

# JUVENILE RECIDIVISM ANALYSIS – PRELIMINARY RESULTS

## INTRODUCTION

This preliminary summary report presents findings from a recidivism analysis of youth under supervision of the Sonoma County Probation Department. Below are the analysis questions this analysis sought to answer, via two different methodologies. The respective methodologies and results from these two analyses are presented in this preliminary report.

### Analysis Questions

1. What is the rate of recidivism for youth on supervision, per the Chief Probation Officers of California (CPOC) Unified Recidivism measure?
2. How do recidivism outcomes vary across different groups (race/ethnicity, gender, supervision type)?
3. For youth who recidivate, what is the amount of time between the end of supervision and the recidivating event, and how does that vary by risk level?

## PART I: RECIDIVISM RATES - CPOC DEFINITION

### Methodology

The first analysis leverages the Chief Probation Officers of California (CPOC) Unified Recidivism measure for juvenile adopted by the 58 counties in California: *Of those terminated or closed from a juvenile grant of probation in a given time period, provide a count of how many had new true findings / law convictions during their time under supervision.* While new cases/referrals are not part of the official CPOC definition for recidivism, we additionally include a separate recidivism rate for new cases/referrals while on supervision as well as new adjudications in order to consider additional cases, such as those diverted.

This analysis includes youth on **Wardship, DEOJ, Formal Probation or 654.2(a)** informal supervision who **ended supervision between July 1, 2014 and June 30, 2022.**

- **New cases** are defined as: (1) any new juvenile referral for a new misdemeanor or felony offense, excluding violations, electronic monitoring violations or escapes from an institution, that occurred while on supervision, or (2) any new arrests and booking into the Main Adult Detention Facility (MADF) for a new misdemeanor or felony charge that occurred while the youth was on supervision. New cases for events occurring while a youth is in custody at Juvenile Hall are included.<sup>1</sup>

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<sup>1</sup> New cases that occur while in custody at MADF in the Adult system are not included in this preliminary analysis. While these events are rare, future analyses will include any in-custody events that may have occurred at MADF.

- **New adjudications** are defined as any new adult or juvenile cases that occurred during the youth's time on supervision and led to a misdemeanor or felony conviction in the adult system or an adjudication in Juvenile Court, during the supervision period. Note that if an adult conviction on a charge was later expunged, the original conviction will not be captured in the analysis.

### Descriptive statistics

1,984 distinct periods of supervision among 1,720 unique youth were included in the analysis. A youth is included more than once if they completed more than one period of supervision during the analysis between July 1, 2014 and June 30, 2022. Table 1 below presents the demographics and characteristics of the population included.

With respect to supervision type, a majority of youth in the population were on wardship supervision (71% when including DJJ parole wardship), followed by 654.2(a) informal supervision (16%). Over three-quarters (77%) of youth included in the population were male, and the most commonly represented race or ethnicity was Hispanic, representing nearly half of the population (48%), followed by white youth (37%). While there was a broad range of ages at which youth in the sample ended supervision, 17 and 18 years were the most common, accounting for 57% of the population. Over half of the population ended supervision between FY 14-15 and FY 16-17. 14% of the population ended supervision during the last two fiscal years (FY 20-21 and FY 21-22). The most common assessed risk level among youth in the population was low risk (40%), followed by high (32%) and moderate (27%).

**Table 1. Characteristics of the population**

<b>Supervision Type</b>	<b>#</b>	<b>%</b>
Wardship	1377	69%
DJJ Parole	44	2%
Formal Probation	155	8%
Deferred Entry of Judgement	99	5%
654.2(a) Informal Supervision	309	16%
<b>Gender</b>	<b>#</b>	<b>%</b>
Male	1536	77%
Female	448	23%
<b>Race/Ethnicity</b>	<b>#</b>	<b>%</b>
Hispanic	948	48%
White	743	37%
Black	116	6%
Asian	34	2%
American Indian	30	2%
Native Hawaiian or Other Pacific Islander	24	1%
Multi-Racial	3	<1%
Other/Unknown	86	4%

