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The impact of the NSW Drug Court on health, child welfare, reoffending and imprisonment

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Background

- Drug Courts emerged in the US in the 1980s in response to an epidemic of drug related crime (overcrowded courts and prisons)
- They assume that if an offender's crime is drug-related, reducing their drug use should reduce their involvement in crime.
- Participants are typically subject to close monitoring, including frequent (e.g., weekly) meetings with the Drug Court team and frequent testing for drug use.
- Progress is usually rewarded (e.g., a round of applause), while relapse or non-compliance with program conditions typically attracts a sanction (e.g., a short stay in prison).

Background

- The available evidence suggests that Drug Courts are effective in reducing re-offending.
  - US Government Accountability Office 2011;
  - Wilson, Mitchell & MacKenzie 2006;
  - Belenko 1998;
  - Lind et al. (2002)
  - Weatherburn et al. (2008, 2020)
- However, the 2008 and 2020 NSW studies are now dated because they involved the original 2001 cohort of offenders
- Also, very little research has been conducted into their effects on re-imprisonment, health and child welfare

Eligibility: The NSW Drug Court (Parramatta)

- To be eligible for the Drug Court a person must:-
  - be highly likely to be sentenced to full-time imprisonment if convicted,
  - have indicated a desire to plead guilty to the offence,
  - be dependent on the use of prohibited drugs,
  - reside within the specified catchment area,
  - be referred from a court in the catchment area,
  - be 18 years of age or over,
  - be willing to participate,
  - not be charged with a violent, sexual offence or an offence under Division 2 Part 2 of the Drug Misuse and Trafficking Act (1985), and
  - not be suffering a mental condition that could prevent or restrict participation in the program.

Study Questions:

Compared with those who are eligible for the Drug Court program but not placed on it:

1. Are Drug Court participants less likely to re-offend
2. Are Drug Court participants less likely to be imprisoned
3. Are Drug Court participants less likely to require emergency medical treatment or hospitalization for:
   - an AOD related reason or
   - any reason
4. Are the children of Drug Court participants less likely to be the subject of a risk of serious harm (ROSH) report or placed in out-of-home-care (OOHC)

Design

- Create treatment (T) and control (C) groups that are matched on factors likely to affect the outcome
  - Demographics
  - Prior & current CJS contact
  - Prior child welfare contact
  - Prior health contact
- Compare differences between T and C in criminal justice, health and child protection outcomes
- Note that this is an ITT design (a participant is included in the treatment group regardless of whether they complete treatment)

Data

- **Ethics:**
  - Approved by the NSW Population and Health Services Ethics Committee (2022/ETH02482) 22/11/2022.
- **Spine:**
  - The study cohort consists of all those referred to the NSW Drug Court (Parramatta) between 1st January 2016 and the 31st of December 2020. The total sample size for the project is 2,985
- **Linked data:**
  - Drug Court referrals linked to current offences, criminal history, emergency department admissions, hospital admissions, ROSH reports and OOHC placements

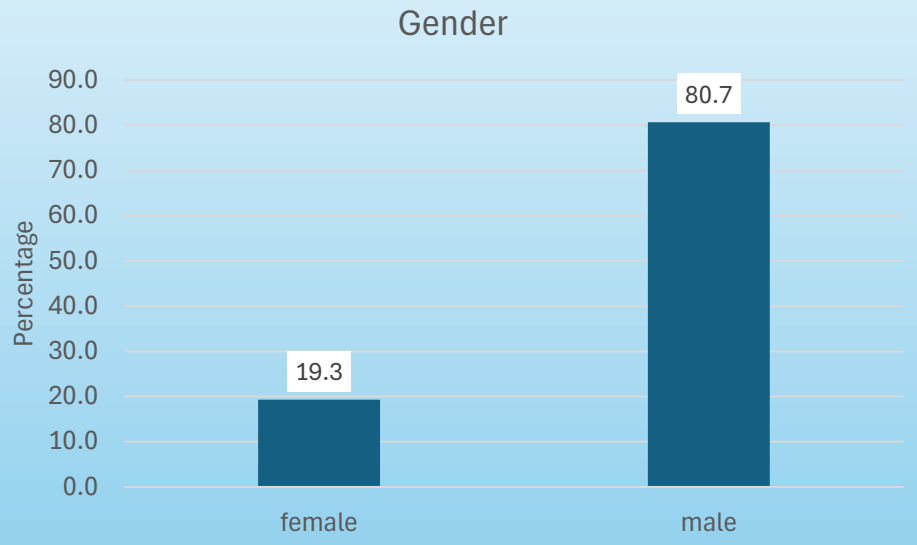
Outcome measures

Outcome	Measure (from treatment entry)	Data Source
Health	Any ED admission within 5 years of referral	NSW Health
	Any drug related ED admission within 5 years of referral	
	Any hospital admission within 5 years of referral	
	Any illicit drug related hospital admission within 5 years of referral	
Child welfare	Any ROSH report within five years of referral	FACSIAR (DCJ)
	Any OOHC within five years of referral	
Reoffending	Reconvicted within 12 months of referral	BOCSAR (DCJ)
Prison	Reconvicted within 24 months of referral	
	Whether imprisoned (for the instigating offence)	

Covariates (for matching)

- Demographics:
  - Age, Sex, Indigenous status
- Criminal justice factors:
  - Number of concurrent offences, Offence seriousness, Number of prior convictions, Prior violence, Prior theft, Prior justice, Prior prison
- Child protection
  - Whether offender's child is the subject of a ROSH report in the previous five years
  - Whether offender's child has been placed in OOHC in the previous five years
- Health
  - Whether the offender has had any ED admission in the previous five years
  - Whether the offender has had any drug related ED admission in the previous five years
  - Whether the offender has had any hospital admission in the previous five years
  - Whether the offender has had any drug-related hospital admission in the previous five years

Sample description: demographics



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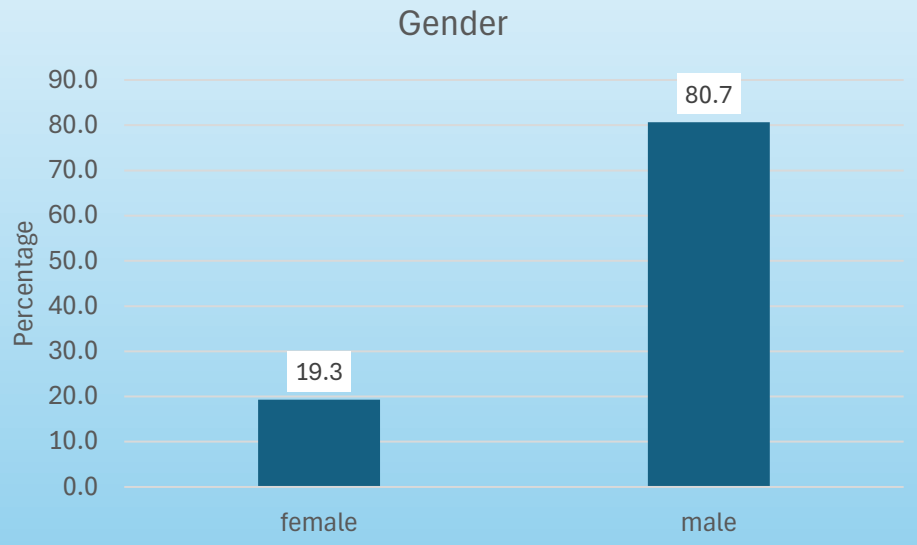

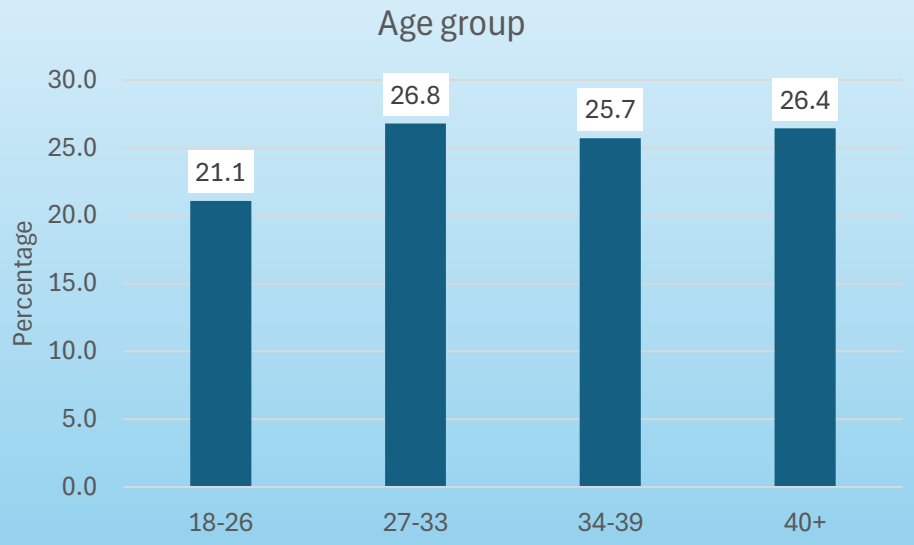

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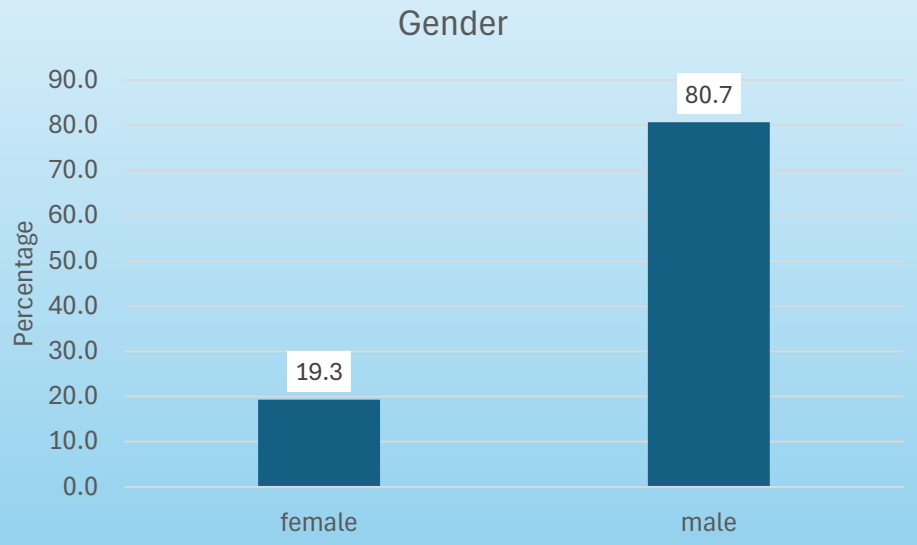

