given a negative denominator, there is no way to estimate a benefit-cost ratio. For purposes of costing, we assumed that if substance use or mental health or other services were needed, both the treatment and counterfactual would receive them. The net cost is, therefore, zero. We assumed the counterfactual would receive around six months of probation at a total cost of \$1,550. Diversionary administrative costs and services (described above) cost \$830. These estimates came from review of court records and discussions with counties on their caseloads. Unlike other services, there is only one relevant cohort (diversion).

**Implementation and demand:** The decision to provide additional services with diversion should be based on the risk level of the client (Andrews, 2006; Andrews & Bonta, 2010). Inclusion of services increases contact, which may have harmful impacts of clients that are of sufficiently low-risk or -need. The evidence cautions “net widening,” whereby a greater number of youth are brought into the system because of the introduction of a diversion programs (Decker, 1985). In this way, some participants may never have been processed and diverted, but for the diversion option. Net widening can have a negative impact of participants, and use of diversion services should be monitored for appropriateness.

## Diversion without services

Seeks to redirect youths away from formal processing in the juvenile justice system and provide an alternate means holding offenders accountable. Youths, who meet the local criteria for diversion (generally, first time or low-risk minor offenders), participate in restorative or therapeutic services. Often occurs through “warn and release,” where police issue a warning before releasing the juvenile or through discussions with a county/city attorney. In either case, youth are diverted away from formal processing (sanctions) in the juvenile justice system without additional community service or treatment requirements.

Impact on outcomes	Source of evidence	Participant cohort	Funding Source
<b>Proven effective</b>	<u>Crime Solutions</u>	Diversion	County, DOC supervision, Courts, DPS

### Benefit-cost analysis (compared to treatment as usual):

Estimated overall Minnesota ratio	Type	Minnesota total	State and local taxpayer	Other Minnesota societal benefits	Federal
<b>n/a</b>	Benefits	\$3,400	\$1,930	\$2,910	\$80
	Net costs	(\$1,430)	(\$1,430)	(\$1,430)	n/a
	B/C ratio	n/a	n/a	n/a	n/a

**Cost and effectiveness:** We estimated the cost of diversion without services using the administrative cost associated with processing diversion. We find that diversion saves correctional agencies money, in addition to offering benefits, because it reduces the amount agencies need to spend on detention, probation, and services for diverted youth.

**Comparison group, benefits, monetized outcomes, and cohorts** Benefits accrue from decreases in crime, in health care expenses, and increases in employment resulting from changes in high school graduation. Because diversion saves money compared to the alternative sentence, probation, we find a negative cost. Therefore, total benefits are \$3,410 (\$490 in taxpayer benefits + \$1,470 in other societal benefits + \$1,430 in taxpayer cost savings). Given a negative denominator, there is no way to estimate a benefit-cost ratio. We assumed the counterfactual would receive around six months of probation at a total cost of \$1,550. Diversionary administrative costs (described above) cost \$120. Because correctional agencies do not offer a set of services in this type of diversion and there is little difference in recidivism between the two groups, there are more cost savings and larger total benefits. These estimates came from review of court records and discussions with counties on caseloads. Data limitations mean this analysis assumes recipients of the two diversion types exhibit the same recidivism rates, which may not hold in practice. Unlike other services, there is only one relevant cohort (diversion).

**Implementation and demand:** The decision to provide additional services with diversion should be based on the risk level of the client (Andrews, 2006; Andrews & Bonta, 2010). The evidence cautions of “net widening,” whereby a greater number of youth are brought into the system because of the introduction of a diversion (Decker, 1985). In this way, some participants may never have been processed and diverted, but for the system. This net widening can have a negative impact of participants, and use of diversion services should be monitored for appropriateness.

## Functional Family Therapy

A structured family-based intervention that seeks to enhance protective factors and reduce risk. The model includes engagement, motivation, behavior change, and positive role models. Because of the intensive offerings, the treatment targets high-risk youth and their families. The offering is described as a “Multisystemic prevention” because it focuses on multiple domains including behavior change, risk and protective factors, and skills training.

Impact on outcomes	Source of evidence	Participant (cohort)	Funding Source
<b>Proven effective</b>	<u>Crime Solutions</u>	Residential; supervision	County, MA eligible

### Benefit-cost analysis (compared to treatment as usual):

Estimated overall Minnesota ratio	Type	Minnesota total	State and local taxpayer	Other Minnesota societal benefits	Federal
<b>\$1.80</b>	Benefits	\$13,500	\$2,570	\$10,930	\$300
	Net costs	\$7,630	\$7,630	\$7,630	n/a
	B/C ratio	\$1.80	\$0.40	\$1.40	n/a

Benefit cost ratio based on participant (cohort) type	Estimated Minnesota ratio: probation-only cohort	Estimated Minnesota ratio: residential + probation cohort
	<b>\$1.50</b>	<b>\$2.70</b>

**Cost and effectiveness:** In our sample of residential treatment facilities and county correctional agencies, we found only one instance of functional family therapy. The cost of the offering was high relative to estimates from other states. This service can be covered under Medical Assistance, but the provider was not using Medical Assistance reimbursement. To remain conservative, we did not assume any federal spending. If federal Medicaid dollars paid for a share of treatment, this service would have a higher estimated benefit-cost ratio.

**Benefits, monetized outcomes, and cohorts:** Benefits accrue from decreases in crime and health care expenses, and increases in employment resulting from changes in high school graduation. Since participants in residential and probation-only contexts receive this service, we modeled three cohorts: probation-only, residential + probation, and these two combined. The overall estimate reflects the combined cohort and remains nearer to probation because the residential cohort is a smaller share of the total delinquent youth. Though not monetized, this analysis also found positive impacts on risky behavior.

**Implementation and demand:** As mentioned, we found relatively low uptake of this evidence-based practice. Functional Family Therapy has a well-developed training program and works to ensure the service is delivered with fidelity. Though we did not conduct field work on fidelity, we found in discussions with the provider, the service had similar duration, frequency, and clinical support as recommended by the evidence.

## Mentoring

Mentoring pairs at risk youth with adult mentors. Mentoring services are designed to reduce risk factors (e.g., anti-social behavior) and enhance protective factors (e.g., health beliefs, social reinforcement). Research shows increased likelihood of successful outcomes if there are a relatively high proportion of male youth participants; participating youth have a background of high individual or environmental risk; an advocacy role for mentors; a teaching/information provision role for mentors; and mentors and youth are matched based on similar interests.

Impact on outcomes	Source of evidence	Participant cohort	Funding Source
<b>Proven effective</b>	<u>Crime Solutions</u>	Residential; supervision	County, DOC supervision, private foundations, DPS

### Benefit-cost analysis (compared to treatment as usual):

Estimated overall Minnesota ratio	Type	Minnesota total	State and local taxpayer	Other Minnesota societal benefits	Federal
<b>\$3.90</b>	Benefits	\$11,050	\$2,100	\$8,950	\$240
	Net costs	\$2,860	\$2,860	\$2,860	n/a
	B/C ratio	\$3.90	\$0.80	\$3.10	n/a

Benefit cost ratio based on participant (cohort) type	Estimated Minnesota ratio: probation-only cohort	Estimated Minnesota ratio: residential + probation cohort
	<b>\$3.30</b>	<b>\$5.90</b>

**Cost and effectiveness:** Costs were estimated using information from three, relatively intensive mentoring offerings used by county correctional agencies. Counties generally offer services through a contract with a nonprofit, though some agencies coordinate their own offerings. Though we identified other mentoring programs in the state, the evidence is clear that *offerings must span a long time period and involve frequent contact with the mentor*. OJJDP offers federal grants for mentoring; to remain consistent across offerings, we did not remove federal dollars from the costs. Though there was a great deal of variation in the length of formal mentoring, we modeled the costs for 16 months.

**Benefits, monetized outcomes, and cohorts:** Benefits accrue from decreases in crime, health care costs, and increases in employment resulting from changes in high school graduation. Since participants in both residential and probation-only context receive this service, we modeled three cohorts: probation-only, residential + probation, and these two combined. Though not monetized, we found positive impacts on substance use and mental health.

**Implementation and demand:** Mentoring works by creating prosocial relationships with responsible adults. There is, however, variation in the quality of mentoring and many do not generate the desired outcomes. Offerings should appropriately match a juvenile's need with a mentor trained to meet those needs. Best practices can be found here: <http://bit.ly/2BNFv4v>.

## Multisystemic therapy (MST)

Multisystemic therapy attempts to address the various social or environmental systems (family, school, friends, neighborhood, etc.) that influence juvenile behavior. Programming focuses on improving the juvenile's relationship with family and achieving academic success by understanding and mobilizing the relevant systems. This analysis refers to use of MST on general delinquent populations. There are also evidence-based MST offerings for specific populations, like those with substance use disorders and those convicted of sex offenses.

Impact on outcomes	Source of evidence	Participant cohort	Funding Source
<b>Proven effective</b>	<u>National Registry of Evidence-Based Programs and Practices</u>	Residential; supervision	County, MA eligible

### Benefit-cost analysis (compared to treatment as usual):

Estimated overall Minnesota ratio	Type	Minnesota total	State and local taxpayer	Other Minnesota societal benefits	Federal
<b>\$0.50</b>	Benefits	\$7,120	\$1,350	\$5,760	\$160
	Net costs	\$13,530	\$13,530	\$13,530	n/a
	B/C ratio	\$0.50	\$0.10	\$0.40	n/a

Benefit cost ratio based on participant (cohort) type	Estimated Minnesota ratio: probation-only cohort	Estimated Minnesota ratio: residential + probation cohort
	<b>\$0.50</b>	<b>\$0.80</b>

**Cost and effectiveness:** We only found two counties in our sample of correctional agencies and residential treatment facilities implementing this offering. This could be related to the relative intensity and high costs of offering the treatment. This estimate reflects an average from those two counties. Moreover, one county used Medical Assistance to pay for the offerings, and the other county did not. To remain conservative, we did not assume any federal spending. If federal Medicaid dollars paid for a share of treatment, this service would have a higher estimated benefit-cost ratio.