<b>Age (at end of supervision)</b>	<b>#</b>	<b>%</b>
<14 years old	35	2%
14 years old	110	6%
15 years old	205	10%
16 years old	341	17%
17 years old	539	27%
18 years old	585	30%
≥19 years old	169	9%
<b>Fiscal Year (at end of supervision)</b>	<b>#</b>	<b>%</b>
FY14-15	302	15%
FY15-16	336	17%
FY16-17	335	17%
FY17-18	257	13%
FY18-19	204	10%
FY19-20	265	13%
FY20-21	180	9%
FY21-22	105	5%
<b>Risk Level (at start of supervision)</b>	<b>#</b>	<b>%</b>
Low	788	40%
Moderate	530	27%
High	632	32%
No Assessed Risk Level	34	2%
<b>TOTAL</b>	<b>1,984</b>	<b>100%</b>

Limitations exist in the collection and reporting of demographic data, particularly with respect to race/ethnicity and gender. With respect to gender, only binary male and female options exist in the data system. This limits our ability to account for a range of other gender identities among the population, including transgender and gender nonconforming youth who according to national and statewide data are overrepresented in the juvenile justice system.<sup>2</sup> In terms of race/ethnicity, these data are typically not self-report, and may not reflect how a youth self-identifies. Additionally, our data system collapses race and ethnicity into a single field, masking multiple identities. Conflating race and ethnicity has been shown to inflate the counts of white youth, and undercount Latinx youth and other youth of color.<sup>3</sup>

<sup>2</sup> Irvine, Angela et al. 2017. [Lesbian, Gay, Bisexual, Questioning and/or Transgender Girls and Boys in the California Juvenile Justice System: A Practice Guide](#).

<sup>3</sup> Alianza for Youth Justice and UCLA's Latino Policy and Politics Initiative. 2020. [The Latinx Data Gap in the Youth Justice System](#).

## Overall Recidivism Rates

The table below presents the overall recidivism rates for youth who ended supervision between July 1, 2014 and June 30, 2022 using the CPOC definition.

**Table 2. Overall Recidivism Rates – CPOC Definition**

CPOC Definition	#	%
New Case/Referral During Supervision	356	18%
New Adjudication During Supervision	200	10%
<b>TOTAL</b>	<b>1,984</b>	<b>100%</b>

## Stratified Recidivism Rates

Tables 3A through 3F below present recidivism rates stratified by characteristics, including supervision type, risk level, fiscal year, age (upon completion of supervision), gender and race/ethnicity.

As shown in table 3A, youth under DJJ parole and wardship supervision experienced the highest rates of recidivism, with those on formal probation, deferred entry of judgement (DOEJ) and 654.2(a) informal supervision experiencing very low rates of recidivism. Note that the number of DJJ youth included in the analysis is relatively small (n=44), so results should be interpreted with caution as this small number can be more subject to fluctuations.

**Table 3A. Recidivism Rates by Supervision Type**

Supervision Type	Total	# with new case/referral	% with new case/referral	# with new adjudication	% with new adjudication
Wardship	1377	311	23%	186	14%
DJJ Parole	44	14	32%	7	16%
Formal Probation	155	6	4%	1	1%
Deferred Entry of Judgement	99	7	7%	3	3%
654.2(a)	309	18	6%	3	1%

As shown in Table 3B below, recidivism rates have varied over time, peaking at FY 19-20:

**Table 3B. Recidivism Rates by Fiscal Year**

Fiscal Year (at end of supervision)	Total	# with new case/referral	% with new case/referral	# with new adjudication	% with new adjudication
FY14-15	302	49	16%	25	8%
FY15-16	336	60	18%	31	9%
FY16-17	335	52	16%	26	8%
FY17-18	257	47	18%	24	9%
FY18-19	204	29	14%	20	10%
FY19-20	265	62	23%	44	17%
FY20-21	180	33	18%	20	11%
FY21-22	105	21	20%	10	10%

Sonoma County Probation uses the Positive Achievement Change Tool (PACT) assessment to determine the level of risk to reoffend. As expected, youth assessed as high risk experienced the highest rates of recidivism, followed up by moderate and then low risk youth. Recidivating events were relatively rare among low risk youth, who represented the largest group of youth on supervision during the analysis period. There were a relatively small number of youth (n=34) who did not have an assessed risk level. Recidivism rates for this group were similar to those in the high risk group, though the same caution about potential fluctuation in rates based on small numbers applies here.

