

Risk of Out-of-Home Placement at First Substantiation

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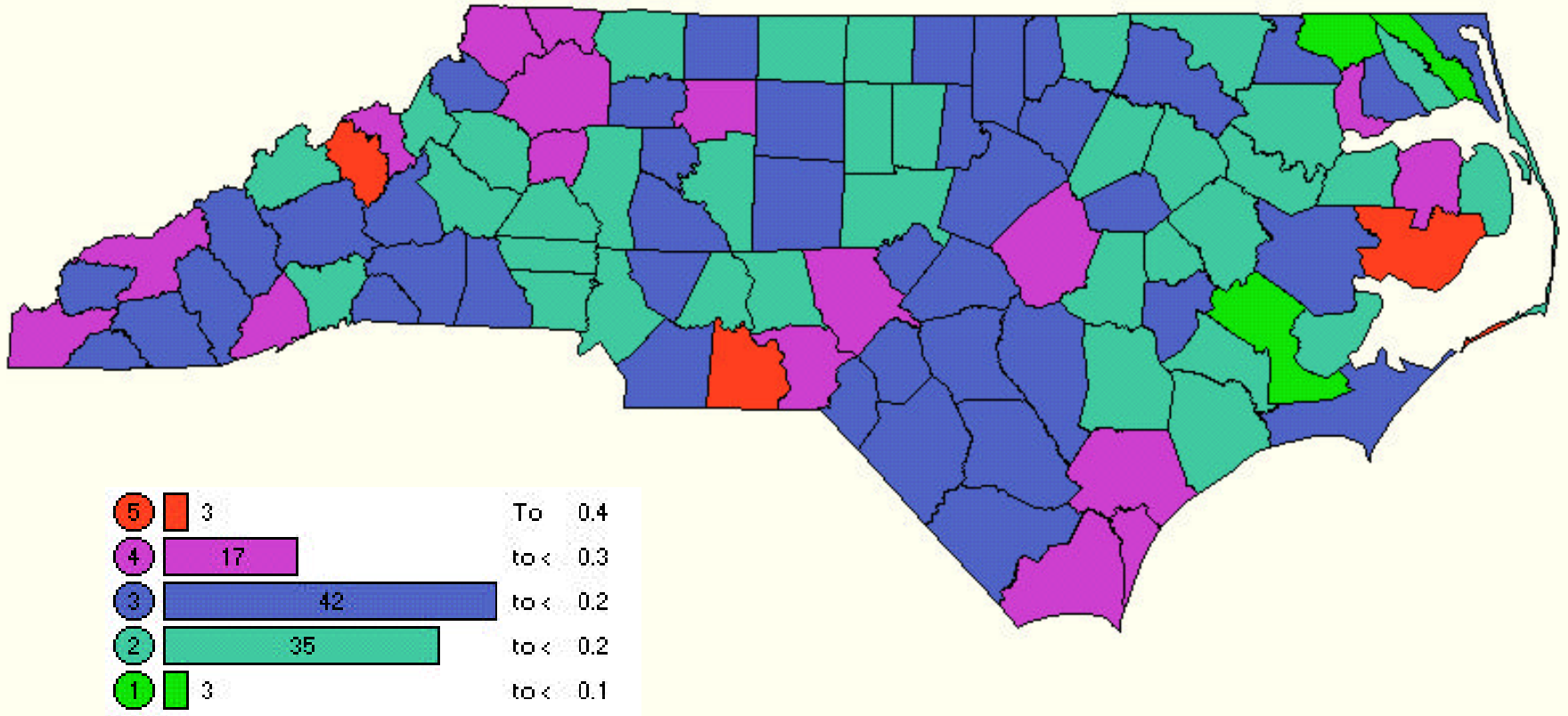
April 26, 2001

<http://www.unc.edu/~lynnu/plcrisk.pdf>

Component of Evaluation of Title IV-E Waiver Demonstration in North Carolina

- Keep children safe while reducing reliance on out-of-home care
- Reduce lengths of stay
- Reduce future reports of maltreatment and re-entry to care among children formerly in out-of-home care

County Placement Rates at Initial Substantiation



Data

- North Carolina Child Abuse and Neglect Report data linked to child placement data
- Longitudinal data track events which include reports, substantiations, placements
- Group children into entry cohorts by date of first substantiated report:
 - 4 cohorts: SFY9495 - SFY9798
- Follow-up time ranges from 1 year to 5.75 years (through March 31, 2000)

Data Exclusions

- Youth who were 17 years at the time of initial substantiation
- All children with an initial substantiation finding of dependency

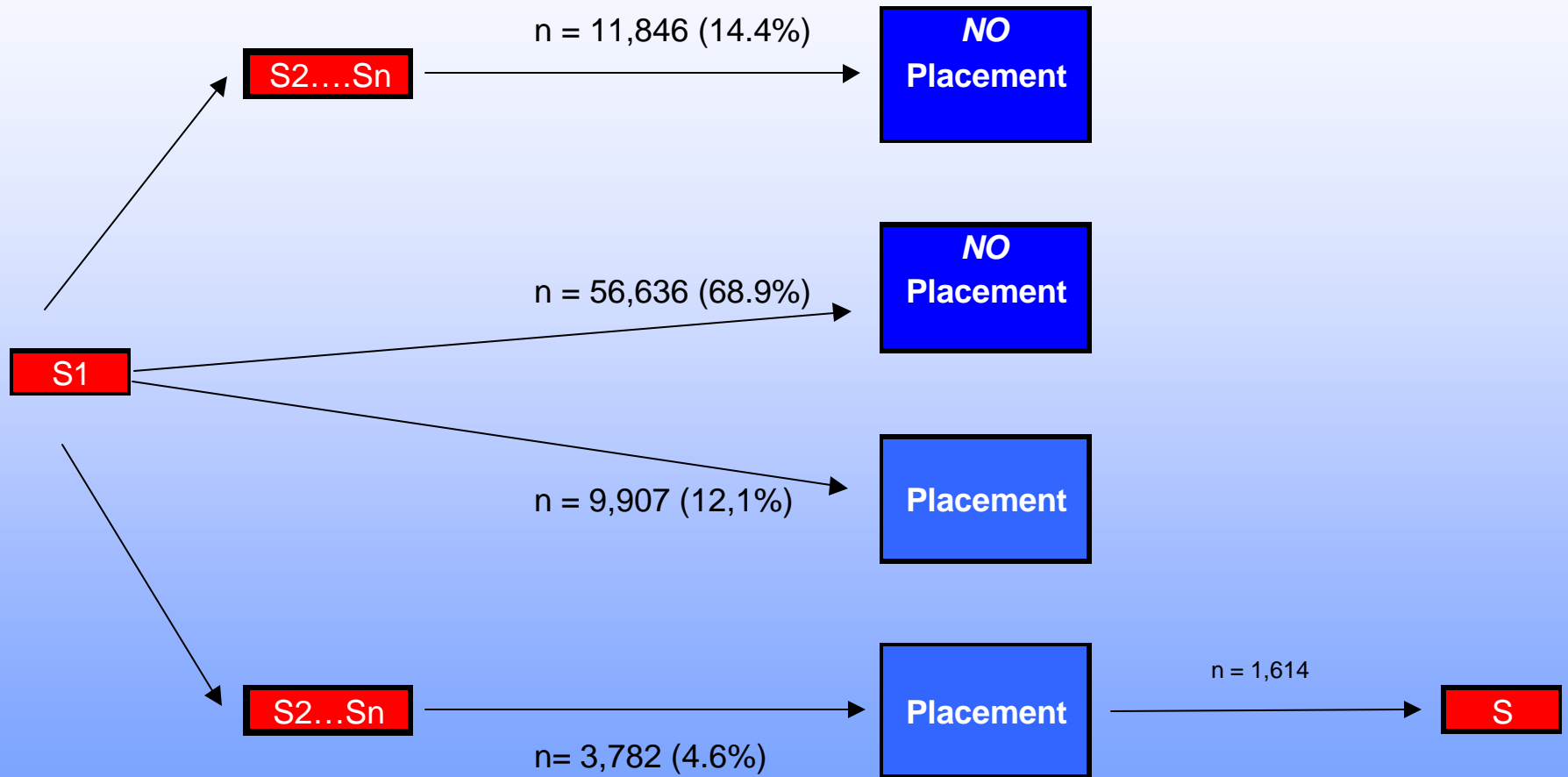
Sample

- 82,171 children with a ***first*** substantiated abuse/neglect report
 - 13,689 children placed in out-of-home care
 - 9,990 entered placement within 1 year

Data Management Challenges

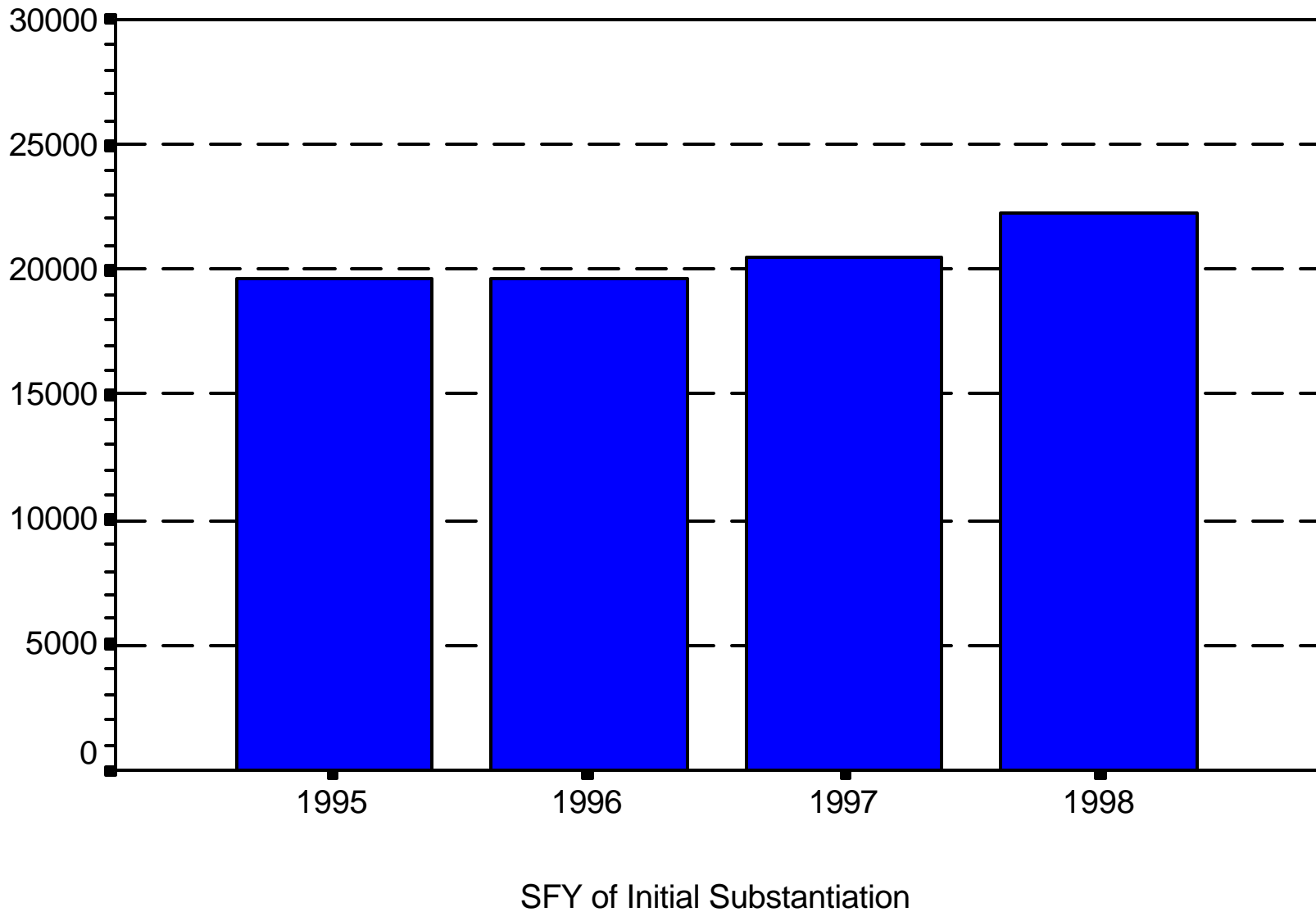
- Converting report data with multiple victims to child-level data with information on multiple reports
- Issues in defining unique incidents of abuse and/or neglect
 - period of time between reports
 - multiple types of abuse on 1 report
 - multiple reports for same incident