**Years of benefits and monetized outcomes:** Benefits accrue from decreases in crime, in health care expenses, and increases in employment resulting from changes in high school graduation. Since participants in both residential and probation-only contexts receive this service, we modeled three cohorts: probation-only, residential + probation, and these two combined. While the service generates high levels of benefits, the benefit-cost ratio is below \$1 because the costs are also relatively high. Though not monetized, this analysis also found positive impacts on substance use and perceived family functioning.

**Implementation and demand:** Though we did not conduct fieldwork on fidelity, we found in discussions with providers, the service had similar duration, frequency, and clinical support as recommended by the evidence. As mentioned, there is relatively low uptake of this service. Given the use, there may be room to expand this offering, though it may be necessary to increase the available providers.

## Vocational programming

Training typically consists of classroom-based or unpaid job experiences that teach juveniles employable skills or trades. Most offerings combine vocational skills training with academic education or tutoring and provide some job search assistance. Vocational training may be community-based residential and non-residential programs or take place during incarceration.

Impact on outcomes	Source of evidence	Participant cohort	Funding Source
<b>Promising</b>	<u>Washington State Institute of Public Policy</u>	Residential; supervision	County, DOC, DEED, private foundations

### Benefit-cost analysis (compared to treatment as usual):

Estimated overall Minnesota ratio	Type	Minnesota total	State and local taxpayer	Other Minnesota societal benefits	Federal
<b>\$2.70</b>	Benefits	\$6,080	\$2,820	\$3,260	\$150
	Net costs	\$2,240	\$2,240	\$2,240	n/a
	B/C ratio	\$2.70	\$1.30	\$1.40	n/a

Benefit cost ratio based on participant (cohort) type	Estimated Minnesota ratio: probation-only cohort	Estimated Minnesota ratio: residential + probation cohort
	<b>\$2.50</b>	<b>\$3.70</b>

**Cost and effectiveness:** We estimated costs from the average cost of delivering two workforce training programs administered from the Department of Employment and Economic Development (DEED) and one offered through a county correctional agency contract. The DEED programs are not solely for juvenile justice youth, and costs may be different for those youth. The federal government supplies much of this service's funding. We did not deduct federal spending, so as to remain consistent with other estimates. Moreover, these offerings are often oversubscribed, meaning there is an opportunity cost to the state of all participants.

**Years of benefits and monetized outcomes:** Benefits accrue from decreases in crime, in health care costs, and increases in employment resulting from changes in high school graduation. We assumed changes in public assistance would accrue to the state. Since participants in both residential and probation-only context receive this service, we modeled three cohorts: probation-only, residential + probation, and these two combined. Though not monetized, this analysis also found positive impacts on substance use and externalizing behavior.

**Implementation and demand:** Vocational training is typically intensive, skills-based offerings. Though they may include resume and interview support, we distinguish vocational training in this analysis from those services that offer only resume and interview support.



## 6. Conclusion

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A bipartisan legislative provision directs Minnesota Management & Budget (MMB) to implement an evidence-based policy framework. Through the Results First Initiative, MMB uses high-quality evidence to estimate the extent to which publicly funded services may generate positive, cost-effective outcomes for Minnesotans.

This juvenile justice report builds on MMB's previous Results First work in adult criminal justice, adult mental health, and substance use. The report finds evidence-based services and practices in juvenile justice offer the potential—when implemented effectively—to improve public safety and generate positive health and labor outcomes for participants and taxpayers. Moreover, decreased correctional contact can have positive impacts on the educational attainment, substance use, mental health, and the general well-being of Minnesota families.

Through literature reviews, surveys, interviews, and discussions with agency and county partners, MMB found that practitioners in juvenile justice routinely use evidence-based practices. Of the sixty-seven juvenile justice practices and services employed across the state, rigorous evidence supports the effectiveness of twenty-five (Appendix A). MMB conducted a benefit-cost analysis for eight practices; seven of which have benefits that exceed their cost. For five of these practices, the taxpayer benefits alone exceed their cost.

MMB found rigorous research supports extending the trend of reducing correctional system contact for low-risk youth and increasing the availability and intensity of treatment for youth with greater needs. Appropriate expansion of these practices, like diversion, has the potential to deliver on each goal, by both reducing the correctional system contact for those with low-risk and allowing resources to be redirected toward juveniles with higher need for treatment. Research defines appropriateness as responding to the risk and needs of the individual youth. As the state and counties make investments, there should also be scrutiny and evaluation of how these interventions impact—and offer the potential to lessen—racial and ethnic disparities in our present system.

This report also found limited funding for monitoring, training, and evaluating the extent to which practitioners implement evidence-based practices effectively. Failure to deliver services to the right person, at the right intensity, and at the right time can limit the extent to which the services are able to deliver anticipated outcomes. It could also create the false perception that juvenile justice treatment is ineffective at treating delinquent youth.

The Results First Initiative uses evaluations from Minnesota and across the nation to estimate the impact of prevention and treatment services in the state. It assumes Minnesota will experience the same impact found in the research to-date. As more local evidence becomes available, future analyses will be able to speak directly to the impact of services for state specific populations. The findings from this report provide one lens that decision-makers can use during investment decisions, but decision-makers also consider other important factors such as equity, justice, and fairness. Nevertheless, the Results First framework and its benefit-cost analysis is a powerful tool to help decision-makers make informed choices when employing scarce public resources.

## Appendix A: Inventory of services

The Results First inventories are an intermediary step toward determining which services to include in the final benefit-cost analysis. Each contains information about the service, the agencies involved in funding or overseeing the service, service details, and the extent to which there is evidence that the services are attaining desired outcomes. To build the inventory, MMB collected data from county and facility partners. The inventory reflects all interventions found through this process.

Minnesota Management and Budget places interventions in one of the five categories listed in the following table, based on evidence of effectiveness found in five [national clearinghouses](#), the [Washington Institute of Public Policy](#), Blue Prints for Healthy Youth Development, Crime Solutions, National Registry of Evidence-based Programs and Practice, Promising Practices Network, What Works in Reentry Clearinghouse. We also reviewed meta-analysis from [Cochrane Collaboration](#) and [Campbell Collaborative](#). The categories largely mirror the levels of evidence defined by the [Pew-MacArthur Results First Initiative](#). Services delivered in Minnesota that closely resemble ones featured in a national clearinghouse (with respect to the nature, length, frequency, and targeted population) or have been rigorously evaluated in Minnesota are categorized as “Proven effective,” “Promising,” “Mixed effects,” or “No effect.”

Proven effective	A proven effective service or practice offers a high level of research on effectiveness of at least one outcome of interest. This is determined through multiple qualifying evaluations outside of Minnesota or one or more qualifying local evaluation. Qualifying evaluations use rigorously implemented experimental or quasi-experimental designs.
Promising	A promising service or practice has some research demonstrating effectiveness of at least one outcome of interest. This may be a single qualifying evaluation that is not contradicted by other such studies but does not meet the full criteria for the proven effective designation. Qualifying evaluations use rigorously implemented experimental or quasi-experimental designs.
Theory-based	A theory-based service or practice has no research on effectiveness or research designs that do not meet the above standards. These services and practices typically have a well-constructed logic model or theory of change. This ranking is neutral. Services may move up to promising or proven effective after research reveals their causal impact on measured outcomes.
Mixed effects	A mixed effects service or practice offers a high level of research on the effectiveness of multiple outcomes. However, the outcomes have contradictory effects, and there is no additional analysis to quantify the overall favorable or unfavorable impact of the service. Multiple qualifying studies outside of Minnesota or one or more qualifying location evaluation. Qualifying evaluations use rigorously implemented experimental or quasi-experimental designs.
No effect	A service or practice with no effects has no impact on the measured outcome. It does not include the service’s potential effect on other outcomes. Qualifying evaluations use rigorously implemented experimental or quasi-experimental designs.
Category of services	These services represent a category of services that a client may receive, dependent on need. Some of these services may be evidenced-based, but the services have not been studied holistically. As services can vary from client to client, we cannot assess their effectiveness.