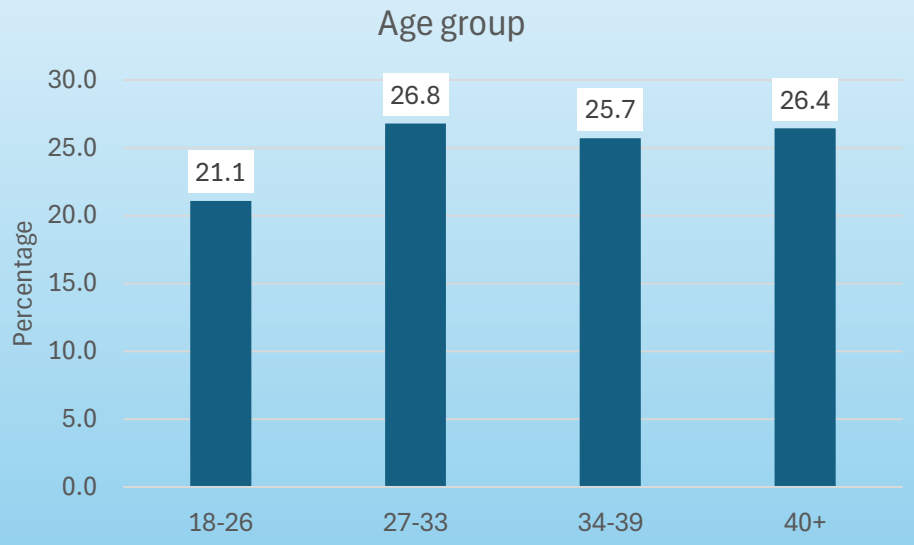

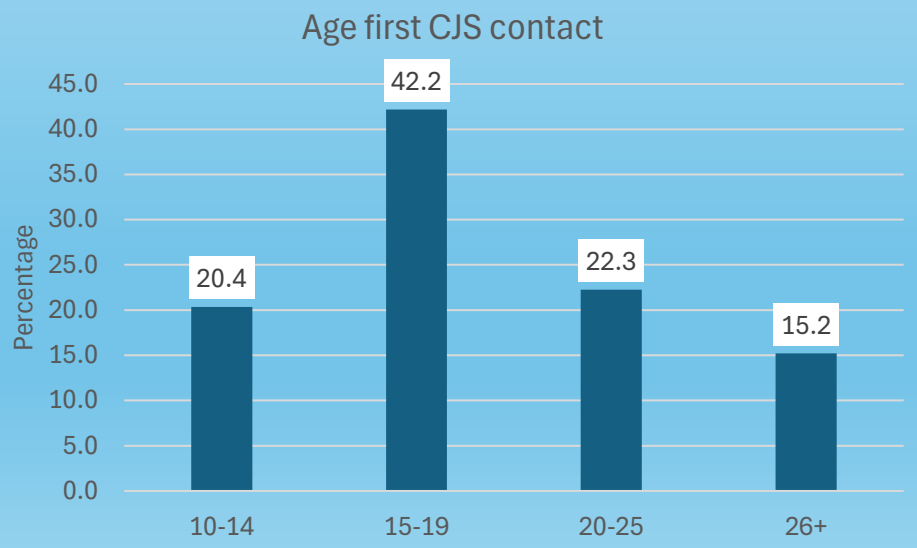

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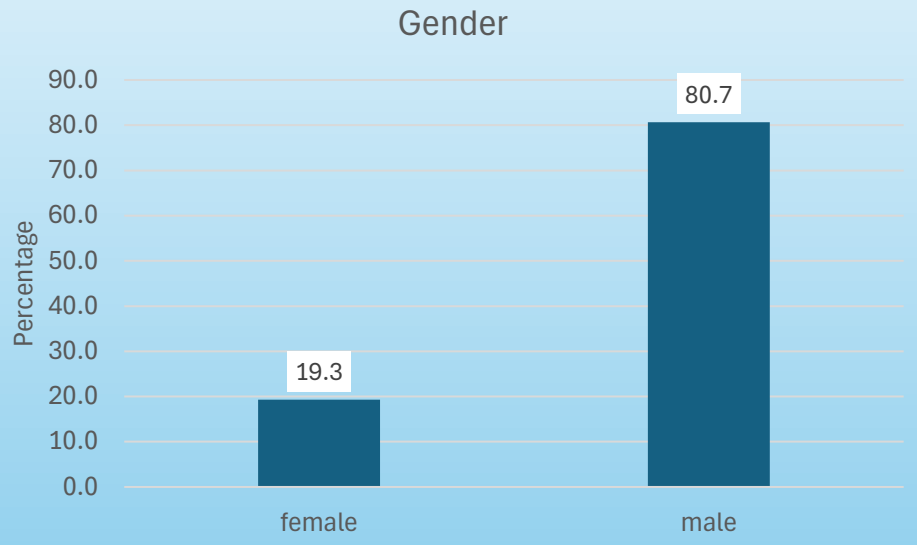

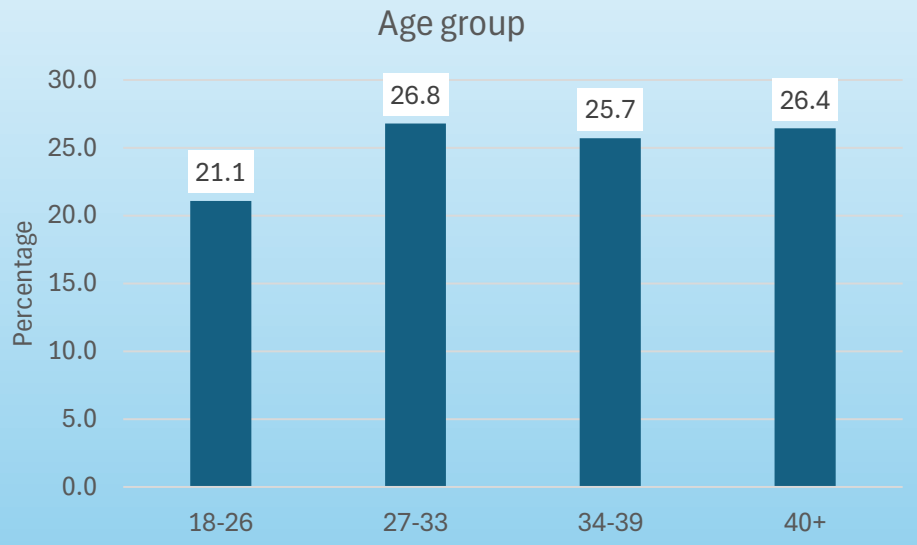

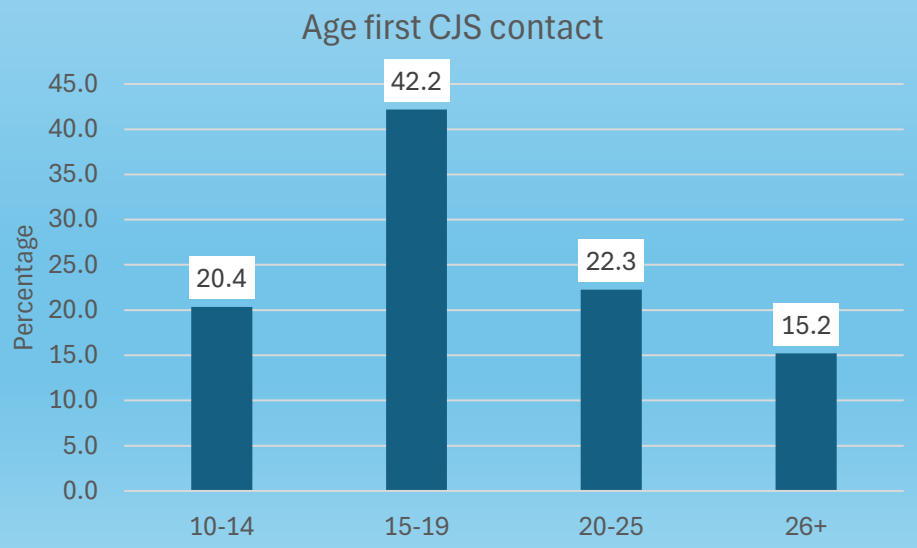

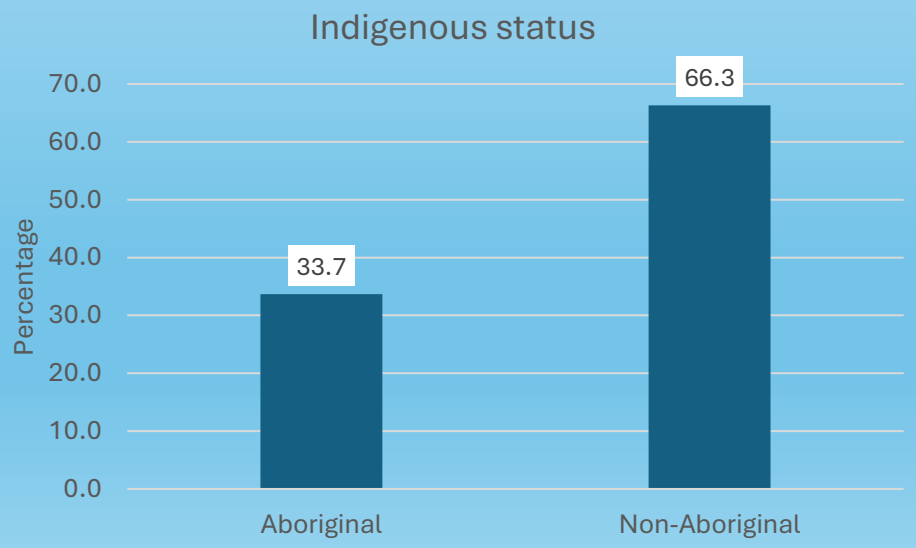

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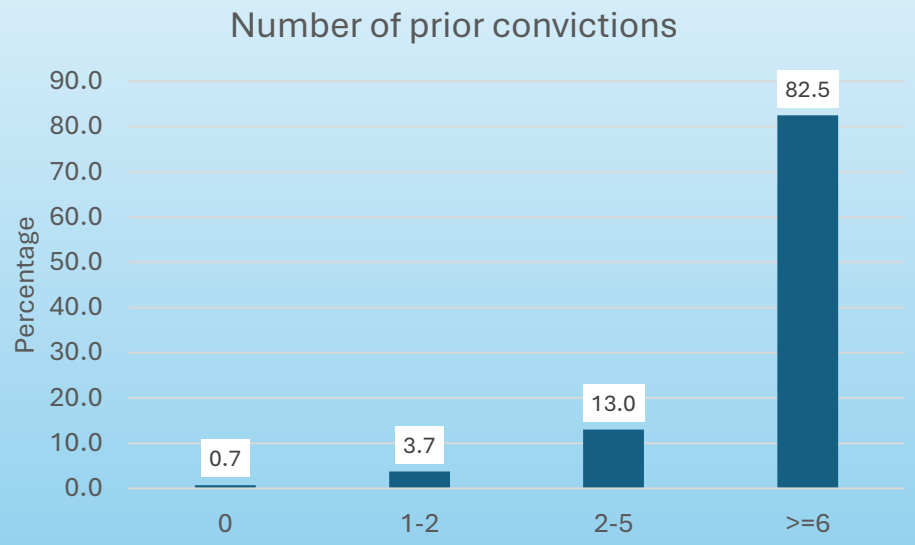

