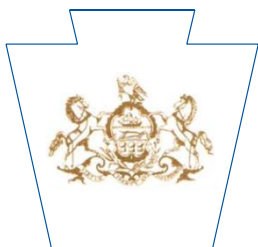


January
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The Pennsylvania Juvenile Justice Recidivism Report: Juveniles with Cases Closed 2007-2016

Pennsylvania Juvenile Court Judges' Commission
www.jcjc.pa.gov

Commonwealth of Pennsylvania
Tom Wolf
Governor



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2007-2016

Prepared By:

Michael Schlossman, Ph.D.
Juvenile Court Judges' Commission
Research Analyst
c-mschloss@pa.gov

Rebecca Anderson
Center for Juvenile Justice
Training & Research
Information Technology Generalist
c-reanders@pa.gov

Juvenile Court Judges' Commission
601 Commonwealth Ave, Suite 9100
P.O. Box 62425
Harrisburg, PA 17106-2425
717.787.6910
www.jcjc.pa.gov

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Table of Contents

Introduction	1
Methodology	5
Definitions	6
Executive Summary	8
Findings	12
Section 1: State- and County-Level Recidivism Patterns	12
Recidivism Rate	12
Court of First Recidivating Case	13
Length of Time to Subsequent Delinquency Adjudication or Criminal Conviction.....	14
Offense Type and Charge Grade of First Re-Offense	15
County-Specific Recidivism Rates	17
Summary of Key Findings	34
Section 2: Demographic Characteristics and Recidivism	35
Gender and Recidivism	35
Race, Ethnicity, and Recidivism.....	37
Age at First Written Allegation and Recidivism	40
Family Status and Recidivism	43
Summary of Key Findings	46
Section 3: Offense History, System Penetration, and Recidivism.....	47
Number of Written Allegations and Recidivism.....	47
System Penetration and Recidivism.....	49
Serious, Violent, and Chronic Youth and Recidivism	51
Summary of Key Findings	54
Section 4: Youth Level of Service/Case Management Inventory (YLS) and Recidivism	55
Background	55
Final YLS Risk Level and Recidivism.....	56
Final YLS Risk Level and Recidivism by Gender	58
Final YLS Risk Level and Recidivism by Race/Ethnicity.....	60
Domain-Specific Final YLS Risk Level and Recidivism.....	63
Final YLS Risk Level, Serious, Violent, and Chronic Offending, and Recidivism	65

Risk Level Change between First and Final YLS Assessments and Recidivism	66
Risk Score Change between First and Final YLS Assessments and Recidivism	68
Summary of Key Findings.....	70
Limitations of the Study.....	72

Introduction

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 Commission 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. The following is the statement purpose of the JJSES:



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.¹

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 or not criminal justice interventions, from diversion through incarceration, are making a difference in keeping offenders from committing more crimes."² 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 case closed.

Consequently, the JCJC undertook the project and developed the methodology and capacity to monitor the statewide recidivism rates of juvenile offenders. 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 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 task was to integrate these data sources into a useful, continuing measure of recidivism.

¹ For more information on Pennsylvania's Juvenile Justice System Enhancement Strategy, visit: <http://www.jcjc.pa.gov>

² Virginia Department of Justice. (2005). Juvenile recidivism in Virginia. *DJJ Quarterly*, 3, 1-12.

Discussions were held with Temple University Criminal Justice Professor Phil Harris, JCJC staff, and representatives from the Pennsylvania Council of Chief Juvenile Probation Officers 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.

The two-year tracking period was selected because there was a consensus that recidivism beyond two years from case closure would be less likely to 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 proceedings³ were included in the definition of recidivism since these case outcomes require judicial determinations.

Initial recidivism studies had two overarching goals. First, since 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 cases closed in 2007, 2008, 2009, and 2010 to provide an accurate measure of pre-JJSES recidivism. In April 2013, the JCJC released *The Pennsylvania Juvenile Justice Recidivism Report: Juveniles with a 2007 Case Closure*, which detailed the outcomes of youth with a case closed from a juvenile probation department in 2007. In November 2013, the JCJC released its second statewide report, entitled *The Pennsylvania Juvenile Justice Recidivism Report: Juveniles with Cases Closed in 2007, 2008, or 2009*. In November 2014, the JCJC released its third statewide report, entitled *The Pennsylvania Juvenile Justice Recidivism Report: Juveniles with Cases Closed in 2007, 2008, 2009, or 2010*. While full implementation of the JJSES may take years, the data obtained from these reports provide a gauge by which to measure the successfulness of the strategy after its implementation 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 examined data from 2007-2012 and analyzed trends over time in recidivism rates and the differences between recidivists and non-recidivists. Finally, a shorter *Research in Brief: Juveniles with Cases Closed between 2007 and 2014* was published in February 2019 that analyzed time trends and recidivism patterns for the full range of years for which recidivism data was available. The current study updates the analysis of recidivism trends and comparison of recidivists and non-recidivists to include juveniles with a case closure in 2015 and 2016.

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 and post-JJSES initiation by considering the observed recidivism of the youth in the years post-JJSES initiation (2011, 2012, 2013, 2014) to a calculated

³ Findings of guilt included: a guilty verdict, a guilty plea, and a nolo contendere plea.

expected recidivism for these groups if they had been processed in the years prior to JJSES (2007-2010). Comparing the observed and expected recidivism rate for the newer sample took into account possible differences in background characteristics (e.g., number of prior arrests) between the groups at the different times. In effect, it looked at how many of each newer sample would be projected to have recidivated if that newer sample had been processed in the juvenile system during the pre-JJSES years and compared it to how many actually recidivated.

This approach was valuable for documenting differences in the performance of the system for the four years prior to as compared to after the implementation of JJSES. In consultation with Dr. Mulvey, however, it was decided not to use that approach in the current report.⁴ Instead data on Youth Level of Service/Case Management Inventory (YLS) scores was incorporated to obtain a picture of differential performance of the system on youth at different levels of risk for recidivism.

One of the cornerstones of the JJSES has been the successful introduction and use of the Youth Level of Service/Case Management Inventory (YLS), and later the YLS 2.0, within juvenile probation departments across the Commonwealth. The YLS is an 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. Generally, youth are assessed at the time they enter the juvenile justice system. Upon completion of the YLS assessment, youth are assigned a numeric score and risk level (i.e., low, moderate, high, or very high) and their top criminogenic needs (those things recognized as driving their delinquent behavior) are identified. These results assist juvenile probation officers in targeting a youth's specific needs through treatment, intervention, services, and intensity of supervision. Best practice also dictates that youth be reassessed at regular intervals while under juvenile court supervision and again at the time of case closure.

This study is the first to take advantage of Pennsylvania's use of the YLS in order to analyze the relationship between juveniles' assigned risk level in regular practice and recidivism. Analysis of the relationship between YLS risk levels and recidivism is important because it provides validation for the tool's ability to distinguish juveniles who are at greater risk of recidivating from those who are at a lower risk. While prior research has validated the YLS as being a useful predictor of recidivism, it is nonetheless important to confirm that it is working as intended in Pennsylvania, as well as to examine whether the YLS is more predictive for certain demographic groups than others (e.g., males versus females). Just as importantly, the YLS provides information that can be used in future reports to examine whether trends in recidivism are a product of improvements in the juvenile justice system or changes in the

⁴ We did not use the comparison of expected and observed recidivism rates for two reasons. First, there is little need to establish that post-JJSES initiation years have shown consistently lower recidivism rates, even when background characteristics are considered; that was done in the previous reports. Moreover, comparing current recidivism rates to projected rates for cases closed over a decade ago (2007 – 2010) has limited interpretability for current practice. Second, any alternative, and possibly more timely comparisons of expected and observed rates would not have a clear, consistent demarcation line that could provide a "before" and "after" period with policy implications. The comparisons in the earlier report had the sample of cases closed in each year after 2010 compared to the cases closed in the years before 2010. This was done because there was the reasonable expectation that implementation of JJSES could conceivably shift the composition of the characteristics of youth involved in the system. Any approach that might compare expected recidivism from a prior period (say the three prior years) to observed rates, however, would introduce an inconsistent metric for each new year, with no clear policy relevance or comparability across each year. In short, it would produce more confusing, rather than illuminating, findings.

characteristics of juveniles with cases closed. If the recidivism rate decreased between 2015 and 2017, for example, it would be possible to examine whether there were declines in the recidivism rates of particular risk level groups (e.g., moderate risk youth) that might explain this outcome. An alternative explanation for declining recidivism rates that could be examined is whether there were decreases in the percentage of juveniles with cases closed who were assessed as high or very high risk.

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 descriptive statistics of juvenile recidivists and non-recidivists for adolescents with case closures in 2015 and 2016, and on comparing their recidivism patterns to prior years (2007 through 2014). 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 Juvenile Court Judges' Commission (JCJC) began the data collection process by querying the Pennsylvania Juvenile Case Management System (PaJCMS) to identify juveniles whose cases were closed by a juvenile probation department in 2015 and 2016. Juveniles were included in the sample if they had a case that occurred prior to their closure date that had a valid disposition.⁵ A data file was created that included the juvenile's name, date of birth, State Identification Number (SID), social security number (SSN), and the date of the case closure. These juveniles formed the base sample for the study.

JCJC then provided this base sample to the Administrative Office of Pennsylvania Courts (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.) his or her SID alone, or 2.) two of the following: his or her last name, his or her date of birth, or his or her social security number. The AOPC provided to JCJC the most serious substantiated offense and the disposition for that case for all misdemeanor and felony convictions occurring after the close date.

Concurrently, PaJCMS was queried to determine if any of the youth from the base sample recidivated in juvenile court, and information on both subsequent adjudications of delinquency and criminal convictions was incorporated into a data file. 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 his or her case 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 chronic offenders and the Youth Level of Service (YLS) assessment was also retrieved from the PaJCMS.

⁵ 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."

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.

Case Closure: The juvenile's termination from juvenile court supervision. A juvenile could be on supervision for multiple individual cases at the time of closure.

Chronic Offender: A juvenile who has four or more previous written allegations for separate incidents that occurred prior to the date of the 2007-2016 case closure.

Cohort: A group of individuals that share a common characteristic, such as the year of their case 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).⁶

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.

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.

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).

⁶ In this report, when two variables are described as being correlated, then 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.

Recidivated: To have committed a subsequent felony or misdemeanor offense that resulted in an adjudication of delinquency in juvenile court or criminal conviction within two years of case 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 his or her juvenile 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 his or her juvenile 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 a juvenile has committed an act of delinquency. It is synonymous with a "court referral," though written allegation is the preferred language.

Youth Level of Service/Case Management Inventory (YLS): A 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. The Youth Level of Service/Case Management Inventory is referred to as the YLS in this report.

Executive Summary

Section 1: State- and County-Level Recidivism Patterns

- For juveniles with cases closed in 2015 and 2016, the recidivism rate was 18.5% and 18.4%, respectively. 2016's recidivism rate (18.4%) is the lowest since the Juvenile Court Judges' Commission (JCJC) began tracking recidivism. The recidivism rates in 2015 and 2016 continue the trend of "post-JJSES initiation" rates being below the "pre-JJSES" rate (21.6% for the years 2007-2010).
- For juveniles with cases closed between 2007 and 2010, 56% of re-offenders first recidivated in criminal court and 44% in juvenile court. Since 2011, the percentage of re-offenders who first recidivated in criminal court has consistently been above 60% (62% in 2015 and 63% in 2016).
- The average number of months between case closure and a recidivism event has increased steadily over time. For juveniles with a case closed between 2007 and 2010, the average number of months between case closure and a new adjudication or conviction was 11.3 months. For juveniles closed in 2015 and 2016, the average number of months had increased to 12.2.
- Between 2007 and 2016, among youth who re-offended, the first new offense was a misdemeanor in approximately two-thirds of cases, and this percentage was consistent over time. For juveniles with cases closed in 2015, the first new re-offense was a misdemeanor in 68% of cases and a felony in the other 32%. For juveniles with cases closed in 2016, the first new re-offense was a misdemeanor in 69% of cases and a felony in the other 31%.
- Almost three-quarters of counties (49/67 or 73%) had an average recidivism rate in the "post-JJSES initiation" era that was below their average recidivism rate in the "pre-JJSES era." Among the 49 counties with a lower "post-JJSES initiation" than "pre-JJSES" recidivism rate, the mean percentage decrease in recidivism was 21.2% and the median percentage decrease was 16.7%.

Section 2: Demographic Characteristics and Recidivism

- Over a ten-year span (juveniles with cases closed between 2007 and 2016), males have consistently been overrepresented in juvenile court, and females underrepresented as compared to the general population. In 2015, 72% of juveniles with cases closed were male and 28% were female. In 2016, 73% of juveniles closed were male and 27% were female.
- For juveniles with cases closed between 2007 and 2016, males have consistently recidivated at a much higher rate than females. In 2015, 22% of males recidivated compared to 9% of females. In 2016, 22% of males recidivated compared to 8% of females.
- Among juveniles with cases closed between 2007 and 2016, White Non-Hispanic youth were consistently the largest racial/ethnic group, followed by Black Non-Hispanic youth, and then Hispanic and Asian Non-Hispanic youth. There has also been a gradual increase in the percentage of youth who were Hispanic: 10% in 2007-2010 versus 14% in 2015 and 2016.

Executive Summary (Continued)

- Between 2007 and 2016, juveniles with cases closed who were Black Non-Hispanic recidivated at the highest rate, followed by Hispanic youth, and then White Non-Hispanic youth and Asian Non-Hispanic youth.
- Further analysis of 2015-2016 juveniles with cases closed shows that racial/ethnic differences in recidivism exist for males but not for females. Among males, 28% of Black Non-Hispanic, 24% of Hispanic, and 18% of White Non-Hispanic youth recidivated. Among females, 10% of Black Non-Hispanic, 9% of White Non-Hispanic, and 8% of Hispanic youth recidivated.
- In all years analyzed (2007 through 2016), 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 2015, 24% of youth whose first written allegation occurred at ages 10-12 recidivated compared to 20% of youth whose first written allegation was at ages 13-15, and 14% of youth at ages 16-17, and also 14% of youth at age 18. In 2016, 23% of youth whose first written allegation was at ages 10-12 recidivated compared to 19% of youth whose first written allegation was at ages 13-15, and 16% of youth at 16-17, and 15% of youth at age 18.
- There was an increase in the percentage of youth with cases closed whose parents had never been married between the 2007-2010 period and 2012 (41% vs. 50%). This higher percentage has continued through 2015 (52%) and 2016 (52%). Similarly, there was a decline in the percentage of youth whose parents had separated or divorced between the 2007-2010 period and 2013 (29% vs. 22%). This lower percentage has continued through 2015 (22%) and 2016 (22%).
- Between 2007 and 2016, juveniles with cases closed whose parents were never married recidivated at a similar rate as those whose parent or parents were deceased. These youth recidivated at a higher rate than juveniles whose parents were separated or divorced, who, in turn, recidivated at a higher rate than youth whose parents were married.

Section 3: Offense History, System Penetration, and Recidivism

- For each of the four years examined (2013 through 2016), over three-quarters of juveniles had 1-2 written allegations by the time their cases were closed. Additionally, less than 15% of juveniles had 4 or more allegations at case closure.
- For the years 2007 through 2016, youth with cases closed who had more written allegations recidivated at a higher rate than youth who had fewer written allegations. In 2015, 11% of juveniles with one written allegation recidivated, compared to 22% with two allegations, 29% with three allegations, 41% with between four and nine allegations, and 45% of juveniles with ten or more allegations. In 2016, 12% of juveniles with one written allegation recidivated, compared to 21% with two allegations, 27% with three allegations, 39% with between four and nine allegations, and 51% of juveniles with ten or more allegations.
- For juveniles with cases closed in 2015-and 2016, 61% and 60%, respectively, were diverted from adjudication and formal processing, while 39% and 40% were adjudicated delinquent prior

Executive Summary (Continued)

to case closure. For the same period, 80% of juveniles with cases closed in 2015 and 2016 did not receive an out-of-home placement disposition, while 20% of juveniles received an out-of-home placement disposition prior to case closure. These percentages are consistent with data for juveniles closed in 2013 and 2014.

- Juveniles closed in 2015-2016 who were diverted from adjudication and formal processing were less than half as likely to recidivate as juveniles who were adjudicated delinquent prior to case closure (11% vs. 29%). Similarly, juveniles who did not receive an out-of-home placement disposition were less than half as likely to recidivate as juveniles who received an out-of-home placement disposition prior to case closure (14% vs. 36%).
- For each of the past ten years (2007 through 2016), approximately one out of five juveniles whose cases were closed met the criteria of being a Serious, or Violent, or Chronic offender
- For juveniles whose cases were closed in 2015-2016, 45% of Serious, or Violent, or Chronic offenders recidivated compared to only 18% 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 whose cases were closed (2007 through 2014).

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

- For juveniles with cases closed in 2015-2016, almost three-quarters (73%) were assessed as low risk, a quarter were moderate risk, and a very small number (2%) were high or very high risk in their final YLS assessment.
- As expected, juveniles who were assessed as high or very high risk in their final YLS assessment 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 (52% vs. 32% vs. 15%). While this pattern was true for both 2015 and 2016 case closures, high or very high risk youth were more likely to recidivate for juveniles closed in 2015 than in 2016 (58% vs. 47%).
- The risk level distribution of males and females in their final YLS assessment was similar. For males in 2015-2016, 73% were assessed as low risk, 26% moderate risk, and 2% high or very high risk. For females in 2015-2016, 76% were assessed as low risk, 23% moderate risk, and 1% high or very high risk.
- A youth's risk level based on their final YLS assessment is correlated with recidivism for both males and females, though males recidivated at a much higher rate at all risk levels. For males with cases closed in 2015-2016, 17% of low risk youth recidivated compared to 37% of moderate risk youth and 54% of high or very high risk youth. For females with cases closed in 2015-2016, 7% of low risk youth recidivated compared to 18% of moderate risk youth and 40% of high or very high risk youth.
- For juveniles with cases closed in 2015-2016, a higher percentage of Black Non-Hispanic and Hispanic youth than White Non-Hispanic youth were assessed as moderate risk on their final YLS

Executive Summary (Continued)

assessment. Likewise, a lower percentage of Black Non-Hispanic and Hispanic youth than White Non-Hispanic youth were assessed as low risk.

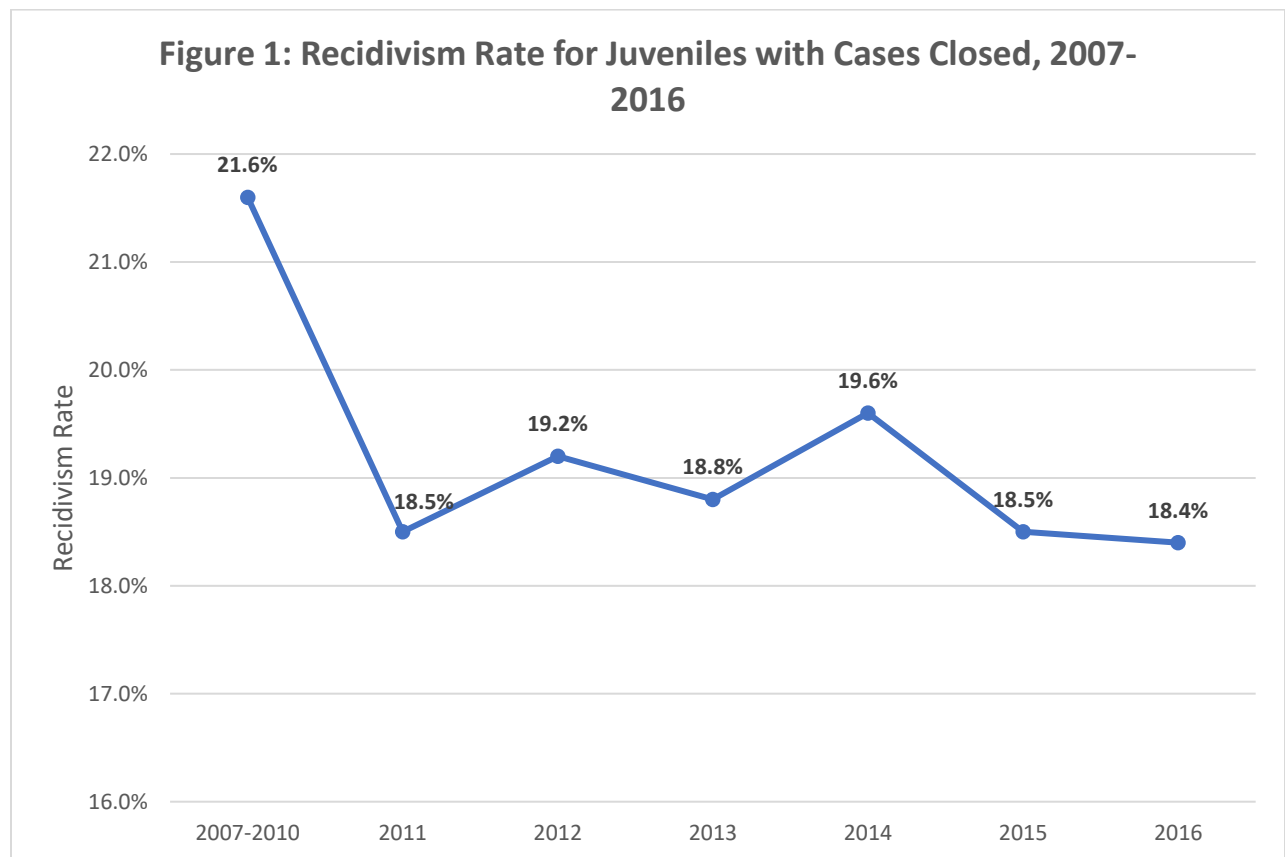
- A youth's final YLS assessment risk level is correlated with recidivism for White Non-Hispanic, Hispanic, and Black Non-Hispanic youth. For Black Non-Hispanics, 18% of low risk youth recidivated compared to 36% of moderate risk youth, and 50% of high or very risk youth. For Hispanics, 16% of low risk youth recidivated compared to 31% of moderate risk youth, and 56% of high or very high risk youth. For White Non-Hispanics, 12% of low risk youth recidivated compared to 29% of moderate risk youth and 53% of high or very high risk youth.
- The final YLS assessment risk level domains in which the largest portion of youth scored either moderate or high risk (excluding Leisure/Recreation), in descending order, were: (1) Personality/Behavior (47%); (2) Education/Employment (46%); (3) Peer Relations (43%); (4) Substance Abuse (38%); (5) Prior and Current Offense (27%); (6) Attitudes and Orientation (21%); (7) Family Circumstances/Parenting (12%).
- For juveniles' final YLS assessment, three risk level domains stood out as having the strongest relationship to recidivism: Prior and Current Offenses, Attitudes/Orientation, and Peer Relations.
- 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 juveniles at each risk level on the YLS, being classified as a Serious, or Violent, or Chronic offender greatly increased the likelihood of recidivism.
- Sixty percent of youth who were initially assessed as moderate risk were assessed as low risk in their final YLS. Likewise, 88% 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 much lower rate than youth initially assessed as moderate risk who had no change in risk level (22% vs. 35%). 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 much lower rate than youth initially assessed as high or very high risk who experienced no change in risk level (36% vs. 61%).
- Sixty-four percent of youth who were initially assessed as low risk saw a decline in their risk scores, while 17% saw no change and 18% saw an increase. Eighty-four percent of youth who were initially assessed as moderate risk saw a decline in their risk scores, while 4% saw no change and 12% saw an increase. Ninety-three percent of youth who were initially assessed as high or very high risk saw a decline in their risk scores, while 2% saw no change and 5% saw an increase. Thus, risk score reduction was more common for youth assessed as higher risk than for youth assessed as lower risk.
- Youth who experienced increases in their risk score recidivated at a higher rate than youth who experienced no change or a decrease in their risk score.

