The Pennsylvania Juvenile Justice Recidivism Report: Juveniles Closed 2007-2019

Pennsylvania Juvenile Court Judges' Commission <u>www.jcjc.pa.gov</u>

> Commonwealth of Pennsylvania Tom Wolf Governor





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Commonwealth of Pennsylvania

Tom Wolf, Governor

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Table of Contents

Introduction	1
Methodology	5
Definitions	6
Executive Summary	8
Findings	11
Section 1: State- and County-Level Recidivism Patterns	11
Recidivism Rate	11
Court of First Recidivating Case	12
Length of Time to Subsequent Delinquency Adjudication or Criminal Conviction	13
Offense Type and Charge Grade of First Re-Offense	14
County-Specific Recidivism Rates	16
Section 2: Demographic Characteristics and Recidivism	25
Gender and Recidivism	25
Race, Ethnicity, and Recidivism	27
Age at First Written Allegation and Recidivism	30
Section 3: Offense History, System Penetration, and Recidivism	33
Number of Written Allegations and Recidivism	33
System Penetration and Recidivism	35
Serious, Violent, and/or Chronic Youth and Recidivism	37
Section 4: Youth Level of Service/Case Management Inventory™ (YLS) and Recidivism	41
Background	41
Final YLS Risk Level and Recidivism	42
Final YLS Risk Level and Recidivism by Gender	44
Final YLS Risk Level and Recidivism by Race and Ethnicity	46
Domain-Specific Final YLS Risk Level and Recidivism	48
Final YLS Risk Level, Serious, Violent, and/or Chronic Offending and Recidivism	50
Risk Level Change between First and Final YLS Assessments and Recidivism	51
Study Limitations	53

Introduction

Background

The Pennsylvania Juvenile Court Judges' Commission (JCJC) provides leadership, advice, training, and support to enable Pennsylvania's juvenile justice system to achieve its balanced and restorative justice mission. The JCJC is legislatively empowered to advise juvenile court judges in all matters pertaining to the proper care and maintenance of delinquent and dependent children, employing evidence-based practices whenever possible, and to compile and publish such statistical data as needed for efficient administration of the juvenile courts.

In November 2010, the JCJC unanimously endorsed a comprehensive strategy, known as the Juvenile Justice System Enhancement Strategy (JJSES), to enhance the capacity of Pennsylvania's juvenile justice system to achieve its mission of balanced and restorative justice. For more information regarding the JJSES, please refer to the Pennsylvania's Juvenile Justice System Enhancement Strategy Monograph.



JJSES Statement of Purpose

We dedicate ourselves to working in partnership to enhance the capacity of Pennsylvania's juvenile justice system to achieve its balanced and restorative justice mission by:

- Employing evidence-based practices, with fidelity, at every stage of the juvenile justice process;
- Collecting and analyzing the data necessary to measure the results of these efforts; and, with this knowledge,
- Striving to continuously improve the quality of our decisions, services, and programs.

Key stakeholders concluded that one of the most appropriate ways to evaluate the effectiveness of the JJSES was to examine the recidivism rates of juveniles who have been involved in Pennsylvania's juvenile justice system. After all, recidivism is the key statistic in determining whether interventions are making a difference in keeping offenders from committing more crimes. At the initiation of the JJSES, however, there was no systematic mechanism available to track the statewide recidivism rates of juvenile offenders in Pennsylvania within both the criminal and juvenile justice systems once their cases closed.

Since the Center for Juvenile Justice Training and Research (CJJT&R), a division of the JCJC, collects and maintains delinquency data from all 67 counties through the Pennsylvania Juvenile Case Management System (PaJCMS), the JCJC undertook the project. Over time, the JCJC developed the methodology and capacity to monitor the statewide recidivism rates of juvenile offenders.

Discussions were held with Temple University Criminal Justice Professor Phil Harris, the JCJC staff, and representatives from the PCCJPO regarding appropriate methods for calculating recidivism. The following definition of recidivism was adopted:

Recidivism:

A subsequent delinquency adjudication in juvenile court or conviction in criminal court for either a misdemeanor or felony offense within two years of case closure.

Since the agreed-upon definition of recidivism included criminal convictions, the JCJC worked closely with the Administrative Office of Pennsylvania Courts (AOPC), which collects court data at both the criminal and magisterial district justice levels, for the project.

The two-year tracking period was selected because there was a consensus that recidivism beyond two years from case closure would less likely be related to the services and interventions provided during the period of juvenile court supervision. Additionally, only subsequent adjudications of delinquency and findings of guilt in criminal proceedings were included in the definition of recidivism because these case outcomes require judicial determinations.

Initial recidivism studies had two overarching goals. First, because the core premise of the JJSES is that recidivism rates can be reduced through the implementation of evidence-based practices, the main goal was to establish an ongoing, consistent recidivism benchmark. The second goal was to examine differences between recidivists and non-recidivists in terms of demographics and other key variables to identify factors associated with recidivism in the Pennsylvania juvenile justice system.

The benchmark was developed with juveniles closed in 2007, 2008, 2009, and 2010 to provide an accurate measure of pre-JJSES recidivism. Between April 2013 and November 2014, three reports were released analyzing the two-year recidivism rates of youth closed in the pre-JJSES time period. The data obtained from these reports provide a gauge by which to measure the success of the JJSES after its initiation in 2010.

In September 2016, the JCJC released *The Pennsylvania Juvenile Justice Recidivism Report: Juveniles with Cases Closed in 2007, 2008, 2009, 2010, 2011, and 2012*. This report analyzed trends over time in recidivism rates and identified the differences between recidivists and non-recidivists. In February 2019, the JCJC released *Research in Brief: Juveniles with Cases Closed between 2007 and 2014*. This Brief analyzed time trends and recidivism patterns for the full range of years for which recidivism data was available.

In the September 2016 and February 2019 reports, Dr. Edward Mulvey and his colleagues from the Psychiatry Department at the University of Pittsburgh School of Medicine used a method that compared system performance pre-JJSES initiation versus post-JJSES initiation with a more sophisticated and analytical approach. This was accomplished by comparing the observed recidivism rate of youth in the years post-JJSES initiation (2011, 2012, 2013, 2014) to a calculated "expected" recidivism rate. The "expected" rate was what the system could anticipate recidivism to be based on how similarly situated youth recidivated pre-JJSES. This approach controlled for the possible differences in background characteristics (e.g., number of prior arrests, offense severity) of each youth, allowing for an "apples to apples" comparison of each population. If the observed recidivism rate was lower than the "expected" recidivism rate, the system could conclude that it was performing better than it had in the past, when all other things were equal. This "proxy" risk to re-offend profile was critical

because there was not enough statewide Youth Level of Service/Case Management Inventory™ (YLS) data for such comparisons.

Beginning with *The Pennsylvania Juvenile Justice Recidivism Report: Juveniles with Cases Closed in 2007-2016*, which was published January 2021, YLS risk levels and scores were incorporated to obtain a picture of differential performance of the system on youth with different levels of risk for recidivism. *The Pennsylvania Juvenile Justice Recidivism Report: Juveniles Closed in 2007-2018*, which was published in September 2021, and this current study, *The Pennsylvania Juvenile Justice Recidivism Report: Juveniles Closed in 2007-2019*, expand on the approach of analyzing the relationship between juveniles' assigned risk level and recidivism. Since YLS data was available beginning with the January 2021 report, Dr. Mulvey's "expected" vs. "anticipated" recidivism analyses were no longer completed.

Key Findings

Recidivism rates substantially declined over the most recent five years examined, dropping from 18.5% in 2015 to 11.7% in 2019. These trends could be a result of changes in the characteristics of juveniles closed. It is also possible—and these explanations are not mutually exclusive—that among youth assessed at the same risk level (e.g., moderate risk youth) fewer recidivated, perhaps as a result of the system's improved performance. The evidence presented in Section 4: Youth Level of Service/Case Management Inventory™ (YLS) and Recidivism suggests that both hypotheses are relevant to explaining recent recidivism trends. Over the last five years, the percentage of youth assessed as low risk on their final YLS has increased (from 73% in 2015 to 79% in 2019). Having a less "at risk" group of juveniles closed could play a role in why recidivism rates have decreased over the last few years. There have also been notable declines in the recidivism rates of youth assessed as high or very high risk and more modest declines in the recidivism rates of moderate risk youth. Declining recidivism rates among youth assessed as having the same risk level suggests that something other than the characteristics of those youth assessed by the YLS must explain those trends. These latter findings are consistent with the idea that the programming innovations occurring under the JJSES are continuing to bear fruit and drive recidivism rates down. The JCJC's JJSES Implementation Survey provides details about the implementation and sustainability of this programming at the county-specific and statewide levels. An analysis of survey results is available on the JCJC website at System Enhancement Strategy (pa.gov).

COVID-19 Impact

Readers of this report should keep in mind that data for the 2018 and 2019 recidivism cohorts may have been impacted in unknown ways by the COVID-19 pandemic and corresponding shelter-in-place orders and social distancing restrictions that began in mid-March 2020. The 2020 Juvenile Court Annual Report shows that written allegations to juvenile court decreased substantially beginning in mid-March and remained at a lower level for the rest of 2020. Allegations remained at this low level through 2021, as the 2021 Juvenile Court Annual Report reflects. It seems likely that some of the same pandemic-related factors that explain the decline in allegations (e.g., fewer opportunities to engage in delinquent acts due to less in-person interaction) could also lead to fewer new adjudications and convictions for juveniles closed. Thus, pandemic-related factors could play a role in why the recidivism rates of juveniles closed in 2018 and 2019 (14.6% and 11.7%, respectively) were so much lower than in past years. However, the recidivism rate for juveniles closed in 2017 was also lower than in previous years—and the pandemic did not affect data for the 2017 cohort because, as mentioned above, Pennsylvania's definition of recidivism only counts new adjudications and convictions that occur within two years of case closing.

Current Report

After a brief description of the methodology employed, the remainder of this report will describe the results of the study. More specifically, the bulk of this report will focus on analyzing the demographic, offense-related, and YLS risk level characteristics correlated with recidivism for juveniles closed in 2019 and on comparing their recidivism patterns to prior years (2007 through 2018). The report concludes with an overview of project limitations inherent in this type of study.

Methodology

In order to meet the goals of the project, staff members from the JCJC began the data collection process by querying the PaJCMS to identify juveniles whose involvement with a juvenile probation department ended in 2019. Juveniles were included in the sample if they had a case that occurred prior to their closure date that had a valid disposition. These juveniles formed the base sample for the study.

The JCJC provided this base sample to the AOPC. The AOPC in turn queried their case management systems against the base sample juveniles to determine if these individuals had a subsequent conviction for a felony or misdemeanor offense in criminal court following their closure date. A juvenile was matched by: (1) State Identification Number³ alone, or (2) two of the following: last name, date of birth, or social security number. The AOPC provided to the JCJC the most serious substantiated offense and the disposition for that case for all misdemeanor and felony convictions occurring after the close date.

The PaJCMS was queried to determine if any youth from the base sample recidivated in juvenile court, and information on both subsequent adjudications of delinquency and criminal convictions was merged. The data was then analyzed to determine whether an individual had a subsequent recidivating event—either an adjudication or a conviction—occurring within two years of closure. If so, they were marked as a recidivist, and the individual's first recidivating offense was selected for further analysis.

The PaJCMS was also utilized to collect additional variables that were examined in this report. These include demographics, offense and disposition variables, and out-of-home service variables. Information related to Serious, Violent, and/or Chronic offenders and the YLS was also retrieved from the PaJCMS.

¹ Prior reports described the youth being analyzed in this study as "juveniles with cases closed." Starting with this report, we refer to the same youth as "juveniles closed."

² Valid dispositions for the purposes of this project were as follows: informal adjustment; consent decree; probation; placement; probation with day treatment; deferred adjudication; deferred placement; disposition deferred; courtesy supervision; dependency placement; warned, counseled, case closed; warned and counseled; community service only; fines and/or costs ordered by court; referral to another agency/individual; restitution only ordered; Youth Aid Panel; and "other."

³ The State Identification Number, or SID, is a unique identifier assigned to an individual after being fingerprinted.

Definitions

The following terms are used in the Pennsylvania juvenile justice system and this report.

Adjudication of Delinquency: The juvenile court's determination that a juvenile has committed a delinquent act and is also in need of treatment, supervision, or rehabilitation. This is similar to the finding of guilt in criminal court.

Chronic Offender: A juvenile who has four or more previous written allegations for separate incidents that occurred prior to the date of the 2019 juvenile closure.

Cohort: A group of individuals who share a common characteristic, such as the year of their closure.

