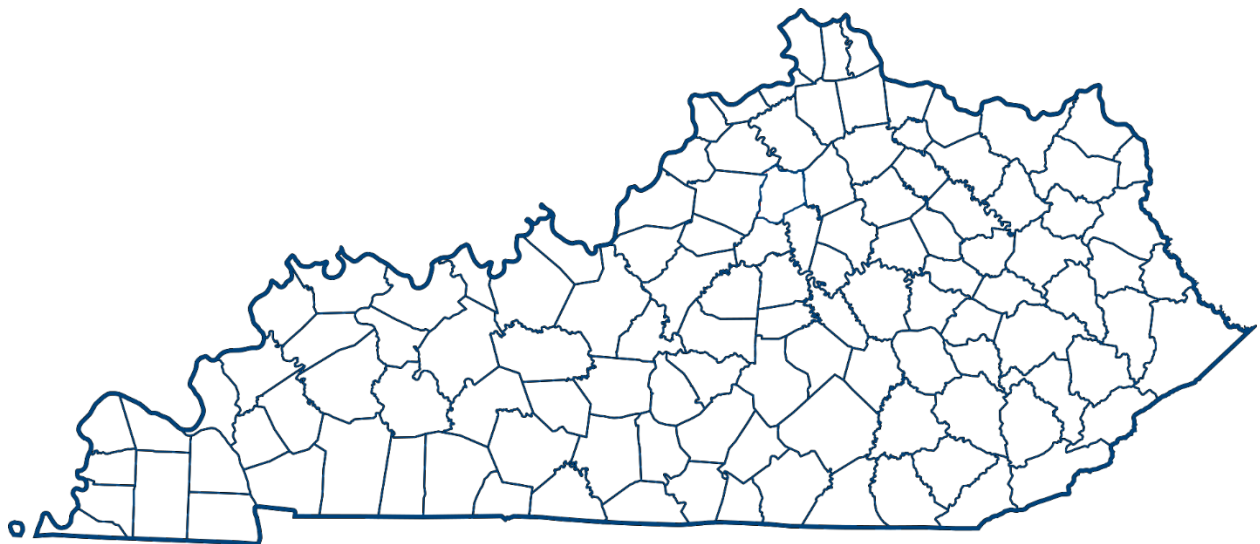


# Kentucky

## Juvenile Justice Reform Evaluation

January 2020

### Assessment of Community-Based Services for Justice-Involved Youth



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## Executive Summary

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The Juvenile Justice System Improvement initiative, formerly known as the Smart on Juvenile Justice System Initiative, began in 2014 and provided funding for technical assistance to states to implement system-wide reforms through the Office of Juvenile Justice and Delinquency Prevention (OJJDP). The goals of these reforms are to (1) adopt developmentally appropriate evidence-based practices (2) eliminate racial and ethnic disparities, (3) maximize cost savings while holding youth accountable, and (4) improve youth outcomes. In April 2014, Senate Bill 200 (SB 200) legislation was passed in Kentucky. SB 200 includes statutes that mandate a data sharing agreement between juvenile justice agencies, revised procedures for screening and assessing youth risk/needs, procedures for including more youth in the pre-court diversion program, and for reducing youth commitments and length of commitments to the Department of Juvenile Justice (DJJ).

Central to SB 200 is **the use of community-based services** to facilitate early intervention, hold youth accountable, maintain public safety, and achieve better outcomes for youth and their families. In this study, **we conducted an assessment of the available community-based services for youth referred to the juvenile justice system in Kentucky. We also identified gaps in service areas and potential disparities in access to services.**

### Evaluation Methods

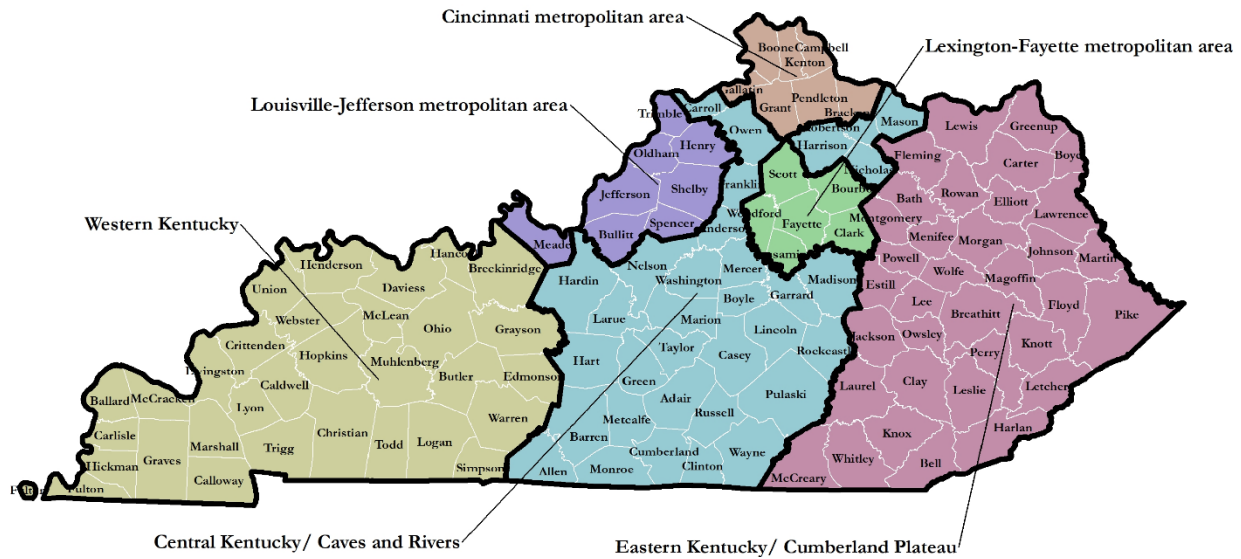
[Westat](#), in partnership with the [American Probation and Parole Association](#) (APPA), worked together to document and analyze community-based programs and services for youth across Kentucky. First, we collected resource guides that **list community-based programs available in each county in Kentucky**. These resource guides contain information about programs that offer a variety of services targeted to different populations (e.g., infants, youth, adults, and seniors). For the purposes of the current study, community-based services were limited to programs where youth may be referred to or receive treatment. These programs include those in the community and in non-secure residential settings.

We also utilized **administrative data from the Court Designated Worker Case Management System (CDWCMS)**, a statewide electronic case management and information system maintained by the Department of Family & Juvenile Services of the Administrative Office of the Courts. The CDWCMS contains information on youth referrals, including, but not limited to, youth race/ethnicity, age at referral, most recent address, school status, date of referral, referral charge, and reason for referral closure, diversion status, and screening assessment scores.

Finally, a **geographic analysis plan** was developed to understand the accessibility of community-based services for youth involved with the juvenile justice system in Kentucky using geographic information systems (GIS). We identified six regions which included three urban or metropolitan areas defined by the Census Metropolitan Statistical Areas (MSAs) and three rural areas defined by common geographic characteristics that are identifiable to people within Kentucky. As shown below, the

geographic regions used for this analysis are: (1) Cincinnati metropolitan area, (2) Lexington-Fayette metropolitan area, (3) Louisville-Jefferson metropolitan area, (4) Central Kentucky/Caves and Rivers, (5) Eastern Kentucky/Cumberland Plateau, and (6) Western Kentucky.

### Geographic Regions Used in GIS Analysis



## Findings

### What are the characteristics of youth referrals in FY 2017-2018

Between October 1, 2017 and September 30, 2018, 10,589 youth<sup>1</sup> from Kentucky were referred to the juvenile justice system. Of these, 68% were White, 21% Black, 5% Hispanic, and 6% were of unknown or other race/ethnicity. Approximately two-thirds (67%) of these youth were males. On average, youth received 2.5 referrals (SD = 2.7, range 1-32) in FY 2017-2018. At the time of referral, 23% of youth lived in Western Kentucky with the smallest proportion (9%) residing in the Cincinnati metropolitan area.

### What types of community-based services are available to justice-involved youth?

**More than 2,000 program locations that offer services to justice-involved youth were identified.** As expected, **programs are denser in metropolitan areas**, with more than double the number of programs per square mile in Louisville-Jefferson and Lexington-Fayette metropolitan areas than in Eastern Kentucky/ Cumberland Plateau and Western Kentucky.

<sup>1</sup> Youth residing in states other than Kentucky (n = 362) and those residing in Kentucky whose residential zipcodes were unknown (n = 13) were excluded from the analysis.

A single program may offer different types of services that target youth risk and needs. **Seven types of services were identified based on the information provided in the resource guides.** These services address: mental and behavioral health, prosocial peers and role models, family, school and work, prosocial activities, substance use, and disabilities.

Overall, more than 3,800 community-based services that address youth needs were identified across the six regions in Kentucky. Forty two percent (n = 880) of the programs offer mental and behavioral health services and approximately one-third offer family services (35%, n = 732) and prosocial activities (32%, n = 667). About one-quarter of the programs offer services related to prosocial peers and roles models (26%, n = 402) and less than 20% of the programs offer services related to school and work (19%, n = 402) and substance abuse (18%, n = 376). Only nine percent (n = 190) of the programs offer services related to disabilities.

### Types of Services Offered by Community-Based Programs

**Mental and behavioral health** – addresses issues related to mental health; antisocial behaviors; conduct problems; delinquency

**Prosocial peers and role models** – addresses issues related to interactions with antisocial peers, or services that encourage interactions with positive peers and role models

**Family** – addresses issues related to family relationships, including parent-child relationship and family well-being

**School and work** – addresses issues related to academic achievement, engagement, and truancy; finding or securing employment

**Prosocial activities** – encourages involvement in positive leisure and recreational activities

**Substance use** – addresses issues related to using or abusing substances including drugs and alcohol

**Disabilities** – addresses issues related to physical, developmental, and intellectual disabilities

### To what extent do justice-involved youth have access to community-based services?

**Most services, with the exception of those targeting disability needs, are within a 30-minute drive for the majority of youth within each region.** For example, services are within a 30-minute drive in at least 74% of urban regions and in at least 61% of rural regions. **However, when the drive-time was reduced to 15-minutes, accessibility to services was substantially diminished.** Specifically, services are within a 15-minute drive in 54%, at most, of urban regions and in 35%, at most, of rural regions. Disability services are within a 30-minute drive in 74%, at most, of urban regions and in 52%, at most, of rural regions. Accessibility to disability services also dropped substantially when a 15-minute drive-time was considered with services accessible only in 11-31% of the regions.

Notably, there is also some variation by county within a region. For example, **counties located in rural regions display more variations in service coverage** with a mix of counties within a region showing above 80% coverage and counties with limited service coverage (e.g., below 60%).

### Does access to services vary by youth race/ethnicity?

Non-White youth were represented in the justice system at a higher proportion than in the general population, suggesting racial and ethnic disparities. However, access to services did not vary by race or ethnicity. That is, the **drive-time analysis did not indicate that non-White youth had less access to services compared to White youth.** Race, however, was found to be an important aspect

of accessibility in terms of locale as the majority of non-White youth live in the two metropolitan regions of Lexington-Fayette and Louisville-Jefferson, which have the greatest program density.

### Does access to services vary by youth level of needs?

**Accessibility to substance abuse services did not significantly differ by the level of youth's needs; however, notable gaps in substance abuse services exist across Kentucky.** The average drive-time to substance abuse services by youth's level of needs ranged from 8.1 to 9.6 minutes. Substance abuse services gaps are located in rural regions. However, we did find one of the longest drive-times on the boundary of Louisville-Jefferson metropolitan area.

### Strengths and Limitations

Reliance on community-based programs to support positive youth development and curtail offending has received a lot of attention from policymakers and juvenile justice practitioners alike. Yet, little research exists on understanding the availability and access to community-based resources for justice-involved youth. Lack of sufficient data on services, at both the youth- and program-level, may contribute to this gap in research. In this study, **we addressed this critical gap by gathering information on community-based services for youth in Kentucky.** We note the following strengths of this study:

- To ensure that we collected an accurate and complete list of resources, **we built quality control procedures into our process, including a feedback loop between Westat and Kentucky stakeholders. Kentucky stakeholders also reviewed the list of services** and clarified key definitions such as program eligibility and risk and need categories.
- Using the final list of community-based programs, **we used GIS to conduct a spatial analysis to understand the geographic variations** of service availability throughout the State.

There are several limitations to keep in mind, however, when interpreting the study findings.

- **The list of community-based programs that we received from agencies was last updated between 2017 and 2018.** It is possible that new programs have opened since then and some of the programs in the list have closed or moved locations.
- **Our analyses were limited by the availability of administrative data.** For example, youth-level service data were not available, and thus, we were not able to explore the availability of and accessibility to *specific services* that youth may be referred to.
- **Our analyses focused on potential disparities that may exist *only* in availability and accessibility to services.** Utilization of and engagement with services are two other key areas that require further assessment to fully understand gaps in provision of community-based services to justice-involved youth.



## Recommendations for Kentucky

We focus our recommendations on two key areas that will help support and enhance efforts related to increasing the availability and access to community-based services for justice-involved youth in Kentucky—(1) collecting and managing data on services and (2) practice recommendations for increasing availability and access to services.

### I. Collecting Data on Services and Programs to Support Juvenile Justice Reform

Collecting data about service providers and the programs they offer can help agencies:

- Identify areas with sufficient programs and services and identify service deserts in coverage
- Efficiently allocate resources
- Coordinate program/service provision across systems
- Create case plans to match youth’s risk and needs with appropriate programs and services
- Plan and develop training programs for staff
- Create quality assurance measures for programs/services

Collecting data about the services that individual youth receive can help agencies:

- Manage individual youth case plans to track services needed vs. services received
- Produce a snapshot of an individual youth’s entire service history
- Identify potential issues with service delivery, such as referral to services that are never used
- Examine patterns of data to assess the impact of specific services on youth outcomes
- Examine patterns of data to assess the extent to which different youth populations have access to appropriate services, and identify potential disparities in service delivery
- Prepare case reports for judges, district attorneys, and other decision-makers

Existing data management systems can be enhanced through the following practices:

- Incorporate service information into case management systems where possible
- Track both service provider information and services each youth has received
- Use unique service provider and youth IDs to link data within and between systems  
Create data fields rather than text fields where possible to improve reporting capabilities

Challenges for collecting and using data can be addressed by implementing the following:

- Conduct staff trainings on how to efficiently and accurately use data entry tools
- Support data collection policies and practices with manuals and data codebooks
- Conduct quality assurance checks early on (when new data elements are collected or data entry tools are set up) and on a regular basis to assess and address missing or inaccurate data
- Create a set of standard reports so data is easily used for management and case planning
- Gather feedback from staff who use data entry and reporting tools to improve their usability and usefulness

- Coordinate with other agencies to share information about service provision to overlapping populations of youth
- Create a Memorandum of Understanding (or Information Sharing Agreement) to share service data with other agencies

## II. Enhancing Availability and Access to Community-Based Services for Justice-Involved Youth

1. **Assess the feasibility of increasing access to telehealth, in-home, and school-based services.** These services provide the opportunity to improve access to services for youth and families who face challenges with transportation and can fill gaps in communities that face challenges in maintaining sufficient services in their area.
2. **Assess the extent to which SB 200 reforms have resulted in increased funding for community-based services.** Ongoing evaluation of funds to support reform efforts is critical to ensuring that sufficient supports exist to achieve and sustain SB 200 goals.
3. **Assess the feasibility of providing grant writing support** particularly to rural and small communities to assist them with identifying and applying for funding opportunities in order to increase availability of services.
4. **Enhance supports provided to FAIR teams to improve engagement and collaboration among members.** Enhanced supports, including trainings and implementation of quality control procedures, are critical to ensure meaningful engagement and collaboration among FAIR team members.
5. **Assess the delivery and quality of services provided** to youth in addition to access and availability. A quality assessment of services provides critical information to agencies working with the youth as well as for agencies responsible for reinvesting fiscal resources in the community.
6. **Assess the effectiveness of the Juvenile Justice Fiscal Incentive Program in supporting the goals of SB 200.** The combination of comprehensive data collection and analysis as well as uniform standards for evaluating effective programs can be used to create standards for the use of justice reinvestment dollars from SB 200.

