

# The NSW Drug Court: Findings from a re-evaluation

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# Background

- February 1999: NSW Govt established the DC
- 2002: Lind et al. complete a randomised trial of its effectiveness
  - Intention-to-treat results favourable and credible but small
  - As-treated results favourable and large but open to question (limited controls)

## Background (cont.)

- Following our evaluation a number of changes were made to Drug Court policies and procedures
  - Greater police input to eligibility screening
  - More flexible sanctioning
  - Closer monitoring of participants
  - More intensive urine testing
  - Changes to eligibility criteria (re violence)

# Research questions

- Are Drug Court participants less likely to re-offend than a matched sample dealt with via conventional sanctions?
- Is the Drug Court equally effective with low and high risk offenders? (Marlowe et al. 2008)

# Sample

- All offenders who made it through the ballot (Feb 2003 - Apr 2007)
  - Drug Court group: those accepted onto the program (n = 645)
  - Comparison group: those not accepted on the program (n = 329)

# Dependent variables

- ‘Free time’ to first offence, separately for:
  - *Any*: time to first reconviction for an offence of any kind
  - *Person*: time to first reconviction for an offence against the person
  - *Property*: time to first reconviction for a property offence
  - *Drug*: time to first reconviction for a drug offence

# Independent (control) variables

- Age
- Gender
- Indigenous status
- Principal offence
  - Violence
  - Property
  - Theft
  - Other
- Prior convictions for violence
- Concurrent offences
- Prior convictions
- Catchment area

# Analyses

## 1. All treatment vs. all controls

- Cox regression to account for differences between groups
- Two stage least squares (more sophisticated way of dealing with selection bias)

## 2. Program completers vs. all controls

- Cox regression

## 3. High vs. low risk

- Split sample into two groups based on risk of re-offending
- Separate Cox regression models



# Sample description

Characteristic	Drug Court (n=645)		Comparison Group (n=329)		Sig?
	N	%	N	%	
AGE					No
18-21	69	10.7	44	13.4	
22-26	182	28.2	78	23.7	
27-30	130	20.2	74	22.5	
31+	264	40.9	133	40.4	
SEX					No
Female	120	18.6	48	14.6	
Male	525	81.4	281	85.4	
ATSI					No
No	560	86.8	272	82.7	
Yes	85	13.2	57	17.3	
CATCH					Yes
No	82	12.7	68	20.7	
Yes	563	87.3	261	79.3	
CONCUR					Yes
0-2	99	15.4	122	37.1	
3-5	152	23.6	91	27.7	
6-10	191	29.6	67	20.4	
11+	203	31.5	49	14.9	
INDEX OFF					Yes
Violence	78	12.1	64	19.5	
Theft	398	61.7	192	58.4	
Drug	86	13.3	39	11.9	
Other	83	12.9	34	10.3	

## Contd....

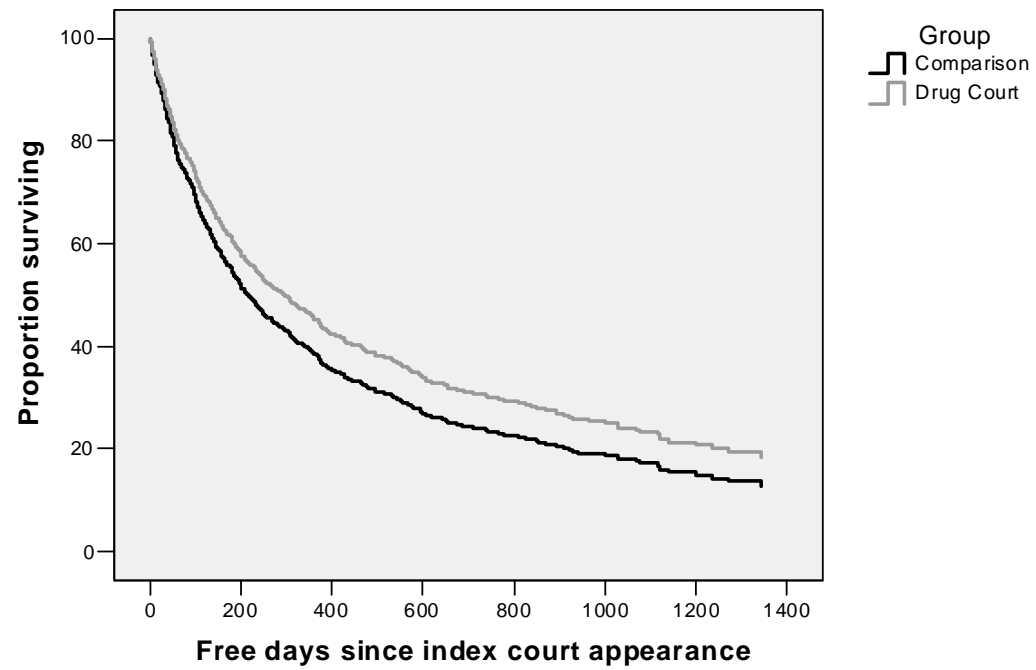
Characteristic	Drug Court (n=645)		Comparison Group (n=329)		Sig?
	N	%	N	%	
PRIORCON					No
0-4	114	17.7	62	18.8	
5-9	234	36.3	111	33.7	
10-14	200	31.0	89	27.1	
15+	97	15.0	67	20.4	
PRIOR VIOL					Yes
0	384	59.5	121	36.8	
1	167	25.9	100	30.4	
2+	94	14.6	108	32.8	
ANY					No
No	206	31.9	121	36.8	
Yes	439	68.1	208	63.2	
PERSON					Yes
No	541	83.9	254	77.2	
Yes	104	16.1	75	22.8	
PROPERTY					Yes
No	319	49.5	186	56.5	
Yes	326	50.5	143	43.5	
DRUG					Yes
No	537	83.3	255	77.5	
Yes	108	16.7	74	22.5	