Service/Practice	Description	Category	Oversight agency/funding source	Impact on outcomes	Crime	Academic Achievement/Employment	Mental Health/Substance Use	Risky Behaviors	Source of evidence	Population in the research	Other evidence or expert opinion
All Children Excel	Seeks to build resiliency in young (under 10) delinquent youth at high-risk of becoming violent offenders. The service integrates services across sectors with care coordination. Focuses on problem management, family engagement, and building protective factors.	Prevention	County, DPS, private foundation	Theory-based	*	*	*	*			Though the service has not received a formal impact evaluation, it's been cited as promising program structure by the W.T. Grant Foundation and Harvard Innovation in American Government.
Aggression Replacement Training	A cognitive behavioral intervention. It targets chronically aggressive and violent youths. Treatment focuses on improving social skills, moral reasoning, as well as anger and emotional management. Provides youths with an opportunity to learn non-aggressive prosocial skills.	Residential; Supervision	County, DOC supervision, MA/private insurance	Proven effective	Favorable	*	*	Favorable	<a href="#">Crime Solutions</a>	Violent offenders	
Building and empowering students together (BEST)	A monthly group meeting involving families, youth, law enforcement, school staff, corrections staff, and human services staff to assist families and youth in addressing concerns and celebrating successes at school, in the community, and at home.	Supervision	County	Theory-based	*	*	*	*			A literature review by the Federal Office of Juvenile Justice and Delinquency Prevention (OJJDP) outlines best practices for wraparound services, including family voice and choice, interdisciplinary teams, community-based offerings, and individualization of services based on needs of the family unit. It also highlighted some promising outcome evaluation results. The report noted, however, there were few studies on juvenile justice specific populations and evaluations of those populations to date have been inconsistent ( <a href="http://bit.ly/2xeZETV">http://bit.ly/2xeZETV</a> ).
Bullying prevention programming	Designed to stop juveniles from disrespecting others (i.e. lacking respect for the dignity, personal space, safety, and property of others). Programming includes lecture, videos, handouts, and group participation.	Prevention	County	Theory-based	*	*	*	*			
Career curricula and interview skills	Short term job search curriculums. Often include resume help, job search assistance, and interview training. These services differ from vocational programs because they do not teach job skills.	Residential; Supervision	County, DOC, DEED	Theory-based	*	*	*	*			
Circle sentencing	Offenders sit in a circle with victims, other offenders, friends, family, and criminal justice and social service representatives. The group works together to identify steps needed for recovery and the appropriate sentencing plan. This approach comes from American Indian tradition principles.	Supervision	County	Theory-based	*	*	*	*			
Cognitive Behavioral Therapy (CBT)	Refers to a variety of combinations of cognitive and behavioral therapies, which are often adapted to address specific diagnoses. Programming focuses on discussing and restructuring individual perceptions and behaviors in challenging situations. The Therapist may provide guidance on emotional regulation, communication skills, and problem solving. Many different forms of CBT exist. Common models include Thinking for a Change, Becoming a Man, and Carey Guides.	Residential; Supervision	County, MA/private insurance	Proven effective	Favorable	Favorable	Fvorable	Favorable	<a href="#">Crime Solutions</a>	Black, Hispanic, Asian, American Indian, and white youth; First-time offenders; Violent offenders; Youth with co-occurring disorders	A range of evidence-based interventions use cognitive-behavioral concepts. These individual practices may have varying levels of evidence and have curriculums that vary dependent on the client need and goals. Cognitive approaches have demonstrated success in reducing delinquency, substance use, risky behavior, and failure at school ( <a href="http://bit.ly/2yGAlSK">http://bit.ly/2yGAlSK</a> ). The evidence-column links to a crime solutions review of interventions that use CBT principles.
Collaborative Intensive Bridging (CIB)	Combines family intensive therapy with a brief residential placement. Residential placement is followed by a second round of family intensive therapy. The program focuses on stabilizing behavior, assisting parents in developing relational skills, building crises management skills, and providing coordination throughout treatment. Addresses issues with: aggression, self-harm, depression, truancy, theft, and acting-out.	Residential; Supervision	County	Theory-based	*	*	*	*			Early evidence shows positive outcomes for behaviorally troubled children receiving intensive in-home therapy compared to residential placement. Kids in Barth (2007) show greater tendency to live at home, progress in school, and avoid criminal justice system interactions ( <a href="http://bit.ly/2hs9Eaz">http://bit.ly/2hs9Eaz</a> ).
Community Specialists	Designed to support and encourage youth. Community specialists collaborate with probation officers to ensure youth have the community resources they need to become healthy and self-sufficient. To accomplish this, community specialists may assist in the development and implementation of case plans. They also assist in securing educational, employment, or prosocial programming.	Supervision	County	Theory-based	*	*	*	*			
Crossover youth programming and probation	Crossover Youth Programming (also known as Dually Involved Youth Program) is designed to interrupt a pattern of delinquent/criminal behaviors for youth involved in the child welfare and juvenile justice systems by providing more integrated mental health, chemical health, and parenting support in a trauma-informed manner to youth and their families. Probation services include pre and post disposition monitoring.	Supervision	County, DPS	Theory-based	*	*	*	*			A small impact evaluation found the service caused reductions in recidivism risk compared to a like control group ( <a href="http://bit.ly/2gWpL3M">http://bit.ly/2gWpL3M</a> ). The study, however, has too few participants (n=18) to meet our threshold for promising, but it portends a future increase as more research is conducted. This service is also in the Results First Children's Welfare inventory.
Dialectical Behavioral Therapy	A type of cognitive-behavioral treatment for individuals with complex or otherwise difficult to treat mental disorders. Blends behavioral, problem-solving approaches with acceptance-based strategies, and an emphasis on logical processing.	Residential; Supervision	County, DOC, MA/private insurance	Promising	*	*	Favorable	*	<a href="#">NREPP</a>	American Indian, Asian, black, Hispanic, and white	Washington Institute of Public Policy found a positive impact on recidivism, but it was from a small sample study and the results were not statistically significant ( <a href="http://bit.ly/2gWpL3M">http://bit.ly/2gWpL3M</a> ). Research involves youth, but may be not specifically targeted to juvenile justice populations.
Diversion with services	Seeks to redirect youths away from formal processing in the juvenile justice system and provide an alternate means holding offenders accountable. Youths, who meet the local criteria for diversion (generally, first-time or low-risk minor offenders), participate in restorative justice or therapeutic programming.	Supervision	Courts, County, DOC, Local law enforcement	Promising	Favorable	*	*	*	<a href="#">Crime Solutions</a>	Black and white youth; First-time offenders; Violent offenders	
Diversion without services	Often occurs through "warn and release," where police issue a warning before releasing the juvenile or through discussions with a county/city attorney. In either case, youth are diverted away from formal processing (sanctions) in the juvenile justice system without additional community service or treatment requirements.	Diversion	Courts, County, DOC, Local law enforcement	Promising	Favorable	*	*	*	<a href="#">Crime Solutions</a>	Black and white youth; First-time offenders; Violent offenders;	

Service/Practice	Description	Category	Oversight agency/funding source	Impact on outcomes	Crime	Academic Achievement/Employment	Mental Health/Substance Use	Risky Behaviors	Source of evidence	Population in the research	Other evidence or expert opinion
Driver Education	Driver education provides youths (i.e. inexperienced drivers) with the skills and strategies required to drive responsibly. Instruction during driver education frequently addresses defensive driving, the perils of impaired or distracted driving, and decision-making. Instruction is generally provided by law enforcement personnel, or trained personnel.	Supervision	County	Theory-based	*	*	*	*			
Electronic Home Monitoring (EM)	Measures used to place restrictions on the activities of juvenile offenders as an alternative to detention. Specifically, EM can monitor the location of a youth during a particular timeframe or verify sobriety. EM is implemented through a range of technological tools, including wrist bracelets, ankle bracelets, voice verification systems, global positioning systems, and drug and alcohol testing units. Tampering with or violating the terms of the EM device alerts nearby personnel for remediation.	Supervision	County, DOC	Theory-based	*	*	*	*			While evidence exists showing the efficacy on adult populations, there was limited evidence to assess the effectiveness of this practice for juveniles.
Equine Therapy	Equine therapy is a form of animal assisted therapy (AAT). It attempts to rehabilitate detained or at-risk youths by allowing them to nurse or train horses. Group work and experience sharing may also be a significant component of this program.	Supervision	County	Theory-based	*	*	*	*			
Eye movement desensitization and reprocessing	A psychotherapy treatment that seeks to address trauma and its contribution to conduct problems. Under the care of a trained therapist, clients focus on traumatic memories and are guided to reprocess the experiences.	Residential; Supervision	County, MA/private insurance	Theory-based	*	*	*	*			For youth with trauma, early evidence shows positive impact on externalizing behaviors, PTSD, and anxiety disorders ( <a href="http://bit.ly/2xDijVA">http://bit.ly/2xDijVA</a> ). We were unable to find any treatment on juvenile justice populations or indicators of reductions in crime or recidivism.
Functional Family Therapy	A structured family-based intervention that seeks to enhance protective factors and reduce risk. The model includes engagement, motivation, behavior change, and positive role models.	Residential; Supervision	County, MA/private insurance	Proven effective	Favorable	*	*	Favorable	<a href="#">Crime Solutions</a>	Violent offenders; Families; Black, American Indians, Asian, Hispanic, and white youth	
Girls Circle	A structured support group for girls that integrates relational theory, resiliency practices and skills training in a specific format designed to increase positive connection, personal and collective strengths and competence in girls. Program components are delivered through activity guides and facilitated activities.	Residential; Supervision	County	Promising	Favorable	*	*	*	<a href="#">NREPP</a>	LGBTQ, American Indian; black, Hispanic, and white youth	
Healthy Relationships	Coursework prepares adolescents to identify and address abuse behavior within a relationship. Content includes information on healthy sexuality, relationships, indicators of abuse, effects of abuse, strategies for intervention, and resources for assistance.	Residential; Supervision	County	Promising	Favorable	*	Favorable	*	<a href="#">Crime Solutions</a>	Children exposed to violence; black, American Indian, Asian, and white youth	
Independent living skills	Programming is focused on providing youth, who are nearing independence or lack exposure to independent life skills, with information on budgeting, housing, employment, and other life skills. Content is delivered in a group setting. Instructors provide resources and know-how, and occasionally coordinate services.	Residential; Supervision	County, MA/private insurance	Theory-based	*	*	*	*			
Intensive Supervision	A form of nonresidential treatment, which allow probation officers or caseworkers to closely monitor the activities of juvenile offenders as an alternative to detainment. This tactic emphasizes a higher degree of surveillance than traditional supervision (e.g. contact hours, urinalysis, GPS units) to ensure compliance. This does not include additional treatment services that often accompany intensive supervision.	Supervision	County, DOC	No effect	Neutral	*	*	*	<a href="#">WSIPP</a>		Research found that more intensive supervision practices (e.g., more contact with probation officers) had no effect on re-offending. To foster rehabilitation in non-custodial contexts, treatment is key ( <a href="http://bit.ly/2hS9Eaz">http://bit.ly/2hS9Eaz</a> ).
Juvenile Drug or Wellness Courts	Youth with substance use disorders agree to comply with court mandated treatment and supervision. Typically, this involves a multi-disciplinary team of criminal justice, mental health, family services, and substance use professionals partnering with juveniles and their families. Those services include therapy, monitoring, drug tests, rewards and sanctions, and progressive stages.	Supervision	Courts, County, DPS, Federal funding	Promising	Favorable	*	Neutral	*	<a href="#">Crime Solutions</a>	Alcohol and Drug Offenders; white youth	
Mentoring	Pairs at risk youth with adult mentors. Programs are designed to reduce risk factors (e.g., anti-social behavior) by enhancing protective factors (e.g., health beliefs, social reinforcement). Evidence supports long-term mentorships.	Prevention; Residential; Supervision	County, private foundations	Proven effective	Favorable	Favorable	Favorable	*	<a href="#">Crime Solutions</a>	American Indians, Asian, black, Hispanic, and white youth	Dubois (2011) in a meta-analysis found increased likelihood of successful outcomes includes: a relatively high proportion of male youth participants; participating youth had a background of relatively high individual or environmental risk; the program included an advocacy role for mentors; the program included a teaching/information provision role for mentors; and mentors and youth were matched together in the program based on similarity of interests (via Crime Solutions, <a href="http://bit.ly/2tm1xV">http://bit.ly/2tm1xV</a> ).
Minnesota Anti-Violence Initiative (MAVI)	Probation and police officers form collaborative teams monitor youth who are in pretrial or sentencing status. Monitoring activities include compliance checks during the evening hours; checks for drug, weapons, or sobriety violations; and checks for neighborhood or associate visitation violations.	Supervision	County	Theory-based	*	*	*	*			
Multisystemic Therapy (MST)	MST attempts to address the various social or environmental systems (family, school, friends, neighborhood, etc.) that impact juvenile behavior. Programming focuses on improving the juvenile's relationship with family and achieving academic success by understanding and mobilizing the relevant systems. Ideally, MST will reduce out-of-home placements (incarceration, residential treatment, or hospitalization)	Residential; Supervision	County, MA/private insurance	Proven effective	Favorable	*	Favorable	*	<a href="#">NREPP</a>	American Indian, Asian, black, Hispanic, and white youth	