## Introduction

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In 2014, the [Office of Juvenile Justice and Delinquency Prevention](#) (OJJDP) began its Smart on Juvenile Justice Initiative (now known as the Juvenile Justice System Improvement initiative). This initiative promoted system-wide reform efforts in juvenile justice with the goals of (1) adopting developmentally appropriate evidence-based practices, (2) eliminating racial and ethnic disparities, (3) maximizing cost savings while holding youth accountable, and (4) improving youth outcomes.<sup>2</sup>

Kentucky was one of the initial states involved in the OJJDP initiative. Kentucky first received assistance from the Pew Charitable Trusts to help identify areas for improvement in the juvenile justice system to be addressed through legislative changes. With support from Pew, Kentucky drafted Senate Bill 200 (SB 200) which sought to strengthen the Kentucky juvenile justice system and improve outcomes for youth. Following passage of SB 200 in 2014, with funding from OJJDP's Smart on Juvenile Justice Initiative, the Crime and Justice Institute (CJI) provided training and technical assistance to Kentucky for implementation of the reforms included in SB 200.

### Objectives of SB 200 Legislation:

- Focus resources on most serious offending youth;
- Reinvest savings into strengthening early intervention and prevention programs;
- Increase effectiveness of juvenile justice programs and services; and
- Improve government performance by providing oversight.

SB 200 includes statutes that mandate a data sharing agreement between juvenile justice agencies, revised procedures for screening and assessing youth risk/needs, procedures for including more youth in the pre-court diversion program, and for reducing youth commitments and length of commitments to the Department of Juvenile Justice (DJJ). **SB 200 also calls for increases in community-based services made available to youth through reinvestment of savings achieved from reductions in DJJ commitments.**

[Westat](#), in partnership with the [American Probation and Parole Association](#) (APPA), worked with Kentucky agencies involved in the reform effort to evaluate key juvenile justice reforms passed in the SB 200 legislation. In a previous report, we described findings from an evaluation of the reform implementation process.<sup>3</sup> **In this report, we present findings from an assessment of community-based services for justice-involved youth in Kentucky.** A subsequent outcome evaluation will be conducted to examine long-term impacts for the juvenile justice system and youth.

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<sup>2</sup> The Office of Juvenile Justice and Delinquency Prevention. (2015). *Smart on Juvenile Justice Initiative*. Retrieved from <https://www.ojjdp.gov/archives/newsletter/248712/topstory.html>

<sup>3</sup> Kaasa, S., Vidal, S., Meadows, K., Foster, M., and Lowe, N. (2019). *Kentucky Juvenile Justice Reform Evaluation: Implementation Evaluation Report* (for National Institute of Justice). Rockville, MD: Westat.

## SB 200: A Focus on Community-Based Services

SB 200 aims to improve youth outcomes and represents a major shift in Kentucky juvenile justice policy away from institutionally-based interventions to community-based ones. As such, funds saved by not incarcerating youth or putting them through lengthy court processes are meant to be reinvested in community-based intervention and prevention services. Thus, it is critical for policymakers to understand the current availability and accessibility of community-based services to justice-involved youth and whether those services adequately address the risks and needs of those youth.

There are several statewide agencies in Kentucky that interact with and provide services to youth. From the perspective of the justice system and central to the implementation of SB 200 reforms, there are two key agencies that work with youth—the Administrative Office of the Courts (AOC) and the Department of Juvenile Justice (DJJ).

The **Administrative Office of the Courts** (AOC) is the operational arm of the Judicial Branch. The AOC supports court facilities and programs in all 120 counties, including the establishment and implementation of the Family, Accountability, Intervention and Response (FAIR) teams. The Kentucky **Department of Juvenile Justice** (DJJ) is one of the five departments under the Kentucky Justice and Public Safety Cabinet. The DJJ is responsible for prevention programs for at-risk youth, court intake, detention, residential placement and treatment services, probation, community aftercare, and reintegration programs, as well as the confinement of youth awaiting adult placement or court.

Although the AOC and DJJ have significant responsibilities toward justice-involved youth, the Kentucky **Cabinet for Health and Family Services** (CHFS) oversees all state service programs and plays a critical role on promoting and supporting access to necessary youth services within the state. Table 1 provides an overview of relevant agencies within CHFS.

**Table 1.** Service agencies within the Kentucky Cabinet for Health and Family Services

Agency	Description
<b>DBHDID</b>	The Department for Behavioral Health, Developmental and Intellectual Disabilities (DBHDID) is among the departments and agencies within the Kentucky Cabinet for Health and Family Services. The DBHDID’s mission is to provide leadership, in partnership with others, to prevent disability, build resilience in individuals and their communities, and facilitate recovery for people whose lives have been affected by mental illness, intellectual disability or other developmental disability, or substance abuse.
<b>DCBS</b>	The Department for Community-Based Services (DCBS) is another department within the Kentucky Cabinet for Health and Family Services. Among other things, the department provides family support; child care; child and adult protection; eligibility determinations for Medicaid and food benefits; as well as administers the state foster care and adoption systems.

Agency	Description
<b>DMS</b>	The Department for Medicaid Services oversees Kentucky Medicaid which is a state and federal program authorized by Title XIX of the Social Security Act to provide health care for eligible low-income residents including children, families, pregnant women, the aged, and the disabled. Eligibility is determined by a number of factors, including family size, income and the federal poverty level. DMS is expanding coverage to include additional substance abuse services.
<b>FRYSC</b>	The Division of Family Resource and Youth Services Centers provides administrative support, technical assistance and training to local school-based Family Resource and Youth Services Centers (FRYSC). The primary goal of these centers is to remove non-academic barriers to learning as a means to enhance student academic success. Each center offers a unique blend of programs and services determined by the needs of the population being served, available resources, location and other local characteristics.
<b>OCSHCN</b>	The Office for Children with Special Health Care Needs (OCSHCN), formerly the Commission for Children with Special Health Care Needs, provides comprehensive care to children and youth with special health care needs.

Together, these agencies play a critical role in supporting and facilitating the provision of services to youth in Kentucky.

### Promoting Community-Based Resources and Services: Enhanced Pre-Court Diversion and the Establishment of the Family, Accountability, Intervention and Response (FAIR) Teams

As part of SB 200, AOC’s pre-court diversion process was enhanced in 2014 for low-level offenders.<sup>4</sup> The pre-court diversion is designed to provide community-based services and hold youth accountable for behavior without court action. Court designated workers (CDWs) and their counterparts, court designated specialists (CDSs) are responsible for investigating completion of complaints filed, completing risk and needs assessments, and supervising diversion agreements for youth.

In support of the enhanced pre-court diversion process, and central to SB 200 reform efforts, the Family, Accountability, Intervention and Response (FAIR) teams were also established in 2014 to improve case management and reduce youth’s involvement in the justice system. Teams consist of representatives from various youth-serving agencies, including education, AOC, DJJ, and CFHS. It

<sup>4</sup> The Pew Charitable Trusts. (2014, July). *Kentucky’s 2014 Juvenile Justice Reform*. Retrieved from <https://www.pewtrusts.org/~media/assets/2014/07/psppkyjuvenilejusticereformbriefjuly2014.pdf>

also includes local representatives from law enforcement, the county attorney’s office, public defender’s office, and other sectors of the community. These teams are mandated to meet monthly to review referrals for youth that have either failed to appear for an initial intake, declined to enter into a diversion agreement, are considered high needs, or are struggling or have failed to complete terms outlined in their diversion agreement.<sup>5</sup> FAIR team members can determine that no further action be taken on certain status offense cases or continue to brainstorm and recommend resources and services that best support the needs of justice-involved youth and families. FAIR teams were initially implemented between September 2014 and February 2015 in four groups of pilot sites.<sup>6</sup> Between October 2014 and May 2017, 114 FAIR teams have been implemented in each judicial district in Kentucky.<sup>7</sup>

**Roles of CDW:**

- Conducts preliminary investigations
- Formulates, enters into, and supervises diversion agreements
- Assists in placing children in alternative out-of-home placements prior to arraignment and after consultation with a judge

**Roles of CDS:**

- Performs all CDW duties
- Leads, convenes, and manages the FAIR teams

Youth may be referred to the FAIR teams in several ways. The CDW can refer youth charged with an offense, public or status, who are either assessed as having high needs or who are struggling or not participating in diversion. Directors of Pupil Personnel (DPPs) may also directly refer youth to the FAIR team in consultation with CDWs.<sup>8</sup> The FAIR team will then make recommendations regarding appropriate interventions for the youth, coordinate service provision, and will continue to oversee the progress of the youth. Indeed, providing referrals and connecting youth to appropriate community-based services are fundamental to the establishment of the FAIR teams.

## Barriers to Availability and Access to Community-Based Services

Westat, in collaboration with the American Probation and Parole Association (APPA), conducted an implementation evaluation of SB 200 that focused on the process of implementation, including perceived challenges, successes, and areas for continuing improvement.<sup>9</sup> One of the key findings of the evaluation suggests that a lack of access to community-based services remains a significant barrier to implementation of SB 200. Interviewees, especially those in rural areas, indicated that there were few service providers for their population and that barriers to those services were sometimes insurmountable. These barriers include:

<sup>5</sup> Administrative Office of the Courts. (2015). *Family Accountability, Intervention, and Response (FAIR) Team Guidelines*.

<sup>6</sup> Administrative Office of the Courts. (2015, February). *Juvenile Services Specialist – FAIR Team Implementation Timeline*.

<sup>7</sup> AOC staff, personal communication, April-June 2017.

<sup>8</sup> Kentucky Department of Education. (ND). *Senate Bill 200 Frequently Asked Questions*.

<https://education.ky.gov/school/sdfs/Documents/SB%20200%20FAQs.pdf>

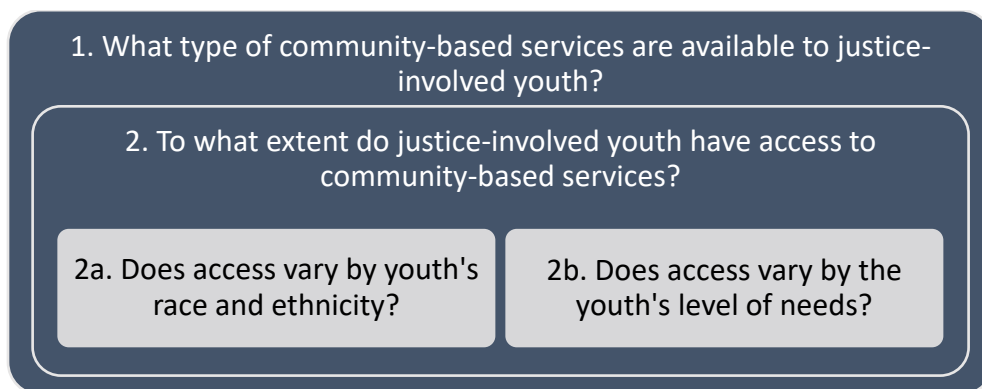
<sup>9</sup> Kaasa, S., Vidal, S., Meadows, K., Foster, M., and Lowe, N. (2019). *Kentucky Juvenile Justice Reform Evaluation: Implementation Evaluation Report* (for National Institute of Justice). Rockville, MD: Westat.

- **Transportation:** Access to reliable transportation was an issue for many youth and families. For example, public transportation is limited to urban areas of the state and it is unclear if public transportation even in those areas provides easy access to services. For rural youth, interviewees shared that most families either did not own a vehicle or shared one which was often used to transport parents to work and not available for youth when needed. While Medicaid does offer transportation services in some circumstances, CDSs and CDWs said the requirements were prohibitive.
- **Waitlists for services:** Although some areas did have convenient service providers, these providers may not have had openings for youth when referred and waitlists could be months long.
- **Youth's Charges:** Youth with violent or felony charges often have a more limited number of services available to them. For example, several of these youth were required to participate in volunteer work or services. Interviewees shared frustration that many opportunities for volunteer work or services would only accept youth with truancy or other minor charges leaving few or no opportunities for youth with more serious charges.
- **Insurance/Cost of services:** Many service providers hold contracts with the state to serve certain at-risk populations and therefore prioritize Medicaid recipients. This creates an unintentional barrier for youth with private insurance which may or may not be accepted by agencies. Additionally, out of pocket costs for services are often prohibitive to families.

## Research Questions

A main goal of SB 200 is to increase the provision of community-based services to justice-involved youth. Westat, in partnership with APPA, worked with key Kentucky agencies involved in the reform effort to conduct an assessment of community-based services available for justice-involved youth. Specifically, we analyzed the types of community-based services available for youth, accessibility to these services, and if certain disparities in accessibility exist by characteristics of youth (e.g., race/ethnicity, needs level). In this report we present the methods, findings, and recommendations from this assessment guided by the research questions outlined in Figure 1.

**Figure 1.** Research questions



# Methodology

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## Data Sources

**Documentation of Community-based Programs.** In October 2018, AOC provided Westat with a list of community-based programs available in each county in Kentucky. The resource guides contain programs that offer a variety of services targeted to different populations (e.g., infants, youth, adults, and seniors). For the purposes of the current study, community-based services were limited to programs where youth may be referred to or receive treatment. These programs include those in the community and in non-secure residential settings. Because youth up to the age of 20 may remain under the jurisdiction of juvenile justice agencies, programs serving individuals over the age of 18, but not those providing services to seniors were also included.

A single program may offer different types of services that target youth risk and needs. Seven types of services were identified based on the information provided in the resource guides:

- **Mental and behavioral health** – addresses issues related to mental health; antisocial behaviors; conduct problems; delinquency
- **Prosocial peers and role models** – addresses issues related to interactions with antisocial peers, or services that encourage interactions with positive peers and role models
- **Family** – addresses issues related to family relationships, including parent-child relationship and family well-being
- **School and work** – addresses issues related to academic achievement, engagement, and truancy; issues related to finding or securing employment
- **Prosocial activities** – encourages involvement in positive leisure and recreational activities
- **Substance use** – addresses issues with using or abusing substances including drugs and alcohol
- **Disabilities** – addresses issues related to physical, developmental, and intellectual disabilities

After the different types of services were identified, Westat recoded these services into a standard set of categories mapping onto AOC and DJJ’s risk and needs assessment categories, criminogenic needs, and factors associated with positive youth development.<sup>10</sup> We define **risk** as factors that may contribute to youth’s antisocial or delinquent behaviors and we define **needs** as factors supporting positive youth development. For example, the service types *counseling, assessment, referral services, and mental health* are coded as addressing the risk and needs category *mental and behavioral health*. Service types *abuse, family services, parenting/pregnancy services, and youth services* are coded as addressing the risk and needs category *family*. Figure 2 summarizes the service types by risk and needs categories.