# 1. All treatment vs. all controls

	Any		Person		Property		Drug	
	HR	Sig?	HR	Sig?	HR	Sig?	HR	Sig?
<b>DRUGCOURT</b>	0.83	Yes	0.70	Yes	0.95	No	0.62	Yes
<b>PRIORVIO</b>								
0	-	-	-	-	-	-	-	-
1	0.98	No	1.12	No	1.08	No	0.99	No
2+	1.38	Yes	2.32	Yes	1.44	Yes	1.07	No
<b>CONCUR</b>								
0-2	-	-	-	-	-	-	-	-
3-5	1.21	No	0.71	No	1.23	No	0.86	No
6-10	1.71	Yes	1.12	No	1.82	Yes	1.22	No
11+	2.04	Yes	1.55	No	2.09	Yes	1.06	No
<b>AGE</b>								
18-21	1.10	No						
22-26	1.17	No						
27-30	0.76	Yes						
31+	-	-						
<b>ATSI</b>			1.51	Yes				
<b>MALE</b>			2.23	Yes	0.75	Yes		
<b>PRIORCON</b>								
0-4	-	-	-	-	-	-	-	-
5-9	1.48	Yes	1.75	Yes	1.30	No	1.10	No
10-14	1.49	Yes	2.08	Yes	1.30	No	1.52	No
15+	2.26	Yes	2.82	Yes	1.87	Yes	2.75	Yes
<b>INDEX OFF</b>								
Violence			2.18	Yes	0.99	No		
Theft			0.96	No	1.10	No		
Drug			0.62	No	0.66	Yes		
Other			-	-	-	-		

