# VIOLENT CRIME ARRESTS OF YOUTH IN CALIFORNIA EXPECTED TO DECLINE THROUGH 2020

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## Introduction

Youth arrest rates are declining for all races and genders across California, particularly for the youngest ages (CJCJ, 2016). From 1990 to 2015, the total arrest rate of children under 12 fell by 93 percent, and their violent felony arrest rate declined by 87 percent (DOJ, 2011, 2016). Though a large majority of youth arrested for low-level offenses are unlikely to experience repeated contact with the justice system, childhood arrests (particularly for violent offenses) can be strong predictors of future justice system involvement (CJCJ, 2015; DeLisi, 2006; Samson & Laub, 1990). Therefore, recent dramatic declines in the violent felony arrest rates of the youngest Californians signal continued positive trends to come.

Projecting trends in the arrest rates of youth, especially violent felony arrests of youth ages 12-17, is fundamental to predicting the future needs of California's juvenile justice system. This age group comprises the largest share of young people in the system, from arrest through detention, and incurs more severe penalties when arrested for violent offenses, including longer commitments at more secure facilities (DOJ, 2016). Therefore, sizeable fluctuations in the violent felony arrest rate of youth ages 12-17 can predict future shifts in juvenile justice, particularly demands on juvenile courts, probation, and state and local correctional facilities for youth.

This report forecasts future trends in violent felony arrests of youth ages 12-17. It finds a strong correlation between trends in violent felony arrests of children under 12 and trends several years later when they become older. Given recent declines in the arrest rates of children under 12, this report predicts an ongoing decline in the violent felony arrest rate of youth ages 12-17 through 2020 (Figure 1).

**Figure 1. Violent felony arrests of youth ages 12-17, actual (1995-2015) and projected (2020)**
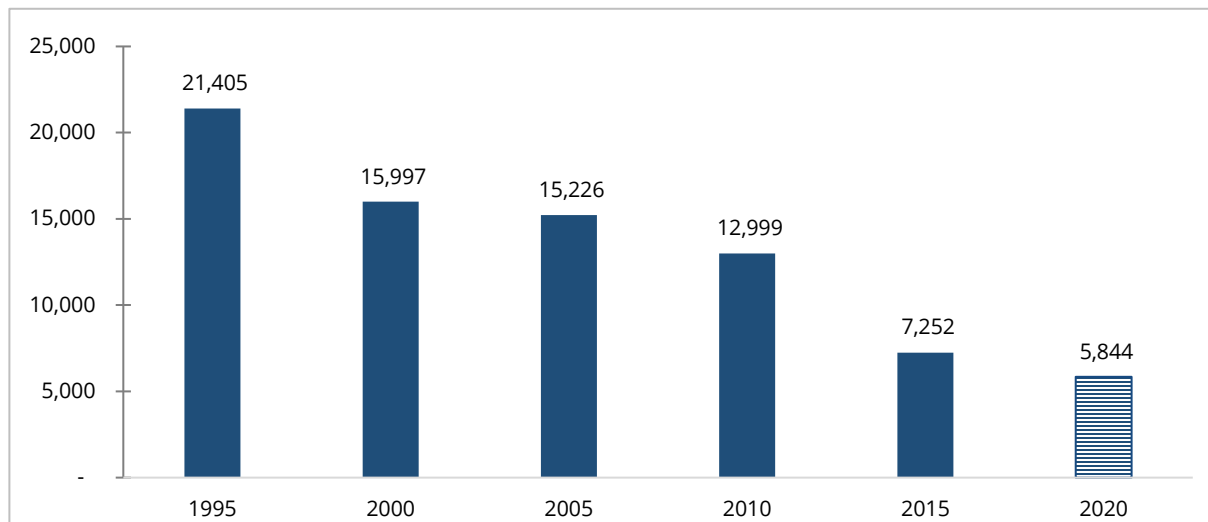


Sources: DOF, 2009, 2012, 2016; DOJ, 2011, 2016.

