

CHAPTER 2:

PARTICIPANT OUTCOMES ANALYSIS

This chapter describes two major analyses of child outcomes, utilizing data from the first ProtectOhio Waiver. The first section examines child safety in terms of the way cases progress through the child welfare system from the initial point of contact. The second section focuses on children who were already in placement at the start of the first Waiver.

2.1 SAFETY IN THE CONTEXT OF CHILD WELFARE SERVICE TRAJECTORIES

In this section we compare patterns of contact with the child welfare system during a two-year period prior to the start of the first Waiver period (1994-1995¹) with the pattern of contact during the final two years of the first Waiver (2001-2002). The goal of the analysis is to determine whether, as a result of service choices made during the Waiver period, child safety was adversely affected. The first evaluation of the ProtectOhio Waiver demonstration did not address this question.

To carry out the analysis, we assembled data from FACSIS that show whether a given child was the subject of a maltreatment investigation (and the disposition of the investigation) and then whether the child's case was opened for services, closed for services, placed in out-of-home care and/or discharged from out-of-home care.² These events were sorted into their temporal order so that the event sequence for each child could be studied. We refer to the event sequence as the trajectory. For the analysis, we grouped children according to their trajectory and asked how the trajectories observed during the pre-Waiver years differed from those observed during the Waiver period. Our particular focus is on substantiated and unsubstantiated maltreatment investigations, given the child's prior history of involvement with the child welfare system.

A **Trajectory** is a sequence of events, arranged in order of their occurrence.

For example: *Case opening—child placement—child discharge—case closure* is a trajectory of four events.

The presentation is in two parts. First, we outline the theory of the Waiver and the projected impact on service decisions made by workers, under the assumption that the Waiver creates an incentive to use non-placement services. Then, we briefly describe how the trajectories were assembled from the data, with an eye toward understanding how the trajectories might change as a result of the Waiver. For the second part, we describe the results, which consist of two main

¹ In most of the evaluation, the baseline period preceding the Waiver is 1996-1997; here we have used 1994-95 because we examine two years of case activity following the initial referral to the PCSA, which would bring the baseline cases up to the 1996-97 period.

² Note that FACSIS data are county-specific, and statewide or multi-county counts include duplicates whenever a child or family has incidents in more than one Ohio county. There is no way to unduplicate FACSIS data; thus one child or family could be counted in more than one trajectory.

pieces of evidence. The discussion starts with a general description of the children involved. The emphasis is on the number of children and the general decline in the children coming to the attention of the child welfare system in both the comparison and demonstration counties. The final section addresses the question of safety and whether the likelihood of a substantiated maltreatment event increased, given the history of prior events.

2.1.1 The Theory of the Waiver, Service Availability and Worker Decisions

The essence of the Waiver program is this. Under current funding schemes, providers of out-of-home care are reimbursed for each day of care they provide. The mechanism is a classic per diem system – provide a day of care and reimbursement follows. Specific details of the federal/state, state/local, and local/private sector relationships are important, but the essence of the system is largely the same. Revenue for a large part of the system depends on having children in out-of-home care.

The problem with the per diem system is that it often leads to an over reliance on the services funded in that way. Moreover, once investments in out-of-home care have been made, it is hard to back out of those investments because categorical restrictions on the use of placement dollars prohibit shifting the resources to service alternatives. Among other effects, the per diem system tends to finance inefficiency in that, absent other controls, inefficient systems are reimbursed in the same way that an efficient system is. Having the money tied up in placement means that, to the extent non-placement service alternatives exist, it is very difficult to bring those services on line. As a consequence, placement becomes supply-driven, used because the beds exist and other services do not.

The federal Title IV-E Waiver offers an opportunity to alter this core dynamic. Theoretically, by making placement dollars fungible (i.e., usable on services other than out-of-home care), favorable changes in the utilization of placement will occur, and will result in the reinvestment of unused placement dollars in those services that allow counties to forego placement in the first instance.

The theory of the Waiver hinges on the availability of clinically viable alternatives to out-of-home care. Under the pre-Waiver system, workers were taught to make a placement decision because service alternatives did not exist. With the Waiver, the child welfare system increases the supply of services so that placement can be avoided. It is at this point the question of clinically viable alternatives enters the picture. At one level, the assumption behind the Waiver is that the out-of-home care system is fundamentally inefficient – more out-of-home care is provided (too many admissions or too much time is spent in placement) than the needs of children dictate. In other words, the safety of children can be preserved short of placing them in out-of-home care but for the absence of an alternative. The assumption rests on whether the alternatives assure safety commensurate with what would have been true if out-of-home care had been used in the amount used previously. If the same outcomes (or better) can be achieved and out-of-home placement is reduced, then the plan works.

From the perspective of the worker who has to decide on a course of services for a child, the pre-Waiver situation looks something like this. A child becomes known to the system and a

service decision has to be made. Because the supply of non-placement services is limited, the likelihood of being served in home is lower than it would otherwise be. Over a group of 100 children who are referred for services, hypothetically speaking, workers may elect to place 16 children because six really need placement and 10 need protection, but the necessary level of protection cannot be provided within the available supply of non-placement services. Rather than expose a child to the risk, the worker elects to over-serve the child by placing him or her in out-of-home care. The child is protected from the risk of maltreatment but the service level exceeds what is necessary.

With the Waiver program in place, the under-supply of in-home services can be remedied. New capacity makes it possible to serve more children in-home. In doing so, several things can happen. Ideally, the in-home services are allocated to the 10 children whose needs can be addressed in the context of their home. Alternatively, workers may allocate the in-home services to some, but not all of the 10 children who could have been served at home. If this happens, the system is somewhat more efficient, but still not optimally so. Or, it could be that the worker elects to offer in-home services to some of the 10 children whose needs can be met with in-home services and some of the six children who really need placement. The worker may do this because he/she believes that the in-home services are equally effective, or perhaps he/she misses the diagnosis – a false positive on the ability of in-home services to meet the safety needs of the child. If this happens, the risk to the child increases because the service is not matched to the need. The impact on the child is an increased risk of maltreatment given that the service is not adequate. The data will not tell us *why* maltreatment followed the course of action taken – the use of ineffective services or a missed diagnosis – only that the course of action did not succeed.

2.1.2 Introduction to Trajectory Analysis

2.1.2.1 Composition of Trajectories

Bearing in mind the foregoing discussion of the Waiver theory, how do we imagine child welfare trajectories will change in the ProtectOhio Waiver context? We start with the service events we used to construct the trajectories. These events are shown in Table 2.1.

Table 2.1: FACSIS Events Used to Construct Trajectories	
<i>Event</i>	<i>Description</i>
SUB	A report of child maltreatment was recorded (FACSIS Event I00), and the report was substantiated or indicated (FACSIS Events I04, 216, I14). The date of the event is the date of the report.
UNSUB	A report of child maltreatment was recorded (FACSIS Event I00), and the report was unsubstantiated. (FACSIS Events I04, 216, I14). The date of the event is the date of the report.
OPEN	A case for this child is opened for ongoing services. (FACSIS Event 172).
CLOSE	A case for this child was closed. (FACSIS Event 090)
PLACE	This child was placed in out-of-home care. (FACSIS Event 060)
DISCH	This child was discharged from out-of-home care. (FACSIS Event 064)

For most children, contact with the child welfare system begins with a maltreatment investigation and the disposition of that investigation as either substantiated (SUB) or not (UNSUB). In addition, we have case openings (OPEN) and closings (CLOSE), an indication that a case was opened for ongoing services and then closed, if not followed by placement. Admittedly, case opening is a rough proxy measure for the delivery of non-placement services, especially since a case opening also precedes placement in out-of-home care. Finally, we have placement (PLACE) and discharge (DISCH).³

Our analysis of the data strings together the event sequence in their temporal order of occurrence. We have event dates, so we are also able to assess the gap between events. From the gaps we can assess the time-length of the entire sequence as well as any combination of intervals. For the initial analysis, we use children who had a first event during 1994, 1995, 2001 or 2002. For each child, we recorded up to four events provided they occurred within two years of the date of the first. Within that two-year period the events can be spread out in a very rich variety of patterns. Without considering the time between events, there are well-over two hundred unique trajectories (specific sequences), although some are quite rare.

The first two cohorts – children beginning their experience during 1994 or 1995 – provide information about the pre-Waiver period for both demonstration and comparison counties. Since each cohort is observed for two years, the observation period extends through 1997. The second two cohorts – children beginning their experience in 2001 or 2002 – provide information about the Waiver period, again for both demonstration and comparison counties. This observation period extends through 2004. We had to choose those last two cohorts to avoid as much as

³ It is important to remember that FACSIS does not link cases across multiple counties, so the several events represented by a case trajectory are events which occurred in a single county; if a case was reported or reopened in a different county, we cannot detect it.

possible the period of time when most Ohio counties were recording the resolution of abuse/neglect allegations using a “case resolution” framework (1997-2000).⁴ However, it is not necessarily a bad choice, since whatever service and safety-related changes took place probably took a few years to develop.