**Table 3C. Recidivism Rates by Assessed Risk Level**

Assessed Risk Level	Total	# with new case/referral	% with new case/referral	# with new adjudication	% with new adjudication
Low	788	49	6%	19	2%
Moderate	530	93	18%	45	8%
High	632	201	32%	129	20%
No assessed risk level	34	10	29%	7	21%

The recidivism rates for males were roughly twice that of females, for both new cases and new adjudications, as shown below in Table 3D.

**Table 3D. Recidivism Rates by Gender**

Gender	Total	# with new case/referral	% with new case/referral	# with new adjudication	% with new adjudication
Male	1536	308	20%	176	11%
Female	448	403	10%	24	5%

Overall, Hispanic youth who accounted for roughly half of the population experienced higher rates of recidivism compared to white youth (14% of white youth had a new case during supervision, compared to 20% of white youth). Black youth experienced close to twice the rate of recidivism compared to white youth, and American Indian youth recidivated at a rate more than twice those of white youth. Rates for Asian and Native Hawaiian or Other Pacific Islander youth were comparable to whites. It should be noted that several of these groups have very small numbers so results should be interpreted with caution as the rates are more subject to fluctuation.

**Table 3E. Recidivism Rates by Race/Ethnicity**

Race/Ethnicity	Total	# with new case/referral	% with new case/referral	# with new adjudication	% with new adjudication
Hispanic	948	196	20%	106	11%
White	743	102	14%	60	8%
Black	116	30	26%	17	15%
Asian	34	5	14%	3	8%
American Indian	30	9	29%	8	26%

Race/Ethnicity	Total	# with new case/referral	% with new case/referral	# with new adjudication	% with new adjudication
Native Hawaiian or Other Pacific Islander	24	4	16%	2	8%
Multi-Racial	3	0	0%	0	0%
Other/Unknown	86	7	8%	4	5%

Overall, as the age at the end of supervision increased, the rates of recidivism increased, the exception being the small number of youth under the age of 14 (n=35) and who recidivating at a higher rate than those who finished supervision at age 14.

**Table 3F. Recidivism Rates by Age at End of Supervision**

Age (at end of supervision)	Total	# with new case/referral	% with new case/referral	# with new adjudication	% with new adjudication
<14 years old	35	4	11%	1	3%
14 years old	110	9	8%	1	1%
15 years old	205	24	12%	9	4%
16 years old	341	47	14%	33	10%
17 years old	539	79	15%	44	8%
18 years old	585	113	19%	59	10%
>19 years old	169	77	46%	53	31%

Future reporting will include an analysis of the population that had a recidivating event.

## PART II: SURVIVAL ANALYSIS

### Methodology

Survival analysis is a technique that examines the amount of time it takes for a given outcome to occur. In this case, the analysis examines the amount of time until a youth recidivates in the community. If a person does not recidivate, they are considered to have “survived” the entire timeframe under analysis. Based in public health research (hence the “survival” terminology), this is a useful approach for comparing outcomes across groups where different individuals have had different periods of time during which an outcome could occur.

**Two types of recidivating events are included** in the survival analysis: (1) New cases/referrals, and (2) New adjudications. Only recidivating events in the community are included. New recidivating events that occur in the adult system are included as well.

**Population:** For this analysis, youth who ended supervision (Wardship, DEOJ, Formal Probation, 654.2(a)) between July 1, 2014 and June 30, 2021 will be included.