Pathways to Placement

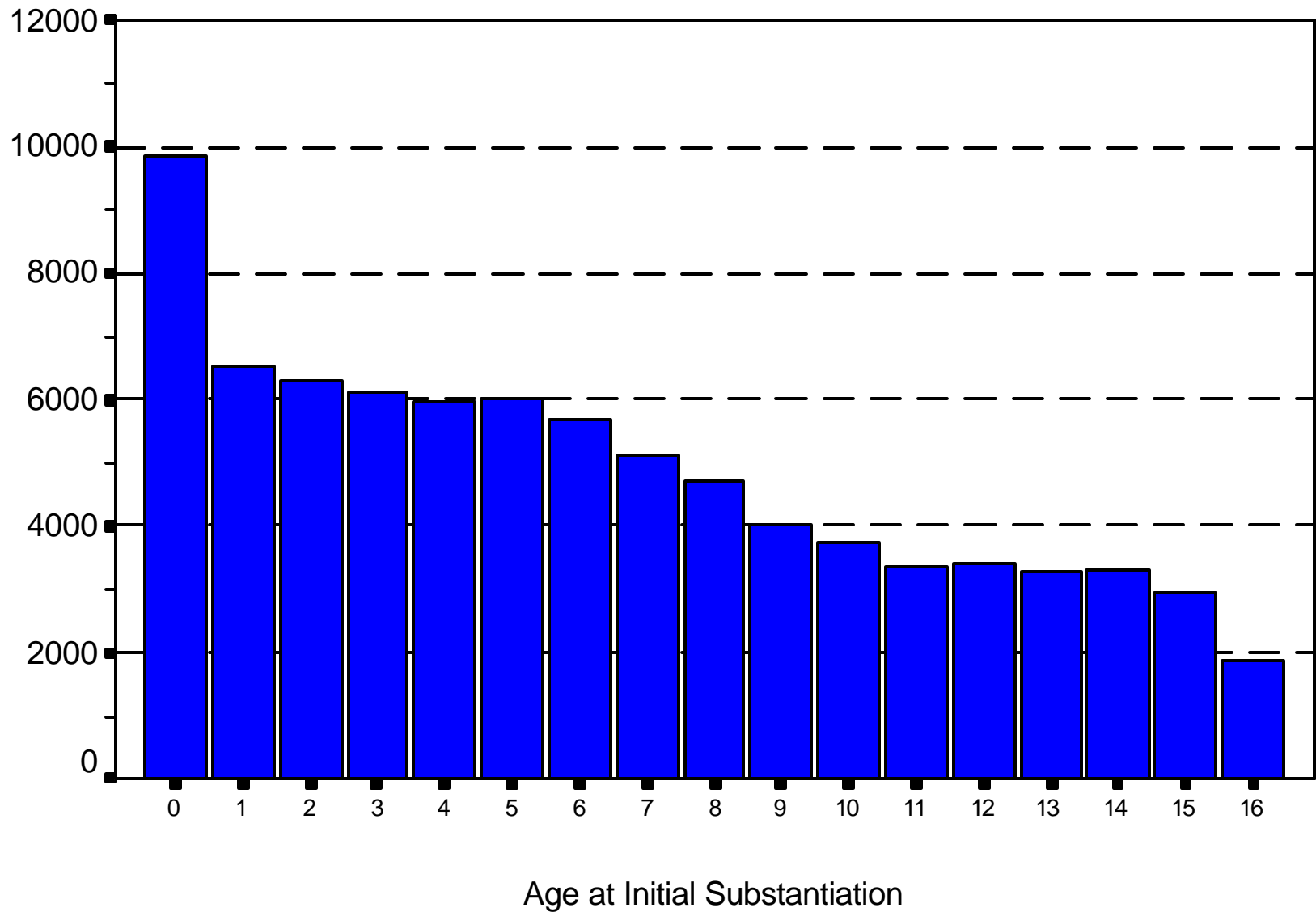


Number of Children with Initial Abuse/Neglect Substantiation

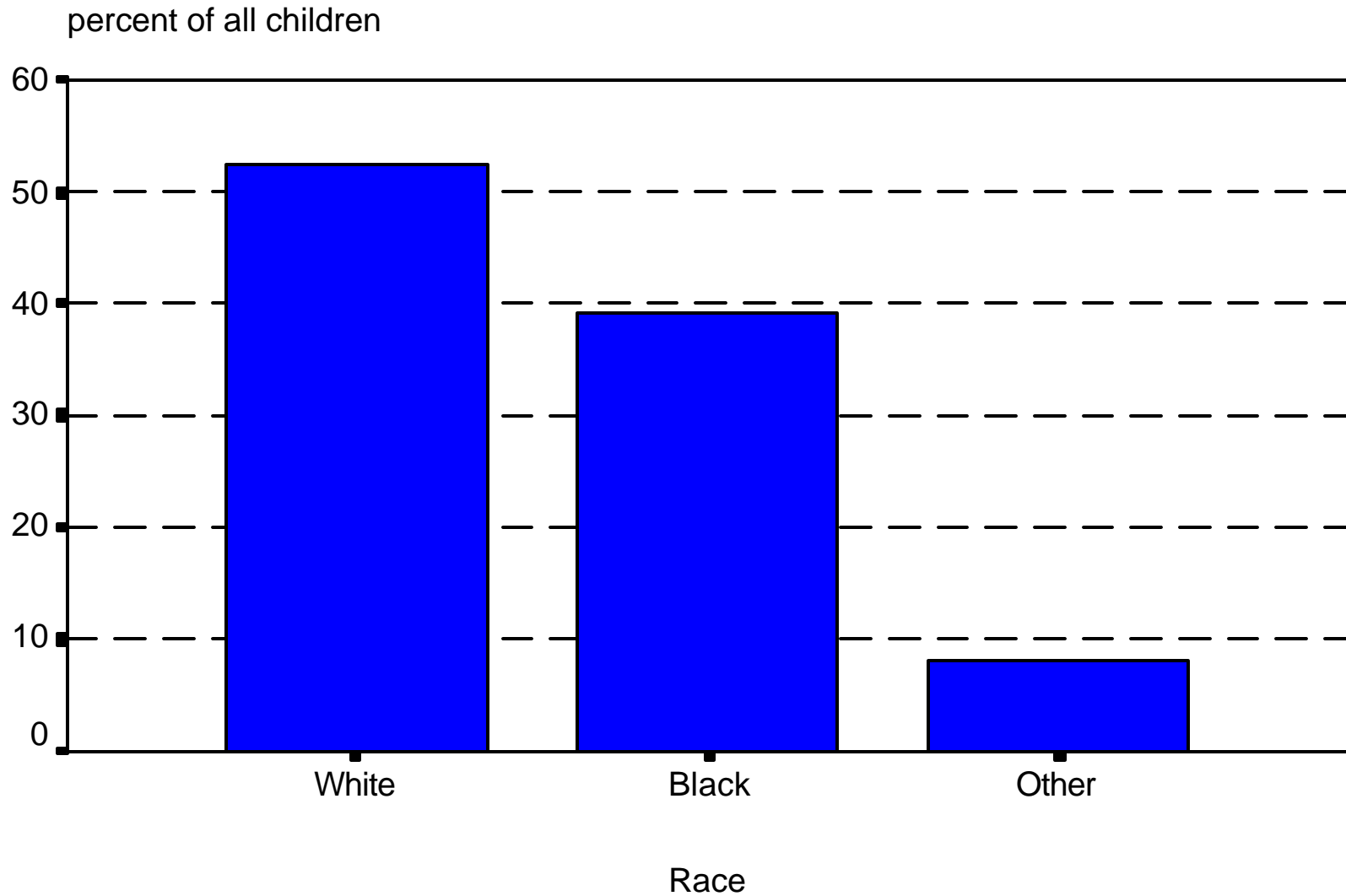
North Carolina, SFY95 - SFY99



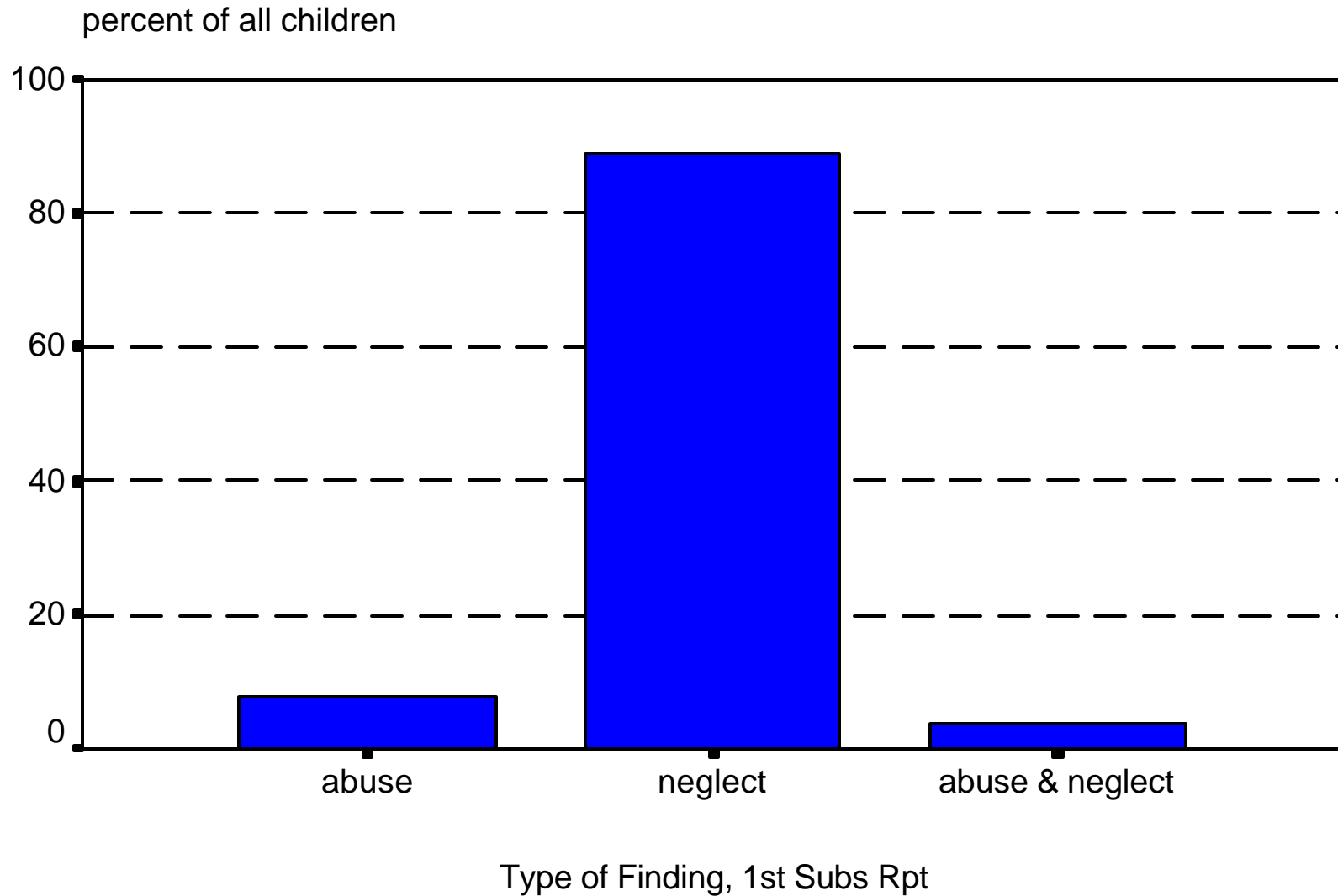
Number of Children with Initial Abuse/Neglect Substantiation by Age, North Carolina, SFY95 - SFY98



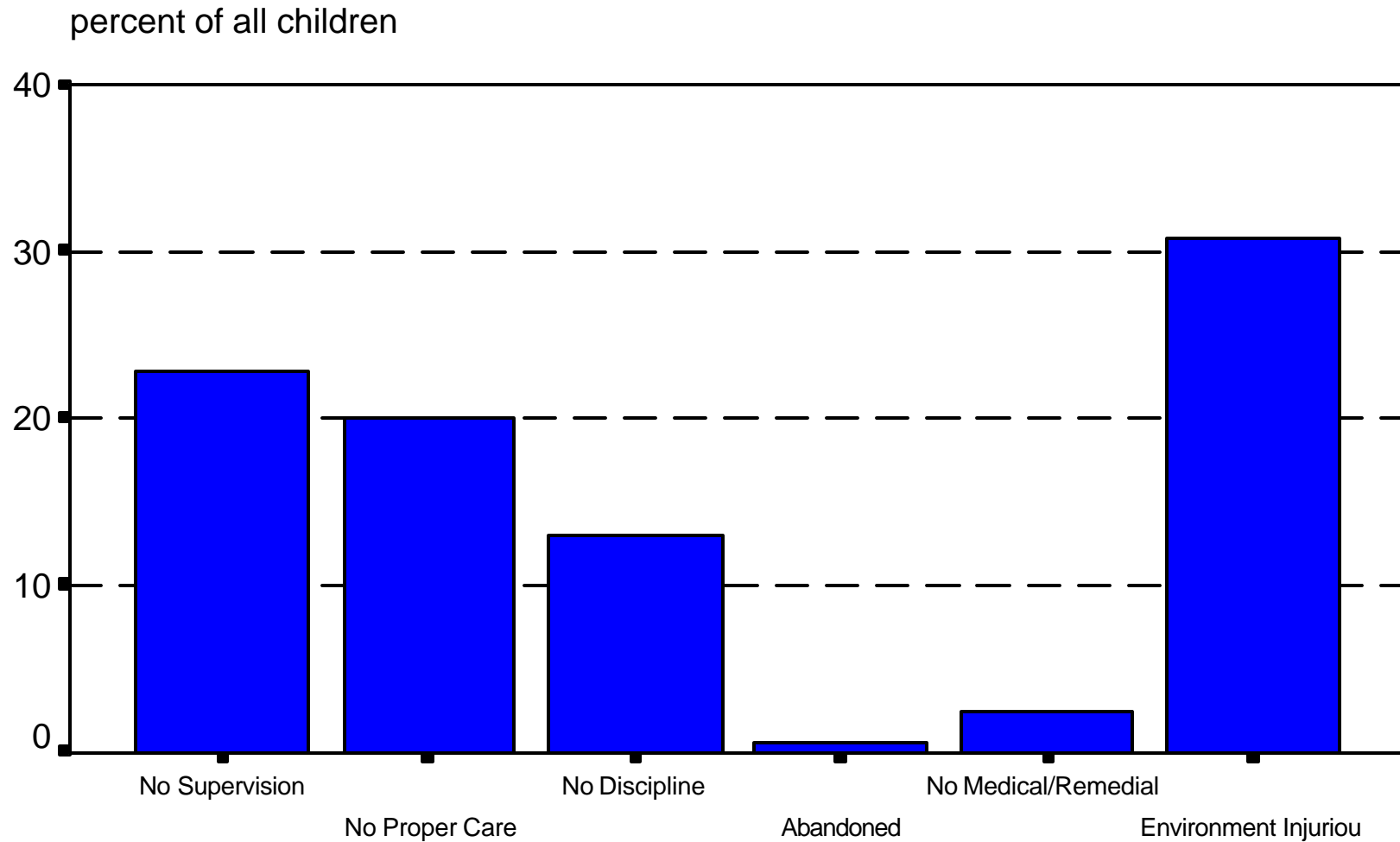
Number of Children with Initial Abuse/Neglect Substantiation by Race, North Carolina, SFY95 - SFY98



Number of Children with Initial Abuse/Neglect Substantiation by Finding, North Carolina, SFY95 - SFY98