2.1.2.2 Introduction to Trajectory Analysis

The trajectories record the interaction between maltreatment and services (or lack of services). Using the trajectories, we can assess whether the Waiver accomplished what it was intended to: *raise the supply of non-placement services so that workers are able to choose a different path for children who come in contact with the child welfare system **without** adversely affecting child safety.* In conducting the trajectory analysis, we follow the record of events through time, recording the likelihood of each type of subsequent event (including no subsequent event during the two-year window), given what came before. For this reason, the detailed trajectory analysis takes places in three stages -- after the second, third and fourth events are observed. This mimics what a caseworker would see as the case unfolds and service decisions need to be made. Since the number of children experiencing second, third and fourth events goes down, so do the number of trajectories analyzed. However, some of the most important trajectories with respect to safety consist of at least four events.

We briefly illustrate how this works by introducing a sample of event histories of children whose first event was an investigation that was determined to be substantiated (SUB). A substantiated allegation means that the child was maltreated. The worker has to decide whether the risk of maltreatment going forward is such that removal is the step that best mitigates the risk or that the risk of repeat maltreatment can be mitigated with some blend of in-home services. If the supply of in-home services increases because of the Waiver, then the worker has greater flexibility to select those services.

We illustrate this line of reasoning in Figure 2.1 below. When the first event is a substantiated allegation, that event can be followed by no second event, a case opening, a second substantiated incident or an unsubstantiated incident. Following the children who had a SUB-OPEN series, we would expect to see an increase in the number of cases that then close with no further action (Trajectory E, below), assuming that the service is effective at eliminating the risk. We also would expect to see a commensurate drop in the fraction of children that head straight to placement after the case is open (Trajectory F). Looking to the fourth event where a child’s trajectory was SUB-OPEN-CLOSE, we would be looking to see whether more children were subject to re-abuse following a period of in-home services (Trajectory H) or more children with no further contact with child welfare services (Trajectory G).

⁴ There were still 7% of investigations without dispositions for the 1994 and 1995 cohorts and 4% for the 2001 and 2002 cohorts. However, we imputed dispositions for 95% of these missing records based on the following procedure. Some counties continued to enter dispositions during the risk assessment period or reintroduced disposition codes while continuing to use case resolution codes. In these cases, we examined frequencies of dispositions by case resolution and primary maltreatment type. If 80% or more of cases at a given risk level and maltreatment type were classified as a certain disposition type in instances where both fields are complete, then we imputed these disposition values in cases with a like case resolution value but no disposition.

Figure 2.1: Sample Trajectories Given a First SUB Event				
TWO EVENTS Given first SUB Event	A:	SUB	NO SECND	
	B:	SUB	OPEN	
	C:	SUB	SUB	
	D:	SUB	UNSUB	
THREE EVENTS Given SUB-OPEN Path	E:	SUB	OPEN	CLOSE
	F:	SUB	OPEN	PLACE
FOUR EVENTS Given SUB-OPEN-CLOSE	G:	SUB	OPEN	CLOSE NO 4th
	H:	SUB	OPEN	CLOSE SUB

2.1.3 Findings

As noted in the introduction, the findings are presented in three parts. We start the discussion with a simple accounting of children and their first child welfare event. These data provide a context for the presentation that follows.

The second section examines the likelihood of a substantiated or unsubstantiated maltreatment report following a prior event or set of prior events. Substantiated reports of maltreatment are the primary measure of child safety. To simplify the presentation, we adopt a two-stage approach. In the first stage, we ask a simple question: Given *any* combination of prior events, what is the likelihood of either a substantiated or an unsubstantiated maltreatment event as the next event? We treat such an occurrence (a substantiated or unsubstantiated maltreatment report) as evidence of a safety risk. The theory of the Waiver leads us to expect a lower likelihood of a SUB or UNSUB event during the Waiver period in the demonstration counties. We also expect to find differences between the comparison and demonstration counties. If so, we will interpret the results to say that changes in service strategies kept children at least as safe as they would have been.

The second stage of our analysis focuses on the *particular selection* of trajectories. The trajectories selected relate to the underlying intent of the Waiver. For example, the Waiver creates opportunities to serve children in home rather than in placement. Children should shift from SUB/OPEN/PLACE/ (trajectory “F” in Figure 2.1) to SUB/OPEN/CLOSE (trajectory “E”) and, in so doing, the likelihood of a subsequent maltreatment investigation (SUB or UNSUB) should not increase for the children who follow the less intrusive trajectory (SUB/OPEN/CLOSE) relative to the alternative (SUB/OPEN/PLACE/DISCH).

Two issues are worth noting at this point. First, we have not yet taken into account the time between events. This means we treat a case opening followed by placement (OPEN-PLACE) the same regardless of how much time elapsed between the two events. If the gap is 2 days or 200 days, we interpret the trajectory in the same way. We know that timing makes a difference – a short time means something different than a long time between events. **Second, it is important to point out that the findings we report are based on aggregate data. That is, we compared all of the demonstration counties to all of the comparison counties as though there were just two programs. The results for individual counties may be different.** These results are thus preliminary – they give an initial view of what this type of analysis can offer. This exploratory phase is essential; it helps us identify a smaller set of trajectories worth examining in more detail in the future. For now, we do not consider the differences in timing -- as it is, with four events, there are over 200 unique pathways through the system. We have opted instead to reduce the complexity of our presentation, to better engage the reader in discussing our overall approach.

2.1.3.1 Initial Event Frequencies

Between the two observation periods, the number of children who had a first contact with the child welfare system in the 27 evaluation counties declined sharply, with the largest decline noted for unsubstantiated maltreatment investigations (Figure 2.2). In the pre-Waiver cohorts (1994-1995), there were 45,000 children whose first contact with the child welfare system was an unsubstantiated maltreatment investigation; by the final two years of the Waiver (2001-2002), that number had dropped to under 25,000. Total children with any involvement dropped from 80,000 to slightly more than 55,000, a change of 40 percent. Only the number of children with a case opening as the initial event (i.e., no prior recorded involvement) remained at a constant level over time; during both periods, the number of cases opened stood at roughly 10,000 children.

Figure 2.2: Number of Children by First Event Type and Waiver Period: All Children