## Methods and Data

Juvenile felony arrest data for children under age 12 and youth ages 12-17 for 1990-2015 were obtained from the California Department of Justice (DOJ, 2011, 2016). Corresponding population statistics were obtained from the California Department of Finance (DOF, 2009, 2012, 2016). Arrest and population data are used to calculate rates of violent felony arrest per 100,000 youth for two age categories: children under 12 (populations for ages 10-11 are used to calculate rates) and youth ages 12-17. This analysis uses violent felony arrest rates of children under 12 for 2011-2015 to predict the violent felony arrest rates of youth ages 12-17 for 2016-2020.

The model does not account for policy changes or other factors that influence arrest. However, compared to other types of offenses, violent felonies are less affected by shifts in state policy or local law enforcement: California's recent juvenile and criminal justice reforms such as juvenile justice realignment, Public Safety Realignment, drug law reform, and Proposition 47 have not directly impacted violent felony laws, and violent offenses are less susceptible to law enforcement discretion than less serious ones. The implication for this study is that trends over time in violent felony arrests are more stable by age cohort and more directly reflective of actual crimes committed (FBI, 2015). Youth convicted of violent crimes are more likely to be sent to state Division of Juvenile Justice facilities than youth convicted of nonviolent offenses, making their trends useful in predicting facility needs.

Annual violent felony arrest rates for children under 12 from 1990 through 2010 and for ages 12-17 from 1995 through 2015 were incorporated into a simple regression analysis, which found a significant relationship between childhood arrests and arrests of older youth five years later (See Appendix A). This result is unsurprising considering that these are largely the same young people: most youth ages 12 to 17 were children under 12 five years earlier. For example, a person born from 1983 to 1988 would have been 7 to 12 years old in 1995 and 12 to 17 in 2000.

According to the model, trends in violent felony arrests for children under 12 are predictive of trends in violent felony arrests among older youth five years later. However, declines in childhood arrests for violent felony offenses have accelerated in recent years, meaning that the model may offer a conservative estimate of the reductions in arrests expected through 2020.

## Predicted Declines

Violent felony arrest rates of children under 12 are strongly correlated with those of 12-17-year-olds five years later, and the relationship can be described with the following linear model.

$$\text{12-17 Violent Felony Arrest Rate}_{\text{year 5}} = \text{Under-12 Violent Felony Arrest Rate}_{\text{year 1}} \times 7.52 + 121.96$$

That is, based on 21 years of annual data, the violent felony arrest rate per 100,000 population for age 12-17 is 7.52 times the violent felony arrest rate per 100,000 population for children under 12 five years earlier, adding a consistent rate difference of 121.96. The ability of the arrest rates of children under 12 to predict the arrest rates of youth ages 12-17 five years later is statistically significant (R=0.827; p=0.000; see Appendix A). Given this relationship, the analysis finds an expected 24 percent decline in the rate of violent felony arrests among youth ages 12-17 from 2016 through 2020 based on rates projected from arrests of children under 12 for 2011-2015. A decline of this magnitude would translate into a reduction of 1,600 to 1,700 annual arrests of youth ages 12-17 from 2016 to 2020.