Correlated: When variation in one variable corresponds with variation in another variable (e.g., the greater the amount of criminogenic risk factors a juvenile is exposed to, the more likely they are to recidivate).⁴

Detention/Shelter: A temporary holding facility.

Disposition: The action/decision implemented, or treatment plan decided upon, by a juvenile court in response to a written allegation of delinquency. This is similar to the sentence imposed in criminal court.

Diversion: A juvenile court disposition that avoids an adjudication of delinquency and redirects youth away from formal processing in the juvenile justice system.

Expungement: The sealing of a juvenile court record making it permanently unavailable to the public but where some information may be retained only by a juvenile justice agency for limited purposes.

Juveniles Closed: Juveniles terminated from juvenile court supervision. A juvenile could be on supervision for multiple individual cases at the time of closure.

Mean: The numerical average of a data sample. The mean can be found by summing all of the values in the data sample and then dividing by the number of values in the data sample.

Median: The numerical value that separates the higher half of a data sample from the lower half of a data sample. The median can be found by arranging all the values from lowest to highest and picking the middle number. If there is an even number of values in the data sample, the median is identified as the mean of the two middle values.

⁴ In this report, when two variables are described as being correlated, statistical significance tests have been performed and the difference is significant at the p<.05 level. This is consistent with the threshold used in much criminological literature to establish that a correlation is unlikely to be a product of chance variation.

Out-of-Home Placement: An out-of-home program utilized as a juvenile court disposition. Included in this definition are placements into group homes, general residential programs, secure residential care, foster care, drug and alcohol programs, residential treatment facilities (RTF), Youth Development Centers (YDC), and Youth Forestry Camps (YFC).

Recidivated: To have committed a subsequent felony or misdemeanor offense that resulted in an adjudication of delinquency in juvenile court or conviction in criminal court within two years of the juvenile's closure.

Recidivating Case: The first case that resulted in an adjudication of delinquency in juvenile court or a conviction in criminal court following the juvenile's close date.

Serious Offender: A juvenile who has been adjudicated delinquent in juvenile court at any point in the juvenile's offending history for one of the following offenses: burglary, theft (felonies only), arson, drug trafficking (manufacture/deliver/possession with intent to deliver), and extortion (theft by extortion).

Violent Offender: A juvenile who has been adjudicated delinquent in juvenile court at any point in the juvenile's offending history for one of the following offenses: homicide or non-negligent manslaughter, rape, robbery, aggravated assault, kidnapping, and select firearm/weapon offenses.

Written Allegation: The document completed by a law enforcement officer or other person that is necessary to allege that a juvenile has committed an act of delinquency. It is synonymous with a "court referral," although written allegation is the preferred language.

Youth Level of Service/Case Management Inventory™ (YLS): A validated research-based assessment tool designed to determine a juvenile's risk to re-offend and the presence of criminogenic needs. The YLS helps the probation officer objectively determine a juvenile's risk of recidivating and the level of intervention needed. This report refers to the Youth Level of Service/Case Management Inventory™ as the YLS.

Executive Summary

Section 1: State- and County-Level Recidivism Patterns

- The recidivism rate for juveniles closed in 2019 was 11.7%. The 2019 recidivism rate is the lowest since the Juvenile Court Judges' Commission (JCJC) began tracking recidivism, continuing the trend of "post-JJSES initiation" rates being below the "pre-JJSES initiation" rate (21.6% for the years 2007-2010).
- More re-offenders first recidivate as adults than juveniles, with the percentage of re-offenders
 first recidivating as adults increasing from "pre-JJSES initiation" levels. However, in 2019, the
 percentage returned to near "pre-JJSES initiation" levels.
- The average number of months between a juvenile's closure and a new recidivism event increased between 2011 and 2015 and then remained at this higher level in 2016-2017 before falling in 2018 through 2019. For juveniles closed in 2019, the average number of months between closure and a new adjudication or conviction was 11.2.
- Between 2007 and 2019, the first new offense for recidivists was a misdemeanor in approximately two-thirds of cases. This trend has been consistent over time, with the proportion of misdemeanors increasing slightly. For juveniles closed in 2019, the first new reoffense was a misdemeanor in 72% of cases and a felony in the remaining 28%.
- Fifty (75%) counties had a recidivism rate in the "post-JJSES initiation" era (2011-2019) below their "pre-JJSES initiation" era (2007-2010) rate.
- Forty-four (66%) counties had a recidivism rate for the years 2015-2019 below their rate for 2011-2014.

Section 2: Demographic Characteristics and Recidivism

- Over a 13-year span (2007 through 2019), males have consistently accounted for three times as many juveniles closed as females. For juveniles closed in 2019, 72% of juveniles closed were male, and 28% were female.
- Over the last 13 years, males have consistently recidivated at a much higher rate than females. In 2019, 14% of males recidivated compared to 5% of females.
- For juveniles closed in 2019, White Non-Hispanic youth were the largest racial/ethnic group, followed by Black Non-Hispanic youth then Hispanic youth.
- Between 2007 and 2018, Black Non-Hispanic youth recidivated at the highest rate. However, for juveniles closed in 2019, Black Non-Hispanic youth and Hispanic youth recidivated at the same rate (14%), followed by White Non-Hispanic youth. These differences are not as pronounced as in years past.
- In all the years analyzed (2007-2019), juveniles whose first written allegation occurred at a younger age were more likely to recidivate than juveniles whose first written allegation occurred at an older age. In 2018, contrary to the pattern observed in past years and in 2019, a higher portion of youth whose first allegation was at ages 18-20 recidivated than youth whose first allegation was at ages 16-17.

Section 3: Offense History, System Penetration, and Recidivism

- In 2019, over three-quarters of juveniles had one to two written allegations by the time they were closed. Additionally, less than 15% of juveniles had four or more allegations at closure.
- For the years 2007 through 2019, juveniles closed who had more written allegations recidivated at a higher rate than juveniles who had fewer written allegations. In 2019, 6% of juveniles with one written allegation recidivated, compared to 14% with two allegations, 21% with three allegations, 30% with between four and nine allegations, and 41% of juveniles with 10 or more allegations.

- For juveniles closed in 2019, 63% were diverted from adjudication while 37% were adjudicated delinquent prior to juvenile closure. These percentages are consistent with data for juveniles closed in prior years.
- Juveniles closed in 2019 who were diverted from adjudication were almost one-third as likely to recidivate as juveniles who were adjudicated delinquent prior to closure (7% vs. 20%).
- For juveniles closed in 2019, 83% of youth did not receive an out-of-home placement disposition while 17% received an out-of-home placement disposition prior to juvenile closure. These percentages are consistent with data for juveniles closed in prior years.
- Juveniles closed in 2019 who did not receive an out-of-home placement disposition were almost one-third as likely to recidivate as juveniles who received an out-of-home placement disposition prior to closure (9% vs. 26%).
- For each of the past 13 years, approximately one out of five juveniles who were closed met the criteria of being a Serious, or Violent, or Chronic offender.
- For juveniles closed in 2019, 27% of Serious, or Violent, or Chronic offenders recidivated compared to only 9% of youth whose offense history did not place them in any of these categories. These findings are consistent with those of previous cohorts of juveniles closed, beginning in 2007.

Section 4: Youth Level of Service/Case Management Inventory™ (YLS) and Recidivism

- For juveniles closed in 2019, more than three-quarters (79%) were assessed as low risk in their final YLS assessment, just under one-fifth (19%) were moderate risk, and 2% were high or very high risk.
- The percentage of juveniles closed who were assessed as low risk on their final YLS assessment increased from 73% in 2015 to 79% in 2019, and the percentage assessed as moderate risk declined from 25% in 2015 to 19% in 2019.
- As expected, and consistent with past years (2015-2018), juveniles closed in 2019 who were assessed as high or very high risk on their final YLS assessment were much more likely to reoffend than moderate risk youth, who, in turn, were much more likely to re-offend than low risk youth (41% vs. 23% vs. 10%).
- The recidivism rates of youth assessed as high or very high risk notably declined from 2015 to 2019 (58% to 41%). Moderate risk youth also experienced a decline in recidivism (from 32% to 23% during that same time period).
- For juveniles closed in 2019, the risk level distribution of males and females on their final YLS assessment was similar. Eighty percent of males were assessed as low risk, 18% as moderate risk, and 2% as high or very high risk. Seventy-six percent of females were assessed as low risk, 21% as moderate risk, and 2% as high or very high risk.
- For juveniles closed in 2019, YLS risk level was correlated with recidivism for both males and females, although males recidivated at a much higher rate at all risk levels. For males, 12% of youth assessed as low risk on their final YLS assessment recidivated compared to 28% of moderate risk youth and 52% of high or very high risk youth. For females, 4% of low risk youth recidivated compared to 11% of moderate risk youth and 16% of high or very high risk youth.
- For juveniles closed in 2019, a higher percentage of Black Non-Hispanic youth and Hispanic youth than White Non-Hispanic youth were assessed as high or very high risk on their final YLS assessment. Likewise, a lower percentage of Black Non-Hispanic youth and Hispanic youth than White Non-Hispanic youth were assessed as low risk or moderate risk.

- A youth's final YLS risk level was correlated with recidivism for White Non-Hispanic, Hispanic, and Black Non-Hispanic youth among juveniles closed in 2019. Among Black Non-Hispanic youth, 13% assessed as low risk youth recidivated, compared to 25% assessed as moderate risk youth and 42% assessed as high or very risk youth. For Hispanic youth, 12% assessed as low risk recidivated, compared to 26% assessed as moderate risk and 45% assessed as high or very high risk. Among White Non-Hispanic youth, 8% assessed as low risk recidivated, compared to 22% assessed as moderate risk and 39% assessed as high or very high risk.
- In descending order, the top three risk level domains in which the largest portion of youth were assessed as either moderate or high risk (excluding Leisure/Recreation) were: (1) Personality/Behavior (47%) and (2 Tie) Education/Employment (41%) and Substance Abuse (41%).
- Final YLS assessment risk levels were predictive of recidivism for both Serious, or Violent, or Chronic youth and those who were not Serious, or Violent, or Chronic. Likewise, for youth at each risk level on the YLS, being classified as a Serious, or Violent, or Chronic offender greatly increased the likelihood of recidivism.
- Sixty-eight percent of youth who were initially assessed as moderate risk were assessed as low
 risk in their final YLS. Likewise, 91% of youth initially assessed as high or very high risk were
 assessed as moderate or low risk in their final YLS.
- Youth who were initially assessed as moderate risk—and then, in their final YLS, were assessed as low risk—recidivated at a lower rate than youth initially assessed as moderate risk who had no change in risk level (13% vs. 20%). Youth who were initially assessed as high or very high risk— and then, in their final YLS, were assessed as moderate or low risk—recidivated at a lower rate than youth initially assessed as high or very high risk who experienced no change in risk level (22% vs. 38%).

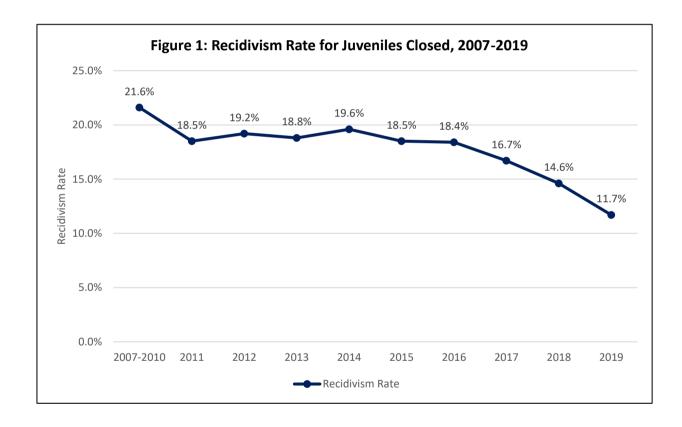
Findings^{5, 6}

Section 1: State- and County-Level Recidivism Patterns

Recidivism Rate

The recidivism rate for juveniles closed in 2019 was 11.7%. The 2019 recidivism rate is the lowest since the Juvenile Court Judges' Commission (JCJC) began tracking recidivism, continuing the trend of "post-JJSES initiation" rates being below the "pre-JJSES initiation" rate (21.6% for the years 2007-2010).⁷

It is possible that the COVID-19 pandemic impacted 2018 and 2019's low recidivism rates (see the 2020 Juvenile Court Annual Report and the 2021 Juvenile Court Annual Report). However, the recidivism rate for juveniles closed in 2017 was also lower than in past years—and the pandemic would not affect the 2017 recidivism rate since outcomes were only tracked for two years post-closure.