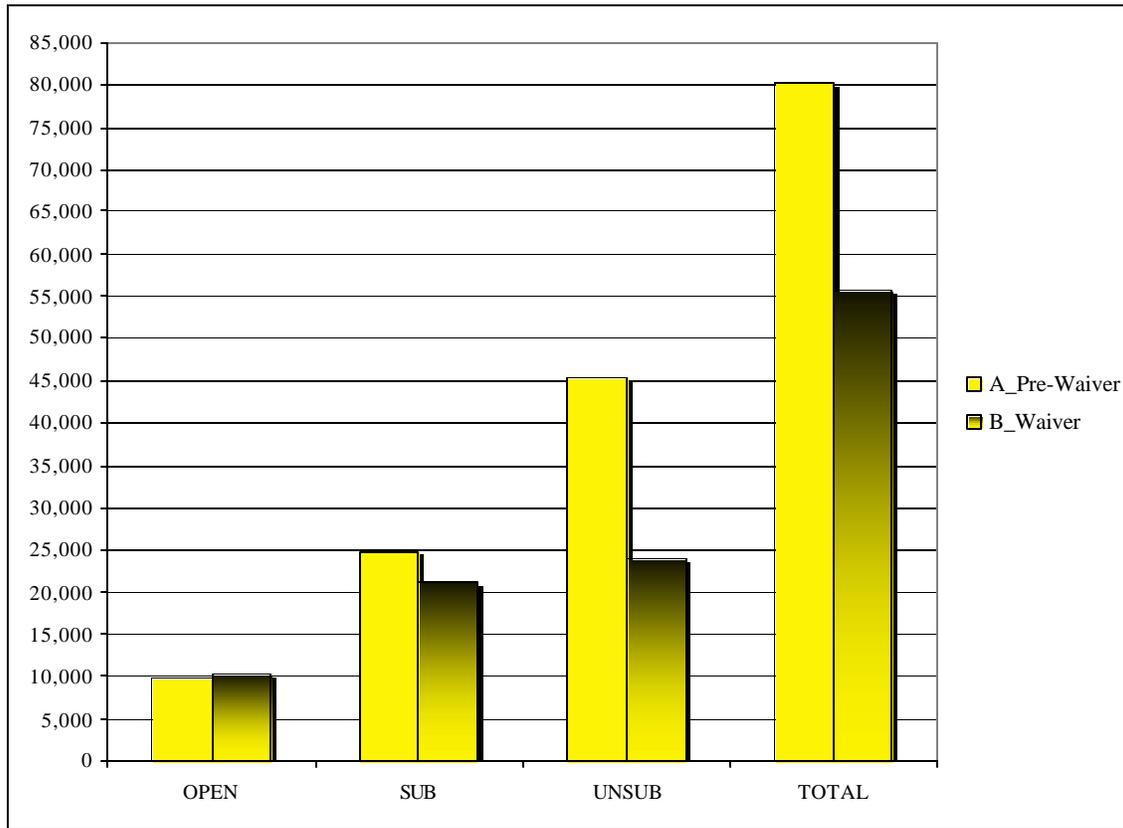


Table 2.1 and Figure 2.3 offer more detail on the data shown above, separating the demonstration sites from the comparison sites. The total number of children dropped dramatically in both the comparison and demonstration counties, although the change in the comparison counties was greater. The data also highlight one notable difference: The number of children who started their trajectory with a SUB event declined sharply in the comparison counties, from about 9,900 to 6,800, a drop of 31%. In contrast, the fall-off in the number of children with an initial SUB event in the demonstration counties was much smaller – about 530, a drop of 4%. Thus, in the comparison counties, changes to the total number of children coming into contact with the child welfare system arose because both unsubstantiated and substantiated reports went down. In the demonstration counties, the overall change came about through of a large drop in unsubstantiated cases alone.

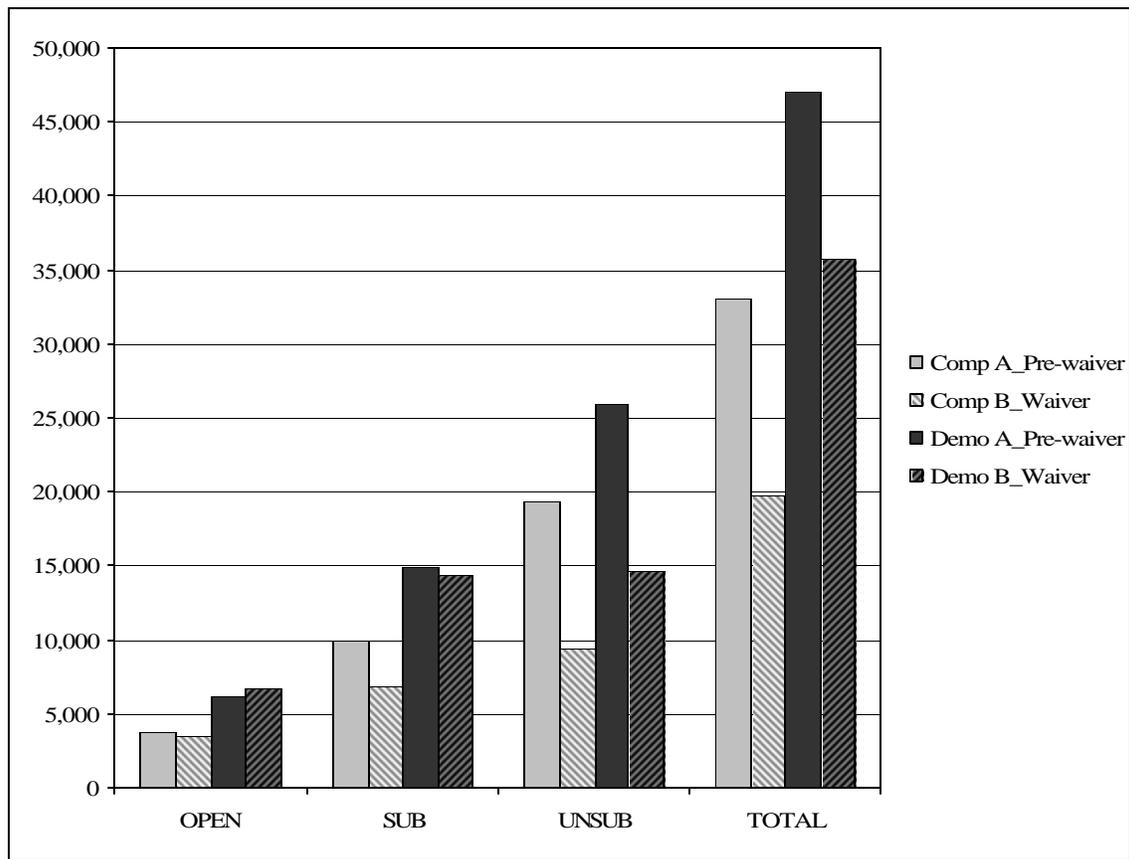
The significantly larger drop in the number of first substantiated investigations among comparison counties raises the possibility that the comparison counties do not provide a valid counterfactual for the demonstration counties. The drop in substantiated investigations could be due to a large decrease in the actual incidence of abuse or neglect, a change in the way the child welfare system evaluated reports, or some combination of the two. If the change was due to the way the child welfare systems in these counties evaluated reports, then we would expect to see

commensurately larger drops in substantiated investigations at every point in the trajectories. We will return to this possibility later in the discussion.

Table 2.2: Number of Children by First Event Type, Comparison/Demo Counties and Waiver Period: All Children

County and Waiver Period	OPEN	SUB	UNSUB	TOTAL
<i>Comparison Counties</i>				
A_Pre-Waiver	3,743	9,962	19,410	33,115
B_Waiver	3,542	6,834	9,418	19,794
Percent Difference	-5.4%	-31.4%	-51.5%	-40.2%
<i>Demonstration Counties</i>				
A_Pre-Waiver	6,154	14,957	25,954	47,065
B_Waiver	6,755	14,423	14,601	35,779
Percent Difference	8.9%	-3.6%	-43.7%	-24.0%

Figure 2.3: Number of Children by First Event Type, Comparison/Demo Counties and Waiver Period: All Children



In the sections which follow, we address one of the evaluation’s central questions: Relative to the pre-Waiver period and the comparison counties, did the safety of children in the demonstration counties change in ways that run counter to project’s intent? Given the evaluation design, the answer to the question takes shape around knowing what happened after the initial event that brought the child into contact with the system. Child safety is indicated by the presence or absence of a substantiated maltreatment event following one or more prior events. The specific sequence of the first few events may change as a result of the Waiver stimulus (e.g. a desired shift towards fewer placements following a substantiated report, i.e. more “B” and less “C” as shown in Figure 2.1 above); the question is whether the risk of safety then increases (more “D” and less “B”).

2.1.3.2 Assessing Child Safety: Two Events

Table 2.3 below provides the first stage analysis for the first two events.⁵ In this case, the data show the likelihood of a second event given *any first event*. Data for the two time periods and the comparison/demonstration counties are displayed separately.

⁵ For clarity is worth pointing out here that the population under consideration is all children. All children in the sample have at least one event, by definition. Children with one event may or may not have a second event. In

These data indicate the following. First, it is important to note that No Second event is the most common follow-up to the first event. Put another way, within two years of their first event, about 50 percent of all children have no further formal contact with the child welfare system in that county. Second, from the perspective of the Waiver stimulus, it appears that there was an increase in the likelihood a case would be opened following a first event in the demonstration counties (7.1% increase). There was no real increase in the comparison counties (0.6% increase). A change such as this is consistent with what one would expect. However, the increase may also be attributable to the fact that fewer children came to the attention of child welfare agencies. Rather than an increase in the propensity to open a case, the results are consistent with the idea that fewer children needing an open case had an initial event in the first instance. This explanation is, however, mitigated somewhat by the fact that children in the comparison group were no more likely to have their cases opened.

In addition to changes in case openings, there was an increase in the likelihood a case closed (4.7%). This also coincides with what one would expect in the Waiver context. Placements increased slightly from the pre-Waiver to the Waiver period, a change that was evident in both the comparison and the demonstration counties.

Table 2.3: Likelihood of a Second Event Given Any First Event by Second Event Type: All Children

County and Waiver Period	CLOSE	NO_SECOND	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>						
A_Pre-Waiver	7.0%	59.1%	10.4%	2.9%	7.1%	13.5%
B_Waiver	12.4%	57.7%	11.0%	4.9%	5.5%	8.4%
Difference	5.4%	-1.4%	0.6%	2.0%	-1.5%	-5.1%
<i>Demonstration Counties</i>						
A_Pre-Waiver	8.5%	53.8%	15.1%	2.9%	7.9%	11.7%
B_Waiver	13.3%	46.8%	22.3%	4.4%	6.8%	6.5%
Difference	4.7%	-7.0%	7.1%	1.5%	-1.2%	-5.3%
Difference in Differences	-0.6%	-5.6%***	6.6%***	-0.5%*	0.4%	-0.2%
Prior event sequence:	ANY					
Total children:	135,753					

*p<.05, **p<.01, ***p<.001

With respect to child safety, the likelihood of substantiated maltreatment dropped in the Waiver period in both the comparison and demonstration counties, although it dropped by

later tables, when we consider children with 3 events, children with only one event are dropped since children with only one event are not in the set of children at risk of a third event.

slightly more among comparison counties. The reverse was true for unsubstantiated maltreatment, which dropped slightly more in the demonstration counties.

