

3.0 IMPACT OF WAIVER ACTIVITIES ON OUTCOMES

North Carolina has a state-supervised and county-administered child welfare system. In this system, the 100 counties in the state have considerable responsibility for the safety and well-being of children. Given that counties vary in size, demographic composition, socioeconomic well-being, and cultural norms, child welfare agencies differ considerably in the provision of services to families involved with child welfare. Within this context, North Carolina's Title IV-E waiver demonstration was built upon the premise that given well-defined goals and outcomes, the 19 waiver counties were in the best position to design a waiver reform agenda to address the needs of residents in their communities. Thus, the reform pathways pursued by the 19 waiver counties did not need to be the same and, indeed, should not have been the same.

The previous chapter demonstrated that improvements in two key outcomes could be attributed to the presence of the waiver and specific efforts undertaken as a result of the regulatory relief available through it. This chapter discusses some of the specific activities pursued under the waiver by the 19 participating counties. The analyses presented here are restricted to children who initially became involved with the child welfare system during the waiver years in this group of counties because similar activities could not be pursued without waiver authority.

3.1 Prevalence of New Services

One widespread approach to the waiver was to develop services that were absent in the county prior to the waiver, but that counties hypothesized would either prevent out-of-home placements or shortened lengths of stay. Since the specific services varied significantly across the 19 counties, the evaluation team developed two indices of waiver activity, Support Services Index (SSI) and Placement and Permanency Services Index (PPSI), to summarize the prevalence of new services provided as a result of the waiver. As discussed in Chapter 2, the SSI is a summative measure of the number of mental health, substance abuse, and assessment services for parents and children. Since an agency may elect to contract out for services, provide services with in-house staff, or both, the index includes an indicator for each possibility. The PPSI summarizes the number of services developed for recruiting and supporting foster and adoptive parents, as well as, newly implemented post-placement, adoption, and legal services. Exhibits 3.1 and 3.2 recap the scores received by the waiver counties on each of these indices. The distribution of the counties on these measures provides clear indication that there was wide variation among the waiver counties. It is also evident from Exhibit 3.3 that, although many counties were active in both areas, there are some counties that instituted either

support services or placement and permanency services. For this reason, we maintain the indices as separate measures and include each in a separate multivariate model to test their relationship to the waiver outcomes.

Exhibit 3.1. Distribution of Scores on Support Services Index

Score	Number of Counties	% of Counties
0	8	42
1	2	11
2	3	16
3	2	11
4	1	5
5	0	0
6	3	16
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Mean	1.9	
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Median	1.0	
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S. D.	2.2	

Exhibit 3.2. Distribution of Scores on Placement and Permanency Services Index

Score	Number of Counties	% of Counties
0	6	32
1	5	26
2	0	0
3	3	16
4	2	11
5	1	5
6	1	5
7	0	0
8	1	5
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Mean	2.2	
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Median	1.0	
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S. D.	2.4	

Exhibit 3.3. Distribution of Counties on Combined Indices of Support Services Placement and Permanency Services

SSI Score	PPSI Score	Number of Counties	% of Counties
0	0	4	21
0	1	3	16
0	5	1	5
1	0	2	11
2	1	1	5
2	3	2	11
3	1	1	5
3	4	1	5
4	8	1	5
6	3	1	5
6	4	1	5
6	6	1	5

3.2 Impact of Waiver Services on Probability of Placement

Earlier analyses demonstrated that the likelihood of entering out-of-home placement decreased more for children in waiver counties than those in comparison or other non-waiver counties. Moreover, active wavier counties diverted children from placement at a somewhat greater rate than did other waiver counties. The analysis results presented in Exhibits 3.4 and 3.5 support these results and suggest that new services implemented in the active waiver counties contributed significantly to this improved outcome.

After controlling for the impact of age, gender, race, and FFK participation, the likelihood of entry to out-of-home placement is significantly less as the SSI increases. There is a 4% decrease in placement probability for each additional support service initiated in a county. Additionally, the results suggest that infants in waiver counties are more than twice as likely to enter placement as older children (indicated by RR’s equal to . 48, . 38 and . 55 for children in other age groups), and males are 10% more likely (RR = 1. 105) to enter placement than females. Although RR’s greater than 1.0 suggest that black and other minority children in waiver counties are more likely to enter placement than white children, the degree of difference is small and does not reach a level of statistical significance. Finally, these analyses uphold earlier results that children in FFK counties are about 10% less likely to enter placement than children in non-FFK counties.

