

PREDICTING FIRST ADULT FELONY CONVICTIONS

Findings from OYA's Feeder System Dataset

PRIMARY QUESTIONS

- (1) How prevalent are prior social services among First-Time Adult Felony Offenders?
- (2) Can we predict First-Time Adult Felony Convictions from prior services?
- (3) Which service contacts are the best predictors of First-Time Adult Felony Convictions?

PREVIEW OF FINDINGS

- (1) Prior Services are the Norm
- (2) Future Adult Felony Convictions can be predicted from prior service contacts with reasonable accuracy
- (3) There are many predictors, but big ones include:
 - Male
 - Substance Use Problems
 - Juvenile Justice Involvement

DATASET TIME WINDOW

Approximately 14 years of data

- To capture felonies through age 25, can look back to about age 13
- Early childhood history is unavailable for individuals tracked into adulthood.
- Services received *only* in early childhood will not be detected.

Not a full population sample

- Only individuals who contacted one or more services are included
- Education records come close to population sample, but not available for this cohort

Selected a multiple birth year cohort (YOB 1985-1987)

- Everyone tracked to at least age 26
- Records start at age 13-15 (11-13 for Child Welfare)

DATA TIMELINE: 14 YEARS OF RECORDS

2000

2013

13- 15	14- 16	15- 17	16- 18	17- 19	18- 20	19- 21	20- 22	21- 23	22- 24	23- 25	24- 26	25- 27	26- 28
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Child Protective Services, Foster Care (1998-2010)

Education Records (2004/5-2012/13)

Self-Sufficiency, Medical Assistance, Mental Health, Alcohol and Drugs, Juvenile Justice, OYA, DOC

**PART I:
PREVALENCE OF PRIOR
SOCIAL SERVICE CONTACTS**

Findings from OYA's Feeder System Dataset

PREVALENCE OF PRIOR SERVICES

What % of young adult felony offenders had prior contacts with state services?

PREVALENCE OF PRIOR SERVICES

SAMPLE

- Birth year cohort (YOB 1985-1987)
- Records available from ages 13/15 thru age 26/28;
- Convicted of First Adult Felony ages 18-25
- N=12,259
 - 76% Male
 - 69% Caucasian, 10% Hispanic, 5% African American, 3% Native American, 1% Asian, 12% Other/Unknown
 - Excluded 270 youth with juvenile DOC commitments

MEASURES

- Services (age 13-17) Prior to First Adult Felony Conviction (ages 18-25)
 - YES = service accessed at least 1 day before first adult felony conviction
 - NO = service not accessed, or accessed after first adult felony conviction

PREVALENCE OF PRIOR SERVICES

SERVICES INCLUDED:

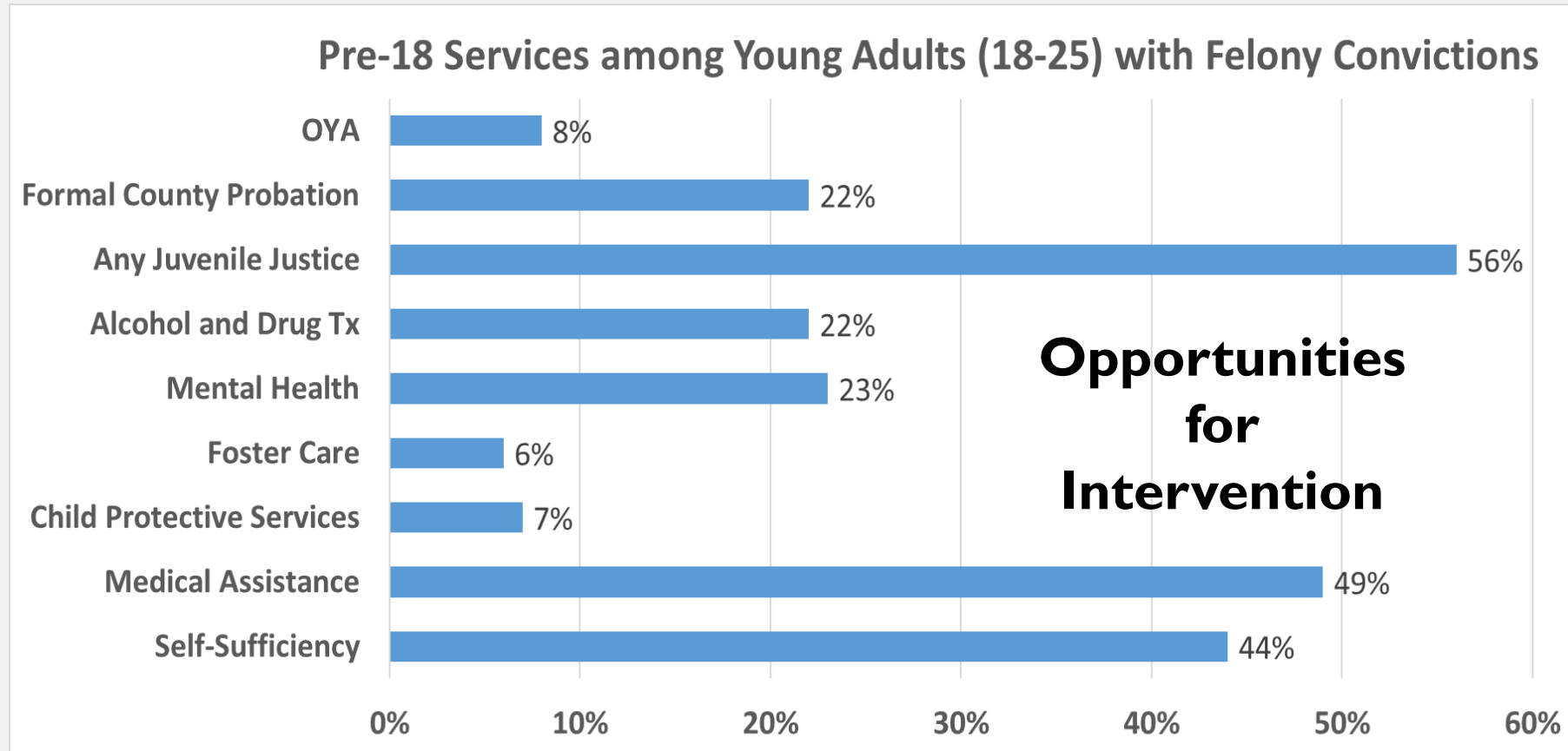
- Self-Sufficiency
- Medical Assistance
- Child Protective Services
- Foster Care
- Mental Health
- Alcohol and Drug Treatment
- **Any Juvenile Justice**
- **Formal County Probation**
- **Oregon Youth Authority**

PREVALENCE OF PRE-18 SERVICES

73% accessed social services
and/or juvenile justice before age 18

Opportunities for Intervention

PREVALENCE OF PRE-18 SERVICES



**Opportunities
for
Intervention**

73% accessed social services and/or juvenile justice

61% accessed social services

N=12,259

PREVALENCE OF PRIOR SERVICES

- **Prior Services are the Norm**
 - 73% had one or more service contacts prior to adult felony conviction
 - Nearly 60% had Juvenile Justice Involvement
 - Nearly 50% had received Medical Assistance
 - Nearly 45% received Self Sufficiency Services
- **Opportunity for Intervention/Prevention**

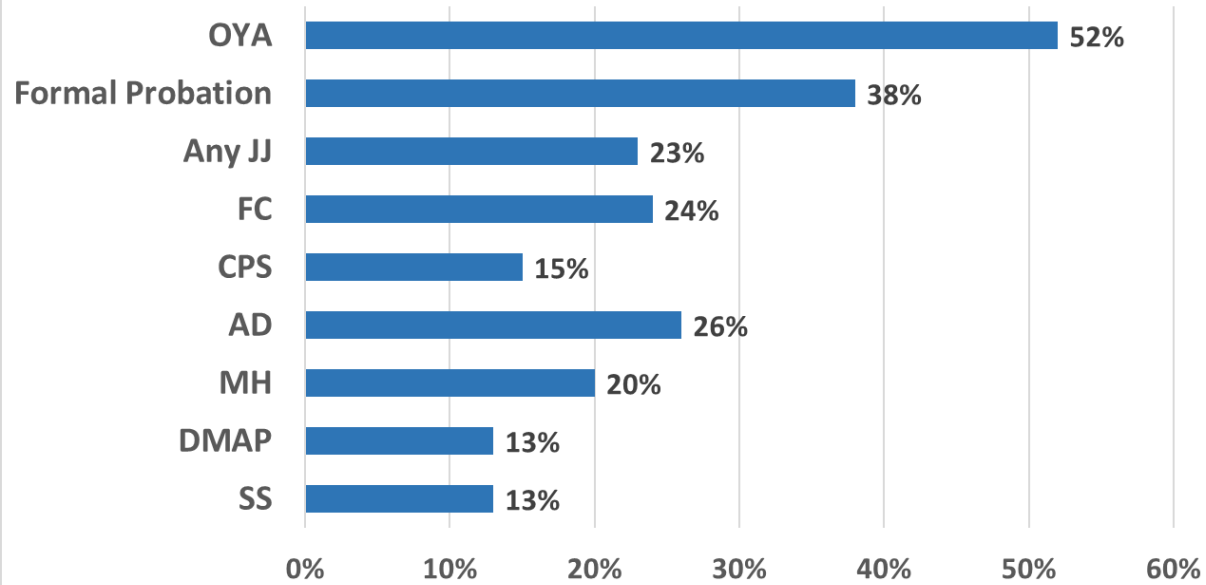
PREVALENCE OF PRIOR SERVICES

- The most common prior services were
 - Juvenile Justice
 - Self Sufficiency
 - Medical Assistance
- But lots of youth receive SS or DMAP and DON'T commit adult felonies