The second stage analysis, found in Tables 2.3a through 2.3c, examines how first events are paired with second events, given a *specific first event*. Table 2.3a shows the data for children with an OPEN first event. Across both groups of counties and both time periods, roughly two-thirds of the children with an initial OPEN event followed that event with a CLOSE. The next most likely event was placement. Over the transition from the pre-Waiver to the Waiver period, the likelihood of placement was unchanged. The data also indicate that the risk of maltreatment following an opening went down, but did so more in the comparison counties than in the demonstration counties. This difference is larger than the difference observed when considering any second event, and may be worth exploring further once questions about the overall decrease in substantiated events in the comparison counties is better understood.

Table 2.3a: Likelihood of a Second Event Given an OPEN First Event by Second Event Type: All Children

County and Waiver Period	CLOSE	NO_SECOND	PLACE	SUB	UNSUB
<i>Comparison Counties</i>					
A_Pre-Waiver	62.3%	4.4%	24.9%	4.6%	3.8%
B_Waiver	69.5%	2.0%	26.3%	1.0%	1.3%
Difference	7.1%	-2.4%	1.4%	-3.6%	-2.5%
<i>Demonstration Counties</i>					
A_Pre-Waiver	65.4%	3.9%	21.9%	4.2%	4.6%
B_Waiver	70.4%	1.5%	23.2%	2.6%	2.3%
Difference	5.0%	-2.4%	1.3%	-1.6%	-2.3%
Difference in Differences	-2.1%	0.0%	-0.1%	2.0%***	0.2%
Prior event sequence:	OPEN				
Total children:	20,194				

*p<.05, **p<.01, ***p<.001

When we separately examine children who start their contact with the child welfare system because of a substantiated report of maltreatment (Table 2.3b) and children who started because of an unsubstantiated report (Table 2.3c), a different picture emerges. All else being equal, in the demonstration counties one would expect to find a higher propensity to open the case after a SUB event because of the service opportunities that were supposed to be generated by Waiver stimulus. This is indeed the case, although some other important differences are evident. From the pre-Waiver to Waiver period, the likelihood a SUB case will be opened increased in the demonstration counties (from 30.3% to 36.9%) and went down in the comparison counties.

**Table 2.3b: Likelihood of a Second Event Given a SUB First Event
by Second Event Type: All Children**

County and Waiver Period	NO_SECOND	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>					
A_Pre-Waiver	54.6%	27.8%	0.1%	8.9%	8.6%
B_Waiver	63.1%	23.5%	0.5%	7.1%	5.8%
Difference	8.5%	-4.3%	0.4%	-1.7%	-2.8%
<i>Demonstration Counties</i>					
A_Pre-Waiver	51.6%	30.3%	0.1%	9.2%	8.7%
B_Waiver	49.8%	36.9%	0.1%	8.0%	5.2%
Difference	-1.9%	6.7%	0.0%	-1.2%	-3.6%
Difference in Differences	-10.4%***	11.0%***	-0.4%***	0.5%	-0.7%
Prior event sequence:	SUB				
Total children:	46,176				

*p<.05, **p<.01, ***p<.001

For cases with an initial SUB event, subsequent UNSUB events dropped from the pre-Waiver period to the Waiver period, although more so in the demonstration counties than in the comparisons. When the first event is a UNSUB investigation (see Table 2.3c), the baseline likelihood of a second UNSUB (following the first UNSUB) was relatively high in the pre-Waiver period (above 15% in both comparison and demonstration counties), and dropped during the Waiver years in both groups but by a larger margin in the demonstration counties.

**Table 2.3c: Likelihood of a Second Event Given an UNSUB First Event
by Second Event Type: All Children**

County and Waiver Period	NO_SECOND	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>					
A_Pre-Waiver	72.0%	3.5%	0.1%	6.6%	17.8%
B_Waiver	74.8%	6.0%	0.1%	6.1%	13.0%
Difference	2.8%	2.5%	0.0%	-0.6%	-4.8%
<i>Demonstration Counties</i>					
A_Pre-Waiver	66.8%	10.0%	0.0%	8.1%	15.1%
B_Waiver	64.8%	18.1%	0.0%	7.5%	9.6%
Difference	-2.0%	8.1%	0.0%	-0.6%	-5.5%
Difference in Differences	-4.8%***	5.5%***	0.0%	0.0%	-0.7%
Prior event sequence:	UNSUB				
Total children:	69,383				

*p<.05, **p<.01, ***p<.001

In sum, analysis of the first two events does not show evidence of an increase in risk to children, nor do we see a noteworthy differential impact between the demonstration and comparison sites at this stage of the analysis.

2.1.3.3 Assessing Child Safety: Three Events

At each step in the unfolding trajectory, the most likely outcome is no next event. As a consequence, only 46 percent of the original sample (135,000 children across all years and all counties) remains in the set of children at risk for a third event. Our approach to this population is much the same as before. We start with a general statement about the likelihood of a third event given any combination of prior events. From there, we move on to examine whether certain trajectories of high interest deviate from the general pattern. For example, we observed an increase in the OPEN/CLOSE sequence within the set of children with two events. We also observed an increase in OPEN trajectories in the demonstration counties, possibly in response to the Waiver. The question is: How likely was a maltreatment event, either SUB or UNSUB, in relation to the specific sequence that preceded the third event?

Table 2.4 captures the likelihood of a third event given *any combination* of two prior events. Again the most likely follow-up is no third event. The next most common outcome is case closure (CLOSE). Among the possible events, case closure is dependent on a prior opening in the same way that discharge is contingent upon a child having been placed in out-of-home care. Children in the demonstration counties were less likely to have no third event, a difference that grew larger in the Waiver period given that the likelihood of no third event declined in the

demonstration counties and increased in the comparison counties. The difference is connected to an increase in case closings, which were higher generally in the demonstration counties. However, these results are clearly tied to specific combinations of events earlier in the trajectories – the greater likelihood of opening a case as a second event laid the foundation for this change.

We find two other notable differences involving other event types. DISCH as a third event increased more in the comparison than in the demonstration counties. Repeating a pattern observed after the first event, safety (as measured by a subsequent SUB or UNSUB event) improved in both the comparison and demonstration counties as they transitioned from the pre-Waiver to the Waiver period.

**Table 2.4: Likelihood of a Third Event Given Any Combination of Prior Events
by Third Event Type: All Children**

County and Waiver Period	CLOSE	DISCH	NO_THIRD	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>							
A_Pre-Waiver	15.7%	6.7%	42.9%	8.5%	7.7%	7.0%	11.6%
B_Waiver	15.5%	11.1%	46.2%	7.8%	9.4%	4.3%	5.8%
Difference	-0.2%	4.4%	3.3%	-0.7%	1.7%	-2.7%	-5.8%
<i>Demonstration Counties</i>							
A_Pre-Waiver	22.8%	5.8%	36.1%	10.9%	6.8%	7.2%	10.3%
B_Waiver	32.1%	7.9%	33.8%	8.1%	7.9%	5.2%	5.0%
Difference	9.3%	2.0%	-2.3%	-2.8%	1.2%	-2.0%	-5.3%
Difference in Differences	9.5%***	-2.4%***	-5.6%***	-2.1%***	-0.5%	0.7%	0.5%
Prior event sequence:	ANY	ANY					
Total children:	62,696						

*p<.05, **p<.01, ***p<.001

Results for specific trajectories are found in Tables 2.4a through 2.4e. The first trajectory-specific assessment of safety, found in Table 2.4a, examines children who started with a case opening followed by a case closing. From Tables 2.3 and 2.4, we know that demonstration counties opened a larger proportion of cases and closed a larger proportion cases following the first event. In Table 2.4a, the data indicate whether the OPEN/CLOSE trajectory was associated with an increase safety risk. With Waiver effects in mind, we imagine that the children that fit this trajectory represent children who have received services in the Waiver period which might not have been available prior to the Waiver. By the same token, these may be children who, rather than going into placement, were served in home.

The data for children with the OPEN/CLOSE event pair at the outset of their contact with the system shows the following. First, NO THIRD event increased in the demonstration counties during the Waiver period (to 79.2%) when compared to the pre-Waiver period (69.6%). No such change was observed in the comparison counties. With respect to the likelihood of a new case opening (OPEN) during the Waiver period, the comparison counties showed an increase over the pre-Waiver period (2.5%), while demonstration counties showed a decline (-3.0%). Both indicators suggest that the Waiver was operating as intended.