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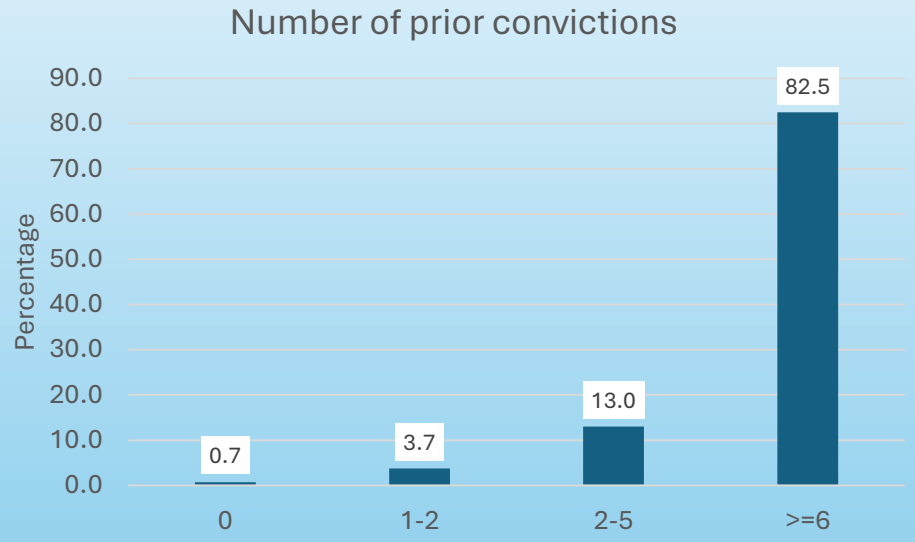

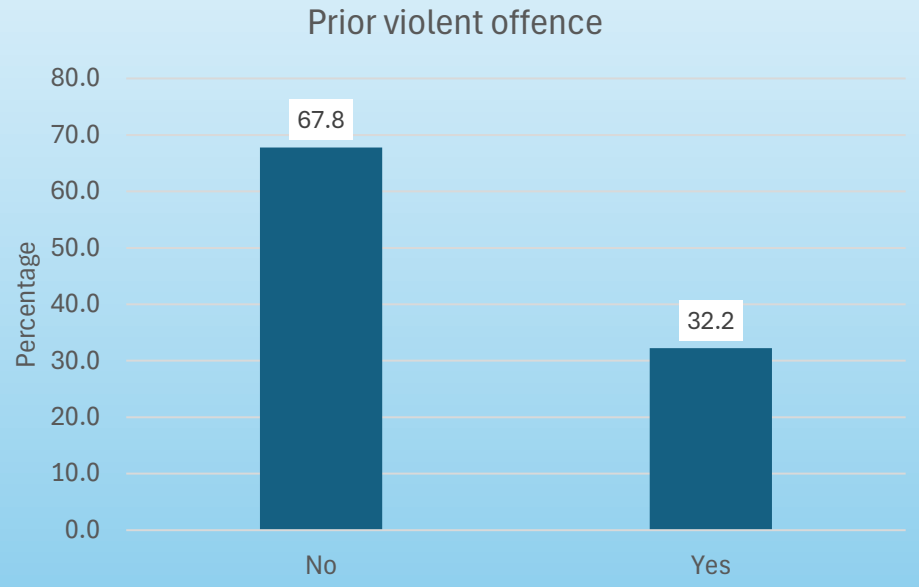

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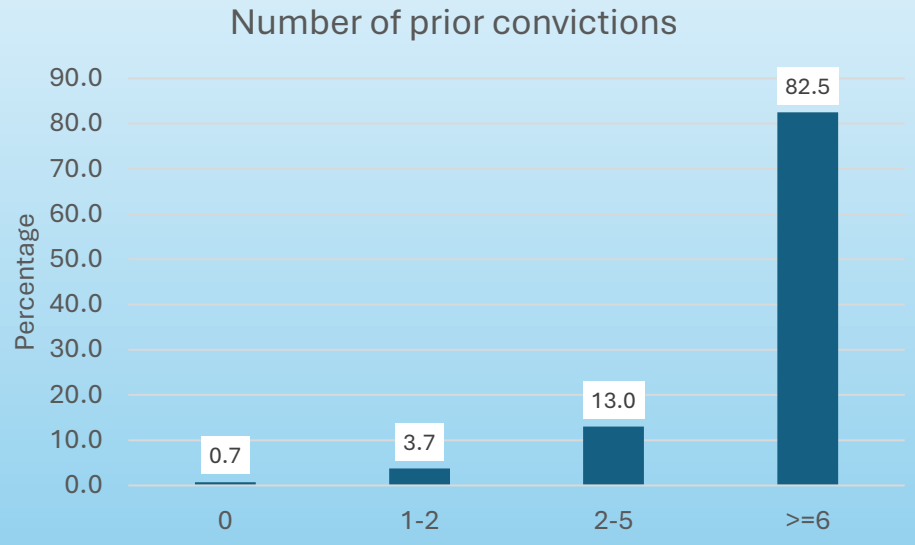