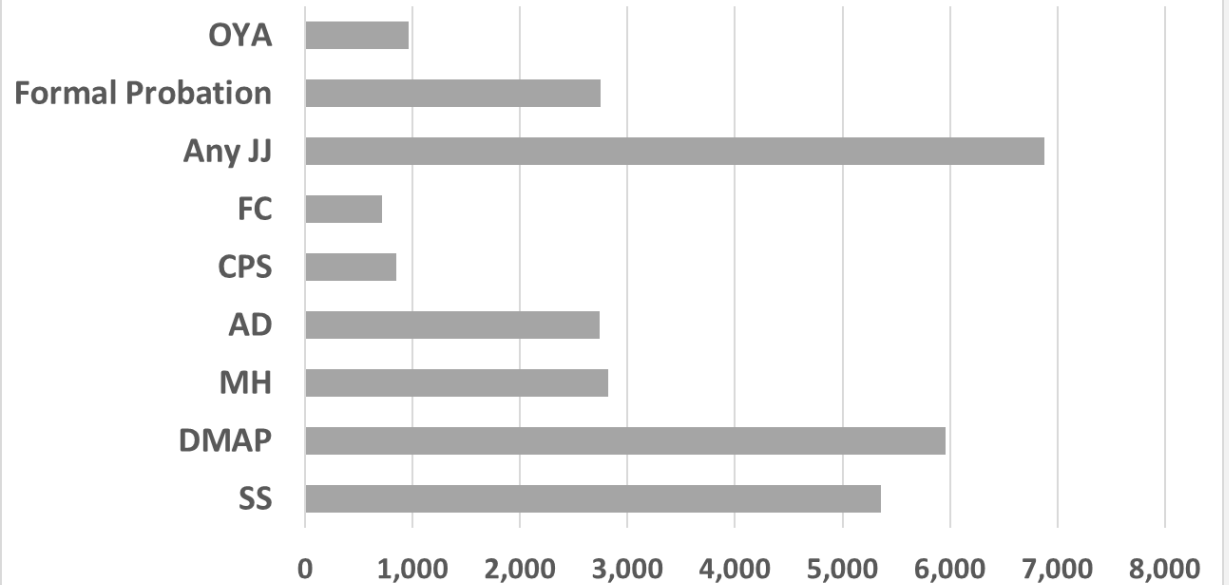
What is the rate/density of future adult felonies among youth served by each service/agency?

FUTURE FELONY CONVICTIONS AMONG THOSE SERVED BY EACH AGENCY

% with Future Adult Felony (ages 18-25)



Number with Future Adult Felony (ages 18-25)



PREVALENCE OF PRIOR SERVICES

- The most common prior services were
 - Juvenile Justice
 - Self Sufficiency
 - Medical Assistance
- The highest density of future adult felonies was within
 - OYA
 - Formal County Probation
 - Drug and Alcohol Services

PART 2:
PREDICTING ADULT FELONY CONVICTIONS

Findings from OYA's Feeder System Dataset

PREDICTING ADULT FELONY CONVICTIONS

Why?

- Identify high-risk youth for targeted services
 - (a) at 18th birthday
 - (b) within specific services
- Understand which services predict adult felony convictions
 - From rate/density, might expect Formal Probation, OYA, AD
 - From number, might expect JJ, SS, DMAP

Statistical approach: Logistic Regression

PREDICTING FELONY AGES 18-25 FROM SERVICES RECEIVED AGES 13-17

SAMPLE

- Same YOB cohort (1985-1987) as above
- Tracked in Feeder System data from ages 13/15 to 26/28
- N=175,221
 - 12,259 (7.0%) had an adult felony conviction ages 18-25

OUTCOME = First Adult Felony ages 18-25 (Yes/No)

PREDICTORS

- Gender
- Race/ethnicity
- Other agency contacts ages 13/15 to 17

PREDICTING FELONY AGES 18-25 FROM SERVICES RECEIVED AGES 13-17

RESULTS

- Model can distinguish between future felony and non-felony youth with **80%** accuracy (Area Under the Curve (AUC)) = .80)
- **Can predict young adult felonies from pre-18 service history**

Which services matter the most?