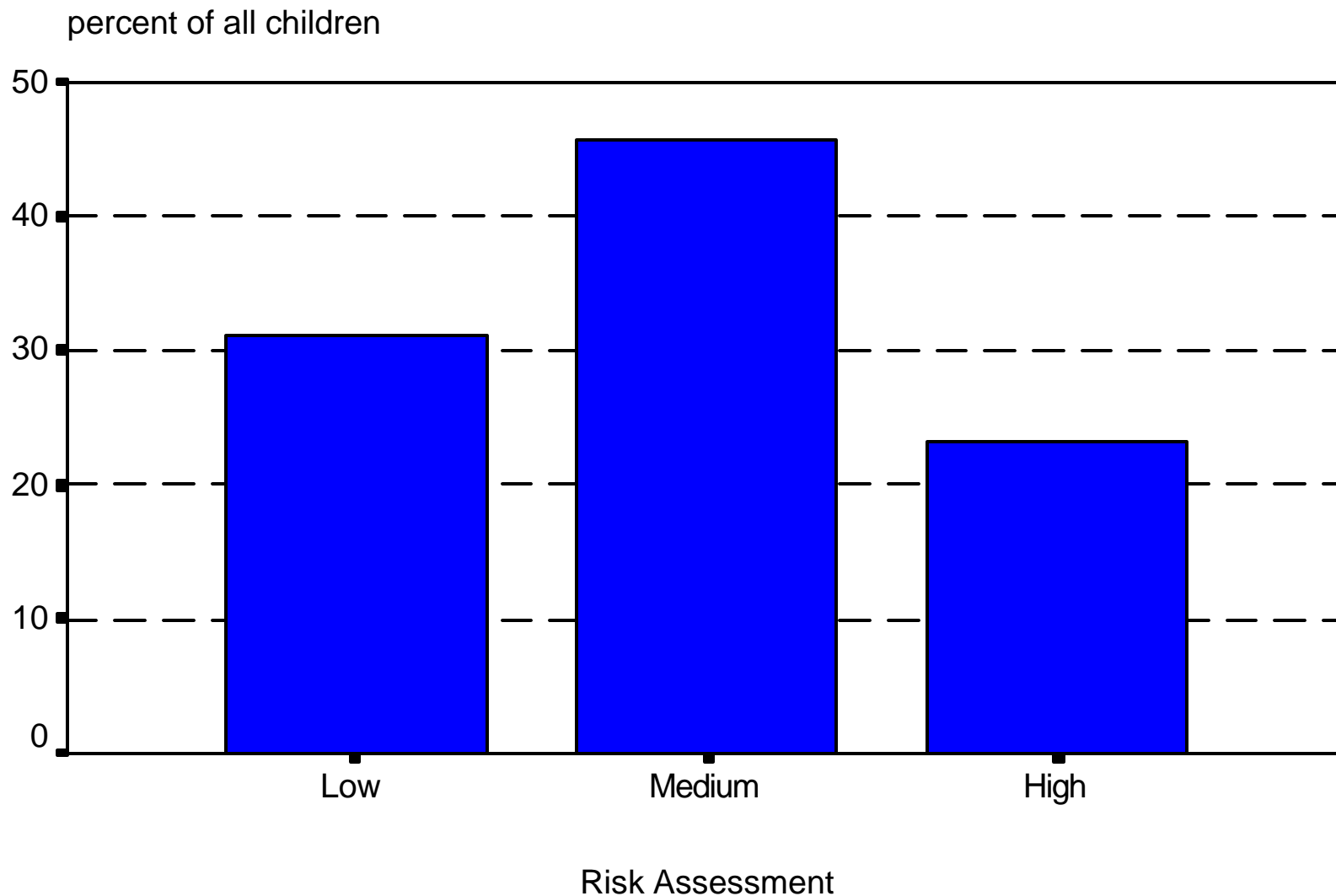


Number of Children with Initial Abuse/Neglect Substantiation by Type of Neglect, North Carolina, SFY95 - SFY98

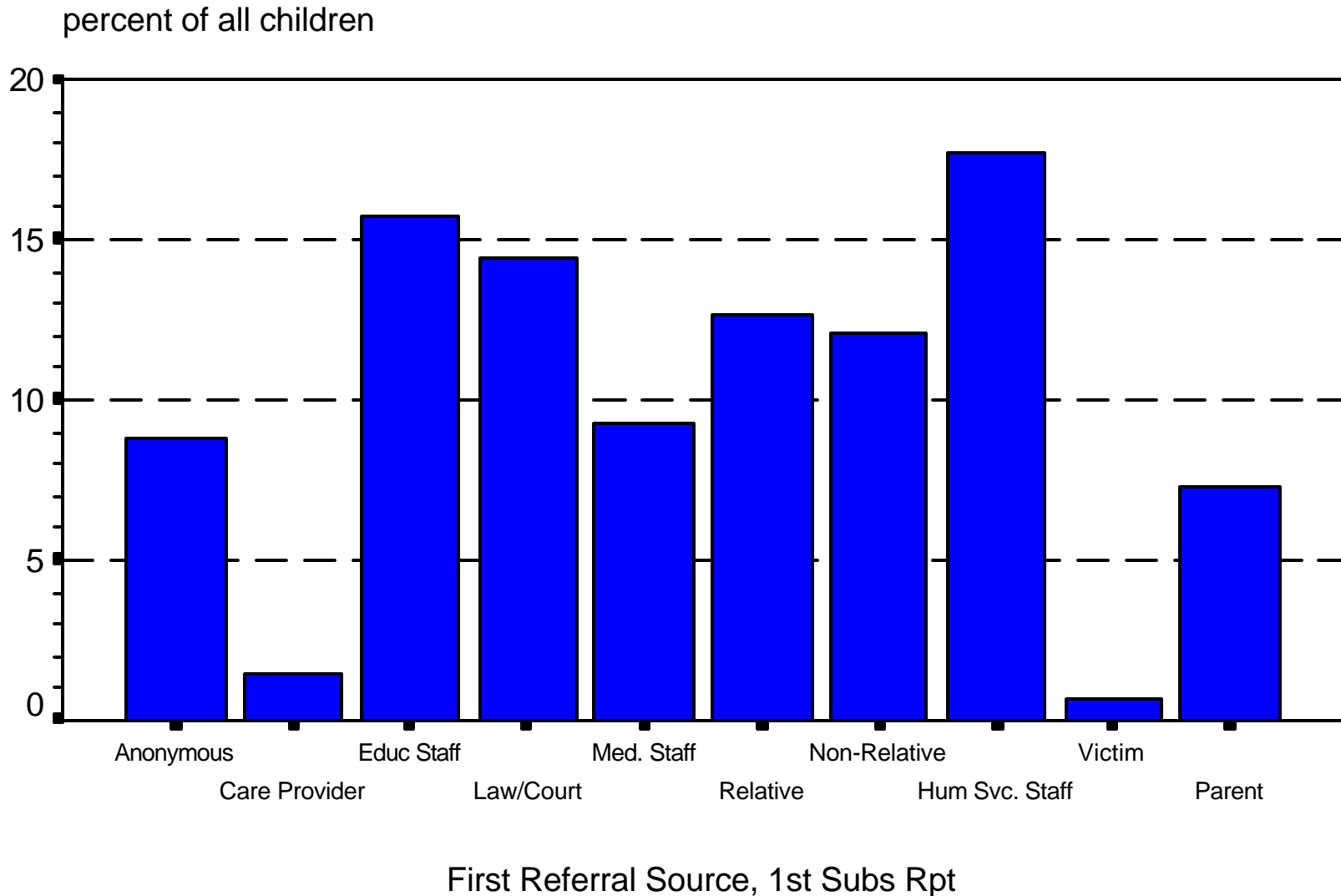


Maltrtment, 1st Subs Rpt

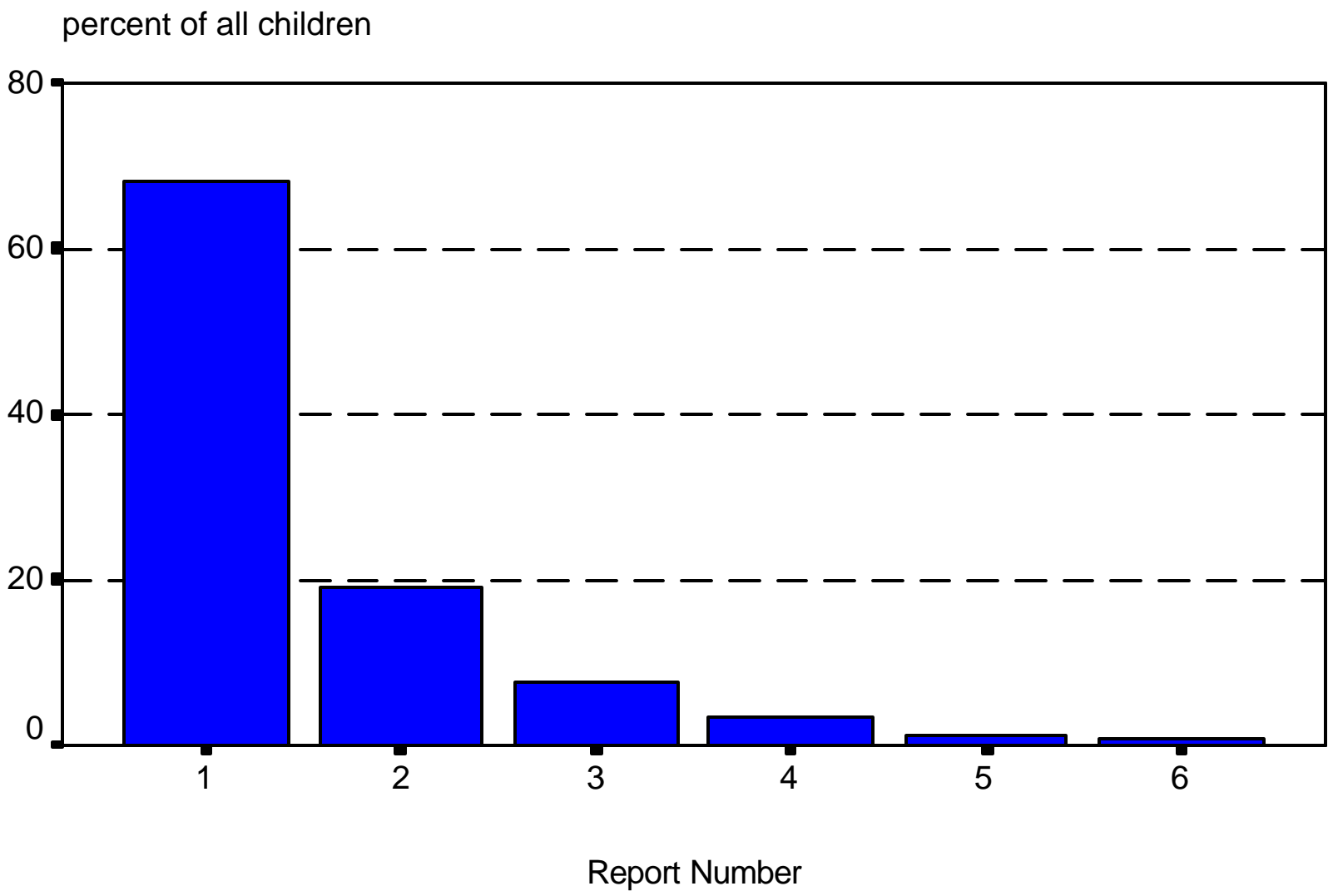
Number of Children with Initial Abuse/Neglect Substantiation by Level of Risk, North Carolina, SFY95 - SFY98



Number of Children with Initial Abuse/Neglect Substantiation by Referral Source, North Carolina, SFY95 - SFY98



Children with Initial Abuse/Neglect Substantiation by Report Number, North Carolina, SFY95 - SFY98

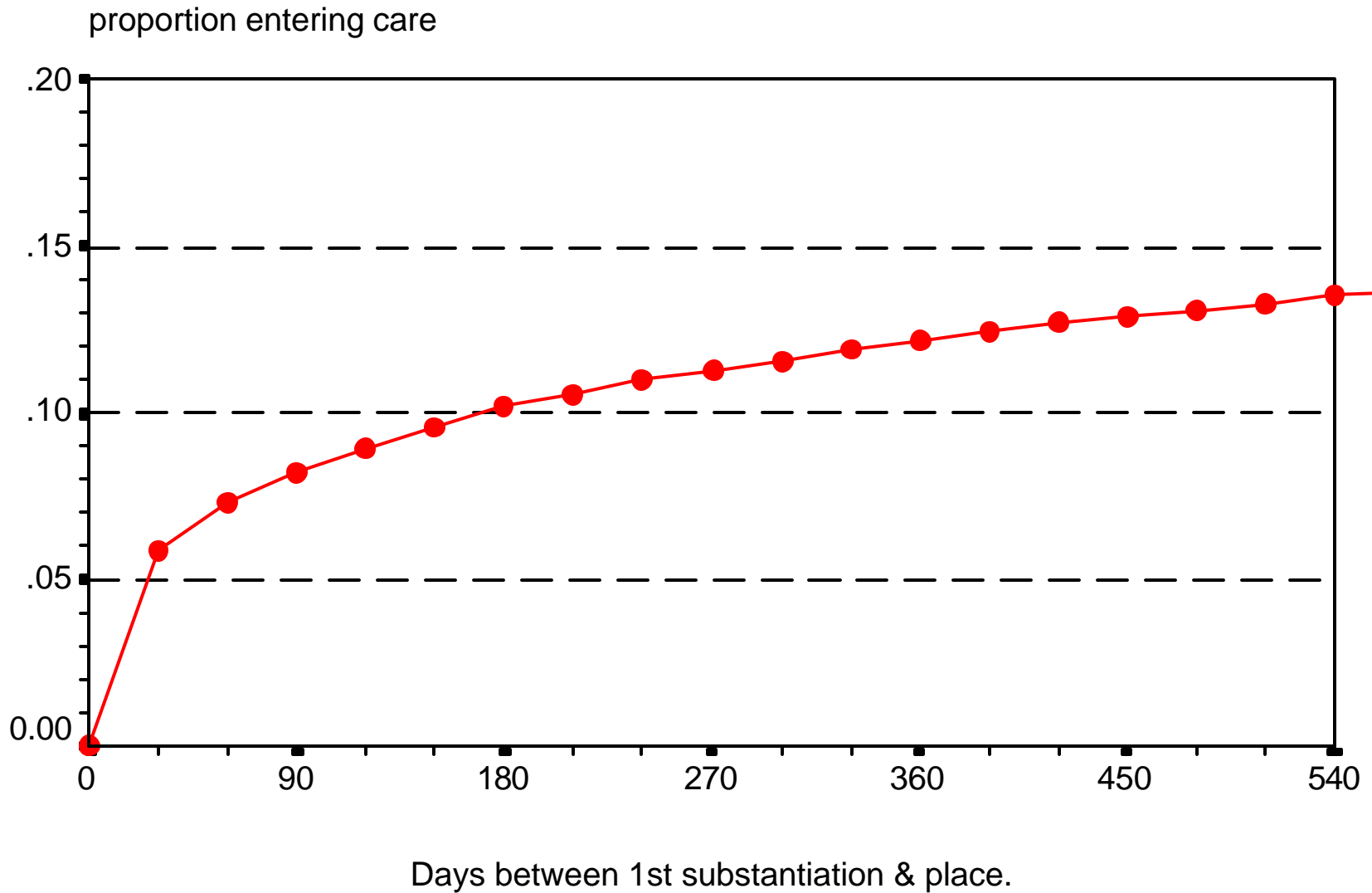


Analytic Strategy

- Survival analysis estimates the cumulative probability of entering out-of-home placement at different time points