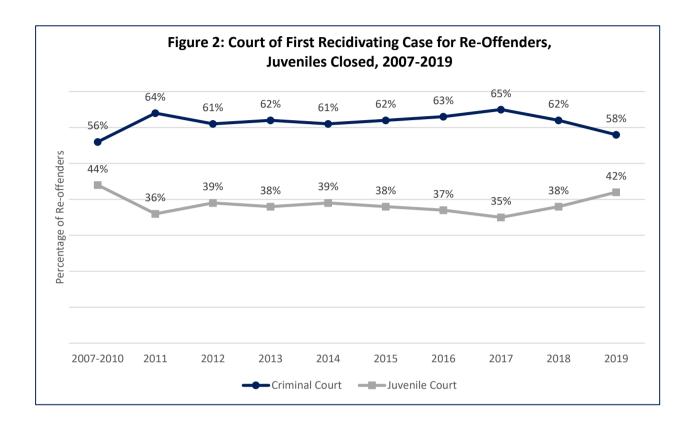
⁵ Values in charts may not add to 100% due to rounding.

⁶ Trends may vary greatly due to the small number of youth in certain sub-categories.

⁷ See the Limitations Section for a discussion of issues to consider when making year-to-year comparisons using recidivism data.

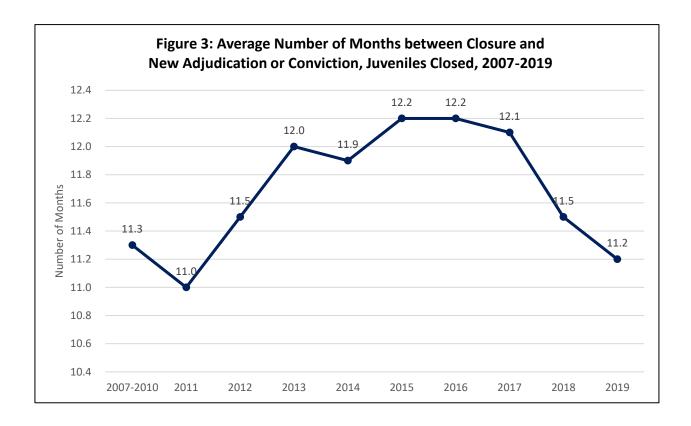
Court of First Recidivating Case

For juveniles closed in 2019, 58% of re-offenders first recidivated as adults. This 2019 dip below 60%, the first in eight years, ends the pattern of "post-JJSES initiation" years having a notably higher percentage of re-offenders recidivating as adults.



Length of Time to Subsequent Delinquency Adjudication or Criminal Conviction

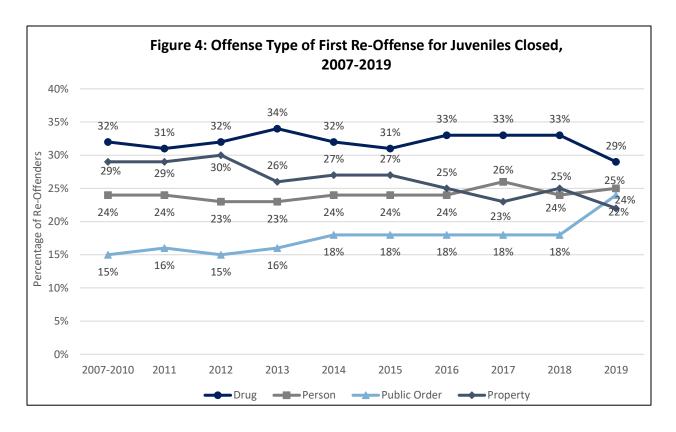
For juveniles closed in 2019, the average number of months between a juvenile's closure and a new adjudication or conviction was 11.2. The average number of months between a juvenile's closure and a new recidivism event increased between 2011 and 2015 and then remained at this higher level in 2016-2017 before falling in 2018 through 2019.



Offense Type and Charge Grade of First Re-Offense

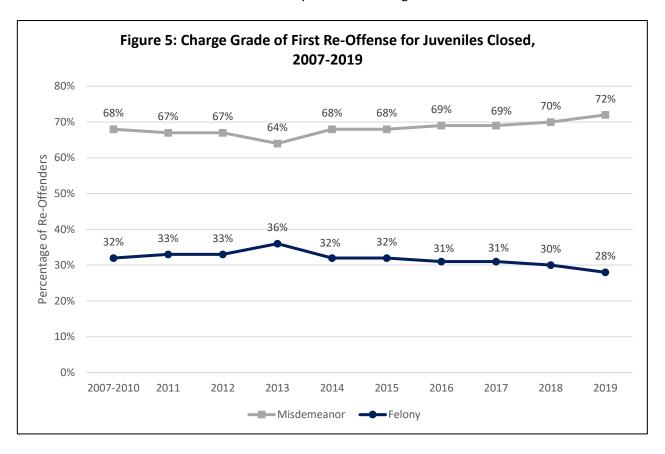
Among youth who re-offended between 2007 and 2019, the most common first new offense type⁸ was a drug offense. However, for the first time in this report's existence, the percentage of re-offenders committing drug offenses fell below 30%. Another recent trend is that the percentage of re-offenders committing public order offenses increased six percentage points (18% to 24%) from 2018 to 2019 after being at 18% for five years in a row.

For juveniles closed in 2019, the most common re-offense type was drug (29%), followed by person (25%), followed by public order (24%), followed by property (22%).



⁸ This study only analyzes the offense characteristics of the first recidivism event occurring within two years of the date a juvenile was closed.

Between 2007 and 2019, among youth who re-offended, the first new offense was a misdemeanor in approximately two-thirds of juveniles closed. This percentage has been consistent over time, with the proportion of misdemeanors increasing slightly. For juveniles closed in 2019, the first new re-offense was a misdemeanor in 72% of cases and a felony in the remaining 28%.



County-Specific Recidivism Rates

County and statewide recidivism data for the 13-year period beginning in 2007 and ending in 2019 are presented below. Each county's total number of juveniles closed for that year appears *above* the corresponding recidivism rate. These numbers are then tallied and summed at the bottom of the table to produce statewide statistics.

When reviewing county-specific recidivism rates, please note that smaller numbers of juveniles closed skew percentages. Smaller denominators can produce widely varying trends and/or distort a single year's percentages. This could be especially notable in rural counties. See the Study Limitations Section for a discussion of other issues to consider when analyzing county recidivism rates.

1	Гable 1: Coui	nty and State	wide Recidiv	ism Rates: Ju	veniles Close	d 2007-2019	
Cohort Time Period	Pre-JJSES 2007-2010	2011-2014	2015	2016	2017	2018	2019
County	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed
	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism
Adams	885	680	115	116	118	140	101
Additis	24%	19%	19%	23%	22%	19%	18%
Allegheny	6,192	7,415	1,525	1,479	1,500	1,418	1,420
Allegheny	25%	20%	19%	17%	15%	13%	10%
A	402	250	78	58	49	67	56
Armstrong	20%	15%	18%	17%	14%	22%	16%
Beaver	1,119	1,008	252	215	170	203	169
beaver	17%	15%	15%	12%	12%	8%	5%
Bedford	252	195	19	19	10	1 ⁹	54 ¹⁰
Dealora	18%	14%	5%	11%	10%	0%	22%
Berks	3,274	2,368	696	612	500	465	456
	20%	15%	12%	13%	13%	13%	11%
Blair	380	438	173	175	173	183	148
J.d.i.	17%	16%	22%	25%	16%	14%	18%
Bradford	197	419	108	102	83	97	57
Diauloiu	20%	11%	12%	20%	16%	9%	4%
Bucks	2,991	2,185	473	476	422	541	481
DUCKS	21%	17%	14%	18%	11%	10%	7%

⁹ Data entry irregularities in Bedford County may have impacted the number of juveniles closed in 2018.

¹⁰ Data entry irregularities in Bedford County may have impacted the number of juveniles closed in 2019.

	Table 1: Cou	nty and State	wide Recidiv	ism Rates: Ju	veniles Close	d 2007-2019	
Cohort Time Period	Pre-JJSES 2007-2010	2011-2014	2015	2016	2017	2018	2019
County	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed
•	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism
D. Alex	643	661	163	147	123	145	139
Butler	16%	16%	19%	13%	13%	13%	11%
	1,087	794	251	184	142	163	166
Cambria	20%	18%	14%	13%	17%	17%	15%
	25	9	10	6	2	4	3
Cameron	32%	33%	30%	0%	100%	0%	0%
	404	338	62	58	59	91	66
Carbon	14%	16%	11%	10%	14%	16%	11%
	252	227	56	69	69	81	61
Centre	19%	12%	20%	13%	14%	15%	8%
	2,664	2,339	506	385	405	385	390
Chester	19%	14%	12%	15%	19%	10%	7%
	140	137	23	31	30	21	33
Clarion	26%	21%	17%	0%	7%	10%	12%
Clearfield	224	198	74	27	42	19	70
Clearneid	23%	20%	23%	26%	14%	21%	20%
a!	125	170	44	51	44	51	45
Clinton	24%	23%	25%	22%	27%	14%	16%
Columbia	284	325	70	48	50	68	59
Columbia	16%	17%	13%	27%	24%	13%	10%
Crawford	555	464	134	97	59	98	101
	21%	18%	19%	19%	20%	16%	15%
Cumberland	375	612	259	280	246	270	259
	21%	13%	17%	22%	14%	11%	12%
Dauphin	3,707	2,728	562	547	518	509	550
	24%	24%	25%	25%	25%	21%	18%
Delaware	1,145	3,255	814	694	691	702	604
	23%	20%	20%	18%	17%	18%	12%
Elk	131	148	38	25	29	36	32
	26%	25%	21%	12%	24%	14%	22%

	Table 1: Cou	nty and State	wide Recidiv	ism Rates: Ju	veniles Close	d 2007-2019	
Cohort Time Period	Pre-JJSES 2007-2010	2011-2014	2015	2016	2017	2018	2019
County	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed
·	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism
Erie	2,925	2,260	404	420	392	410	403
Ene	21%	20%	18%	23%	18%	20%	17%
Favotta	1,043	1,041	235	185	152	109	234
Fayette	15%	11%	15%	14%	16%	13%	8%
	25	13	1	2	1	0	1
Forest	12%	8%	0%	50%	100%	N/A ¹¹	0%
	1,217	910	321	216	207	212	226
Franklin	23%	24%	20%	16%	20%	21%	12%
Fulton	54	51	19	18	9	9	14
Tuiton	13%	12%	11%	11%	0%	11%	7%
Greene	151	190	21	16	11	14	14
Greene	10%	6%	14%	13%	9%	0%	7%
Huntingdon	197	146	32	30	29	35	45
Humanguon	17%	17%	16%	30%	10%	26%	16%
Indiana	258	296	66	78	67	50	79
iliulalia	16%	13%	18%	4%	13%	14%	10%
Jefferson	207	197	42	51	33	47	48
Jenerson	24%	23%	21%	20%	18%	15%	13%
liata	56	66	12	18	15	20	16
Juniata	29%	21%	17%	17%	20%	10%	6%
Laskanna	776	752	190	226	193	220	230
Lackawanna	24%	22%	20%	20%	15%	15%	15%
	1,643	2,249	641	594	594	596	516
Lancaster	21%	18%	19%	20%	19%	19%	14%

 $^{^{\}rm 11}$ A recidivism rate could not be calculated because no juveniles were closed in this time period.