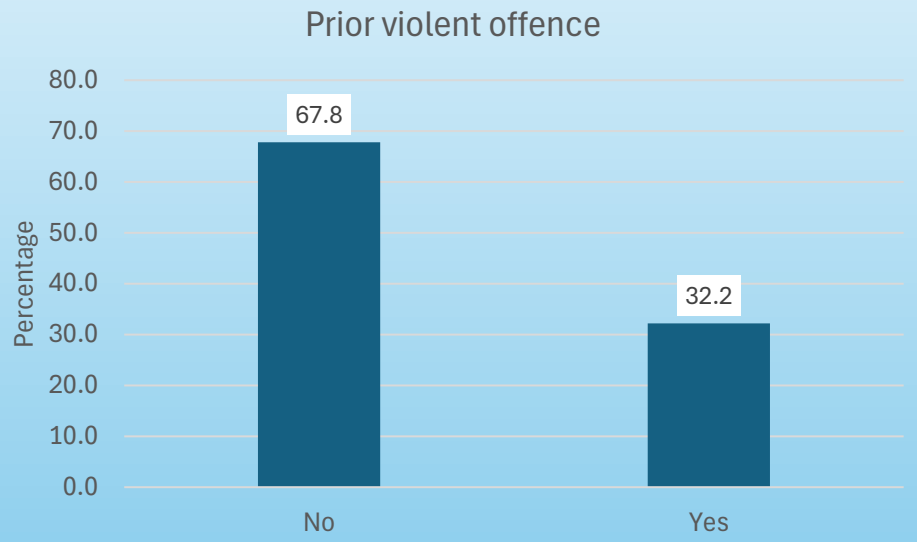

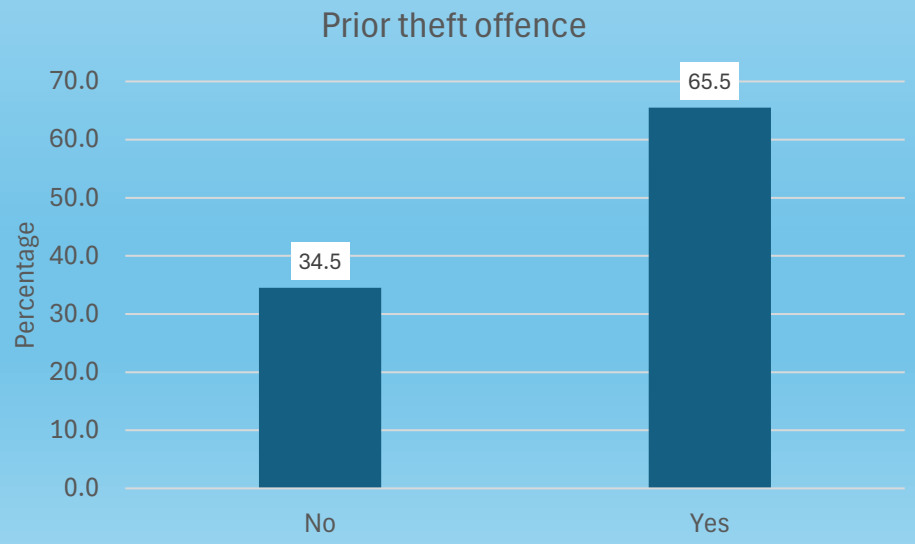

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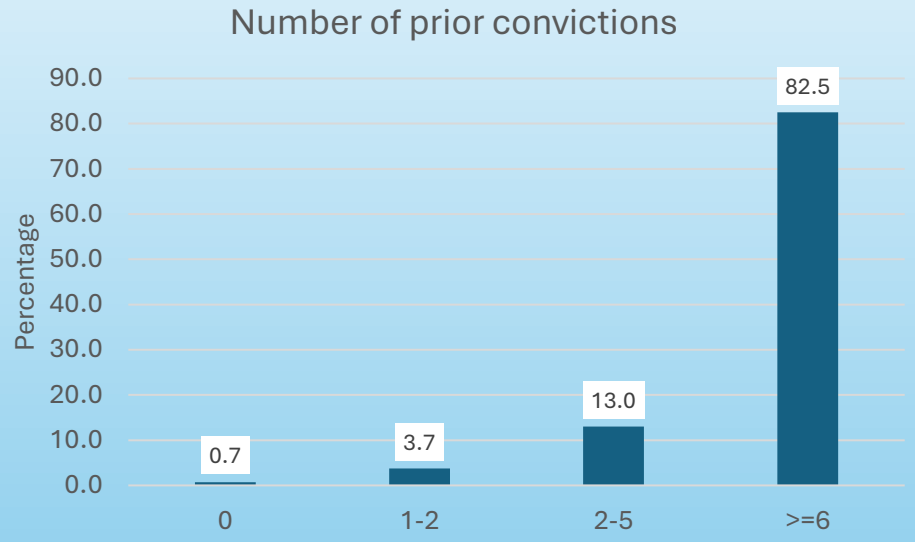
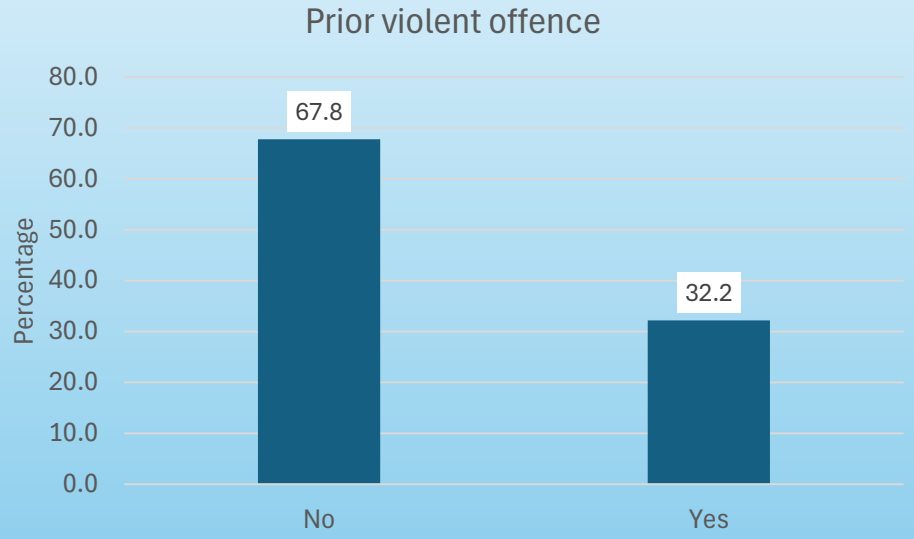
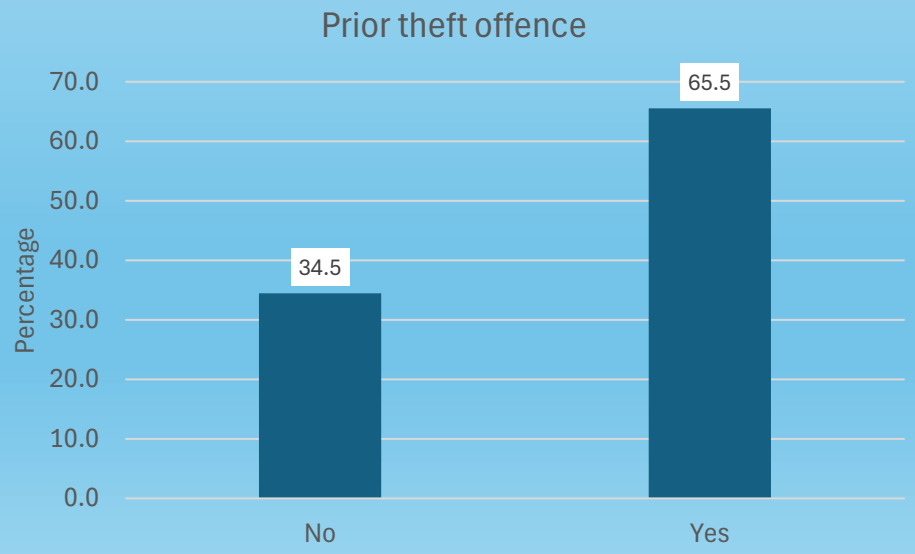
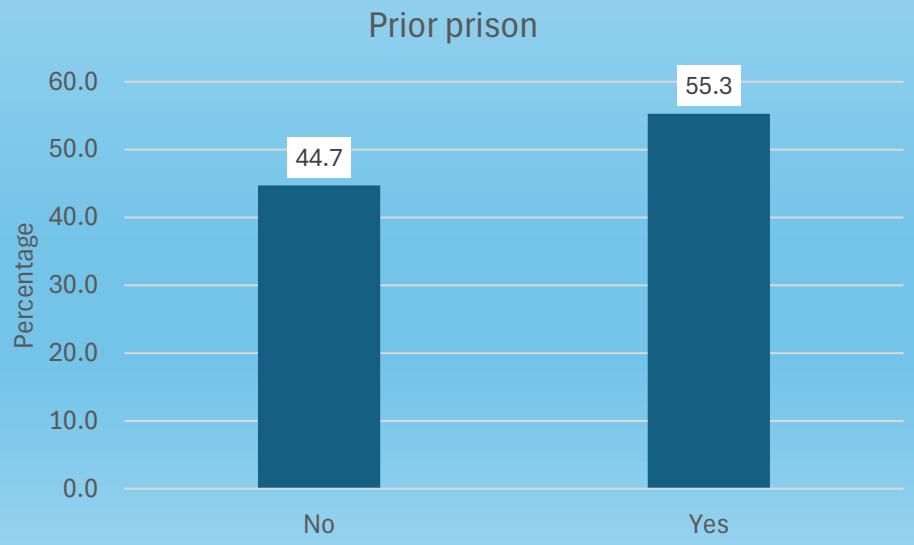
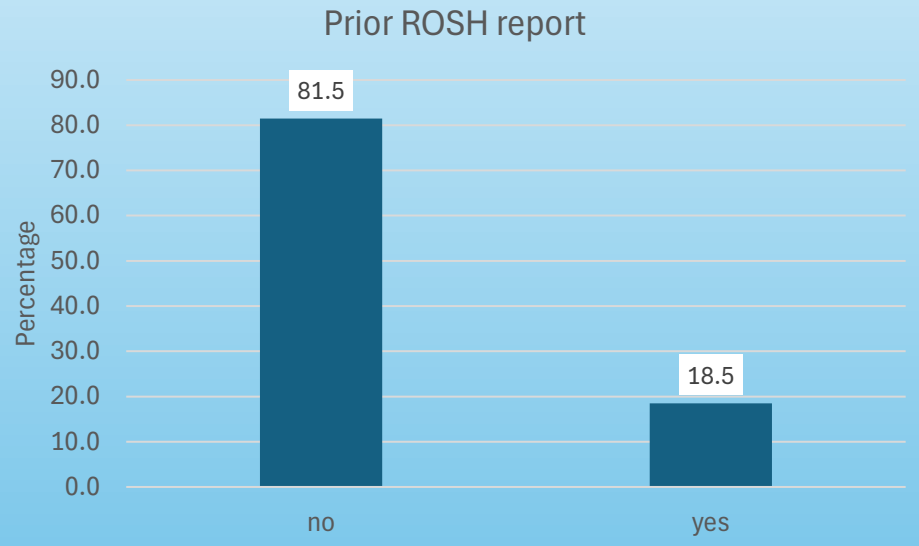


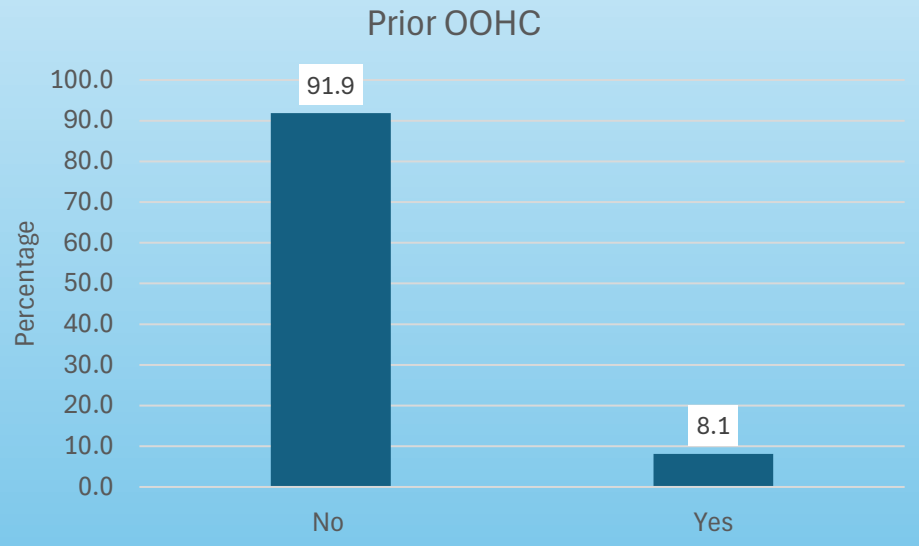




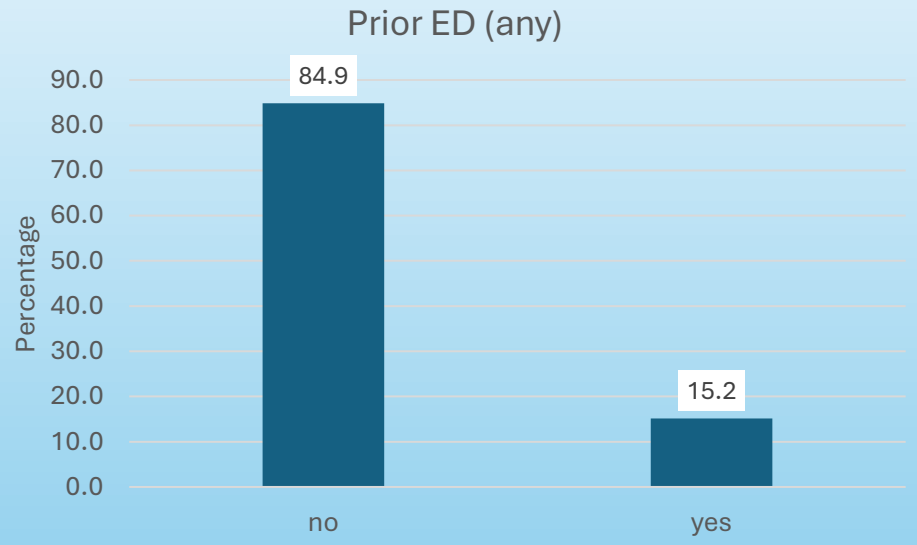


Sample description: child protection





Sample description: health



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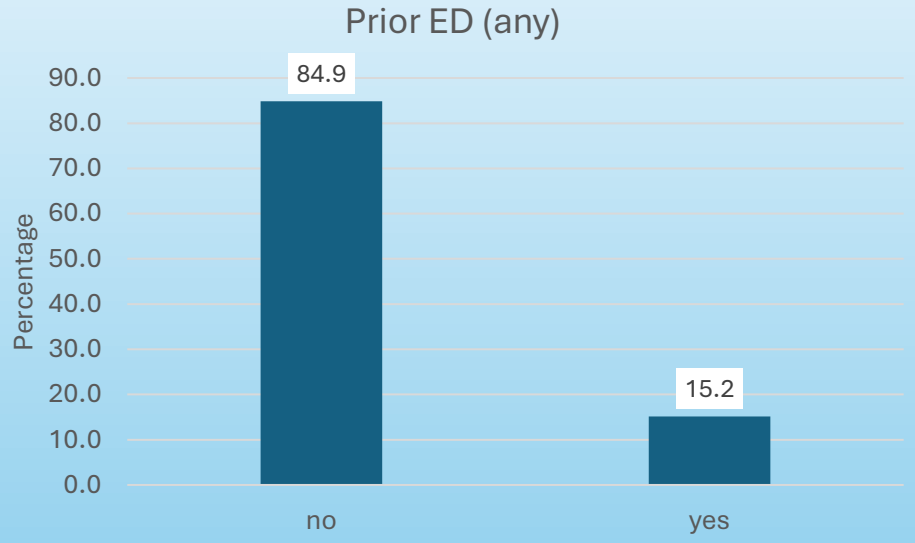