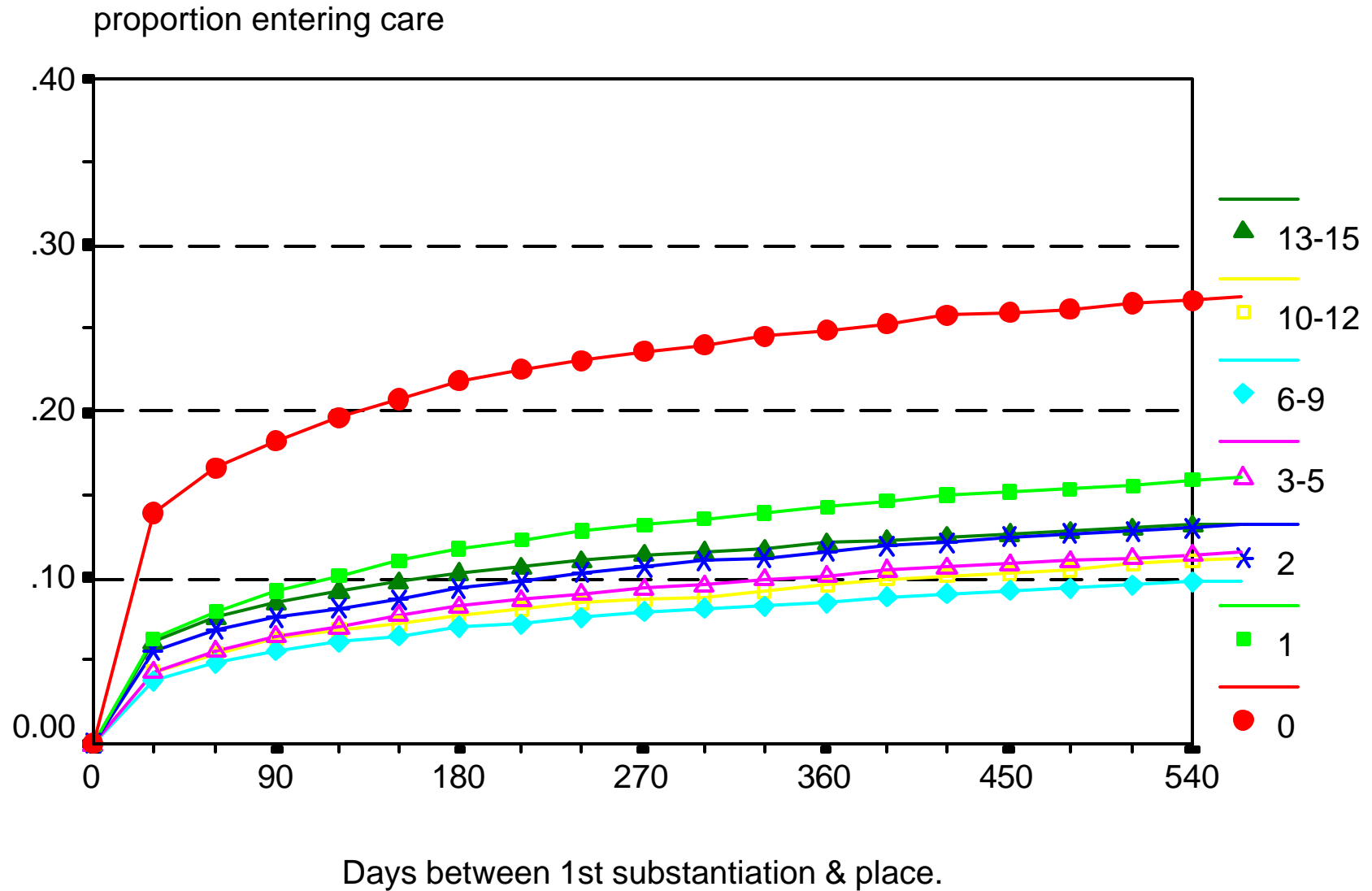
Risk of Placement following Initial Substantiation

North Carolina, SFY95 - SFY98



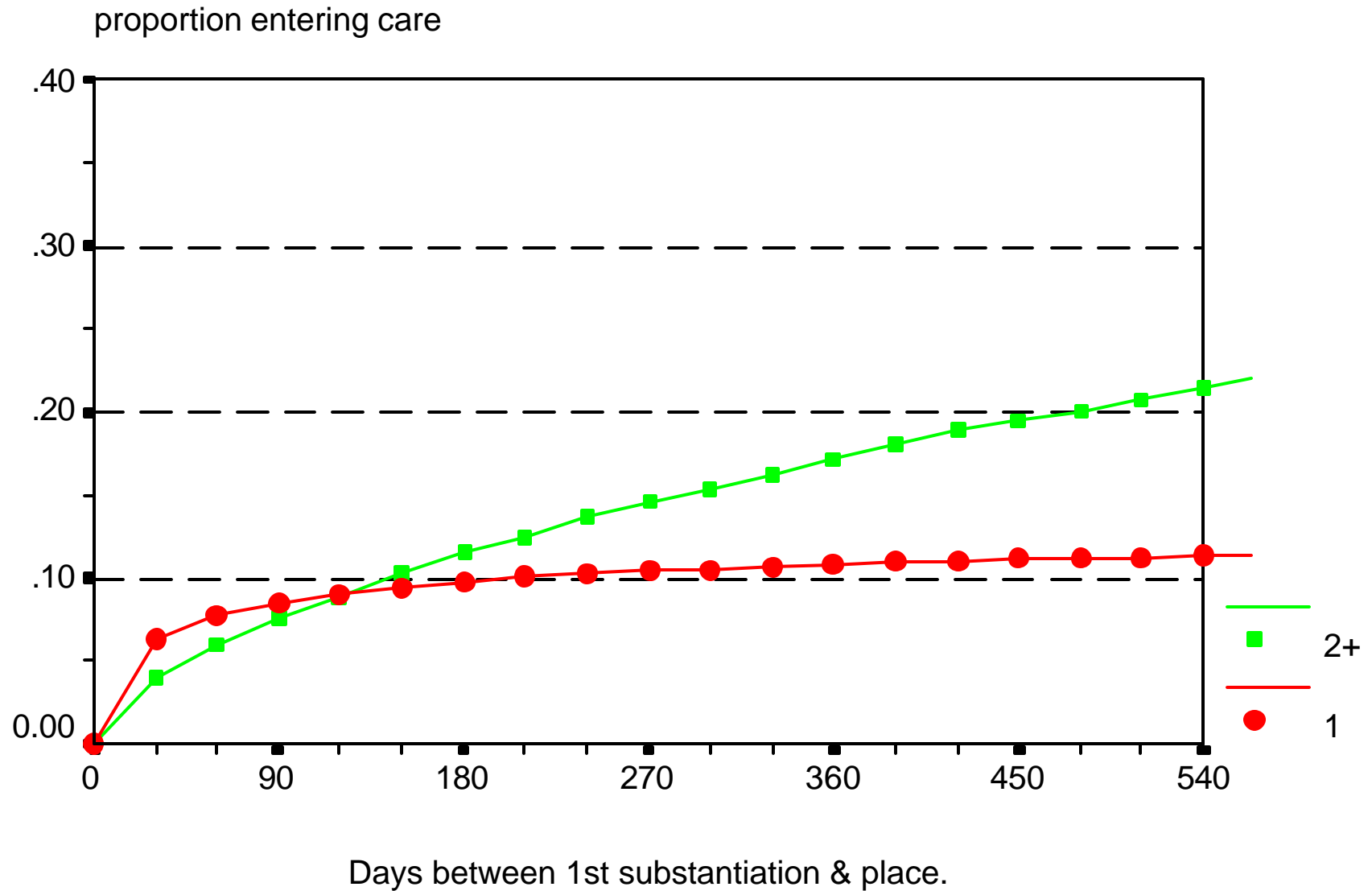
Risk of Placement following Initial Substantiation

by Age, North Carolina, SFY95 - SFY98



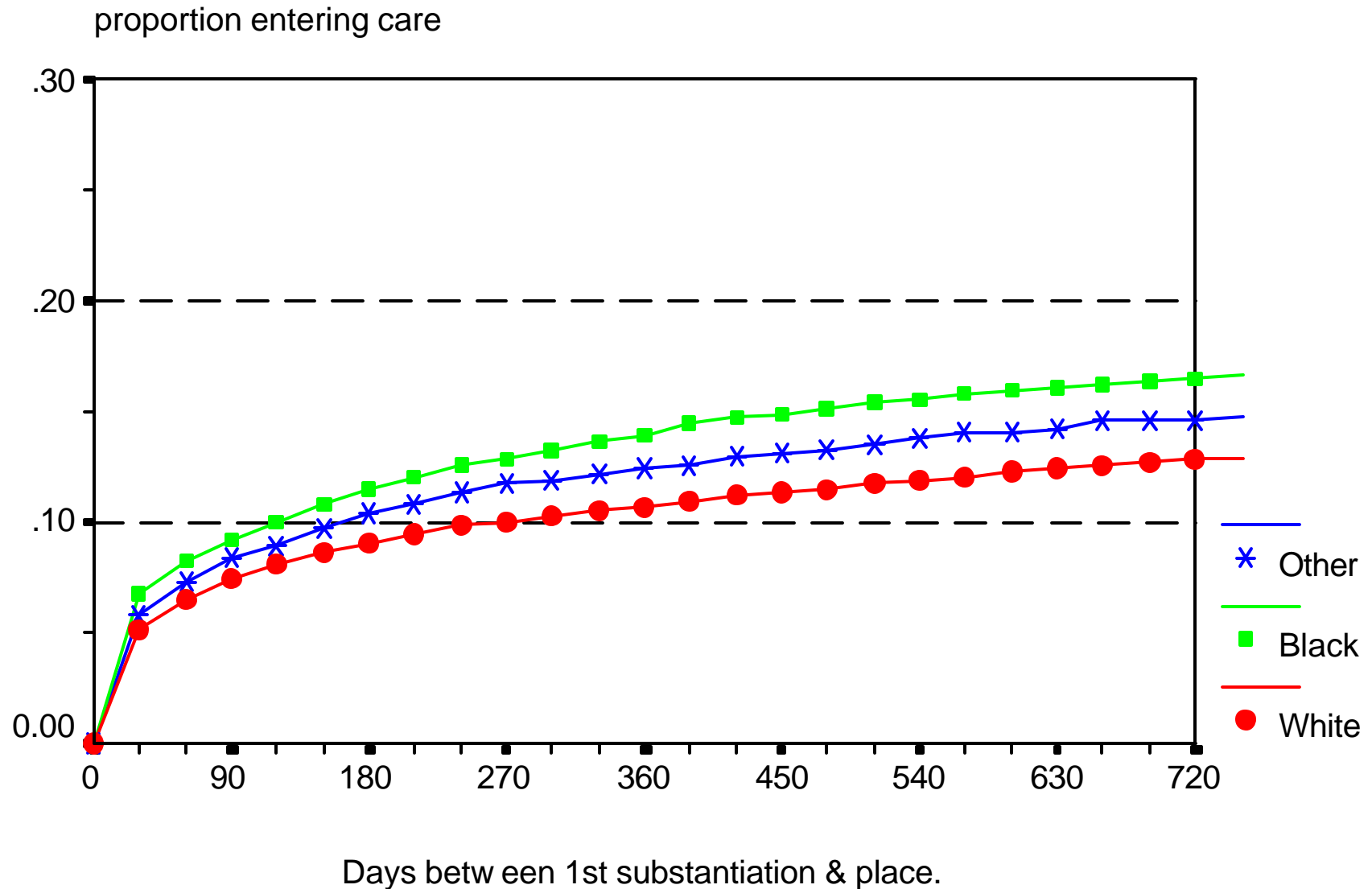
Risk of Placement following Initial Substantiation

by Number of Substantiations, North Carolina, SFY95 - SFY98



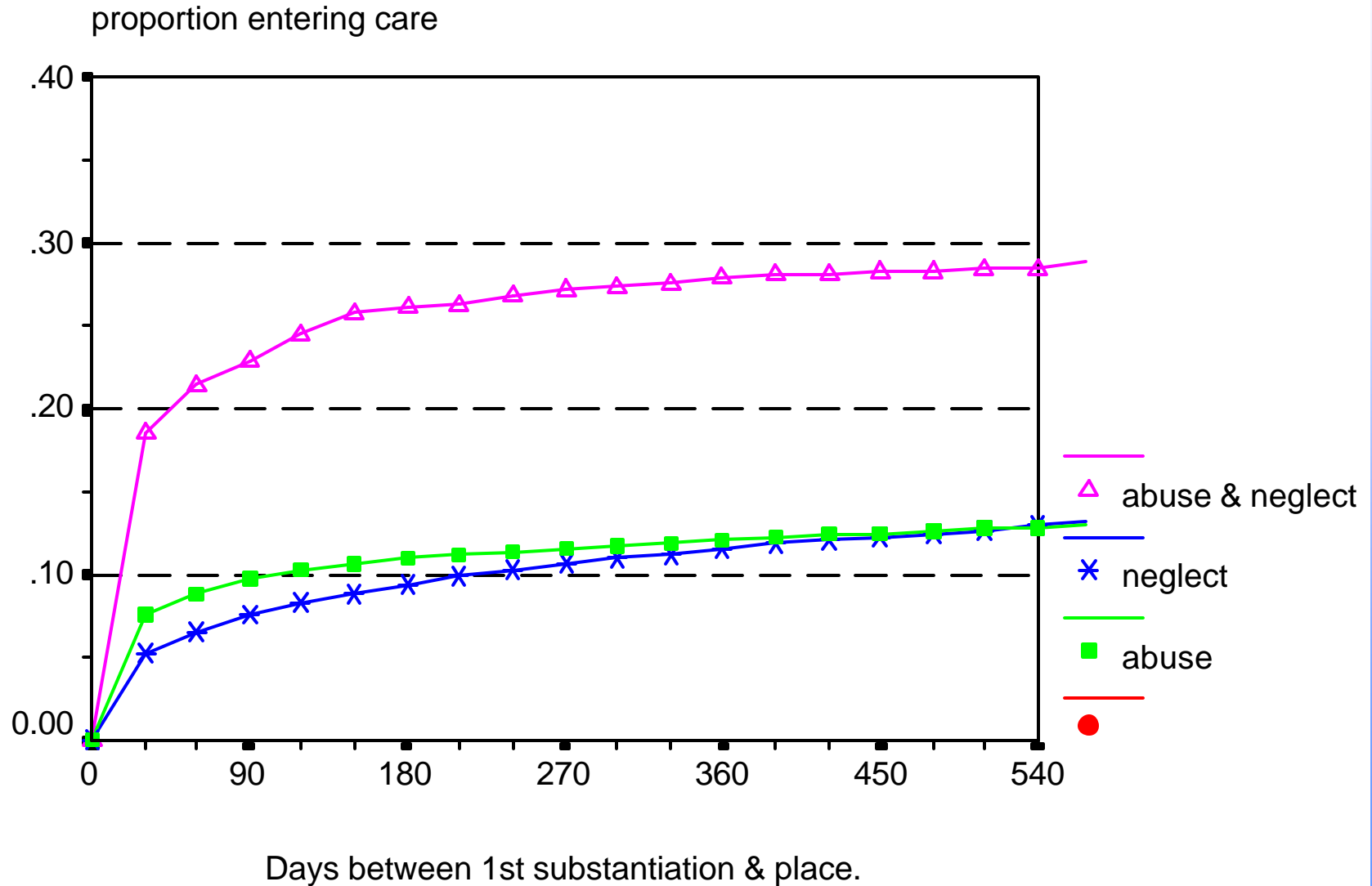
Risk of Placement following Initial Substantiation