Findings

Section 1: State- and County-Level Recidivism Patterns

Recidivism Rate

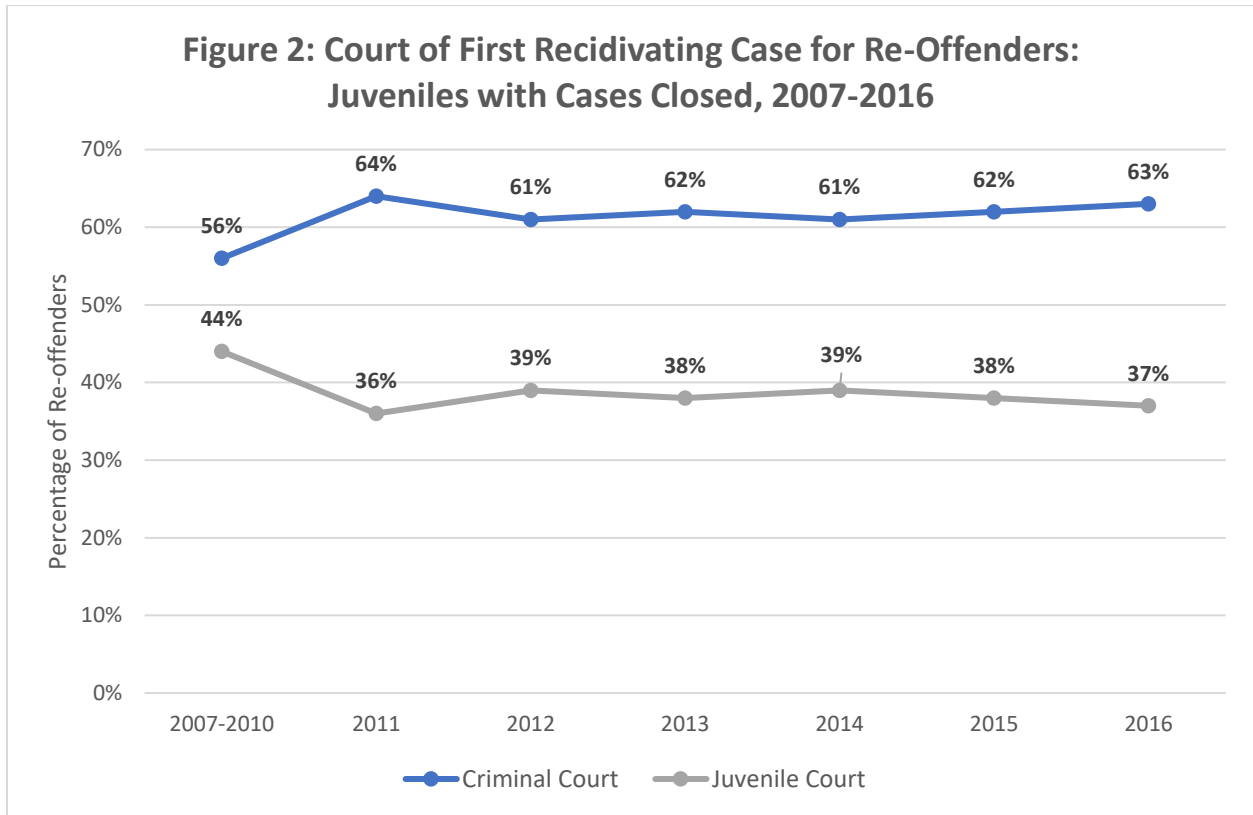
For juveniles with cases closed in 2015 and 2016, the recidivism rate was 18.5% and 18.4%, respectively. 2016's recidivism rate (18.4%) is the lowest since the Juvenile Court Judges' Commission (JCJC) began tracking recidivism. The recidivism rates in 2015 and 2016 continue the trend of "post-JJSES initiation" rates being below the "pre-JJSES" rate (21.6% for the years 2007-2010).*



* Due to the many factors outside of the control of the juvenile justice system that affect recidivism rates, and also may vary over time, the reader is cautioned against drawing strong conclusions about changes in the performance of the state's juvenile justice system based on the data presented in Figure 1. See the Limitations section for a discussion of this issue.

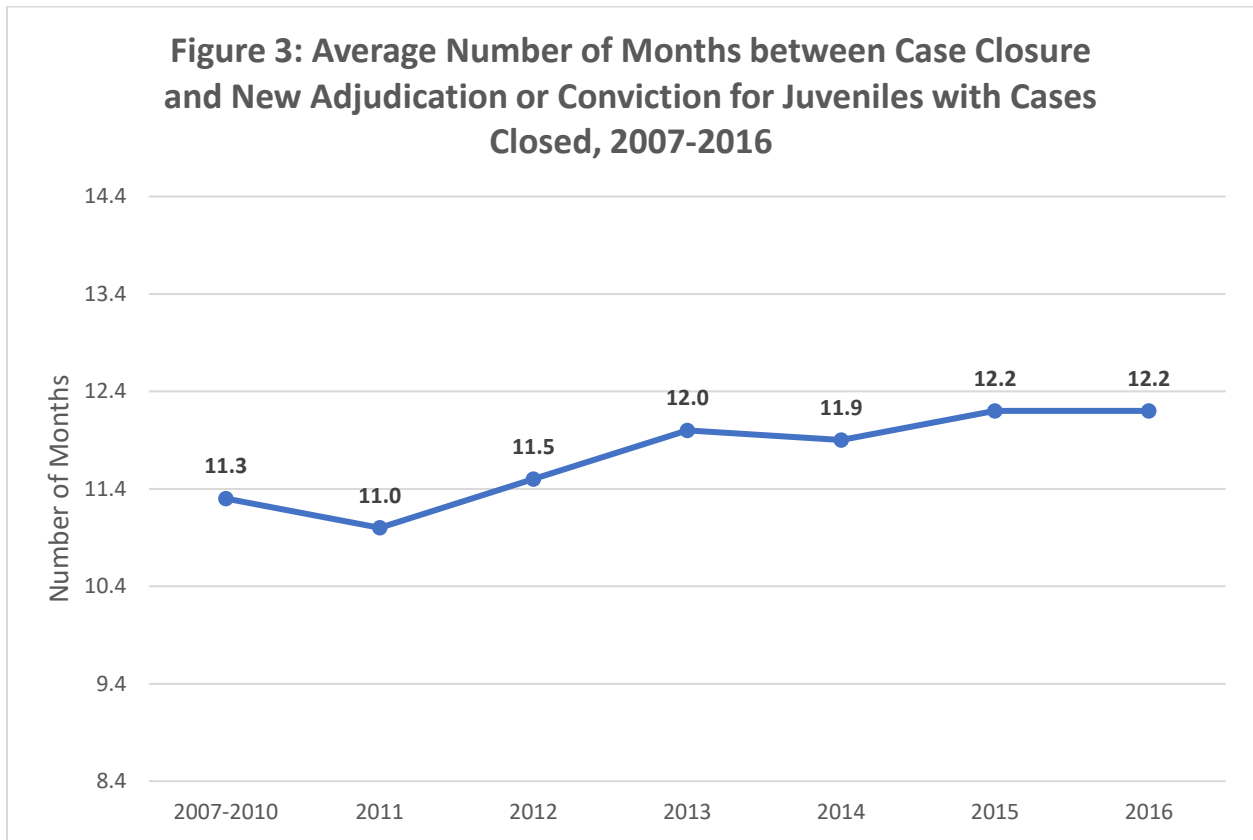
Court of First Recidivating Case

For juveniles with cases closed in 2015, 62% of re-offenders first recidivated as adults, whereas 38% first recidivated as juveniles. For juveniles with cases closed in 2016, 63% first recidivated as adults, whereas 37% first recidivated as juveniles. For juveniles with cases closed between 2007 and 2010, 56% of re-offenders first recidivated in criminal court. Since 2011, the percentage of re-offenders who first recidivated in criminal court has consistently been above 60%.



Length of Time to Subsequent Delinquency Adjudication or Criminal Conviction

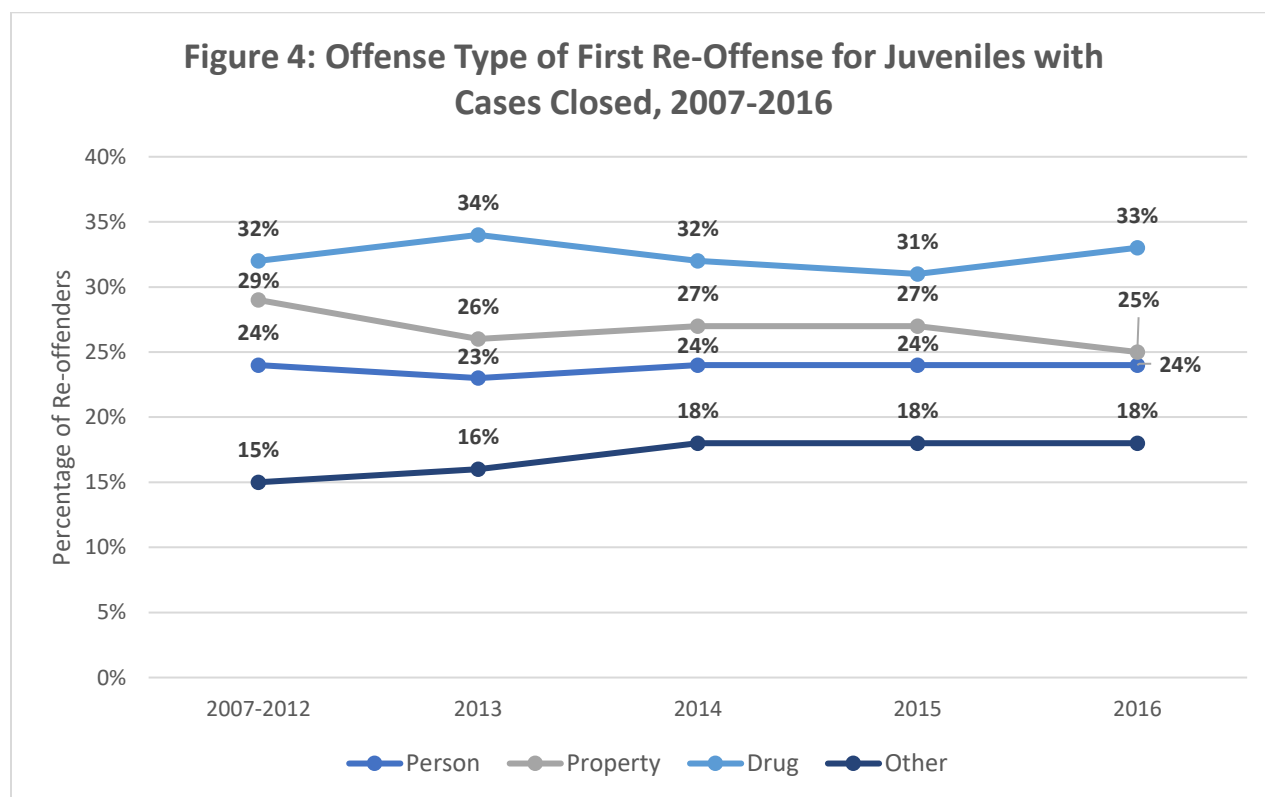
The average number of months between case closure and a new recidivism event has increased steadily over time. For juveniles with a case closed between 2007 and 2010, the average number of months between case closure and a new adjudication or conviction was 11.3 months. For juvenile closed in 2015 and 2016, the average number of months had increased to 12.2.



Offense Type and Charge Grade of First Re-Offense

Between 2007 and 2016, among youth who re-offended, the most common first new offense type⁷ was consistently drug, followed by property, person, and then “other.”⁸ For juveniles with cases closed in 2015, the most common re-offense type was drug (31%), followed by property (27%), followed by person (24%), followed by “other” (18%). For juveniles with cases closed in 2016, the most common re-offense type was drug (33%), followed by property (25%), followed by person (24%), followed by “other” (18%).

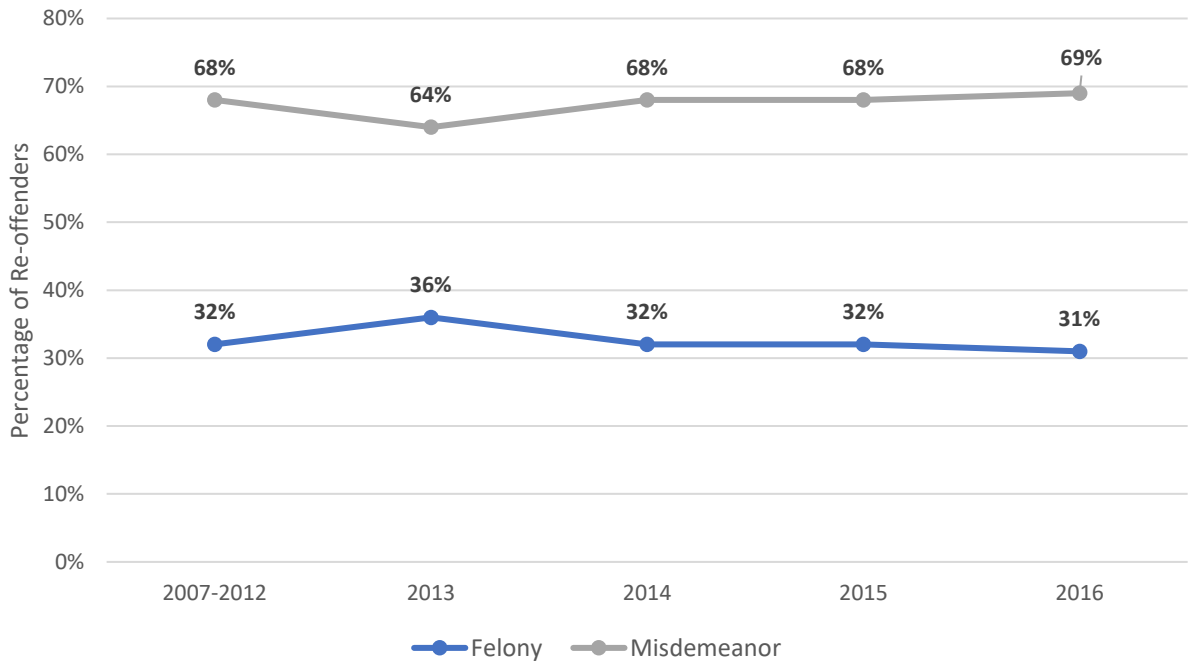
Between 2007 and 2016, among youth who re-offended, the first new offense was a misdemeanor in approximately two-thirds of cases, and this percentage was consistent over time. For juveniles with cases closed in 2015, the first new re-offense was a misdemeanor in 68% of cases and a felony in the remaining 32%. For juveniles with cases closed in 2016, the first new re-offense was a misdemeanor in 69% of cases and a felony in the remaining 31%.



⁷ This study only analyzes the offense characteristics of the first recidivism event occurring within two years of the date a case was closed.

⁸ The top three offenses in the “other” category were: (1) Firearm-Related Offense (26%); (2) Disorderly Conduct (20%); (3) Resisting Arrest (6%).

Figure 5: Charge Grade of First Re-offense for Juveniles with Cases Closed, 2007-2016



County-Specific Recidivism Rates

Table 1 presents county and statewide recidivism data for the ten-year period beginning in 2007 and ending in 2016.* For each county, the total number of juveniles with cases closed for that year appears next to the corresponding recidivism rate. These numbers are then tallied and summed up at the bottom of the table to produce statewide statistics.

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 PA Rules of Juvenile Court Procedure, however, identifying information can now be retained for research purposes. Beginning with the 2015 case closures, expunged cases will no longer impact the Juvenile Court Judges' Commission's ability to calculate recidivism rates. It was hypothesized that the recidivism rates of counties that expunged large numbers of cases were impacted by their high expungement rates. However, after including expunged cases in the calculation of recidivism rates for 2015 and 2016 case closures, there is no evidence of major shifts in these counties' recidivism rates.

Table 2 aggregates the county-specific recidivism data presented in Table 1 into the "pre-JJSES" (2007-2010) and "post-JJSES initiation" (2011-2016) periods. Appearing in the second column to the right is the relative (numeric) difference in the recidivism rate "post-JJSES initiation" when compared to "pre-JJSES" for each county. This is arrived at by subtracting the "pre-JJSES" rate from the "post-JJSES initiation" rate.⁹ As can be seen at the bottom of the table, the statewide difference between the "post-JJSES initiation" (18.8%) and "pre-JJSES" (21.6%) recidivism rates was -2.8. The negative sign reflects that the "post-JJSES initiation" rate was below the "pre-JJSES" rate, consistent with the results presented earlier in Figure 1.

In the right most column is the percentage change in recidivism rates between the two periods. This figure is arrived at by taking the difference between the "post-JJSES initiation" and "pre-JJSES" rates and then dividing this number by the "pre-JJSES" recidivism rate. The bottom of the table shows that, statewide, there was a 13.0% decrease in the recidivism rate between the "pre-JJSES" and the "post-JJSES initiation" periods.

Furthermore, almost three-quarters of counties (49/67 or 73%) had an average recidivism rate in the "post-JJSES initiation" era that was below their average rate in the "pre-JJSES" era. Among the 49 counties with a lower "post-JJSES initiation" than "pre-JJSES" recidivism rate, the mean relative (numeric) decrease in recidivism was 4.5 and the median relative (numeric) decrease in recidivism was 3.3. For these same counties, the mean percentage decrease in recidivism rates was 21.2% and the median percentage decrease was 16.7%.

* Due to the many factors outside of the control of the juvenile justice system that affect recidivism rates, the reader is cautioned against drawing strong conclusions about the effectiveness of a county's juvenile justice programming based on the data presented in Tables 1 and 2. See the Limitations sections for a discussion of this issue.

⁹ For example, Adams County had a 20% post-JJSES initiation recidivism rate, a 24% pre-JJSES recidivism rate and a difference of -4.0.

