

## COST ANALYSIS

A key aspect of the cost-benefit analysis is to explore variation in costs at the individual level. While the cost neutrality of the IV-E Waiver will be determined at a macro level—for the 19 wavier counties as a group—those costs represent the sum of the monthly maintenance and administrative costs for each child in licensed care. By and large, those individual costs are determined by caseworkers following agency practice standards that guide the caseworker in deciding whether a child should be brought into foster care and making the initial placement. These standards also guide decisions concerning the level of care, when to review the case, whether to move a child to a less restrictive level of care, and finally, when to petition the court to return a child to the custody of the family. In some instances, these standards are explicitly stated in law or regulation, but in others, caseworkers may exercise discretion according to local dictates.

Local agencies' standards and practices have a direct bearing on costs of care. These standards determine the array of available placements, ranging from kinship care to specialized congregate care facilities. They also provide guidance concerning the circumstances under which it is appropriate to consider moving a child to a less restrictive level of care. In addition to these internal factors, however, costs are also affected by external factors, such as the court system. Contention for court time could result in children remaining in placement authority for several months longer than might be necessary. The court also can order on its own—without intervention by the local social service agency—that a child should be placed in custody or that a child should remain in custody even though the child welfare agency believes otherwise.

Another external factor is the rate that a licensed facility charges. Some facilities, such as licensed foster homes, may be limited by regulation to a particular fee. Other facilities, such as group homes, may have flexibility in setting their rates and can raise rates according to what the market will bear. As a result, local child welfare agencies that rely on such facilities may be left with the option of paying the higher rates or moving all children currently housed in a facility to different living arrangements. Even if less expensive facilities are available, however, the disruption may not be in the best interest of the child. Therefore, child welfare agencies lacking placement alternatives may be vulnerable to significant price increases.

This section presents the findings of preliminary analyses of individual-level cost data. These data are drawn from the administrative computer system that tracks the payments for children in licensed care. The initial extract of data from that system contains 892,659 payment records for licensed out-of-home care that was provided between July 1991 and August 1999. Each

child in licensed foster care had at least one payment record for each month in care. In many instances, children had multiple payment records associated with a given month. These multiple payment records are associated with Title IV-E or Child Caring Institution (CCI) maximization.

As part of the analysis, the payment records were aggregated by child and by month. This sums the payment records for each child in a given month. The resulting aggregated file contains information on payments made for licensed care provided to 39,339 children in foster care. The payments total more than \$200,000,000. About half of these children had payments made on their behalf for eight or fewer months. Two-thirds of the children had payments made on their behalf for 15 months or less. Only 23 children had payments made on their behalf for all 109 months between July 1991 and August 1999.

**Licensed Care in North Carolina**

Exhibit 4.1 illustrates the number of IV-E children in licensed care between January 1996 and August 1999. As the figure indicates, the number of IV-E children in licensed care each month ranged between 4,475 and 4,575 from May 1996 through April 1997. There was an increase to slightly more than 4,700 in June 1997, and the number fell to 4,421 in July 1997, before returning the range of 4,475 and 4,575. The number of IV-E children in licensed care began falling in April 1998 and declined to 4,168 in December 1998. The number has since risen to approximately 4,400.

Exhibit 4.1: Number of IV-E Children in Licensed Care in North Carolina Over Time