by Race, North Carolina, SFY95 - SFY99



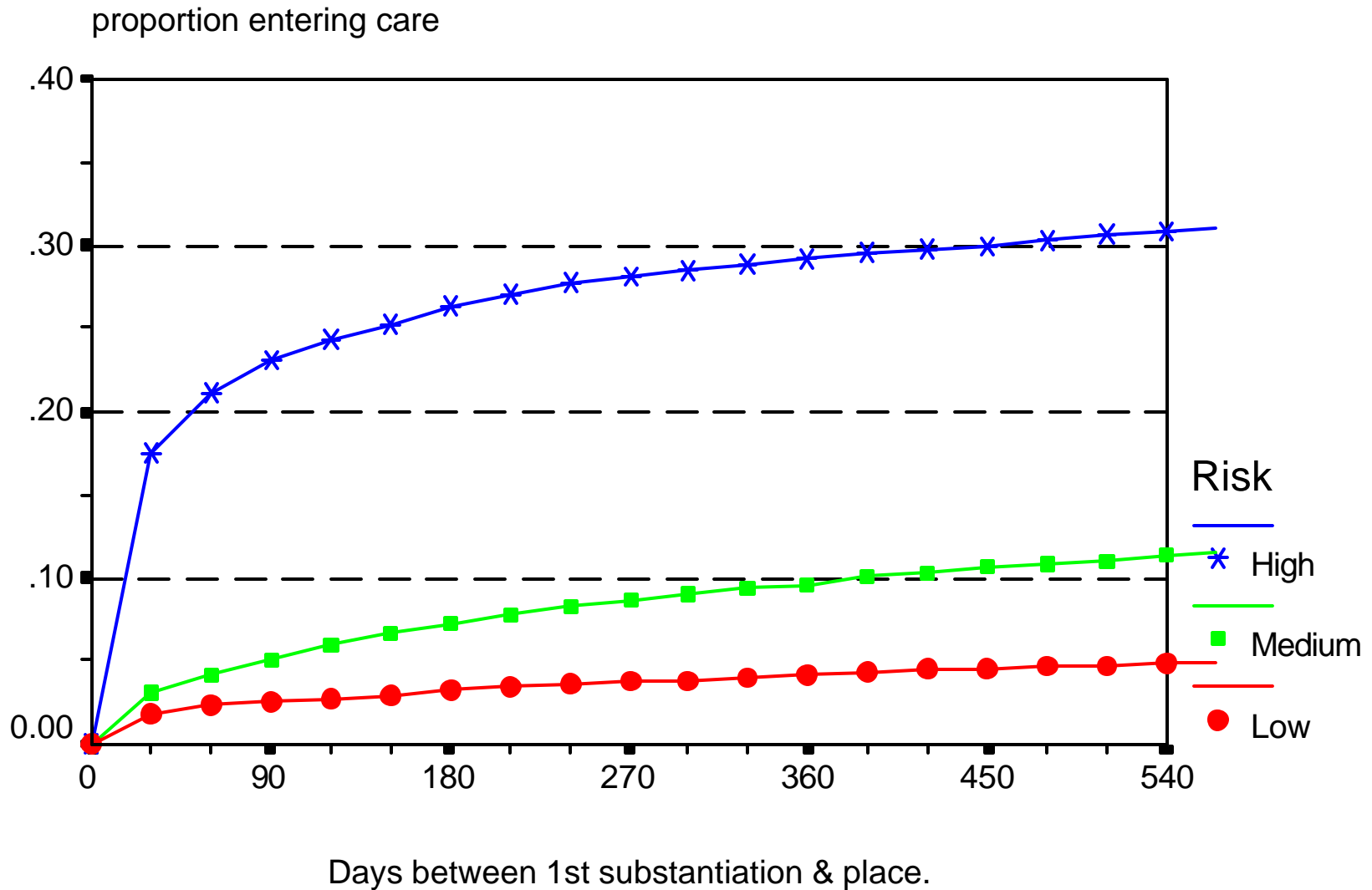
Risk of Placement following Initial Substantiation

by Maltreatment Type, North Carolina, SFY95 - SFY98

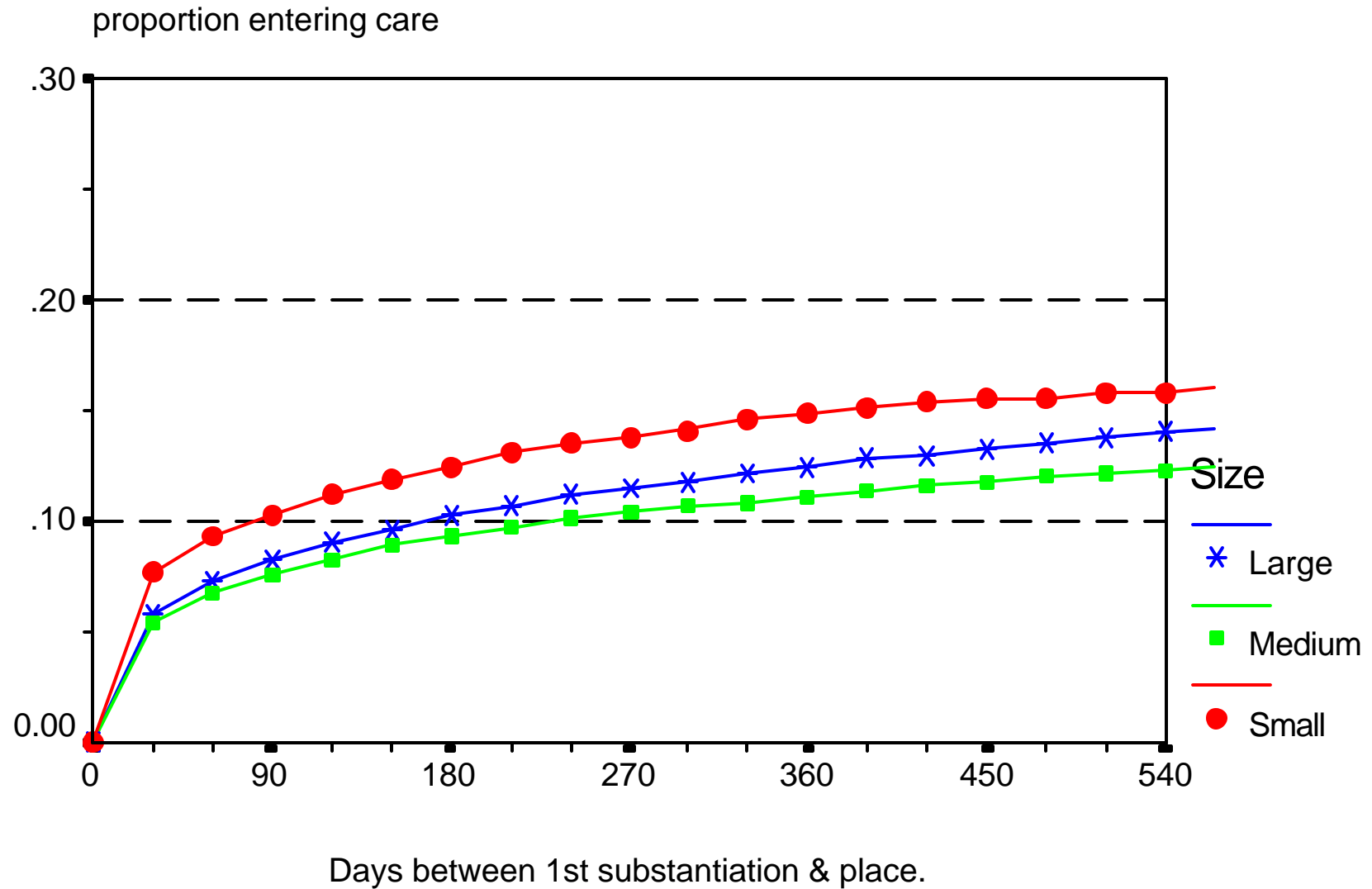


Risk of Placement following Initial Substantiation

by Level of Risk, North Carolina, SFY95 - SFY98



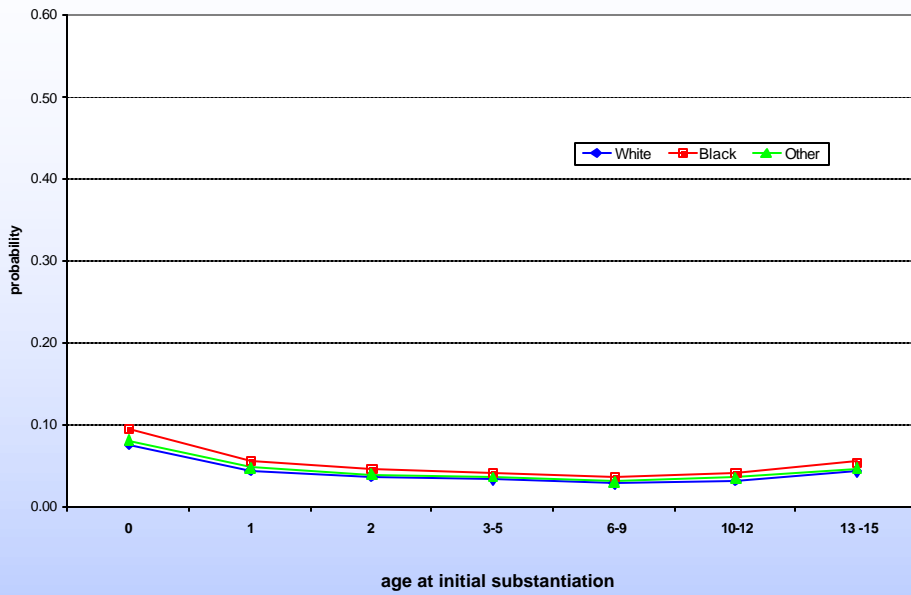
Risk of Placement following Initial Substantiation by County Size, North Carolina, SFY95 - SFY98



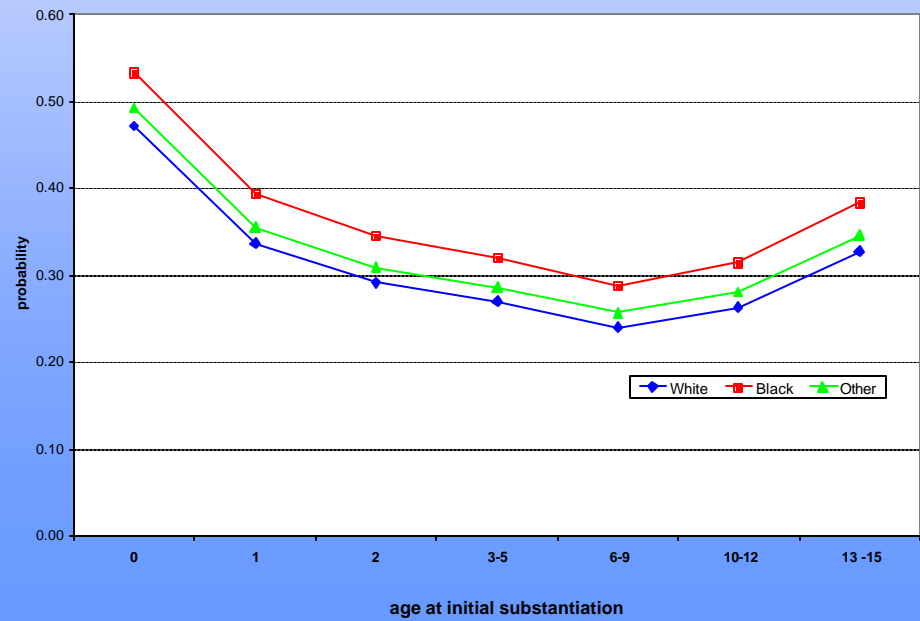
Analytic Strategy

- Logistic regression estimates the probability of entry to care within 1 year of initial substantiation
- Model includes age, race, number of substantiations, level of risk at initial substantiation, maltreatment type, size of county

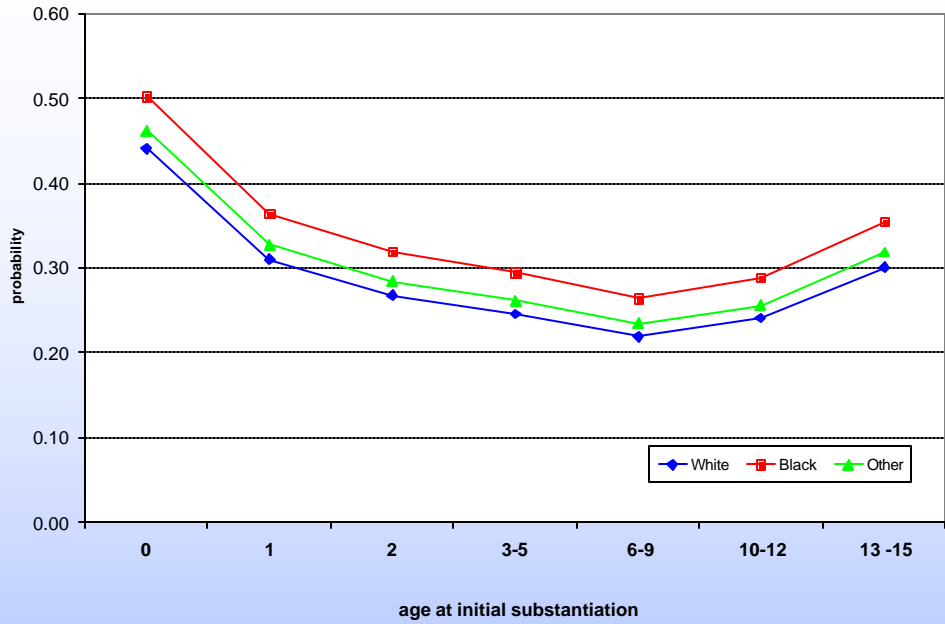
Probability of Entering Placement within 1 year by Age and Race for Abuse Victim in Small County with One Low Risk Substantiation



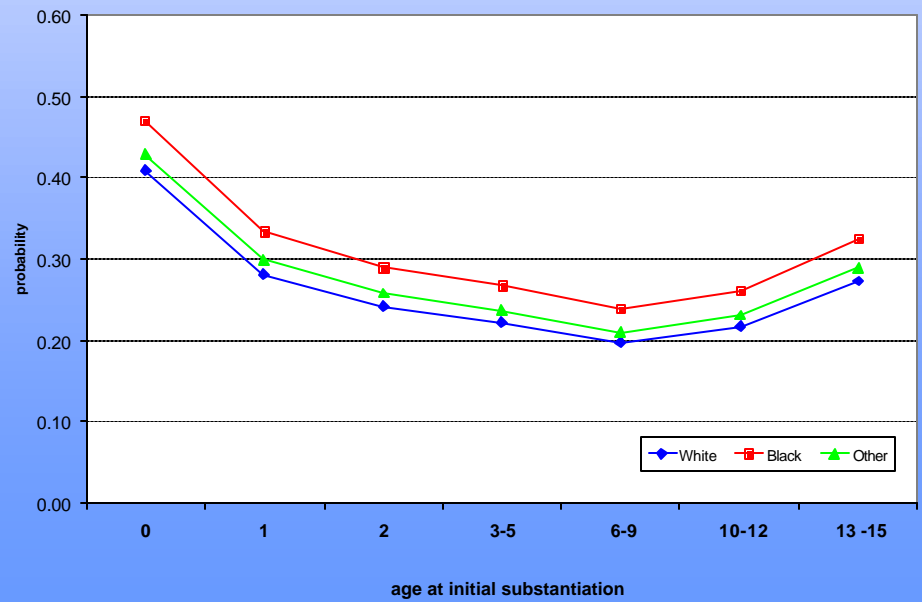
Probability of Entering Placement within 1 year by Age and Race for Abuse Victim in Small County with One High Risk Substantiation