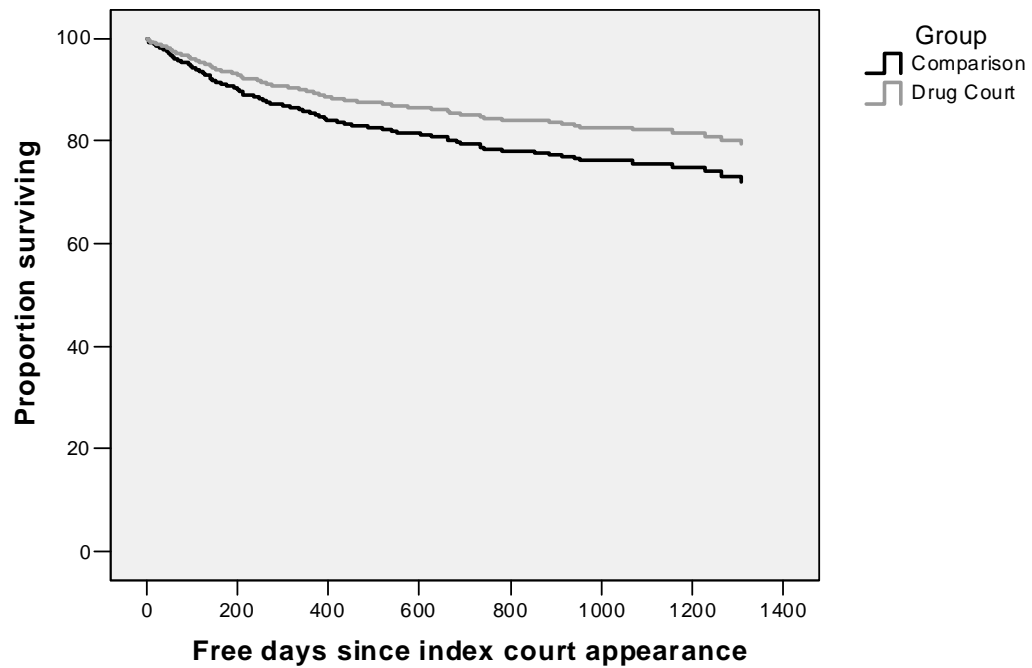
# 1. Any offence

**Figure 1. Survival curve for any offences ('intention-to-treat' analysis)**



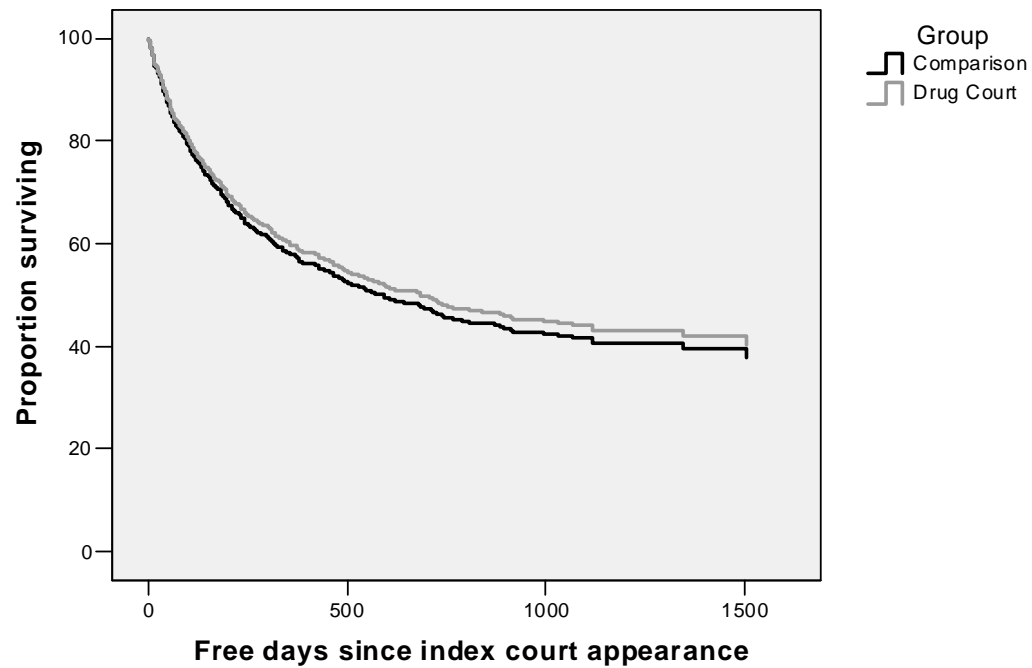
# 1. Person offences

**Figure 2. Survival curve for offences against the person ('intention-to-treat analysis')**



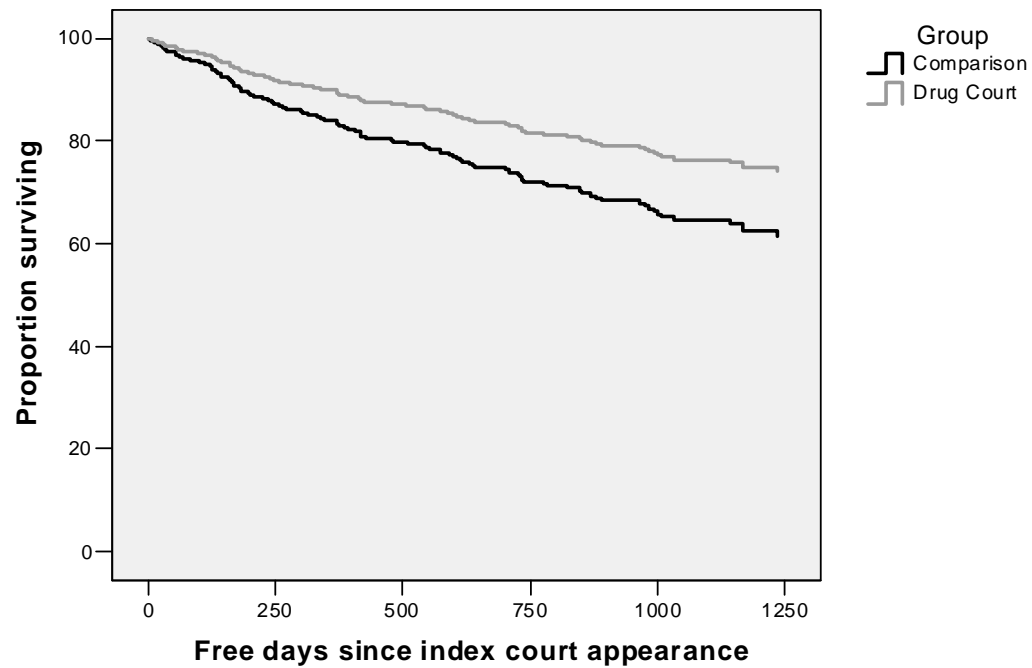
# 1. Property offences

**Figure 3. Survival curve for property offences ('intention-to-treat' analysis)**



# 1. Drug offences

**Figure 4. Survival curve for drug offences ('intention-to-treat' analysis)**



# 1. All treatment vs. all controls

## Two-stage models

Parameter	$\beta$ (s.e.)	Sig?
Intercept	-0.51 (0.21)	Y
1 prior violent conviction	-0.35 (0.11)	Y
2+ prior violent convictions	-0.75 (0.12)	Y
3-5 concurrent offences	0.56 (0.13)	Y
6-10 concurrent offences	0.94 (0.13)	Y
11+ concurrent offences	1.12 (0.14)	Y
Aged <25	0.23 (0.13)	N
Aged 25-30	0.26 (0.13)	Y
Aged 36+	0.44 (0.14)	Y
Index offence = violent	-0.52 (0.17)	Y
Index offence = theft	-0.03 (0.14)	N
Index offence = drug	0.17 (0.19)	N
Live in catchment	0.46 (0.12)	Y



# 1. All treatment vs. all controls

## Two-stage models

Parameter	$\beta$ (s.e.)	Sig?
Intercept	4.27 (0.27)	Y
3-5 concurrent offences	-0.32 (0.19)	N
6-10 concurrent offences	-0.48 (0.22)	Y
11+ concurrent offences	-0.75 (0.25)	Y
Index offence = violent	-0.02 (0.22)	N
Index offence = theft	0.08 (0.16)	N
Index offence = drug	0.37 (0.22)	N
Treatment probability	1.07 (0.44)	Y