Child safety improved in the sense that SUB and UNSUB events following the CLOSE were less likely. Between the two time periods, SUB events declined slightly in both groups of counties. In the pre-Waiver period, the UNSUB event followed the case closing in 12 percent of the cases in the demonstration counties; this figure dipped to 6.4 percent in the Waiver period, a large change relative to the comparison counties.

Table 2.4a: Likelihood of a Third Event Given an OPEN/CLOSE Trajectory by Third Event Type: All Children

County and Waiver Period	NO_THIRD	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>					
A_Pre-Waiver	83.1%	6.0%	0.3%	5.0%	5.6%
B_Waiver	83.7%	8.5%	0.2%	3.2%	4.4%
Difference	0.5%	2.5%	-0.1%	-1.8%	-1.2%
<i>Demonstration Counties</i>					
A_Pre-Waiver	69.6%	12.0%	0.0%	6.4%	12.0%
B_Waiver	79.2%	9.0%	0.1%	5.2%	6.4%
Difference	9.6%	-3.0%	0.1%	-1.1%	-5.6%
Difference in Differences	9.1%***	-5.5%***	0.1%	0.6%	-4.4%***
Prior event sequence:	OPEN	CLOSE			
Total children:	13,568				

*p<.05, **p<.01, ***p<.001

A second, three-event trajectory that is important to the overall story of the Waiver and its impact on child safety has to do with the SUB/OPEN pair found in Table 2.4b. Children who start with a SUB were maltreated insofar as the official record is concerned. Notwithstanding other factors, one might expect higher rates of placement among the children who follow this path from the outset.

The data in Table 2.4b confirm the higher rate of placement among these children. In the pre-Waiver years, the likelihood of placement was about 25 percent across both the comparison and demonstration counties. Interestingly, in the comparison counties the likelihood of placement increased substantially, from 27.8 percent to 39.8 percent (12% increase). For the demonstration counties in the pre-Waiver period, placement was also likely. However, the likelihood of

placement dipped slightly during the final two years of the Waiver (-1.6%). At the same time, the likelihood the case would close went up in the demonstration counties and down in the comparison counties. Over time, the likelihood of a SUB or UNSUB event dropped in both the comparison and demonstration counties. By and large these changes are all consistent with the intent of the Waiver, without an increased safety risk.

**Table 2.4b: Likelihood of a Third Event Given an SUB/OPEN Trajectory
by Third Event Type: All Children**

County and Waiver Period	CLOSE	NO_THIRD	PLACE	SUB	UNSUB
<i>Comparison Counties</i>					
A_Pre-Waiver	59.2%	4.4%	27.8%	4.2%	4.4%
B_Waiver	52.0%	4.2%	39.8%	2.1%	2.0%
Difference	-7.2%	-0.2%	12.0%	-2.2%	-2.4%
<i>Demonstration Counties</i>					
A_Pre-Waiver	59.6%	4.7%	24.9%	5.9%	4.9%
B_Waiver	69.6%	1.5%	23.3%	3.3%	2.4%
Difference	10.0%	-3.2%	-1.6%	-2.6%	-2.5%
Difference in Differences	17.2%***	-3.0%***	-13.6%***	-0.4%	-0.1%
Prior event sequence:	SUB	OPEN			
Total children:	14,230				

*p<.05, **p<.01, ***p<.001

Table 2.4c shows the results for children for whom the initial UNSUB event was followed by a case opening. This is a less common trajectory involving a total of 6,472 children. In general, the likelihood the case will be closed is higher than it is if the first event is substantiated investigation. For children in Table 2.4c, the changes for the comparison group were larger: fewer placements and more case closings, although in the case of the former, placement was still more likely in comparison sites than in demonstration sites, and, in the case of the latter, case closings were less likely. For both groups, safety improved, although by a smaller margin in demonstration counties.

**Table 2.4c: Likelihood of a Third Event Given an UNSUB/OPEN Trajectory
by Third Event Type: All Children**

County and Waiver Period	CLOSE	NO_THIRD	PLACE	SUB	UNSUB
<i>Comparison Counties</i>					
A_Pre-Waiver	47.1%	9.0%	32.4%	5.2%	6.3%
B_Waiver	72.4%	4.4%	19.0%	1.9%	2.3%
Difference	25.3%	-4.6%	-13.4%	-3.2%	-4.0%
<i>Demonstration Counties</i>					
A_Pre-Waiver	74.4%	6.5%	10.4%	3.4%	5.3%
B_Waiver	82.5%	2.6%	8.5%	2.6%	3.8%
Difference	8.1%	-4.0%	-1.9%	-0.8%	-1.5%
Difference in Differences	-17.2%***	0.6%	11.6%***	2.4%*	2.5%*
Prior event sequence:	UNSUB	OPEN			
Total children:	6,472				

*p<.05, **p<.01, ***p<.001

Table 2.4d follows the trajectories of children with a recurrent substantiated maltreatment report (SUB/SUB). Out of the 135,000 children in the sample, only 3,914 children followed this path. Children with two substantiated maltreatment reports are more likely to have a case opened than are children with a single substantiated investigation (Table 1b). As Table 2.4d shows, the likelihood of case opening dropped over time among children in the comparison counties, as was true for children with a single SUB event. The likelihood of a third SUB event was quite high in both sets of counties. Although not statistically significant, the likelihood of a third maltreatment event followed the same downward trend between the two time periods for both sets of counties as following a single SUB event. If we accept the comparison counties as the counterfactual, this suggests no significant compromise of safety for the small number of children who followed this path in the demonstration counties.

**Table 2.4d: Likelihood of a Third Event Given an SUB/SUB Trajectory
by Third Event Type: All Children**

County and Waiver Period	NO_THIRD	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>					
A_Pre-Waiver	45.4%	34.2%	0.0%	13.0%	7.4%
B_Waiver	52.4%	32.0%	1.2%	10.1%	4.3%
Difference	6.9%	-2.2%	1.2%	-3.0%	-3.0%
<i>Demonstration Counties</i>					
A_Pre-Waiver	41.4%	36.8%	0.1%	12.2%	9.4%
B_Waiver	46.9%	35.2%	0.1%	11.6%	6.1%
Difference	5.5%	-1.6%	-0.1%	-0.6%	-3.3%
Difference in Differences	-1.4%	0.6%	-1.3%*	2.4%	-0.2%
Prior event sequence:	SUB	SUB			
Total children:	3,914				

*p<.05, **p<.01, ***p<.001

Among children who followed the UNSUB/SUB trajectory (see Table 2.4e), third event types look similar to those for the SUB/SUB group. Case openings are high (at or above 30%), perhaps as a precursor to placement. Less than half have no third event, a fraction that increased in the comparison group during the Waiver period. The rate in the demonstration counties was essentially unchanged.

With one exception, recurrence rates of abuse/neglect reports for this group dropped (both SUB and UNSUB). The exception involves children from the demonstration counties. For those children, recurrence of SUB went up slightly, from 9.7 percent to 10.5 percent, the first trajectory associated with an apparent increase in safety risk in the Waiver period relative to the demonstration counties themselves.

**Table 2.4e: Likelihood of a Third Event Given an UNSUB/SUB Trajectory
by Third Event Type: All Children**

County and Waiver Period	NO_THIRD	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>					
A_Pre-Waiver	41.4%	37.0%	0.4%	12.0%	9.2%
B_Waiver	53.0%	29.6%	1.1%	8.6%	7.7%
Difference	11.5%	-7.4%	0.7%	-3.4%	-1.5%
<i>Demonstration Counties</i>					
A_Pre-Waiver	41.9%	38.0%	0.0%	9.7%	10.3%
B_Waiver	43.2%	39.2%	0.2%	10.5%	7.0%
Difference	1.3%	1.2%	0.1%	0.7%	-3.3%
Difference in Differences	-10.3%**	8.6%**	-0.5%	4.1%*	-1.9%
Prior event sequence:	UNSUB	SUB			
Total children:	5,040				

*p<.05, **p<.01, ***p<.001

2.1.3.4 Assessing Child Safety: Four Events

The sample of children with a minimum of three events falls to slightly more than 38,000 or about 28 percent of the original group. As the sample of children shrinks, the diversity of trajectories increases. Importantly, three events provide a fuller view of what happens to children, especially those children with an open case following a maltreatment investigation. If the third event is a case closing, the fourth event, if it is another maltreatment report, is indicative of on-going concerns and the possibility that the case should not have been closed.

As in the previous sections, we start with a first stage analysis that considers the fourth event type given *any combination* of prior events. This provides a general baseline for assessing safety risks among children with at least three events in their trajectory. These data are presented in Table 2.5.

The patterns in the data generally follow what has already been reported. After any combination of three events, the likelihood of a substantiated or unsubstantiated maltreatment report dropped from the pre-Waiver period to the Waiver period in both the comparison and demonstration counties. With respect to other event types, the specific changes are connected to the particular combination of prior events. We turn to that evidence next.