Service/Practice	Description	Category	Oversight agency/funding source	Impact on outcomes	Crime	Academic Achievement/Employment	Mental Health/Substance Use	Risky Behaviors	Source of evidence	Population in the research	Other evidence or expert opinion
No Wrong Door (trauma and sexual violence group)	Aims to remove shame and blame from youth who have been or are at risk of sexual exploitation. Curriculum creates a safe environment for girls from diverse backgrounds to understand sexual trauma, manage the effects of abuse in a safe and healthy way, and start the healing process alongside peers.	Residential; Supervision	County	Theory-based	*	*	*	*			
Neighborhood Probation	Neighborhood probation is a specialized form of traditional probation. This method emphasizes collaboration between community members and agencies to build services for probationers and ensure community safety. Neighborhood probation officers work with law enforcement to address juvenile delinquency and related community issues.	Supervision	County	Theory-based	*	*	*	*			
Phoenix Curriculum	This class focuses on risk factors, real-life case studies, and proactive techniques to assist in stepping away from negative peer group influences. Other session topics include relationship mapping, self-identification exercises, identifying healthy vs. unhealthy relationships, and creating recipes for making healthy friendships.	Residential; Supervision	County, DOC	Promising	Favorable	*	*	*	<a href="#">Crime Solutions</a>	High-risk girls; white youth	
Polygraphs	Polygraphs, or lie detectors, are often used to monitor and evaluate juvenile disclosures. They can provide therapists with an insight into juvenile compliance with treatment and supervision, or facilitate the identification of new treatment opportunities.	Supervision	County, DOC	Theory-based	*	*	*	*			
Positive Opportunities for Women of Every Race (POWER)	This program serves young women, who are court or probation officer referred. Programming is gender-specific, culturally responsive, and trauma-informed. In addition to individualized case management, group topics of discussion include sexual health, relationship violence, youth leadership development, chemical health, coping skills, emotional regulation, culturally responsive programming, and yoga.	Supervision	County	Theory-based (Culturally-informed service)	*	*	*	*			
Program to Encourage Responsible Thinking (PERT)	This program is designed to address the irresponsible thinking and decision-making that leads to a range of minor offenses, including theft, vandalism, disorderly conduct, trespassing, curfew violations, and driving violations. Participants are exposed to a responsible thinking model, which teaches participants how thoughts, feelings, goals, and consequences contribute to behavior.	Supervision	Court, County	Theory-based	*	*	*	*			
Restorative justice conferencing	Victims and offenders meet face to face in the presence of a trained facilitator and other members of the community. The conversation focuses on the offense, its consequences on the victim, and how to address the underlying causes.	Residential; Supervision	County, DOC	Proven effective	Favorable	*	*	*	<a href="#">Campbell Collaboration</a>		
School-Based Skills and Leadership Groups	Aims to reduce juvenile arrest referrals for in-school behaviors by partnering with schools to facilitate skill groups designed to help youth recognize emotional triggers and practice pro-social thinking and responses to potential incidents. Participants are referred by their schools because of disruptive behavior but also because of their leadership potential.	Supervision	County, DOC	Theory-based	*	*	*	*			
School-based skills group using social information processing models	Aims to reduce juvenile arrest referrals for in-school behaviors by partnering with schools to facilitate skill groups designed to help youth recognize emotional triggers and practice pro-social thinking and responses to potential incidents. Participants are referred by schools because of disruptive behavior but also because of leadership potential.	Prevention; Supervision	County, School districts	Promising	*	*	*	Favorable	<a href="#">Crime Solutions</a>	Asian, black, Hispanic, and white youth	
Sex Offender Treatment - Multi-Systemic Treatment for Problem Sexual Behavior (MST-PSB)	An adaptation of MST for juveniles who have committed sexual offenses. MST-PSB emphasizes identifying triggers and risk factors that underlie problem behavior. Incorporates intensive family therapy. Seeks to establish and promote healthy family and community relationships.	Residential; Supervision	DOC, County	Promising	Favorable	Favorable	*	*	<a href="#">WSIPP</a>	Youth sex offenders	A review of the literature by Washington State Institute of Public Policy found positive impacts on grade point average and reduction in sex offenses, but these studies were small.
Sex Offender Treatment- Cognitive-behavioral & Psychotherapy approaches	Sex-specific programming focuses on dynamics that have contributed to sexual offending. The program is structured to address cognitive distortions, thinking, and beliefs related to sexual offending, victim empathy and relapse prevention.	Residential; Supervision	County, DOC, MA/private insurance	Promising	Favorable	*	*	*	<a href="#">Crime Solutions</a>	Black, Hispanic, American Indian, and white youth, Sex offenders; Children exposed to violence	CBT and psychotherapy reflect two different types of approaches. They aggregated this case because available meta-analyses grouped them together.
Theft/shoplifting education classes	This program is designed for youth who have committed a shoplifting offense that resulted in contact with the juvenile justice system. Participants are, as a result, on diversion or probation. Programming seeks to help youth understand the consequences of shoplifting and make alternative choices.	Supervision	County	Theory-Based	*	*	*	*			
Trauma-Focused Cognitive Behavioral Therapy	A form of cognitive behavioral therapy designed to help juveniles and their parents overcome the negative effects of trauma associated with violence, accidents, and natural disaster. Treatment focuses on teaching the skills necessary to address serious emotional problems to include post-traumatic stress, fear, anxiety, and depression.	Residential; Supervision	County, DOC, MA/private insurance	Proven effective	*	*	Favorable	Favorable	<a href="#">Crime Solutions</a>	Black and white youth; Children exposed to violence; Families	This service is also in the Results First Children's Welfare inventory.
Trauma-Grief Component Therapy	Group treatment program designed to reduce posttraumatic emotional and behavioral reactivity while improving pro-social skills and citizenship in adolescents exposed to multiple forms of trauma and loss.	Residential; Supervision	County, DOC, MA/private insurance	Promising	*	Favorable	*	*	<a href="#">CEBC</a>	Black, Hispanic, and white youth	