Exhibit 3.4. Results of Multivariate Model: Impact of Family Support Services on the Probability of Entering Placement

	B	SE	Wald	df	Sig.	Exp(B)
Age at 1 st substantiation			390.975	3	.000	
0-1 year	<i>(reference group)</i>					
2-5 years	-.739	.054	190.785	1	.000	.478
6-11 years	-.967	.053	332.297	1	.000	.380
12+	-.597	.056	112.836	1	.000	.551
Gender (ref = male)	.100	.040	6.388	1	.011	1.105
Race			2.502	2	.174	
White	<i>(reference group)</i>					
Black	.011	.045	.064	1	.800	1.012
Other	.113	.061	2.412	1	.065	1.120
County FFK status at 1 st substantiation (ref = non-FFK)	-.111	.044	6.394	1	.011	.895
SSI	-.043	.011	15.018	1	.000	.958

The impact of placement and permanency services on the probability of placement (Exhibit 3.5) is similar to that seen for the SSI. Although the direction of the relationship is the same (i.e., as number of services increases the probability of placement decreases), the degree of difference is smaller. Each additional service decreases likelihood of placement by only 2%. Since the services included in this index are targeted more broadly and could, perhaps, have been expected to impact more on the experiences of children already in placement, these results are plausible.

Exhibit 3.5. Results of Multivariate Model: Impact of Placement and Permanency Services on the Probability of Entering Placement

	B	SE	Wald	df	Sig.	Exp(B)
Age at 1 st substantiation			388.321	3	.000	
0-1 year	<i>(reference group)</i>					
2-5 years	-.738	.054	190.181	1	.000	.478
6-11 years	-.964	.053	330.879	1	.000	.382
12+	-.591	.056	111.819	1	.000	.554
Gender (ref = male)	.101	.040	6.511	1	.011	1.106
Race			2.688	2	.158	
White	<i>(reference group)</i>					
Black	.024	.045	.280	1	.597	1.024
Other	.118	.061	2.688	1	.055	1.125
County FFK status at 1 st substantiation (ref = non-FFK)	-.103	.044	5.430	1	.020	.902
PPSI	-.023	.008	8.302	1	.004	.977

Given that the focus of the SSI and PPSI is on the provision of services, ranging from mental health and substance abuse treatment to legal services, that respond to risk factors that are often identified during the investigation process prior to placement, it seems likely that these services could only be instituted with the flexibility offered by waiver funding. These analyses, taken together with the analyses presented in Chapter 3, provide evidence that improvements in probability of placement can be attributed to the waiver.

3.3 Impact of Waiver Services on Exit from Placement

The length of time that children in North Carolina spend in out-of-home placement has decreased statewide, so this improvement is not confined to waiver counties. Although analyses in Chapter 2 did not detect any significant differences in the rate of exit between waiver, comparison, and other non-waiver counties, an examination of factors affecting length of stay only for children in waiver counties suggests that waiver activities did, in fact, have an impact on length of stay.

As shown in Exhibits 3.6 and 3.7, the availability of support services significantly increased the probability that a child would exit placement authority overall but did not significantly change the likelihood of exit for children considered “stuck in care.” The RR of 1.04 indicates that there is a 4% increase in overall likelihood of exit for each additional support service provided; the smaller RR of 1.011 for SSI in the analyses of children in placement over two years signifies little difference in probability of exit for this group. Note that, as in previous models, the rate of placement has a strong influence on the outcomes, probability of exit, and probability of exit after two years (RR 1.011 and RR 1.007 respectively). These RR’s translate into about a 1% increase in likelihood of exit for each percentage point increase in rate of placement. This strong relationship between the rate of placement and the likelihood of exit from placement suggest that the decrease in probability of placement over the years, observed in all waiver counties, may in part account for no differential changes in length of stay over the years due to the waiver.

Exhibit 3.6. Results of Multivariate Model: Impact of Family Support Services on the Probability of Exiting Care

	B	SE	Wald	df	Sig.	Exp(B)
Age at 1 st placement			2.578	3	.461	
0-1 year	<i>(reference group)</i>					
2-5 years	-.006	.055	.011	1	.917	.994
6-11 years	-.029	.052	.306	1	.580	.972
12+	.053	.053	1.000	1	.317	1.054
Gender (ref = male)	.046	.038	1.491	1	.222	1.047
Race			3.267	2	.118	
White	<i>(reference group)</i>					
Black	-.042	.044	.913	1	.339	.959
Other	.090	.061	2.167	1	.141	1.094
County FFK status at entry to placement (ref = non-FFK)	-.217	.049	19.965	1	.000	.805
County rate of placement	.011	.002	21.140	1	.000	1.011
SSI	.039	.009	16.833	1	.000	1.040

Age and FFK status are the only other factors significantly related to the probability of exit—children in FFK counties are about 20% less likely to exit overall, and infants who remain in out-of-home care after two years are about 50% more likely to leave placement authority after two years than 6 – 11 year olds and 70% more likely to leave placement than teenagers.