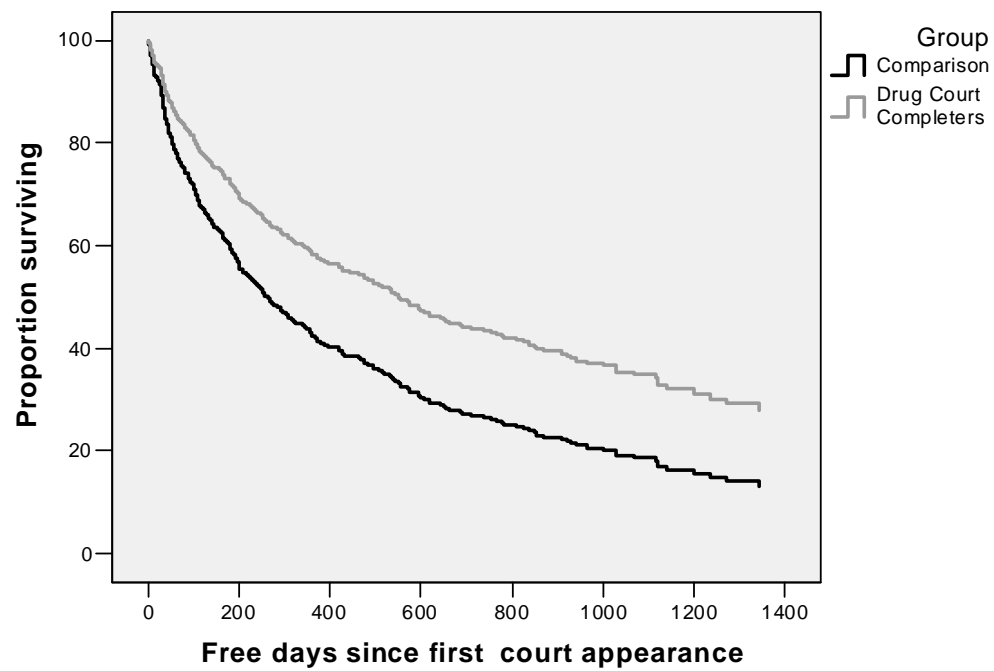
## 2. Completers vs. all controls

### Cox regression model

	Any		Person		Property		Drug	
	HR	Sig?	HR	Sig?	HR	Sig?	HR	Sig?
<b>COMPLETED</b>	0.63	Yes	0.35	Yes	0.65	Yes	0.42	Yes
PRIORVIO								
0	-	-	-	-	-	-	-	-
1	1.08	No	1.21	No	1.15	No	1.02	No
2+	1.80	Yes	2.65	Yes	1.61	Yes	1.19	No
CONCUR								
0-2	-	-	-	-	-	-	-	-
3-5	1.06	No	0.62	No	1.02	No	0.69	No
6-10	1.36	Yes	1.07	No	1.55	Yes	1.15	No
11+	1.56	Yes	1.18	No	1.46	No	0.77	No
AGE								
18-21					1.08	No		
22-26					0.94	No		
27-30					0.82	No		
31+					-	-		
ATSI								
			1.60	No				
MALE								
	0.74	Yes	3.01	Yes	0.71	Yes		
PRIORCON								
0-4	-	-	-	-	-	-	-	-
5-9	1.35	No	2.04	No	1.31	No	1.02	No
10-14	1.43	Yes	1.93	No	1.41	No	1.58	No
15+	2.17	No	3.64	Yes	2.30	Yes	2.72	Yes
INDEX OFF								
Violence			1.60	No	0.86	No		
Theft			1.10	No	1.40	No		
Drug			0.75	No	0.79	No		
Other			-	-	-	-		

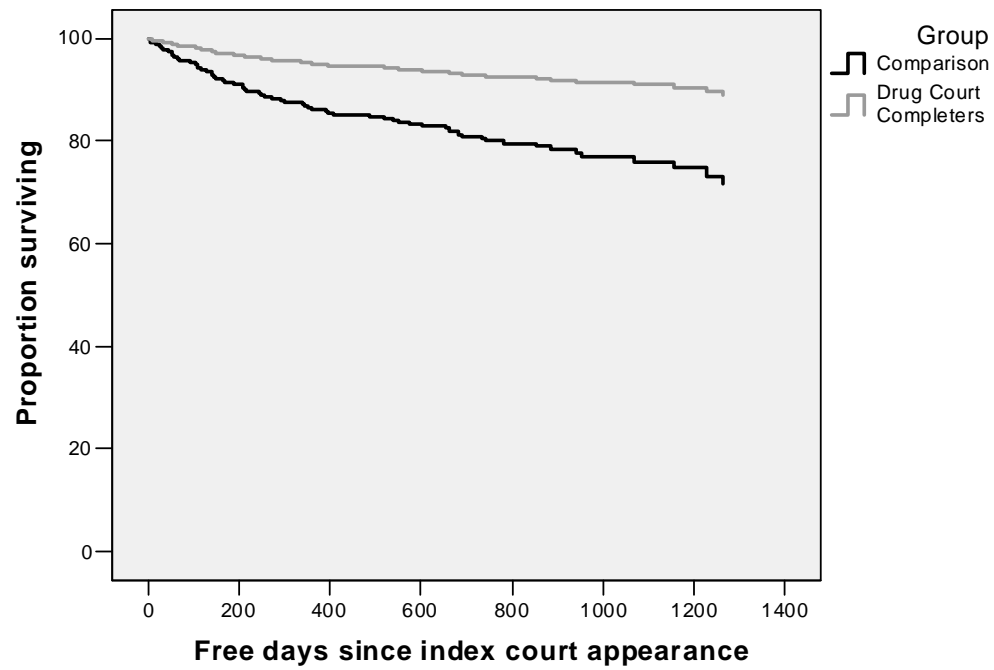
## 2. Any offence

Figure 5. Survival curve for any offences ('as-treated' analysis)