Table 1: County and Statewide Recidivism Rates: Juveniles with Cases Closed 2007-2016

	2007-2010 Case Closures (#)	2011 Case Closures (#)	2012 Case Closures (#)	2013 Case Closures (#)	2014 Case Closures (#)	2015 Case Closures (#)	2016 Case Closures (#)
County	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)
Adams	885	164	190	188	138	115	116
	24%	15%	21%	19%	23%	19%	23%
Allegheny	6,192	1,886	1,920	1,983	1,626	1,525	1,479
	25%	19%	18%	21%	21%	19%	17%
Armstrong	402	62	45	28	115	78	58
	20%	18%	16%	11%	15%	18%	17%
Beaver	1,119	276	282	239	211	252	215
	17%	11%	15%	18%	15%	15%	12%
Bedford	252	50	38	57	50	19	19
	18%	18%	8%	14%	16%	5%	11%
Berks	3,274	595	544	688	541	696	612
	20%	18%	13%	14%	13%	12%	13%
Blair	380	109	64	104	161	173	175
	17%	19%	25%	10%	14%	22%	25%
Bradford	197	58	179	97	85	108	102
	20%	17%	11%	7%	13%	12%	20%
Bucks	2,991	565	480	615	525	473	476
	21%	22%	21%	14%	14%	14%	18%
Butler	643	189	169	158	145	163	147
	16%	13%	24%	15%	12%	19%	13%

Table 1: County and Statewide Recidivism Rates: Juveniles with Cases Closed in 2007-2016

	2007-2010 Case Closures (#)	2011 Case Closures (#)	2012 Case Closures (#)	2013 Case Closures (#)	2014 Case Closures (#)	2015 Case Closures (#)	2016 Case Closures (#)
County	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)
Cambria	1,087	231	203	197	163	251	184
	20%	14%	17%	18%	23%	14%	13%
Cameron	25	-	2	4	3	10	6
	32%	-	0%	25%	67%	30%	0%
Carbon	404	81	86	91	80	62	58
	14%	22%	14%	11%	18%	11%	10%
Centre	252	65	39	65	58	56	69
	19%	12%	3%	17%	14%	20%	13%
Chester	2,664	776	516	605	442	506	385
	19%	17%	13%	11%	14%	12%	15%
Clarion	140	36	32	38	31	23	31
	26%	17%	25%	24%	19%	17%	0%
Clearfield	224	35	73	38	52	74	27
	23%	14%	12%	26%	29%	23%	26%
Clinton	125	35	34	49	52	44	51
	24%	20%	18%	16%	35%	25%	22%
Columbia	284	71	81	97	76	70	48
	16%	21%	14%	11%	22%	13%	27%

Table 1: County and Statewide Recidivism Rates: Juveniles with Cases Closed in 2007-2016

	2007-2010 Case Closures (#)	2011 Case Closures (#)	2012 Case Closures (#)	2013 Case Closures (#)	2014 Case Closures (#)	2015 Case Closures (#)	2016 Case Closures (#)
County	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)
Crawford	555	116	127	179	116	134	97
	21%	18%	17%	24%	18%	19%	19%
Cumberland	375	85	54	229	244	259	280
	21%	18%	31%	9%	10%	17%	22%
Dauphin	3,707	796	704	694	534	562	547
	24%	22%	24%	25%	28%	25%	25%
Delaware	1,145	767	862	813	813	814	694
	23%	21%	21%	19%	21%	20%	18%
Elk	131	38	22	43	45	38	25
	26%	29%	9%	30%	24%	21%	12%
Erie	2,925	620	654	537	537	404	420
	21%	17%	19%	19%	25%	18%	23%
Fayette	1,043	191	310	293	247	235	185
	15%	15%	11%	11%	8%	15%	14%
Forest	25	4	3	4	2	1	2
	12%	25%	0%	0%	0%	0%	50%
Franklin	1,217	222	185	276	227	321	216
	23%	23%	23%	22%	28%	20%	16%

Table 1: County and Statewide Recidivism Rates: Juveniles with Cases Closed in 2007-2016

	2007-2010 Case Closures (#)	2011 Case Closures (#)	2012 Case Closures (#)	2013 Case Closures (#)	2014 Case Closures (#)	2015 Case Closures (#)	2016 Case Closures (#)
County	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)
Fulton	54	15	17	10	9	19	18
	13%	13%	6%	10%	22%	11%	11%
Greene	151	58	80	16	36	21	16
	10%	3%	8%	13%	6%	14%	13%
Huntingdon	197	44	34	37	31	32	30
	17%	14%	21%	22%	13%	16%	30%
Indiana	258	52	88	74	82	66	78
	16%	10%	15%	11%	13%	18%	4%
Jefferson	207	41	39	60	57	42	51
	24%	32%	33%	8%	25%	21%	20%
Juniata	56	17	13	18	18	12	18
	29%	18%	23%	22%	22%	17%	17%
Lackawanna	776	205	117	212	218	190	226
	24%	20%	28%	21%	21%	20%	20%
Lancaster	1,643	410	519	676	644	641	594
	21%	14%	14%	19%	22%	19%	20%
Lawrence	593	240	178	162	142	103	100
	17%	14%	21%	17%	16%	13%	12%

Table 1: County and Statewide Recidivism Rates: Juveniles with Cases Closed in 2007-2016

	2007-2010 Case Closures (#)	2011 Case Closures (#)	2012 Case Closures (#)	2013 Case Closures (#)	2014 Case Closures (#)	2015 Case Closures (#)	2016 Case Closures (#)
County	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)
Lebanon	1,026	202	165	181	154	150	162
	27%	23%	27%	23%	20%	24%	30%
Lehigh	3,611	945	1,041	740	666	683	646
	14%	19%	19%	21%	18%	21%	23%
Luzerne	1,904	394	374	300	309	256	242
	17%	11%	11%	24%	21%	14%	19%
Lycoming	1,216	231	299	295	257	208	171
	28%	27%	24%	25%	24%	25%	15%
McKean	183	45	34	38	55	60	53
	24%	13%	24%	18%	16%	23%	17%
Mercer	586	198	173	197	143	156	151
	16%	16%	16%	21%	22%	16%	27%
Mifflin	261	57	41	63	48	58	49
	27%	23%	32%	21%	23%	24%	31%
Monroe	977	207	228	198	161	193	161
	14%	16%	12%	15%	17%	18%	16%
Montgomery	3,793	1,001	959	1,187	997	776	733
	24%	17%	15%	14%	19%	18%	19%

Table 1: County and Statewide Recidivism Rates: Juveniles with Cases Closed in 2007-2016

	2007-2010 Case Closures (#)	2011 Case Closures (#)	2012 Case Closures (#)	2013 Case Closures (#)	2014 Case Closures (#)	2015 Case Closures (#)	2016 Case Closures (#)
County	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)
Montour	83	20	22	14	16	11	18
	22%	30%	36%	21%	13%	36%	28%
Northampton	1,951	534	541	506	433	422	440
	17%	14%	17%	20%	20%	17%	15%
Northumberland	611	192	152	153	170	210	183
	23%	19%	18%	9%	16%	16%	19%
Perry	249	40	39	63	45	62	36
	25%	30%	33%	21%	24%	23%	25%
Philadelphia	8,949	3,025	3,663	3,469	2,745	2,488	2,169
	28%	22%	24%	23%	22%	22%	20%
Pike	309	46	60	87	81	61	62
	13%	17%	8%	11%	15%	8%	8%
Potter	120	20	28	12	9	5	19
	11%	10%	11%	8%	33%	0%	16%
Schuylkill	1,011	239	249	225	162	171	100
	16%	14%	19%	17%	13%	16%	20%
Snyder	219	59	68	83	50	37	57
	22%	19%	16%	27%	26%	24%	19%

Table 1: County and Statewide Recidivism Rates: Juveniles with Cases Closed in 2007-2016

	2007-2010 Case Closures (#)	2011 Case Closures (#)	2012 Case Closures (#)	2013 Case Closures (#)	2014 Case Closures (#)	2015 Case Closures (#)	2016 Case Closures (#)
County	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)
Somerset	355	61	54	76	43	37	37
	13%	21%	11%	13%	21%	16%	8%
Sullivan	16	8	0	1	2	8	4
	6%	0%	-	0%	0%	13%	0%
Susquehanna	217	52	50	44	38	32	25
	18%	19%	20%	11%	16%	3%	20%
Tioga	271	47	58	55	46	41	34
	18%	17%	16%	20%	13%	12%	15%
Union	105	33	32	34	17	21	33
	23%	24%	47%	18%	18%	38%	12%
Venango	297	99	128	115	92	131	74
	13%	13%	20%	16%	21%	18%	19%
Warren	256	62	45	61	33	46	48
	17%	24%	11%	18%	21%	20%	19%
Washington	1,121	363	309	324	322	260	210
	24%	17%	17%	15%	16%	15%	14%
Wayne	263	62	48	53	47	42	45
	15%	10%	17%	21%	15%	19%	29%

Table 1: County and Statewide Recidivism Rates: Juveniles with Cases Closed in 2007-2016

	2007-2010 Case Closures (#)	2011 Case Closures (#)	2012 Case Closures (#)	2013 Case Closures (#)	2014 Case Closures (#)	2015 Case Closures (#)	2016 Case Closures (#)
County	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)	Recidivism Rate (%)
Westmoreland	2,191	534	476	426	359	388	331
	16%	16%	13%	14%	16%	16%	16%
Wyoming	209	48	29	33	28	28	21
	19%	15%	14%	12%	21%	14%	14%
York	3,780	906	860	859	797	783	768
	25%	20%	24%	19%	18%	19%	18%
Total:	72,738	18,935	19,208	16,714	16,790	16,417	14,938
	21.6%	18.5%	19.2%	18.8%	19.6%	18.5%	18.4%

**Table 2: County and Statewide Recidivism Rates for Juveniles with Cases Closed
“Pre-JJSES” (2007-2010) and “Post-JJSES Initiation” (2011-2016)**

County	“Pre-JJSES” (2007-2010)		“Post-JJSES Initiation” (2011-2016)		Comparison of “Pre- and Post-JJSES Initiation” Recidivism	
	Number of Juveniles with Cases Closed	Recidivism Rate	Number of Juveniles with Cases Closed	Recidivism Rate	Relative Difference in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES	Percentage Change in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES
Adams	885	24%	911	20%	-4.0	16.7%
Allegheny	6192	25%	10419	19%	-5.6	22.6%
Armstrong	402	19%	386	16%	-3.3	17.2%
Beaver	1119	17%	1475	14%	-2.3	13.9%
Bedford	252	17%	233	13%	-4.2	23.8%
Berks	3274	20%	3676	14%	-6.2	30.8%
Blair	380	17%	786	19%	2.6	15.9%
Bradford	197	20%	629	13%	-7.1	35.8%
Bucks	2991	21%	3134	17%	-4.1	19.3%

**Table 2: County and Statewide Recidivism Rates for Juveniles with Cases Closed
“Pre-JJSES” (2007-2010) and “Post-JJSES Initiation” (2011-2016)**

County	“Pre-JJSES” (2007-2010)		“Post-JJSES Initiation” (2011-2016)		Comparison of “Pre- and Post-JJSES Initiation” Recidivism	
	Number of Juveniles with Cases Closed	Recidivism Rate	Number of Juveniles with Cases Closed	Recidivism Rate	Relative Difference in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES	Percentage Change in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES
Butler	643	16%	971	16%	0.1	0.6%
Cambria	1087	20%	1229	16%	-3.9	19.7%
Cameron	25	32%	25	0%	-32.1	100.2%
Carbon	404	14%	458	15%	0.8	5.5%
Centre	252	19%	352	14%	-5.4	28.4%
Chester	2664	19%	3230	14%	-5.1	26.7%
Clarion	140	26%	191	17%	-9.2	34.6%
Clearfield	224	23%	299	21%	-2.1	9.2%
Clinton	125	24%	265	23%	-1.0	4.1%

**Table 2: County and Statewide Recidivism Rates for Juveniles with Cases Closed
“Pre-JJSES” (2007-2010) and “Post-JJSES Initiation” (2011-2016)**

County	“Pre-JJSES” (2007-2010)		“Post-JJSES Initiation” (2011-2016)		Comparison of “Pre- and Post-JJSES Initiation” Recidivism	
	Number of Juveniles with Cases Closed	Recidivism Rate	Number of Juveniles with Cases Closed	Recidivism Rate	Relative Difference in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES	Percentage Change in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES
Columbia	284	16%	443	17%	1.0	5.9%
Crawford	555	21%	695	18%	-3.3	15.4%
Cumberland	375	28%	1151	16%	-12.0	43.3%
Dauphin	3707	24%	3837	25%	0.6	2.5%
Delaware	1145	23%	4763	20%	-3.5	15.1%
Elk	131	26%	211	23%	-3.2	12.4%
Erie	2925	21%	3084	20%	-1.6	7.4%
Fayette	1043	15%	1461	12%	-3.0	20.0%
Forest	25	12%	16	0%	-12.0	100.2%

**Table 2: County and Statewide Recidivism Rates for Juveniles with Cases Closed
“Pre-JJSES” (2007-2010) and “Post-JJSES Initiation” (2011-2016)**

County	“Pre-JJSES” (2007-2010)		“Post-JJSES Initiation” (2011-2016)		Comparison of “Pre- and Post-JJSES Initiation” Recidivism	
	Number of Juveniles with Cases Closed	Recidivism Rate	Number of Juveniles with Cases Closed	Recidivism Rate	Relative Difference in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES	Percentage Change in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES
Franklin	1217	23%	1447	22%	-0.9	3.7%
Fulton	54	13%	85	12%	-1.2	9.2%
Greene	151	10%	227	7%	-2.4	24.6%
Huntingdon	197	17%	208	19%	2.0	11.9%
Indiana	258	16%	440	12%	-4.5	27.4%
Jefferson	207	24%	290	22%	-2.1	8.6%
Juniata	56	29%	96	20%	-8.8	30.7%
Lackawanna	776	24%	1168	21%	-3.2	12.9%
Lancaster	1643	21%	3484	18%	-2.9	13.7%

**Table 2: County and Statewide Recidivism Rates for Juveniles with Cases Closed
“Pre-JJSES” (2007-2010) and “Post-JJSES Initiation” (2011-2016)**

County	“Pre-JJSES” (2007-2010)		“Post-JJSES Initiation” (2011-2016)		Comparison of “Pre- and Post-JJSES Initiation” Recidivism	
	Number of Juveniles with Cases Closed	Recidivism Rate	Number of Juveniles with Cases Closed	Recidivism Rate	Relative Difference in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES	Percentage Change in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES
Lawrence	593	17%	925	16%	-1.5	8.5%
Lebanon	1026	27%	1014	25%	-2.7	10.0%
Lehigh	3611	14%	4721	20%	6.3	44.8%
Luzerne	1904	17%	1875	16%	-1.2	6.7%
Lycoming	1216	28%	1461	24%	-3.8	13.8%
McKean	145	24%	263	21%	-3.0	12.6%
Mercer	586	16%	1018	19%	3.0	18.1%
Mifflin	261	27%	316	25%	-1.8	6.8%
Monroe	977	14%	1148	15%	1.7	12.4%

**Table 2: County and Statewide Recidivism Rates for Juveniles with Cases Closed
“Pre-JJSES” (2007-2010) and “Post-JJSES Initiation” (2011-2016)**

County	“Pre-JJSES” (2007-2010)		“Post-JJSES Initiation” (2011-2016)		“Comparison of Pre- and Post-JJSES Initiation” Recidivism	
	Number of Juveniles with Cases Closed	Recidivism Rate	Number of Juveniles with Cases Closed	Recidivism Rate	Relative Difference in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES	Percentage Change in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES
Montgomery	3793	24%	5653	17%	-7.0	29.6%
Montour	83	22%	101	28%	6.0	27.8%
Northampton	1951	17%	2876	17%	0.0	0.2%
Northumberland	611	23%	1060	16%	-6.3	27.7%
Perry	249	25%	285	25%	0.0	0.2%
Philadelphia	8949	28%	17559	22%	-5.6	20.1%
Pike	309	13%	397	11%	-1.9	14.6%
Potter	120	11%	93	13%	2.1	19.1%
Schuylkill	1011	16%	1146	16%	0.8	4.9%

**Table 2: County and Statewide Recidivism Rates for Juveniles with Cases Closed
“Pre-JJSES” (2007-2010) and “Post-JJSES Initiation” (2011-2016)**

County	“Pre-JJSES” (2007-2010)		“Post-JJSES Initiation” (2011-2016)		Comparison of “Pre- and Post-JJSES Initiation” Recidivism	
	Number of Juveniles with Cases Closed	Recidivism Rate	Number of Juveniles with Cases Closed	Recidivism Rate	Relative Difference in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES	Percentage Change in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES
Snyder	219	22%	354	22%	-0.2	0.8%
Somerset	355	13%	308	15%	2.3	17.8%
Sullivan	16	6%	23	4%	-1.9	30.4%
Susquehanna	217	18%	241	15%	-2.2	12.3%
Tioga	271	18%	281	16%	-2.1	11.6%
Union	105	23%	170	26%	3.0	13.2%
Venango	297	13%	639	18%	4.7	37.0%
Warren	256	17%	295	19%	2.2	13.0%
Washington	1121	24%	1788	16%	-8.6	35.5%

**Table 2: County and Statewide Recidivism Rates for Juveniles with Cases Closed
“Pre-JJSES” (2007-2010) and “Post-JJSES Initiation” (2011-2016)**

County	“Pre-JJSES” (2007-2010)		“Post-JJSES Initiation” (2011-2016)		Comparison of “Pre- and Post-JJSES Initiation” Recidivism	
	Number of Juveniles with Cases Closed	Recidivism Rate	Number of Juveniles with Cases Closed	Recidivism Rate	Relative Difference in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES	Percentage Change in the Recidivism Rate Post-JJSES Initiation Compared to Pre-JJSES
Wayne	263	15%	297	18%	2.6	17.3%
Westmoreland	2191	16%	2514	15%	-1.2	7.4%
Wyoming	209	19%	187	15%	-3.7	19.8%
York	3780	25%	4973	20%	-5.2	20.8%
Total:	72,738	21.6%	105,756	18.8%	-2.8	13.0%

Summary of Key Findings

- The recidivism rates in 2015 and 2016 (18.5% and 18.4%, respectively) continues the trend of “post-JJSES initiation” recidivism rates being below the “pre-JJSES” rate (21.6% for the years 2007-2010).
- Between 2007 and 2016, among youth who re-offended, the most common re-offense type was consistently drug, followed by property, person, and then “other” offenses.
- Among youth who re-offended, the first new offense was a misdemeanor in approximately two-thirds of cases, and this pattern was consistent over time.
- Almost three-quarters of counties (73%) had an average recidivism rate in the “post-JJSES initiation” era that was below their average recidivism rate in the “pre-JJSES” era.

Section 2: Demographic Characteristics and Recidivism

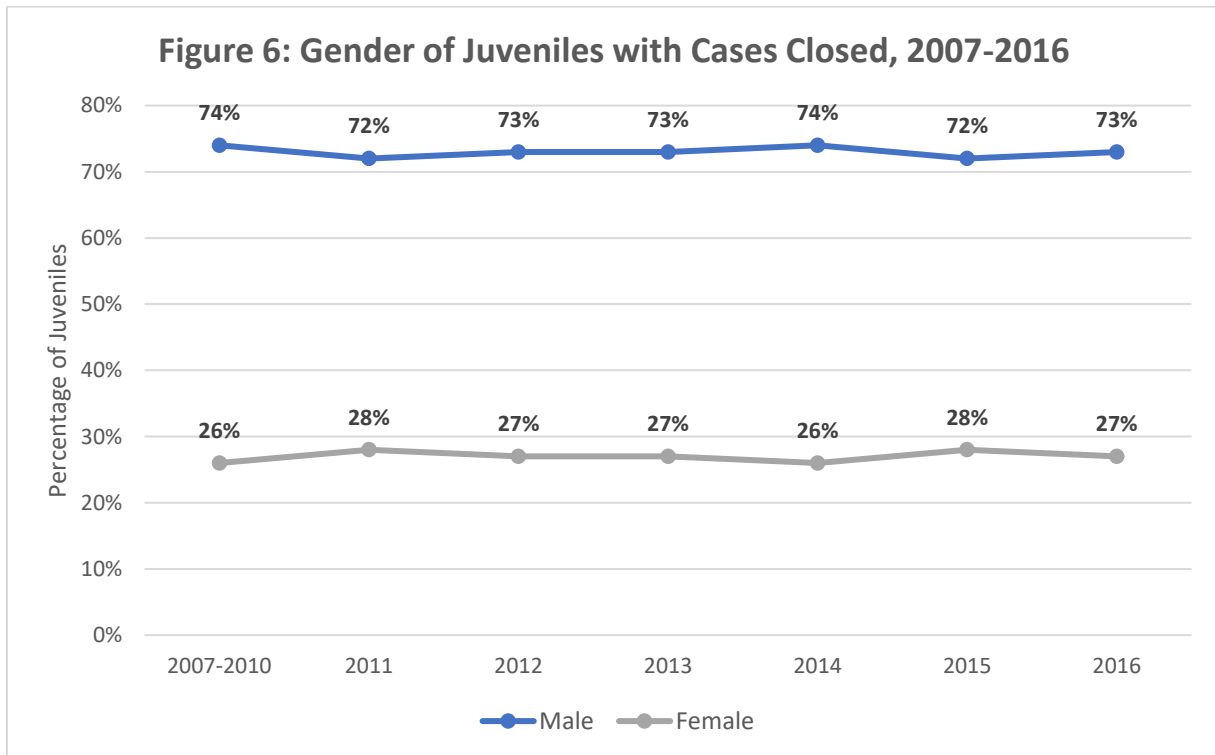
Gender and Recidivism

Over a ten-year span (2007 through 2016), males have consistently been overrepresented, and females underrepresented, in juvenile court as compared to the general population.

In 2015, 72% of juveniles with cases closed were male and 28% were female. In 2016, 73% of juveniles with cases closed were male and 27% were female.