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<sup>10</sup> Westat reviewed the risk and needs instruments provided by AOC (e.g., GAIN-Q3) and DJJ (RCNA) and identified the different risk and needs domains captured by the instruments. A crosswalk of identified domains, criminogenic risks and needs, and factors associated with positive youth development was then conducted to determine the final list of risk and needs categories shown in Figure 2.



**Figure 2.** Service types by risk and needs categories

RISK and NEEDS	SERVICE TYPES
Mental and Behavioral Health	<ul style="list-style-type: none"> <li>• Counseling; Assessment; Referral Services; Mental Health</li> </ul>
Substance Use	<ul style="list-style-type: none"> <li>• Substance Dependency and Abuse</li> </ul>
Family	<ul style="list-style-type: none"> <li>• Abuse; Family Services; Parenting/Pregnancy Services; Youth Services (only if Family Resource Center)</li> </ul>
School and Work	<ul style="list-style-type: none"> <li>• Education and Training; Employment Services</li> </ul>
Prosocial Peers and Role Models	<ul style="list-style-type: none"> <li>• Mentoring Services; Youth Services</li> </ul>
Prosocial Activities	<ul style="list-style-type: none"> <li>• Volunteering; Youth Services</li> </ul>
Disability	<ul style="list-style-type: none"> <li>• Disability (not including medical facilities)</li> </ul>

A data file that contains the list of programs, address of the program, description of services offered by the program (when available), and risk/needs categories was created for data analysis and reporting. To ensure that we capture community-based services offered to justice-involved youth in Kentucky as accurate and complete as possible, we solicited feedback from AOC, DBHDID, and DJJ by asking them to review the list of services. Agency staff reviewed information such as program name, eligibility (i.e., programs providing services to justice-involved youth), location, and description (when available).<sup>11</sup> They also reviewed the risk and needs categories that services offered by a program may address. Westat conducted trainings with agency staff prior to their review to standardize the review process across all regions and agencies.

**Court Designated Worker Case Management System (CDWCMS).** The CDWCMS is a statewide electronic case management and information system maintained by the Department of Family & Juvenile Services of the Administrative Office of the Courts. It collects information on youth referrals, including, but not limited to, youth race/ethnicity, age at referral, most recent address, school status,

<sup>11</sup> During the review process, we also asked that corporate locations be removed from the list if the location does not provide services to youth. There are some corporate locations, however, that do offer services for youth.

date of referral, referral charge, and reason for referral closure, diversion status, and screening assessment scores. Table 2 lists the data elements that were used in this study.

**Table 2.** List of CDWCMS data elements

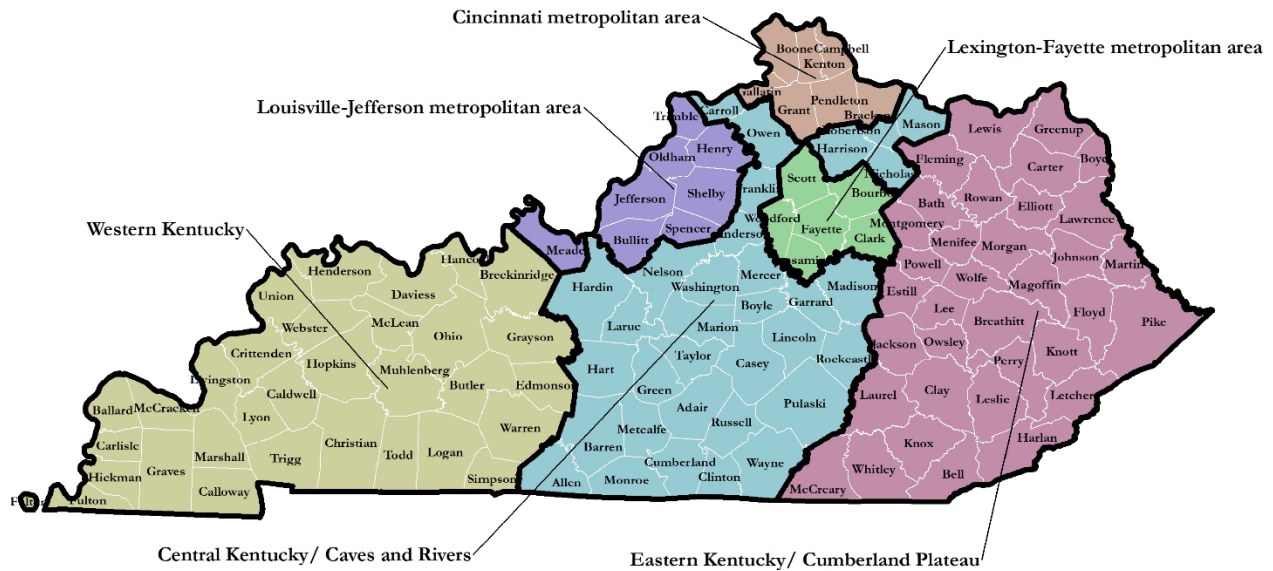
Data Elements	
1.	Race/Ethnicity
2.	Gender
3.	Juvenile county most recent county of residence
4.	Juvenile state - most recent state of residence
5.	JuvZipCode - most recent zip code of residence
6.	GAIN-SS total score
7.	GAIN-SS substance use score
8.	GAIN-SS externalizing disorder score
9.	GAIN-SS internalizing disorder score
10.	GAIN-SS crime/violence score

As described above, the documentation of community-based services that we received from Kentucky agencies was last updated between 2017 and 2018. To provide an accurate description of the clientele of youth that community-based programs serve as accurately as possible, we restricted our sample of youth to those who were referred to the justice system during the time period October 1, 2017 to September 30, 2018.

## Analytical Approach

**Geospatial Approach.** A geographic analysis plan was developed to understand the accessibility of community-based services for youth involved with the juvenile justice system in Kentucky using geographic information systems (GIS). The first part of the geographic analysis included understanding the geographic regions of Kentucky to explore regional variations of service accessibility. We identified six regions which included three urban or metropolitan areas, defined by the Census Metropolitan Statistical Areas (MSAs), and three rural areas defined by common geographic characteristics and identifiable to people within Kentucky. The six geographic regions used for this analysis are: Cincinnati metropolitan area, Lexington-Fayette metropolitan area, Louisville-Jefferson metropolitan area, Central Kentucky/Caves and Rivers, Eastern Kentucky/Cumberland Plateau, and Western Kentucky. These regions shown in Figure 3 and are described in Table 3, and are used to interpret the geographic analysis results.

**Figure 3.** Kentucky regions map



**Table 3.** Kentucky geographic regions

Urban Regions	
<b>Cincinnati metropolitan area</b>	This area contains 17 counties across portions of Ohio, Indiana and Kentucky. The Cincinnati MSA encompasses 7 counties in Kentucky that are separated from Ohio by the Ohio River and is considered urban.
<b>Lexington-Fayette metropolitan area</b>	This area is made up of 6 counties. Fayette County is the 2 <sup>nd</sup> most populous county in the state but is roughly half the population of Jefferson County. Lexington is home to the University of Kentucky and is considered urban.
<b>Louisville-Jefferson metropolitan area</b>	This area, known colloquially as Kentuckiana, is made up of 13 counties across Kentucky and Indiana, 8 in Kentucky and 5 in Indiana, with Jefferson County, KY as the hub. Louisville is the largest urban area in the state with Jefferson County containing more than double the population of the next largest county and is considered urban. <sup>12</sup>
Rural Regions	
<b>Central Kentucky/Caves and Rivers</b>	Central Kentucky is in the Eastern time zone, but some counties are split with the Central time zone. The area is largely rural but contains the state capitol of Frankfort in Franklin County and Eastern Kentucky University in Richmond in Madison County.

<sup>12</sup> According to U.S. Census, Jefferson County has a population of 740,000+ versus Fayette County which contains 295,000+ people. See <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>.

<b>Eastern Kentucky/Cumberland Plateau</b>	Eastern Kentucky is largely defined by the Appalachian Mountains and more specifically the Cumberland Plateau. The mountainous geography of this area and history related to coal mining and the fallout of that economy justify the grouping of this area. This is the least populous and most rural region of Kentucky. Its highest population county ranks 15 <sup>th</sup> overall for population in the state.
<b>Western Kentucky</b>	Western Kentucky is located entirely within the Central Time Zone of the United States which sets it apart from the majority of the state. This region is primarily rural but includes the third largest city in the state of Kentucky, Bowling Green in Warren County, as well as Owensboro and the Evansville, Indiana metropolitan area. <sup>13</sup> The area is defined geologically by the Western Coal Fields and the area west of Tennessee River known as the Jackson Purchase.

The geographic analysis was conducted using ArcMap 10.6 with the network analyst extension. Two approaches were used to understand accessibility to services—(1) a service area analysis and (2) a route analysis. The service area analysis calculated a 15-minute and 30-minute drive-time polygons from the service provider. The drive-time was calculated based on normal traffic patterns. The next geospatial analysis was a route analysis based on road hierarchy.<sup>14</sup> The route analysis was conducted to determine the closest service facility to the youth.<sup>15</sup> Because the exact youth address was not available, the zip code of where the youth lived was used to calculate the distance to the closest service provider. In order to conduct the spatial analysis we assumed that all of the youth lived at the centroid (or center) of the zip code. This analysis provides an estimate of how many minutes youth are estimated to drive based on the zip code that they live in.

## Findings

### Characteristics of Youth Referrals in FY 2017-2018

Between October 1, 2017 and September 30, 2018, 10,964 youth from Kentucky were referred to the juvenile justice system. These referrals were handled by the Administrative Office of the Courts. For the purposes of this study, youth residing in states other than Kentucky (n = 362) and those residing in Kentucky whose residential zipcodes were unknown (n = 13) were excluded from the analysis. Of the remaining 10,589 youth, 68% were White, 21% Black, 5% Hispanic, and 6% were of unknown or

<sup>13</sup> Bowling Green is the third largest city in Kentucky (population of 68,401), which is significantly smaller than Lexington-Fayette (population of 323,780), the next largest city. See <https://www.census.gov/quickfacts/fact/table/lexingtonfayettekentucky,bowlinggreencitykentucky,KY/PST045218>

<sup>14</sup> Road hierarchy uses primary roads or highways as the first roads traveled followed by secondary and tertiary roads.

<sup>15</sup> Because youth-level service data are not available, we do not know if a youth receives services from the closest program location. It is possible that a youth does not receive services from the closet program because the program may have reached its capacity to serve new clients, it offers limited hours, or another program has a specific provider that a youth or their family prefers.

other race/ethnicity.<sup>16</sup> Approximately two-thirds (67%) of these youth were males. On average, youth received 2.5 referrals (SD = 2.7, range 1-32) in FY 2017-2018. At the time of referral, approximately 23% of youth were residing in Western Kentucky and the smallest proportion of youth (9%) were residing in Cincinnati metropolitan area. Table 4 summarizes the youth referral population within each of the six identified geographic regions in Kentucky.<sup>17</sup>

**Table 4.** Number of youth referrals in Kentucky by region

Region	Count	Percentage	Rate per 1,000 total population	Rate per 1,000 population under age 18 <sup>18</sup>
Kentucky	10,589		2.4	10.5
<b>Urban Regions</b>				
Cincinnati metropolitan area	933	9%	2.1	8.7
Lexington-Fayette metropolitan area	1,288	12%	2.6	11.6
Louisville- Jefferson metropolitan area	2,158	20%	2.1	9.2
<b>Rural Regions</b>				
Central Kentucky/Caves and Rivers	1,914	18%	2.4	10.4
Eastern Kentucky/ Cumberland Plateau	1,854	18%	1.7	10.9
Western Kentucky	2,442	23%	2.7	11.9

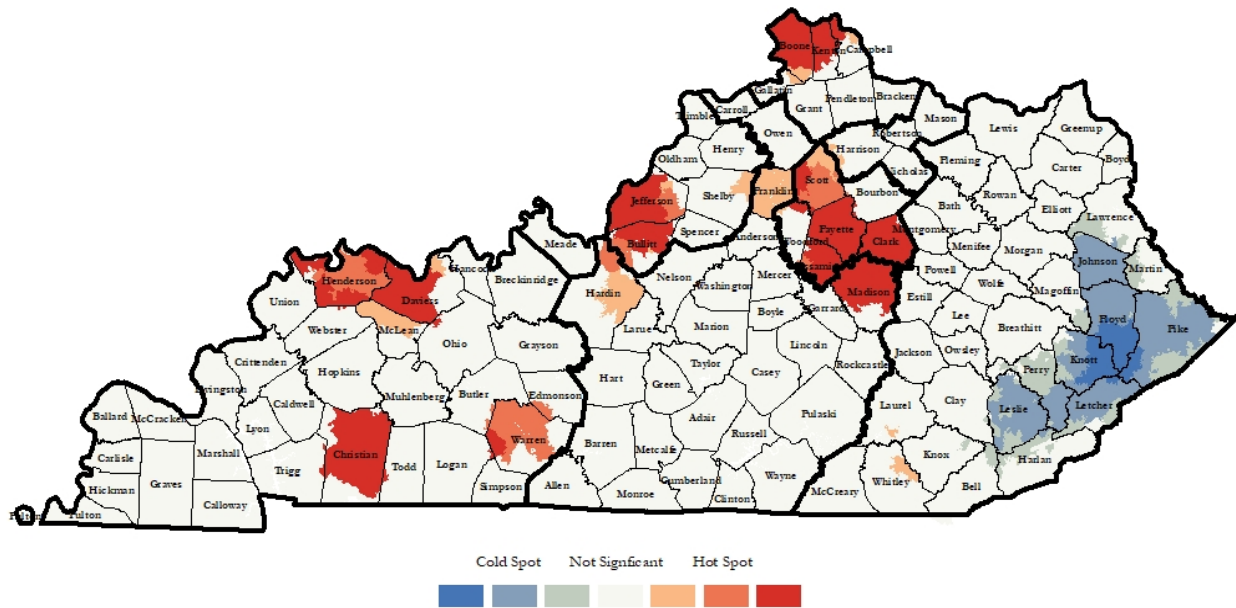
To determine if justice-involved youth live in particular areas of Kentucky, a cluster analysis was conducted using the Getis-Ord  $G_i^*$  statistic. Youth are clustered in six areas throughout the state (signified by red in the map below). The hot spots represent the highest concentration of youth who received referrals. The clusters primarily align with the three metropolitan areas highlighted in the geographic division (i.e., Cincinnati metropolitan area, Lexington-Fayette metropolitan area, and Louisville-Jefferson metropolitan area). The non-urban clusters are located near two smaller metropolitan areas namely, Bowling Green, KY and Evansville, IN as well as Christian County, KY which is a large and generally rural county. The cluster analysis not only identified clusters known as hot spots but also areas known as cold spots. The cold spots indicate a cluster of a lower concentration of youth who received referrals in a geographic area. As shown in Figure 4, cold spots are geographically clustered in Eastern Kentucky/ Cumberland Plateau area.