	Table 1: Cou	nty and State	wide Recidiv	ism Rates: Ju	veniles Close	d 2007-2019	
Cohort Time Period	Pre-JJSES 2007-2010	2011-2014	2015	2016	2017	2018	2019
County	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed
County	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism
	593	722	103	100	66	70	76
Lawrence	17%	17%	13%	12%	15%	11%	13%
Lebanon	1,026	702	150	162	191	160	153
Lepanon	27%	23%	24%	30%	21%	16%	10%
Lehigh	3,611	3,392	683	646	573	496	461
Lenign	14%	20%	21%	23%	18%	18%	14%
Luzerne	1,904	1,377	256	242	211	252	233
Luzerne	17%	16%	14%	19%	13%	13%	10%
Lycoming	1,216	1,082	208	171	194	166	188
_,,	28%	25%	25%	15%	22%	19%	16%
	183	194	60	53	41	54	56
McKean	24%	16%	23%	17%	15%	22%	9%
Danner	586	711	156	151	122	153	128
Mercer	16%	18%	16%	27%	16%	20%	13%
	261	209	58	49	62	42	66
Mifflin	27%	24%	24%	31%	27%	36%	33%
	977	794	193	161	158	148	195
Monroe	14%	15%	18%	16%	14%	11%	9%
	3,793	4,144	776	733	696	668	721
Montgomery	24%	16%	18%	19%	17%	12%	11%
	83	72	11	18	7	10	8
Montour	22%	26%	36%	28%	43%	30%	13%
Northampton	1,951	2,014	422	440	411	515	511
1401 tilalliptoli	17%	18%	17%	15%	17%	11%	12%
Northumberland	611	667	210	183	166	115	158
- Tortinamberiana	23%	16%	16%	19%	13%	12%	9%

	Table 1: Cour	nty and State	wide Recidiv	ism Rates: Ju	veniles Close	d 2007-2019	
Cohort Time Period	Pre-JJSES 2007-2010	2011-2014	2015	2016	2017	2018	2019
County	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed
	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism
Perry	249	187	62	36	27	27	25
	25%	26%	23%	25%	19%	19%	4%
Philadelphia	8,949	12,902	2,488	2,169	1,769	1,771	1,774
	28%	23%	22%	20%	16%	13%	12%
Pike	309	274	61	62	63	58	63
	13%	13%	8%	8%	8%	12%	6%
Potter	120	69	5	19	8	5	2
Potter	11%	13%	0%	16%	13%	40%	0%
61 11 11	1,011	875	171	100	138	156	173
Schuylkill	16%	16%	16%	20%	14%	14%	8%
	219	260	37	57	38	43	45
Snyder	22%	22%	24%	19%	18%	5%	7%
_	355	234	37	37	26	42	33
Somerset	13%	16%	16%	8%	12%	10%	3%
	16	11	8	4	1	1	1
Sullivan	6%	0%	13%	0%	0%	0%	100%
	217	184	32	25	23	50	32
Susquehanna	18%	17%	3%	20%	9%	12%	3%
	271	206	41	34	28	25	43
Tioga	18%	17%	12%	15%	29%	0%	9%
	105	116	21	33	41	28	24
Union	23%	28%	38%	12%	15%	7%	13%
	297	434	131	74	76	62	57
Venango	13%	17%	18%	19%	16%	24%	18%
	256	201	46	48	36	36	55
Warren	17%	19%	20%	19%	6%	22%	15%

	Table 1: Cour	nty and State	wide Recidiv	ism Rates: Ju	veniles Close	d 2007-2019	
Cohort Time Period	Pre-JJSES 2007-2010	2011-2014	2015	2016	2017	2018	2019
County	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed	# Juveniles Closed
	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism	% Recidivism
Washington	1,121	1,318	260	210	212	261	249
Washington	24%	16%	15%	14%	13%	10%	8%
Wayne	263	210	42	45	24	17	37
wayne	15%	15%	19%	29%	29%	24%	5%
Westmoreland	2,191	1,795	388	331	238	285	285
Westilloreland	16%	14%	16%	16%	17%	11%	9%
	209	138	28	21	18	17	19
Wyoming	19%	15%	14%	14%	11%	24%	11%
York	3,780	3,422	783	768	752	845	779
YORK	25%	20%	19%	18%	20%	16%	12%
	72,738	74,450	16,417	14,938	13,653	14,058	13,996
Total:	21.6%	19.0%	18.5%	18.4%	16.7%	14.6%	11.7%

County-Specific Aggregated Recidivism Rates

To facilitate analysis of recent and long-term county-specific recidivism trends, county-specific recidivism data is aggregated into the "pre-JJSES" (2007-2010) period and then 2011-2014 and 2015-2019—the earlier and later years within the "post-JJSES initiation period" (2011-2019). Presenting data separately for 2011-2014 and 2015-2019 allows for more nuanced analysis of county-specific recidivism trends within the "post-JJSES initiation period."

Appearing in the second column to the right is the percentage change in recidivism rates between the "pre-JJSES" (2007-2010) and "post-JJSES initiation" periods (2011-2019). This figure is arrived at by taking the difference between the "post-JJSES initiation" rates (not shown, but a combination of the 2011-2014 and 2015-2019 data presented) and "pre-JJSES" rates. Then, this number is divided by the "pre-JJSES" recidivism rate. The bottom of the table shows that, statewide, there was a 25.9% decrease in the recidivism rate between the "pre-JJSES" and the "post-JJSES initiation" periods.

Furthermore, 75% of counties (n=50) had a recidivism rate in the "post-JJSES initiation" era (2011-2019) below their rate in the "pre-JJSES" era (2007-2010). Among these 50 counties, the mean percentage decrease in recidivism rates was 21.7%, and the median percentage decrease was 20.4%.

Appearing in the right-most column is the percentage change in recidivism rates between the earlier and later parts of the "post-JJSES initiation" period (2011-2014 compared to 2015-2019). This figure is arrived at by taking the difference between the 2015-2019 and 2011-2014 recidivism rates and dividing this number by the 2011-2014 rate. The bottom of the table shows that, statewide, there was a 15.3% decrease in the recidivism rate between the 2011-2014 era and 2015-2019 era.

Sixty-six percent (n=44) of counties had a recidivism rate for the years 2015-2019 below their rate for 2011-2014. Among these 44 counties, the mean percentage decrease in recidivism rates was 21.6%, and the median percentage decrease was 22.5%.

	Table 2: Co	ounty and St	atewide Re	cidivism Ra	tes for Juve	eniles Close	d	
	Pre-JJSES 2007-2010		2011-2014		2015	-2019	% Change in Rat	
County	Number of Juveniles Closed	Recidivism Rate	Number of Juveniles Closed	Recidivism Rate	Number of Juveniles Closed	Recidivism Rate	Pre-JJSES (2007-2010) to Post- JJSES Initiation (2011-2019)	2011-2014 to 2015-2019
Adams	885	24%	680	19%	590	20%	-17%	5%
Allegheny	6,192	25%	7,415	20%	7,342	15%	-32%	-25%
Armstrong	402	19%	250	15%	308	18%	-11%	20%
Beaver	1,119	17%	1,008	15%	1,009	11%	-24%	-27%
Bedford	252	17%	195	14%	103	16%	-12%	14%
Berks	3,274	20%	2,368	15%	2,729	12%	-35%	-20%
Blair	380	17%	438	16%	852	19%	6%	19%
Bradford	197	20%	419	11%	447	13%	-40%	18%
Bucks	2,991	21%	2,185	17%	2,393	12%	-29%	-29%
Butler	643	16%	661	16%	717	14%	-6%	-13%
Cambria	1,087	20%	794	18%	906	15%	-20%	-17%
Cameron	25	32%	9	33%	25	20%	-25%	-39%
Carbon	404	14%	338	16%	336	13%	0%	-19%
Centre	252	19%	227	12%	336	14%	-32%	17%
Chester	2,664	19%	2,339	14%	2,071	13%	-32%	-7%
Clarion	140	26%	137	21%	139	9%	-42%	-57%
Clearfield	224	23%	198	20%	232	21%	-13%	5%
Clinton	125	24%	170	23%	235	20%	-13%	-13%
Columbia	284	16%	325	17%	295	17%	6%	0%
Crawford	555	21%	464	18%	489	18%	-14%	0%
Cumberland	375	28%	612	13%	1,314	15%	-50%	15%
Dauphin	3,707	24%	2,728	24%	2,686	23%	0%	-4%
Delaware	1,145	23%	3,255	20%	3,505	17%	-17%	-15%
Elk	131	26%	148	25%	160	19%	-15%	-24%
Erie	2,925	21%	2,260	20%	2,029	19%	-10%	-5%
Fayette	1,043	15%	1,041	11%	915	13%	-20%	18%
Forest	25	12%	13	8%	5	40%	42%	400%
Franklin	1,217	23%	910	24%	1,182	18%	-9%	-25%
Fulton	54	13%	51	12%	70	9%	-23%	-25%
Greene	151	10%	190	6%	76	9%	-30%	50%
Huntingdon	197	17%	146	17%	171	19%	6%	12%
Indiana	258	16%	296	13%	340	11%	-25%	-15%
Jefferson	207	24%	197	23%	221	17%	-17%	-26%
Juniata	56	29%	66	21%	81	14%	-41%	-33%

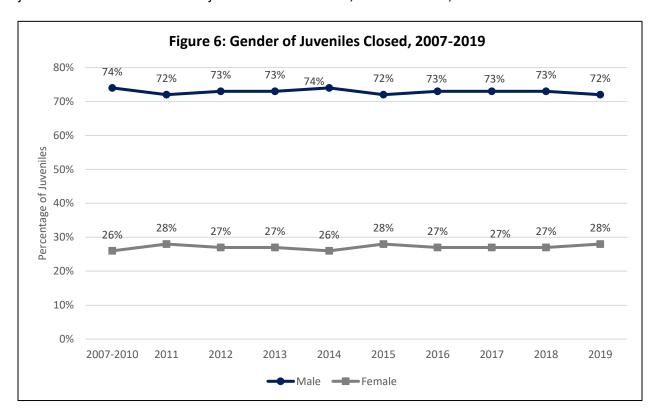
	Table 2: Cou	inty and Sta	tewide Reci	divism Rate	es for Juve	niles Closed			
	Pre-JJSES 2	007-2010	2011-	2014	2015	2015-2019		% Change in Recidivism Rates	
County	Number of Juveniles Closed	Recidivism Rate	Number of Juveniles Closed	Recidivism Rate	Number of Juveniles Closed	Recidivism Rate	Pre-JJSES (2007-2010) to Post-JJSES Initiation" (2011-2019)	2011-2014 to 2015-2019	
Lackawanna	776	24%	752	22%	1,059	17%	-21%	-23%	
Lancaster	1,643	21%	2,249	18%	2,941	18%	-14%	0%	
Lawrence	593	17%	722	17%	415	13%	-12%	-24%	
Lebanon	1,026	27%	702	23%	816	21%	-19%	-9%	
Lehigh	3,611	14%	3392	20%	2,859	19%	36%	-5%	
Luzerne	1,904	17%	1,377	16%	1,194	14%	-12%	-13%	
Lycoming	1,216	28%	1,082	25%	927	19%	-21%	-24%	
McKean	183	23%	194	16%	264	17%	-22%	-11%	
Mercer	586	16%	711	18%	710	19%	19%	6%	
Mifflin	261	27%	209	24%	277	30%	0%	25%	
Monroe	977	14%	794	15%	855	14%	0%	-7%	
Montgomery	3,793	24%	4,144	16%	3,594	15%	-33%	-6%	
Montour	83	22%	72	26%	54	30%	27%	15%	
Northampton	1,951	17%	2,014	18%	2,299	14%	-6%	-22%	
Northumberland	611	23%	667	16%	832	14%	-35%	-13%	
Perry	249	25%	187	26%	177	19%	-8%	-27%	
Philadelphia	8,949	28%	12,902	23%	9,971	17%	-29%	-26%	
Pike	309	13%	274	13%	307	8%	-23%	-38%	
Potter	120	11%	69	13%	39	15%	27%	15%	
Schuylkill	1,011	16%	875	16%	738	14%	-6%	-13%	
Snyder	219	22%	260	22%	220	15%	-14%	-32%	
Somerset	355	13%	234	16%	175	10%	0%	-38%	
Sullivan	16	6%	11	0%	15	13%	33%	N/A ¹²	
Susquehanna	217	18%	184	17%	162	9%	-28%	-47%	
Tioga	271	18%	206	17%	171	13%	-17%	-24%	
Union	105	23%	116	28%	147	16%	-26%	-43%	
Venango	297	13%	434	17%	400	19%	-9%	12%	
Warren	256	17%	201	19%	221	16%	38%	-16%	
Washington	1,121	24%	1318	16%	1,192	12%	6%	-25%	
Wayne	263	15%	210	15%	165	21%	-42%	40%	
Westmoreland	2,191	16%	1795	14%	1,527	14%	20%	0%	
Wyoming	209	19%	138	15%	103	13%	-13%	-13%	
York	3,780	25%	3,422	20%	3,927	17%	-26%	-15%	
Total	72,738	21.6%	74,450	19.0%	73,062	16.1%	-25.9%	-15.3%	

 $^{^{12}}$ A percent change could not be calculated because Sullivan County's recidivism rate was 0% from 2011 to 2014.