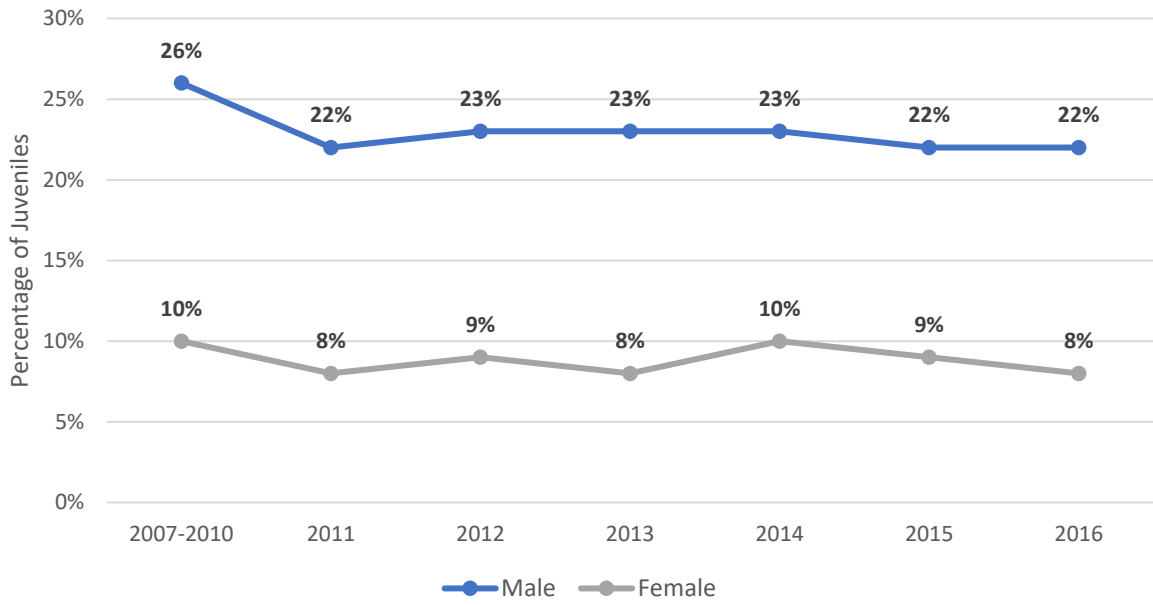
Over the last ten years, males have consistently recidivated at a much higher rate than females.¹⁰

In 2015, 22% of males recidivated compared to 9% of females. In 2016, 22% of males recidivated compared to 8% of females. As Figure 7 shows, the recidivism rates of males dropped from an average of 26% in the pre-JJSES years (2007-2010) to an average of 23% in the post-JJSES initiation years (2011-2016). This trend was not evident for females.



¹⁰ Whenever an important difference exists between groups, 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.

Figure 7: Recidivism Rates by Gender: Juveniles with Cases Closed 2007-2016



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.

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

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

Figure 8 shows that over the last ten years, White Non-Hispanic youth were consistently the largest racial/ethnic group with cases closed, followed by Black Non-Hispanic youth, and then Hispanic and Asian Non-Hispanic youth.¹¹ There has also been a gradual increase in the percentage of youth who were Hispanic: 10% in 2007-2010 versus 14% in 2015 and 2016.

In 2015, 50% of youth were White Non-Hispanic, 36% were Black Non-Hispanic, 14% were Hispanic, and 0.5% were Asian Non-Hispanic youth. In 2016, 49% of youth were White Non-Hispanic, 37% were Black Non-Hispanic, 14% were Hispanic, and 0.4% were Asian Non-Hispanic youth.

Black Non-Hispanic youth have consistently recidivated at the highest rate, followed by Hispanic youth, and then White Non-Hispanic youth and Asian Non-Hispanic youth, who recidivated at close to the same rate.¹²

In 2015, 23% of Black Non-Hispanic youth recidivated, compared to 19% of Hispanic, 15% of White Non-Hispanic, and 15% of Asian Non-Hispanic youth. In 2016, 22% of Black Non-Hispanic youth recidivated, compared to 21% of Hispanic, 16% of White Non-Hispanic, and 11% of Asian Non-Hispanic youth.

Further analysis of 2015-2016 juveniles with cases closed shows that racial/ethnic differences exist for males but not for females. Among males, 28% of Black Non-Hispanic, 24% of Hispanic, and 18% of White Non-Hispanic youth recidivated. Among females, 10% of Black Non-Hispanic, 9% of White Non-Hispanic, and 8% of Hispanic youth recidivated.¹³

¹¹ For juveniles closed in 2015-2016, a more detailed breakdown of racial/ethnic groups, from largest to smallest, includes youth who were White Non-Hispanic (47%), Black Non-Hispanic (35%), White Hispanic (10%), Missing Race or Ethnicity (3%), Multi-Racial (3%), Black Hispanic (2%), Asian (0%), and Other Race (0%).

¹² The recidivism rate of Asian Non-Hispanic youth varies greatly likely because of the small number of Asian Non-Hispanic youth included in this study.

¹³ There are not enough Asian Non-Hispanic youth to include them in the combined analysis of race/ethnicity and gender in Figure 10.

Figure 8: Race & Ethnicity of Juveniles with Cases Closed, 2007-2016

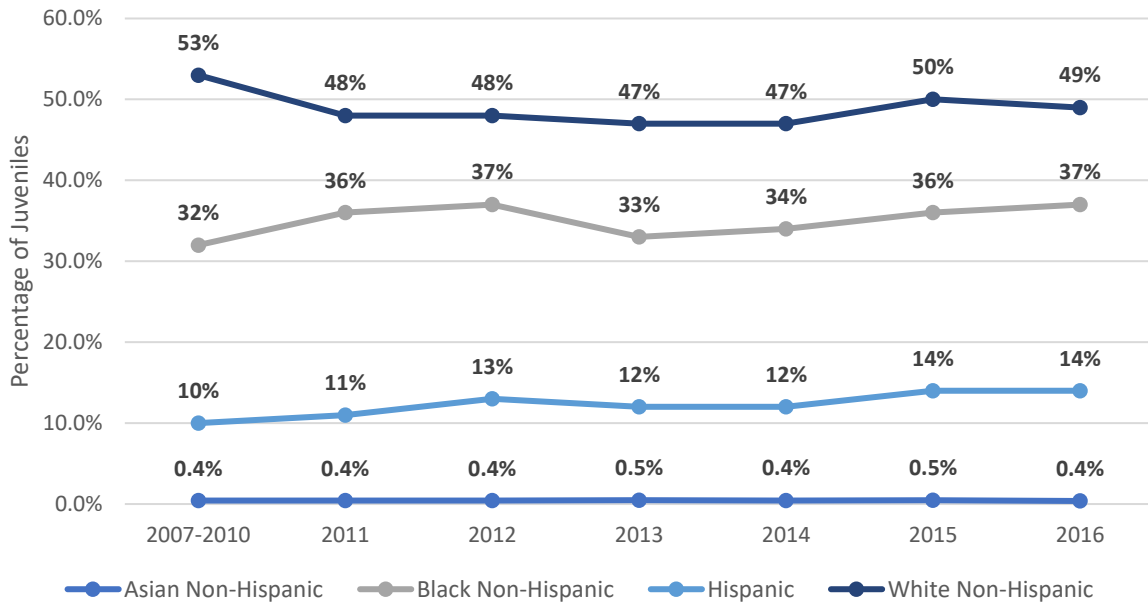
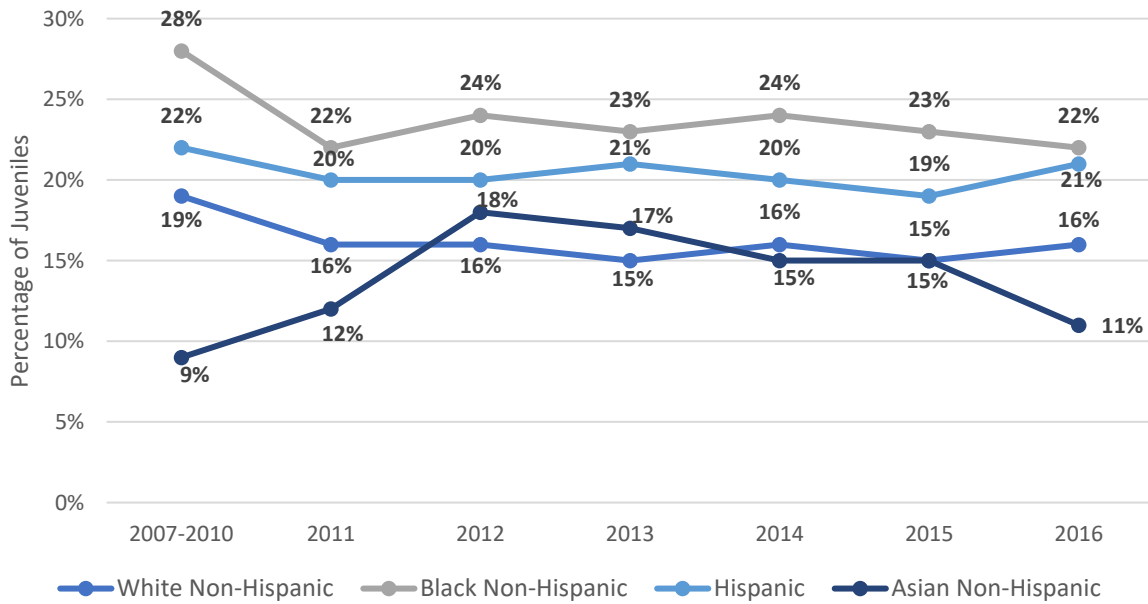
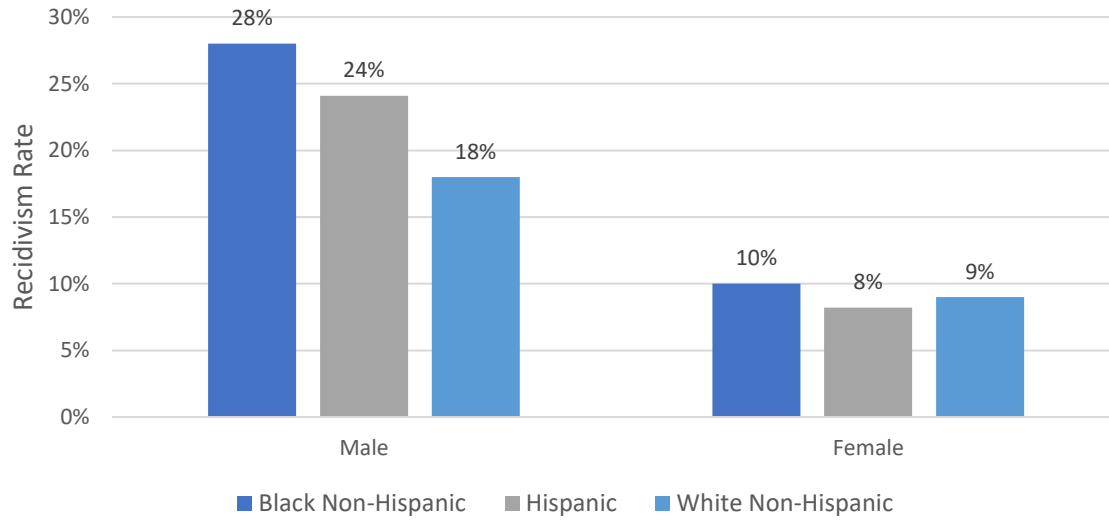


Figure 9: Recidivism Rates by Race & Ethnicity: Juveniles with Cases Closed, 2007-2016



**Figure 10: Recidivism Rates by Race, Ethnicity, and Gender:
Juveniles with Cases Closed, 2015-2016 Combined**



Age at First Written Allegation and Recidivism

Consistent with prior years (2013 and 2014), 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 with cases closed in 2015 and 2016, followed by those referred at ages 16-17, at ages 10-12, and, finally, at 18 years old.

In 2015, 48% of youth had their first written allegation between the ages of 13 and 15, 37% between 16 and 17, 14% between 10 and 12, and 2% at age 18 years old. In 2016, 48% of youth had their first written allegation between the ages of 13 and 15, 36% between 16 and 17, 14% between 10 and 12, and 2% at age 18 years old.

In all years analyzed (2013 through 2016), 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 (see Figure 12).¹⁴

In 2015, 24% of youth whose first written allegation occurred at ages 10-12 recidivated compared to 20% of youth whose first written allegation was at ages 13-15, and 14% of youth at ages 16-17, and also 14% of youth at age 18. In 2016, 23% of youth whose first written allegation was at ages 10-12 recidivated compared to 19% of youth whose first written allegation was at ages 13-15, and 16% of youth at 16-17, and 15% of youth at age 18.

Figures 13 and 14 show specific ages for juveniles closed in 2015-2016 and how age relates to recidivism. Twenty-eight percent of juveniles whose first written allegation was at age 10 recidivated compared to 14% of those whose first allegation was at age 17 and 15% of those who were age 18 at the time of their first allegation.

¹⁴ Data on the age of juveniles' first written allegation starts with the 2013 case closings.

Figure 11: Age Group at First Written Allegation of Juveniles with Cases Closed, 2007-2016

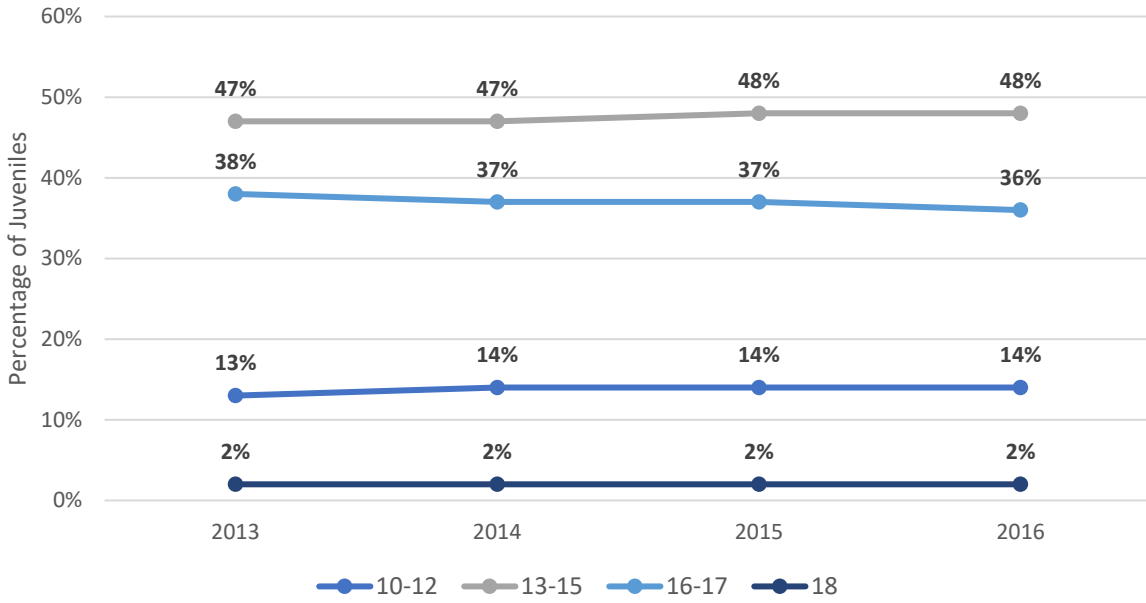


Figure 12: Age Group at First Written Allegation and Recidivism, Juveniles with Cases Closed, 2013-2016

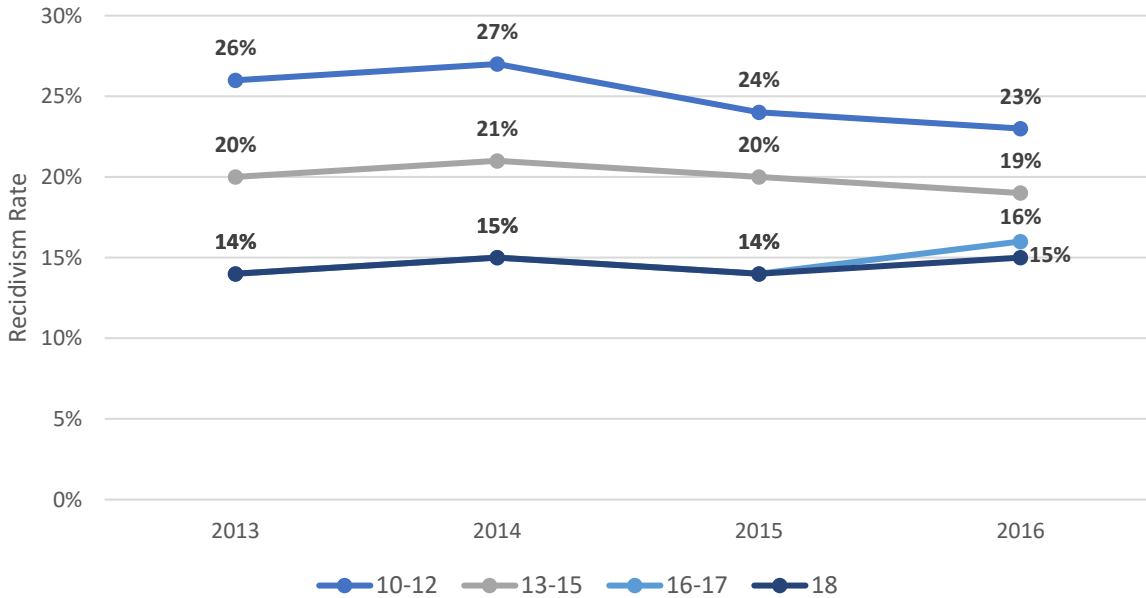


Figure 13: Age at First Written Allegation, Juveniles with Cases Closed, 2015-2016

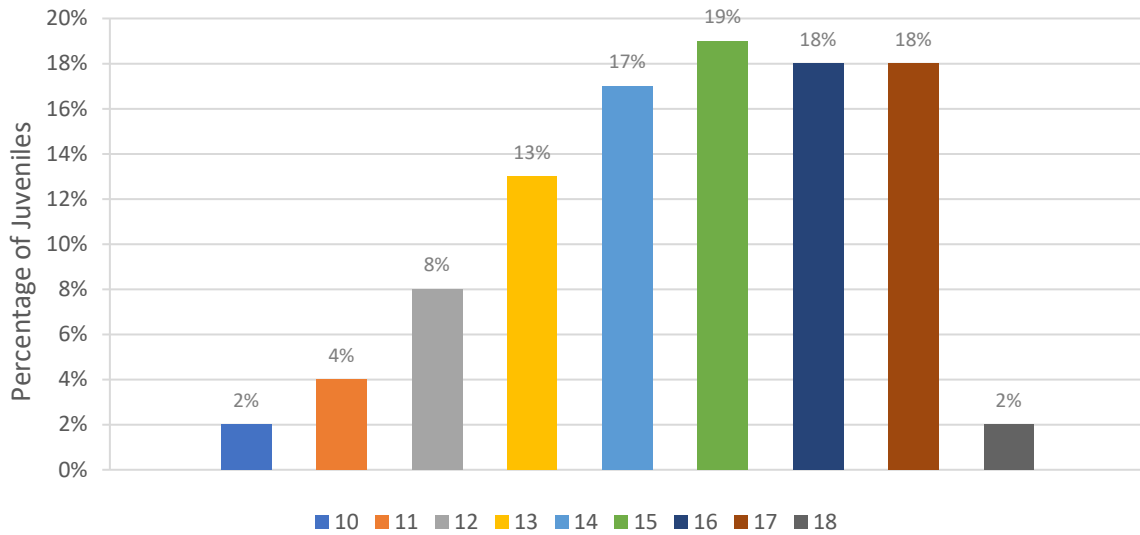
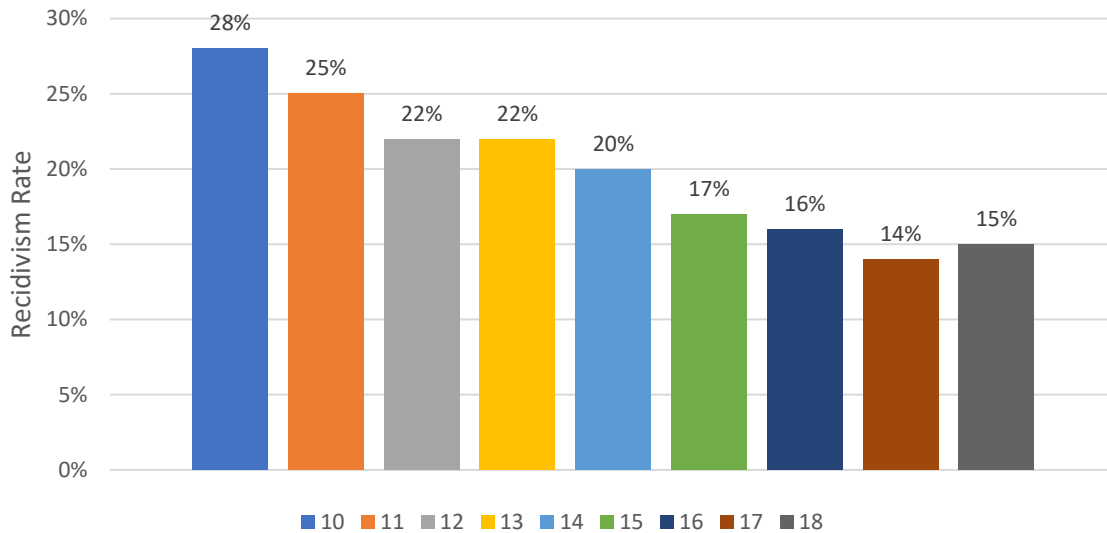


Figure 14: Age at First Written Allegation and Recidivism, Juveniles with Cases Closed, 2015-2016



Family Status and Recidivism

Figure 15 shows that there was an increase in the percentage of youth with cases closed whose parents had never married between the 2007-2010 period and 2012 (41% vs. 50%). This higher percentage has continued through 2015 (52%) and 2016 (52%). Similarly, there was a decline in the percentage of youth whose parents had separated or divorced between the 2007-2010 period and 2013 (29% vs. 22%). This lower percentage has continued through 2015 (22%) and 2016 (22%).