<sup>16</sup> The racial groups do not include individuals of Hispanic ethnicity.

<sup>17</sup> Ninety five percent of zip codes were completely contained within a region. For the 5% of zip codes that crossed regional boundaries the zip code was assigned to the region based on the centroid (center) of the zip code location.

<sup>18</sup> Youth under age 18 make up 23% of the population in Kentucky.

**Figure 4.** Hot spot map of youth involved with the juvenile justice system in Kentucky

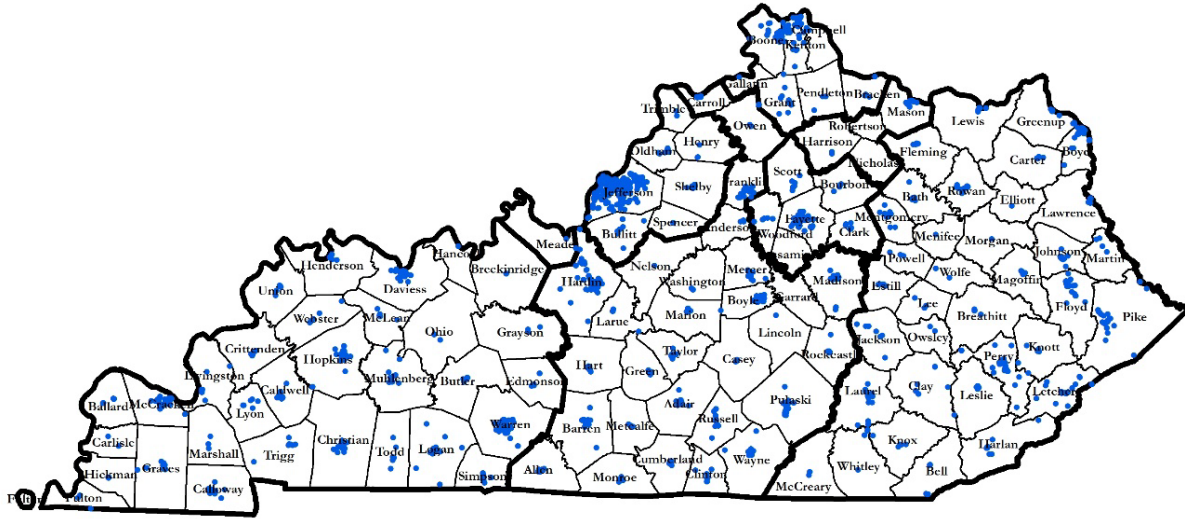


### Research Question 1: What types of community-based services are available to justice-involved youth?

To address this research question, we examined the number and types of community-based services available to justice-involved youth in Kentucky.

Figure 5 shows where community-based programs for justice-involved youth are located in Kentucky. Specifically, the maps shows the locations of more than 2,000 programs. As expected, programs are densely distributed in metropolitan areas, with more than double the number of programs per square mile in Louisville-Jefferson and Lexington-Fayette metropolitan areas than in Eastern Kentucky/Cumberland Plateau and Western Kentucky.

**Figure 5.** Map of community-based program locations in Kentucky



For the more rural counties, the programs tend to be more centralized within the county, typically where the county seat is located. Table 5 shows the number of programs in each region in Kentucky as well as the program density. There are more programs located per square mile in urban areas than in rural regions.

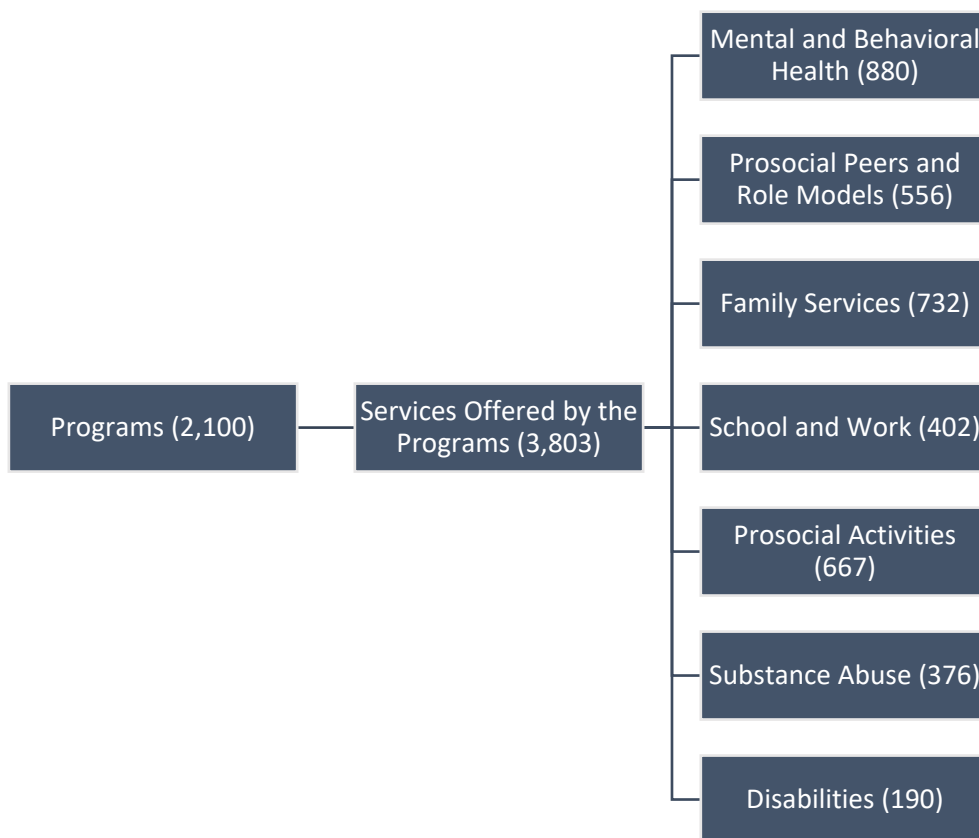
**Table 5.** Program density by region

Region	Area (square miles)	Number of programs	Program density <sup>19</sup>
<b>Urban Regions</b>			
Cincinnati metropolitan area	1,436.79	127	0.09
Lexington-Fayette metropolitan area	1,483.98	141	0.10
Louisville- Jefferson metropolitan area	2,242.82	307	0.14
<b>Rural Regions</b>			
Central Kentucky/ Caves and Rivers	10,771.50	509	0.05
Eastern Kentucky/ Cumberland Plateau	12,134.56	464	0.04
Western Kentucky	12,335.68	552	0.04
<b>Total</b>		<b>2,100</b>	

<sup>19</sup> Program density is defined as the number of services per square mile and calculated by dividing the number of services by the region’s area.

Next, we examined the different types of services that these programs offer. Programs offer more than one type of service, and overall, more than 3,800 community-based services that address youth needs were identified across the six regions in Kentucky. Figure 6 summarizes the number of the different types of services offered by the programs. Forty two percent (n = 880) of the programs offer mental and behavioral health services and approximately one-third offer family services (35%, n = 732) and prosocial activities (32%, n = 667). About one-quarter of the programs offer services related to prosocial peers and roles models (26%, n = 402) and less than 20% of the programs offer services related to school and work (19%, n = 402) and substance abuse (18%, n = 376). Only nine percent (n = 190) of the programs offer services related to disabilities.

**Figure 6.** Number of community-based programs and the types of services programs offer



Notably, there are variations in the number of services offered by the programs within regions. For example, Table 6 shows the number and different types of services in urban regions. There are more services offered in the Louisville-Jefferson area relative to the other metropolitan areas—54% of services in these urban regions are offered by programs in Louisville-Jefferson compared to 24% and 22% of services offered by programs in Cincinnati and Lexington-Fayette areas, respectively. This is expected since there are more programs located per square mile in the Louisville-Jefferson area compared to the Cincinnati and Lexington-Fayette areas.



**Table 6.** Number and proportion of services in urban regions

Region	Mental and Behavioral Health	Prosocial peers and role models	Family Services	School and Work	Prosocial Activities	Substance Abuse	Disabilities	Total
Cincinnati metropolitan area	62	42	64	29	46	36	6	285
	25%	19%	27%	30%	19%	32%	17%	24%
Lexington-Fayette metropolitan area	76	35	49	15	48	34	9	266
	31%	16%	21%	16%	20%	30%	25%	22%
Louisville-Jefferson metropolitan	107	141	124	52	149	42	21	636
	44%	65%	52%	54%	61%	38%	58%	54%
<b>Total</b>	<b>245</b>	<b>218</b>	<b>237</b>	<b>96</b>	<b>243</b>	<b>112</b>	<b>36</b>	<b>1187</b>

Also of note, programs in Cincinnati and Lexington-Fayette areas offer fewer services (e.g., prosocial peers and role models, prosocial activities) compared to programs located in rural regions. As shown in Table 7, overall, there is less variation in the number of services offered by programs located in rural regions.

**Table 7.** Number and proportion of services in rural regions

Region	Mental and Behavioral Health	Prosocial peers and role models	Family Services	School and Work	Prosocial Activities	Substance Abuse	Disabilities	Total
Central Kentucky/Caves and Rivers	213	79	169	105	105	82	72	825
	34%	23%	34%	34%	25%	31%	47%	32%
Eastern Kentucky/Cumberland Plateau	205	105	167	105	132	103	37	854
	32%	31%	34%	34%	31%	39%	24%	33%
Western Kentucky	217	154	159	96	187	79	45	937
	34%	46%	32%	31%	44%	30%	29%	36%
<b>Total</b>	<b>635</b>	<b>338</b>	<b>495</b>	<b>306</b>	<b>424</b>	<b>264</b>	<b>154</b>	<b>2616</b>

## Research Question 2: To what extent are community-based services available and accessible to justice-involved youth?

To address this research question, first, we examined the availability of community-based services relative to where youth reside. Next, we examined whether availability and access to services vary by youth’s race and ethnicity. Lastly, we examined whether availability and access to services vary by youth’s level of need.

### Access to Services: Drive-time

Findings from Westat’s Implementation Evaluation of SB 200 indicated that access to transportation was a major barrier to participating in services. For this reason, drive-time was used as a measure to better understand the availability of services to justice-involved youth in Kentucky. Drive-time from the service provider was calculated at 30-minute and 15-minute intervals. Table 8 shows the percentage of any given region that is within a 30-minute drive-time of different types of service providers.

**Table 8.** Percentage of the region that is in a 30-minute drive-time to a service

Region	Mental and Behavioral Health	Prosocial Peers and Role Models	Family	School and Work	Prosocial Activities	Substance Use	Disabilities
<b>Urban Regions</b>							
Cincinnati metropolitan area Rivers	97%	89%	90%	74%	89%	87%	42%
Lexington-Fayette metropolitan area	97%	90%	81%	90%	97%	93%	74%
Louisville-Jefferson metropolitan area	84%	81%	82%	82%	89%	74%	62%
<b>Rural Regions</b>							
Central Kentucky/Caves and Rivers	88%	66%	83%	76%	74%	68%	52%
Eastern Kentucky/Cumberland Plateau	76%	61%	69%	65%	65%	61%	34%
Western Kentucky	81%	83%	79%	74%	85%	62%	40%

Overall, the results demonstrate that services are within a 30-minute drive-time for the majority of each region. For example, mental and behavioral health services are within a 30-minute drive in at least 76% of any region (range: 76% to 97%). Eastern Kentucky, however, does have the greatest gaps in services. For instance, only 61% to 76% of Eastern Kentucky is within a 30-minute drive to services that address mental and behavioral health, prosocial peers and role models, family, school and work, prosocial activities, and substance use needs. This number drops substantially when services addressing disabilities are considered. Specifically, services targeting disability needs were available to only one-third (34%) of the region. We note, however, that this finding may be a reflection of how services are identified in the resource guides. Thus, it is possible that disability services are underreported. On the other hand, we also note that several stakeholders have shared the need for additional community-based resources particularly for youth with special needs.<sup>20</sup>

The picture of service availability changes drastically once we shift to a more conservative estimate of drive-time, that is, a 15-minute drive. We considered a 15-minute drive-time to services for two reasons—(1) a vast majority of areas did not have access to public transportation and (2) most families were said to either share a single vehicle or not have access to a vehicle at all.<sup>21</sup> In such circumstances, even a 15-minute drive would be prohibitive especially if youth are expected to attend services several times each week. Nearly all services were available to less than half of each region when limited to a 15-minute drive-time (see Table 9). Indeed, in Western Kentucky, substance abuse services were deemed accessible to less than 20% of the region. Even in the urban areas, no service was available within a 15-minute drive-time to more than 55% of the area.

**Table 9.** Percentage of region within a 15-minute drive-time to a service

Region	Mental and Behavioral Health	Prosocial Peers and Role Models	Family	School and Work	Prosocial Activities	Substance Use	Disabilities
<b>Urban Regions</b>							
Cincinnati metropolitan area	47%	49%	54%	38%	47%	40%	15%
Lexington-Fayette metropolitan area	54%	43%	36%	41%	54%	46%	31%
Louisville-Jefferson metropolitan area	42%	41%	41%	40%	51%	29%	26%

<sup>20</sup> Kentucky Juvenile Justice Reform Evaluation Data Collection Planning Meeting, January 11, 2018.

<sup>21</sup> The 2017 American Community Survey estimated that 3% of the population in Kentucky has no vehicle available as a means of transportation to work and 42% of the population in Kentucky did not have access to public transportation for commuting to work. See

[https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\\_17\\_5YR\\_B08141&prodType=table](https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B08141&prodType=table)

Region	Mental and Behavioral Health	Prosocial Peers and Role Models	Family	School and Work	Prosocial Activities	Substance Use	Disabilities
<b>Rural Regions</b>							
Central Kentucky/ Caves and Rivers	35%	20%	32%	26%	24%	24%	15%
Eastern Kentucky/ Cumberland Plateau	29%	22%	26%	23%	24%	21%	11%
Western Kentucky	28%	34%	31%	25%	35%	19%	11%

Notably, however, there is also some variation by county within a region. These variations are more evident when looking at 30-minute drive-time to services compared to 15-minute drive-time, as well as when comparing counties within urban versus those located in rural regions. For example, as shown Appendix A, most counties in urban regions, with exception of a few, are within a 30-minute drive to a service provider. Specifically, most counties in urban regions have above 80% in service coverage. On the other hand, counties located in rural regions display more variations in service coverage with a mix of counties within a region showing above 80% coverage and counties with limited service coverage (e.g., below 60%). Appendix B shows service coverage within a 15-minute drive to a service provider. For the most part, coverage drops to below 50% regardless of regions and counties within regions.

Figure 7 and Figure 8 show the average drive-time by zip code to the top two service categories—mental and behavioral health and family services and Figure 9 shows the average drive-time by zip code to services addressing disability needs. The lighter shades of blue indicate a shorter drive-time to the service location, whereas, the darker shades of blue indicate a longer drive-time to the service location.