Service/Practice	Description	Category	Oversight agency/funding source	Impact on outcomes	Crime	Academic Achievement/Employment	Mental Health/Substance Use	Risky Behaviors	Source of evidence	Population in the research	Other evidence or expert opinion
Truancy reduction interventions	This intervention attempts to address individual, school, family, and community level factors contributing to truancy. Interventions include: academic tutoring, vocational education, case management, contingency management, counseling, mentoring, advocacy, attendance monitoring, parental outreach, and youth development. This includes truancy courts.	Supervision	County	Proven effective	*	Favorable	*	*	<a href="#">Crime Solutions</a>	Black, Hispanic, and white youth; Truants	Practice components include tutoring, case management, counseling, mentoring, monitoring, and parent outreach. This is included because of the overlap between truancy and juvenile justice participants, both in practice and in the research. Outcome evaluations show improvements in school outcomes, but do not yet measure juvenile justice outcomes. The Federal Office of Juvenile Justice and Delinquency Prevention (OJJDP) found that financial sanctions are an ineffective way to reduce truancy ( <a href="http://bit.ly/2xWp5nD">http://bit.ly/2xWp5nD</a> ).
Victim Empathy Program	Victim empathy programming focuses on a combination of victim empathy and emotional regulation coursework, which may culminate in participation in victim offender mediation.	Residential; Supervision	County, DOC	Theory-Based	*	*	*	*			
Vocational Programs	Training typically consists of classroom-based or unpaid job experiences that teach juveniles employable skills or trades. Most programs combine vocational skills training with academic education or tutoring and provide some job search assistance. Can be community-based residential and non-residential programs or take place during incarceration.	Residential; Supervision	County, DOC, DEED	Promising	Neutral	Favorable	*	*	<a href="#">WSIPP</a>		A review of research found mixed impacts for vocational programming on reducing recidivism.
Urban Boatbuilders	Youth participate in this in-depth, paid apprenticeship program aimed at removing barriers to employment and reducing juvenile justice and child welfare system contact.	Supervision	DPS, private donations	Promising	Neutral	Favorable	*	*	<a href="#">WSIPP</a>		Though this individual service has not been studied, the program follows many components of vocational training and mentoring.
Work Services/Sentencing to service	Juveniles participate on supervised work crews. Projects are completed for local communities, often to satisfy court sanctions or in lieu of fines.	Residential; Supervision	County, DOC	Theory-Based	*	*	*	*			
Wraparound services	Wraparound is a team-based care coordination strategy for juveniles and families with complex behavioral needs. This approach is oriented towards juveniles who interact with several service systems (e.g. mental health, child welfare, juvenile justice, special education, etc.), experience cognitive-behavioral challenges, and are at risk of institutionalization. Wraparound services include, planning (care coordination), implementation, monitoring, and follow-up.	Supervision	County, MA/private insurance	Promising	Favorable	*	*	*	<a href="#">Crime Solutions</a>	Mentally ill offenders; High risk offenders; families; White youth	This rating is based on the "Connections" program. A literature review by the Federal Office of Juvenile Justice and Delinquency Prevention (OJJDP) outline best practices for wraparound services, including family voice and choice, interdisciplinary teams, community-based offerings, and individualization of services based on needs of the family unit. It also highlighted some promising outcome evaluation results. <a href="http://bit.ly/2xeZETv">http://bit.ly/2xeZETv</a>
Core correctional services, placement settings, required offerings, or other service categories											
Aftercare	A range of programs designed to reintegrate juveniles after an out-of-home placement concludes. These programs focus on changing individual behavior so as to prevent further delinquency.	Supervision	County, DOC supervision	Promising	Favorable	*	*	*	<a href="#">Crime Solutions</a>		There are many forms of aftercare programming. Crime solutions notes those programs that generate positive outcomes are administrated by trained staff, and offer evidence-based treatments that match the needs of the juvenile.
Culturally responsive services, practices, and treatments	Interventions which integrate culturally derived behaviors and cognitive schemas into care to better serve the client. To this end, evidence-based treatments and intervention protocols may be systematically modified to satisfy language, cultural, or contextual needs. Alternatively, clients may be culturally matched with caregivers according to ethnicity to increase cultural awareness and responsiveness.	Residential; Supervision	County, DOC, Tribal Nations, Private foundations	Theory-based (Category of services; culturally informed services)	*	*	*	*			Disproportionate minority contact with the juvenile justice system is a significant problem in Minnesota and across the US. Culturally specific training and services may be a path forward to reduce that contact. These services and practices don't fit neatly into the evidence. One resource on this topic is the Federal Office of Juvenile Justice and Delinquency Prevention (OJJDP)'s systematic review of effective culturally appropriate adaptations : ( <a href="http://bit.ly/2hKL7nO">http://bit.ly/2hKL7nO</a> ; pg. 85). An additional review of the literature and discussion can be found in the Results First substance use report ( <a href="http://bit.ly/2g9fsIz">http://bit.ly/2g9fsIz</a> ; pg. 23).
Detention (custodial sanctions) practices	Custodial (imprisonment) sanctions remove juveniles from the community and place them in a closed residential setting. Non-custodial sanctions are alternatives to confinement, such as community work, monitoring, and other services	Residential; Supervision	County, DOC	No effect (Category of services)	Neutral	*	*	*	<a href="#">Campbell Collaboration</a>		While custodial sanctions are needed in high-risk cases, evidence shows "non-custodial sanctions to be more beneficial in terms of re-offending than custodial sanctions. The research also adds that longer sanctions have no impact on recidivism. To foster rehabilitation in non-custodial contexts, treatment is key ( <a href="http://bit.ly/2hS9Eaz">http://bit.ly/2hS9Eaz</a> ). Non-custodial sanctions also tend to be less expensive than custodial services ( <a href="http://bit.ly/1yK5cwi">http://bit.ly/1yK5cwi</a> ).
Detention Centers	Within the juvenile justice continuum, detention centers are secure or non-secure temporary holding facilities, which house juveniles as they await legal action, placement, or sentence completion. Detention centers typically provide education, recreation, health, and intervention services to youth during their time in a facility.	Residential	County, DOC	Theory-based (Category of services)	*	*	*	*			A review of meta-analyses by the Pew Charitable Trust found lengthy out-of-home placements "do not lower the likelihood of juvenile reoffending and may, in fact, increase it in some cases" ( <a href="http://bit.ly/1yK5cwi">http://bit.ly/1yK5cwi</a> ).The Federal Office of Juvenile Justice and Delinquency Prevention (OJJDP) notes there is little relationship between incarceration and recidivism in delinquent youth. Offenders receiving treatment, in either residential or community settings, is key to reductions in recidivism ( <a href="http://bit.ly/2hS9Eaz">http://bit.ly/2hS9Eaz</a> ).
Early Discharge	This program offers youth who satisfy certain conditions an opportunity for early discharge from probation. Successful participation in community work service (earned through good grades and attendance) may fulfill some requirements for early discharge.	Supervision	County, DOC	Theory-based (Category of services)	*	*	*	*			Best practices suggest using verified assessments to identify lower risk populations and, after release, supporting these populations with evidence-based treatments, based on their individual needs.

Service/Practice	Description	Category	Oversight agency/funding source	Impact on outcomes	Crime	Academic Achievement/Employment	Mental Health/Substance Use	Risky Behaviors	Source of evidence	Population in the research	Other evidence or expert opinion
Evaluation and assessment	This category includes psychological, psychiatric, pro-sexual, trauma, substance use, needs, risks, and other assessments or evaluations that occur at intake or at an ongoing basis. In general, the service seeks to ensure juveniles and their families are receiving appropriate, culturally relevant services and levels of supervision to promote rehabilitation and protect public safety. Many of these assessments follow evidence-based models and use validated assessments, such as the YLS/CMI.	Residential; Supervision	County, DOC, MA/private insurance	Theory-based (Category of services)	*	*	*	*			This category provides the foundation for successfully rehabilitating youth. Research reinforces using validated risk assessments and tailored treatment to risk level and needs of youth. This category does not fit neatly into our rating system, as all juveniles receive some form of assessment and no plausible counterfactual exists. Instead the field focuses on ensuring reliability of assessments in predicting risk and need ( <a href="http://bit.ly/2xDDTEI">http://bit.ly/2xDDTEI</a> ).
Evening Reporting Centers (ERC)	Evening reporting centers (ERCs) provide an alternative to detention for juvenile offenders. Participation is typically court mandated. Programming is intended to intervene, address, and prevent delinquent behavior by placing youths in a controlled pro-social environment during the evening hours when teen crime is typically at its highest. Activities include therapy, skills building, recreation, and attendance at motivational presentations.	Supervision	County	Theory-based (Category of services)	*	*	*	*			In spite of the logical appeal, there is still little empirical evidence to demonstrate ERC's effectiveness in reducing recidivism (Garland (2014). ERC's also show wide variation in the treatments offered and would benefit from a unified, tested design. <a href="http://bit.ly/2icn9Ck">http://bit.ly/2icn9Ck</a>
Family engagement	Programming attempts to engage the families of youth involved in the juvenile justice system to foster active collaboration between families and agencies. Activities for families include, safety planning, communications/crisis planning, advocacy, and resource training. Agencies, administrators, and staff focus on improving and leveraging family engagement to yield better outcomes for youth through design, implementation, and monitoring. Often these involve home visits from case workers and probation agents.	Residential; Supervision	County, DOC	Theory-based (Category of services)	*	*	*	*			Broad lines of research have identified many evidence-based family engagement strategies and the research is general consensus about the importance of family engagement in generating positive outcomes. According to the Vera Institute "research consistently shows that family involvement correlates to improved outcomes for incarcerated" and at risk youth ( <a href="http://bit.ly/2wUTzUp">http://bit.ly/2wUTzUp</a> ). The Federal Office of Juvenile Justice and Delinquency Prevention (OJJDP) notes "Youth reoffend less and their siblings are less likely to be become involved with the justice system when families are integrated into the system's response." <a href="http://bit.ly/2xFHxW">http://bit.ly/2xFHxW</a>
Formal system processing for juveniles	When juveniles commit offenses, officials decide whether to formally process them through the justice system, divert with programming, or release altogether. This aims to prevent low-level offenders from developing into more serious offenders.	Supervision	Courts	No effect (Category of services)	Neutral	*	*	*	<a href="#">Crime Solutions</a>	White youth; First-time offenders; Truants	Meta-analysis show a small, negative effective for formal system processing of juveniles, relative to like peers that were diverted. In other words, diverted juveniles were less likely to recidivate. Moreover, according to the research the cost of "formally processing youths through the juvenile justice system is often greater than the cost of the myriad of alternatives and diversion programs" ( <a href="http://bit.ly/2xRqPJl">http://bit.ly/2xRqPJl</a> ).
Foster Homes	Foster care is a form of continuous care that places children in homes, shelters, or facilities where they are apart from their parents or guardians.	Residential; Supervision	County, DOC	Theory-based (Category of services)	*	*	*	*			
General Counseling	Group or individual therapy. Can involve a range of different modalities, some of which are supported by evidence and others built on logic models. This includes anger management, grief and loss counseling, family-based therapies, gender or culturally-specific offerings.	Residential; Supervision	County, MA/private insurance	Theory-based (Category of services)	*	*	*	*			
Group Homes	These residential treatment facilities provide a home for juvenile offenders and at-risk youth who cannot - for one reason or another - reside with their families for an extended period of time. Group homes provide youth with a supportive, pro-social environment.	Residential; Supervision	County, DOC	Theory-based (Category of services)	*	*	*	*			This category often lacks a standard definition. For purposes of this inventory, we define it as small (5-15 youth), community-based, non-secure, long-term facilities. This definitional issues makes generalizing research findings difficult. Several group home models, including the Teaching-Family model, are evidence-based. In general, however, the Federal Office of Juvenile Justice and Delinquency Prevention (OJJDP) notes there is little evidence of positive, sustained outcomes, compared to other interventions, like foster care ( <a href="http://bit.ly/2ztkuQn">http://bit.ly/2ztkuQn</a> ).
Juvenile Detention Alternatives Initiative (JDAI)	JDAI is focused on reducing juvenile detention populations, combating racial and ethnic disparities in juvenile justice, and improving confinement conditions within the juvenile justice system. JDAI includes program elements to divert youth away from formal processing, provide community services following diversion, and provide probationary or residential alternatives to detention. It also includes community coaches to promote positive outcomes.	Supervision	County, State/Federal Grants, Private foundations	Promising	*	*	*	*	Forthcoming research, reviewed by MMB		Forthcoming quasi-experimental research from the University of Washington demonstrates reductions in detention compared to control group. Minnesota sites have had similar positive outcomes; for example, Hennepin County reported a 54 percent reduction in average daily population. Practitioners noted, however, the challenges with disparities. Hennepin's 2015 Annual Report notes the program "struggled toward reducing the racial and ethnic disproportionality within detention numbers, as youth of color depict 88 percent of admissions over the past year."
Low-risk or administrative supervision	Administrative supervision of lower risk clients. Involves minimal contact with probation officers and little to no treatment. Stems from understanding that too much juvenile justice contact for low-risk juveniles can produce unintended harmful consequences.	Supervision	County, DOC	Theory-based (Category of services)	*	*	*	*			
Mental health services	Provide a continuum of care for youth with mental illness. These services are tailored to suit the needs of each offender, and may include screenings and assessments, treatment, and rehabilitation. They generally involve coordination by a case manager and vary in intensity and offerings dependent on need.	Residential; Supervision	County, DOC, MA/private insurance	Featured in forthcoming Results First Children's Mental Health report	*	*	*	*			While not all mental health services are evidence-based, strong evidence exists that many treatment modalities are effective at improving psychiatric help and may reduce criminality. The Federal Office of Juvenile Justice and Delinquency Prevention (OJJDP) highlighted best practices and ongoing questions here: <a href="http://bit.ly/2ywk9qE">http://bit.ly/2ywk9qE</a> . A future Results First Children's Mental Health report will inventory the evidence on these services.
Other enrichment activities	These services provide an opportunity for self-development. Examples include recreation, art, critical thinking skills, library, and a computer learning center	Residential; Supervision	County, DOC	Theory-based (Category of services)	*	*	*	*			