Consistent with prior years (2007 through 2014), for juveniles with cases closed in 2015-2016, youth whose parents had never married made up the largest portion of cases closed, followed by families in which parents were separated or divorced and in which the parents were married, and, finally, youth whose parent or parents were deceased.

In 2015, 52% of juveniles closed came from families in which their parents were never married, 22% were separated or divorced, 21% were married, and 5% were deceased (at least one parent). These percentages were the same for juveniles closed in 2016.

Between 2007 and 2016, juveniles with cases closed whose parents were never married recidivated at a similarly high rate as those whose parent or parents were deceased. These youth recidivated at a higher rate than juveniles whose parents were separated or divorced, who, in turn, recidivated at a higher rate than youth whose parents were married.

In 2015, 22% of juveniles whose parent or parents were deceased recidivated followed by 21% of juveniles whose parents were never married, 18% of juveniles whose parents were separated or divorced, and 14% of juveniles whose parents were married. In 2016, 22% of juveniles whose parent or parents were deceased recidivated followed by 21% of juveniles whose parents were never married, 17% of juveniles whose parents were separated or divorced, and 14% of juveniles whose parents were married.

As can be seen in Figure 17, when looking at juveniles with cases closed in 2015 and 2016, youth whose parents were married recidivated at a lower rate than youth whose parents were not married (14% vs. 20%).

**Figure 15: Family Status of Juveniles with Cases Closed
2007-2016**

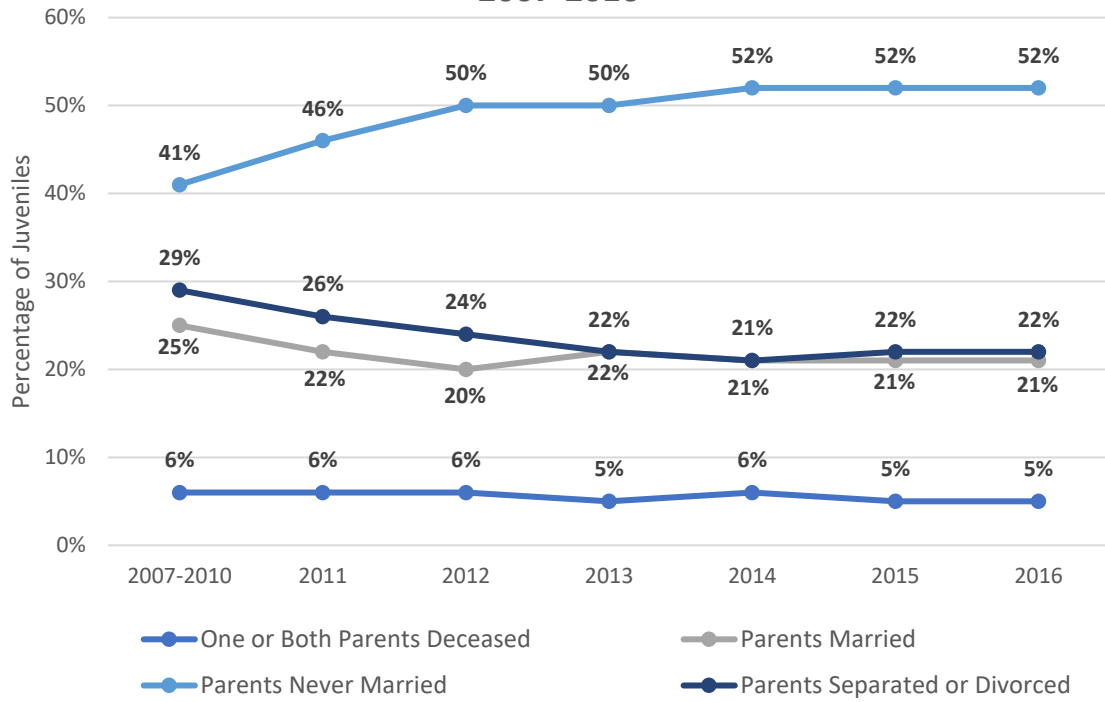


Figure 16: Family Status and Recidivism, Juveniles with Cases Closed, 2007-2016

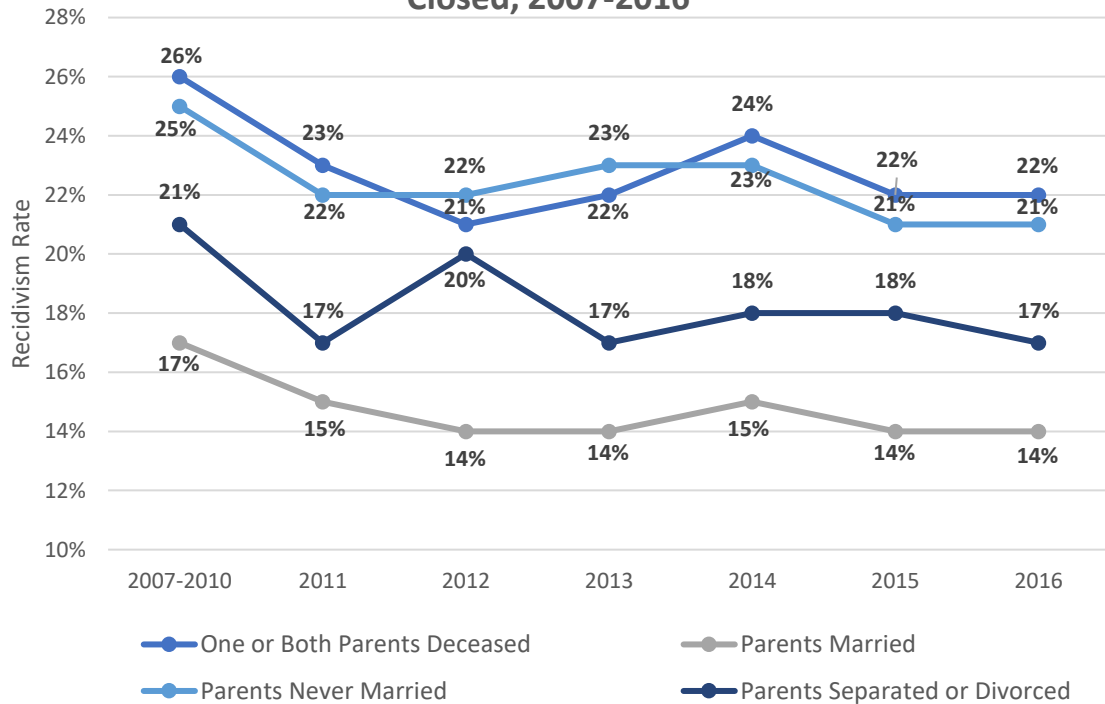
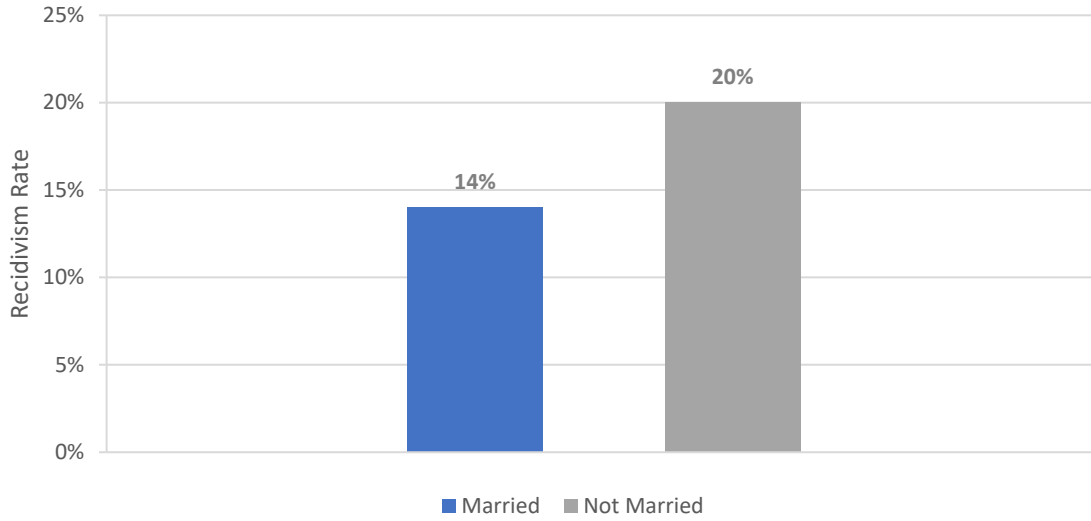


Figure 17: Parents' Marital Status and Recidivism, Juveniles with Cases Closed, 2015-2016



Summary of Key Findings

Gender

- Consistent with prior years (2007 through 2014), when compared to the general population, males were overrepresented among juveniles whose cases were closed in 2015 and 2016.
- Gender continues to be the strongest demographic predictor of recidivism.

Race and Ethnicity

- Over the last ten years, White Non-Hispanic youth with cases closed were consistently the largest racial/ethnic group, followed by Black Non-Hispanic youth, and then Hispanic and Asian Non-Hispanic youth.
- Black Non-Hispanic youth have consistently recidivated at the highest rate, followed by Hispanic youth, and then White Non-Hispanic youth and Asian Non-Hispanic youth.
- Further analysis shows that racial/ethnic differences in recidivism exist for males but not for females.

Age at First Written Allegation

- Consistent with findings from prior years (2013 through 2014), youth with a 2015 or 2016 case closure who were between the ages of 13 and 15 at the time of their first written allegation made up the largest portion of juveniles with cases closed, followed by those whose first written allegation was at ages 16-17, at ages 10-12, and, finally, at 18 years old.
- Consistent with prior years (2013 through 2014), youth with a 2015 or 2016 case closure who received their first written allegation at a younger age were more likely to recidivate than youth whose first written allegation was at an older age.

Family Status

- Similar to the findings of prior reports (2007 through 2014), youth whose parents had never married made up the largest portion of cases closed in 2015 and 2016, followed by youth living in families in which parents were separated or divorced and youth whose parents were married, and, finally, youth whose parent or parents were deceased.
- There was an increase in the percentage of youth with case closures whose parents had never married between the “pre-JJSES” and “post-JJSES initiation” periods. Similarly, there was a decline in the percentage of youth whose parents had separated or divorced between the two periods.
- Juveniles with cases closed in 2015 or 2016 whose parents were married at the time of case closing recidivated a lower rate than those whose parents were not married.

Section 3: Offense History, System Penetration, and Recidivism

Number of Written Allegations and Recidivism

For each of the four years examined (2013 through 2016), over three-quarters of juveniles had 1-2 written allegations by the time their cases were closed. Additionally, less than 15% of juveniles had 4 or more allegations at case closure.

In 2015, 59% of juveniles had only one written allegation, 19% had two, 9% had three, 11% had between four and nine, and 1% had ten or more written allegations. In 2016, 59% of juveniles had only one written allegation, 20% had two, 9% had three, 12% had between four and nine, and 1% had ten 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 2015, 11% of juveniles with one written allegation recidivated, compared to 22% with two allegations, 29% with three allegations, 41% with between four and nine allegations, and 45% of juveniles with ten or more allegations. In 2016, 12% of juveniles with one written allegation recidivated, compared to 21% with two allegations, 27% with three allegations, 39% with between four and nine allegations, and 51% of juveniles with ten or more allegations.

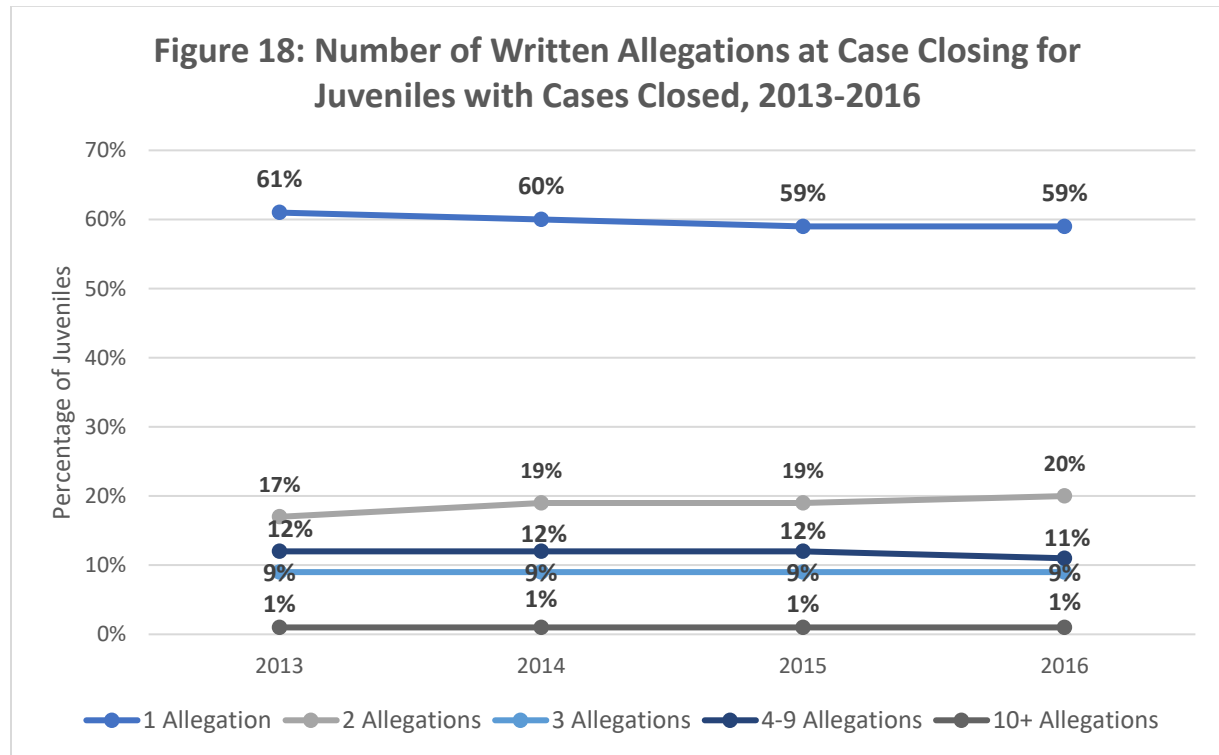
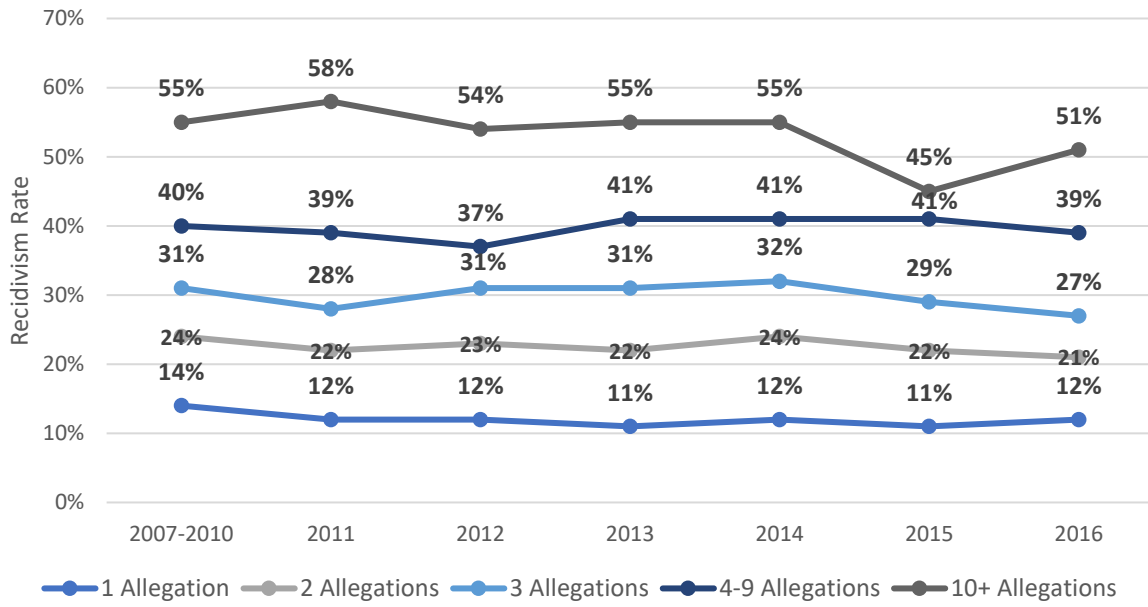


Figure 19: Number of Written Allegations and Recidivism, Juveniles with Cases Closed, 2013-2016



System Penetration and Recidivism

For juveniles with cases closed in 2015 and 2016, 61% and 60%, respectively, were diverted from adjudication and formal processing, while 39% and 40% were adjudicated delinquent prior to case closure. For the same period, 80% of juveniles with cases closed in 2015 and 2016 did not receive an out-of-home placement disposition, while 20% of juveniles received an out-of-home placement disposition prior to case closure. These percentages are consistent with data for juveniles closed in 2013 and 2014.

As Figure 21 shows, juveniles closed in 2015-2016 who were diverted from adjudication and formal processing were less than half as likely to recidivate as juveniles who were adjudicated delinquent prior to case closure (11% vs. 29%). Similarly, juveniles who did not receive an out-of-home placement disposition were less than half as likely to recidivate as juveniles who received an out-of-home placement disposition prior to case closure (14% vs. 36%).

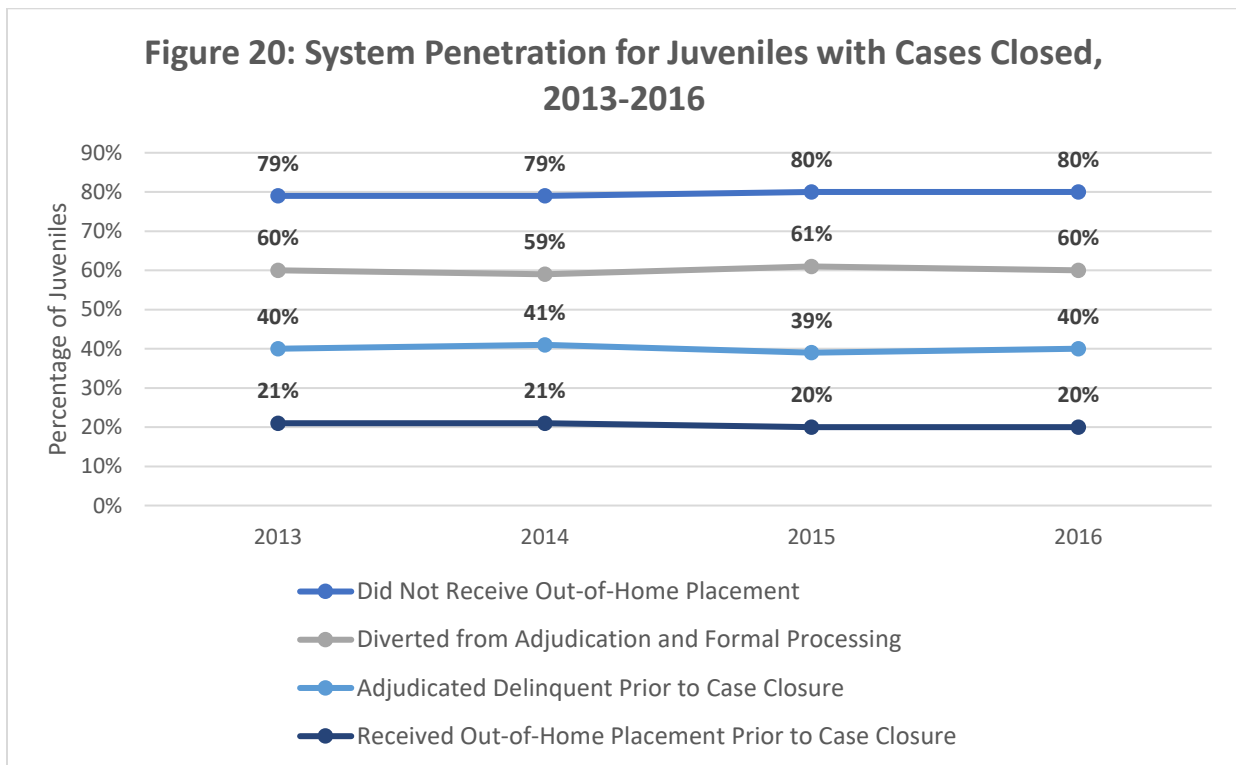
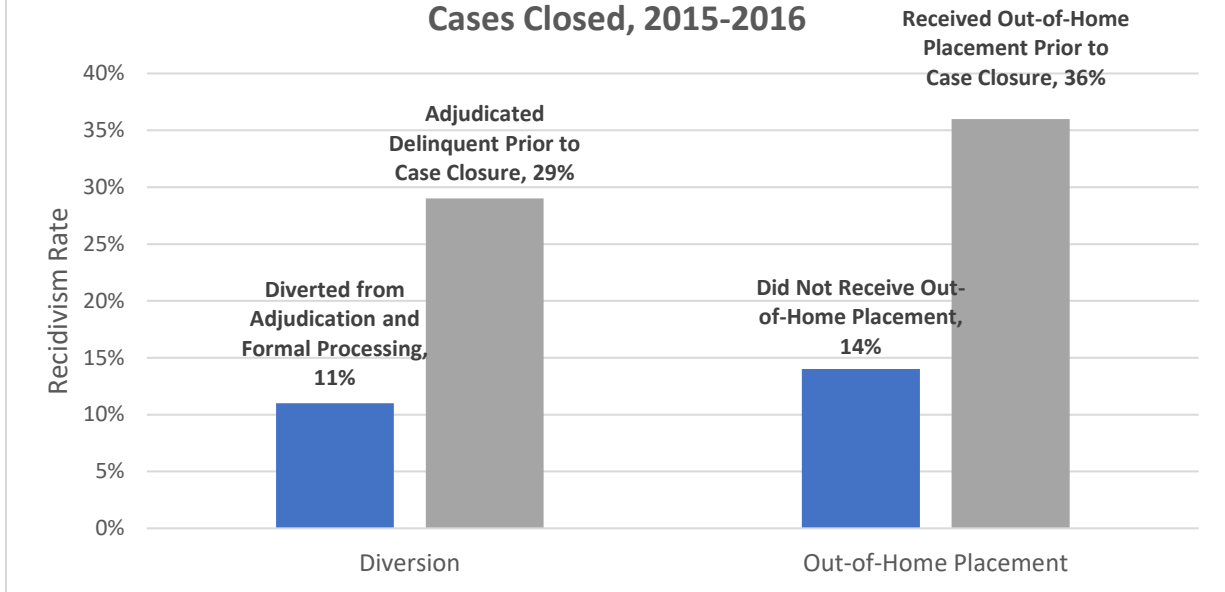


Figure 21: System Penetration and Recidivism, Juveniles with Cases Closed, 2015-2016



Serious, Violent, and 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 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.¹⁵

The Juvenile Court Judges’ Commission (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, JCJC has presented data on the relationship between Serious, Violent, and Chronic offending and recidivism. JCJC consulted with the former Director of OJJDP, James “Buddy” Howell, who provided guidance on which offenses in the Pennsylvania Juvenile Court Management System (PaJCMS) should be considered “serious” and “violent” and how to utilize Serious, Violent, and 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 his or her juvenile 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 his or her juvenile 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 2007-2016 case closure.