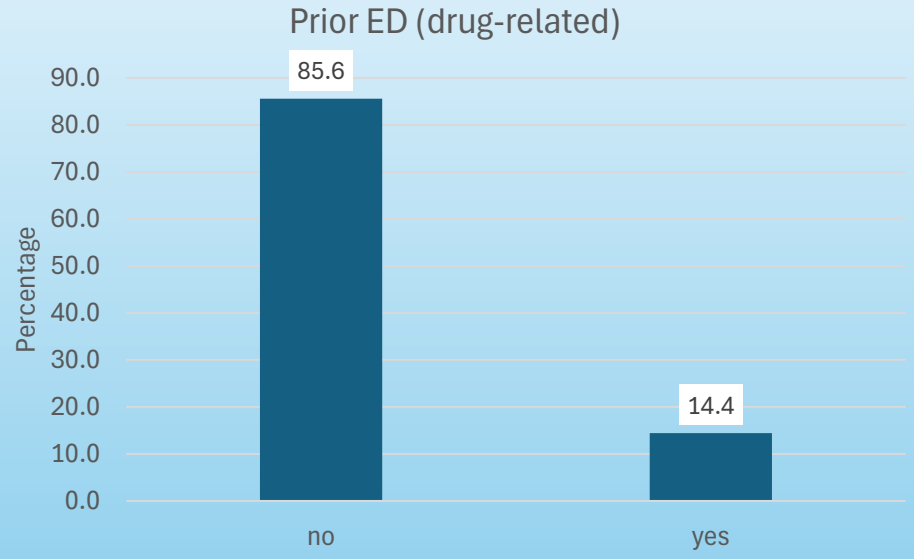

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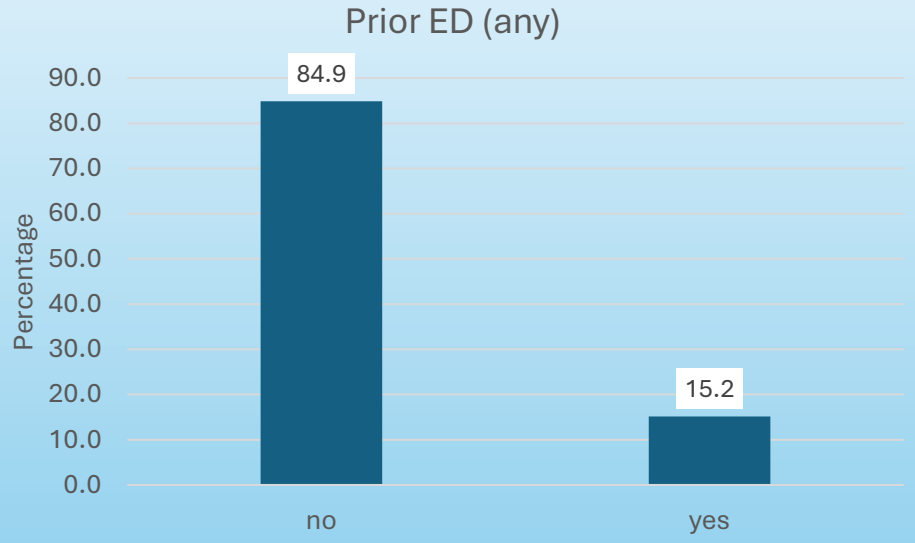

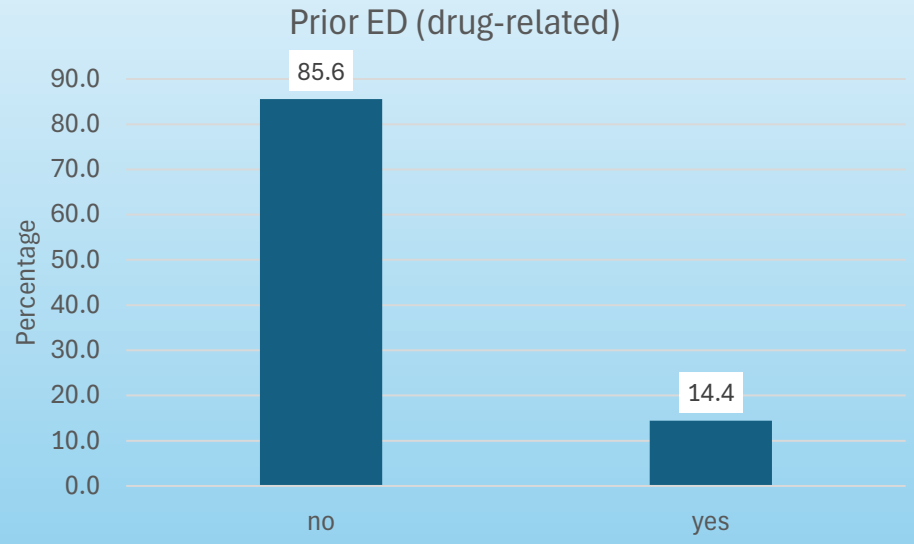

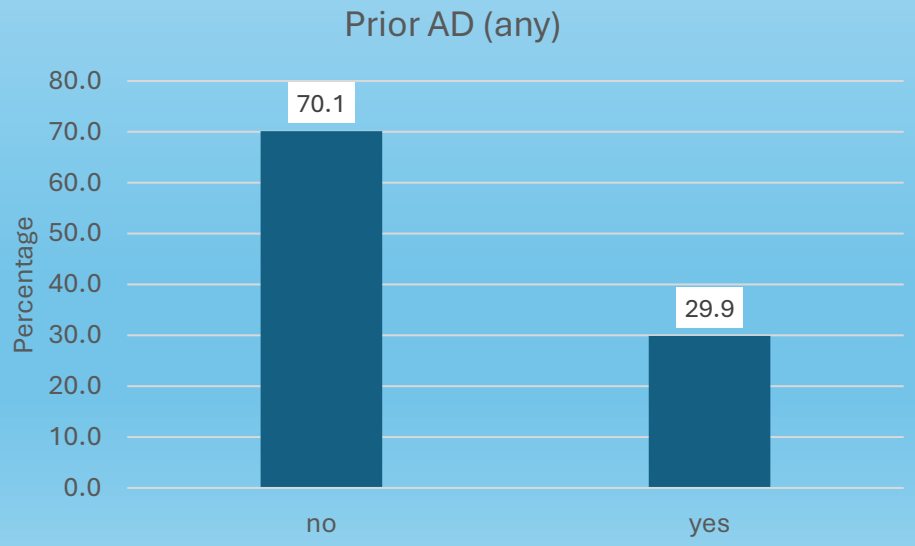

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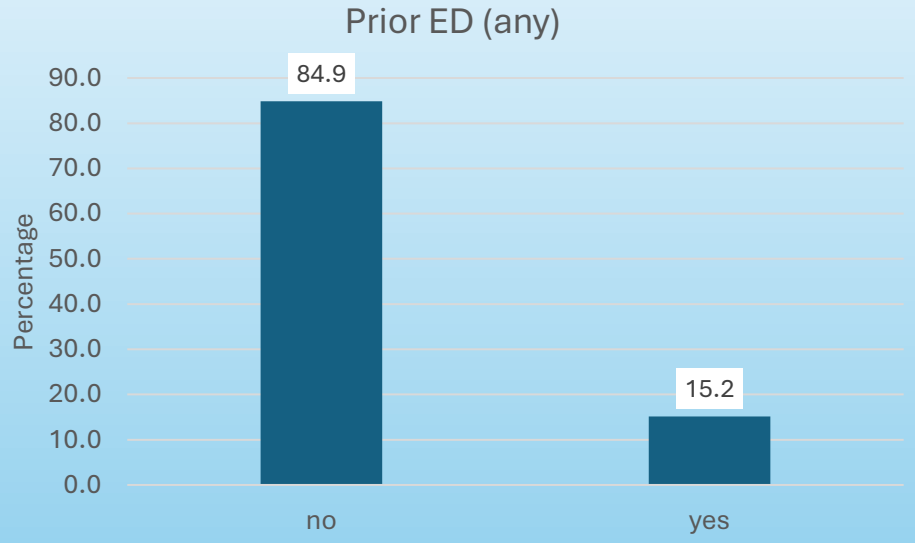
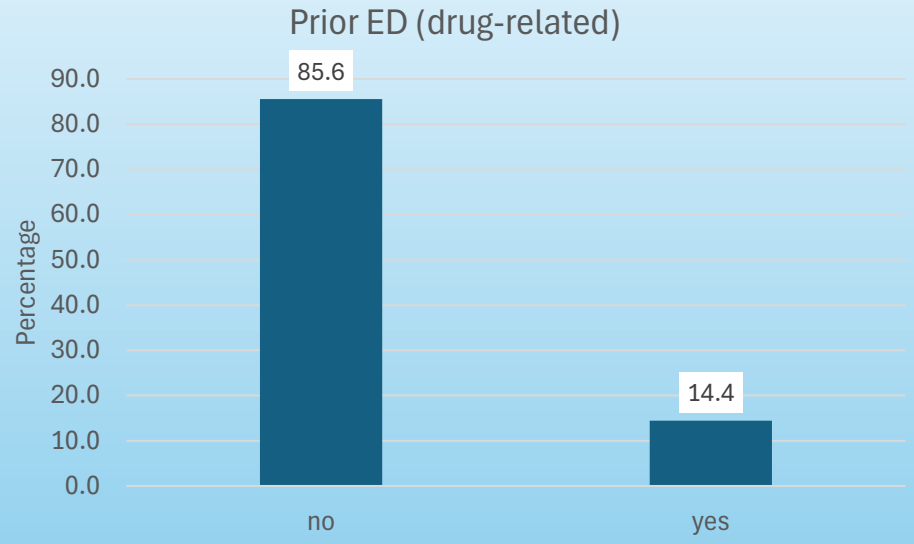
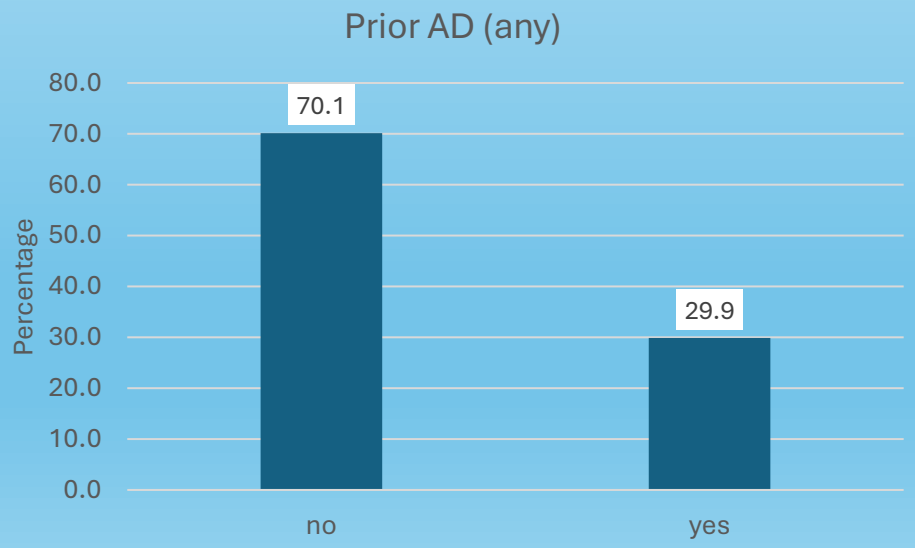