Exhibit 3.7. Results of Multivariate Model: Impact of Family Support Services on the Probability of Exiting Care after Two Years in Placement

	B	SE	Wald	df	Sig.	Exp(B)
Age at 1st placement			37. 666	3	. 000	
0-1 year	(reference group)					
2-5 years	-. 185	. 179	1. 068	1	. 301	. 831
6-11 years	-. 774	. 186	17. 386	1	. 000	. 461
12 +	-1. 230	. 234	27. 628	1	. 000	. 292
Gender (ref = male)	-. 043	. 140	. 097	1	. 756	. 958
Race			1. 363	2	. 506	
White	(reference group)					
Black	-. 191	. 165	1. 355	1	. 244	. 826
Other	-. 061	. 237	. 067	1	. 796	. 941
County FFK status at entry to placement (ref = non-FFK)	-. 128	. 197	. 424	1	. 515	. 880
County rate of placement	. 007	. . 010	. 430	1	. 512	1. 007
SSI	. 011	. 035	. 103	1	. 748	1. 011

Exhibits 3.8 and 3.9 summarize the probability of overall exit from care and exit after two years relative to activities of placement and permanency services. Although not significant, these analyses suggest that as the PPSI increases, so does the probability of exiting care (RR 1. 016) and exiting care after two years (RR 1. 008). Additionally, these analyses confirm once more the relationship of age to exit after two years. Infants still in care at two years are more likely to exit than children over five years old at entry, perhaps reflecting the increased likelihood of adoption for younger children.

Exhibit 3.8. Results of Multivariate Model: Impact of Placement and Permanency Services on the Probability of Exiting Care

	B	SE	Wald	df	Sig.	Exp(B)
Age at 1st placement			2. 633	3	. 452	
0-1 year	(reference group)					
2-5 years	-. 007	. 055	. 016	1	. 898	. 993
6-11 years	-. 031	. 052	. 365	1	. 546	. 969
12+	. 051	. 053	. 947	1	. 330	1. 053
Gender (ref = male)	. 048	. 038	1. 591	1	. 207	1. 049
Race			3.809	2	. 090	
White	(reference group)					
Black	-. 054	. 045	1. 492	1	. 222	. 947
Other	. 084	. 061	1. 906	1	. 167	1. 088
County FFK status at entry to placement (ref = non-FFK)	-. 234	. 049	22. 840	1	. 000	. 792
County rate of placement	. 011	. 002	20. 109	1	. 000	1. 011
PPSI	. 016	. 010	2. 651	1	. 104	1. 016

Exhibit 3.9. Results of Multivariate Model: Impact of Placement and Permanency Services on the Probability of Exiting Care after Two Years in Placement

	B	SE	Wald	df	Sig.	Exp(B)
Age at 1st placement			37.423	3	.000	
0-1 year	(reference group)					
2-5 years	-.187	.178	1.104	1	.293	.829
6-11 years	-.776	.186	17.421	1	.000	.460
12+	-1.229	.234	27.499	1	.000	.293
Gender (ref = male)	-.044	.140	.097	1	.755	.957
Race			1.344	2	.511	
White	(reference group)					
Black	-.192	.166	1.331	1	.249	.826
Other	-.060	.239	.062	1	.803	.942
County FFK status at entry to placement (ref = non-FFK)	-.126	.198	.403	1	.526	.882
County rate of placement	.007	.010	.438	1	.508	1.007
PPSI	.008	.035	.053	1	.817	1.008

3.4 Impact of Waiver Services on Re-entry to Placement

As described earlier, the probability is low in North Carolina that a child who leaves placement authority will return for a second custody spell. Thus, it is not surprising that there is no significant impact of the SSI or PPSI on likelihood of re-entry, as shown in Exhibits 3.10 and 3.11. For waiver counties implementing additional support activities, the likelihood of re-entry to care is slightly less than counties that did not pursue these activities (RR= 0.964). For waiver counties initiating new placement and permanency activities, the likelihood of re-entry to care within one year is no different from counties who did not pursue these additional activities as aggressively. Age and race are both related to re-entry to out-of-home care. Infants exiting care are more likely to reenter placement than children aged 2 to 5 years at exit and black children are about 20% less likely to reenter placement than white children.