For each of the past ten years, approximately one out of five juveniles whose cases were closed met the criteria of being a Serious, or Violent, or Chronic (SVC) offender. As Figure 21 shows, 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 cases closed were Chronic youth than Serious or Violent youth. In 2015, 13% of juveniles with cases closed were Chronic, 6% were Violent, 5% were Serious, 0.4% were Serious, Violent, and Chronic, and 19% were Serious, or Violent, or Chronic. In 2016, 13% of juveniles with cases closed

¹⁵ Office of Juvenile Justice and Delinquency Prevention. (1998). *OJJDP Juvenile Justice Bulletin: Serious and Violent Juvenile Offenders*. Retrieved from <https://www.ncjrs.gov/pdffiles/170027.pdf>.

were Chronic, 6% were Violent, 5% were Serious, 0.5% were Serious, Violent, *and* Chronic, and 19% were Serious, or Violent, or Chronic.

For juveniles whose cases were closed in 2015-2016, these variables were strongly correlated with recidivism. Chronic offenders were more likely to recidivate than Serious or Violent offenders (41% vs. 38% vs. 35%). Juveniles who met the criteria for being Serious, Violent, *and* Chronic recidivated at a higher rate than those who only met the less restrictive criteria of being Serious, or Violent, or Chronic offenders (45% vs. 37%). These findings are consistent with those of previous cohorts of juveniles whose cases were closed.

Figure 24 presents data on recidivism rates between 2007 and 2016 separately for juveniles who were Serious, or Violent, or Chronic (SVC) and non-SVC juveniles. The data shows that, for SVC youth, the recidivism rate has fluctuated, without a clear-cut trend. By contrast, the recidivism rate for non-SVC youth for each of the “post-JJSES initiation” years (2011 through 2016) was below the non-SVC recidivism rate average for the “pre-JJSES” years (2007 to 2010). Given the general decline in recidivism that occurred “post-JJSES initiation” when compared to “pre-JJSES” (documented in Section 1), this additional piece of data suggests that the biggest declines occurred for youth with a less severe offense history.

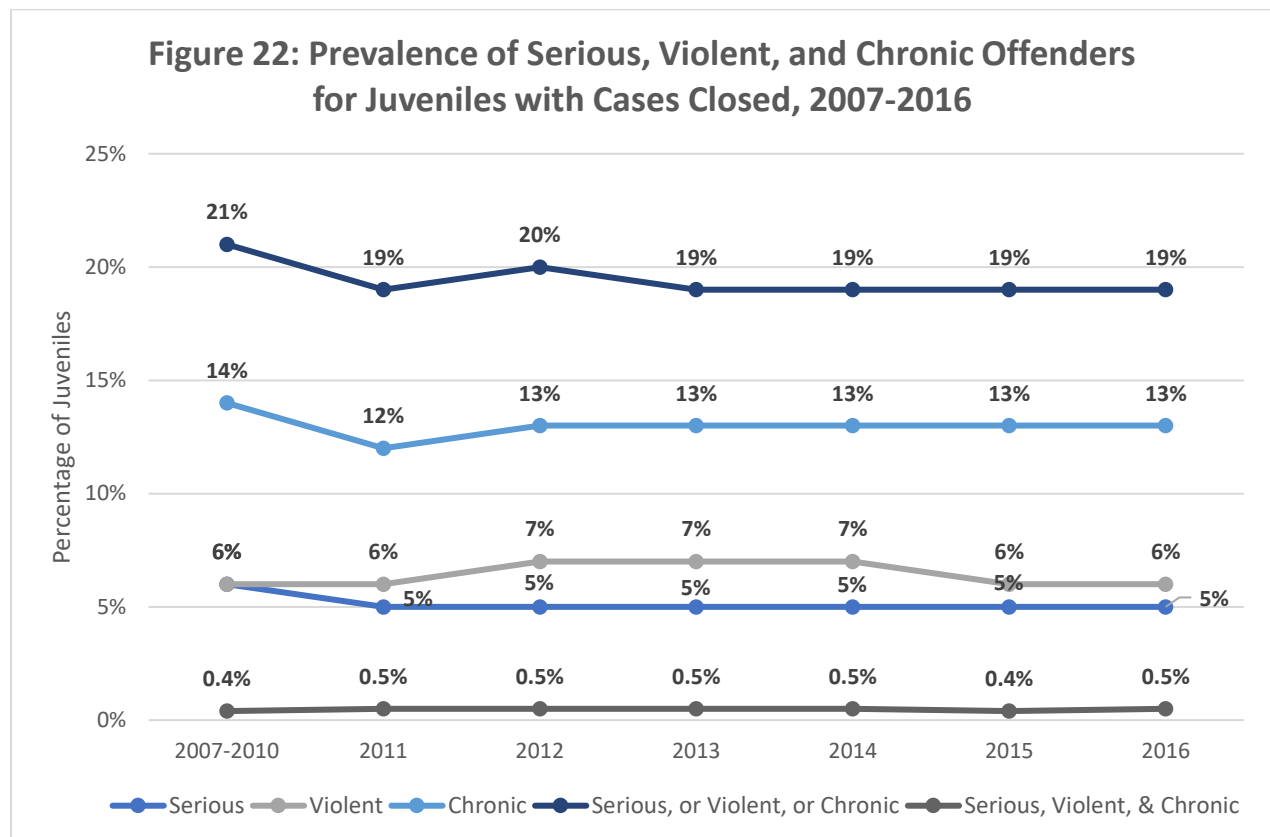


Figure 23: Serious, Violent, and Chronic Youth and Recidivism, Juveniles Cases Closed, 2015-2016

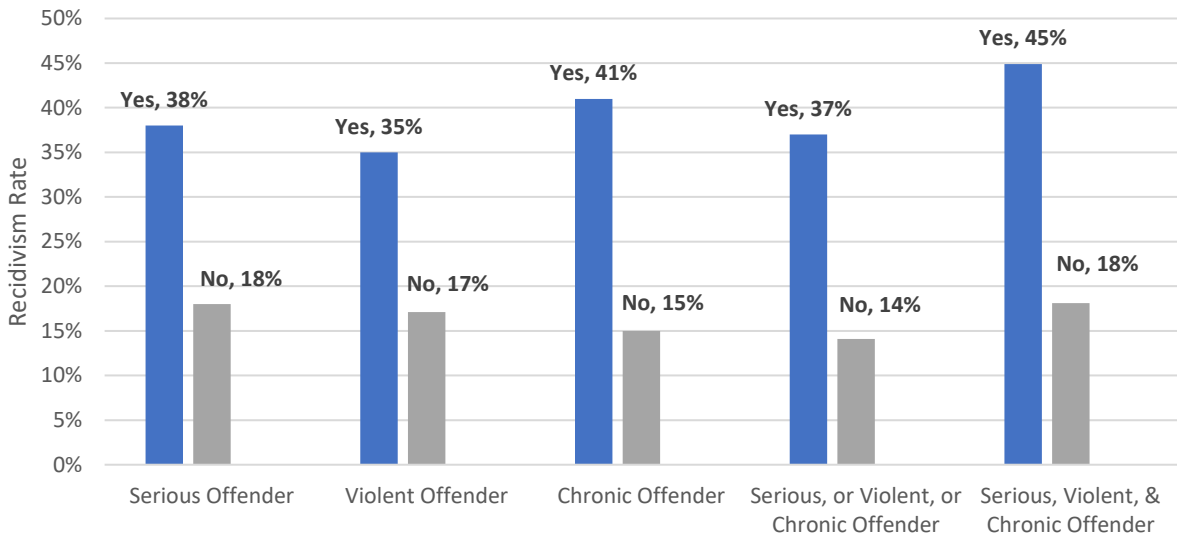
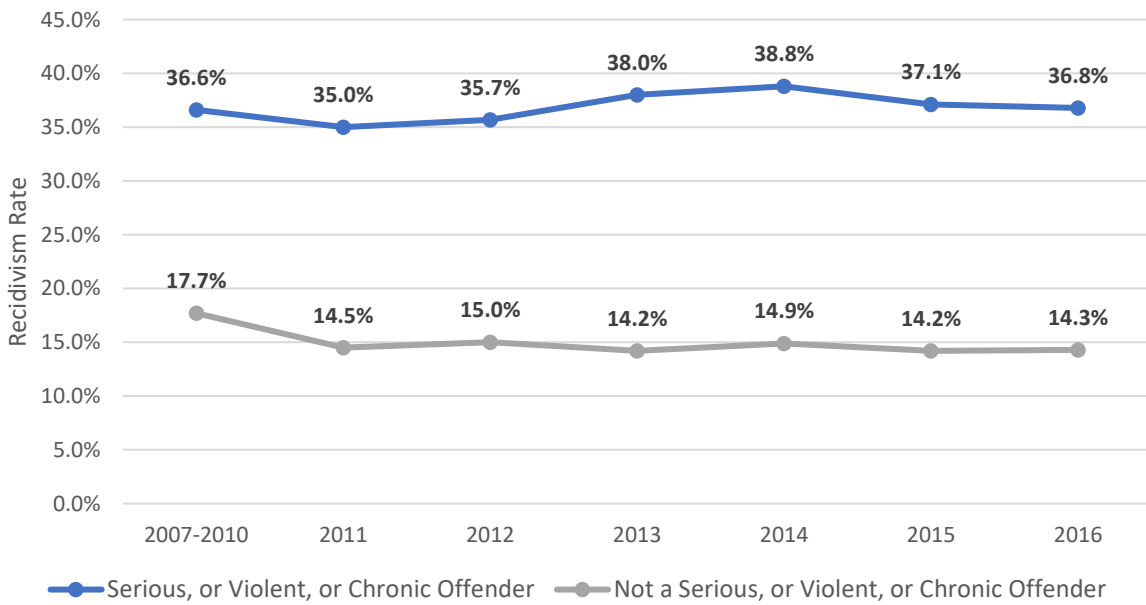


Figure 24: Recidivism Rate by Serious, or Violent, or Chronic Offender Status, 2007-2016



Summary of Key Findings

Number of Written Allegations

- Consistent with prior years, over three-quarters of juveniles with cases closed in 2015-2016 had 1-2 written allegations and only 15% had 4 or more allegations.
- The number of written allegations a youth had prior to case closure is highly correlated with recidivism. Youth with a higher number of written allegations recidivated at a higher rate than youth with a lower number of written allegations.

System Penetration

- For juveniles with cases closed in 2015-2016, 60% were diverted from adjudication and formal processing, while 40% were adjudicated delinquent prior to case closure. For the same period, 80% of juveniles with cases closed in 2015-2016 did not receive an out-of-home placement disposition, while 20% of juveniles received an out-of-home placement disposition prior to case closure.
- Juveniles who were diverted from adjudication and formal processing were less than half as likely to recidivate as juveniles who were adjudicated delinquent prior to case closure.
- Juveniles who did not receive an out-of-home placement disposition were less than half as likely to recidivate as juveniles who received an out-of-home placement disposition prior to case closure.

Serious, Violent, and Chronic Offenders

- Consistent with past reports, slightly less than one in five juveniles with cases closed in 2015-2016 were either Serious, or Violent, or Chronic.
- Being a Serious, or Violent, or Chronic offender was strongly correlated with recidivism.
- Juveniles who met the criteria for being Serious, Violent, *and* Chronic recidivated at a higher rate than those who only met the less restrictive criteria of being Serious, or Violent, or Chronic offenders (45% vs. 37%).

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 Pennsylvania Council of Chief Juvenile Probation Officers and staff from the Juvenile Court Judges' Commission chose to pilot the Youth Level of Service/Case Management Inventory risk assessment instrument (YLS). Since then, the YLS has been chosen as the risk assessment tool to be used in Pennsylvania's juvenile justice system, and the YLS 2.0 is currently being administered by all Pennsylvania counties.

The YLS 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.¹⁶ 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: Low (0-8); Moderate (9-22); High (23-34); Very High (35 or higher).¹⁷ 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 assessment¹⁸ 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.¹⁹

¹⁶ These domains include: (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 YLS assessments analyzed in this report were from the 1.0 version of the tool. The 2.0 version, which is currently in use in Pennsylvania, is the same except that there are a few differences in the range of scores corresponding to each risk level designation.

¹⁸ This report only analyzes YLS risk levels for juveniles whose last YLS assessment was within 6 months of their case closing. Only 51% (16,045/31,355) of cases closed in 2015 and 2016 met this criterion.

¹⁹ Seventy-nine percent of juveniles who had a last YLS assessment within 6 months of cases closing also had a previous YLS assessment that occurred at least 90 days before their final assessment. In total, only 41% (12,702/31,355) of juveniles with cases closed in 2015 and 2016 met the criteria for inclusion in the section on Risk Level Change between First and Final YLS Assessments and Recidivism.

Final YLS Risk Level and Recidivism

For juveniles with cases closed in 2015-2016, almost three-quarters (73%) were assessed as low risk, a quarter were moderate risk, and a very small number (2%) were high or very high risk. As Figure 25 shows, the risk level profiles of juveniles with cases closed in 2015 and 2016 were almost identical.

As expected, juveniles 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 (52% vs. 32% vs. 15%). While this pattern was true for both 2015 and 2016 case closures, high or very high risk youth were more likely to recidivate for juveniles closed in 2015 than for 2016 (58% vs. 47%). The percentage of low and moderate risk youth who recidivated did not vary between the two years.

The higher level of recidivism for high risk youth closed in 2015 than for high risk youth closed in 2016 appears to vary by race and ethnicity and gender. The difference between the years is greater for Black Non-Hispanic and Hispanic youth than for White Non-Hispanic youth. It is also greater for males than for females. However, when broken down by race and ethnicity and by gender, there are not enough juveniles who scored high and very high risk in each group to draw major conclusions. For this reason, the remaining YLS sections of this report present data combining 2015 and 2016 closings rather than analyzing each year separately.

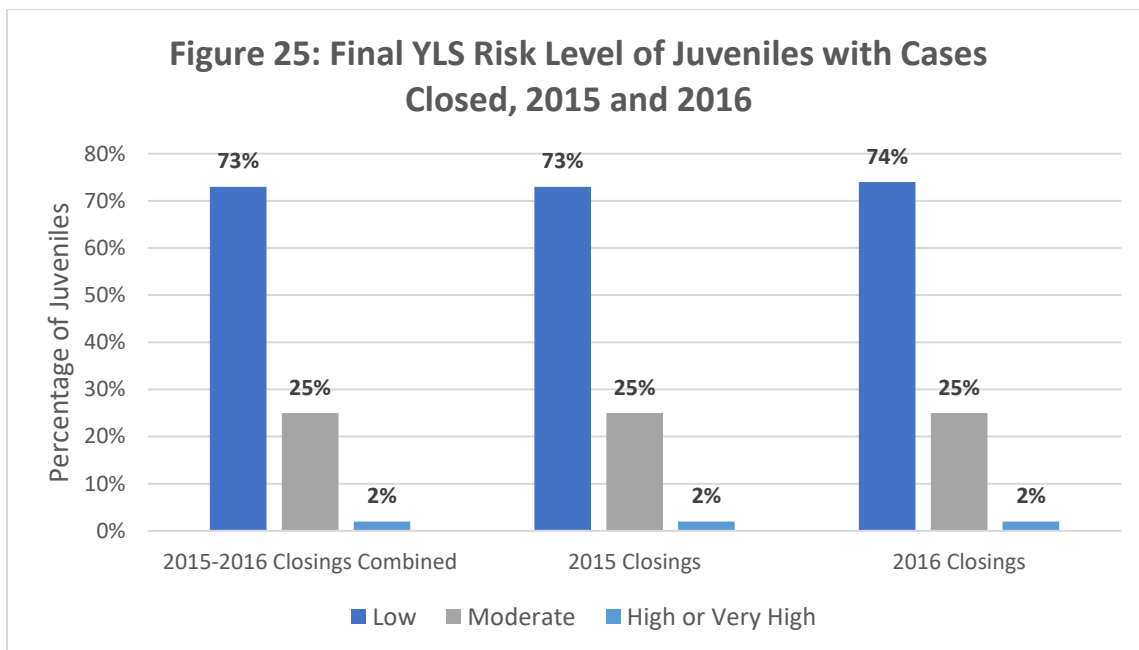
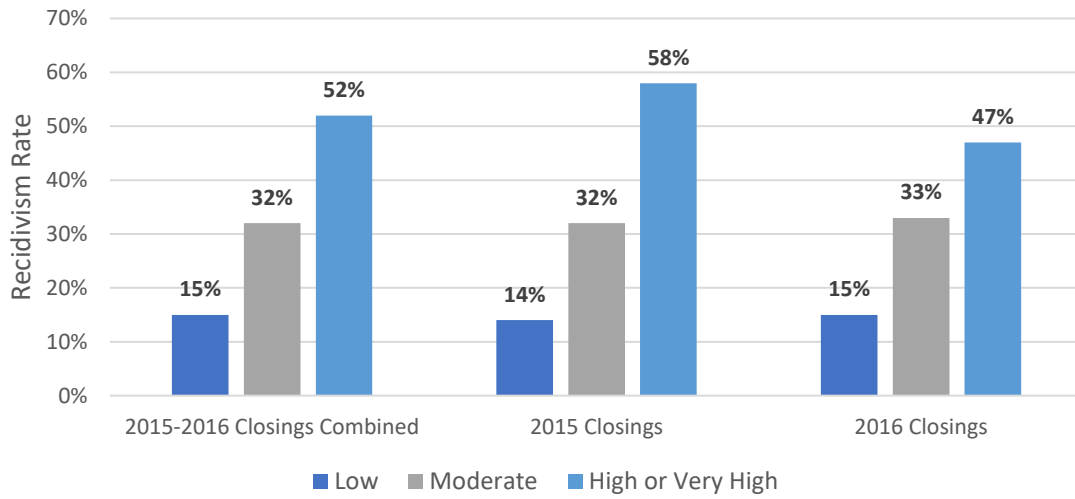


Figure 26: Final YLS Risk Level and Recidivism, Juveniles with Cases Closed, 2015-2016



Final YLS Risk Level and Recidivism by Gender

For juveniles with cases closed in 2015-2016, the risk level distribution of males and females was similar. For males in 2015-2016, 73% were assessed as low risk, 26% moderate risk, and 2% high or very high risk. For females in 2015-2016, 76% were assessed as low risk, 23% moderate risk, and 1% high or very high risk.

Figure 28 shows that YLS risk level was correlated with recidivism for both males and females, though males recidivated at a much higher rate at all risk levels. For males with cases closed in 2015-2016, 17% of low risk youth recidivated compared to 37% of moderate risk youth and 54% of high or very high risk youth. For females with cases closed in 2015-2016, 7% of low risk youth recidivated compared to 18% of moderate risk youth and 40% of high or very high risk youth.