WHAT SERVICES MATTERED THE MOST?

If pre-18 services are known,
Can distinguish between high-risk and low-risk youth with 80% accuracy

Predicting Adult Felony Ages 18-25 from Pre-18 Service Contacts		Odds Ratio
N=115,704	Any Juvenile Justice	4.2
7.0% had adult felony	Any OYA	1.9
AUC = .80	Formal County Probation	1.7
	Alcohol and Drug Services	1.7
	Mental Health Services	1.3
	Self Sufficiency	1.3
	Medical Assistance	1.2
	Foster Care	1.2
	Child Protective Services	1.1
	Male	3.1
	African American	n.s.
	Asian	.4
	Caucasian	.6
	Hispanic	.7
	Native American	.7

Odds Ratio = Extent to which a “yes” increases or decreases risk

Odds Ratio > 1.0 = Increases Risk

Odds Ratio < 1.0 = Decreases Risk

Every agency mattered. None were protective.

PREDICTING FELONY AGES 18-25 FROM SERVICES RECEIVED AGES 13-17

- If pre-18 services are known, can identify high-risk youth
- Every agency mattered (increased risk)
- Strongest predictors:
 - Male gender
 - Juvenile Justice involvement
 - Alcohol and Drug Services

BEYOND “CONTACT”

- Which client/service details matter within each agency?
- Can agencies predict risk among the clientele they serve?
- Approach
 - Predict felony conviction from each agency’s administrative data elements
 - Plus demographics
 - Plus other agency contacts (yes/no)

SEPARATE ANALYSES BY AGENCY

- All models were reasonably accurate (68-75%)
- Cross-Agency Contacts (Yes/No) increased accuracy by about 1%

Agency	Total N	Model Accuracy
Child Protective Services	18,238	68%
Foster Care	8,038	72%
Mental Health	45,803	75%
Alcohol and Drug Services	30,162	75%
County Juvenile Department	31,539	73%
Oregon Youth Authority	1,891	70%

EXAMPLE: FOSTER CARE

Foster Care			Odds Ratio
		Male	3.58
	N = 6.439	Total Number of FC Episodes	1.56
	(992 entered DOC)	Any FC Episode ended in Reunification	0.73
	AUC = .722	Any FC Episode ended in Adoption	0.33
		Any FC Episode ended in Emancipation	0.74
		Any Non-Relative FC Placements	0.56
		Any Relative FC Placements	0.61
		Any Removals for Sexual Abuse	0.78
		Any Removals for Child Drug Use	2.12
		Any Removals for Child Disability	0.81
		Any Removals for Child Behavior	1.58
		MH Services Received prior to First FC Placement in Records	1.17
		AD Services Received prior to First FC Placement in Records	2.34
		OYA Commitment prior to First FC Placement in Records	3.80

EXAMPLE: MENTAL HEALTH

Mental Health			Odds Ratio
		Male	3.04
	N = 36,729	Non-White Race/Ethnicity	1.20
	(4,170 entered DOC)	Total Number of Mental Health Episodes (1, 2, 3+)	1.14
	AUC = .747	Ever Referred to MH by Criminal Justice	2.28
		Ever Referred to MH by a Local or State Agency	1.09
		Ever Received Adult Outpatient Services	0.59
		Ever Received Crisis Services	1.15
		Ever Eligible via Severe and Persistent Mental Illness	0.83
		Ever Eligible via Priority 3	0.90
		Ever Living Arrangement = Alone or with Friends or Partner	0.87
		Ever Living Arrangement = Homeless	1.35
		Ever Living Arrangement = Residential Institution	2.07
		Ever Incomplete due to Administrative reasons	1.19
		Ever Incomplete due to Client Reasons	1.26
		Ever Funded by Medicaid	1.09
		SS received prior to first MH service episode	1.23
		DMAP Received prior to First MH Service Episode	1.15
		AD Services Received prior to First MH Service Episode	2.31
		FC placement prior to first MH service episode	1.24

MAJOR PREDICTORS

- Male gender
- Race/Ethnicity
- Juvenile Justice Involvement
- Substance use and/or Alcohol and Drug Services

SUMMARY

- More than 70% of young adult felony offenders had pre-18 contact with social services or juvenile justice
- More than half had prior contact with juvenile justice
- History of pre-18 service contacts can be used to predict adult felonies
- Within-agency information can be used to predict adult felonies
- Major predictors include: male, substance abuse services, juvenile justice involvement, race/ethnicity