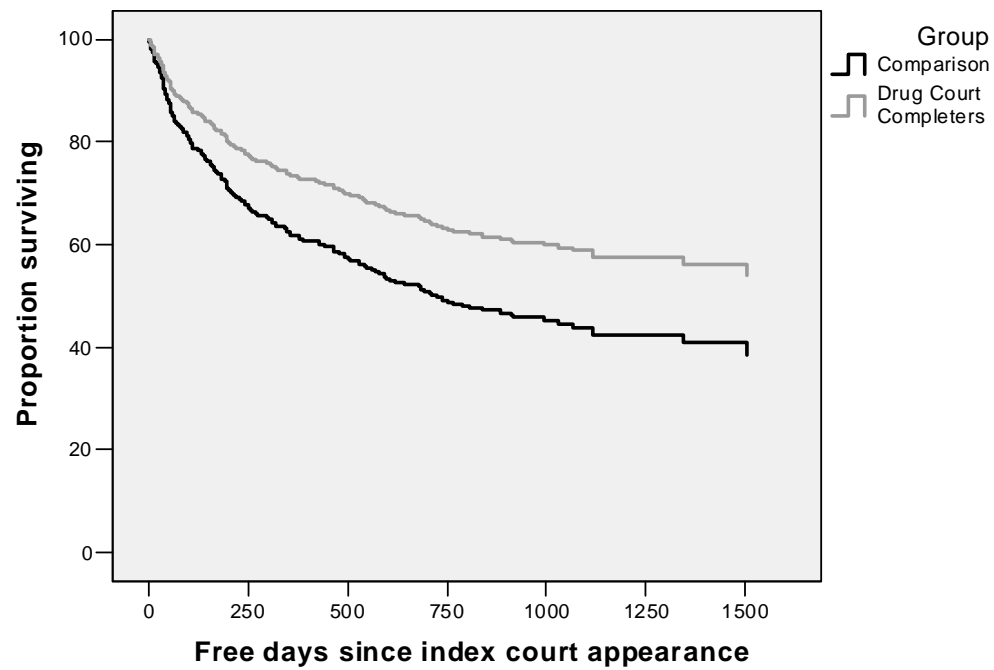
## 2. Person offence

**Figure 6. Survival curve for offences against the person ('as-treated' analysis)**



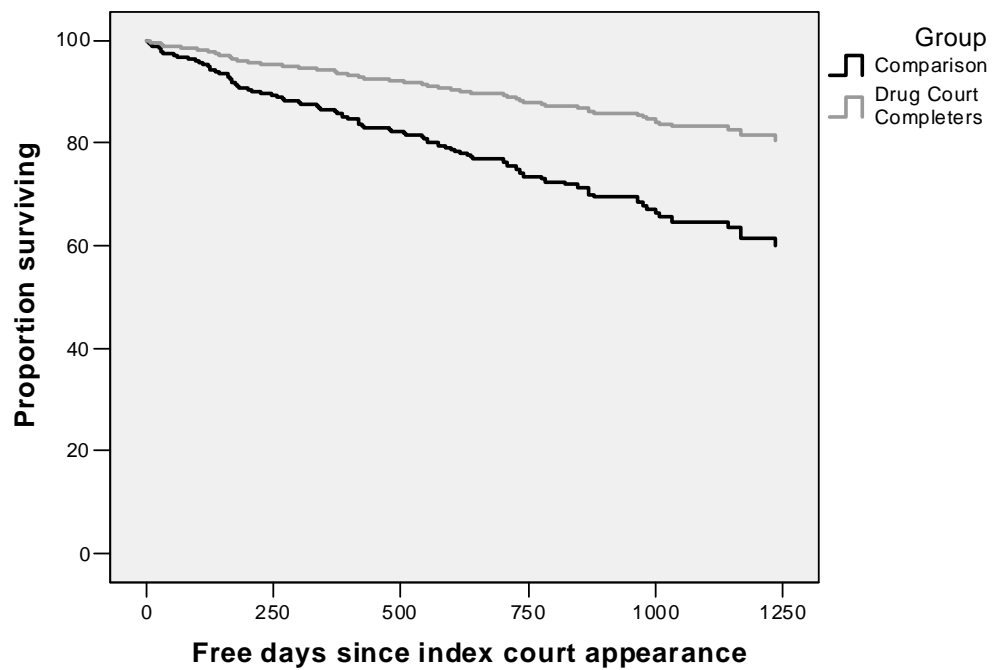
## 2. Property offence

Figure 7. Survival curve for property offences ('as-treated' analysis)



## 2. Drug offence

Figure 8. Survival curve for drug offences ('as-treated' analysis)