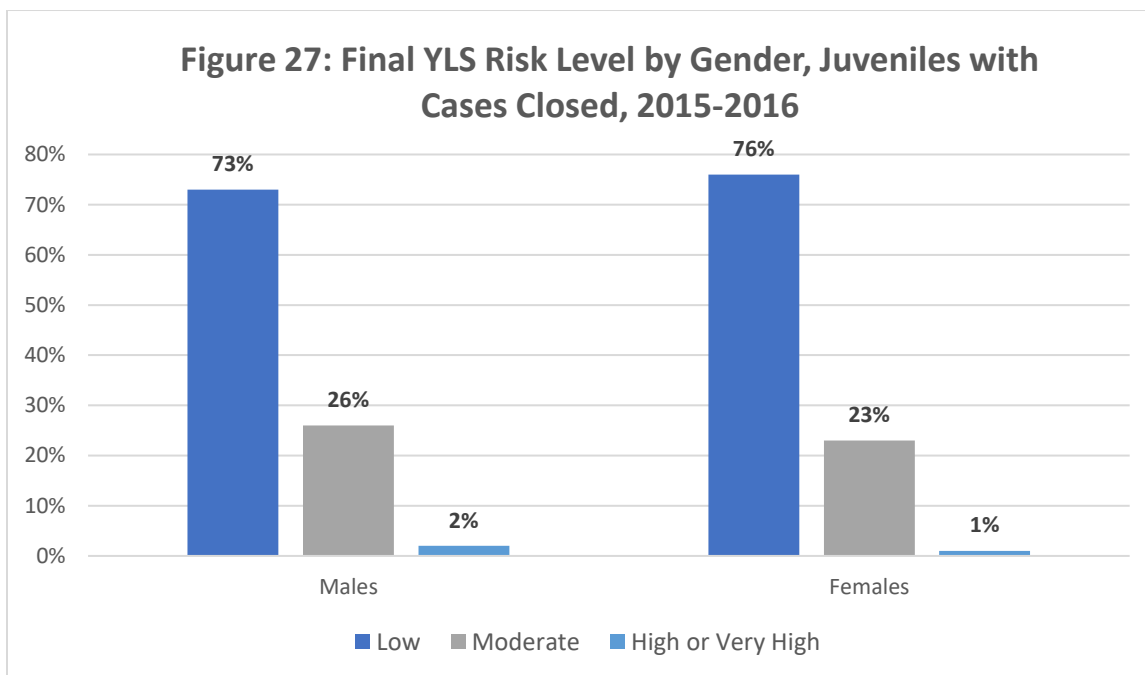
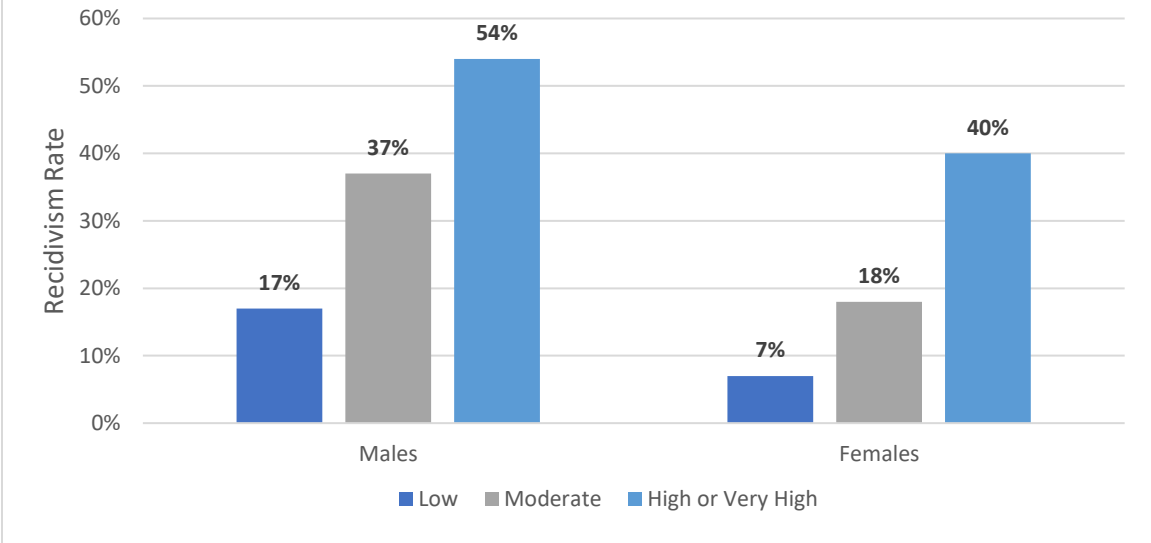


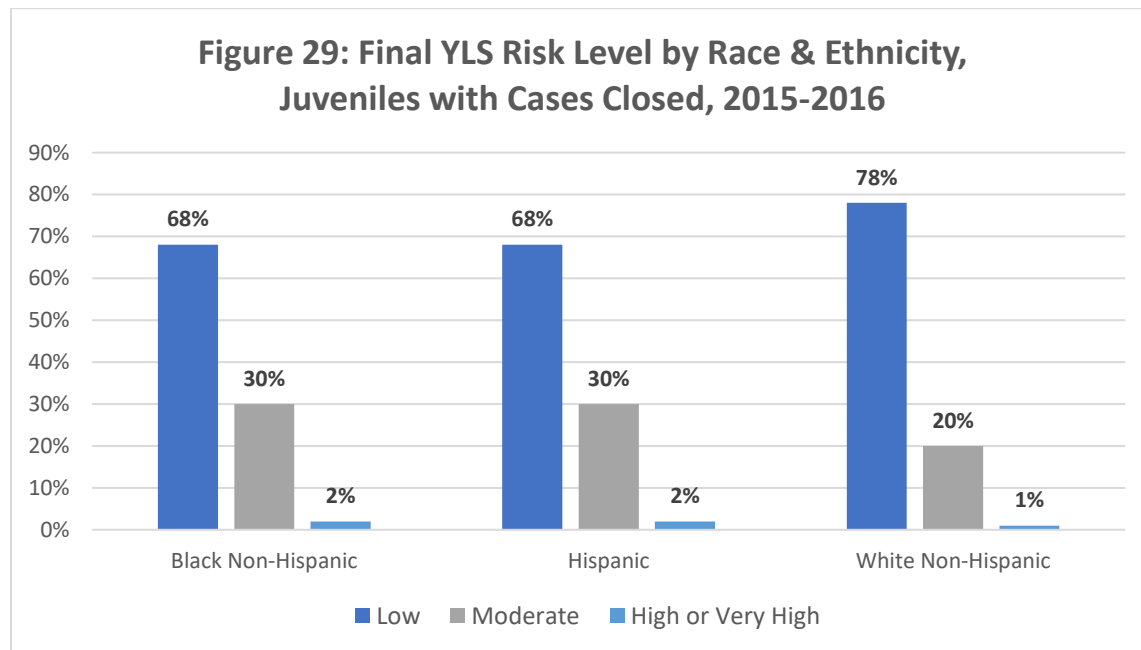
Figure 28: Final YLS Risk Level and Recidivism by Gender, Juveniles with Cases Closed, 2015-2016



Final YLS Risk Level and Recidivism by Race/Ethnicity

For juveniles with cases closed in 2015-2016, a higher percentage of Black Non-Hispanic and Hispanic youth than White Non-Hispanic youth were assessed as moderate risk on the YLS. Likewise, a lower percentage of Black Non-Hispanic and Hispanic youth than White Non-Hispanic youth were assessed as low risk when compared to White Non-Hispanic youth. For Black Non-Hispanic youth, 68% were assessed as low risk, 30% moderate risk, and 2% high or very high risk. The risk level distribution was the same for Hispanic youth. For White Non-Hispanic youth, 78% were assessed as low risk, 20% 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. For Black Non-Hispanics, 18% of low risk youth recidivated compared to 36% of moderate risk youth, and 50% of high or very high risk youth. For Hispanics, 16% of low risk youth recidivated compared to 31% of moderate risk youth, and 56% of high or very high risk youth. For White Non-Hispanics, 12% of low risk youth recidivated compared to 29% of moderate risk youth and 53% of high or very high risk youth. Further analysis presented in Figures 31 and 32 suggests that YLS risk level is correlated with recidivism for all combinations of gender and race/ethnicity: Black Non-Hispanic males and females, White Non-Hispanic males and females, and Hispanic males and females.²⁰ It is worth noting that the relationship between risk level and recidivism appears to be stronger for White Non-Hispanic females than for Black Non-Hispanic or Hispanic females.



²⁰ There were below 20 high or very high risk youth for females of each racial/ethnic group. Therefore, when breaking down by race/ethnicity for females, only the data for low and moderate risk youth is reported.

Figure 30: Final YLS Risk Level and Recidivism by Race & Ethnicity, Juveniles with Cases Closed, 2015-2016

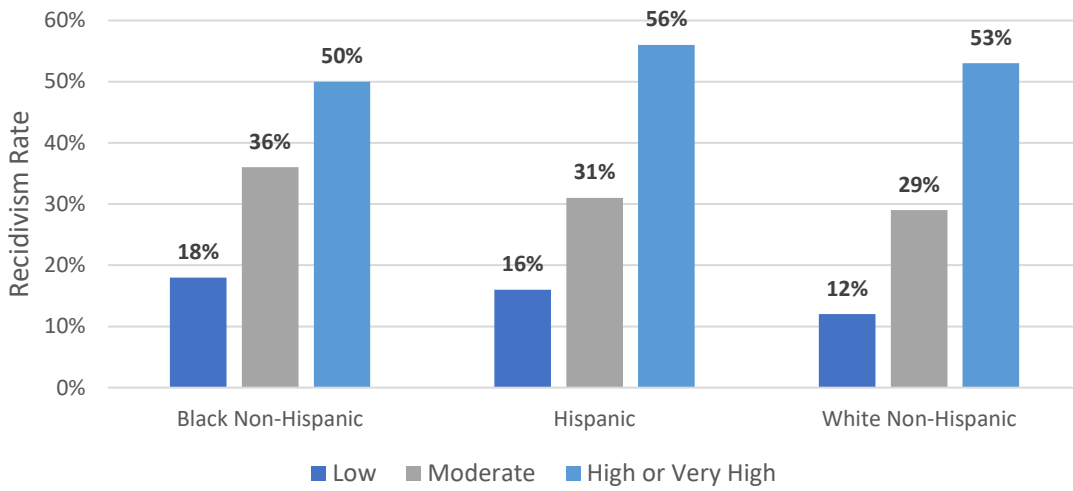


Figure 31: Final YLS Risk Level and Recidivism by Race & Ethnicity, Males with Cases Closed, 2015-2016

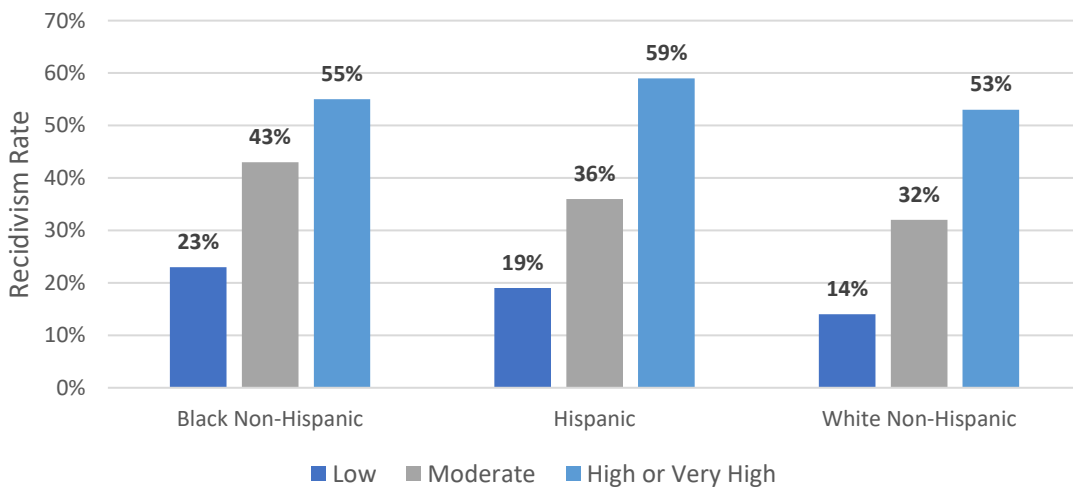
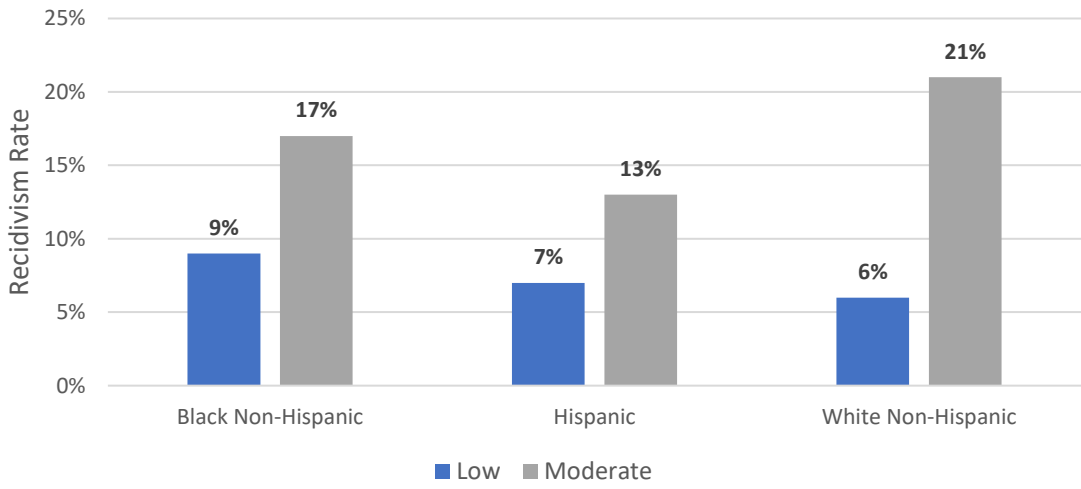


Figure 32: Final YLS Risk Level and Recidivism by Race & Ethnicity, *Females* with Cases Closed, 2015-2016



Domain-Specific Final YLS Risk Level and Recidivism

As Figure 33 illustrates, there is variation in the domain-specific risk level profiles of juveniles with cases closed in 2015-2016. In descending order, the 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%); (2) Education/Employment (46%); (3) Peer Relations (43%); (4) Substance Abuse (38%); (5) Prior and Current Offense (27%); (6) Attitudes and Orientation (21%); (7) Family Circumstances/Parenting (12%).

All eight YLS risk level domains were correlated with recidivism. Three risk level domains stood out as having the strongest relationship to recidivism: Prior and Current Offenses, Attitudes/Orientation, and Peer Relations. Forty-eight percent of juveniles scoring high risk in Prior and Current Offenses recidivated compared to 31% of those who scored moderate risk and 14% of those who scored low risk for this domain. Fifty-three percent of juveniles scoring high risk in Attitudes/Orientation recidivated compared to 32% of those who scored moderate risk and 16% of those who scored low risk for this domain. Forty-two percent of juveniles scoring high risk in Peer Relations recidivated compared to 23% of those who scored moderate risk and 14% of those who scored low risk for this domain.

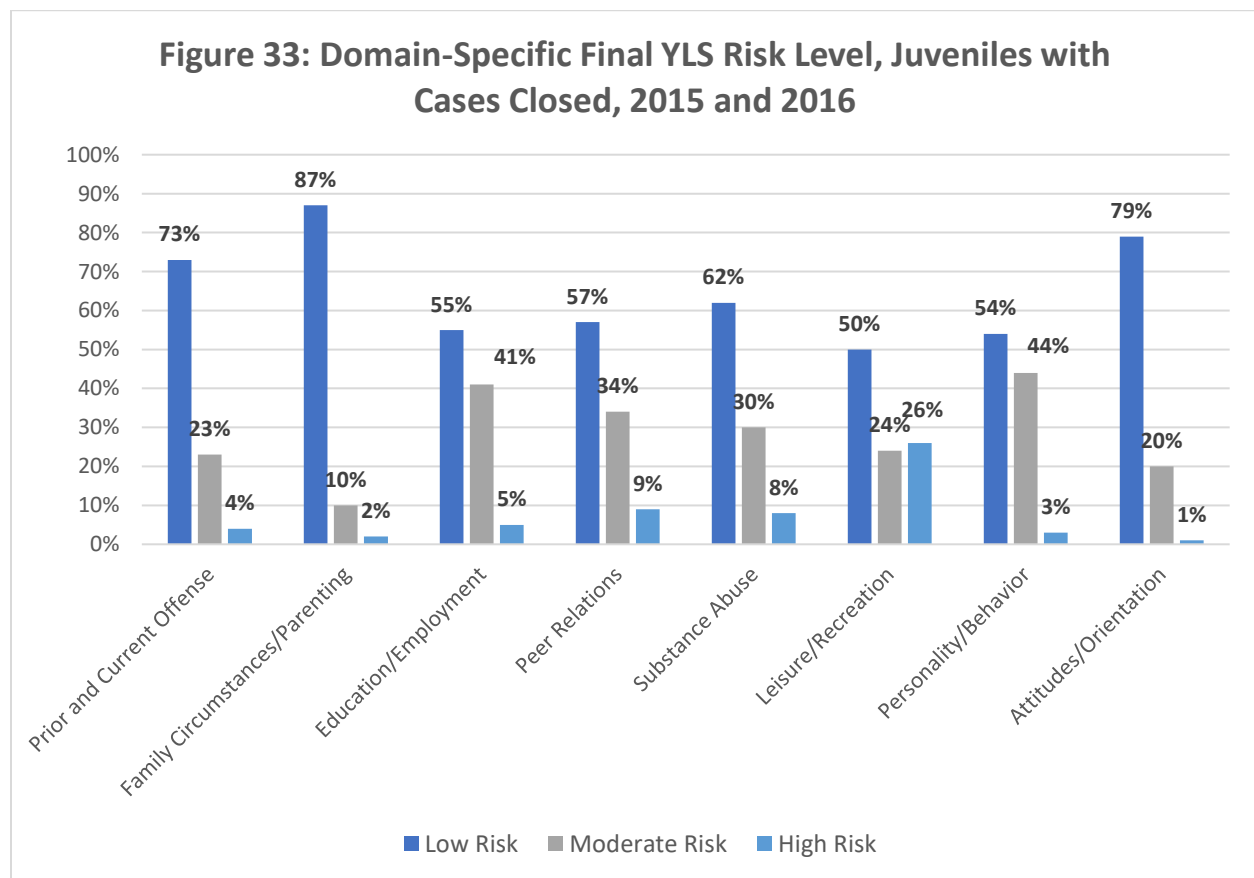
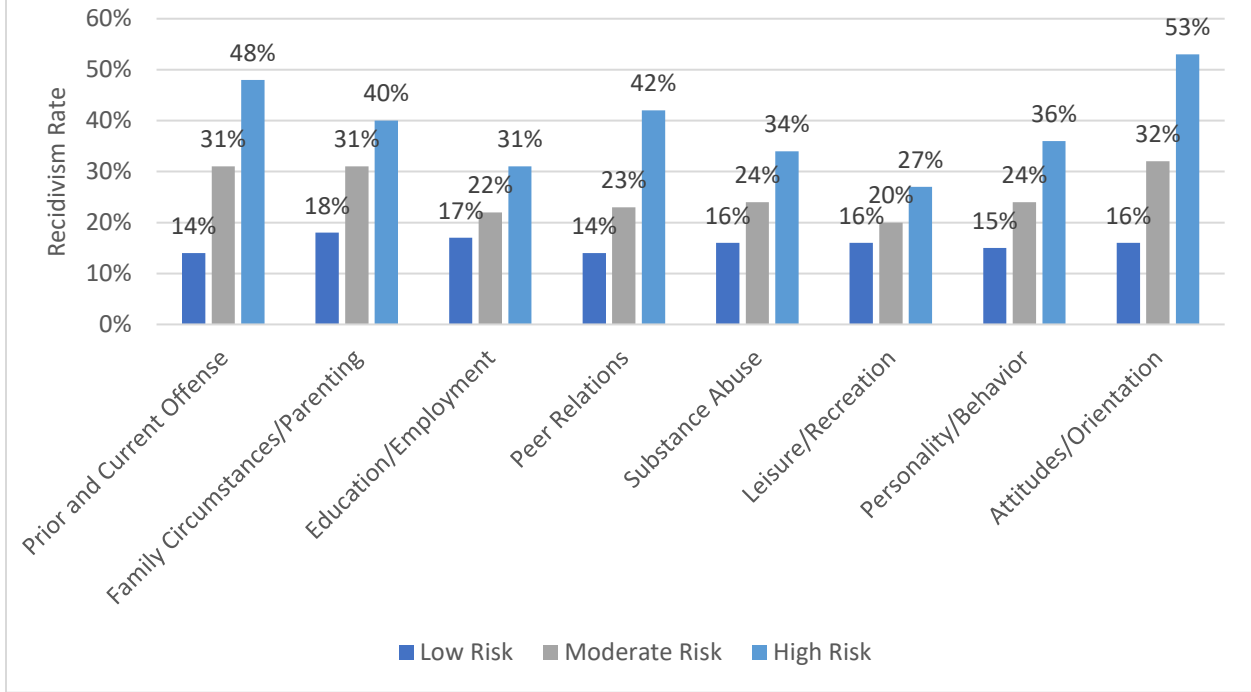


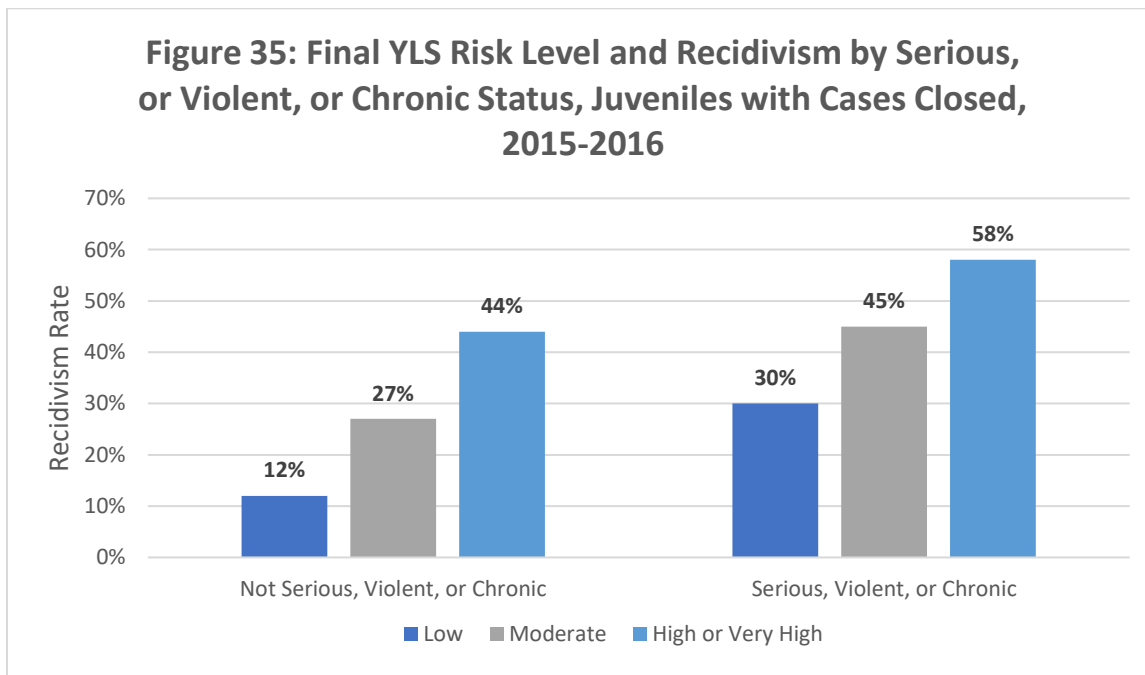
Figure 34: Recidivism Rate by Domain-Specific Final YLS Risk Level, Juveniles with Cases Closed, 2015-2016



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

Figure 35 shows that final YLS risk levels are predictive of recidivism for both Serious, or Violent, or Chronic (SVC) youth and those who were not Serious, or Violent, or Chronic (non-SVC). For non-SVC youth, 12% of low risk, 27% of moderate risk, and 44% of high or very high risk youth recidivated. For SVC youth, 30% of low risk, 45% of moderate risk, and 58% of high or very high risk youth recidivated. In other words, as expected, the YLS is correlated with recidivism after taking into account the offense history of youth.