Figure 7. Drive-time to Mental and Behavioral Health Services

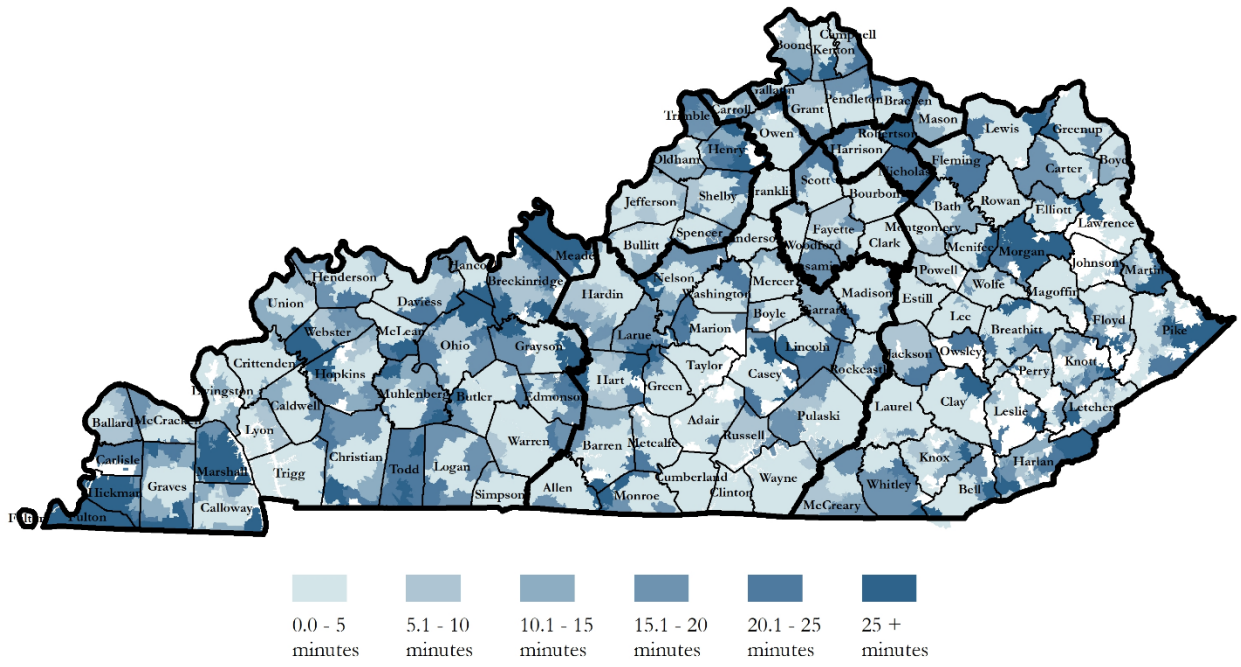
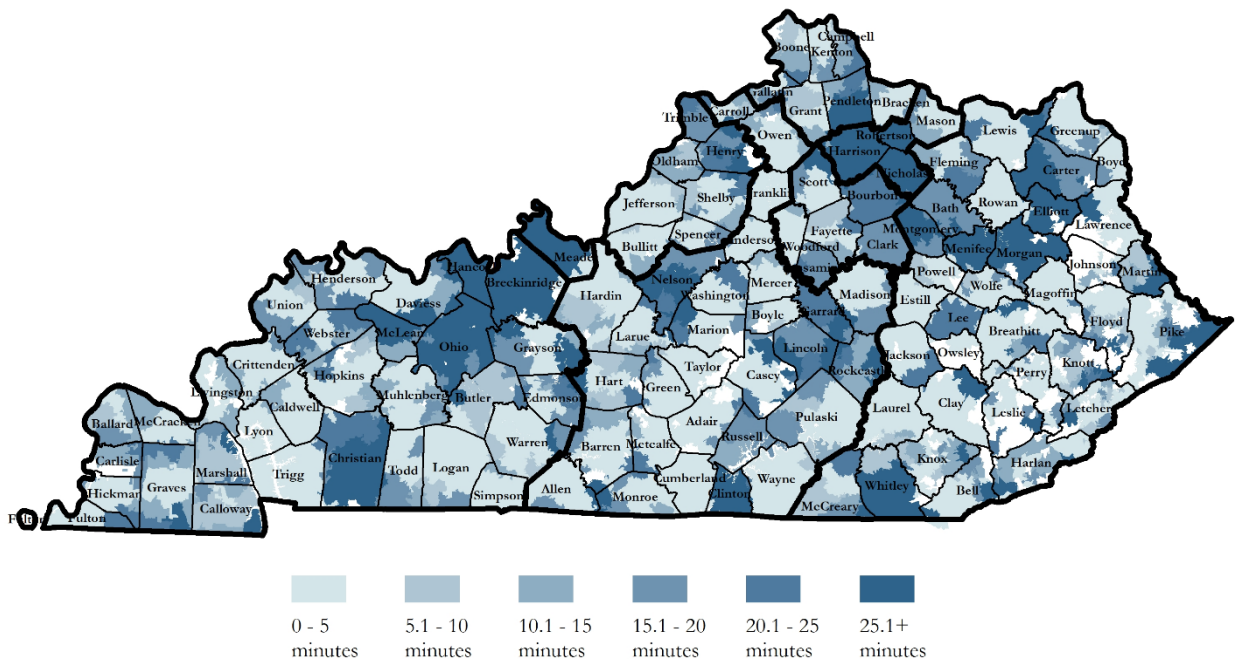
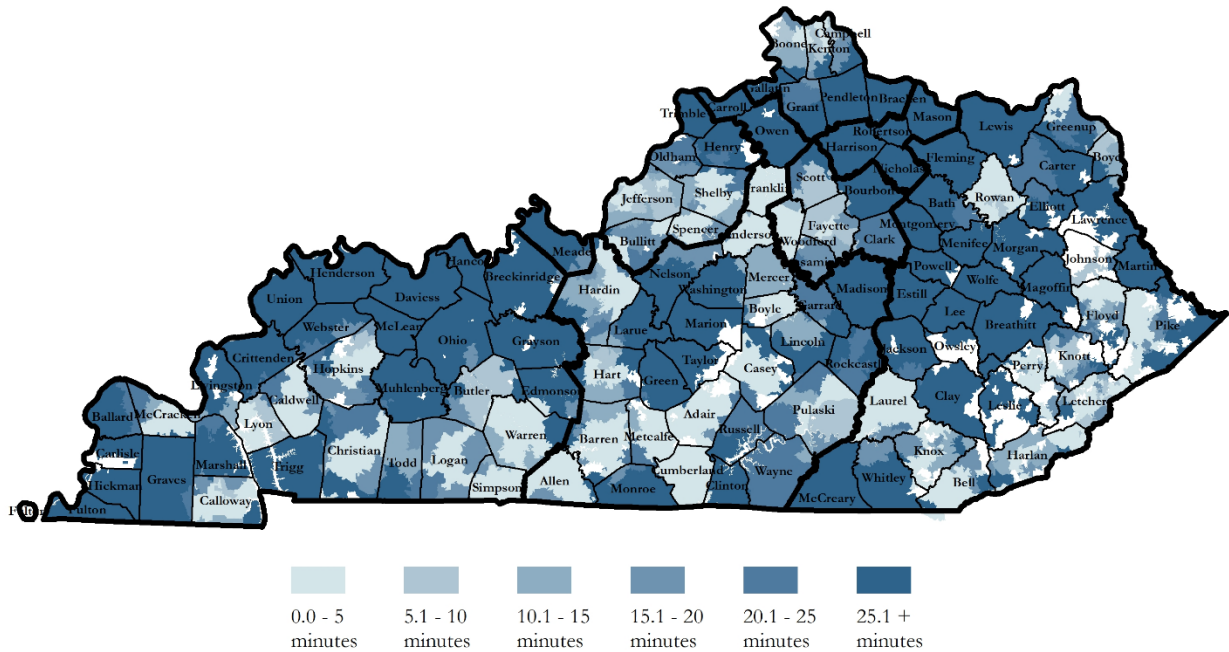


Figure 8. Drive-time to Family Services



**Figure 9.** Drive-time to Disabilities Services



### Access to Services by Youth’s Race/Ethnicity

The racial breakdown of justice-involved youth is not consistent with the general population of Kentucky (see Table 10). For example, although 13% of Kentucky’s population is non-White, almost one-third (32%) make up the population of justice-involved youth in Kentucky.<sup>22</sup> These data suggest that racial and ethnic disparities may exist in Kentucky such that non-White youth are represented at higher levels in the justice system than in the general population across all six regions in Kentucky.<sup>23</sup> That said, non-White youth are not evenly distributed across the state. As also shown in Table 10, the large majority of contact with non-White youth are in the two largest urban areas, Louisville-Jefferson and Lexington-Fayette, where non-White youth are represented at almost three times their population statewide. These two areas are also more racially diverse than the rest of the state.

<sup>22</sup> Our analysis was limited to comparing White youth with non-White youth, including those whose race/ethnicity was unknown, because of the small proportion of youth of other race/ethnicity.

<sup>23</sup> Racial and ethnic disparities in the juvenile justice system has been previously recorded by Kentucky officials. State actors have taken steps to begin addressing the issue. Some of these programs and policies were discussed in Westat’s Implementation Evaluation of SB 200.

**Table 10.** Racial composition of the general population and justice-involved youth in Kentucky<sup>24</sup>

Region	Kentucky Population		Justice-Involved Youth in Kentucky	
	Non-White	White	Non-White	White
	n = 4,424,376		n = 10,589	
Kentucky	13%	87%	32%	68%
<b>Urban Areas</b>				
Cincinnati metropolitan area	8%	92%	24%	76%
Lexington-Fayette metropolitan area	19%	81%	50%	50%
Louisville- Jefferson metropolitan area	22%	78%	57%	43%
<b>Rural Areas</b>				
Central Kentucky/ Caves and Rivers	9%	91%	20%	80%
Eastern Kentucky/ Cumberland Plateau	3%	97%	10%	90%
Western Kentucky	11%	89%	31%	69%

Although, non-White youth are generally represented in higher numbers than White youth in the juvenile justice system, the drive-time analysis did not indicate that non-White youth had less access to services compared to White youth. Overall, non-White youth appeared to have shorter drive-times to services than White youth (see Table 11). This finding was not expected but may be explained by non-White and minority populations living in more densely populated areas where services are located.

<sup>24</sup> Kentucky population characteristics are based on the 2017 American Community Survey 5 year estimates <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

**Table 11.** Drive-time in minutes to services by region and race

Region	Mental and Behavioral Health		Prosocial Peers and Role Models		Family		School and Work		Prosocial Activities		Substance Use		Disabilities	
	Non-White	White	Non-White	White	Non-White	White	Non-White	White	Non-White	White	Non-White	White	Non-White	White
Kentucky	3.8	6.8	6.1	10.9	5.2	9.0	6.1	10.9	4.4	8.9	5.5	11.1	12.4	21.8
<b>Urban Regions</b>														
Cincinnati metropolitan area	2.7	5.5	3.6	8.7	3.1	7.0	3.6	8.7	3.0	7.6	3.2	6.4	6.2	14.6
Lexington-Fayette metropolitan area	4.2	5.9	6.3	8.9	5.2	9.2	6.3	8.9	4.2	6.3	5.0	8.1	7.6	11.6
Louisville-Jefferson metropolitan area	3.2	6.4	4.0	8.9	2.3	6.0	4.0	8.9	2.0	5.2	4.2	10.6	6.6	13.5
<b>Rural Regions</b>														
Central Kentucky/Caves and Rivers	2.9	5.5	7.8	10.3	5.2	9.3	7.8	10.3	10.4	11.8	8.5	12.5	17.4	20.8
Eastern Kentucky/Cumberland Plateau	6.8	7.9	10.1	12.9	9.1	10.0	10.1	12.9	11.6	11.6	9.3	11.2	24.5	25.4
Western Kentucky	4.4	7.8	8.0	12.3	9.9	10.0	8.0	12.3	4.0	7.5	6.4	13.0	22.4	30.6



## Access to Services by Youth’s Level of Needs

As part of case management needs assessment, CDWs administer the Global Appraisal of Individual Needs—Short Screener (GAIN-SS) to youth who received referrals. The GAIN-SS is a 20-item screening tool that helps identify high needs youth based on the following four domains—internalizing disorders, externalizing disorders, substance disorders, and crime/violence.<sup>25-26</sup> A total domain score can range from 0 to 5 and youth are identified as having low, moderate, or high needs based on these scores. A total GAIN-SS score is calculated by taking the sum of the individual total score of the four domains. If a youth scores nine<sup>27</sup> or higher on the GAIN-SS total score, the youth is then referred to the CDS and a more in-depth GAIN-Q3 is administered to determine the high needs criteria. However, youth may receive referrals for services regardless of their needs score. Table 12 below summarizes the proportion of youth in FY 2017-2018 who were identified as having low, moderate, and high needs in GAIN-SS subscreeners. Sixteen percent of youth scored nine and above in total GAIN-SS.

### GAIN-SS Domain Scoring

**Low (0):** Unlikely to have a diagnosis or need services

**Moderate (1 to 2):** A possible diagnosis; the youth is likely to benefit from a brief assessment and outpatient intervention

**High (3+):** High probabilities of a diagnosis; the client is likely to need more formal assessment and intervention, either directly or through referral

**Table 12.** Proportion of youth identified with low, moderate, and high needs (n = 10,589)

Subscreener	Needs Categories		
	Low	Moderate	High
Substance Disorders	77%	15%	8%
Internalizing Disorders	37%	30%	33%
Externalizing Disorders	30%	34%	36%
Crime/Violence	55%	41%	4%

<sup>25</sup> Dennis, M., Feeney, T., Stevens, L., & Bedoya, L. (2007). Global Appraisal of Individual Needs– Short Screener (GAIN-SS): Administration and scoring manual version 2.0. See

[https://www.assessments.com/assessments\\_documentation/gain\\_ss/GAIN-SS%20Manual.pdf](https://www.assessments.com/assessments_documentation/gain_ss/GAIN-SS%20Manual.pdf)

<sup>26</sup>The four domains describe endorsement of problems that may relate to (1) somatic complaints, depression, anxiety, trauma, and suicide (*internalizing disorders*); (2) attention deficits, hyperactivity, impulsivity, conduct problems, and, in rarer cases, impulse control disorders (*externalizing disorders*); (3) substance abuse, dependence, and substance use disorder treatment (*substance disorders*); and (4) interpersonal violence, drug-related crimes, and property crimes (*crime/violence*).

<sup>27</sup> GAIN SS was recently updated to version 3.0.1. This updated version launched on February 2, 2019 and the GAIN-SS score for a high needs referral was increased from 9 to 11. The updated GAIN-SS included two additional questions-- IDScr 1 (f) seeing or hearing things that no one else could see or hear or feeling that someone else could read or control your thoughts and EDScr 2 (g) tried to win back your gambling losses by going back another day.

Of the four GAIN-SS subscreeners, only the substance disorders subscreener aligns closely with our service risk and needs categories.<sup>28</sup> Thus, for this analysis, we focus on programs that specifically address substance use.

Youth experience an average drive-time of 9.3 minutes to a substance abuse treatment center. Figure 10 shows that the average drive that youth experience by their risk category is relatively consistent with the median drive-time (represented by the yellow dots in the figure) ranging from 8.1 minutes to 9.6 minutes. Even though most of the youth have a drive-time of less than 20 minutes, some youth have to travel much farther. For example, youth in the lowest risk category have the longest drive-time, with the maximum drive-time of 97.4 minutes. Indeed, in each risk category, maximum drive-times were well over the 30-minute radius used in this analysis.