**Table 2.5: Likelihood of a Fourth Event Given Any Combination of Prior Events
by Fourth Event Type: All Children**

County and Waiver Period	CLOSE	DISCH	NO_FOURTH	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>							
A_Pre-Waiver	18.6%	12.4%	41.1%	5.8%	4.8%	6.7%	10.5%
B_Waiver	25.3%	17.4%	40.5%	3.4%	3.8%	4.1%	5.6%
Difference	6.6%	5.0%	-0.6%	-2.4%	-1.0%	-2.7%	-4.9%
<i>Demonstration Counties</i>							
A_Pre-Waiver	20.6%	10.0%	35.7%	9.9%	4.2%	7.9%	11.7%
B_Waiver	21.2%	12.0%	43.8%	7.5%	2.8%	5.8%	7.0%
Difference	0.5%	2.1%	8.1%	-2.4%	-1.5%	-2.0%	-4.8%
Difference in Differences	-6.1%***	-3.0%***	8.7%***	0.0%	-0.5%	0.6%	0.2%
Prior event sequence:	ANY	ANY	ANY				
Total children:	38,752						

*p<.05, **p<.01, ***p<.001

The specific analysis begins with Tables 2.5a and 2.5b. These two tables consider what happens when the third event in the trajectory is either a case closing (2.5a) or a discharge from placement (2.5b). The event combinations prior to the third event are non-specific (i.e., any combination).

Presented this way, the data in Table 2.5a suggest that the likelihood of no fourth event is high. Moreover, the evidence indicates that the likelihood of no fourth event increased in both the comparison and demonstration counties but by a larger margin in the demonstration counties. The likelihood of the case reopening was higher in the demonstration counties and declined in both groups of counties from the pre-Waiver to the Waiver period.

Insofar as safety is concerned, rates of subsequent maltreatment investigations (SUB or UNSUB) are relatively high when compared to other trajectories, especially in the demonstration counties. In the pre-Waiver period, the rate of UNSUB started higher in the demonstration counties and declined more. Nevertheless, there was a drop in both the comparison and demonstration counties, suggesting improvements in safety, with a Waiver-specific effect for the larger reduction in UNSUB events among the demonstration counties.

Table 2.5a: Likelihood of a Fourth Event Given the ANY/ANY/CLOSE Trajectory by Fourth Event Type: All Children

County and Waiver Period	NO_FOURTH	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>					
A_Pre-Waiver	79.4%	4.5%	0.2%	7.0%	8.9%
B_Waiver	85.5%	2.0%	0.1%	5.5%	6.9%
Difference	6.1%	-2.5%	-0.1%	-1.5%	-1.9%
<i>Demonstration Counties</i>					
A_Pre-Waiver	61.2%	9.1%	0.1%	10.9%	18.7%
B_Waiver	74.8%	6.9%	0.0%	7.5%	10.8%
Difference	13.6%	-2.2%	0.0%	-3.4%	-7.9%
Difference in Differences	7.5%***	0.2%	0.1%	-1.9%	-6.0%***
Prior event sequence:	ANY	ANY	CLOSE		
Total children:	14,487				

*p<.05, **p<.01, ***p<.001

Children discharged from placement after two prior events are included in Table 2.5b. These data are for the most part unremarkable relative to other patterns. Most of the cases are closed following the discharge and recurrence of maltreatment is low. Looking past the fourth event to the fifth event after the case is closed (not shown) reveals that the rate of new reporting hovers between one and four percent. Furthermore, the likelihood of a substantiated report (as the fifth event in the ANY/ANY/DISCH/CLOSE sequence) did increase among the demonstration counties relative to the pre-Waiver period, from 1.5% to 2.5%.

**Table 2.5b: Likelihood of a Fourth Event Given the ANY/ANY/DISCH Trajectory
by Fourth Event Type: All Children**

County and Waiver Period	CLOSE	DISCH	NO_FOURTH	OPEN	SUB	UNSUB
<i>Comparison Counties</i>						
A_Pre-Waiver	86.0%	5.1%	4.5%	0.2%	1.2%	2.9%
B_Waiver	76.0%	4.3%	15.4%	0.3%	1.4%	2.5%
Difference	-10.0%	-0.8%	10.9%	0.1%	0.2%	-0.4%
<i>Demonstration Counties</i>						
A_Pre-Waiver	88.4%	6.4%	1.3%	0.0%	2.0%	1.9%
B_Waiver	91.0%	5.3%	0.8%	0.0%	1.4%	1.5%
Difference	2.6%	-1.2%	-0.5%	0.0%	-0.6%	-0.4%
Difference in Differences	12.6%***	-0.4%	-11.4%***	-0.1%	-0.8%	0.0%
Prior event sequence:	ANY	ANY	DISCH			
Total children:	4,602					

*p<.05, **p<.01, ***p<.001

The ANY/ANY/OPEN, ANY/ANY/SUB and ANY/ANY/UNSUB trajectories are represented in Table 2.5c through 2.5e. Generally, the patterns found within these tables follow those described previously. In the demonstration counties, relative to themselves, safety improves except in the case of children from the demonstration counties who followed the ANY/ANY/UNSUB trajectory (3e). During the Waiver period the likelihood of a substantiated maltreatment report went up slightly (less than 1 percent), to a level above what it was in the pre-Waiver years. That said, the difference is not statistically important. Otherwise, children in the demonstration counties were more likely to be placed in out-of-home care than the comparison group children following an ANY/ANY/OPEN sequence. They were less likely to be placed following an ANY/ANY/SUB pattern. When comparing safety among the two groups of counties, in the ANY/ANY/SUB trajectory, the likelihood of a substantiated investigation declined less among demonstration counties.

**Table 2.5c: Likelihood of a Fourth Event Given the ANY/ANY/OPEN Trajectory
by Fourth Event Type: All Children**

County and Waiver Period	CLOSE	DISCH	NO_FOURTH	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>							
A_Pre-waiver	41.4%	0.3%	20.9%	0.2%	27.4%	5.1%	4.8%
B_Waiver	58.9%	1.5%	11.8%	1.5%	21.8%	2.6%	1.8%
Difference	17.5%	1.2%	-9.0%	1.4%	-5.6%	-2.5%	-2.9%
<i>Demonstration Counties</i>							
A_Pre-waiver	54.7%	0.3%	14.4%	0.1%	20.0%	5.3%	5.3%
B_Waiver	62.0%	0.4%	12.5%	0.3%	19.5%	2.9%	2.4%
Difference	7.3%	0.1%	-2.0%	0.2%	-0.5%	-2.3%	-2.9%
Difference in Differences	-10.3%***	-1.0%	7.1%***	-1.1%*	5.1%*	0.2%	0.1%
Prior event sequence:	ANY	ANY	OPEN				
Total children:	5,720						

*p<.05, **p<.01, ***p<.001

**Table 2.5d: Likelihood of a Fourth Event Given the ANY/ANY/SUB Trajectory
by Fourth Event Type: All Children**

County and Waiver Period	CLOSE	DISCH	NO_FOURTH	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>							
A_Pre-Waiver	9.7%	1.6%	32.3%	27.7%	4.0%	14.5%	10.3%
B_Waiver	6.7%	3.6%	41.7%	26.9%	6.1%	8.1%	6.9%
Difference	-3.0%	2.0%	9.4%	-0.7%	2.1%	-6.5%	-3.4%
<i>Demonstration Counties</i>							
A_Pre-Waiver	11.8%	2.0%	28.2%	33.5%	5.8%	10.8%	7.9%
B_Waiver	16.4%	2.3%	30.3%	31.9%	3.6%	9.6%	5.9%
Difference	4.6%	0.4%	2.1%	-1.6%	-2.2%	-1.2%	-2.1%
Difference in Differences	7.6%***	-1.7%	-7.2%*	-0.9%	-4.3%**	5.3%*	1.3%
Prior event sequence:	ANY	ANY	SUB				
Total children:	3,878						

*p<.05, **p<.01, ***p<.001

**Table 2.5e: Likelihood of a Fourth Event Given the ANY/ANY/UNSUB Trajectory
by Fourth Event Type: All Children**

County and Waiver Period	CLOSE	DISCH	NO_FOURTH	OPEN	PLACE	SUB	UNSUB
<i>Comparison Counties</i>							
A_Pre-Waiver	6.3%	0.7%	50.9%	5.6%	0.9%	8.9%	26.8%
B_Waiver	5.2%	2.3%	63.8%	3.5%	1.2%	7.9%	16.1%
Difference	-1.1%	1.6%	12.9%	-2.1%	0.3%	-1.0%	-10.7%
<i>Demonstration Counties</i>							
A_Pre-Waiver	11.5%	1.3%	43.3%	17.1%	0.9%	8.8%	16.9%
B_Waiver	19.2%	3.4%	39.2%	21.0%	1.3%	9.1%	6.9%
Difference	7.6%	2.0%	-4.1%	3.8%	0.3%	0.3%	-10.0%
Difference in Differences	8.7%***	0.4%	-17.0%***	5.9%**	0.0%	1.3%	0.7%
Prior event sequence:	ANY	ANY	UNSUB				
Total children:	5,249						

*p<.05, **p<.01, ***p<.001

Children with histories of uninterrupted maltreatment reports are few in number. For example, there were only 66 children with 4 SUB events in a row. Only 1531 children had trajectories that involved any combination of SUB/UNSUB over four events (e.g., SUB/UNSUB/SUB/UNSUB). Still, some children do have multiple SUB and/or UNSUB events prior to some other action. Further information about the children involved in these trajectories can be found in Appendix B.