Service/Practice	Description	Category	Oversight agency/funding source	Impact on outcomes	Crime	Academic Achievement/ Employment	Mental Health/ Substance Use	Risky Behaviors	Source of evidence	Population in the research	Other evidence or expert opinion
Reentry and transitional services	A general category of services that works to reintegrate youth after out-of-home placements. This includes transition to supervision, family engagement, and assessing risks and needs.	Residential; Supervision	County, DOC	Theory-based (Category of services)	*	*	*	*			The Council of State Government's laid out a series of best practices in reentry. They highlighted the need to connect youth and families to identify and address needed to ensure a successful rehabilitation, such as healthcare, housing, education/ employment, and case management. It also calls for the use of proper assessment needs to assess reentry decisions, interagency cooperation, and properly allocate supervision and treatment resources ( <a href="http://bit.ly/2c9eY06">http://bit.ly/2c9eY06</a> ).
Religious services	A wide range of faith-based groups and services are offered at facilities and cover many faiths and religious bodies.	Residential; Supervision	County, DOC	Theory-based (Category of services)	*	*	*	*			
Residential Treatment Centers	Residential Treatment Centers house and provide therapeutic treatment to juveniles with a history of criminal behavior and substance abuse. Within these structured environments, juveniles participate in a range of individual and group therapies oriented towards reducing recidivism. Juveniles are assigned increasing responsibility as they progress through treatment.	Residential	County, DOC	Theory-based (Category of services)	*	*	*	*			The Government Accountability Office (2007), notes that this category lacks a standard definition, and it is challenging to develop an overarching picture. Given the diversity of services offered, it's difficult to assess the efficacy of the treatment. We define residential treatment as long-term placement with an emphasis on treatment. Evidence compiled by the Federal Office of Juvenile Justice and Delinquency Prevention (OJJDP) shows centers that focus on evidence-based treatment and reintegration techniques have the most success, but often "inadequate services are available." Moreover, many localities have better outcomes by providing alternatives to placement and provides wraparound services in the community ( <a href="http://bit.ly/2xE7Xjq">http://bit.ly/2xE7Xjq</a> ).
Restorative justice programs	Programs in this category are based on restorative justice theoretical frameworks. Rather than view offenses as transgressions against rules or property, these frameworks conceptualize offenses as transgressions against people and relationships. Programming is focused on amending the damage done to victims and injured relationships through dialogue, empathy, and restitution. Examples include victim-offender mediation, family group mediation, and victim-empathy programming.	Residential; Supervision	County, DOC	Theory-based (Category of services)	*	*	*	*			Though some forms of Restorative Justice programs, like Restorative Justice Conferencing, are evidence-based, the entire category cannot be considered evidence-based. Many Restorative Justice programs have yet to be researched using qualifying methods.
Risk-Need-Responsivity (RNR)	Model based on three principles. The risk principle means program intensity should match the level of risk associated with the offender. The need principle refers to targeting the criminogenic needs of the offender (e.g. individuals with substance abuse issues should receive treatment that addresses substance abuse). The responsivity principle refers to the idea that the treatment should be responsive to the culture, learning style, and abilities of the offender (e.g. providing culturally specific treatments for offenders). This practice often uses incentives to encourage prosocial behaviors.	Residential; Supervision	County, DOC	Promising	Favorable	*	*	*	<a href="#">MMB literature review</a>		RNR principles are foundational for adult and juvenile criminal justice system. Brogan (2015) notes that different causal mechanisms exist in juvenile recidivism reductions, and while individual tailoring of services and focusing on medium to high risk kids shows promise, RNR techniques need to be translated to meet the needs of juveniles and tested to ensure they are producing desired outcomes. Though more research is needed specific to youth, the evidence shows the positive impacts associated with tailoring services based on individual risk levels ( <a href="http://bit.ly/2AgZ449">http://bit.ly/2AgZ449</a> ).
Shelter care (short-term, emergency)	Short term, crisis-related placement for the safety and welfare of the child until such time as more permanent options are available. Typically involves a structured daily schedule, intensive staff-resident interaction, and small numbers of children (10 or fewer youth at a time).	Residential; Supervision	County, DOC, Private foundations	Theory-based (Category of services)	*	*	*	*			This review looks narrowly at emergency sheltering services. Some evaluations have positive outcomes associated with sheltering, including decreases in violence and substance use, but the research is nascent. Best practices in sheltering highlight "enhancing interactions between youth and staff and daily teaching of social skills through a therapeutic teaching method" ( <a href="http://bit.ly/2gl4Gd6">http://bit.ly/2gl4Gd6</a> ).
Substance use treatment (prevention, treatment, and recovery)	Chemical dependency treatment provides a continuum of care to prevent, treat, and promote recovery from substance use disorder. These services are tailored to suit the needs of each offender, and may include screenings and assessments, treatment, and rehabilitation. Many evidence-based models exist for treating substance, including cognitive behavioral therapy and Multidimensional Family Therapy.	Residential; Supervision	County, DOC, DHS	See Results First's substance use report	*	*	*	*	<a href="#">Results First</a>		While not all substance use treatment is evidence based, the effective treatment of substance use is foundational to addressing criminogenic factors. Moreover, a multitude of treatment modalities are proven effective. Effective service delivery should deliver services to the right person, by the right practitioner, at the right time. Culture is often one important consideration with many practitioners across the state offering culturally specific offerings. The Federal Office of Juvenile Justice and Delinquency Prevention (OJJDP) highlights questions for the field and best practices: <a href="http://bit.ly/2gpMYKS">http://bit.ly/2gpMYKS</a> . The Results First team reviewed the evidence for substance use interventions here: <a href="http://bit.ly/1yK5cwi">http://bit.ly/1yK5cwi</a> .



## Appendix B: Summary of research methods

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### Inventory of services

Minnesota Management & Budget (MMB) compiled inventories that provide information about the service description, the oversight agency, serviced details, and the supporting evidence that it reduces recidivism. For this inventory, we collaborated with the Department of Corrections (DOC) which runs Red Wing juvenile facility and oversees juvenile probation for twenty-eight counties. We also collaborated with eight Community Correction Act Counties and county-probation officer jurisdictions that oversee juvenile probation for juveniles and several residential facilities from across the state. The inventory and the benefit-cost analysis reflect the experiences of these partners.

The inventory also includes information on the extent to which there is evidence of effectiveness for each service listed. For theory-based services, MMB could not find rigorous outcome evaluations that met the below criteria. That does not mean that those services are ineffective, it simply means we did not find evaluations that met the below criteria. At some juncture, all services on the inventory were theory-based. Services that include the term “category of service” highlight that this group can include many different models, some of which may be evidence-based, but the overall category typically has not been studied holistically. For example, there are many forms of restorative justice—some of which follow evidence-based models—but there is no overall study of restorative justice.

### Data quality

The juvenile justice system is complex and provides a wide array of services for public safety and services for juvenile delinquents. The inventory only includes services that are funded fully or partially through the state or county budget and also include reducing recidivism as a central goal.