**Figure 10.** Drive-time to Substance Use Services by youth’s level of needs

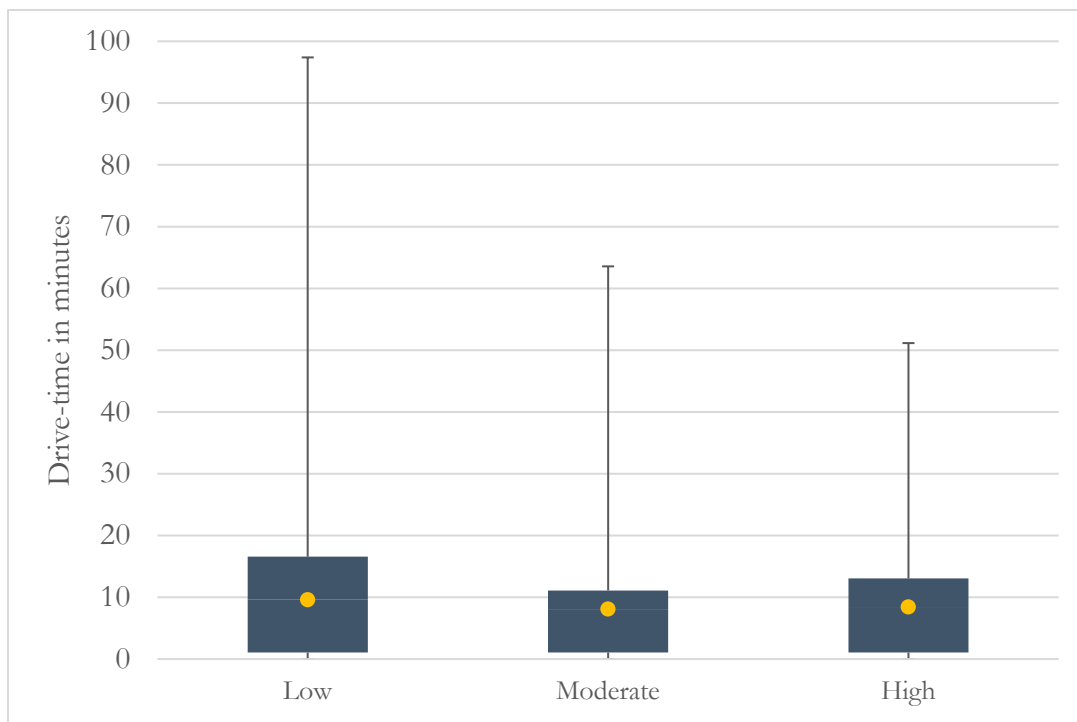
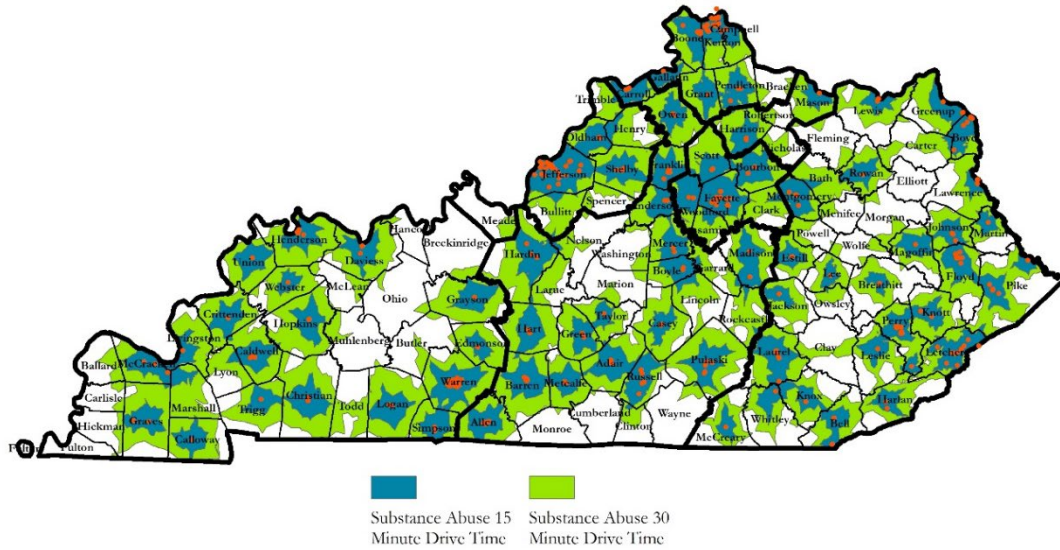


Figure 11 below illustrates where substance abuse services are located in Kentucky and the area within a 30- or 15-minute drive-time. White areas on the map indicate gaps in services or service deserts. As services are largely clustered in larger towns or around metropolitan areas, the largest service deserts are concentrated in more rural areas of the state. Communities at the border of the state may have closer access to services in a neighboring state, but it is unclear what other barriers may exist and if services do exist in these places.

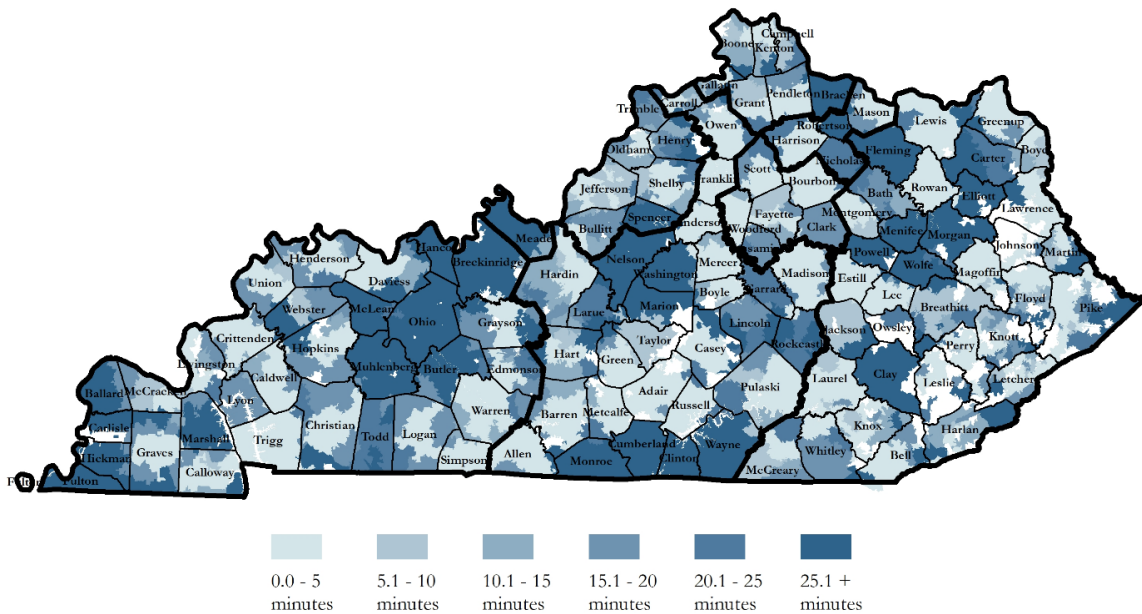
<sup>28</sup> Westat used the GAIN-Q3 to create the risk and needs categories identified in this study. For example, among the GAIN-Q3 domains include school problems, work problems, physical health, mental health, and substance use. However, the CDWCMS does not track GAIN-Q3 scores, which are available only through manual review of case notes.

**Figure 11.** Thirty- and 15-minute drive-time to Substance Use Services



Although there are larger areas without available services across the rural regions of the state, some of the most noticeable gaps exist at the edge of the metropolitan regions. For example, as shown in Figure 12 below, the longest drive-time to substance abuse services was for individuals in Meade County, part of the Louisville-Jefferson metropolitan area.

**Figure 12.** Drive-time to Substance Abuse Services



## Discussion

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SB 200 represents a major shift in juvenile justice policy and practice in Kentucky by enhancing services for youth through the pre-court diversion process and the establishment of the FAIR teams, collaboration across juvenile justice and other youth-serving agencies on case management services, and creating data sharing agreements between juvenile justice agencies. Central to SB 200 is the use of community-based services to facilitate early intervention, hold youth accountable, maintain public safety, and achieve better outcomes for youth and their families. In this study, we conducted an assessment of the available community-based services for youth referred to the justice system in Kentucky and identified gaps in services areas and potential disparities in access to different types of services. Below, we summarize key findings, identify strengths and limitations, and provide recommendations for research and practice.

### Summary of Key Findings

#### *1. What type of community-based services are available to justice-involved youth?*

**More than 2,000 program locations that offer services to justice-involved youth were identified.** As expected, programs are denser in metropolitan areas, with more than double the number of programs per square mile in Louisville-Jefferson and Lexington-Fayette metropolitan areas than in Eastern Kentucky/ Cumberland Plateau and Western Kentucky.

Notably, some program locations offer more than one type of service. Using information provided in the community-based resource guides, we identified seven types of services that aim to address risks and/or needs of justice-involved youth. These services are mental and behavioral health, prosocial peers and role models, family, school and work, prosocial activities, substance abuse, and disabilities. **Overall, more than 3,800 community-based services that address youth needs were identified across the six regions in Kentucky.** Forty two percent (n = 880) of the programs offer mental and behavioral health services and approximately one-third offer family services (35%, n = 732) and prosocial activities (32%, n = 667). About one-quarter of the programs offer services related to prosocial peers and roles models (26%, n = 402) and less than 20% of the programs offer services related to school and work (19%, n = 402) and substance abuse (18%, n = 376). Only nine percent (n = 190) of the programs offer services related to disabilities.

#### *2. To what extent do justice-involved youth have access to community-based services?*

**Most services, with the exception of those targeting disability needs, are within a 30-minute drive for the majority of youth within each region.** For example, services are within a 30-minute drive in at least 74% of urban regions (range: 74-97%) and in at least 61% of rural regions (range: 61-89%). **However, when the drive-time was reduced to 15-minutes, accessibility to services was substantially diminished.** Specifically, services are within a 15-minute drive in 54%, at most, of urban regions (range: 24-54%) and in 35%, at most, of rural regions (range: 19-35%). Disability services are within a 30-minute drive in 74%, at most, of urban regions (range: 42-74%) and in 52%,

at most, of rural regions (range: 34-52%). Accessibility to disability services also dropped substantially when a 15-minute drive-time was considered with services accessible only in 11-31% of the regions.

Notably, however, **there is also some variation by county within a region**. For example, most counties in urban regions, with exception of a few, are within a 30-minute drive to a service provider. Specifically, most counties in urban regions have above 80% in service coverage. On the other hand, counties located in rural regions display more variations in service coverage with a mix of counties within a region showing above 80% coverage and counties with limited service coverage (e.g., below 60%). For the most part, coverage drops to below 50% regardless of regions and counties within regions when a 15-minute drive to a service provider is considered.

### *2a. Does access to services vary by youth race/ethnicity?*

Although the analysis did show that non-White youth were represented in the justice system at a higher proportion than in the general population, suggesting that racial and ethnic disparities may exist, access to services did not vary by race or ethnicity. That is, the **drive-time analysis did not indicate that non-White youth had less access to services compared to White youth**. Race, however, was found to be an important aspect of accessibility in terms of locale as the majority of non-White youth live in the two metropolitan regions of Lexington-Fayette and Louisville-Jefferson, which both have the greatest service density.

### *2a. Does access vary by youth's level of needs?<sup>29</sup>*

**Accessibility to substance abuse services did not significantly differ by the level of youth's needs; however, notable gaps in substance abuse services exist across Kentucky.** The average drive-time to substance abuse services by youth's level of needs ranged from 8.1 to 9.6 minutes. Substance abuse services gaps are located in rural regions. However, we did find one of the longest drive-times on the boundary of Louisville-Jefferson metropolitan area.

## **Strengths, Limitations, and Future Research Directions**

Reliance on community-based programs to support positive youth development and curtail offending has received a lot of attention from policymakers and juvenile justice practitioners alike. Yet, little research exists on understanding the availability and access to community-based resources for justice-involved youth. Lack of sufficient data on services, at both the youth- and program-level, may contribute to this gap in research. In this study, we addressed this critical gap by gathering information on community-based services for youth in Kentucky.

We note the following strengths of this study. First, we collected and reviewed 120 community-based resource guides that contain a list of various programs and services from various localities in Kentucky. **To consolidate these resources in a uniform format, we created an Excel database** that contains select key information from the resource guides. Next, **Westat developed a process to recode program types into a standard set of categories** that also aligns with AOC and DJJ's risk and needs

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<sup>29</sup> Access to substance abuse services was analyzed specifically as it was the only risk/need category that aligns well with a service category.

assessment domains, the criminogenic needs literature, and elements of positive youth development. **To ensure that we collected an accurate and complete list of resources as possible, we built into our process quality control procedures, including a feedback loop between Westat and Kentucky stakeholders** to review the list of services and clarify key definitions such as program eligibility and risk and need categories. Using the final list of community-based programs, **we used GIS to conduct a spatial analysis to understand the geographic variations of service availability throughout the State.** The geospatial analysis provides a better understanding on where service deserts are located. It also informs providers of where needs are already being met and where new program offices need to be located in order to provide better access to services.

There are several limitations to keep in mind, however, when interpreting the study findings. First, **the list of community-based services that we received from agencies was last updated between 2017 and 2018.** It is possible that new programs have opened since then and some of the programs in the list have closed or moved locations. This limitation is tempered, however, by having stakeholders (e.g., CDSs and CDWs; RIAC members) review the list of services for accuracy and comprehensiveness prior to finalizing the data file for analysis.

Second, **our analyses were limited by the availability of administrative data.** For example, youth-level service data were not available, and thus, we were not able to explore the availability of and accessibility to *specific services* that youth may be referred to. Such approach would provide a more accurate picture of the types of services that youth receive as well as youth's access to those services. Youth-level service data would also allow for a closer examination of whether the youth's level of risk and needs matches with the services that they receive, and if there is sufficient availability for types of services that are most commonly needed by youth. For example, in the Implementation Evaluation, FAIR Team members expressed frustration that many service agencies would not accept youth with violent crimes or felonies leaving few, if any, options for those youth. Further, data on GAIN-Q3, a more comprehensive version of risk and needs assessment administered to youth, are not tracked in CDWCMS. Thus, we were not able to match all of the service type categories with the risk and needs categories and examine service access by needs beyond substance abuse.

Lastly, **our analyses focused on potential disparities that may exist *only* in availability and accessibility to services.** Utilization of and engagement with services are two other key areas that require further assessment to fully understand gaps in provision of community-based services to justice-involved youth. For example, although race and ethnicity may not be a significant factor in access to services as measured by drive-time, research suggests,<sup>30-31</sup> however, that service utilization among underrepresented group of youth and families is well documented. In addition, we are limited to drive-time as a measure of accessibility. Other barriers including whether the service agencies are also providing services to adults (which creates additional demand for a single service provider), whether the amount of services is sufficient to serve the number of youth in the system, or if programs

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<sup>30</sup> Garcia, A., Aisenberg, E., & Harachi, T. (2012). Pathways to service inequalities among Latinos in the child welfare system. *Children and Youth Services Review, 34*, 1060–1071.