**Table 1. Violent felony arrest rates for youth under age 12 and for ages 12-17**

| Children Under Age 12 | | | Youth Ages 12 to 17 | | | |
|---|---|---|---|---|---|---|
| Year of Arrest | Arrest Rate | Arrest Count | Year of Arrest | Arrest Rate | Arrest Count | |
| 1990 | 67.0 | 569 | 1995 | 782.5 | 21,405 | |
| 1991 | 79.1 | 704 | 1996 | 774.1 | 21,495 | |
| 1992 | 64.7 | 590 | 1997 | 713.4 | 20,368 | |
| 1993 | 54.5 | 507 | 1998 | 656.3 | 19,058 | |
| 1994 | 61.7 | 571 | 1999 | 618.7 | 18,173 | |
| 1995 | 51.9 | 486 | 2000 | 532.1 | 15,997 | |
| 1996 | 61.5 | 593 | 2001 | 549.6 | 16,834 | |
| 1997 | 65.2 | 634 | 2002 | 488.3 | 15,335 | |
| 1998 | 58.3 | 578 | 2003 | 477.4 | 15,368 | |
| 1999 | 67.7 | 694 | 2004 | 462.8 | 15,148 | |
| 2000 | 57.3 | 613 | 2005 | 462.0 | 15,226 | |
| 2001 | 65.5 | 734 | 2006 | 503.6 | 16,748 | |
| 2002 | 47.1 | 530 | 2007 | 527.0 | 17,695 | |
| 2003 | 39.5 | 440 | 2008 | 512.3 | 17,238 | |
| 2004 | 33.5 | 369 | 2009 | 468.7 | 15,159 | |
| 2005 | 33.2 | 362 | 2010 | 403.2 | 12,999 | |
| 2006 | 30.8 | 331 | 2011 | 347.0 | 10,990 | |
| 2007 | 33.9 | 355 | 2012 | 297.9 | 9,312 | |
| 2008 | 27.6 | 282 | 2013 | 263.9 | 8,155 | |
| 2009 | 22.5 | 228 | 2014 | 257.9 | 7,893 | |
| 2010 | 19.7 | 201 | 2015 | 238.0 | 7,252 | |
| 2011 | 16.6 | 168 | 2016 | 246.4 | 7,505 | Projected Arrest Rates |
| 2012 | 12.5 | 125 | 2017 | 216.1 | 6,594 | |
| 2013 | 14.9 | 148 | 2018 | 234.2 | 7,167 | |
| 2014 | 13.1 | 131 | 2019 | 220.4 | 6,788 | |
| 2015 | 8.8 | 89 | 2020 | 188.2 | 5,844 | |

Sources: DOF, 2009, 2012, 2016; DOJ, 2011, 2016. Note: Rates are calculated per 100,000 population of the corresponding age group. The populations for youth ages 10-11 are used to calculate arrest rates for youth under age 12.

## Conclusion

Based on the declining rates of youth arrest over the last several decades, California can expect continued declines and historically low rates of violent felony arrest of youth through 2020. This continued decrease in violence also provides California the opportunity to address changing needs in its juvenile justice system. As violent felony arrest rates have fallen, the populations of correctional facilities for youth have also sustained major declines. From 1995 to 2015, when violent felony arrests of 12-17-year-olds fell by over 14,000, the annual number of new admissions to the Division of Juvenile Justice dropped by nearly 3,500 (CDCR, 2002, 2016; DOJ, 2011, 2016).

Continued declines in youth arrests will extend these existing patterns and reverberate through the justice system, impacting courts, probation departments, and residential facilities. In particular, a reduction of 1,600 to 1,700 in the number of young people arrested annually for violent felonies will shrink the pool of youth eligible for commitment to local detention facilities and the Division of Juvenile Justice. These changes would require California to reassess the long-term utility of large, congregate institutions for youth and reevaluate its juvenile justice spending priorities.

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## Appendix A: Regression Output

Violent felony arrest rates for youth ages 12-17 is the dependent variable in this model, which varies in response to the predictor variable, violent felony arrest rates of children under age 12. It is statistically unlikely that the relationship between the year-to-year variance in the violent felony arrest rate for children under 12 and the year-to-year variance in the violent felony arrest rate of youth ages 12-17 five years later is occurring by random chance alone (R=0.827; p=0.000). The year-to-year variation in violent felony arrest rates of children under 12 explains 68.4 percent (adjusted $R^2 = 0.684$) of the year-to-year variation in the violent felony arrest rates of youth ages 12-17 five years later, with the remaining 31.6 percent unexplained. The R-squared value is high enough to suggest the model is a good fit for the 1990-2015 data and a valid predictor of future arrests through 2020.

|  | Multiple R | R Square | Standard Error | Observations |  |
|---|---|---|---|---|---|
| Model | 0.827 | 0.684 | 91.83 | 21 |  |
| ANOVA | Sum of Squares | Degrees of Freedom | Mean Square | F | Significance |
| Regression | 347152.8 | 1 | 347152.8 | 41.170 | 0.000 |
| Residual | 160210.4 | 19 | 8432.1 |  |  |
| Total | 507363.2 | 20 |  |  |  |
| Regression Coefficients | Unstandardized coefficients (B) | Standard Error | T-statistic | P-value |  |
| Constant | 121.960 | 61.299 | 1.990 | 0.061 |  |
| Variable | 7.517 | 1.171 | 6.416 | 0.000 |  |