We worked with data collection partners to understand if the service delivered in each jurisdiction matched the services reflected in one or more the research clearinghouses. Relevant factors include similar treatment population, service structure, and adequately trained staff. In cases where services did not meet these requirements or staff articulated a concern for fidelity, the service was not included in the benefit-cost analysis. We did not conduct fieldwork to ensure fidelity of implementation. Rather, we review the extent to which services have attributes that are similar to those that have been rigorously evaluated. If fidelity is absent, Minnesota will not experience the anticipated benefits seen elsewhere.

### Available for a benefit-cost analysis

After the inventory is finished, and each service has a level of evidence, MMB determined which services were available for benefit-cost analysis. To qualify for further analysis, the service needed to meet three criteria:

- The service had a meta-analysis completed by the Washington State Institute for Public Policy or a rigorous local evaluation.
- The service, as operated in Minnesota, had a similar treatment, duration, frequency, and participant profiles as the empirical research.
- MMB and our partners could estimate a statewide cost per participant.<sup>54</sup>

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<sup>54</sup> Implementation costs vary widely from jurisdiction to jurisdiction. This affects the applicability of a benefit-cost ratio from county to county.

## Benefit-cost analysis

Benefit-cost analysis is a tool for comparing policy alternatives based on net benefits generated over time for each dollar invested. The results provide important information about cost-effectiveness, but do not address other important factors, such as equity. An advantage of using benefit-cost analysis within the same policy area is the ability to measure costs and outcomes in the same way across different services.

The Results First model uses an integrated set of calculations in a statistical model to produce a benefit-cost ratio. This ratio indicates how many dollars in benefits to taxpayers and society the state can expect to occur over time, for every public dollar spent to fund the service. The model uses estimates of the impact of a service that have been calculated in a meta-analysis conducted by the Washington State Institute for Public Policy (WSIPP). As described in the following section, MMB applies this impact to Minnesota's baseline rate for the relevant metric. The difference between the baseline and the new estimated rate is monetized as benefits. The service's marginal cost, i.e., how much it costs to add one additional participant, is the denominator of the ratio. We report the resulting ratio as the monetary value of benefits for each \$1 invested to implement the service.

### Limitations

Many public services are composed of a set of treatments given in concert. This analysis, however, uses individual pieces of research on practices. Because of this, the model cannot estimate the impact of two separate services taken together unless existing research has evaluated them together. For example, the analysis does not attempt to estimate the impact of simultaneously delivering chemical dependency and cognitive behavioral therapy to the same individual.

Further, MMB cannot break down results by demographic or socioeconomic characteristics. Since the WSIPP benefit-cost model uses an aggregate measure of effect from multiple evaluations, MMB can only generalize results by the populations studied in those evaluations. To calculate results by demographic or socioeconomic status, MMB would need to have studies which produced measures of impact for those groups. The model is flexible to allow for it, but at the time of publication, those specific evaluations did not exist.

There are limits to using a statewide benefit-cost ratio since Minnesota experiences many differences between regions and between counties, including differences in availability of services and providers' capacity to follow evidence-based practices. A generalized state-level ratio averages the cost of services across very different situations and may not be an accurate representation of the cost experienced by a given jurisdiction.

## Meta-analysis and effect sizes

In the inventory of services, MMB matched state services to similar ones in existing research. These studies contain a statistical measurement of impact. The Results First Initiative uses a benefit-cost model from Washington State Institute of Public Policy (WSIPP). In order to estimate the impact of each service, WSIPP conducts a meta-analysis.

### WSIPP meta-analysis

A meta-analysis collects all existing evaluations on the service and uses the findings from qualifying studies to calculate an average effect size on each relevant outcome. An effect size shows the direction and magnitude to which a service changes an outcome for participants relative to a comparison group (Lipsey & Wilson, 2001). Using recidivism as an example, if the effect size is negative, the service decreases recidivism. The size of the effect represents how much the service decreases recidivism. This analysis uses effect size and its associated

standard error to determine how many units of crime the offender potentially avoids after they participate in a service.

WSIPP uses three main steps to systematically review evaluation evidence for a given service<sup>55</sup>: 1) define a topic or topics of interest (*e.g.*, reduce recidivism), 2) gather all the credible evaluations on the topic, and 3) use statistical procedures to draw a conclusion (Washington State Institute of Public Policy, 2017).

The quality of a meta-analysis depends on the breadth of study selection and coding criteria. WSIPP includes studies from peer-reviewed academic journals and reports obtained from government agencies or independent evaluations. WSIPP researchers use studies that include random assignment to assign subjects into a treatment and control group, as well as quasi-experimental studies which also uses a treatment and control group, but not necessarily random assignment. WSIPP only includes quasi-experimental studies if the study provided enough information to demonstrate comparability between the treatment and comparison groups. Each study must also provide an effect size and standard error for the meta-analysis. Chapter 2.2 of the [WSIPP Benefit-Cost Technical Documentation](#) describes the process and formulas used in the meta-analysis. The resulting effect size is a weighted mean effect size of a service on the specific outcome.

### Using effect sizes for benefit-cost analysis

Application of the average effect size in the WSIPP benefit-cost model requires converting the average effect size to a unit change percentage and applying it to the base rate of an outcome. For example, if the meta-analysis shows a cognitive-behavioral service for probationers will reduce recidivism by 14 percent, the benefit-cost model applies that decrease to the baseline recidivism rate for probationers in Minnesota. The model then estimates the monetary value of this 14 percent reduction in recidivism. By reducing recidivism, the state uses less juvenile and/or criminal justice system resources and there is the potential to avoid victim costs. These avoided and decreased costs are included in the monetized benefits in the benefit-cost ratio.

## Calculating benefits

### Taxpayer benefits for juvenile justice

There are three types of taxpayer benefits in the Washington State Institute for Public Policy (WSIPP) benefit-cost model for juvenile justice: reduced juvenile and criminal justice costs, reduced health care costs and increased labor income through changes in high school graduate rates. For juvenile and criminal justice, the

#### Avoided juvenile and criminal justice system costs

- Law enforcement arrest
- Juvenile detention
- Courts and attorneys
- Juvenile residential placement
- Probation and monitoring
- Jail as an adult
- State prison as an adult

benefits entirely accrue to state and local governments and Minnesota taxpayers. Because the WSIPP model quantifies the relationship between juvenile crime and high school graduation, it monetizes those outcomes as reduced health care costs and increased earnings.

Labor income, minus income tax, accrue to participants. For income tax from labor, we deviate from WSIPP, which assumes a total effective tax rate of 31 percent, and use an effective tax rate of 20.3 percent. This figure reflects the

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<sup>55</sup> In general, WSIPP follows the meta-analytic methods described in: Lipsey, M.W. & Wilson, D. (2001). *Practical meta-analysis*. Thousand Oaks, CA: Sage Publications.

median effective tax rate, which is likely too high for the disadvantaged population in this report. We used estimates from Minnesota's Department of Revenue's 2017 ([table 1-5](#)) tax incidence study for state (7.6%) and local taxes (4.7%).<sup>56</sup> For federal taxes, we use estimates from the [Peter G. Peterson Foundation](#) of total effective tax rates from income, payroll, corporate, and estate taxes combined for the second quintile (8.0%). This assumption may overstate or understate the proportion of the estimated benefits that would accrue to taxpayers versus society more broadly. However, this could be offset by other changes associated with additional earned income, including use of public programs such as health coverage and cash assistance that MMB did not assume had occurred for purpose of this analysis. Benefits also only consider the participant, not ramifications on friends or family.

If a recipient of a program leaves the state, Minnesota will not see those benefits. To account for this, MMB uses net migration rates by age to estimate the cumulative departure rate and deduct a proportional percentage of the total benefits.

Finally, the WSIPP benefit-cost model assumes that not all labor earnings are net new, because some portion of additional earnings by participants likely displace earnings from other Minnesotans. Bartik (2011) estimated that interventions in early education that create new workers displaces about thirty-four percent of wages for workers already in the workforce. Applying this to the juvenile justice benefit-cost analysis, we assumed that 66 percent (i.e., 100% minus 34%) of additional earnings estimated to result from services are net new.

### **Societal benefits for juvenile justice**

The WSIPP benefit-cost model monetizes tangible and intangible avoided victim costs as societal benefits. Tangible victim costs are direct economic losses suffered by crime victims. They include medical expenses, cash losses, property theft or damage, and lost earnings due to injury or related consequences. In the model, some criminal offenses, for example misdemeanor offenses, do not have victim costs. In these instances, the model does not identify a victim.

Intangible victim costs are indirect losses suffered by crime victims. They include the value of pain and suffering, decreased quality of life, psychological distress, and the value of a statistical life in the case of premature death from homicide (McCollister, French, & Fang, 2010). MMB cannot place a dollar value on a victim of homicide. We can use theoretical and statistical values to impute a cost. The intangible costs for a homicide are determined by examining pain and suffering measured by jury award and settlements in wrongful death suits.

The WSIPP benefit-cost model uses tangible and intangible victimization cost estimates from two studies: *The Cost of Crime to Society: New Crime-Specific Estimates for Policy and Program Evaluation* (McCollister et al., 2010) and *New evidence on the monetary value of saving a high-risk youth* (Cohen & Piquero, 2009). Cost estimates are pre-loaded in the model and measured in 2010 dollars. The model estimates the likelihood of avoided victimizations by crime category.<sup>57</sup> Added together, tangible and intangible costs estimate the societal benefits Minnesota can expect from reduced recidivism.

All misdemeanor offenses assume no tangible nor intangible victim costs in the WSIPP model. This presents a limitation since it is possible that misdemeanors (and gross misdemeanors in Minnesota) have victim costs: domestic abuse, DWI, theft, and prostitution.