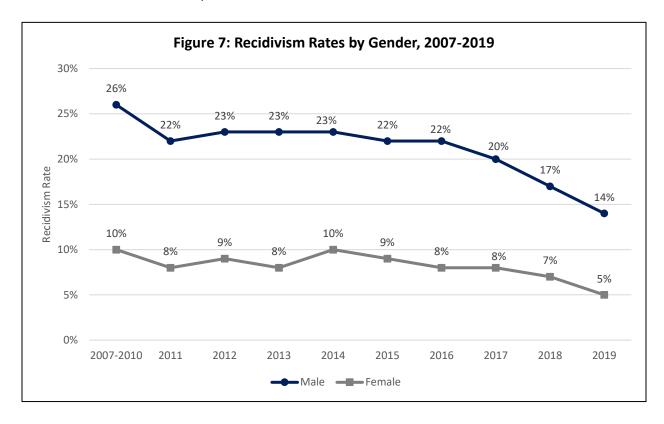
Section 2: Demographic Characteristics and Recidivism

Gender and Recidivism

Over a 13-year span (2007 through 2019), males have consistently accounted for three times as many juveniles closed as females. For juveniles closed in 2019, 72% were male, and 28% were female.



Over the last 13 years, males have consistently recidivated at a much higher rate than females. In 2019, 14% of males recidivated compared to 5% of females.



Race, Ethnicity, and Recidivism

In the following section, race and ethnicity are combined into one category for analysis. For the purposes of this report, the following race and ethnicity categories have been identified:

White Non-Hispanic: Reported as White for race and Non-Hispanic for ethnicity.

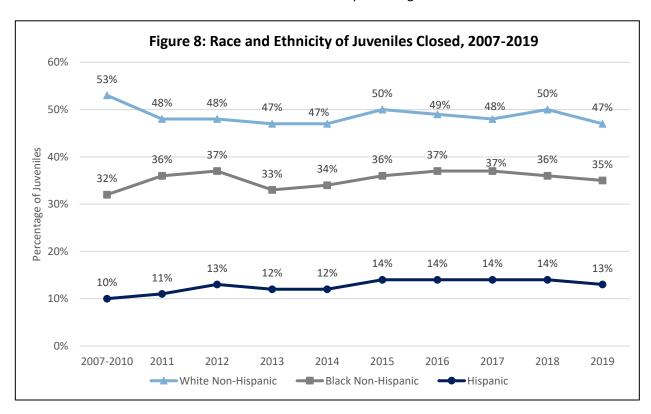
Black Non-Hispanic: Reported as Black for race and Non-Hispanic for ethnicity.

Hispanic: Reported as Hispanic for ethnicity regardless of reported race.

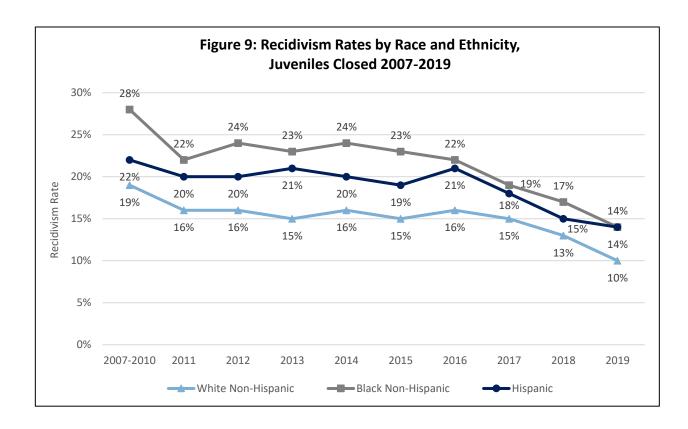
Over the last 13 years, White Non-Hispanic youth were consistently the largest racial/ethnic group closed, followed by Black Non-Hispanic youth, then Hispanic youth. There has also been an increase in the percentage of youth who were Hispanic: 10% in 2007-2010 vs. 14% beginning in 2015 and ending in 2018.

In 2019, 47% of youth were White Non-Hispanic, 35% were Black Non-Hispanic, and 13% were Hispanic.

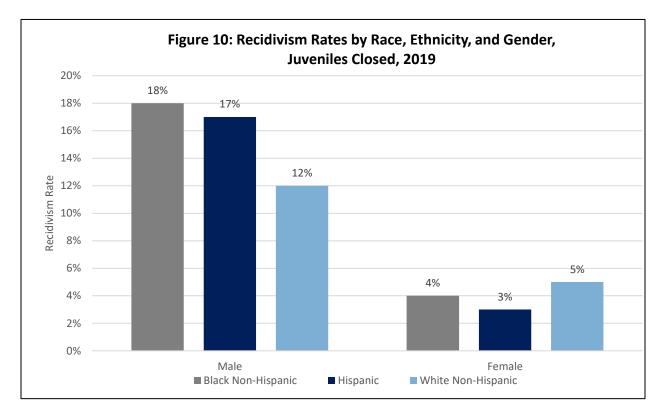
Note: Due to small numbers, juveniles who are not White Non-Hispanic, Black Non-Hispanic, Hispanic or who are of unknown race were excluded from charts pertaining to race.



Historically, Black Non-Hispanic youth recidivated at the highest rate. However, in 2019, Black Non-Hispanic youth and Hispanic youth recidivated at the same rate. In 2019, 14% of Black Non-Hispanic youth and 14% of Non-Hispanic youth recidivated, followed by 10% of White Non-Hispanic youth. These differences are not as pronounced as in years past.



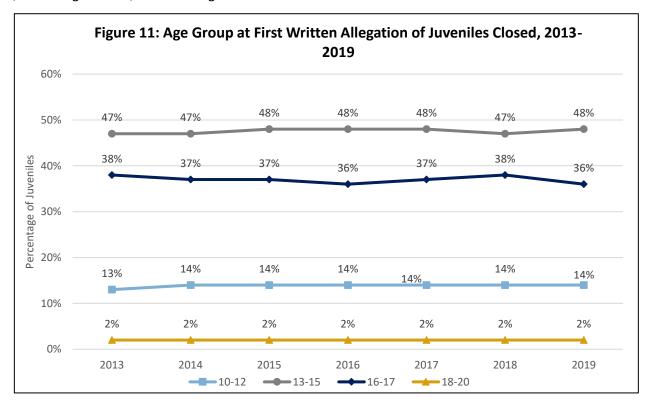
Further analysis of 2019 juveniles closed shows that racial/ethnic differences in recidivism rates are greater for males than for females. Among males, 18% of Black Non-Hispanic youth, 17% of Hispanic youth, and 12% of White Non-Hispanic youth recidivated. Among females, 5% of White Non-Hispanic youth, 4% of Black Non-Hispanic youth, and 3% of Hispanic youth recidivated.



Age at First Written Allegation and Recidivism

Consistent with prior years, youth who were between the ages of 13 and 15 at the time of their first written allegation made up the largest portion of juveniles closed in 2019, followed by those referred at ages 16-17, at ages 10-12, and, finally, at ages 18-20.¹³

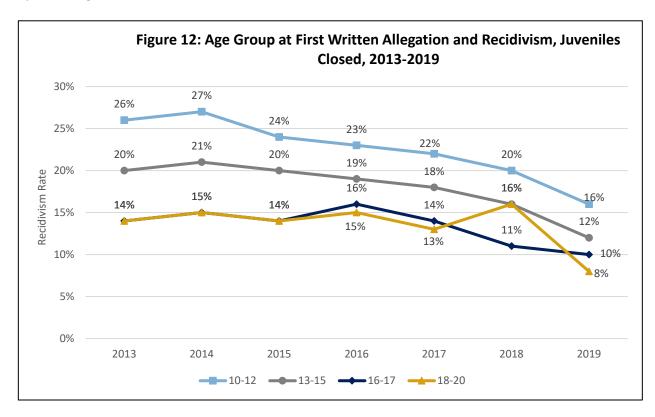
In 2019, 48% of youth had their first written allegation between the ages of 13 and 15, 36% at ages 16-17, 14% at ages 10-12, and 2% at ages 18-20.



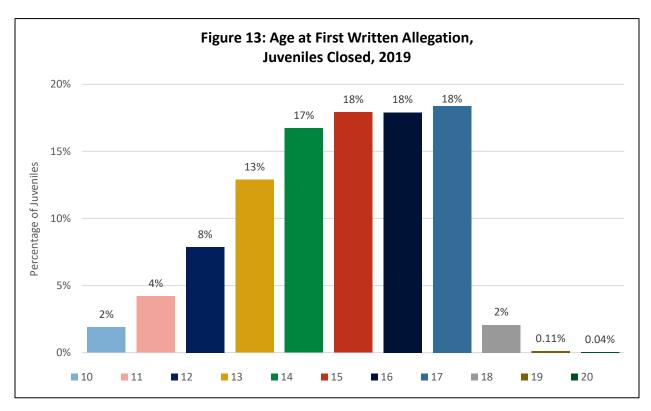
¹³ In Pennsylvania, juvenile court jurisdiction ends when a youth turns 18 years old. There is sometimes a lag between when an alleged offense occurred and when a written allegation for that offense is received by the juvenile court. Therefore, there are a small number of juveniles whose first offense occurred at age 17 but who did not receive their first written allegation until they were 18, 19, or 20 years old.

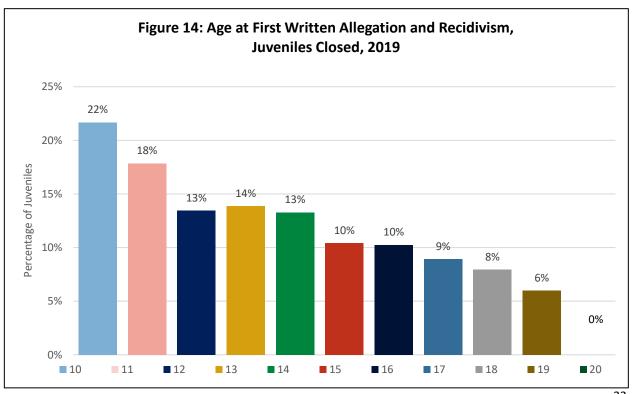
In all the years analyzed, juveniles whose first written allegation occurred at a younger age were more likely to recidivate than juveniles whose first written allegation occurred at an older age. In 2018, contrary to the pattern observed in past years and in 2019, a higher portion of youth whose first allegation was at ages 18-20 recidivated than youth whose first allegation was at ages 16-17.

In 2019, 16% of youth whose first written allegation occurred at ages 10-12 recidivated compared to 12% of youth whose first written allegation was at ages 13-15, and 10% of youth at ages 16-17, and 8% of youth at ages 18-20.



The first figure below shows specific ages for juveniles closed in 2019 while the second shows how age relates to recidivism. Twenty-two percent of juveniles whose first written allegation was at age 10 recidivated compared to 9% of those whose first allegation was at age 17 and 8% of those who were age 18 at the time of their first allegation.



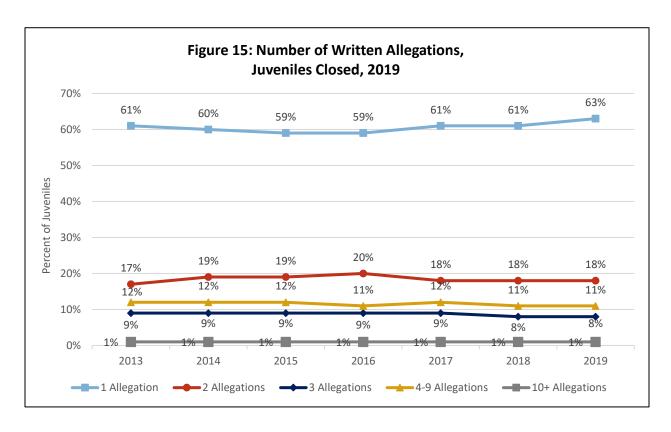


Section 3: Offense History, System Penetration, and Recidivism

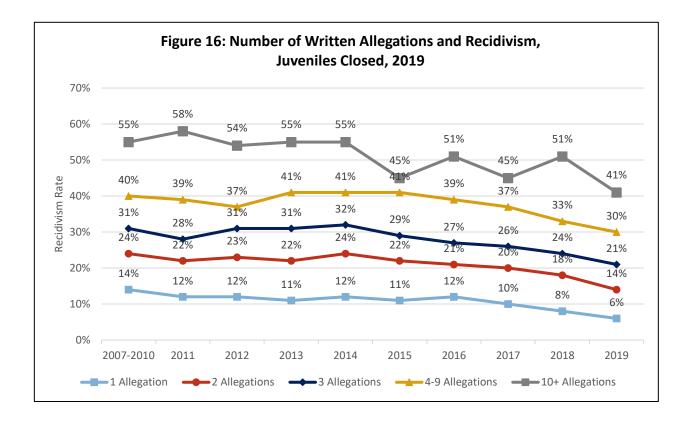
Number of Written Allegations and Recidivism

For each of the years examined (2013 through 2019), over three-quarters of juveniles had one to two written allegations by the time they were closed. Additionally, less than 15% of juveniles had four or more allegations at closure.