Exhibit 3.10. Results of Multivariate Model: Impact of Support Services on the Probability of Re-entry to Placement

	B	SE	Wald	df	Sig.	Exp(B)
Age at exit			10.076	3	.018	
0-1 year	(reference group)					
2-5 years	-.373	.166	5.063	1	.024	.688
6-11 years	-.094	.156	.364	1	.546	.910
12+	.057	.158	.129	1	.720	1.058
Gender (ref = male)	.048	.100	.233	1	.629	1.050
Race			9.184	2	.010	
White	(reference group)					
Black	-.237	.115	3.240	1	.039	.789
Other	.255	.163	2.443	1	.118	1.291
County FFK status at entry to placement (ref = non-FFK)	.321	.112	8.149	1	.004	1.378
SSI	-.006	.026	.050	1	.823	.994

Exhibit 3.11. Results of Multivariate Model: Impact of Placement and Permanency Services on the Probability of Re-entry to Placement

	B	SE	Wald	df	Sig.	Exp(B)
Age at 1 st placement			10.169	3	.017	
0-1 year	<i>(reference group)</i>					
2-5 years	-.374	.166	5.081	1	.024	.688
6-11 years	-.094	.156	.360	1	.548	.810
12+	.058	.158	.135	1	.714	1.060
Gender (ref = male)	.049	.101	.236	1	.627	1.050
Race			9.019	2	.011	
White	<i>(reference group)</i>					
Black	-.229	.115	2.948	1	.047	.795
Other	.261	.164	2.546	1	.111	1.298
County FFK status at entry to placement (ref = non-FFK)	.321	.112	8.247	1	.004	1.379
PPSI	.007	.025	.078	1	.780	1.007

3.5 Summary and Conclusions

In addition to analyzing changes in outcomes for the waiver counties as a group compared to other counties, it is helpful to examine changes among the 19 waiver counties to determine whether policy and practice changes possible only with waiver authority produced changes in outcomes among waiver counties. Since the waiver in North Carolina was implemented at a county level, it is important to compare each county to itself to determine if there are changes in outcomes within the county over the years of the waiver. The analysis presented in this chapter indicates that the availability of support services significantly increased the probability that children in waiver counties would exit placement authority, although it did not significantly change the likelihood of exit for children considered “stuck in care.” This finding indicates that specific activities undertaken as a result of the waiver did have an influence on length of stay even though, as the analysis in the previous chapter indicated, reductions in length of stay in waiver counties were not significantly better than in other counties.

Exhibit 3.12. Direction of Changes in Length of Stay and Probability of Placement Observed in Counties

County	Length of Stay	Probability of Placement
Alamance	↓	↓
Brunswick	↑	↓
Buncombe	–	↓
Burke	↓	↓
Caldwell	↓	↑
Cleveland	↓	↓
Durham	↑	↓
Edgecombe	↓	↓
Forsyth	↑	↑
Haywood	↓	↑
Johnston	↑	↓
Pasquotank	↑	–
Rockingham	↓	↑
Scotland	–	–
Union	↑	↓
Wake	↑	–
Wayne	↑	↓
Yadkin	↑	↑
Yancey	↓	↓

Exhibit 3.12 summarizes the direction of changes in length of stay and the probability of placement in each waiver county. Detailed analyses on each county's outcomes are included in the appendix. The downward arrows in the above table indicate that the length of stay and/or probability of placement in the county decreased over the waiver years. Similarly, an upward arrow signifies an increase in the outcome. These assessments are based upon relative risks calculated with Cox Proportional Hazards models that controlled for changes in age, race, and gender distributions, as well as for the impact of FFK on outcomes. The appendix includes line graphs of the RR for each county for each year.

In summary, 11 out of 19 waiver counties experienced a decrease in the probability of placement over the waiver years; five counties saw an increase and there was no change in three counties. The picture for length of stay is more complex. Although only eight out of 19 waiver counties decreased length of stay, five of these eight did so while also decreasing the probability of

placement. Of the nine counties that saw an overall increase in length of stay, six had a decrease in probability of placement. Similarly, one county with no change in length of stay had a decrease in probability of placement. Looking at county changes in outcomes in this descriptive way helps explain the overall changes experienced by children in waiver counties. It is important, however, to be cautious in interpreting these results. Since the numbers of children involved with child welfare agencies are somewhat small in some of the waiver counties, the trends over time may not adequately represent the changes. Additionally, while controlling for FFK participation, these county-specific analyses cannot take into account the starting places for outcome change. Some of the waiver counties have been involved with system reform since the mid-1990's and had achieved significant outcome improvement prior to the start of the waiver. Although within this context small changes in outcomes may be difficult to achieve and difficult to detect, the changes that come last may, in fact, be those that most significantly affect those children and families that heretofore have been unaffected by system reform efforts. For this reason, we offer this county-specific summary not as the definitive word on whether outcomes improved in specific counties, but instead to provide another picture of the variety inherent in a county-administered child welfare system.