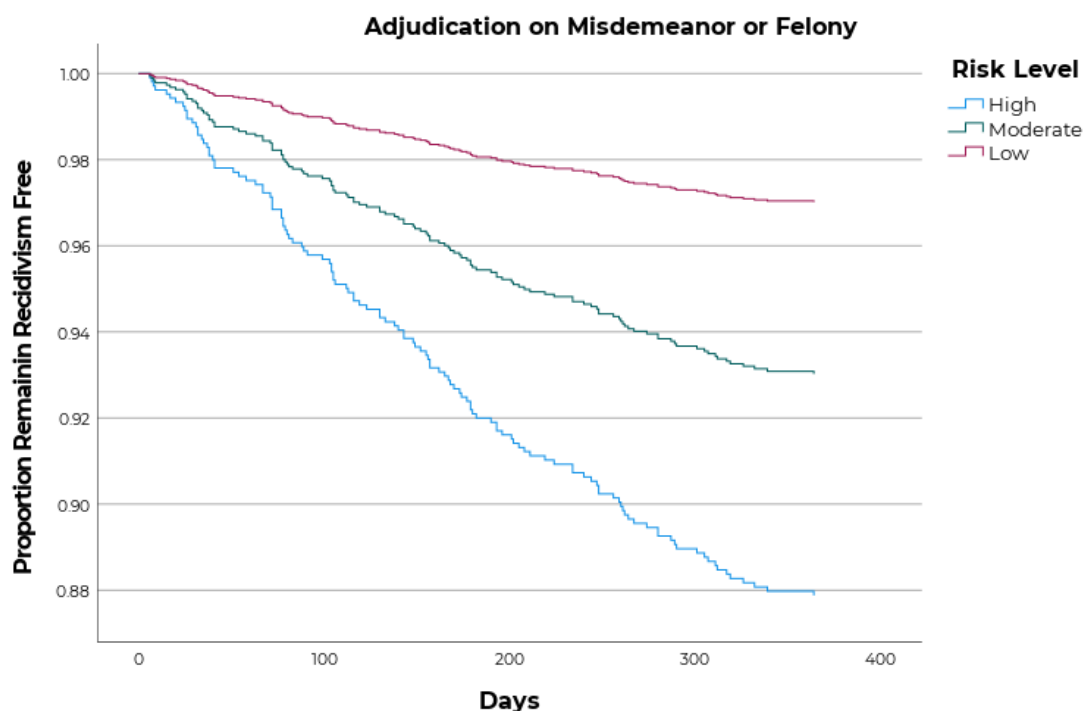
**Observation period:** The survival analysis will include both a 1 and 2 year observation period for youth who ended supervision between July 1, 2014 and June

30, 2020 to allow a two-year observation period for all. Youth ending supervision through June 30, 2021 will be included where a one-year observation period is used. Time spent in custody (either in Juvenile or Adult) will be excluded from the observation period. This is the concept of a “community year.” For example, when checking for a new adjudication, if a person receives a new charge after supervision ends and stays in detention for 30 days but is not adjudicated on the charge, the observation time will be extended by 30 days to allow checking for recidivism events during the full 365 days in the community.

**Presentation of results:** Recidivism comparisons between groups are made by comparing lines on survival graphs. As time passes and people recidivate, the line bends down to represent fewer people still “surviving” without a recidivism event. A line that reaches the .8 mark at 365 days means that, 80% of people are likely to remain recidivism free at the one-year mark.

### Survival Analysis Results – Risk Level

Risk Level is determined by the last PACT risk-need assessment done before the end of supervision. The PACT shows the likelihood of an adjudication for a new offense occurring within a year of the assessment. This analysis does not follow that method exactly – for various reasons the last assessment is done some time before supervision ends. But as expected, the survival lines for lower-risk individuals decline more gradually than the lines for higher-risk individuals.