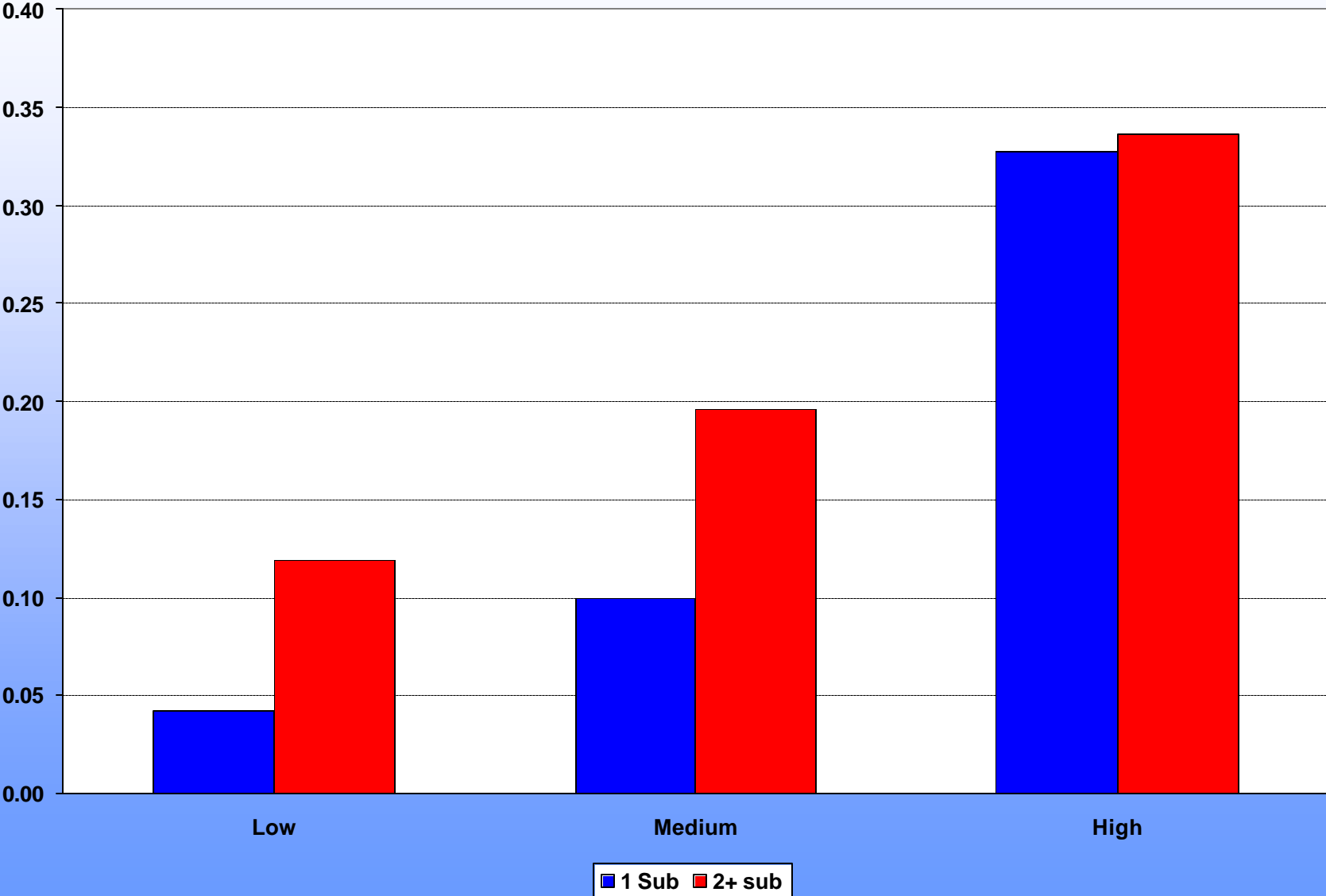
Probability of Entering Placement within 1 year by Age and Race for Neglect Victim in Small County with One High Risk Substantiation



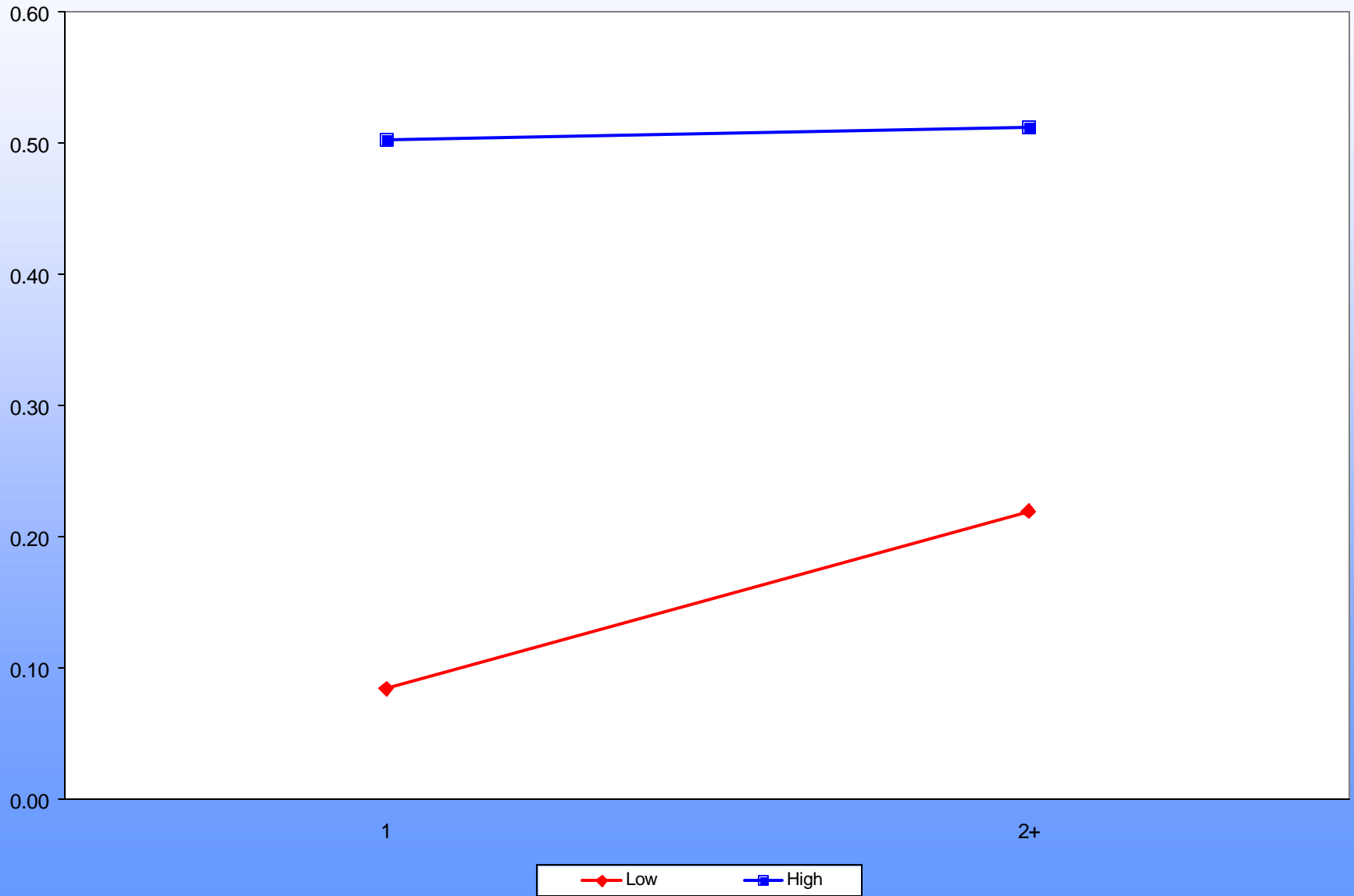
Probability of Entering Placement within 1 year by Age and Race for Neglect Victim in Large County with One High Risk Substantiation



Probability of Entry to Placement by Number of Substantiations and Risk at Initial Substantiation



Probability of Placement for Black Abuse Victims in Small Counties by Risk Level and Number of Substantiations



Analytic Strategy

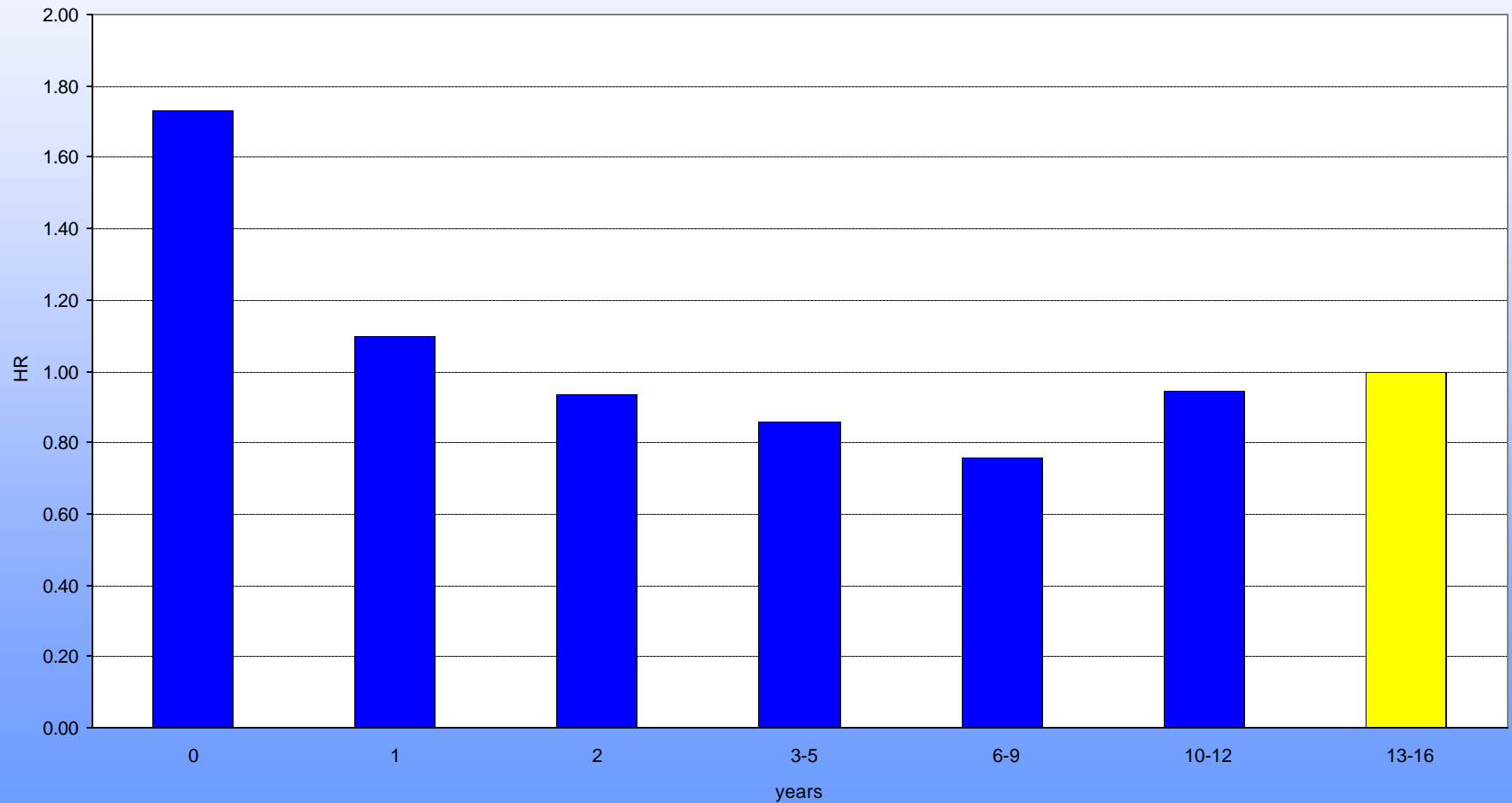
- Cox Proportional Hazards Models estimate comparative risk of placement called Hazard Ratio
- Model includes age, race, number of substantiations, level of risk at initial substantiation, maltreatment type, size of county