# Tentative conclusion

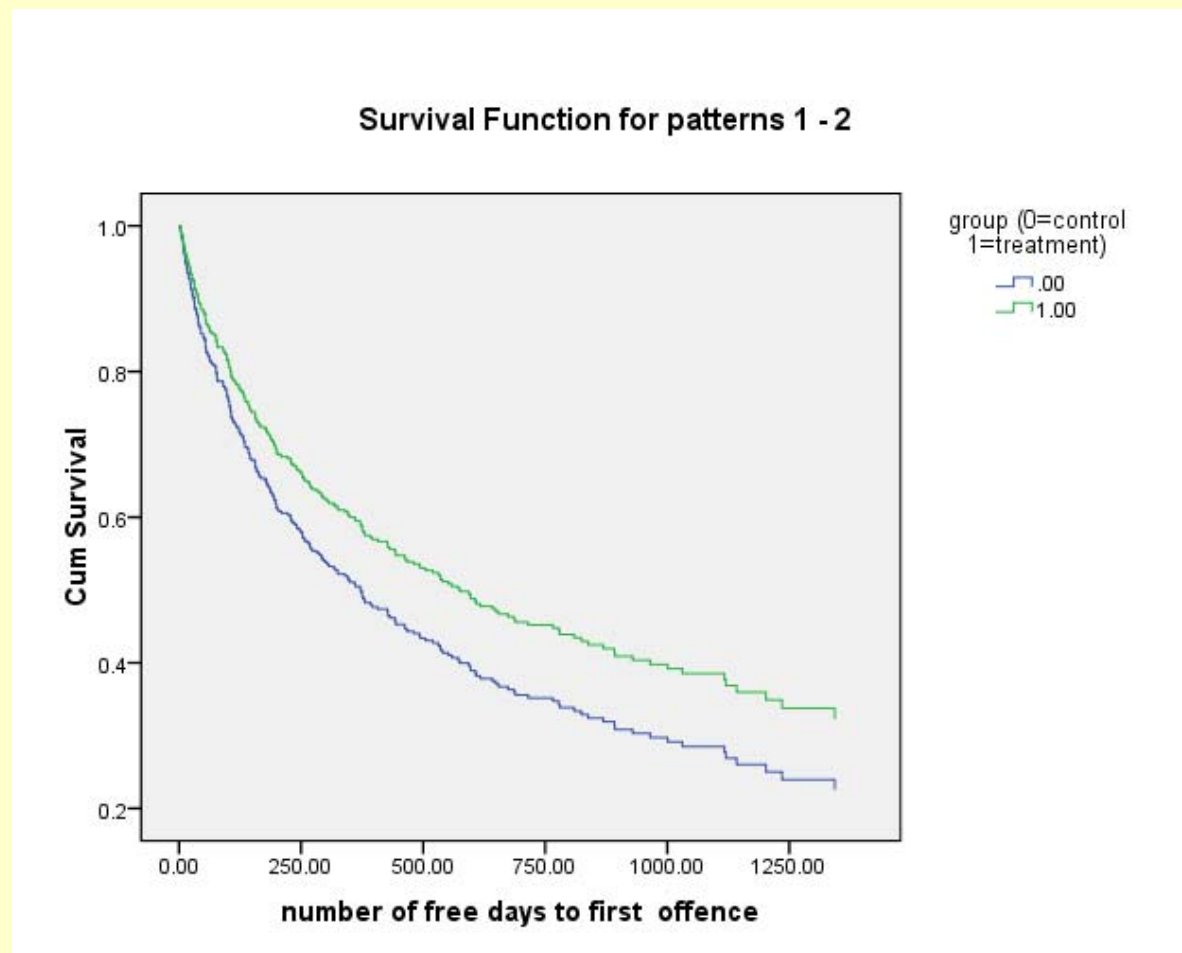
- Drug Court appears to be effective
- But is it equally effective with all groups of offenders?
- To test this:
  - Build a model of recidivism probability
  - Rank defendants in terms of recidivism risk
  - Split sample at median (recidivism risk = .67)
  - Re-run analysis on low and high risk offenders

# Low risk model of recidivism

	B	SE	Wald	df	Sig.	Exp(B)
group	-.274	.132	4.318	1	.038	.760
priorviol_gp			3.247	2	.197	
priorviol_gp(1)	.101	.136	.548	1	.459	1.106
priorviol_gp(2)	.411	.231	3.152	1	.076	1.508
concurr_gp			9.894	3	.019	
concurr_gp(1)	.317	.147	4.654	1	.031	1.373
concurr_gp(2)	.546	.188	8.452	1	.004	1.726
concurr_gp(3)	.374	.213	3.083	1	.079	1.454