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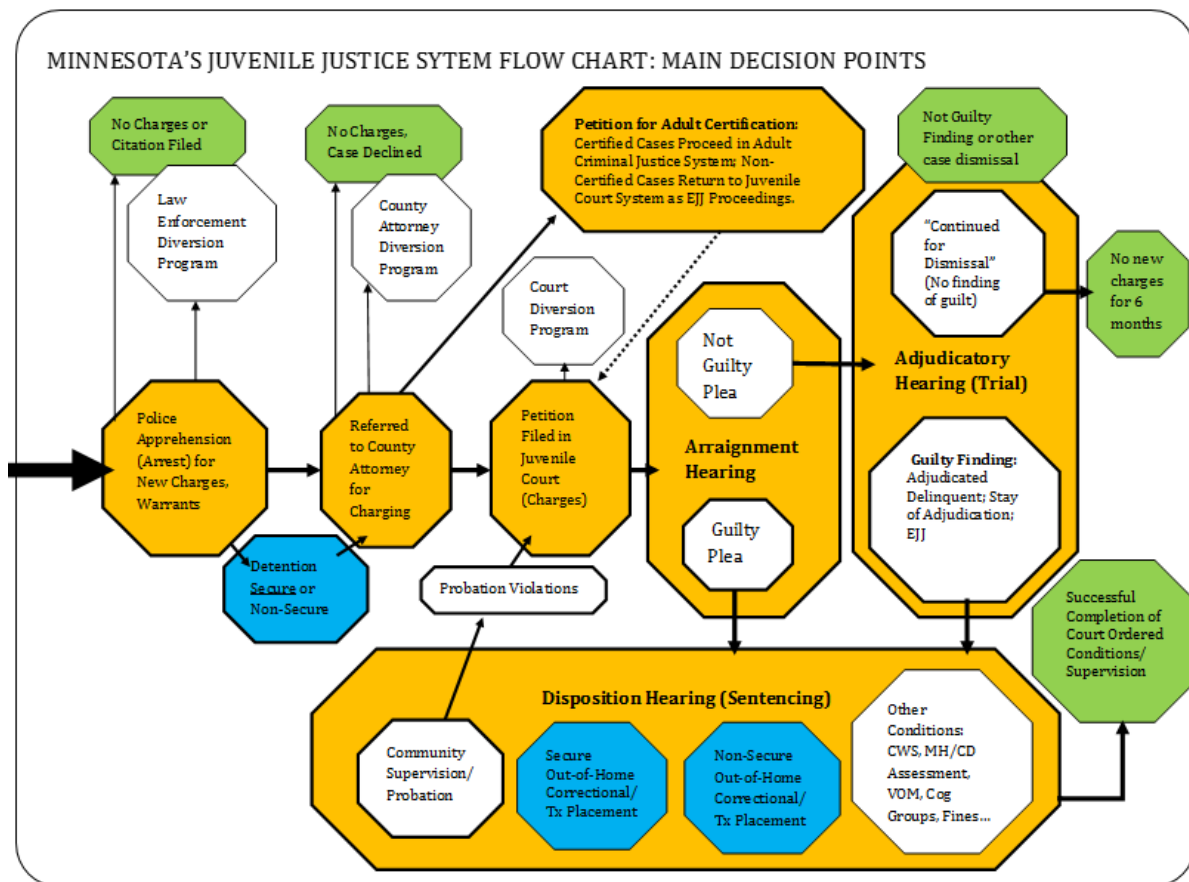
<sup>56</sup> Average of 2-5<sup>th</sup> decile for 2014 in table 1-5.

<sup>57</sup> Crime categories: Homicide, Sexual Abuse, Robbery, Property Damage, Drugs and Other (felonies), and Misdemeanors (includes gross misdemeanors).

## Marginal cost per participant

Minnesota Management and Budget worked with state and county partners to collect Minnesota-specific data to calculate a marginal cost per participant for each juvenile justice service included in the benefit-cost analysis. Marginal costs represent the direct expense of providing treatment or services to one additional participant. The cost is based on all participants admitted rather than only individuals who complete the offering. When appropriate, a comparison group cost is also calculated. For example, when a service is used as an alternative to confinement (e.g., diversion), the comparison group cost is the daily marginal cost of juvenile residential facilities times the average number of days a youth spends in the alternative service. The model deducts this cost from the treatment group costs to calculate the net cost. If the cost of the counterfactual is greater than the cost of the treatment, the costs of the service are said to be “negative”. We then include this negative cost with benefits. Since costs (the denominator in a benefit-cost analysis) are negative, the benefit-cost ratio is undefined/infinite (we represent as n/a). If there is no comparison scenario for a service (treatment as usual), MMB assumed the comparison cost was zero. The WSIPP model assumes all services last one year or less. If the service lasts more than one year, MMB used the actual duration period.

## Appendix C: Minnesota’s Juvenile Justice System Flow Chart: Main Decision Points



**Source:** Swayze, Dana (2015). Juvenile Justice in Minnesota: *Looking Back to Look Ahead* [PowerPoint slides]. Minnesota Department of Public Safety. Office of Justice Programs. Presentation at the 2015 DPS OJP Crime Victim Services Conference. **Note:**

## Appendix D: Disproportionate Minority Contact (DMC)

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The acronym “DMC” by definition requires the use of the term “minority” when describing non-white, non-Hispanic populations. When DMC data are presented in this appendix, the term minority is used in accordance with federal data collection and reporting requirements.

### Juvenile Justice Delinquency Prevention Act

In 1974, Congress passed the Juvenile Justice Delinquency Prevention Act to provide funds to states that followed a series of federal protections for juveniles, called the “core protections”.<sup>58</sup> These included deinstitutionalizing status offenders, prohibiting contact between juvenile and adult offenders, and prohibiting placing youth in adult jails unless under limited circumstances (Office of Juvenile Justice and Delinquency Prevention, 2017b). In 1992, Congress amended the law by adding disproportionate minority confinement as a core protection, tying 25 percent of each state’s grant allocation for that year to compliance (U.S. Department of Justice, 2009). This required states to collect data on the proportion of minority youth detained or confined in a secure detention facility, jail, or lock up, and develop and implement plans to reduce disproportionate representation (U.S. Department of Justice, 2009). Then years later, Congress changed the word “Confinement” to “Contact” in the DMC acronym, expanding the Act’s core requirement of tracking minority confinement to all contact points in the juvenile justice system (Office of Juvenile Justice and Delinquency Prevention, 2014).<sup>59</sup>

Collecting and analyzing data on the Disproportionate Minority Contact (DMC) is a federal response to the “national phenomenon whereby youth from communities of color have contact with the juvenile justice system at rates different from those of white youth” (Swayze & Buskovich, 2012b). States report to the federal Office of Juvenile Justice and Delinquency Prevention (OJJDP).

### Relative Rate Index

Each state uses DMC data collection to investigate where their juvenile justice system has disproportionate minority youth contact compared to white youth, and create appropriate local responses. Many factors can potentially contribute to a disparity in system contact: inequitable distribution of resources in communities, bias within policies and practices of juvenile justice agencies, and underlying social conditions of communities, especially poverty (U.S. Department of Justice, 2009). DMC data reporting uses an index to compare the rates of activity of minority youth to white youth. The Relative Rate Index (RRI) is calculated by dividing the rate of involvement of five minority youth subpopulations (Black or African Americans, American Indian/Alaska Natives, Asians, Native Hawaiian/Pacific Islanders, and Hispanic or Latinos)<sup>60</sup> and all minority populations combined, to the rate of involvement by white youth, at specific system contact points (Swayze & Buskovich, 2012b). For example, the minority population arrest rate is calculated by dividing the total number of minority youth arrests by the minority youth population in Minnesota, in a given year. The white youth arrest rate is calculated by dividing the total number of white youth arrests by the white youth population in Minnesota, in the same year. Use the minority population arrest rate as the dividend, and the white youth arrest rate as the divisor in the final calculation to get the RRI for arrest.

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<sup>58</sup> Juvenile Justice and Delinquency Prevention Act of 1974, Pub. L. No.93-415, 42 U.S.C. § 5601 *et seq.*

<sup>59</sup> On November 2, 2002, Congress reauthorized the JJDP Act. The reauthorization (the 21st Century Department of Justice Appropriations Authorization Act, Pub. L. No. 107-273, 116 Stat. 1758) took effect in FY 2004.

<sup>60</sup> DMC does not include Other/Mixed Race.

**Figure 18: Arrest Relative Rate Index Calculation**

$$\text{Arrest RRI} = \frac{\text{Minority Arrest Rate}}{\text{White Arrest Rate}}$$

$\left\{ \begin{array}{l} \text{Minority Youth Arrests} \\ \text{Minority Youth Population} \end{array} \right.$

$\left\{ \begin{array}{l} \text{White Youth Arrests} \\ \text{White Youth Population} \end{array} \right.$

The OJJDP conceptualizes a state juvenile justice system as nine sequential parts, or decision points: arrest, referral to county attorney, diversion, secure detention, petition to juvenile court, adjudication, secure placement, probation, and adult certification. The base populations used in the denominator of RRI calculations are predetermined by the OJJDP (Office of Juvenile Justice and Delinquency Prevention, 2017c). The denominator changes based on the point in the system that immediately precedes it, since the base population gets smaller the further a youth moves through the system. For example, the arrest RRI base population is the total population of minority or white youth in that age category. But, the base population at the next stage, referral to a county attorney, is not the total population. It is the minority or white arrest population<sup>61</sup>.



Each RRI number compares the white population activity rate to the activity rate of a minority group. An RRI over 1.00 means that the minority group compared is more likely to be present at that system decision point. Similarly, an RRI below 1.00 means less likely to be present at that decision point.

<sup>61</sup> DMC reporting counts events, not individuals.



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