Likewise, being a SVC offender is correlated with recidivism after taking into account youths' final YLS risk level. At each YLS risk level, SVC youth recidivated at a much higher rate than non-SVC youth (e.g., 30% vs. 12% for low risk youth). These patterns suggest that both offense history, as captured by SVC status, and final YLS risk level are independently related to recidivism and should continue to be analyzed separately and together.



Risk Level Change between First and Final YLS Assessments and Recidivism

This subsection examines both the first and final YLS assessments in order to gauge the relationship between risk level change and recidivism. Only 41% (12,702/31,355) of juveniles with cases in 2015-2016 closed 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.

Figure 36 shows that a substantial percentage of youth who were initially moderate or high/very high risk experienced reductions in their risk level by the time of their final YLS assessment. Sixty percent of youth who were initially assessed as moderate risk were assessed as low risk in their final YLS. Likewise, 88% of youth initially assessed as high and very high risk were assessed as moderate or low risk in their final YLS. By contrast, only a small portion (7%) of youth who were initially assessed as low risk had a higher risk level in their final YLS assessment, and only 2% of youth initially assessed as moderate risk had a higher risk level in their final assessment.

As Figure 37 demonstrates, 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 much lower rate than youth initially assessed as moderate risk who had no change in risk level (22% vs. 35%). Youth assessed as moderate risk in their first YLS who had no change in risk level, in turn, recidivated at a much lower rate than youth first assessed as moderate risk whose risk level had increased in their final YLS (35% vs. 52%). 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 much lower rate than youth initially assessed as high or very high risk who experienced no change in risk level (36% vs. 61%). 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 (31% vs. 11%).

²¹ To be included in this analysis, a juvenile had to have both a YLS assessment completed within 6 months of case closure and a YLS assessment that occurred at least 3 months prior to the final assessment.

Figure 36: Change in YLS Risk Level by Risk Level of First YLS Assessment, Juveniles with Cases Closed, 2015-2016

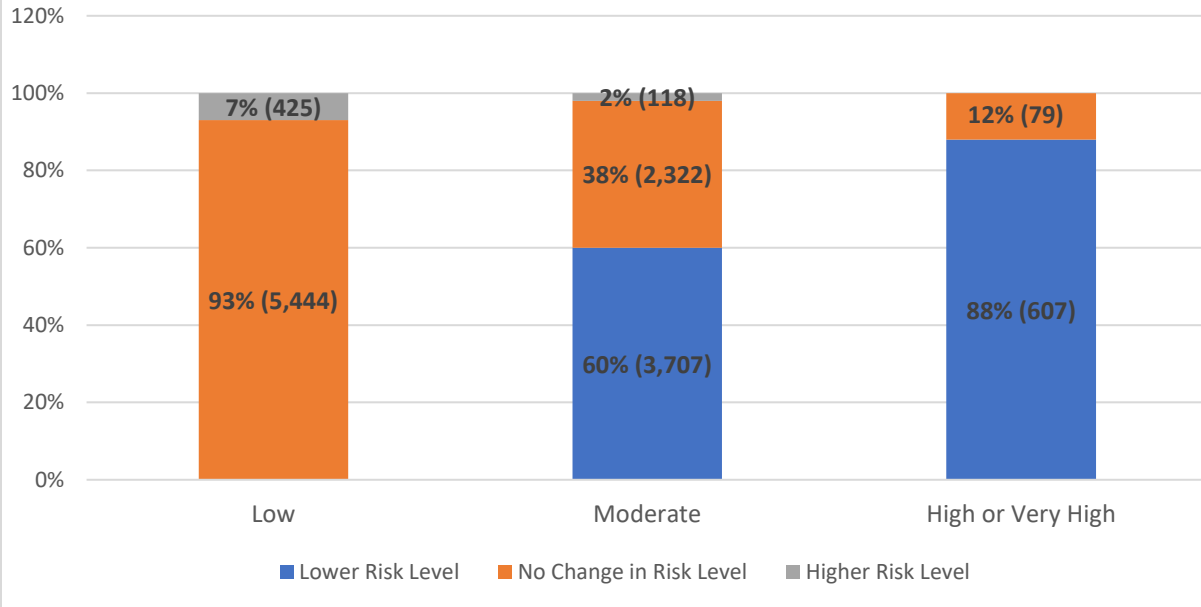
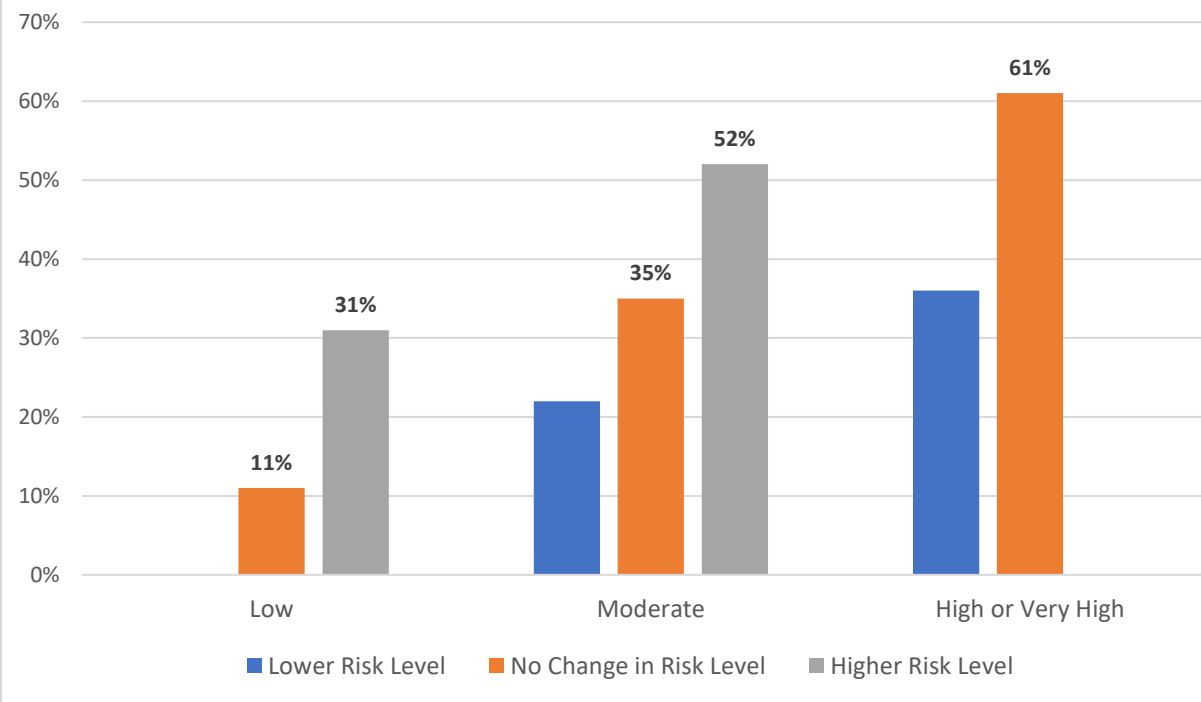


Figure 37: Change in YLS Risk Level and Recidivism by Risk Level of First YLS Assessment, Juveniles with Cases Closed, 2015-2016



Risk Score Change between First and Final YLS Assessments and Recidivism

This subsection examines both the first and final YLS assessments in order to gauge the relationship between risk score change and recidivism. Figure 38 shows that a substantial percentage of youth who were initially low, moderate or high/very high risk experienced reductions in their risk score by the time of their final YLS assessment. Sixty-four percent of youth who were initially assessed as low risk saw a decline in their risk scores, while 17% saw no change and 18% saw an increase. Eighty-four percent of youth who were initially assessed as moderate risk saw a decline in their risk scores, while 4% saw no change and 12% saw an increase. Ninety-three percent of youth who were initially assessed as high or very high risk saw a decline in their risk scores, while 2% saw no change and 5% saw an increase. Thus, risk score reduction was more common for youth assessed as higher risk than for youth assessed as lower risk.

As Figure 39 illustrates, change in the risk score of youth from initial to final YLS assessment is correlated with recidivism. Among juveniles originally assessed as low risk, 11% of youth who saw decreases in their risk score recidivated compared to 9% of youth who saw no change, and 21% of youth whose risk score increased. Among juveniles originally assessed as moderate risk, 25% of youth who saw decreases in their risk score recidivated compared to 31% of youth who saw no change, and 41% of youth whose risk score increased. Among juveniles originally assessed as high or very high risk, 37% of youth who saw decreases in their risk score recidivated compared to 43% of youth who saw no change, and 69% of youth whose risk score increased.

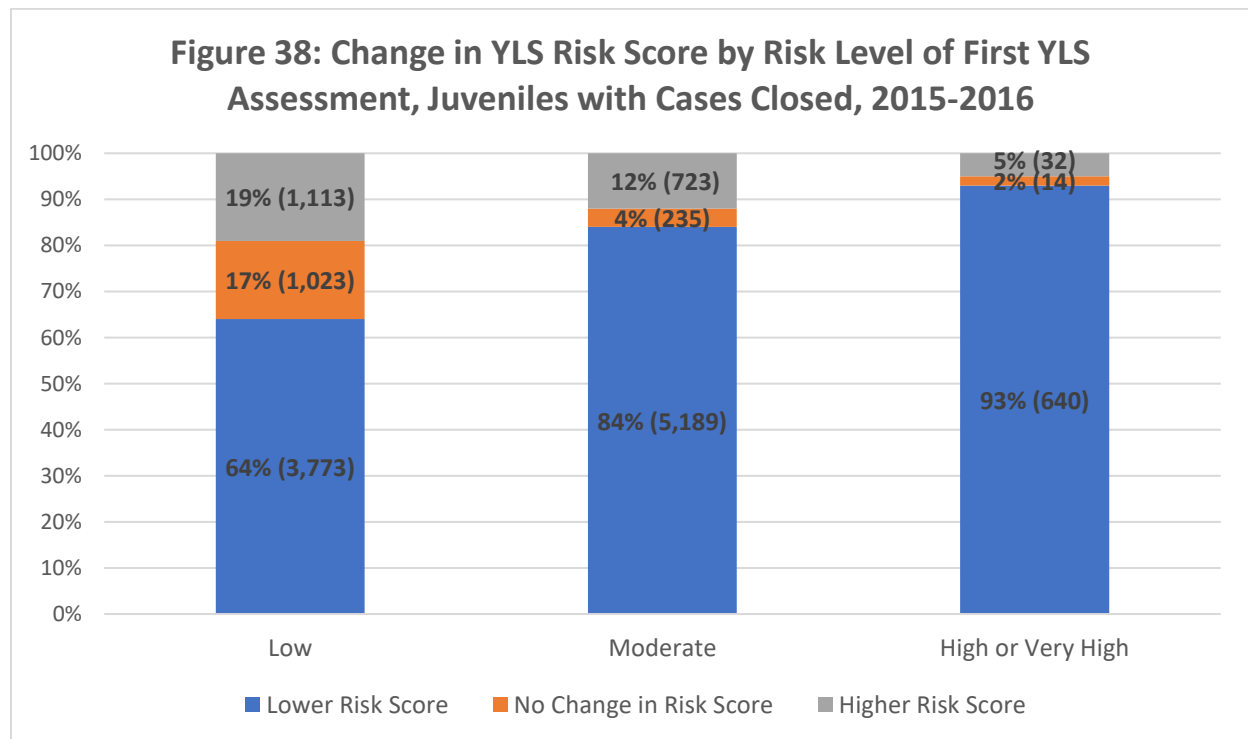
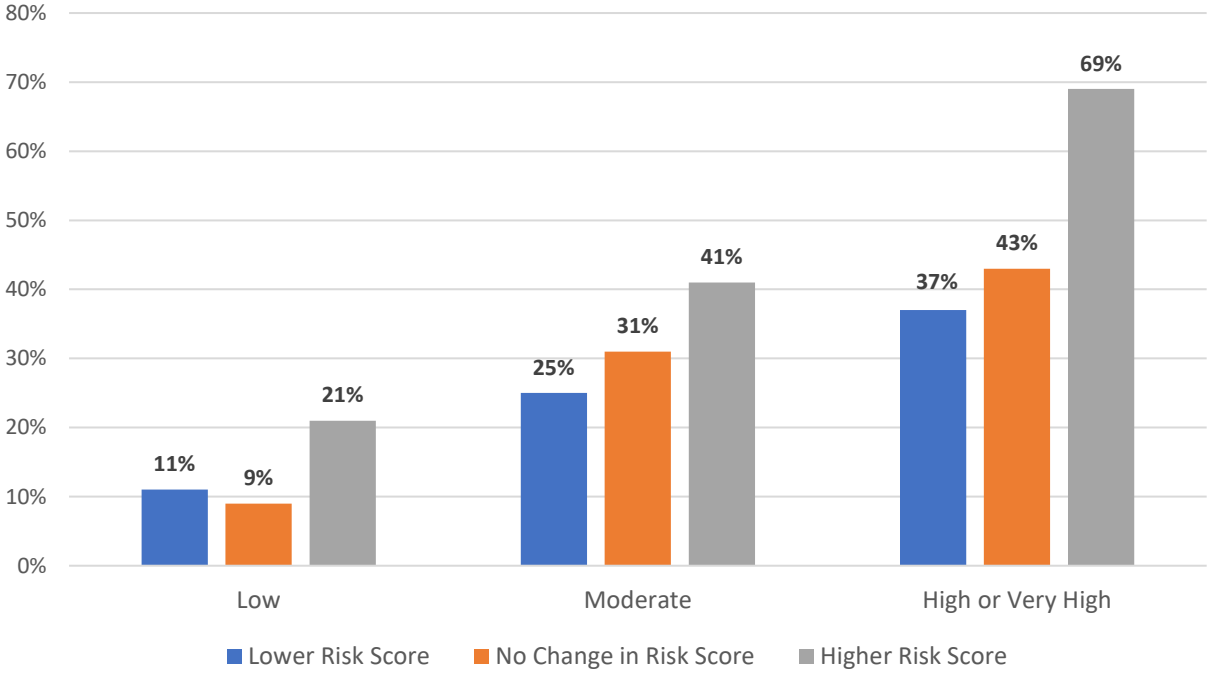


Figure 39: Change in YLS Risk Score and Recidivism by Risk Level of First YLS Assessment, Juveniles with Cases Closed, 2015-2016



Summary of Key Findings

Final YLS Risk Level and Recidivism

- For juveniles with cases closed in 2015-2016, almost three-quarters (73%) were assessed as low risk, a quarter were moderate risk, and a very small number (2%) were high or very high risk.
- As expected, juveniles 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.

Final YLS Risk Level and Recidivism by Gender

- For juveniles with cases closed in 2015 and 2016, the YLS risk level distribution of males and females was similar.
- YLS risk level was correlated with recidivism for both males and females, though males recidivated at a much higher rate at all risk levels.

Final YLS Risk Level and Recidivism by Race/Ethnicity

- For juveniles with cases closed in 2015-2016, a higher percentage of Black Non-Hispanic and Hispanic youth than White Non-Hispanic youth were assessed as moderate risk on the YLS. Likewise, a lower percentage of Black Non-Hispanic and Hispanic youth than White Non-Hispanic youth were assessed as low risk when compared to White Non-Hispanic youth.
- YLS risk level was correlated with recidivism for White Non-Hispanic, Hispanic, and Black Non-Hispanic youth.
- YLS risk level is correlated with recidivism for all combinations of gender and race/ethnicity: Black Non-Hispanic males and females, White Non-Hispanic males and females, and Hispanic males and females.

Domain-Specific Final YLS Risk Level and Recidivism

- In descending order, the 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; (2) Education/Employment; (3) Peer Relations; (4) Substance Abuse; (5) Prior and Current Offense; (6) Attitudes and Orientation; (7) Family Circumstances/Parenting.
- All eight YLS risk level domains were correlated with recidivism.²² Three risk level domains stood out as having the strongest relationship to recidivism: Prior and Current Offenses, Attitudes/Orientation, and Peer Relations.

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

- YLS risk levels are predictive of recidivism for both Serious, or Violent, or Chronic youth and those who were not Serious, or Violent, or Chronic.
- Likewise, for juveniles at each YLS risk level, being classified as a Serious, or Violent, or Chronic offender greatly increased the likelihood of recidivism.

²² All eight YLS domains were statistically significant at the $p < .01$ level.

- These patterns suggest that both offense history, as captured by Serious, or Violent, or Chronic status, and final YLS risk level are independently related to recidivism and should continue to be analyzed separately and together.

Risk Level Change between First and Final YLS Assessment and Recidivism

- A substantial percentage of youth who were initially assessed as moderate or high/very high risk experienced reductions in their risk level by the time of their final YLS assessment. For juveniles with cases closed in 2015-2016, 60% of youth who started out as moderate risk were assessed as low risk in their final YLS. Likewise, 88% of youth who started out as high or very high risk were assessed as moderate or low risk in their final YLS.
- Youth with a lower risk level in their final YLS assessment than in their first assessment recidivated substantially less often than youth who saw no change or an increase in their risk level.

Risk Score Change between First and Final YLS Assessment and Recidivism

- A substantial percentage of youth experienced reductions in their risk score by the time of their final YLS assessment. Risk reduction was more common for youth assessed as higher risk than for youth assessed as lower risk.
- Youth who experienced increases in their risk score recidivated at a higher rate than youth who experienced no change or a decrease in their risk score.

Limitations of the Study

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 with cases closed, or the “case mix”—a term used by Dr. Edward Mulvey of the University of Pittsburgh School of Medicine in previous reports—would be expected to vary from county to county.²³ 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” have been consistently below the “pre-JJSES” rates, but this does not necessarily mean that the system is improving. It is also possible that changes in the characteristics of juveniles with cases closed are responsible for declining recidivism rates.²⁴ The Youth Level of Service/Case Management Inventory (YLS) provides information that can be used in future reports to examine whether trends in recidivism are a product of improvements in the juvenile justice system or changes in the characteristics of juveniles with cases closed. Future recidivism reports will be able to analyze whether an increase or decrease in recidivism rates is: 1) a result of changes in the risk profile of juveniles with cases closed, 2) a result of changes in the recidivism rates of youth with the same risk level (e.g., moderate risk youth in 2015 versus 2017), or 3) a result of some combination of both factors. Unfortunately, because this is the first recidivism report utilizing YLS data, it is not possible to perform this kind of analysis in the current report.

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. This is because 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.

Another study limitation concerns the analysis of the Youth Level of Service/Case Management Inventory (YLS) in Section 4. Only slightly more than half of juveniles (51%) with cases closed in 2015-

²³ Mulvey, E.P., Schubert, C.A., and Hawes, S. (2015). *Benchmarking Pennsylvania’s Juvenile Recidivism Rate*. Pennsylvania Commission on Crime and Delinquency.

²⁴ 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 with cases closed between 2007 and 2014. Their results were consistent with the idea that the initiation of 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.

2016 had a final YLS assessment available for analysis. Likewise, for the analyses under *Risk Level/Score Change between First and Final YLS Assessment and Recidivism*, only 41% of juveniles with cases closed in 2015-2016 completed both first and final YLS assessments. This large amount of missing data 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 (19.6% vs. 17.3%). Such differences do not necessarily mean that the relationship between YLS risk level and recidivism is greatly affected by missing data, however. In future reports, a larger percentage of juveniles with cases closed are expected to have YLS data available to analyze, and it is possible that some of the initial findings in this report will not be replicated.

An additional limitation of this study involves a methodological issue. Since 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.