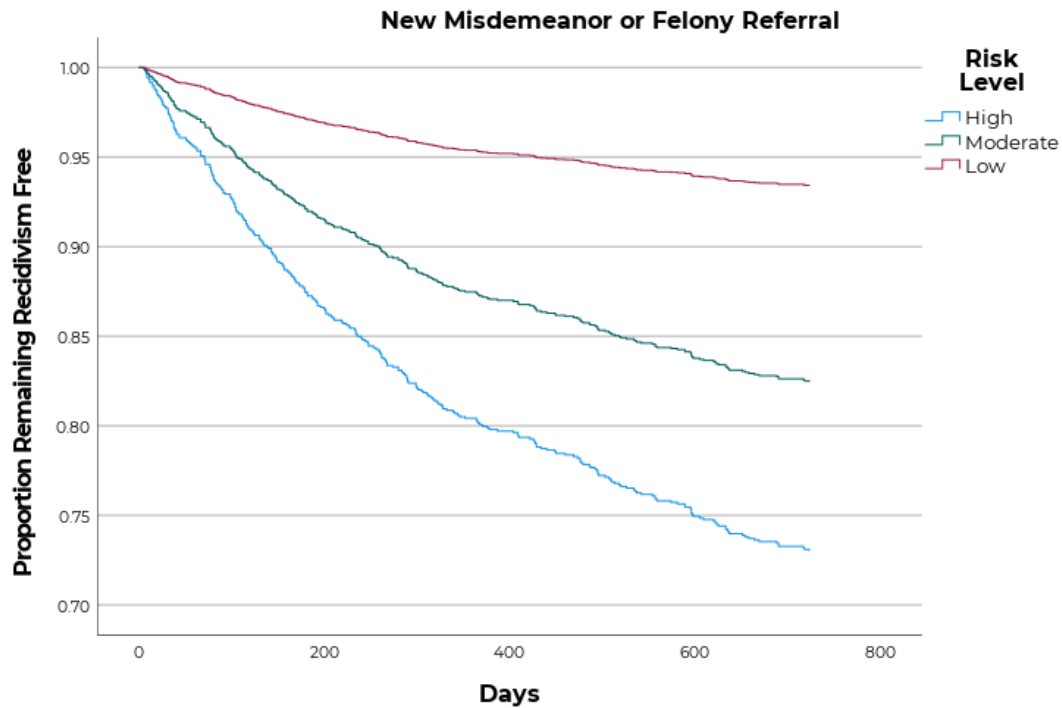


The difference between the risk level groups is only 4%-5% after 365 days, but the lines for the groups are in the hoped-for order. The small amount of separation between the groups suggests more investigation of how the PACT assessment is performing. This can be done via an assessment validation study. The lack of

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separation does not necessarily mean the PACT assessment is not performing as hoped: the methodology here is not the same as that used in a validation study.

Using the new misdemeanor or felony referral measure, the survival lines fall more steeply (as expected) and the difference between risk levels is wider.