In 2019, 63% of juveniles had only one written allegation, 18% had two, 8% had three, 11% had between four and nine, and 1% had 10 or more written allegations.

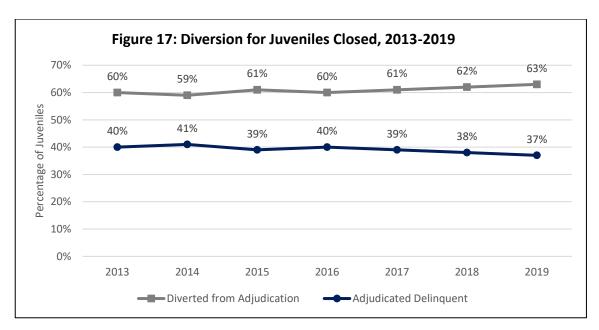


For these same years, youth who had more written allegations recidivated at a higher rate than youth who had fewer written allegations. In 2019, 6% of juveniles with one written allegation recidivated, compared to 14% with two allegations, 21% with three allegations, 30% with between four and nine allegations, and 41% of juveniles with 10 or more allegations.

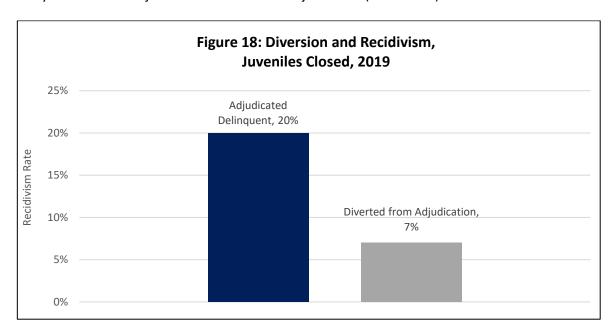


System Penetration and Recidivism

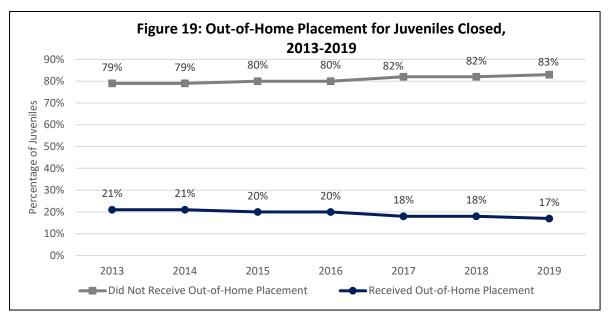
For juveniles closed in 2019, 63% were diverted from adjudication, while 37% were adjudicated delinquent prior to juvenile closure. These percentages are consistent with data for juveniles closed in prior years (2013-2018).



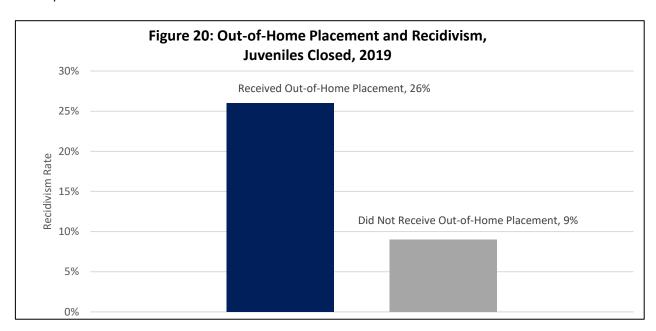
Juveniles closed in 2019 who were adjudicated delinquent prior to closure were almost three times as likely to recidivate as juveniles diverted from adjudication (20% vs. 7%).



For juveniles closed in 2019, 83% did not receive an out-of-home placement disposition, while 17% of juveniles received an out-of-home placement disposition prior to juvenile closure. These percentages are consistent with data for juveniles closed in prior years (2013-2018).



Juveniles who received an out-of-home placement disposition were almost three times as likely to recidivate as juveniles who did not receive an out-of-home placement disposition prior to closure (26% vs. 9%).



Serious, Violent, and/or Chronic Youth and Recidivism

In response to the growth of violent juvenile crime in the late 1980s and early 1990s, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) developed the Comprehensive Strategy for Serious, Violent, and/or Chronic Juvenile Offenders. The terms "serious," "violent," and "chronic" emerged as part of an effort to identify the subset of juveniles that research shows account for a disproportionate share of offending and re-offending and to focus court interventions on this group. Furthermore, longitudinal research following juveniles over time and documenting their offending patterns revealed that there were distinctive developmental pathways of juvenile offending that might require different juvenile justice system responses. It was found, for example, that "violent offenders" follow the Overt Pathway, which starts with minor aggression (e.g., bullying) and progresses to physical fighting and violence when youth get older. "Serious offenders", by contrast, follow the Covert Pathway, which starts out as minor shoplifting and frequent lying and leads to inflicting property damage, and then to offenses like burglary, fraud, and serious theft. "Chronic offenders" have been involved in multiple offenses over time, which is often predictive of future offending.¹⁴

The JCJC wanted to have a research-based method for identifying which youth were at higher risk of reoffending based on their offense profile. For these reasons, starting with the publication of the first recidivism report in May 2013, the JCJC has presented data on the relationship between Serious, Violent, and/or Chronic offending and recidivism. The JCJC consulted with the former Director of OJJDP, James "Buddy" Howell, who provided guidance on which offenses in the PaJCMS should be considered "serious" and "violent" and how to utilize Serious, Violent, and/or Chronic youth offending classifications (defined below) in research on recidivism.

Serious Offender: A juvenile who has been adjudicated delinquent in juvenile court at any point in the juvenile's offending history for one of the following offenses: burglary, theft (felonies only), arson, drug trafficking (manufacture/deliver/possession with intent to deliver), and extortion (theft by extortion).

Violent Offender: A juvenile who has been adjudicated delinquent in juvenile court at any point in the juvenile's offending history for one of the following offenses: homicide or non-negligent manslaughter, rape, robbery, aggravated assault, kidnapping, and select firearm/weapon offenses.

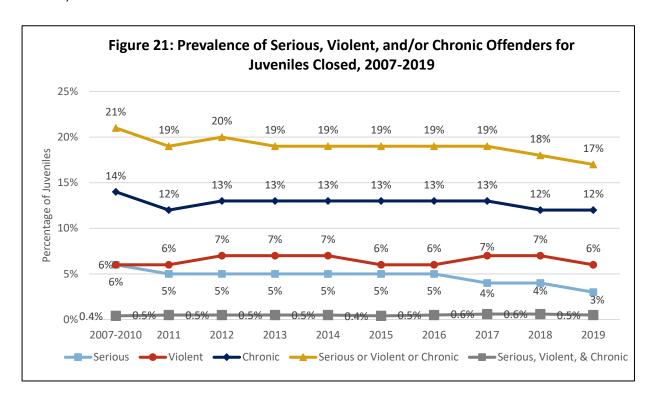
Chronic Offender: A juvenile who has four or more previous written allegations for separate incidents that occurred prior to the date of the 2007-2019 closure.

Serious, Violent, or Chronic Offender: A juvenile who meets the definition of at least one of the following: serious offender, violent offender, or chronic offender.

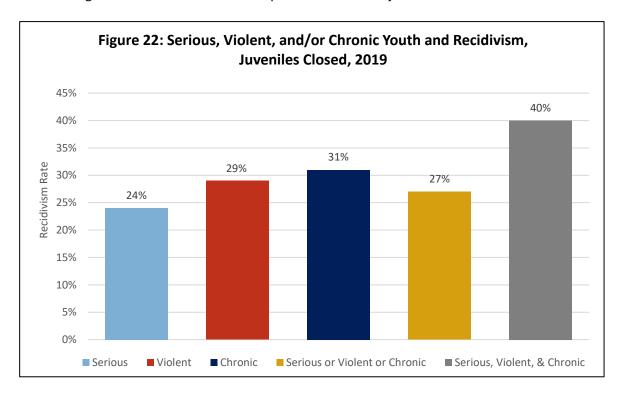
Serious, Violent, and Chronic Offender (SVC): A juvenile who meets the definition of a serious offender, a violent offender, and a chronic offender.

¹⁴ Office of Juvenile Justice and Delinquency Prevention. (1998). *OJJDP Juvenile Justice Bulletin: Serious and Violent Juvenile Offenders*. https://www.ncjrs.gov/pdffiles/170027.pdf

For each of the past 13 years, approximately one out of five juveniles closed met the criteria of being a Serious, or Violent, or Chronic offender. There is consistency in the percentage of youth who meet each of these designations during this period, and, in each year, a larger portion of juveniles closed were Chronic youth than Serious or Violent youth. In 2019, 12% of juveniles closed were Chronic, 6% were Violent, 3% were Serious, 0.5% were Serious, Violent, and Chronic (SVC), and 17% were Serious, or Violent, or Chronic.

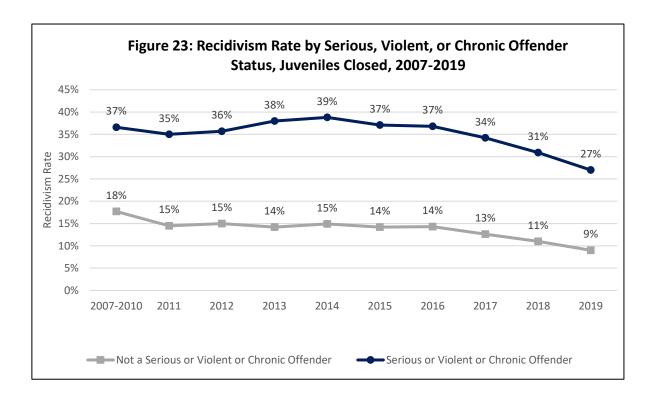


For juveniles closed in 2019, these variables were all strongly correlated with recidivism. Juveniles who met the criteria for being Serious, Violent, and Chronic (SVC) recidivated at a higher rate than those who only met the less restrictive criteria of being Serious, or Violent, or Chronic offenders (40% vs. 27%). These findings are consistent with those of previous cohorts of juveniles closed.



The figure below presents data on recidivism rates between 2007 and 2019 separately for juveniles who were Serious, or Violent, or Chronic and their counterparts. The data shows that, for Serious, Violent, or Chronic youth between 2007 and 2016, the recidivism rate fluctuated, without a clear-cut trend. By contrast, the recidivism rate for their counterparts for 2011 through 2016 was below their recidivism rate average for the "pre-JJSES" years (2007 to 2010).

More recently, the recidivism rates of both groups decreased. The recidivism rates of Serious, or Violent, or Chronic offenders declined from 37% in 2016 to 27% in 2019. The recidivism rates of their counterparts declined from 14% in 2016 to 9% in 2019. Thus, recent declines in the statewide recidivism rate occurred for youth with both more and less severe offense histories.



Section 4: Youth Level of Service/Case Management Inventory™ (YLS) and Recidivism

Background

A fundamental step in recidivism reduction is the use of a research-based risk assessment tool to measure a youth's risks and needs. This information can then be used to determine appropriate levels of supervision, establish case-specific goals, and better allocate resources in order to achieve effective outcomes. In 2009, members of the Executive Committee of the PCCJPO and staff from the JCJC chose to pilot the YLS risk assessment instrument. Since then, the YLS has been chosen as the risk assessment tool to be used in Pennsylvania's juvenile justice system. The YLS 2.0 was introduced in 2017 and is currently being administered by all Pennsylvania counties.¹⁵

The YLS 2.0 is a validated actuarial risk assessment tool that measures 42 static and dynamic risk factors, divided into eight domains, that have been identified as most predictive of youthful re-offending. A youth is assessed at a risk level of low, moderate, or high risk for each domain based on their domain-specific score and at an overall risk level of low, moderate, high, or very high risk based on their total score across the 42 risk factors. The score range for the overall risk level is as follows for males: Low (0-9); Moderate (10-21); High (22-31); Very High (32 or higher). The score range for the overall risk level is as follows for females: Low (0-8); Moderate (9-19); High (20-28); Very High (29 or higher). These results assist juvenile probation officers in targeting a youth's specific needs through treatment, intervention, services, and intensity of supervision.

YLS assessments are completed initially when a youth enters the juvenile justice system. It is best practice for youth to be regularly re-assessed and then given a final YLS assessment at the time their case is closed. Most of the analyses in this section focus on the relationship between the final YLS assessment and recidivism because the final risk level designation is most relevant to predicting a youth's behavior after they are no longer under the supervision of the juvenile court. The analyses in the sections on Risk Level/Risk Score Change between First and Final YLS Assessments and Recidivism examine both the first and the final YLS assessment to see if there was any change in the risk level/risk score of the youth, and whether there is a relationship between risk level/risk score change and recidivism.