2.2.3 Summary and Next Steps

The Title IV-E Waiver program is designed to shift services away from placement by changing the fiscal mechanisms that support in-home and out-of-home services. In effect, the goal is to level the playing field so that service investments that lower the demand for out-of-home care draw federal financial participation the same way out-of-home care would have. Without the Waiver, federal funds flowing to the local jurisdiction would fall as the service utilization shifts away from placement. A key assumption underlying the Waiver theory is that services provided in the home offer at least as much protection for the child as placement. That is, supporting children in the home will not increase the likelihood of a subsequent report of maltreatment.

At this point in the analysis, we are not able to make a definitive statement about safety during the first Waiver (1) without taking into account the timing between events (other than the two-year window), (2) without further examining the large change in the frequency of initial

substantiated investigations among comparison counties (Table 2.2), and (3) without examining county-level differences within the demonstration and comparison groups.

That said, the data point in the following directions. Among the demonstration counties, taken as a whole, there is evidence that following initial contact with the system, children were more likely to have their cases opened and were somewhat less likely to be placed during the Waiver period. With respect to safety, the evidence also suggests that to the extent patterns of contact with the child welfare system did change in the demonstration counties, when demonstration counties were compared to themselves before the Waiver, the likelihood of a subsequent report of maltreatment (SUB or UNSUB) dropped. However, the data also suggest that subsequent reports of maltreatment also declined in the comparison counties and that the rate of change sometimes favored the comparison counties. Thus, the evidence for a distinct Waiver effect is mixed. As noted, the influence of a given county or set of counties on the aggregate picture has not been explored in any detail, and the question remains open with respect to the validity of the counterfactual of the comparison counties.

Next steps to complete the evaluation of safety during the first Waiver include introducing timing between events within the two-year observation window, particularly between opening and placement, examining county-level differences in trajectories that might alter the observed differences in the aggregate, and investigating the validity of the comparison counterfactual with respect to substantiated investigations.

2.2 ANALYSIS OF PLACEMENT OUTCOMES FOR CHILDREN IN LONG-TERM PLACEMENT AT THE START OF THE FIRST WAIVER

When the evaluation of the first Waiver found only small effects on permanency and length-of-stay for children who came into out-of-home care during the Waiver period, some demonstration counties reported that they had made particular efforts (and were likely to have achieved their best results) in two other areas: (1) finding permanent homes for children who had been in care for extended periods at the start of the Waiver, and (2) “stepping down” children in long-term congregate care, who were unlikely to find permanent homes, into more family-like and inexpensive settings. Thus the first task of the placement outcomes analysis (POA) in this evaluation period was to examine permanency and step-downs for children in long-term care at the beginning of the first Waiver period.

2.2.1 Evaluation Design and Key Questions

For the study of outcomes for children in long-term care at the beginning of the first Waiver period, the research questions were:

1. *Did the first Waiver lead to an increase in stable permanent living arrangements for children in long-term placements as of the start of the first Waiver period?*
2. *Did the first Waiver lead to an increase in the proportion of children in long-term congregate care who were able to transition to stable family-based care?*

To answer the first question, the evaluation team analyzed the experiences of children who had been in out-of-home care, for at least 1 year but not more than 5 years as of the reference date (defined below). Children in PPLA, children in independent living settings, children who were older than 17 and one-half as of the reference date, and Interstate Courtesy Cases (ICC's) were excluded from this analysis because permanency through court decisions was not expected for them.

Counties also reported that some children in long-term placements who were unable to achieve permanency might at least have been stepped down from congregate care into less restrictive settings. To answer the second question, the evaluation team analyzed the experiences of children who had been in care for at least 1 year but not more than 5 years as of the reference date (defined below), and additionally were in congregate care as of the reference date. Children older than 17 and one-half as of the reference date, children in independent living settings, and ICC's were excluded, but children in PPLA were included.

Further details of the methodology for this POA task are presented in Appendix B.

2.2.2 Activities and Progress

During this evaluation period, the study team identified target groups and completed the analysis. The reference dates used in the definition of treatment and comparison groups were *January 1, 1998*, and *January 1, 1993*. The evaluation team chose the January 1, 1998 reference date because it was effectively the start of the first Waiver period. The team chose the January 1, 1993 reference date to go back 5 years earlier than the start of the first Waiver period, for purposes of comparison. Based on these reference dates, the evaluation design incorporated one treatment group and three comparison groups as follows:

- The treatment group consisted of children in the demonstration counties at the start of 1998 (the beginning of the first Waiver period).
- One comparison group consisted of children in the comparison counties at the start of 1998.
- A second comparison group consisted of children in the demonstration counties at the start of 1993.
- A third comparison group consisted of children in the comparison counties at the start of 1993.

Table 2.6 summarizes the numbers of children in the treatment group and across all four groups for each of the two types of analyses (permanency and step-down).

Table 2.6: Numbers of Children in POA Analyses	
Permanency Analysis (excludes children in PPLA, children in independent living settings, children who were older than 17 and one-half as of the reference date, and ICC's)	
<i>All four groups:</i>	<i>N</i>
Children in long-term (1-5 years) placement	5690
Children who achieved permanency	2698
<i>Treatment group:</i>	
Children in long-term (1-5 years) placement	1768
Children who achieved permanency	810
Step-Down Analysis (excludes children who were older than 17 and one-half as of the reference date, children in independent living settings, and ICC's, but includes children who were in PPLA)	
<i>All four groups:</i>	
Children in long-term (1-5 years) placement in congregate care facilities	890
Children who experienced step-down or achieved permanency	317
<i>Treatment group:</i>	
Children in long-term (1-5 years) placement in congregate care facilities	221
Children who experienced step-down or achieved permanency	80

The analysis excluded children who had been in placement for more than 5 years as of the two reference dates. For the 1998 cohorts, these children were excluded to reduce the overlap between the 1998 and 1993 cohorts. For the 1993 cohorts, these children were excluded to make the cohorts comparable to the 1998 cohorts and also because the data were less reliable before the 5-year cut-off. On January 1, 1998, there were 1054 children who had been in placement for more than 5 years and these cases were excluded from the analysis, leaving 3014 children in the 1998 cohort (after the other exclusions noted in Table 2.6). On January 1, 1993, there were 755 children who had been in placement for more than 5 years and were thus excluded from the analysis, leaving 2883 children in the 1993 cohort (after the other exclusions noted in Table 2.6).⁶

2.2.2.1 *Permanency*

For the first research question:

- The team defined *stable permanent living arrangements* as exits to adoption, reunification, or guardianship, with no re-entry into out-of-home care⁷ within 1 year or prior to the child's 18th birthday, whichever is earlier.

⁶ Adding these for both cohorts gives a total N of 5897 (i.e., 3014 + 2883 = 5897). As noted in Appendix B, 86 children who were in adoptive homes were excluded from the analysis for technical reasons, as were children who did not have a full set of covariates. As a result, the analysis was conducted on the remaining 5690 cases rather than 5897.

⁷ Technically, we examine re-entry to care *in the same county*, as FACSIS data does not enable us to know whether the child subsequently went into care in another county.

- The exit must have occurred within 5 years of the start of the out-of-home care placement or before the child's 18th birthday, whichever was earlier.

As was shown in Table 2.6, the permanency analysis was based on 5690 children in all four groups, with 2698 achieving stable permanent living arrangements. The team defined a favorable outcome for these children as having an exit from placement to a permanent living arrangement within a limited time span, and then having that living arrangement be stable for an additional time span. Note that:

- The time span for exit from placement was generally within 5 years from start of current placement.
- For teenagers as of the cohort reference date, the target exit date was the earlier of their 18th birthday or 5 years from the placement start date. So, for example, if they were 17 and 5 months as of the cohort reference date, only 7 months were allowed to bring about an exit to a permanent living arrangement for it to count as a favorable outcome.
- The time span to assess stability was generally 1 year, but it was also capped by the child's 18th birthday.
- A living arrangement was considered stable unless the child was taken back into placement.