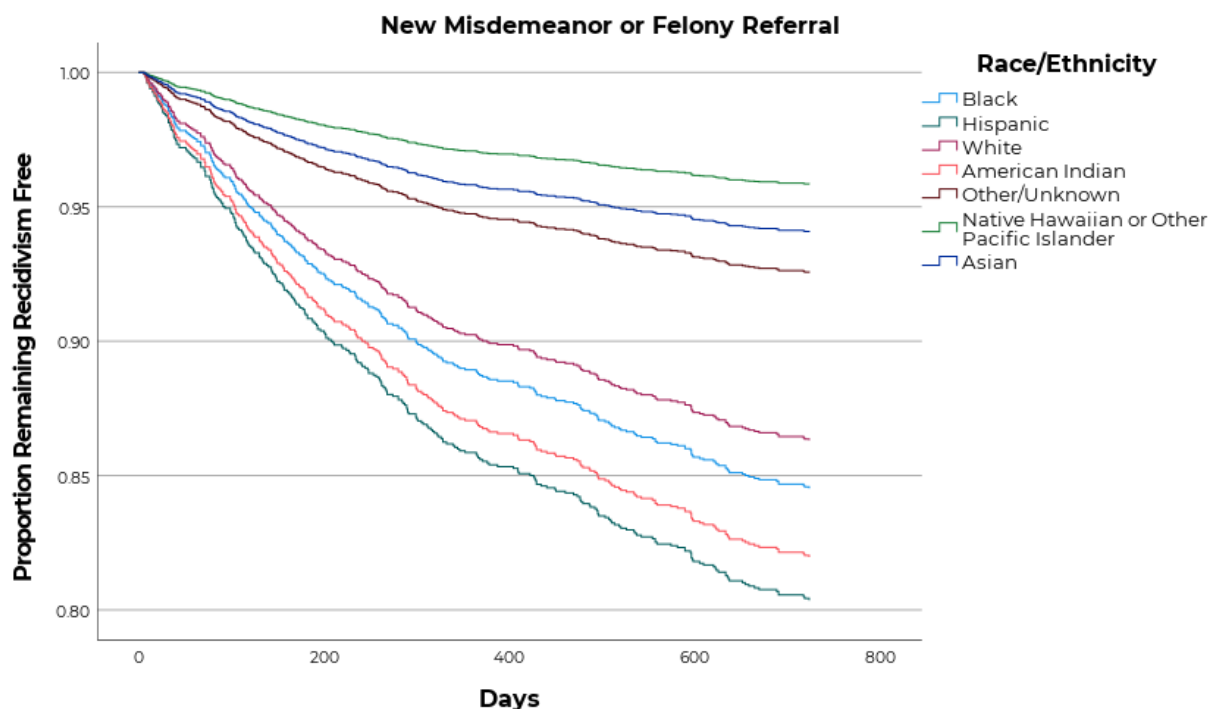


Similar to the Risk Level graphs above, the adjudication measure for the following breakouts consistently yields lower recidivism frequency than the new misdemeanor or felony referral measure, and differences between groups are similar but compressed. The following survival comparisons use only the new misdemeanor or felony referral measure, over two years.

### Survival Analysis by Race/Ethnicity

Some racial/ethnic groups in the study are small, lowering confidence in their survival analysis results. Due to small numbers, comparisons of survival lines for all but Hispanic and white youth are low but they are nevertheless included. The graph below shows likelihood of remaining without a new misdemeanor or felony referral over time, observed for two years.

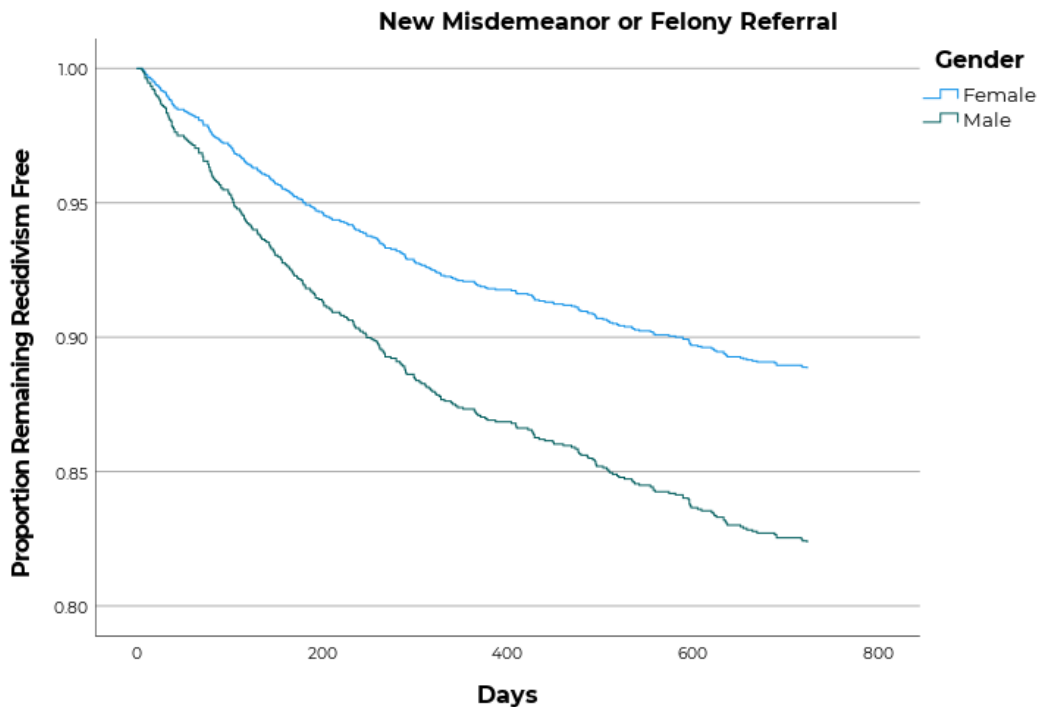




Comparison results are not completely consistent with the CPOC recidivism rates shown earlier. The survival line for Hispanic youth falls more steeply than that for white youth, meaning they experience more recidivism than white youth after supervision ends. Similarly, Hispanic youth recidivate at higher rates during supervision using the CPOC recidivism definition. But the survival line for Black youth is more gradual than the one for Hispanic youth, and is more similar to that for white youth. Dissimilarly, the CPOC recidivism calculation shows Black youth recidivating during supervision at higher rates than Hispanic and white youth during supervision. American Indian youth have the highest CPOC recidivism rate during supervision, and the survival analysis result is somewhat consistent with this, though confidence in comparison of their survival line with other groups is low due to small numbers.