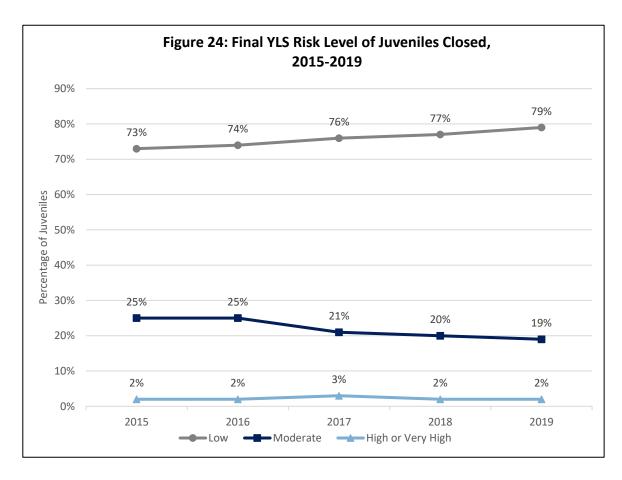
¹⁵ The YLS assessments analyzed in this report used the YLS 2.0 version. The YLS 2.0 range of scores corresponding to each risk level designation differs from the original version.

¹⁶ These domains are: (1) Prior and Current Offenses; (2) Family Circumstances/Parenting; (3) Education/ Employment; (4) Peer Relations; (5) Substance Abuse; (6) Leisure/Recreation; (7) Personality/Behavior; (8) Attitudes/Orientation.

¹⁷ The original YLS was scored the same way for males and females, while the YLS 2.0 uses different cutoff points to assign a risk level to males and females. Due to these differences, 471 initial YLS 1.0 valid assessments were eliminated from analysis. Because no final assessments used the YLS 1.0, none needed to be eliminated.

Final YLS Risk Level and Recidivism¹⁸

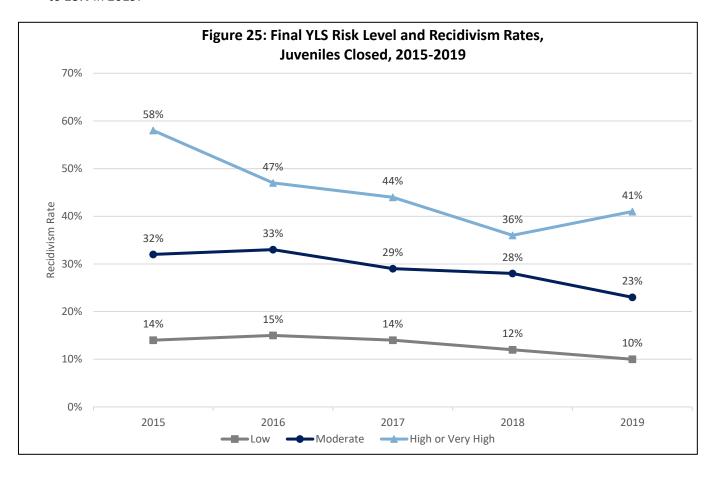
This subsection examines the relationship between a youth's final YLS assessment and recidivism. For juveniles closed in 2019, more than three-quarters (79%) were assessed as low risk, just under one-fifth (19%) were moderate risk, and 2% were high or very high risk. Over the last five years (2015-2019), the percentage of youth closed who were assessed as low risk increased from 73% in 2015 to 79% in 2019. The percentage assessed as moderate risk declined from 25% in 2015 to 19% in 2019.



¹⁸ This report only analyzes YLS risk levels for juveniles whose last YLS assessment was six months before their closing or within 60 days after their closing and that was specifically identified in the PaJCMS as a closing assessment. In other words, initial and review assessments are excluded from being considered final assessments. Forty-seven percent (6,571/13,996) of juveniles closed in 2019 met these criteria.

Consistent with past years, juveniles closed in 2019 who were assessed as high or very high risk were much more likely to re-offend than moderate risk youth, who, in turn, were much more likely to re-offend than low risk youth (41% vs. 23% vs. 10%). These findings are consistent with research that validates the YLS as a risk assessment tool.¹⁹

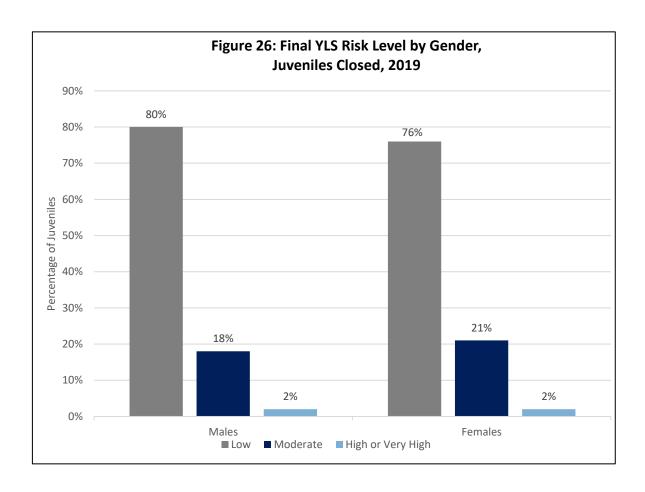
From 2015 to 2018, there was a notable decline in the recidivism rates of youth assessed as high or very high risk, dropping from 58% in 2015 to 36% in 2018. However, the rate rebounded a bit, reaching 41% in 2019. The recidivism rates of moderate risk youth declined over the last four years, from 33% in 2016 to 23% in 2019.



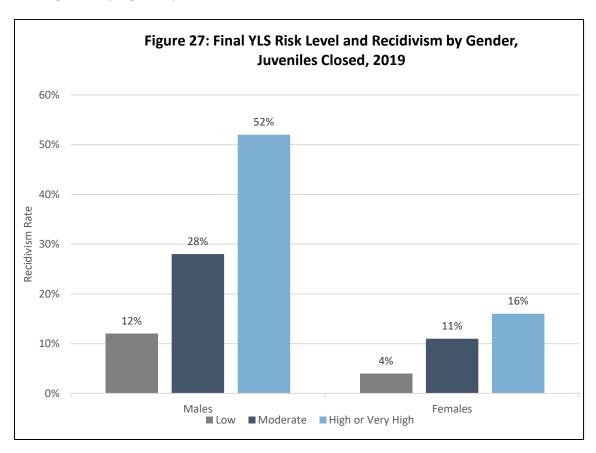
¹⁹ Hoge, R.D., & Andrews, D.A. (2011). *Youth Level of Service/Case Management Inventory™ 2.0: User's Manual.* Multi-Health Systems, Inc.

Final YLS Risk Level and Recidivism by Gender

For juveniles closed in 2019, the risk level distribution of males and females was similar. Eighty percent of males were assessed as low risk, 18% as moderate risk, and 2% as high or very high risk. Seventy-six percent of females were assessed as low risk, 21% as moderate risk, and 2% as high or very high risk.



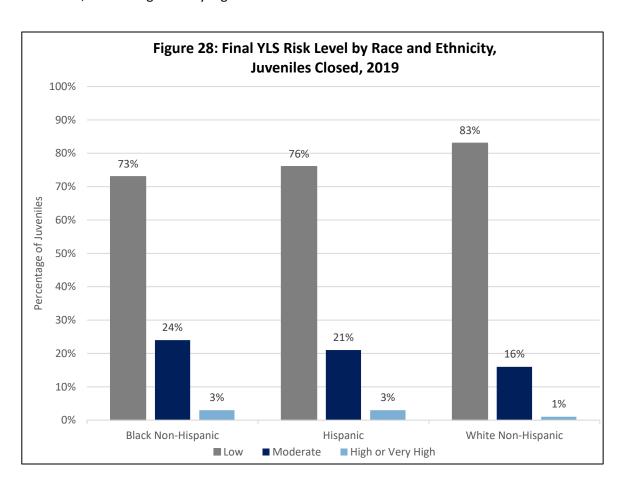
The YLS risk level was correlated with recidivism for both males and females, although males recidivated at a much higher rate at all risk levels. For males closed in 2019, 12% of low risk youth recidivated compared to 28% of moderate risk youth and 52% of high or very high risk youth. For females closed in 2019, 4% of low risk youth recidivated compared to 11% of moderate risk youth and 16% of high or very high risk youth.



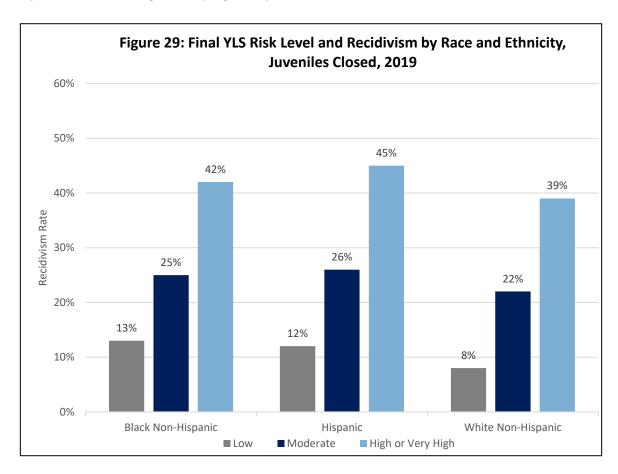
Final YLS Risk Level and Recidivism by Race and Ethnicity

For juveniles closed in 2019, a higher percentage of Black Non-Hispanic youth and Hispanic youth than White Non-Hispanic youth were assessed as moderate risk on the YLS. Conversely, a lower percentage of Black Non-Hispanic youth and Hispanic youth than White Non-Hispanic youth were assessed as low risk.

Specifically, among Black Non-Hispanic youth, 73% were assessed as low risk, 24% moderate risk, and 3% high or very high risk. Among Hispanic youth, 76% were assessed as low risk, 21% moderate risk, and 3% high or very high risk. Among White Non-Hispanic youth, 83% were assessed as low risk, 16% moderate risk, and 1% high or very high risk.

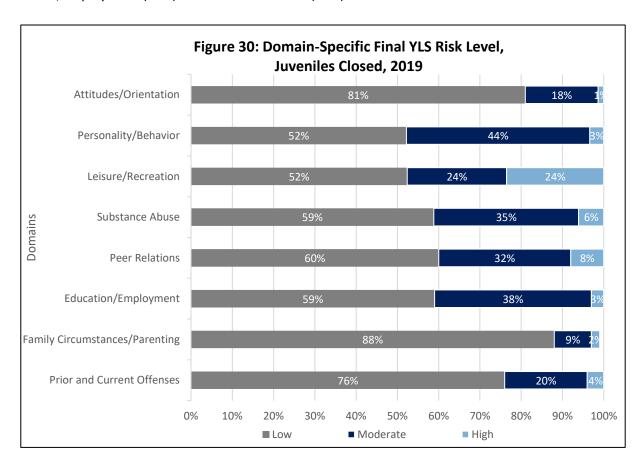


YLS risk level was correlated with recidivism for White Non-Hispanic, Hispanic, and Black Non-Hispanic youth. Among Black Non-Hispanic youth, 13% of low risk youth recidivated compared to 25% of moderate risk youth, and 42% of high or very high risk youth. Among Hispanic youth, 12% of low risk youth recidivated compared to 26% of moderate risk youth, and 45% of high or very high risk youth. Among White Non-Hispanic youth, 8% of low risk youth recidivated compared to 22% of moderate risk youth and 39% of high or very high risk youth.