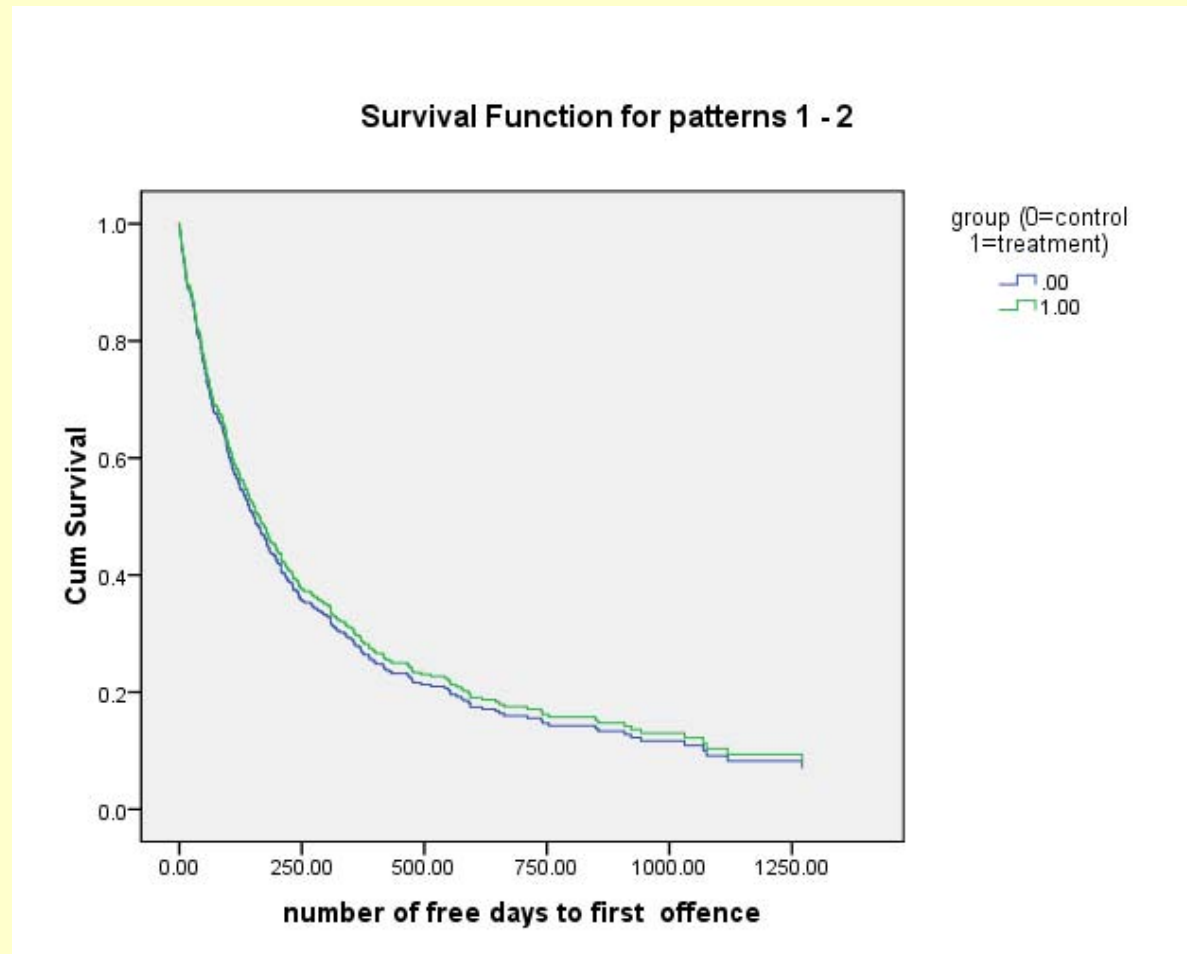
# Survival curves for Drug Court v Comparison Low risk group



# High Risk Model of recidivism

	B	SE	Wald	df	Sig.	Exp(B)
group	-.052	.120	.186	1	.666	.949
priorviol_gp			3.484	2	.175	
priorviol_gp(1)	-.078	.140	.309	1	.579	.925
priorviol_gp(2)	.177	.125	1.994	1	.158	1.194
concurr_gp			4.560	3	.207	
concurr_gp(1)	-.421	.223	3.552	1	.059	.656
concurr_gp(2)	-.293	.198	2.200	1	.138	.746
concurr_gp(3)	-.180	.203	.787	1	.375	.835

# Survival curves for Drug Court v Comparison High risk group



# Conclusion

- The Drug Court appears to be more effective than conventional sanctions in reducing the risk of re-offending
- This effect appears to be confined to lower risk offenders (viz. those with a recidivism risk below .67)