<sup>31</sup> Garland, A. F., & Besinger, B. A. (1997). Racial/ethnic differences in court referred pathways to mental health services for children in foster care. *Children and Youth Services Review, 19*, 651–666.

serve all justice-involved youth, may also present significant barriers to accessibility. Indeed, interviews with CDWs and CDSs indicated that services were generally insufficient due to any of the above factors.

Although we note these limitations, **these findings provide critical groundwork for informing future efforts that can help improve community-based services for justice-involved youth.**

## Recommendations for Kentucky

We focus our recommendations on two key areas that will help support and enhance efforts related to increasing the availability and access to community-based services for justice-involved youth in Kentucky. First, we highlight the importance of **data-driven decision-making** by providing recommendations on collecting and managing data on services. Building upon our first set of recommendations, we then provide **practice recommendations** to increase availability and access to services, as well as assess the quality of services provided to youth.

### I. Collecting Data on Services and Programs to Support Juvenile Justice Reform

Data collection, monitoring, and management are an important part of implementing and sustaining juvenile justice reform efforts. Many juvenile justice agencies nationwide have increased data collection to support policies and practices for promoting public safety, accountability, and improved outcomes for youth. For example, data collection efforts have often focused on recidivism data to measure the impact of reform efforts on youth outcomes. **Enhancing data related to programs and services for justice-involved youth has received less attention, however.** As outlined below, data on programs and services can help support juvenile justice reforms in a variety of ways.

Collecting data about service providers and the programs they offer can help agencies:

- Identify areas with sufficient programs and services and identify service deserts in coverage
- Efficiently allocate resources
- Coordinate program/service provision across systems
- Create case plans to match youth's risk and needs with appropriate programs and services
- Plan and develop training programs for staff
- Create quality assurance measures for programs/services

Collecting data about the services that individual youth receive can help agencies:

- Manage individual youth case plans to track services needed vs. services received
- Produce a snapshot of an individual youth's entire service history
- Identify potential issues with service delivery, such as referral to services that are never used
- Examine patterns of data to assess the impact of specific services on youth outcomes
- Examine patterns of data to assess the extent to which different youth populations have access to appropriate services, and identify potential disparities in service delivery
- Prepare case reports for judges, district attorneys, and other decision-makers

### *Collecting Service Data to Inform Policy and Practice*

Since implementation of SB 200, DJJ and AOC have made and continue to implement changes in their data management systems to improve usability of data and create efficiencies. The way information is collected and stored determines how it can be used. DJJ and AOC have identified areas of improvement for collection, storage, and management of data that would greatly increase their capacity to use data for planning and case management purposes. We recommend the following to enhance existing data management systems:

- Incorporate service information into case management systems where possible
- Track both service provider information and services each youth has received
- Use unique service provider and youth IDs to link data within and between systems
- Create data fields rather than text fields where possible to improve reporting capabilities

### *Suggested Data Elements*

Similar to the way data is collected, the type of data also impacts how this information can be used. Certain data elements are necessary to understand what services are available, how they are being provided, and their impact on youth outcomes. Although exact data elements will vary by agency, we suggest collecting the general types of information listed below. We also suggest that DJJ, AOC, and other agencies who serve similar youth populations collaborate on their data collection efforts. If multiple agencies collect the same information in the same way, their ability to understand service provision across systems and jurisdictions can be greatly improved.

- Program/Service-Level Data
  - Program characteristics (e.g., address, dates of operation, capacity, eligibility requirements)
  - Type of services provided
  - Method of service delivery
  - Standard length of treatment period (e.g., 6 weeks, 1 month, 90 days)
  - Standard number of sessions during treatment period
- Youth-Level Data
  - Type of services provided
  - Method of service delivery
  - Length of treatment (intake date, start date, discharge date)
  - Dosage of treatment (frequency of treatment, length of session)
  - Attendance (number of sessions attended)
  - Outcome of participation in service (completion, partial completion, failure to complete)

### *Addressing Challenges for Collecting and Using Data*

Collecting and using data can be challenging. However, there are ways to make the process easier and more efficient. An agency's ability to collect and store data depends on staff time and resources, so jurisdictions will vary in the amount and type of information they collect. However, some data is better than no data—starting small and building can be a good approach for increasing an agency's capacity



to collect and use service data. Below we list some important considerations to help support this process.

- Conduct staff trainings on how to efficiently and accurately use data entry tools
- Support data collection policies and practices with manuals and data codebooks
- Conduct quality assurance checks early on (when new data elements are collected or data entry tools are set up) and on a regular basis to assess and address missing or inaccurate data
- Create a set of standard reports so data is easily used for management and case planning
- Gather feedback from staff who use data entry and reporting tools to improve their usability and usefulness
- Coordinate with other agencies to share information about service provision to overlapping populations of youth
- Create a Memorandum of Understanding (or Information Sharing Agreement) to share service data with other agencies

## II. Enhancing Availability and Access to Community-Based Services for Justice-Involved Youth

Increasing availability and access to community-based services was a key recommendation of the Implementation Evaluation report. The previous recommendations continue to be supported by the current report as well and we highlight those recommendations here.

1. **Assess the feasibility of increasing access to telehealth, in-home, and school-based services.** These services provide the opportunity to improve access to services for youth and families who face challenges with transportation and can fill gaps in communities that face challenges in maintaining sufficient services in their area.
2. **Assess the extent to which SB 200 reforms have resulted in increased funding for community-based services.** A stated goal of SB 200 was to realize cost savings from reduced youth commitments and reinvest savings into community-based services. However, the extent to which this goal has been achieved is unclear. Ongoing evaluation of funds to support reform efforts is critical to ensuring that sufficient supports exist to achieve and sustain SB 200 goals.
3. **Assess the feasibility of providing grant writing support** particularly to rural and small communities to assist them with identifying and applying for funding opportunities in order to increase availability of services. Identifying strategies that will help address the challenges faced by rural and small communities will foster adoption of SB 200 reform efforts and ensure that all communities experience the potential benefits of the reforms.

In addition to those recommendations from the Implementation Evaluation Report, the current report highlights a few additional recommendations.

4. **Enhance supports provided to FAIR teams to improve engagement and collaboration among members.** Under SB 200, the FAIR teams serve as the primary vehicle for

connecting youth with community-based services. As a multidisciplinary team, members have the opportunity to learn from each other about potential services available to youth. Indeed, findings from the Implementation Evaluation suggest that use of FAIR teams improved communication and knowledge about services available in the community, making the referral process easier and the delivery of care quicker. Enhanced supports, including trainings and implementation of quality control procedures, are critical to ensure meaningful engagement and collaboration among FAIR team members.

5. **Assess the delivery and quality of services provided** to youth in addition to access and availability. Although understanding what services are available and whether services are accessible is critical, it does not verify whether the programs and services are efficacious in promoting positive youth behavior. Additionally, differences in program quality could affect future evaluations of SB 200. A quality assessment of services provides critical information to agencies working with the youth as well as for agencies responsible for reinvesting fiscal resources in the community.
6. **Assess the effectiveness of the Juvenile Justice Fiscal Incentive Program in supporting the goals of SB 200.** Through the Juvenile Justice Fiscal Incentive Program, Kentucky is beginning to address some of the barriers associated with availability and access to community-based services. Through a competitive and expedited grant process, 19 judicial districts were awarded grants to support programs that improve outcomes for youth and families. This Fiscal Incentive Program also emphasizes building meaningful community partnerships across youth-serving agencies, organizations, and other local and private entities. Previous recommendations create necessary aspects of infrastructure that may be used to determine spending of justice reinvestment dollars. The combination of comprehensive data collection and analysis as well as uniform standards for evaluating effective programs can be used to create standards for the use of justice reinvestment dollars from SB 200.

# Appendices

## Appendix A – 30-minute Drive-Time

The color shading represents the percentage of the county that is within a 30-minute drive to one of the programs. Counties that are shaded green have more coverage than counties that are shaded in red.

0%                                      50%                                      100% coverage



Region	County	Mental and Behavioral Health	Prosocial Peers and Role Models	Family	School and Work	Prosocial Activities	Substance Use
<b>Urban Regions</b>							
Cincinnati metropolitan area	Boone	95.0%	99.5%	99.7%	96.0%	99.5%	94.9%
	Bracken	99.2%	98.2%	98.2%	12.5%	98.5%	27.8%
	Campbell	99.0%	97.1%	97.1%	96.9%	97.1%	98.9%
	Gallatin	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Grant	100.0%	99.9%	100.0%	100.0%	98.5%	100.0%
	Kenton	98.9%	100.0%	100.0%	100.0%	100.0%	98.9%
	Pendleton	92.6%	49.6%	53.7%	35.9%	49.6%	91.3%
Lexington-Fayette metropolitan area	Bourbon	99.6%	67.1%	40.5%	63.9%	100.0%	99.5%
	Clark	97.8%	93.9%	73.8%	97.5%	97.9%	74.2%
	Fayette	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Jessamine	88.2%	86.2%	88.4%	83.8%	86.2%	85.9%
	Scott	94.7%	95.6%	95.6%	95.8%	95.6%	95.8%
	Woodford	99.3%	99.2%	98.7%	98.5%	98.7%	99.2%
Louisville- Jefferson metropolitan	Bullitt	97.5%	97.4%	97.6%	96.9%	97.4%	80.9%
	Henry	69.5%	51.6%	64.0%	68.8%	89.3%	70.1%
	Jefferson	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Meade	37.0%	49.4%	31.3%	12.2%	44.3%	17.9%
	Oldham	98.6%	97.9%	95.4%	97.2%	98.0%	97.0%
	Shelby	97.8%	97.5%	97.9%	97.3%	97.3%	97.9%
	Spencer	98.0%	94.0%	94.6%	97.4%	94.6%	36.4%
	Trimble	72.3%	44.6%	69.0%	100.0%	98.5%	71.9%

Region	County	Mental and Behavioral Health	Prosocial Peers and Role Models	Family	School and Work	Prosocial Activities	Substance Use
<b>Rural Regions</b>							
Central Kentucky / Caves and Rivers	Adair	94.6%	91.9%	95.2%	95.5%	91.9%	93.3%
	Allen	92.7%	93.1%	93.1%	92.1%	93.1%	92.7%
	Anderson	99.2%	96.2%	99.0%	69.4%	77.7%	97.9%
	Barren	95.1%	95.7%	95.7%	95.0%	95.7%	94.6%
	Boyle	96.9%	92.8%	96.9%	100.0%	94.8%	93.3%
	Carroll	100.0%	69.9%	100.0%	100.0%	91.0%	100.0%
	Casey	81.3%	76.6%	80.9%	84.7%	79.6%	79.2%
	Clinton	91.7%	88.8%	46.1%	85.9%	91.3%	32.1%
	Cumberland	89.9%	92.2%	91.0%	89.0%	92.7%	5.3%
	Franklin	98.6%	98.7%	99.1%	98.6%	98.7%	99.1%
	Garrard	80.0%	42.3%	63.5%	45.3%	62.9%	62.9%
	Green	95.4%	30.2%	99.1%	91.9%	46.0%	95.9%
	Hardin	90.5%	85.3%	98.2%	79.0%	82.9%	80.7%
	Harrison	99.4%	17.4%	23.8%	35.2%	39.2%	98.7%
	Hart	91.5%	91.2%	93.6%	89.6%	94.4%	89.4%
	Larue	74.0%	63.0%	91.0%	62.7%	99.3%	55.4%
	Lincoln	90.8%	57.8%	62.3%	55.3%	77.2%	58.8%
	Madison	84.4%	35.8%	85.0%	76.9%	80.6%	80.1%
	Marion	91.3%	8.7%	89.7%	85.7%	10.7%	20.2%
	Mason	99.7%	99.6%	99.9%	95.5%	100.0%	94.9%
	Mercer	99.2%	99.1%	100.0%	100.0%	100.0%	99.0%
	Metcalfe	98.4%	93.5%	94.1%	93.7%	93.7%	93.5%
	Monroe	83.4%	84.2%	82.5%	81.9%	84.3%	1.9%
	Nelson	92.8%	53.9%	88.0%	69.9%	68.2%	25.6%
	Nicholas	55.0%	18.7%	19.2%	0.9%	61.3%	41.9%
	Owen	94.4%	36.2%	96.5%	93.2%	28.9%	96.6%
	Pulaski	81.6%	76.7%	78.8%	58.9%	78.6%	78.9%
	Robertson	66.9%	39.0%	44.1%	3.5%	44.8%	33.5%
Rockcastle	98.5%	57.0%	88.7%	57.4%	98.6%	68.8%	
Russell	82.7%	50.4%	79.2%	75.0%	50.2%	83.1%	
Taylor	89.1%	10.5%	89.6%	84.1%	33.1%	73.8%	
Washington	90.4%	26.9%	94.3%	88.2%	21.9%	23.6%	
Wayne	54.1%	52.8%	46.4%	48.3%	53.9%	8.9%	

Region	County	Mental and Behavioral Health	Prosocial Peers and Role Models	Family	School and Work	Prosocial Activities	Substance Use
Eastern Kentucky/ Cumberland Plateau	Bath	96.5%	94.8%	86.5%	80.2%	95.6%	77.7%
	Bell	75.8%	75.5%	76.1%	80.6%	75.5%	75.8%
	Boyd	100.0%	100.0%	100.0%	96.0%	100.0%	100.0%
	Breathitt	62.1%	59.2%	66.5%	3.9%	61.5%	46.6%
	Carter	94.6%	54.1%	60.0%	92.5%	59.8%	44.3%
	Clay	63.8%	64.9%	63.9%	88.9%	63.8%	22.3%
	Elliott	86.6%	0.0%	1.8%	22.4%	7.3%	0.7%
	Estill	80.3%	39.0%	79.1%	4.4%	46.6%	77.1%
	Fleming	88.6%	90.8%	91.0%	23.8%	91.0%	20.2%
	Floyd	85.6%	51.4%	85.9%	84.5%	77.5%	81.5%
	Greenup	89.4%	83.9%	83.6%	88.1%	83.9%	81.5%
	Harlan	64.2%	72.8%	70.0%	65.5%	72.4%	62.1%
	Jackson	89.8%	92.3%	86.5%	94.5%	82.2%	72.5%
	Johnson	86.8%	82.9%	88.4%	89.6%	83.8%	86.7%
	Knott	82.6%	58.6%	82.8%	81.8%	60.4%	82.6%
	Knox	70.9%	71.4%	71.3%	71.2%	71.4%	68.3%
	Laurel	93.2%	91.4%	91.6%	89.1%	91.4%	91.7%
	Lawrence	62.2%	55.8%	56.9%	57.4%	55.8%	58.7%
	Lee	75.9%	84.1%	40.5%	0.0%	84.1%	72.4%
	Leslie	64.3%	64.8%	63.5%	77.0%	61.6%	61.7%
	Letcher	97.0%	99.6%	98.3%	96.8%	99.6%	96.7%
	Lewis	67.2%	66.4%	69.0%	60.4%	69.1%	60.0%
	Magoffin	79.2%	19.2%	80.0%	81.1%	25.7%	73.8%
	Martin	62.8%	60.1%	51.1%	61.8%	63.3%	60.5%
	McCreary	50.5%	5.1%	49.1%	48.2%	3.2%	48.4%
	Menifee	96.0%	30.4%	11.7%	20.9%	32.6%	20.5%
	Montgomery	100.0%	100.0%	63.5%	100.0%	100.0%	100.0%
	Morgan	45.8%	1.3%	24.8%	79.5%	3.5%	20.0%
	Owsley	46.7%	53.8%	73.4%	20.1%	76.5%	32.2%
	Perry	94.8%	98.4%	96.0%	83.3%	98.4%	83.3%
Pike	65.6%	43.5%	64.4%	57.8%	57.4%	60.7%	
Powell	96.3%	82.2%	95.0%	28.7%	96.5%	41.8%	
Rowan	91.8%	79.8%	92.9%	88.8%	93.2%	83.1%	
Whitley	50.7%	37.7%	32.9%	76.4%	39.4%	49.7%	
Wolfe	96.1%	19.1%	95.5%	24.8%	29.3%	27.2%	