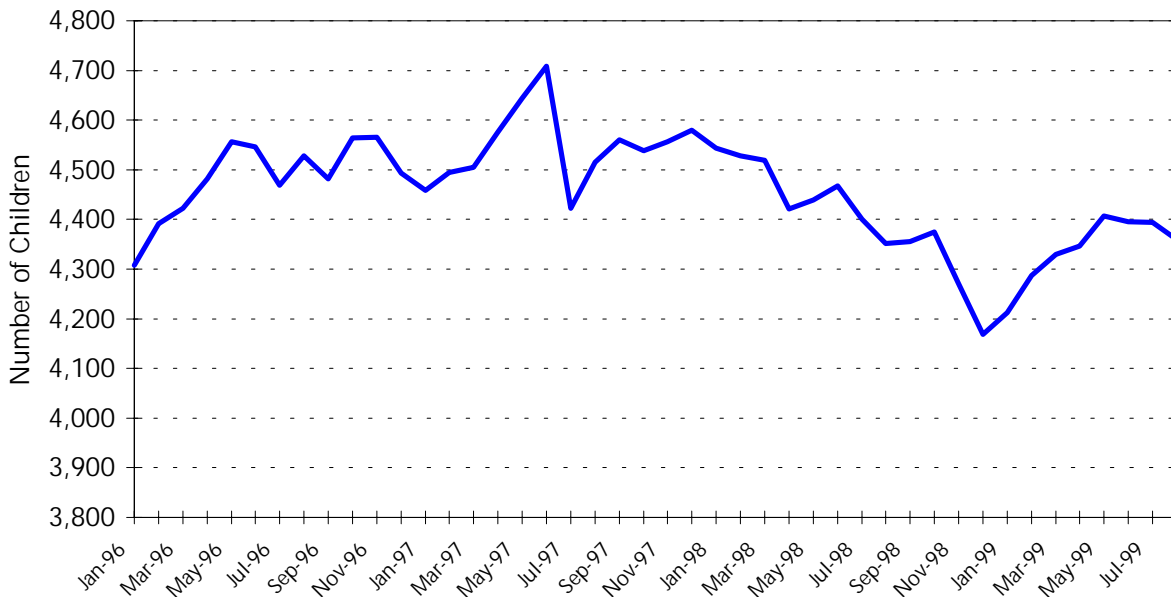


Exhibit 4.2 illustrates the average monthly federal cost for each IV-E child in licensed care. As the figure indicates, the average cost has risen slowly, but steadily over time, from \$534 in January 1996 to \$646 in August 1999. While there was a jump in the mean cost in July 1998—from \$576 in May to \$639 in July—the average cost fell to just under \$600 in August 1998 and subsequently continued its gradual rise. The changes in the number of children in licensed care illustrated in Exhibit 4.1 do not appear to be associated with the average monthly cost of care shown in Exhibit 4.2. Average monthly costs appear to be independent of the number of children in care.

Exhibit 4.2: Average Federal Monthly Cost for IV-E Children in Licensed Care in North Carolina

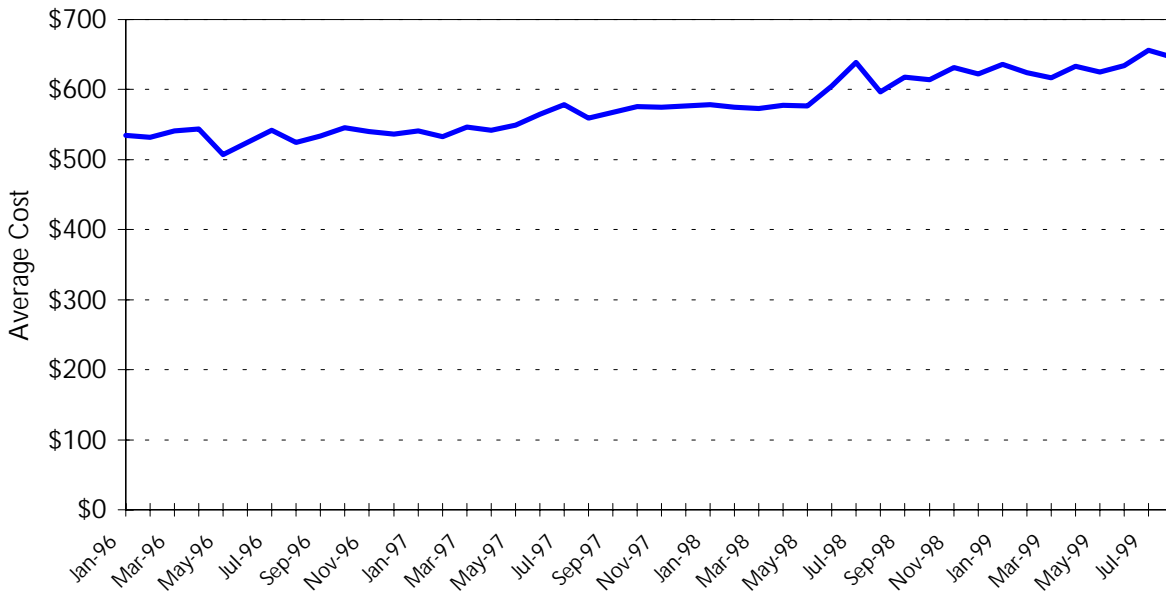
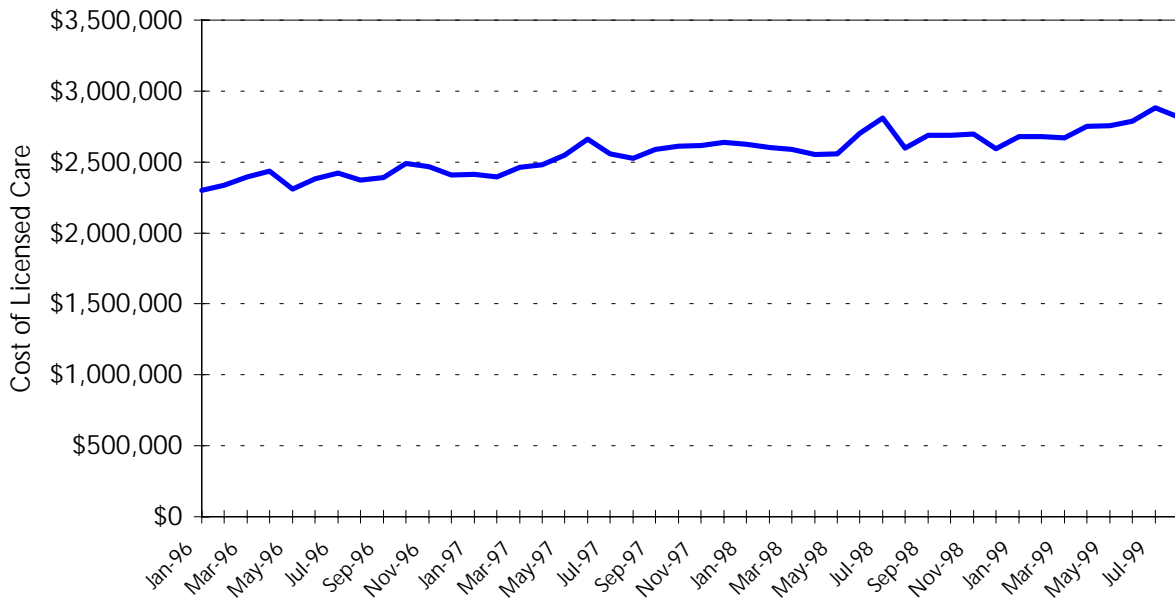