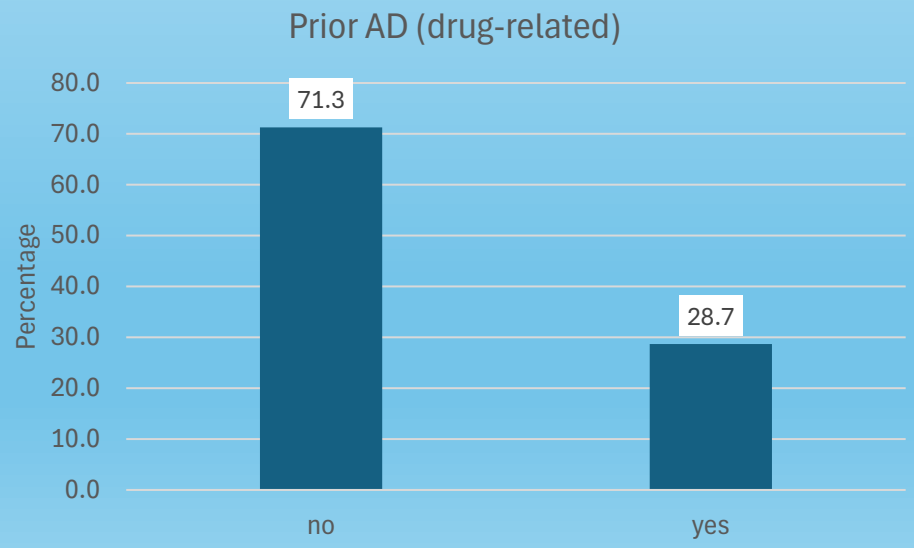


Table 2: Bivariate relationship between covariates and treatment status				
	Group		N	p-value
Variable	Control	Treatment		
Sex				< 0.001
female	11.71	88.29	111	
male	36.36	63.64	322	
Age group				0.801
18-26	33.13	66.87	163	
27-33	30.68	69.32	176	
34-39	34.19	65.81	155	
40+	29.27	70.73	123	
Indigenous status				0.12
Aboriginal	27.98	72.02	218	
Non-Aboriginal	34.09	65.91	399	
Seriousness				0.035
not serious	24.71	75.29	170	
fairly serious	32.99	67.01	291	
very serious	37.82	62.18	156	
Concurrent offences				0.321
1	32.3	67.61	71	
2-4	37.3	62.68	142	
>=5	30.4	69.59	388	
Age first contact				0.07
10-14	33.83	66.17	133	
15-19	33.97	66.03	262	
20-25	22.79	77.21	136	
26+	37.21	62.79	86	
Prior court apps.				0.074
0 to 6	42.86	57.14	162	
7 to 12	26.67	73.33	244	
more than 12	31.99	68.01	211	
Prior prison				0.378
No	30.23	69.77	301	
Yes	33.54	66.46	316	

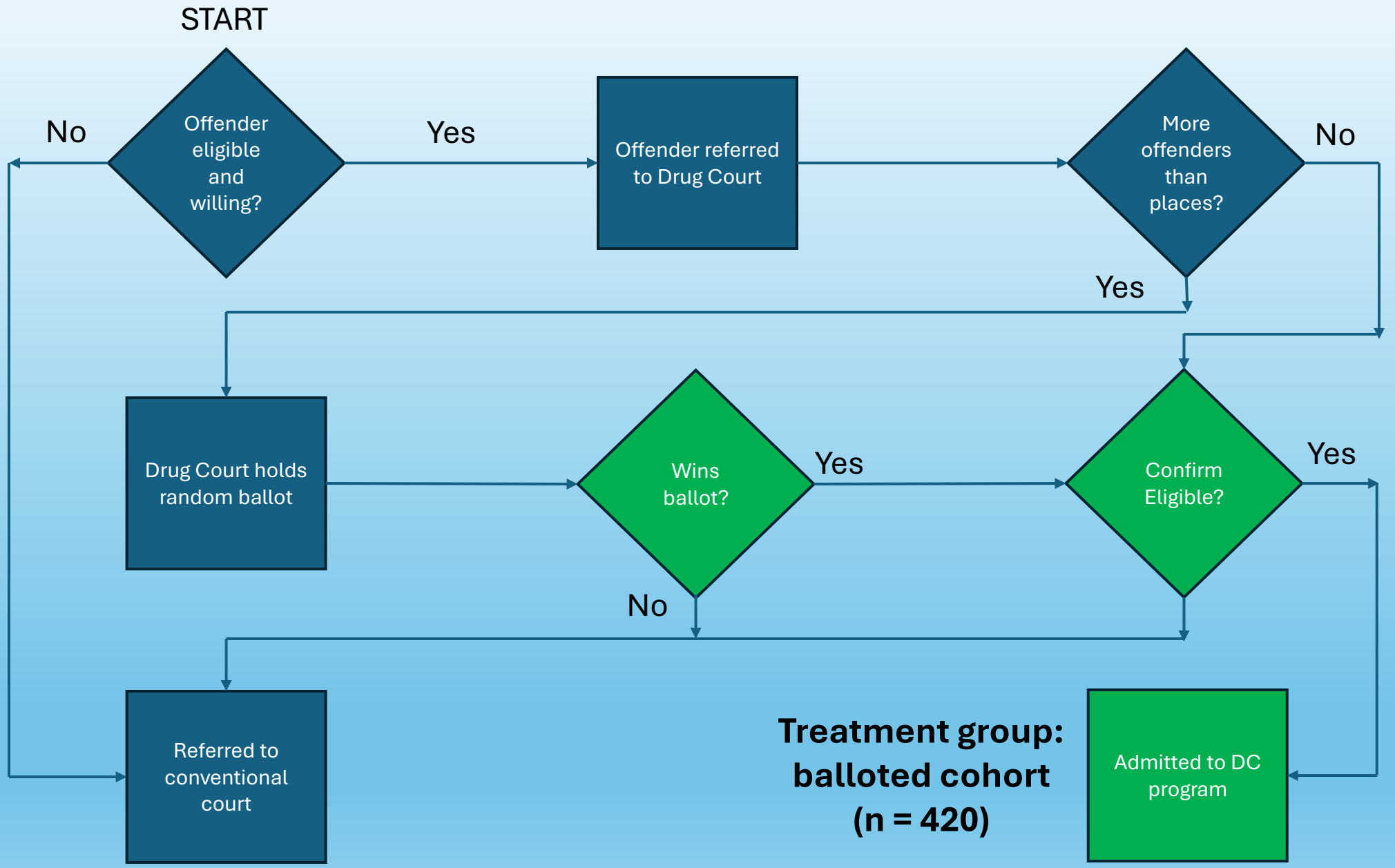
Table 2 (cont.): Bivariate relationship between covariates and treatment status				
	Group		N	p-value
Variable	Control	Treatment		
Prior violence				0.897
No	31.75	68.25	400	
Yes	32.26	67.74	217	
Prior theft				0.173
No	28.51	71.49	221	
Yes	33.84	66.16	396	
Prior justice				0.222
none	36.57	63.43	175	
one	32.72	67.28	162	
two	25.00	75.00	116	
more than two	31.10	68.90	164	
Prior ROSH				0.196
No	33.01	66.99	515	
Yes	26.47	73.53	102	
Prior OOHC				0.512
No	32.32	67.68	560	
Yes	28.07	71.93	57	
Prior ED (any)				0.694
No	31.62	68.38	525	
Yes	33.70	66.30	92	
Prior ED (drugs)				0.701
No	31.64	68.36	531	
Yes	33.72	66.28	86	
Prior admission (any)				0.962
No	31.87	68.13	433	
Yes	32.07	67.93	84	
Prior admission (drugs)				0.878
No	31.75	68.25	441	
Yes	32.39	67.61	176	

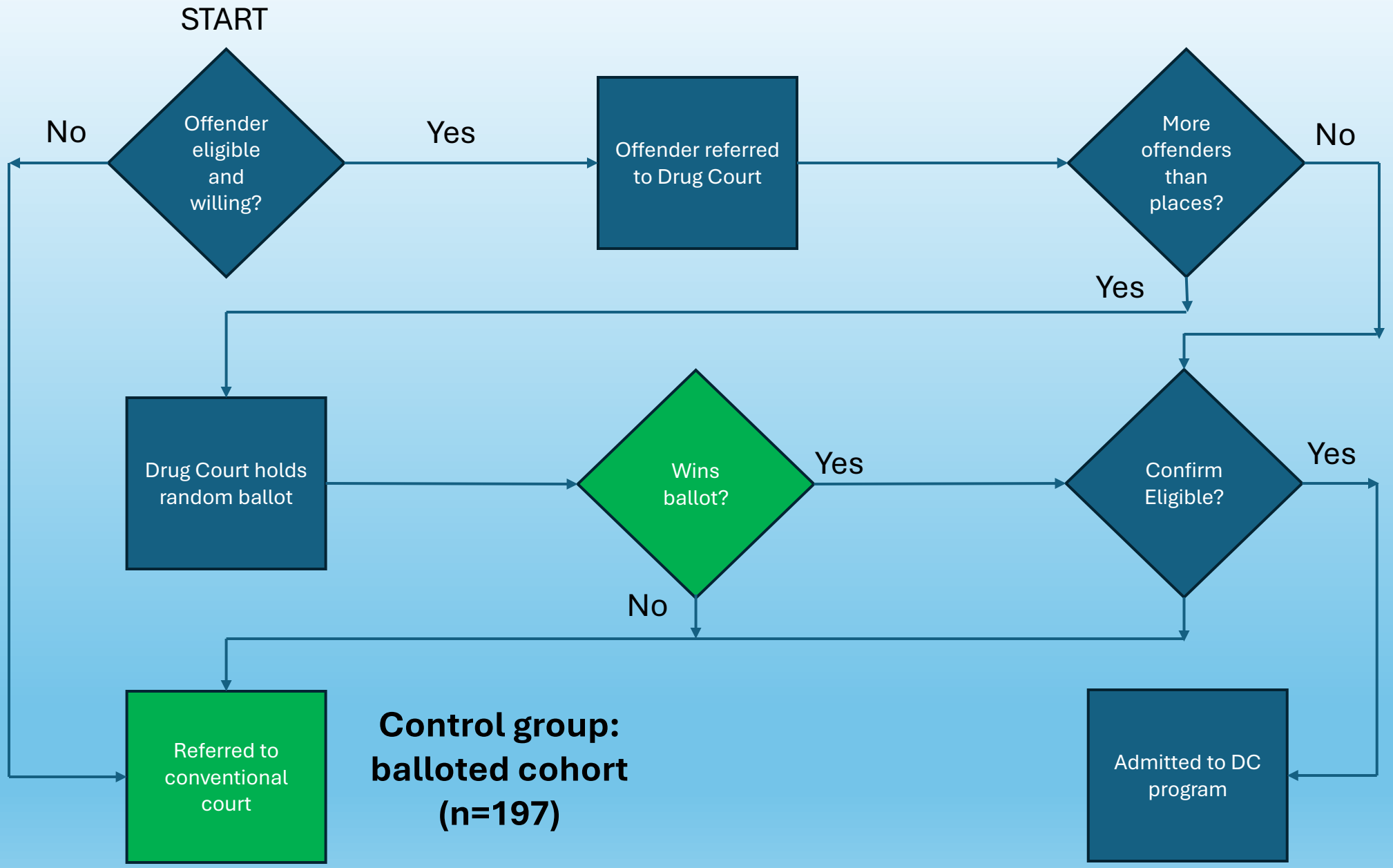
There are two ways into the Drug Court:

those who went through the ballot and those who did not
(let me explain)