Region	County	Mental and Behavioral Health	Prosocial Peers and Role Models	Family	School and Work	Prosocial Activities	Substance Use
Western Kentucky	Ballard	94.0%	90.9%	90.6%	89.3%	90.9%	24.4%
	Breckinridge	71.7%	6.7%	14.2%	0.0%	6.6%	8.6%
	Butler	79.3%	83.2%	80.9%	75.4%	81.3%	18.5%
	Caldwell	93.2%	93.6%	96.9%	94.3%	95.6%	94.0%
	Calloway	80.8%	83.9%	84.1%	79.4%	87.4%	77.5%
	Carlisle	57.8%	95.4%	86.9%	72.0%	95.4%	18.3%
	Christian	83.6%	91.5%	54.4%	78.7%	91.5%	76.2%
	Crittenden	90.8%	93.5%	92.2%	92.2%	94.0%	89.5%
	Daviess	95.0%	92.6%	83.8%	91.9%	92.1%	85.4%
	Edmonson	86.7%	93.5%	86.9%	92.4%	93.5%	86.6%
	Fulton	3.6%	78.4%	77.8%	36.0%	78.4%	0.9%
	Graves	83.1%	85.0%	86.4%	83.5%	85.2%	79.8%
	Grayson	86.3%	81.9%	82.8%	8.4%	81.9%	81.7%
	Hancock	81.2%	11.4%	8.6%	9.7%	8.5%	8.4%
	Henderson	90.4%	86.5%	90.1%	70.3%	89.8%	90.2%
	Hickman	29.3%	91.0%	90.7%	87.9%	91.0%	15.6%
	Hopkins	91.6%	99.1%	98.9%	96.0%	100.0%	87.0%
	Livingston	88.1%	80.4%	91.9%	91.8%	83.7%	83.3%
	Logan	89.8%	99.8%	99.1%	81.3%	99.8%	88.9%
	Lyon	78.6%	66.4%	77.7%	72.3%	67.1%	56.7%
	Marshall	85.9%	71.9%	93.3%	94.4%	94.6%	83.1%
	McCracken	96.9%	97.3%	97.0%	97.1%	97.5%	94.7%
	McLean	96.3%	96.2%	58.4%	99.6%	98.1%	28.5%
	Muhlenberg	87.1%	99.1%	99.1%	83.4%	99.1%	14.3%
	Ohio	68.2%	73.7%	37.1%	71.0%	73.6%	5.9%
	Simpson	98.5%	100.0%	99.0%	99.0%	100.0%	98.9%
Todd	45.2%	99.4%	99.5%	39.8%	99.4%	42.0%	
Trigg	70.0%	67.0%	66.2%	66.3%	81.3%	66.1%	
Union	86.4%	87.6%	86.1%	86.7%	87.4%	86.2%	
Warren	95.1%	94.8%	94.8%	94.7%	94.8%	92.6%	
Webster	83.9%	96.5%	94.6%	96.2%	96.5%	80.4%	

## Appendix B – 15-minute Drive-Time

The color shading represents the percentage of the county that is within a 30-minute drive to one of the programs. Counties that are shaded green have more coverage than counties that are shaded in red.

0% 50% 100% Coverage



Region	County	Mental and Behavioral Health	Prosocial Peers and Role Models	Family	School and Work	Prosocial Activities	Substance Use
<b>Urban Regions</b>							
Cincinnati metropolitan area	Boone	51.0%	66.2%	73.5%	56.2%	66.3%	50.9%
	Bracken	29.9%	45.8%	45.8%	0.0%	49.4%	0.0%
	Campbell	45.4%	43.3%	43.3%	42.6%	61.2%	45.1%
	Gallatin	61.9%	61.9%	62.0%	62.0%	61.9%	61.9%
	Grant	43.8%	48.3%	69.2%	45.3%	37.9%	36.5%
	Kenton	53.8%	98.8%	98.8%	84.9%	98.8%	49.5%
	Pendleton	49.9%	4.4%	6.5%	1.7%	4.4%	47.9%
Lexington-Fayette metropolitan area	Bourbon	55.8%	3.3%	2.9%	3.8%	53.6%	55.6%
	Clark	45.6%	45.8%	1.7%	43.3%	54.4%	6.6%
	Fayette	79.4%	74.4%	76.1%	67.7%	76.5%	77.3%
	Jessamine	23.5%	15.4%	17.5%	10.8%	15.4%	17.6%
	Scott	39.2%	49.4%	46.6%	55.7%	49.5%	39.9%
	Woodford	71.4%	70.3%	71.2%	62.2%	64.2%	69.6%
Louisville-Jefferson metropolitan area	Bullitt	54.3%	50.2%	56.3%	41.1%	19.0%	8.5%
	Henry	11.9%	10.9%	3.4%	5.4%	53.9%	13.0%
	Jefferson	89.3%	91.8%	93.0%	87.2%	91.8%	82.6%
	Meade	7.2%	12.4%	4.5%	0.0%	0.9%	0.1%
	Oldham	64.4%	56.4%	55.4%	51.4%	60.5%	55.0%
	Shelby	37.7%	37.8%	37.7%	37.4%	41.8%	38.0%
	Spencer	48.5%	37.4%	45.9%	39.8%	37.4%	0.0%
	Trimble	5.8%	0.6%	5.5%	64.7%	64.0%	6.1%



Region	County	Mental and Behavioral Health	Prosocial Peers and Role Models	Family	School and Work	Prosocial Activities	Substance Use
<b>Rural Regions</b>							
Central Kentucky / Caves and Rivers	Adair	41.0%	36.6%	39.8%	42.0%	36.5%	40.2%
	Allen	41.7%	42.0%	40.7%	39.8%	41.9%	40.5%
	Anderson	47.5%	38.1%	47.9%	13.0%	15.8%	47.4%
	Barren	42.8%	37.4%	45.4%	35.9%	37.7%	36.0%
	Boyle	60.7%	55.0%	62.8%	79.6%	61.4%	56.0%
	Carroll	69.7%	3.5%	70.5%	74.1%	8.6%	69.8%
	Casey	18.6%	17.9%	18.8%	19.9%	17.6%	18.9%
	Clinton	52.9%	50.9%	2.3%	45.7%	56.2%	2.3%
	Cumberland	21.8%	29.2%	27.2%	27.4%	30.6%	0.0%
	Franklin	64.4%	56.8%	63.7%	64.1%	51.0%	63.4%
	Garrard	14.4%	5.5%	8.2%	7.6%	5.5%	7.8%
	Green	30.2%	0.2%	36.6%	27.7%	2.5%	35.8%
	Hardin	43.1%	35.7%	65.0%	31.0%	27.3%	31.8%
	Harrison	38.7%	0.0%	0.2%	3.2%	0.0%	38.7%
	Hart	38.7%	35.8%	36.5%	34.6%	35.9%	34.1%
	Larue	6.5%	4.0%	51.7%	4.0%	51.3%	1.9%
	Lincoln	29.0%	8.5%	8.4%	8.1%	9.2%	8.8%
	Madison	45.8%	0.7%	36.1%	20.3%	28.7%	36.3%
	Marion	30.8%	0.0%	32.2%	32.8%	0.0%	0.1%
	Mason	40.0%	38.8%	43.5%	29.2%	43.2%	28.5%
	Mercer	45.8%	47.4%	46.8%	49.4%	47.1%	43.0%
	Metcalfe	28.4%	38.2%	38.5%	35.4%	38.2%	35.3%
	Monroe	26.2%	29.3%	30.1%	27.8%	29.3%	0.0%
	Nelson	42.5%	1.5%	4.5%	3.0%	1.7%	2.7%
	Nicholas	0.7%	0.0%	0.0%	0.0%	0.6%	0.7%
	Owen	25.9%	0.2%	31.0%	24.7%	0.1%	28.0%
	Pulaski	26.9%	22.2%	26.4%	12.4%	27.7%	25.1%
	Robertson	0.0%	0.0%	0.0%	3.1%	37.8%	0.0%
Rockcastle	48.5%	2.8%	21.0%	0.0%	45.9%	6.0%	
Russell	53.4%	0.4%	27.9%	42.7%	0.4%	56.5%	
Taylor	40.4%	0.3%	34.1%	34.7%	5.2%	22.6%	
Washington	35.1%	0.0%	33.3%	36.2%	0.0%	0.0%	
Wayne	18.4%	18.4%	15.0%	15.5%	19.6%	0.4%	

Region	County	Mental and Behavioral Health	Prosocial Peers and Role Models	Family	School and Work	Prosocial Activities	Substance Use
Eastern Kentucky/ Cumberland Plateau	Bath	40.0%	37.0%	15.6%	14.3%	38.3%	8.5%
	Bell	30.5%	29.9%	30.7%	30.4%	29.9%	30.5%
	Boyd	79.6%	72.1%	73.3%	45.9%	72.3%	69.6%
	Breathitt	16.7%	15.1%	18.3%	0.0%	15.7%	10.0%
	Carter	36.3%	4.5%	5.0%	32.8%	5.9%	3.0%
	Clay	22.4%	19.6%	22.3%	35.8%	19.6%	0.1%
	Elliott	23.1%	3.0%	0.0%	0.0%	0.0%	0.0%
	Estill	31.3%	0.0%	29.1%	0.0%	3.0%	28.0%
	Fleming	25.9%	27.5%	28.9%	0.0%	30.9%	0.0%
	Floyd	38.2%	8.7%	41.3%	39.2%	29.8%	34.3%
	Greenup	36.1%	35.3%	33.3%	32.0%	35.5%	32.2%
	Harlan	17.4%	27.7%	25.2%	19.0%	0.4%	17.2%
	Jackson	31.7%	31.8%	28.2%	48.2%	18.3%	18.1%
	Johnson	33.4%	27.9%	33.9%	34.5%	27.9%	32.2%
	Knott	26.8%	11.4%	30.7%	29.8%	11.4%	26.7%
	Knox	28.3%	24.1%	25.6%	20.6%	27.4%	25.9%
	Laurel	54.5%	48.2%	52.9%	39.9%	49.4%	43.2%
	Lawrence	12.4%	11.3%	13.1%	10.4%	11.3%	12.4%
	Lee	22.5%	38.2%	0.0%	0.0%	39.3%	22.5%
	Leslie	23.3%	23.1%	22.5%	28.0%	19.8%	21.4%
	Letcher	55.2%	64.5%	59.3%	54.7%	64.5%	55.2%
	Lewis	14.1%	14.1%	14.4%	12.7%	14.3%	13.7%
	Magoffin	36.5%	0.1%	37.5%	32.9%	0.1%	32.2%
	Martin	22.9%	13.3%	13.6%	17.4%	13.3%	21.8%
	McCreary	17.4%	0.0%	17.3%	14.4%	53.7%	14.4%
	Menifee	31.9%	0.9%	0.0%	0.0%	0.0%	0.0%
	Montgomery	74.5%	81.8%	2.1%	59.7%	82.2%	70.3%
	Morgan	0.1%	0.0%	0.1%	26.8%	46.7%	0.0%
	Owsley	1.1%	2.4%	26.6%	0.0%	31.9%	1.1%
	Perry	49.1%	67.3%	60.1%	40.8%	67.3%	40.8%
Pike	26.8%	11.7%	26.4%	17.7%	19.7%	20.1%	
Powell	40.8%	32.4%	39.3%	0.0%	46.4%	0.0%	
Rowan	42.4%	32.0%	46.7%	39.6%	0.0%	32.4%	
Whitley	17.5%	8.0%	5.6%	21.4%	8.8%	17.1%	
Wolfe	35.7%	0.0%	31.6%	0.0%	0.0%	0.0%	

Region	County	Mental and Behavioral Health	Prosocial Peers and Role Models	Family	School and Work	Prosocial Activities	Substance Use
Western Kentucky	Ballard	34.3%	36.9%	32.2%	30.8%	36.9%	0.0%
	Breckinridge	13.1%	0.0%	0.0%	0.0%	48.7%	0.0%
	Butler	24.9%	23.1%	19.0%	22.3%	46.9%	0.0%
	Caldwell	37.8%	39.5%	49.1%	36.7%	39.7%	37.2%
	Calloway	31.0%	34.7%	39.5%	22.8%	43.3%	26.3%
	Carlisle	0.2%	61.2%	28.6%	2.5%	0.0%	0.0%
	Christian	25.3%	31.8%	3.4%	22.4%	31.8%	22.9%
	Crittenden	36.0%	34.7%	34.9%	31.6%	34.7%	31.5%
	Daviess	36.0%	38.2%	26.7%	32.8%	36.7%	27.6%
	Edmonson	20.7%	24.2%	23.3%	24.8%	24.2%	20.7%
	Fulton	0.0%	35.3%	33.2%	2.1%	35.3%	0.0%
	Graves	32.5%	27.2%	30.7%	25.4%	27.2%	23.5%
	Grayson	33.0%	25.6%	28.6%	0.0%	25.6%	26.4%
	Hancock	34.3%	0.0%	0.0%	0.0%	29.2%	0.0%
	Henderson	28.8%	24.8%	25.5%	4.2%	26.7%	27.3%
	Hickman	3.0%	35.2%	34.8%	35.3%	35.2%	0.2%
	Hopkins	30.4%	46.8%	46.6%	33.3%	46.8%	24.3%
	Livingston	40.9%	22.3%	46.1%	42.3%	25.5%	25.7%
	Logan	28.2%	66.7%	58.7%	19.4%	66.8%	27.9%
	Lyon	40.7%	15.9%	43.8%	34.2%	16.2%	6.1%
	Marshall	15.4%	2.2%	50.8%	42.6%	36.3%	14.5%
	McCracken	59.9%	59.4%	58.0%	54.5%	59.6%	50.4%
	McLean	32.2%	51.5%	7.4%	36.6%	8.6%	0.0%
	Muhlenberg	23.0%	46.7%	47.3%	22.9%	0.0%	0.0%
	Ohio	21.8%	24.7%	1.3%	23.7%	24.7%	0.0%
	Simpson	44.2%	61.7%	56.0%	53.9%	55.4%	47.2%
Todd	0.0%	47.0%	46.6%	21.1%	47.9%	0.0%	
Trigg	27.0%	23.5%	23.3%	0.0%	32.8%	20.4%	
Union	34.8%	41.1%	33.8%	35.9%	40.0%	34.1%	
Warren	51.4%	48.4%	44.6%	50.1%	48.6%	43.7%	
Webster	18.8%	29.8%	34.2%	44.1%	29.8%	17.7%	