2.2.2.2 *Stable Step-downs*

For the second research question:

- The team defined *stable family-based care* as placement in a foster home, kinship care, or an adoptive home, with no disruption for a least a year except for positive events such as adoption or a move to an adoptive home.
- The children must have been stepped down into family-based care within 5 years of the start of the congregate care placement.
- “Kinship care” includes both non-licensed relative homes and non-licensed non-relative homes (such as godparents and other significant non-relative relationships).
- An “adoptive home” refers to paid care in the home of foster parents or other caregivers who intend to adopt but where the adoption process is still underway.

As shown in Table 2.6, the step-down analysis was based on 890 children in long-term placements in congregate facilities, with 317 experiencing stable step-downs. The team defined a favorable outcome for these children as having either a favorable outcome as defined for the first question or as having a transition from congregate care to family-based care within a certain time span and then having that arrangement either be stable or serve as a transition to an even more favorable living arrangement. Note that:

- As for the first question, the transition must have occurred within 5 years of the start of the current placement or prior to the child's 18th birthday, and the new arrangement must have been stable for 1 year or up to the child's 18th birthday, whichever occurred first.

- Having the child move from one foster home to another foster home within the 1-year period disqualified the placement from being considered stable.
- Changing kin providers or from foster parents to kinship care also disqualified the placement from being considered stable.
- Changing from foster care or kinship care to adoptive home was considered to be a stable placement. The reason for this was that an adoptive home is clearly an improvement. Moreover, available administrative records did not show whether a switch from foster care to adoptive home actually involved a physical move and new family or just a change in the administrative status of the same set of parents and home.

2.2.3 Findings

2.2.3.1 *Permanency*

In response to the first research question regarding permanency, the study team found that the Waiver's effect on the treatment group (i.e., the 1998 cohort in the demonstration counties), compared to all three comparison groups, is both positive and statistically significant (as further explained in Appendix B). Logistic regression produced an estimate of the Waiver's effect of 0.3417, which translates to an odds ratio of 1.4. An *odds ratio* is a measure of effect size; it is the ratio of the odds of an event occurring in one group to the odds of it occurring in another group. This result confirms demonstration counties' claim that one of their successful initiatives under the Waiver was to move children languishing in long-term placements into stable permanent living arrangements.

The effect of the Waiver also can be expressed as a counterfactual projection. Among the 1768 children in long-term placements in the demonstration counties as of the beginning of 1998, as shown in Table 2.6, 810 experienced stable permanent exits within 5 years of their placement start dates or their 18th birthdays, whichever came first. That was a favorable outcome rate of 46.2 percent. The evaluation team estimated that in the absence of the Waiver, this percentage would have only been 38.3 percent, meaning that 140 fewer of these children would have experienced this favorable outcome. Thus, as in the odds ratio analysis discussed in the previous paragraph, the counterfactual analysis found that the Waiver's impact on permanency was positive and increased the number of children who achieved stable permanent exits.

Because there was such wide variation in record-keeping practices across the counties (as revealed by the data audit), the study team judged that it would be helpful to make separate comparisons of the demonstration group to two comparison groups (the 1993 cohort in demonstration counties, and the 1998 cohort in comparison counties). This produces estimates of (1) an odds ratio of the differences between the 1998 and 1993 cohorts in demonstration counties only, and (2) the odds ratio of the difference between demonstration and comparison counties in the 1998 cohort. The first comparison estimated an odds ratio of 1.54, which was highly significant (p -value < 0.0001). In contrast, the second comparison estimated that the odds ratio between demonstration and comparison counties in the 1998 cohort was 1.14 and not significant (p -value = 0.4275). This indicates that the demonstration counties came up from weaker performance in 1993 to rough parity in 1998.

Other analyses (see Appendix B) showed that, among these children:

- The probability of achieving a stable permanent living arrangement decreased as child age and placement duration as of the reference date increased.
- Sexual abuse also decreased the probability of stable permanency.
- Girls fared better than boys.
- Children in PCC or in adoptive homes as of the reference date fared much better than children not on an adoptive track.
- Children in kinship care as of the reference date did worse unless they were in PCC, perhaps indicating that kin felt little pressure to adopt and caseworkers felt that kinship placements were in the best interest of the child.
- For children in the shortest placements as of the reference dates, Black children fared less well than the others, but that was reversed in the longest placements.⁸
- Children in large counties⁹ did worse in 1998 than in 1993, while the opposite was true in small counties.

2.2.3.2 Step-downs

In response to the second research question, the study team found some weak support for the claim that the Waiver contributed to stable step-downs for children. The estimated effect of being in demonstration counties in 1998 cohort was again positive at 0.5693, which translates to an odds ratio of 1.77. However, the p-value was slightly higher than 0.05, just missing statistical significance; thus although there was some evidence that the Waiver might have contributed to favorable outcomes, the team is less certain of this finding.

The counterfactual projection showed that among the 221 children in demonstration counties in the 1998 cohort, 80 experienced stable step-downs (as presented in Table 2.6), which gave a probability of 36.2 percent. The evaluation team estimated that in the absence of the Waiver, this probability would have dropped to 26.0 percent, meaning that 23 fewer of these children would have experienced this favorable outcome. Obviously, this was a small effect, but the step-downs probably brought substantial improvements in the quality of life for these children.

The team also estimated the differences between the 1998 and 1993 cohorts within demonstration counties, ignoring changes in the comparison counties. The estimated odds ratio was 1.12, which was not significant (p-value = 0.59). The estimated odds ratio between demonstration and comparison counties in the 1998 cohort was 1.55 and also not significant (p-value = 0.11). So the demonstration counties basically tread water from 1993 to 1998 with respect to stable step-down probabilities, while the performance in comparison counties deteriorated from 1993 to 1998. The difference between demonstration and comparison counties

⁸ Figure B.3 in Appendix B shows that before approximately 4 years of placement, non-Black children are less likely to experience stable permanent exits, but after 4 years Black children are more likely to experience stable permanent exits.

⁹ The large counties were Franklin, Montgomery, and Summit.

was not significant in either year, but the decline in the comparison counties was sharp enough to make the difference in change rates marginally significant.

For background information, other analyses showed that the probability of a stable step-down decreased nearly linearly as the children's ages increased – the younger a child was at the reference date, the more likely it was that the child would experience a step-down within 5 years. The probability was also very low for children with physical disabilities in the early part of their placements, but this gap gradually diminished with placement duration. In other words, the difference between children with disabilities and children without disabilities in the likelihood that they would experience a step-down within 5 years was the greatest immediately after the reference date; for children who had long placements in congregate care, physical disability was less important as a factor in placement duration than for children with shorter placements.

2.2.4 Summary and Next Steps

In summary, the major evaluation findings on Waiver effects were:

- During the first Waiver, demonstration counties were able to use the Waiver to move children languishing in long-term placements at the beginning of the Waiver into stable permanent living arrangements.
- There was some evidence that the Waiver might have contributed modestly to stable step-downs for children in congregate care.

The coming years of the Placement Outcomes study will not repeat the permanency and step-down analyses for the second Waiver – the same situation (i.e., a large number of children who had been in out-of-home care for extended periods of time at the start of the Waiver) will not exist, since the counties addressed this situation in the first Waiver. Instead, the evaluation will focus on two other topics. First, the study team will update one of the analyses conducted during the first Waiver: the examination of re-entry to care among children in their first placement. Still using data from the first Waiver, the re-entry analysis will be expanded in two ways: (a) the team will investigate re-entry 18 and 36 months after initial exit from care, and (b) the team will expand the analysis to look at not only re-entry from reunification but also re-entry after exiting to the custody of relatives and (if the data are adequate to support the analysis) to the custody of kin (called “guardianship custody to third party” in Ohio’s administrative data system).¹⁰

The second focal point for the Placement Outcomes study will be a new analysis of first placements. Using the same statistical techniques as we used in Year 5 of the first Waiver evaluation (HSRI, June 2003), we will examine exit types for first placements, length of stay for first placements, re-entry rates, and length of time between exit and re-entry. Having comparable data for the two Waiver periods, we will:

- ✓ Use the counterfactual approach as in Year 5 to examine Waiver effects for the second Waiver period;
- ✓ Compare effects between the first and second Waiver periods; and

¹⁰ The team will explore the counties’ use of this custody type and assess whether it was used consistently enough for inclusion in the re-entry analysis.

- ✓ Assess effects over both Waiver periods taken together.

The period of September 2002 through September 2004 was after the first Waiver ended but before the second Waiver had begun, and is referred to as the Bridge. During the Bridge, the counties were uncertain about whether the second Waiver would be implemented. Although they still operated under the first Waiver's capitation, they were not operating under the contractual terms and conditions. In addition, the strategies that became part of the second Waiver had not yet begun in most counties. Thus, due to these uncertainties, the Bridge period will be excluded.