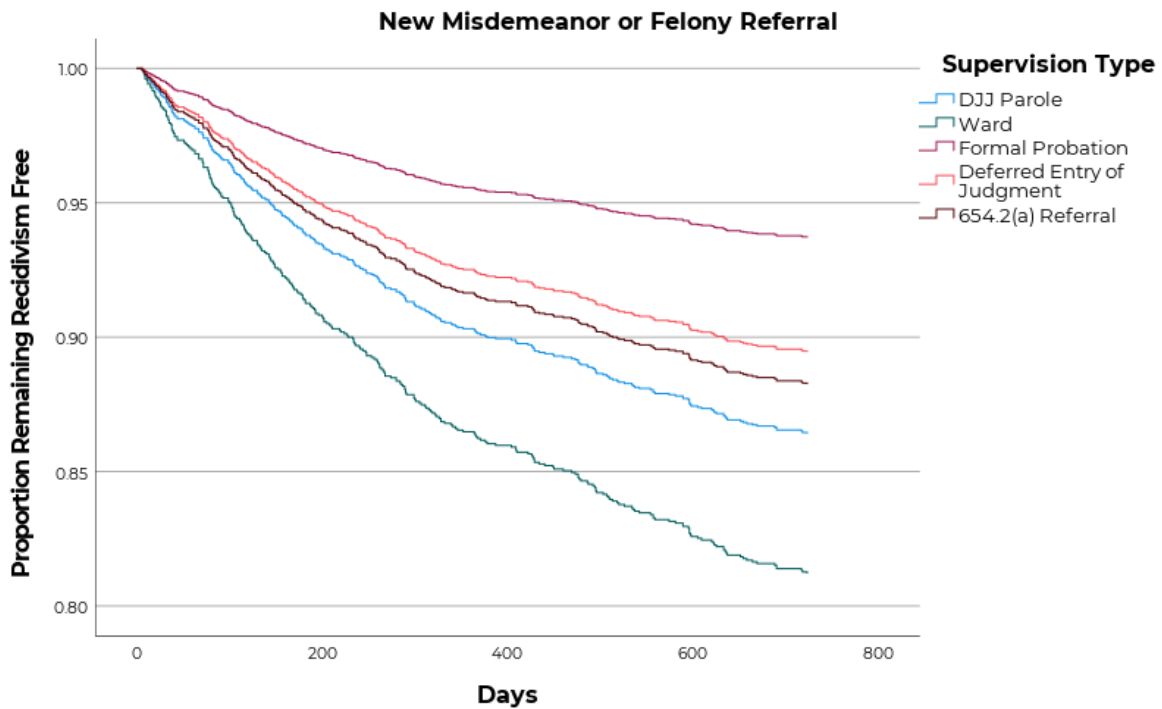
### Survival Analysis by Gender

Consistent with comparison of CPOC recidivism for females and males, the survival line for females is more gradual than for males, who at the end of two years are 82% likely to remain without a new misdemeanor or felony referral, compared with 89% for females.



### Survival Analysis by Supervision Type

Wardship supervision (excluding DJJ Parole) has the steepest decline in remaining recidivism free over time, with about 19% likely to receive a new misdemeanor or felony referral in the two years after supervision. Because the number of DJJ Parole people in the study is small, confidence in comparisons with other groups is low. While DJJ Parole experiences CPOC recidivism at a higher rate than other wards during supervision, data suggest they might reoffend at lower rates after supervision. Numbers are higher for other groups, so confidence in the comparisons is higher. Similar to the CPOC recidivism calculation, Wards receive new misdemeanor referrals at higher rates than other groups. At the end of two years, 12% of 654.2(a) youth are likely to receive a new misdemeanor or felony referral compared with 6% of Formal Probation Youth. During supervision 4% of Formal Probation youth receive a new misdemeanor or felony referral compared with 6% of 654.2(a) youth.



### Overall Recidivism Rates After Supervision Ends

High-level recidivism rates using both the new referral and adjudication measures for one and two community years are shown in the table below:

	1 Year	2 Year
<b>Referral</b> for Misdemeanor or Felony	12%	16%
<b>Adjudication</b> on Misdemeanor or Felony	7%	10%