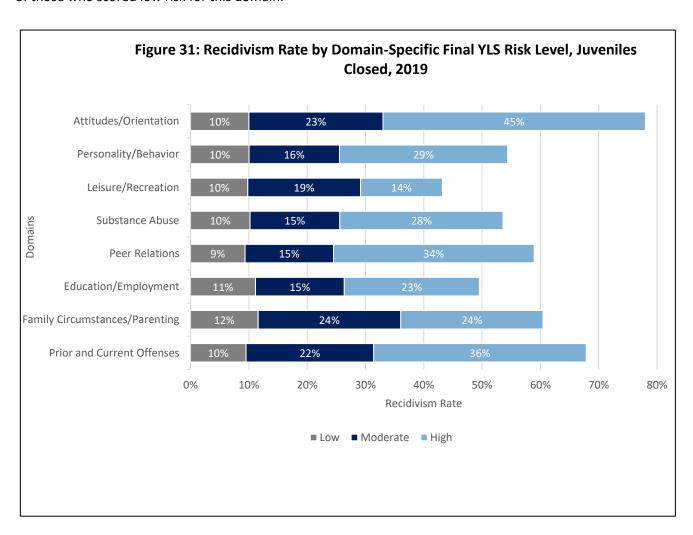
Domain-Specific Final YLS Risk Level and Recidivism

Domain-specific variations exist in risk level profiles of juveniles closed in 2019. In descending order, the top three risk level domains in which the largest portion of juveniles were assessed as either moderate or high risk (excluding Leisure/Recreation) were: (1) Personality/Behavior (47%) and (2 Tie) Education/Employment (41%) and Substance Abuse (41%).²⁰



²⁰ The Leisure/Recreation domain is excluded because it is generally the weakest predictor of delinquency compared to other domains. In addition, for youth at moderate risk or higher, stronger and often multiple risk factors are present; therefore, Leisure/Recreation is not a prioritized target for interventions and treatment aimed at reducing risk

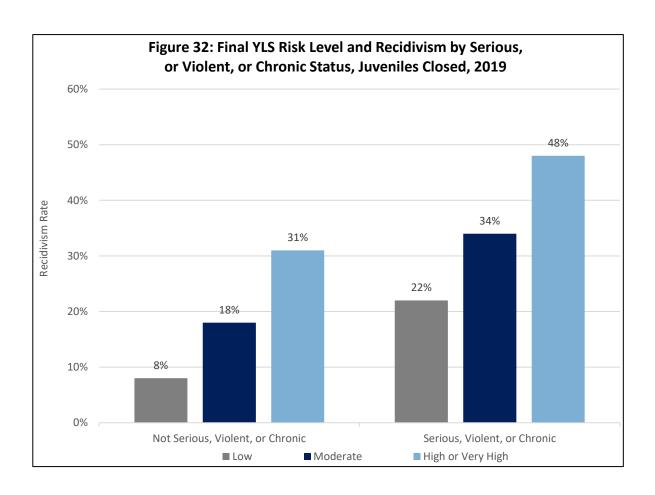
All eight YLS risk level domains were correlated with recidivism. Forty-five percent of juveniles scoring high risk in Attitudes/Orientation recidivated compared to 23% of those who scored moderate risk and 10% of those who scored low risk for this domain. Thirty-six percent of juveniles scoring high risk in Prior and Current Offenses recidivated compared to 22% of those who scored moderate risk and 10% of those who scored low risk for this domain.



Final YLS Risk Level, Serious, or Violent, or Chronic Offending and Recidivism

Final YLS risk levels are predictive of recidivism for youth identified as a Serious, or Violent, or Chronic offender, as well as those who were not a Serious, or Violent, or Chronic offender. For the latter, 8% of low risk, 18% of moderate risk, and 31% of high or very high risk youth recidivated. For those identified as Serious, or Violent, or Chronic, 22% of low risk, 34% of moderate risk, and 48% of high or very high risk youth recidivated.

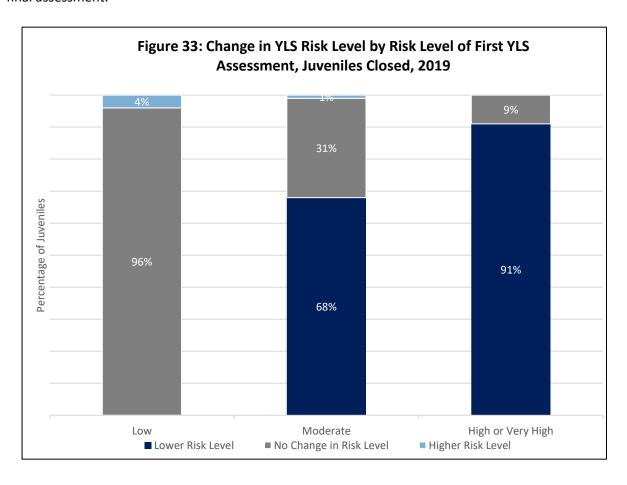
Likewise, being a Serious, or Violent, or Chronic offender is correlated with recidivism after taking into account youths' final YLS risk level. At each YLS risk level, Serious, or Violent, or Chronic youth recidivated at a much higher rate than their counterparts (e.g., 22% vs. 8% for low risk youth).



Risk Level Change between First and Final YLS Assessments and Recidivism

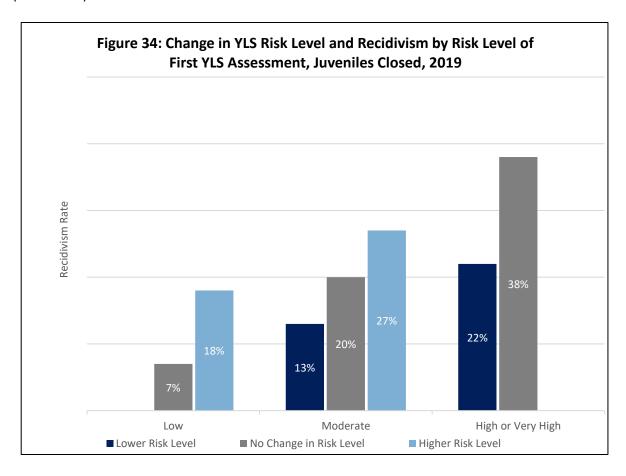
This subsection examines both the first and final YLS assessments to gauge the relationship between risk level change and recidivism. Only 41% (5,725/13,996) of juveniles closed in 2019 met the criteria for inclusion in these analyses.²¹ Any conclusions drawn are, therefore, preliminary and will await confirmation when there is fuller data available in future recidivism reports.

A substantial percentage of youth who were initially moderate, high, or very high risk experienced reductions in their risk level by the time of their final YLS assessment. Sixty-eight percent of youth who were initially assessed as moderate risk were assessed as low risk in their final YLS. Likewise, 91% of youth initially assessed as high or very high risk were assessed as moderate or low risk in their final YLS. By contrast, only 4% of youth who were initially assessed as low risk had a higher risk level in their final YLS assessment, and only 1% of youth initially assessed as moderate risk had a higher risk level in their final assessment.



²¹ In total, 41% (5,725/13,996) of juveniles closed in 2019 met the criteria for inclusion in this section: a final YLS 2.0 assessment within six months before or 60 days after closing with a previous YLS 2.0 assessment that occurred at least 90 days before the final assessment.

Change in the risk level of youth from initial to final YLS assessment is correlated with recidivism. Youth who were initially assessed as moderate risk—and then, in their final YLS, were assessed as low risk—recidivated at a lower rate than youth initially assessed as moderate risk who had no change in risk level (13% vs. 20%). Youth assessed as moderate risk in their first YLS who had no change in risk level, in turn, recidivated at a lower rate than youth first assessed as moderate risk whose risk level had increased in their final YLS (20% vs. 27%). Youth who were initially assessed as high or very high risk—and then, in their final YLS, were assessed as moderate or low risk—recidivated at a lower rate than youth initially assessed as high or very high risk who experienced no change in risk level (22% vs. 38%). Finally, youth initially assessed as low risk whose final YLS assessment risk level had increased were much more likely to recidivate than youth initially assessed as low risk who had no change in risk level (18% vs. 7%).



Study Limitations

It is important to note several limitations to this study. Recidivism rates are a product of many complex factors outside of the control of the juvenile justice system. Demographics, socioeconomic characteristics, criminal opportunities, gangs, and family functioning are just a few of the factors that research has linked to juvenile offending and re-offending. The characteristics of juveniles closed, or the "case mix"—a term used by Dr. Edward Mulvey of the University of Pittsburgh School of Medicine in previous reports—are expected to vary from county to county. ²² Readers are, therefore, cautioned against making comparisons between county recidivism rates and drawing strong conclusions about the effectiveness of a county's juvenile justice programming.

For the same reason, looking at the recidivism rate over time, without attempting to adjust for the "case mix," has important limitations. Section 1 showed that recidivism rates "post-JJSES initiation" (2011-2019) are consistently below "pre-JJSES" rates (2007-2010), and there were substantial declines in recidivism over the last few years. Further research is needed to determine if this is a result of the system improving. It is also possible that changes in the characteristics of juveniles closed are responsible for declining recidivism rates.²³

The YLS provides information that is useful for examining whether trends in recidivism are a product of improvements in the juvenile justice system or changes in the characteristics of juveniles closed, or some combination. This report demonstrates the promise and limitations of this approach. Section 4 of the report shows that there have been declines in the recidivism rate for youth who are at a similar risk of re-offending according to their final YLS assessment, and especially for youth assessed as high or very high risk. While this finding points to improved system performance as a potential explanation for recent declines in the statewide recidivism rate, these conclusions require additional validation and study.

It is important to remember that only 47% of juveniles closed in 2019 had a final YLS assessment within six months of their juvenile closure. Here is a substantial amount of missing data. This is concerning because it is possible that juveniles with a YLS assessment differ from those that did not have a YLS assessment. For example, a higher percentage of juveniles with a final YLS assessment recidivated than juveniles without a final YLS assessment (13% vs. 11%). In future reports, a larger percentage of juveniles closed are expected to have YLS data available to analyze, and it is possible that some of the findings in this report will not be replicated.

²² Mulvey, E.P., Schubert, C.A., and Hawes, S. (2015). *Benchmarking Pennsylvania's Juvenile Recidivism Rate*. Pennsylvania Commission on Crime and Delinquency.

²³ Previous work by Dr. Mulvey and his colleagues comparing "expected recidivism" to observed recidivism rates attempted to adjust for changes in the "case mix" when analyzing recidivism rates across time for juveniles closed between 2007 and 2014. Their results were consistent with the idea that the initiation of the JJSES led to reductions in recidivism. As mentioned in the Introduction, Dr. Mulvey concluded that this analysis is no longer useful as an ongoing measure of the system's performance over time.

²⁴ In order to maximize the number of YLS assessments available to analyze in this report, youth whose most recent assessment occurred as long as six months prior to closure were included. Assessments completed five to six months prior to closure are likely not as predictive of a youth's later behavior as those occurring more proximate to closure. In future reports, it is expected that a higher portion of juveniles will have a YLS assessment closer to their termination from juvenile probation, and it may be possible to utilize more stringent criteria for study inclusion.

While the YLS 2.0 attempts to be comprehensive, like all risk assessment tools, it cannot measure all characteristics of youth that could relate to recidivism. Therefore, there may have been changes in the "case mix" over the last few years that were not fully captured by the YLS beyond the relatively modest increase in the proportion of youth assessed as low risk documented in Section 4 of this report. Thus, unmeasured changes in the "case mix" could be part of the explanation for declining recidivism rates over the last few years. Given this report's finding in Section 3 that Serious, Violent, and Chronic (SVC) youth characteristics are strongly related to recidivism even after taking into account YLS risk levels, future reports may want to find ways to incorporate SVC measures into the analysis of recidivism trends in order to better account for changes in the "case mix." For example, combining YLS and SVC measures when classifying youth as being more or less at risk of re-offending could aid in the interpretation of recidivism trends.

It is important to note that, in past years, expunged cases created a limitation to analyzing trends in county-level recidivism rates. Prior to October 1, 2014, in Pennsylvania, when a case was expunged, all of a juvenile's identifying information pertaining to that case was "erased" and was therefore not available for analysis. Consequently, juveniles with a case expungement between 2007 and 2014 were omitted from the study's sample, unless they had a separate case closed in those years that was not expunged. Due to a change in the Pennsylvania Rules of Juvenile Court Procedure, however, identifying information can now be retained for research purposes. Beginning with juveniles closed in 2015, expunged cases no longer impact the JCJC's ability to calculate recidivism rates.

Additionally, it is important to realize that the data presented in this report are descriptive only and do not demonstrate that any of the variables analyzed "causes" recidivism. For example, the analysis of System Penetration and Recidivism showed that juveniles who received out-of-home placement were more than twice as likely to recidivate as juveniles who did not receive out-of-home placement. Out-of-home placement is correlated with recidivism, but the data presented in this report do not allow for the conclusion to be drawn that out-of-home placement itself causes youth to recidivate. Juveniles who receive out-of-home placement could have many other characteristics that are also correlated with recidivism (e.g., being a Serious, or Violent, or Chronic offender). Looking at the descriptive relationship between a variable and recidivism is often a valuable first step toward deeper analysis, which is how the data in this report should be viewed.

An additional limitation of this study involves a methodological issue. Because only Pennsylvania-based case management systems were queried for recidivating events, recidivism that occurred in other states or jurisdictions was not captured in the analysis. Other states that have conducted similar recidivism analyses generally only use case management systems unique to their state, so this is a common limitation to recidivism research.