Study design

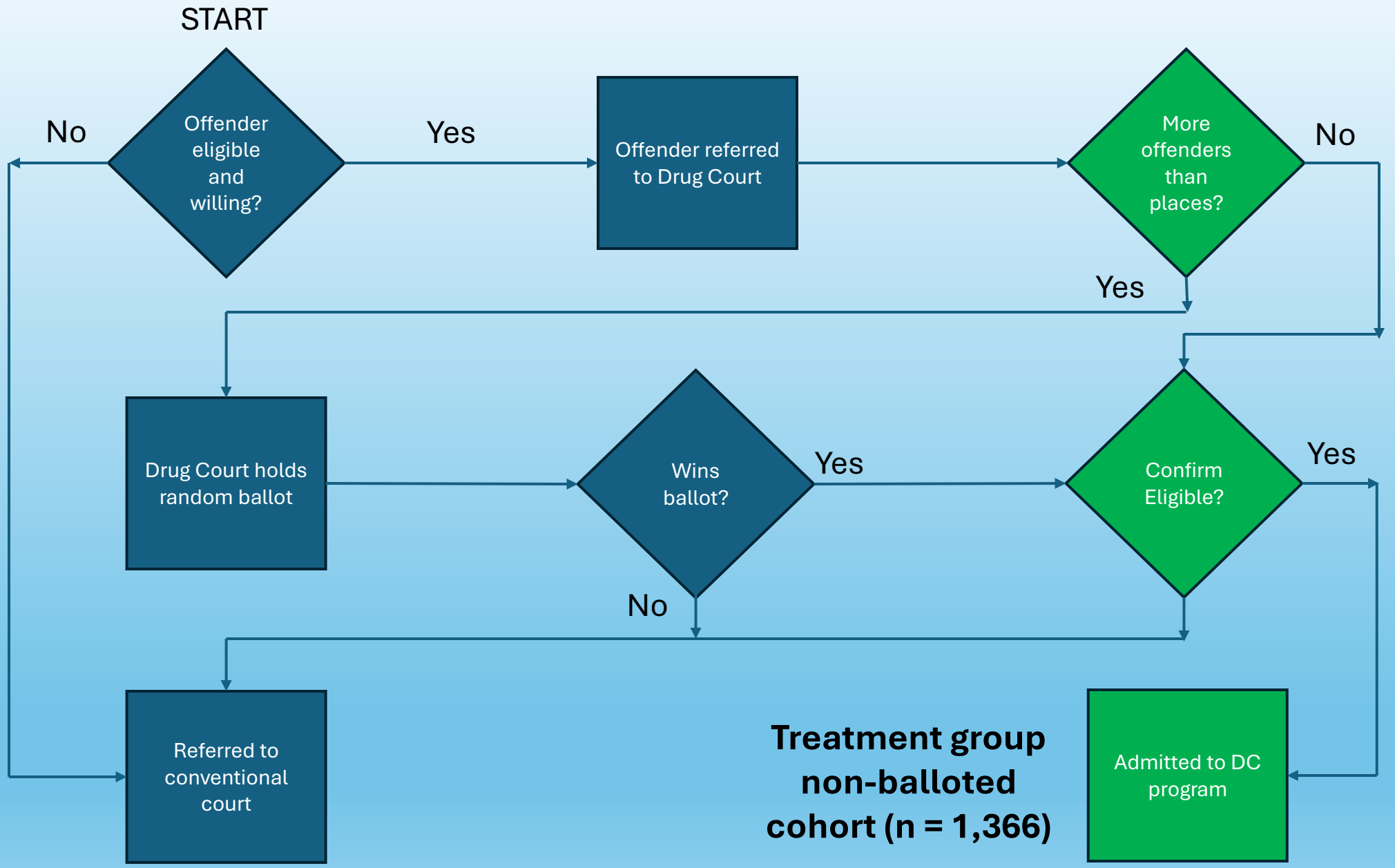
- When there are more eligible referrals than places in the Drug Court, the court selects applicants by ‘nearly’ random ballot
  - We call this cohort the ‘balloted cohort’.
  - **Treatment = 420, Control =197**

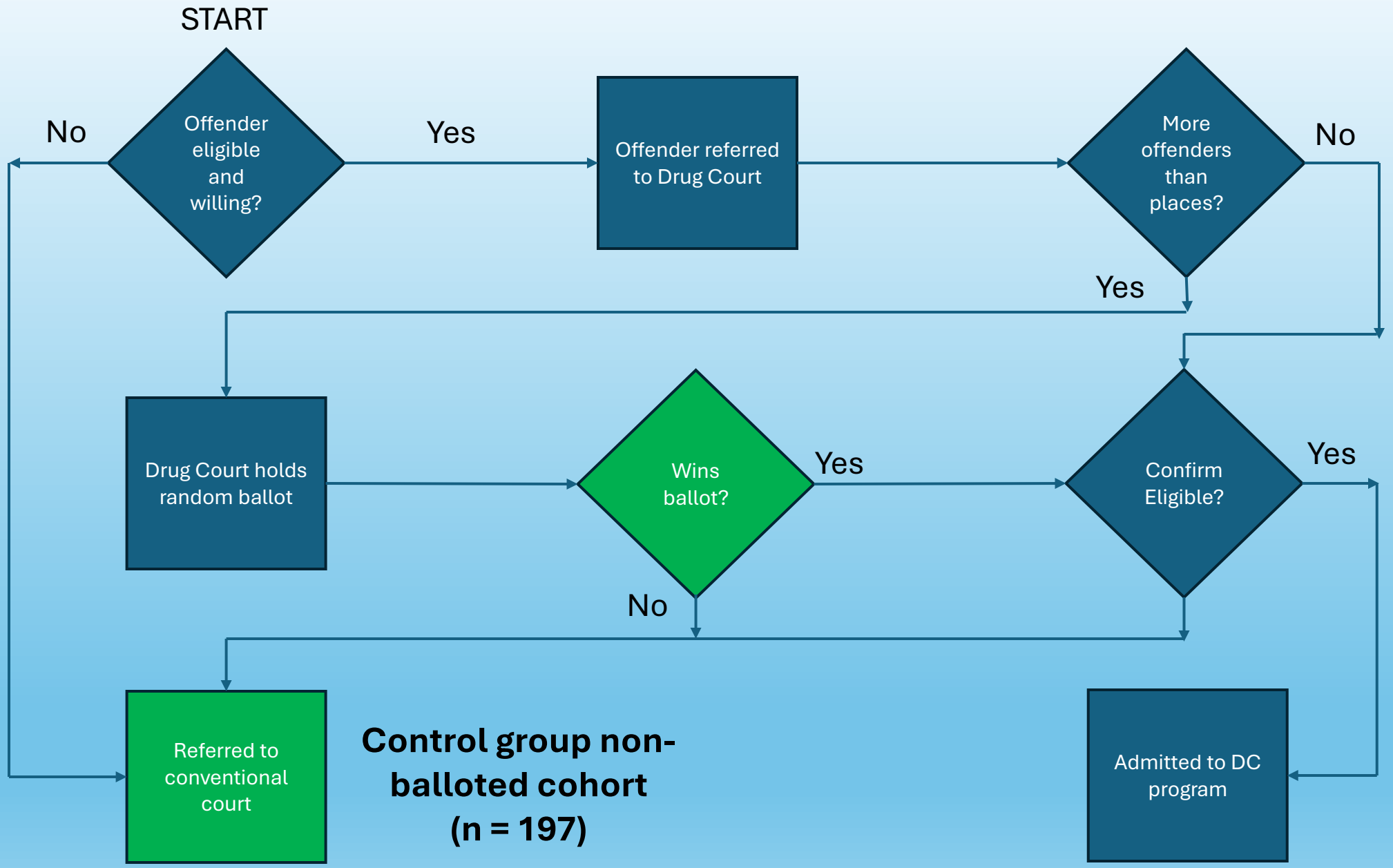

START
Offender eligible and willing?
No
Yes
Offender referred to Drug Court
More offenders than places?
No
Yes
Drug Court holds random ballot
Wins ballot?
Yes
No
Confirm Eligible?
Yes
Referred to conventional court
Treatment group: balloted cohort (n = 420)
Admitted to DC program


START
Offender eligible and willing?
No
Yes
Offender referred to Drug Court
More offenders than places?
No
Yes
Drug Court holds random ballot
Wins ballot?
Yes
No
Confirm Eligible?
Yes
Referred to conventional court
Control group: balloted cohort (n=197)
Admitted to DC program

Background

- When there are more eligible referrals than places in the Drug Court, the court selects applicants by ‘nearly’ random ballot
  - We call this cohort the ‘balloted cohort’.
  - Treatment = 197, Control = 420
- When the number of places is equal to or greater than the number of eligible referrals, no ballot is held
  - We call this cohort the ‘non-balloted cohort’
  - **Treatment = 1,366, Control = 197**


START
Offender eligible and willing?
No
Yes
Offender referred to Drug Court
More offenders than places?
No
Yes
Drug Court holds random ballot
Wins ballot?
Yes
No
Confirm Eligible?
Yes
Referred to conventional court
Admitted to DC program
Treatment group non-balloted cohort (n = 1,366)


START
Offender eligible and willing?
No
Yes
Offender referred to Drug Court
More offenders than places?
No
Yes
Drug Court holds random ballot
Wins ballot?
Yes
No
Confirm Eligible?
Yes
Referred to conventional court
Control group non-balloted cohort (n = 197)
Admitted to DC program