Hazard Ratios for Entry to Placement

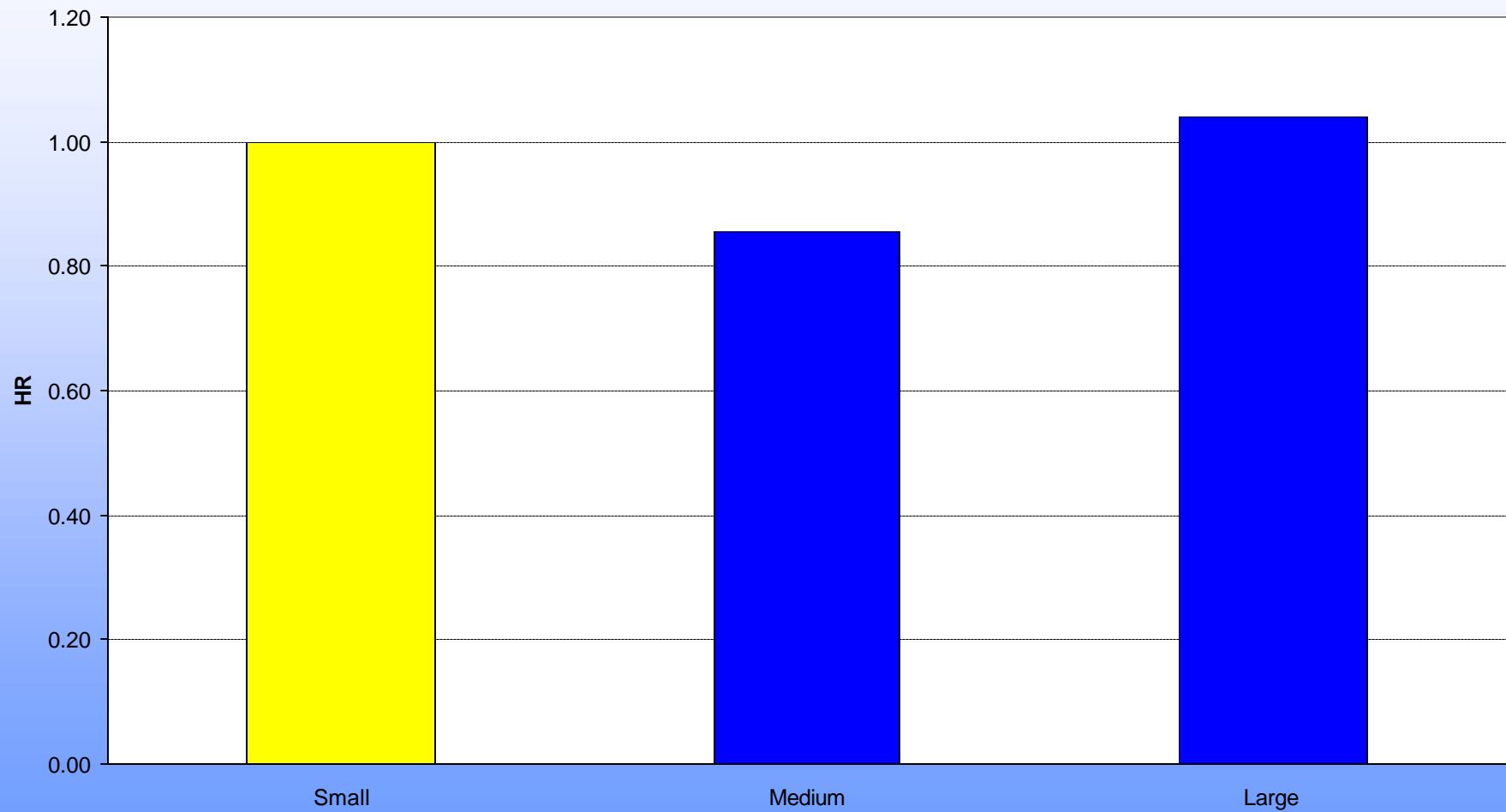
	B	Sig.	Exp(B)	95.0% CI for Exp(B)	
				Lower	Upper
AGE		0.000			
0 years	0.549	0.000	1.732	1.618	1.853
1 year	0.096	0.021	1.100	1.014	1.194
2 years	-0.069	0.123	0.934	0.856	1.019
3 - 5 yeras	-0.151	0.000	0.860	0.803	0.921
6 - 9 years	-0.276	0.000	0.759	0.707	0.814
10 -12 years	-0.059	0.134	0.943	0.873	1.018
SIZE OF COUNTY		0.000			
Medium	-0.155	0.000	0.856	0.809	0.906
Large	0.039	0.178	1.040	0.982	1.102
RACE		0.000			
Black	0.212	0.000	1.237	1.189	1.286
Other	0.075	0.036	1.077	1.005	1.155
MALTREATMENT FINDING		0.000			
Neglect	-0.069	0.079	0.933	0.864	1.008
Abuse & neglect	0.605	0.000	1.831	1.652	2.030
SUBSTANTIATION * RISK		0.000			
1 sub - medium risk	1.014	0.000	2.755	2.516	3.018
1 sub - high risk	2.267	0.000	9.655	8.845	10.539
2+ subs - low	1.976	0.000	7.216	6.501	8.009
2+ subs - medium	2.343	0.000	10.409	10.289	10.529
2+ subs - high	2.709	0.000	15.011	14.892	15.130

Reference groups: white, 13-16 years, 1 substantiation, small county, low risk, abuse

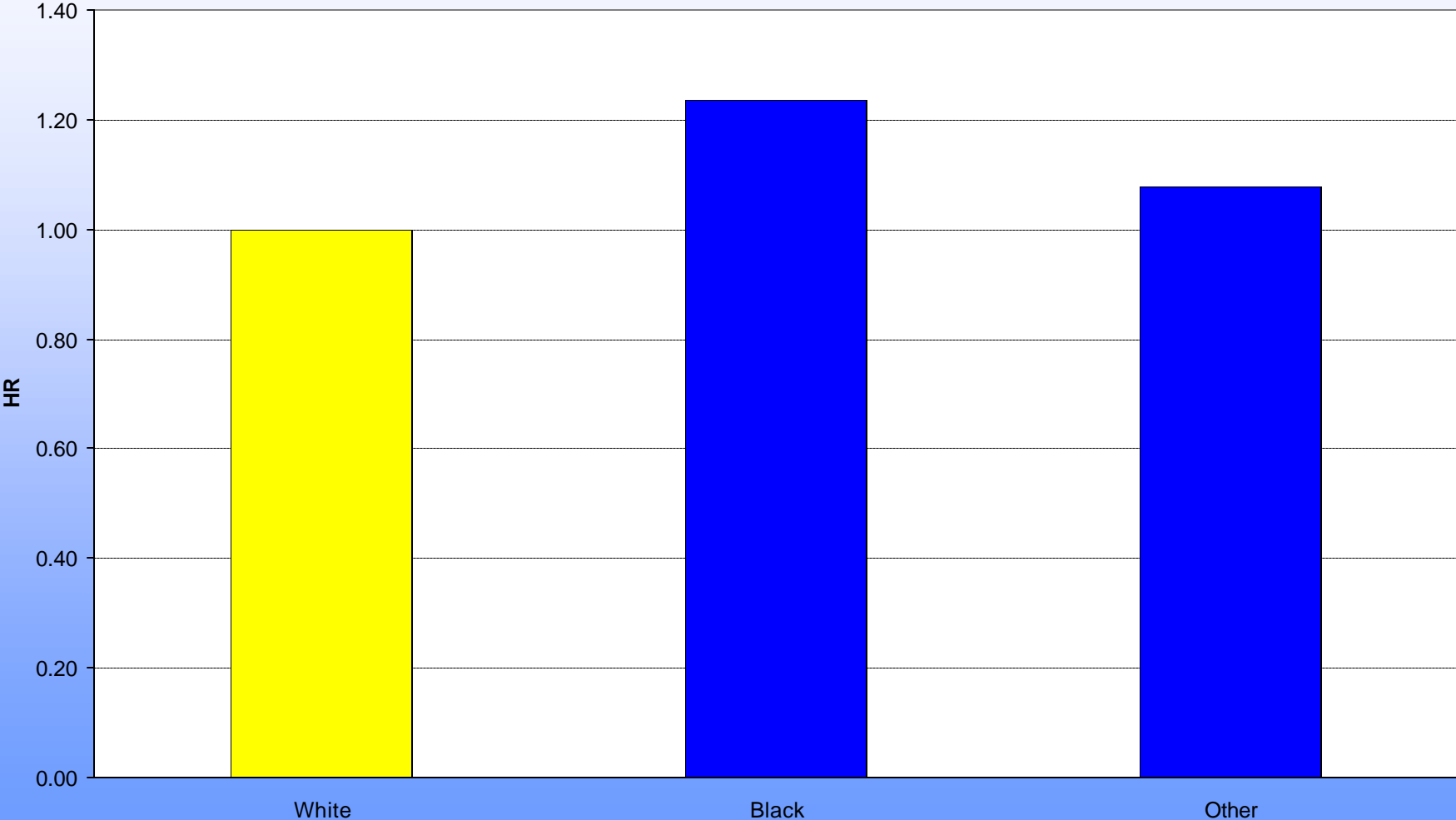
**Comparative Risk of Placement by Age at Substantiation:
PH model controlling for Race, Type of Maltreatment,
Level of Risk, Size of County**



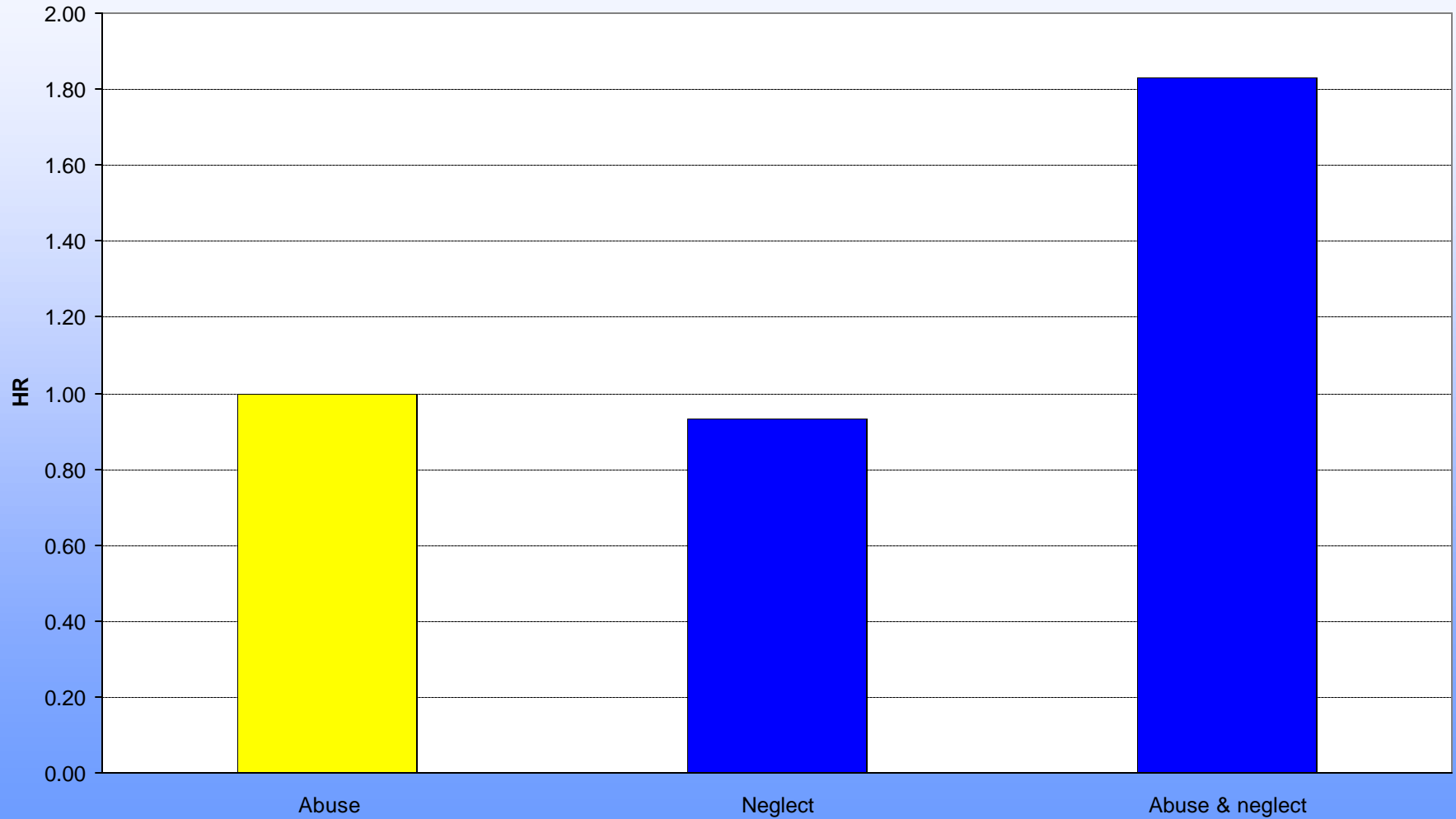
Comparative Risk of Placement by County Size PH Model controlling for Age, Race, Matreatment Type, Risk



**Comparative Risk of Placement by Race:
PH model controlling for Age, Size of County, Risk, Maltreatment Type**



Comparative Risk of Placement by Maltreatment Type Results from PH Model controlling for Age, Race, Risk Level, Size of County



**Risk of Entry to Placement
Results from PH Model**

	B	SE	Sig.	Exp(B)	95.0% CI for Exp(B)	
					Lower	Upper
AGE			0.00			
0 years	0.57	0.05	0.00	1.77	1.60	1.96
1 year	0.10	0.06	0.10	1.11	0.98	1.26
2 years	-0.05	0.07	0.50	0.95	0.83	1.09
3-5 years	-0.15	0.05	0.00	0.86	0.77	0.95
6-9 years	-0.28	0.06	0.00	0.75	0.68	0.84
10-12 years	-0.01	0.06	0.86	0.99	0.88	1.11
RACE			0.00			
Black	0.39	0.03	0.00	1.48	1.38	1.58
Other	0.07	0.06	0.28	1.07	0.95	1.21
MALTREATMENT TTYPE			0.00			
Neglect	-0.01	0.07	0.87	0.99	0.87	1.13
Abuse & Neglect	0.60	0.09	0.00	1.83	1.53	2.18
COUNTY			0.00			
County A	0.01	0.07	0.94	1.01	0.87	1.16
County B	-0.50	0.09	0.00	0.61	0.51	0.72
County C	-0.06	0.06	0.36	0.94	0.84	1.07
County D	-0.30	0.07	0.00	0.74	0.65	0.85
County E	0.52	0.07	0.00	1.68	1.46	1.93
County F	-0.09	0.07	0.20	0.91	0.79	1.05
County G	-0.03	0.06	0.65	0.97	0.86	1.10
County H	-0.50	0.06	0.00	0.60	0.53	0.68
County I	0.42	0.07	0.00	1.52	1.32	1.75

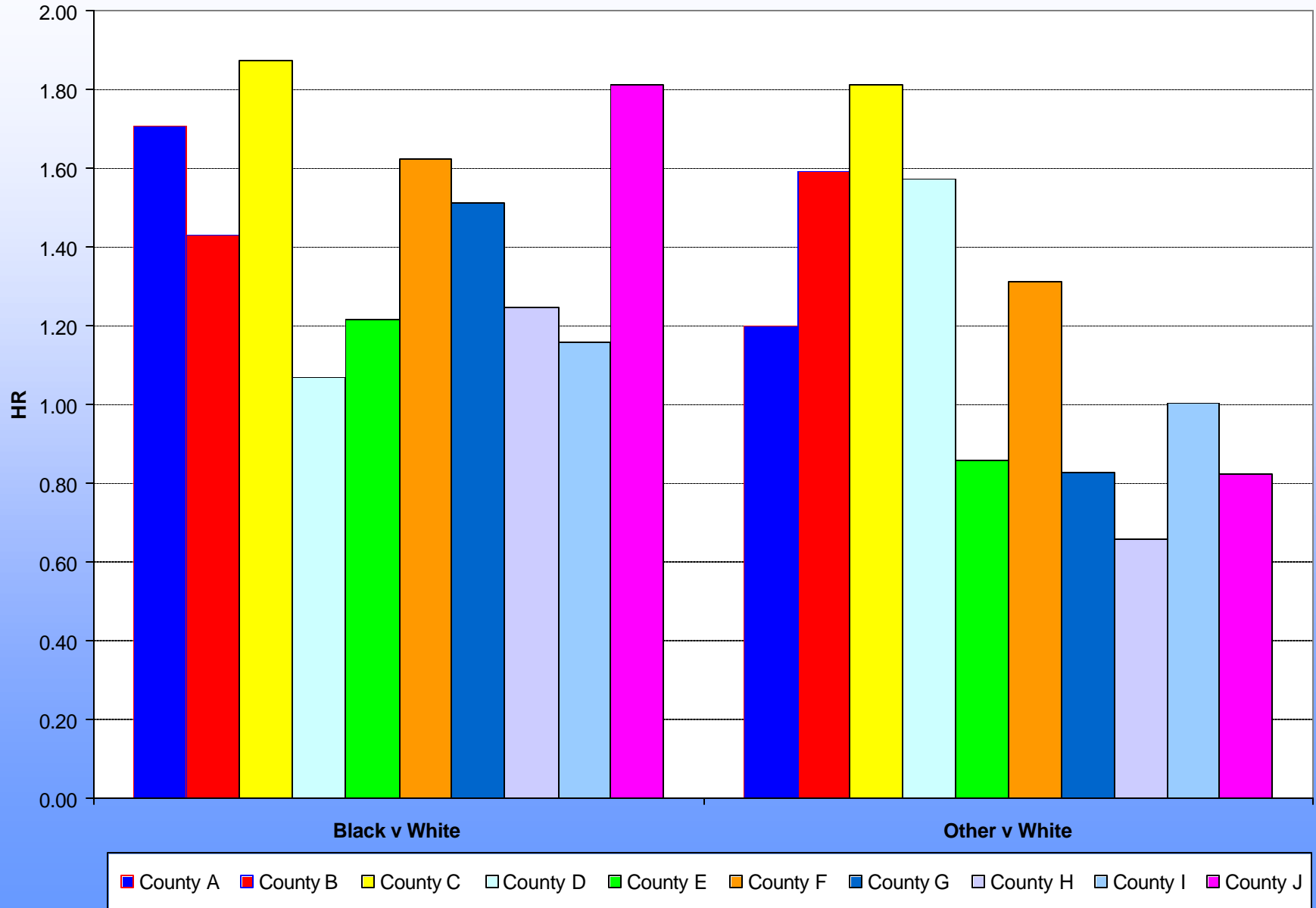
Reference groups: 13-15 years, white, abuse, Wake County