The treatment and control groups

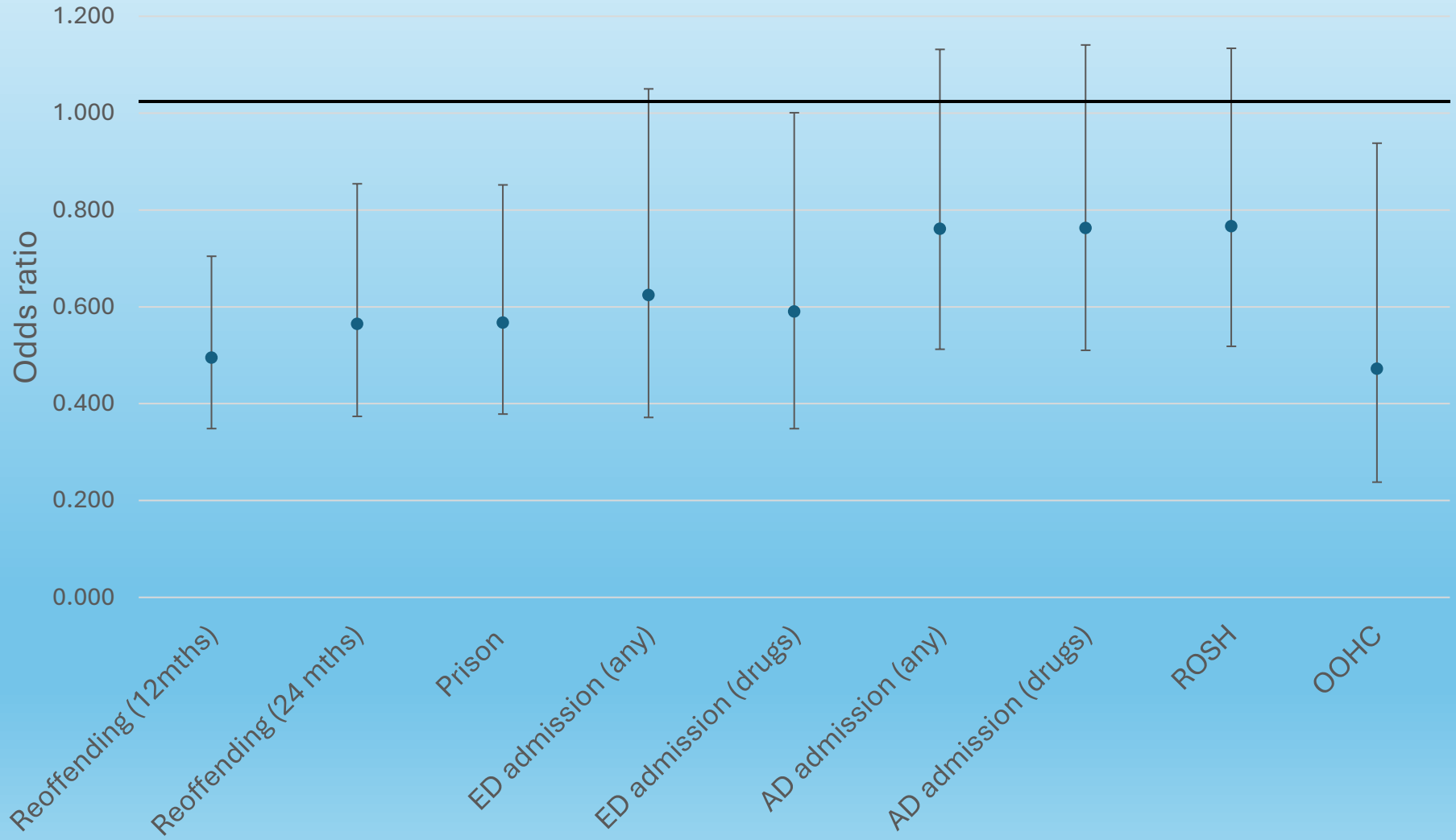
- All subjects in the study go through confirmation of their eligibility
- This means we cannot treat the study as a randomized trial
- Which means treatment and control groups must be matched
- So, we combine the balloted and non-balloted cohorts
  - Treatment = 1,366; Control = 197
- And match them using entropy matching

Matching results

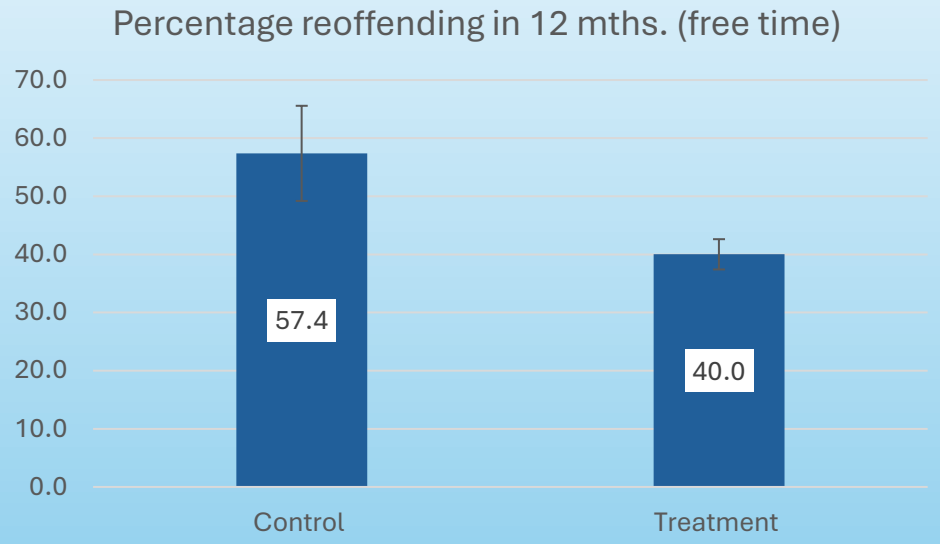
Standardized bias = (mean treatment – mean control)/SD (treatment)

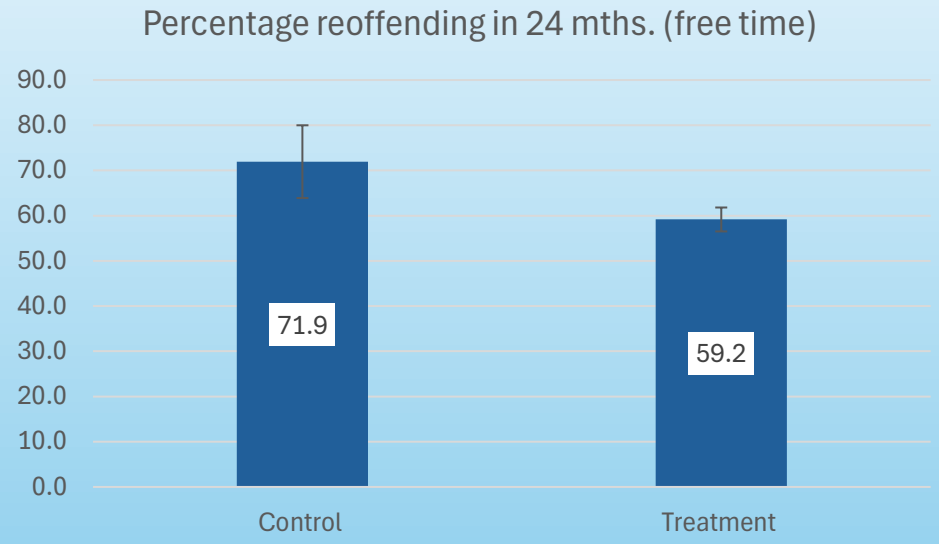
Table 3: Entropy matching results		
	Standardised bias	
Variable	Before matching	After matching
Sex	-0.385	-0.002
2.Age group	0.025	<0.001
3.Age group	-0.052	<0.001
4.Age group	0.058	<0.001
2.Age first group	-0.083	<0.001
3.Age first group	0.211	0.001
4.Age first group	-0.104	-0.001
Aboriginal	-0.138	<0.001
2.Seriousness group	-0.045	<0.001
3.Seriousness group	-0.161	-0.001
1.Concurrent group	-0.132	<0.001
2.Concurrent group	0.117	0.001
2.Prior court group	0.101	<0.001
3.Prior court group	-0.030	<0.001
Prior prison	-0.055	<0.001
Prior violence	-0.003	<0.001
Prior theft	-0.121	<0.001
Prior justice	0.119	<0.001
Prior Rosh	0.105	<0.001
Prior OOHC	0.045	<0.001
Prior ED any	-0.042	<0.001
Prior ED drugs	-0.042	<0.001
Prior AD any	-0.003	<0.001

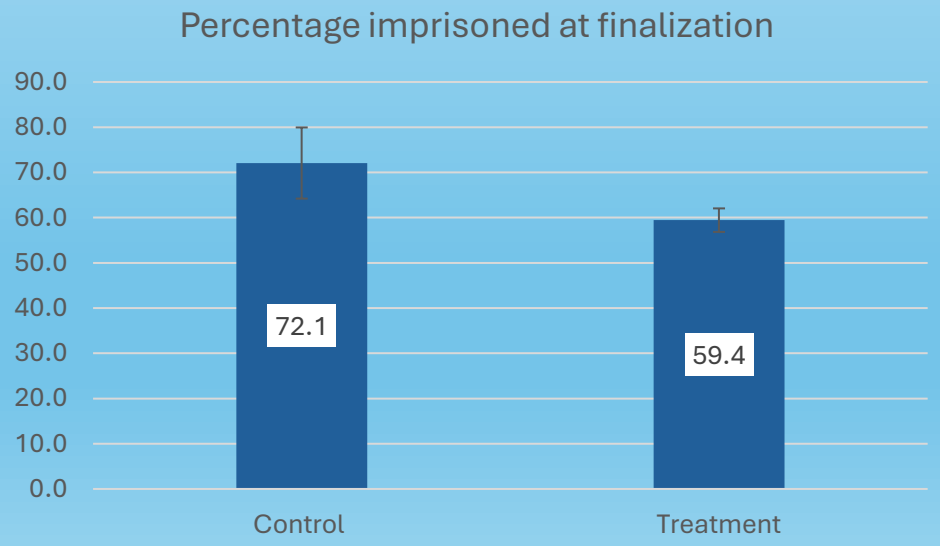
Odds ratios and confidence intervals for all outcomes: non-balloted cohort

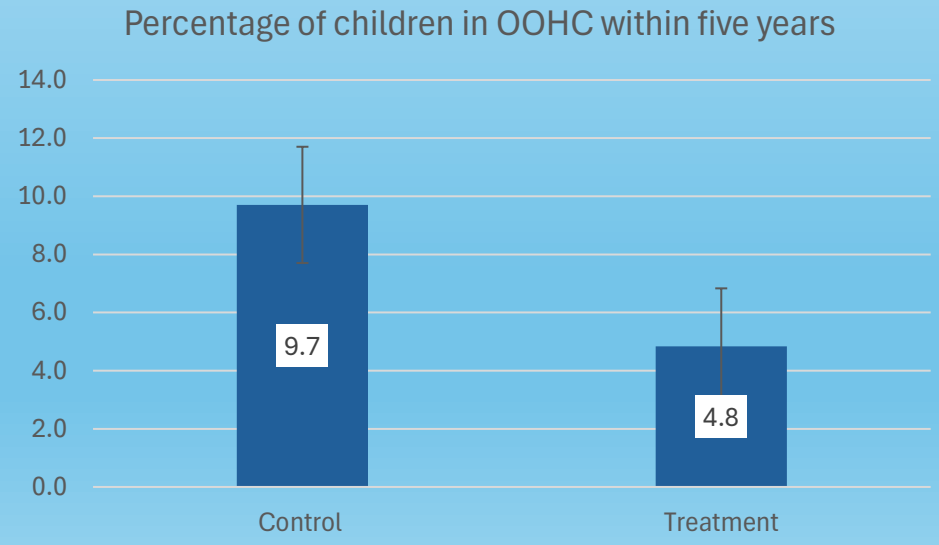


Significant outcomes in percentage terms









Summary of findings

- Compared with those who were eligible for the Drug Court but who were not placed on the Drug Court program, we see a:
  - 17.4 pp lower risk of reoffending after 12 months
  - 12.7 pp lower risk of reoffending after 24 months
  - 12.7 pp lower risk of going to prison
  - 4.9 pp lower risk of having children being placed in OOHC
- In relative terms that's a:
  - 30% lower risk of reoffending at 12 months
  - 18% lower risk of reoffending at 24 months
  - 18% lower risk of imprisonment
  - 51% lower risk of a child being placed in OOHC

Interpreting the findings

- Results on re-offending and imprisonment consistent with past research on Drug Court
- Results on ROSH reports
  - Encouraging effect on OOHC
  - Not sure why no effect on ROSH reports
    - Power problem?
    - Drug court addresses risk factors for ROSH
- Results on health outcomes
  - Could be a power problem (power problem?)
  - Could be because treatment encourages further treatment seeking (a similar result was found in the MERIT evaluation).

Study limitations

- Insufficient number of control subjects (power problem)
- Possible problems with measures of health status
- Possible omitted variable bias

Comments? Questions?