Comparative Risk of Entry to Placement in 8 Largest Counties by Age, Race, and Maltreatment Type

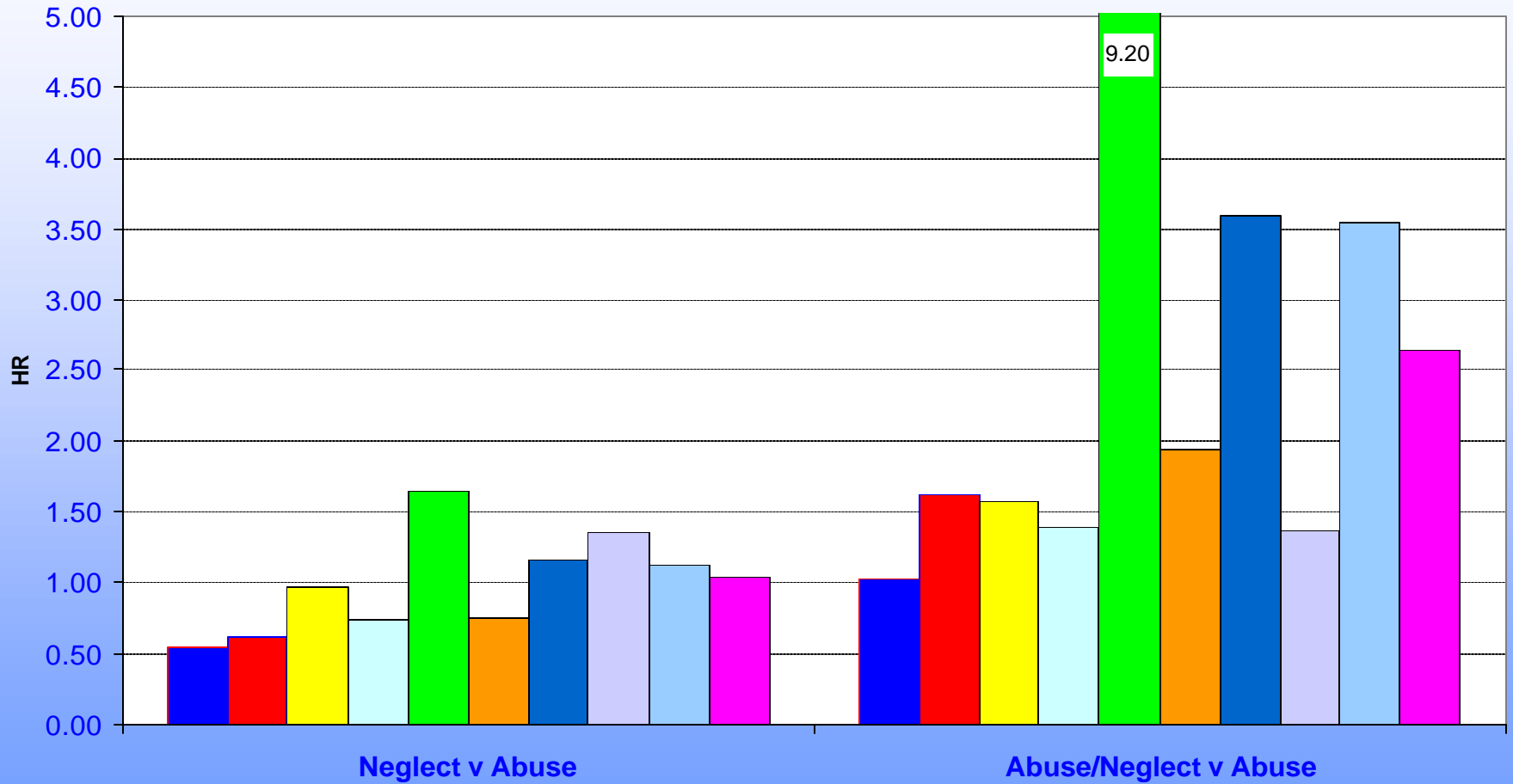
	County A HR	County B HR	County C HR	County D HR	County E HR	County F HR	County G HR	County H HR	County I HR	County J HR
AGE										
0 years	1.85	1.94	1.58	1.66	2.52	1.39	2.05	1.40	2.21	1.80
1 year	1.33	0.88	1.07	0.95	1.59	0.99	1.05	0.85	1.58	1.32
2 years	0.88	0.82	1.16	0.87	1.81	0.70	0.90	0.78	0.98	0.95
3-5 years	0.73	0.70	0.99	0.87	1.79	0.78	0.64	0.62	1.08	1.09
6-9 years	0.58	0.63	0.67	0.63	1.37	0.63	0.78	0.67	0.81	1.17
10-12 years	0.91	1.23	1.01	0.83	1.10	0.90	1.02	0.95	0.83	1.28
RACE										
Black	1.71	1.43	1.88	1.07	1.22	1.62	1.51	1.25	1.16	1.81
Other	1.20	1.59	1.81	1.57	0.86	1.31	0.83	0.66	1.00	0.82
MALTREATMENT TTYPE										
Neglect	0.54	0.63	0.97	0.75	1.65	0.76	1.16	1.35	1.13	1.05
Abuse & Neglect	1.03	1.62	1.57	1.39	9.20	1.94	3.59	1.36	3.55	2.64

Reference group: 13-16 years, White, Abuse.

Comparative Risk of Placement by Race in 10 Large Counties Results from PH model

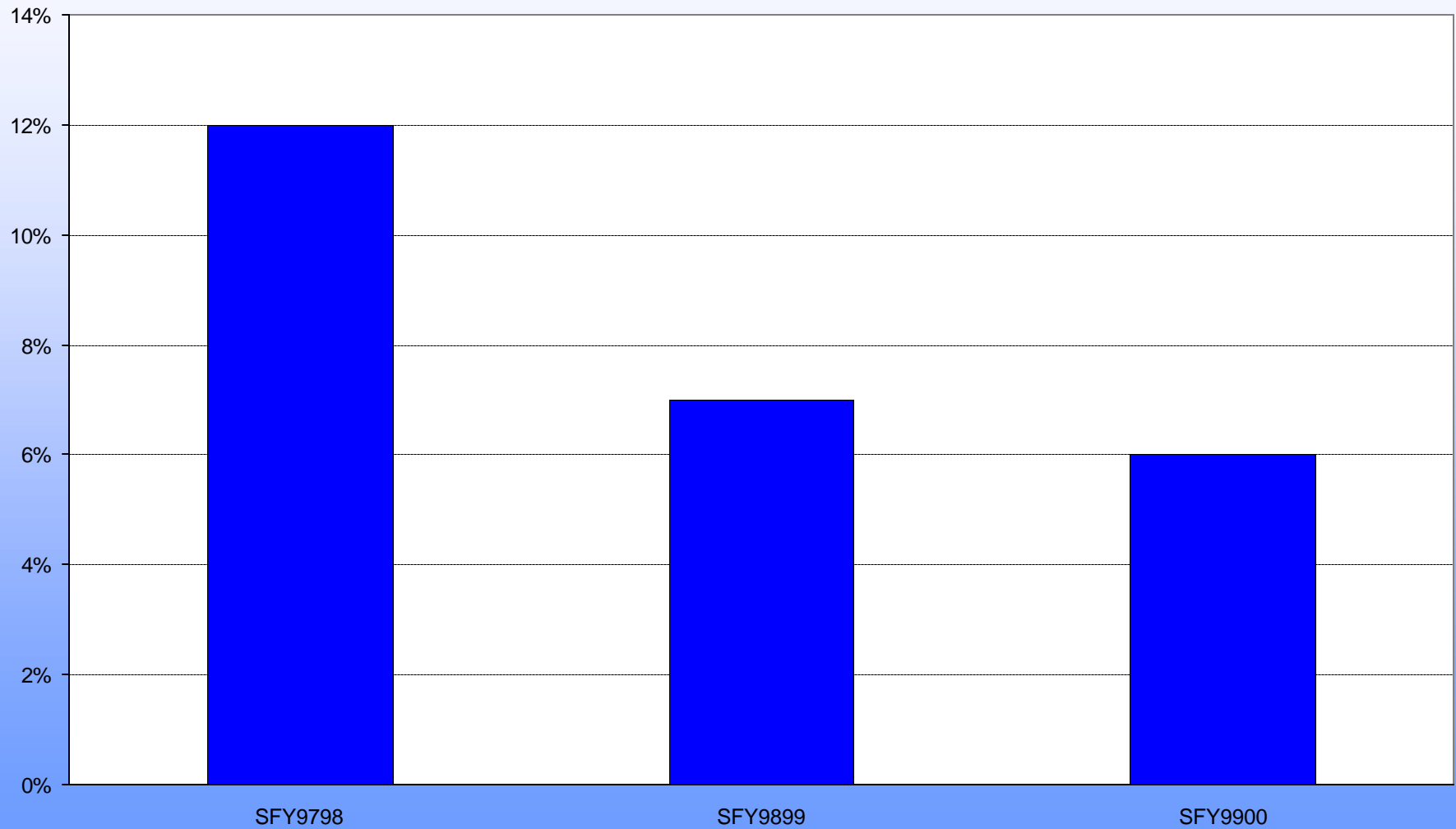


Comparative Risk of Placement by Maltreatment Type in 10 Large Counties Results from PH model



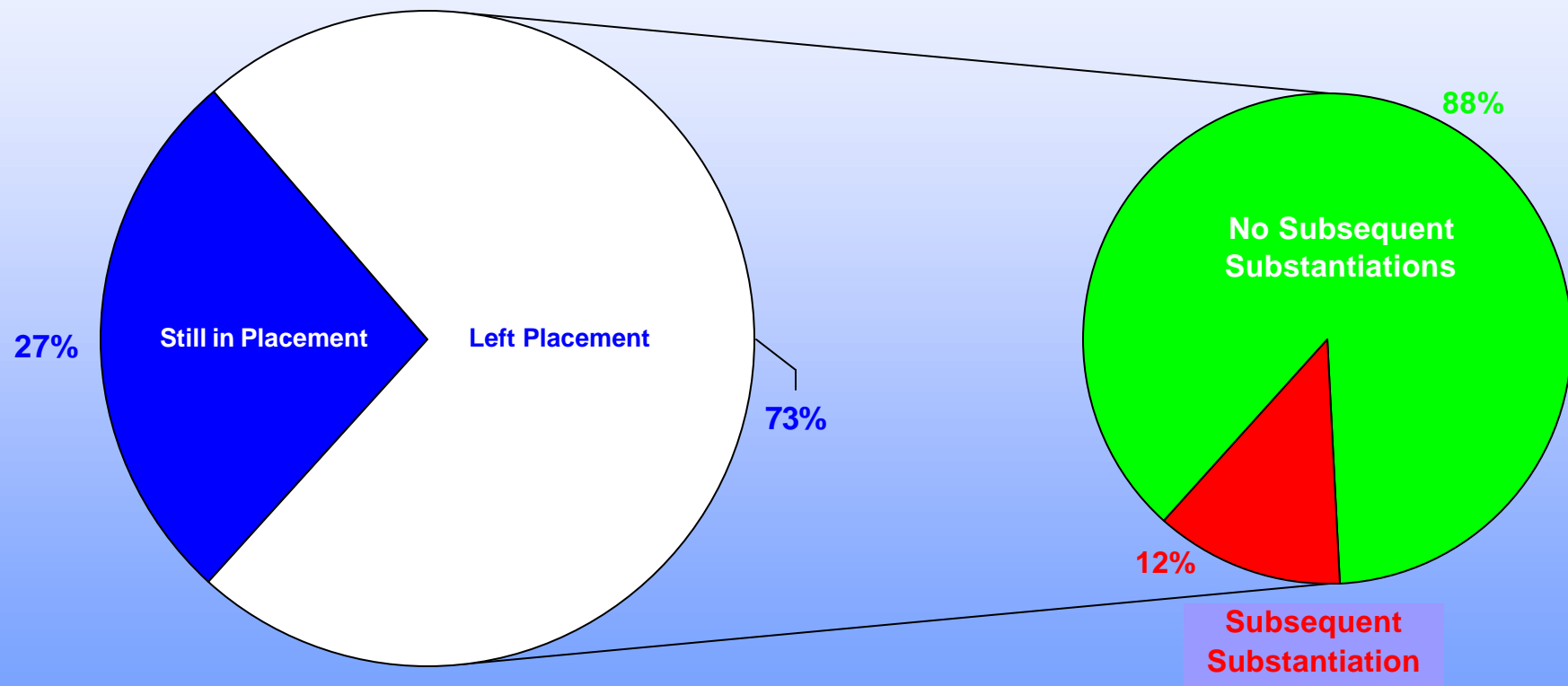
■ County A
 ■ County B
 ■ County C
 ■ County D
 ■ County E
 ■ County F
 ■ County G
 ■ County H
 ■ County I
 ■ County J

Percentage of Children who Experienced Repeat Substantiation between Close of CPS Services and December 2000 by Year of Initial Substantiation*



*Source: NC DHHS, DSS Key Indicators Report, 12/2000

Incidence of Abuse/Neglect Substantiation Following Out-of-Home Placement



Conclusions

- The children most likely to be placed are:
 - Very young
 - Black
 - Victims of abuse *and* neglect
- The risk of placement varies significantly across counties, even controlling for factors such as age, race, and types of maltreatment