Exhibit 4.3 reports the monthly federal cost for IV-E children in licensed care in North Carolina. It shows that the monthly federal cost has risen from close to \$2.3 million in January 1996 to around \$2.8 million in August 1999. The change in total maintenance cost tends to follow the pattern of the change in average cost shown in Exhibit 4.2. It does not drop even though there was a decline in the number of children in licensed care. This means that the cost of care has continued to rise even though the number of children in licensed care has fallen. The rise in the total indicates that cost of a month in licensed care has risen at a higher rate than the offset resulting from the reduction in the number of children in care. The rate of growth in average cost has cancelled out any savings that would be expected due to a drop in the number of children in licensed care.

Exhibit 4.3: Monthly Federal Cost of IV-E Licensed Care in North Carolina



Total cost is a function of the number of children in care and the monthly cost for each child. There is no standard unit cost for licensed care. Instead, there is an array of rates associated with different facilities and differing levels of care. Total cost is the product of the number of children in licensed care at Rate A plus the number of children in licensed care at Rate B plus the sum of the products of the number of children in care at all the other rates. If the number of children in licensed care at each rate remains the same, the average cost of care will not change. If the number of children in care remains the same and the number of children provided licensed care at an expensive rate drops while the number of children provided care at a lower rate increases, the average cost will fall. The average cost is, thus, an indicator of the number of children in care at all the differing rates.

By the same token, total cost is the product of the number of children in care and the average cost of care. If the number of children rises, but the average cost remains the same, the total cost will rise. Similarly, if the number of children remains constant, but the average monthly cost rises, the total cost will rise. Total cost will decrease if either the number of children decrease or the monthly cost decreases.<sup>1</sup> If one factor increases while the other decreases, the impact on total cost will be determined by the difference in the rate of change between the two factors. If the number of

children falls at a higher rate than the increase in the monthly cost of care, the total cost will decrease. By the same token, if the rate of increase in the monthly cost is higher than the decrease in the number of children, the total cost will increase. This appears to have been the case in North Carolina between January 1996 and September 1999.

**Waiver and Comparison Counties**

Exhibit 4.4 shows the number of IV-E children from Waiver counties in licensed care over time. As the exhibit shows, the number of children in licensed care averaged more than 1,400 from January 1996 through June 1997. The number of children in licensed care from Waiver counties declined to 1,179 in December 1998 before rising to 1,289 in August 1999.

Exhibit 4.4: The Number of IV-E Children in Licensed Care from Waiver Counties Over Time

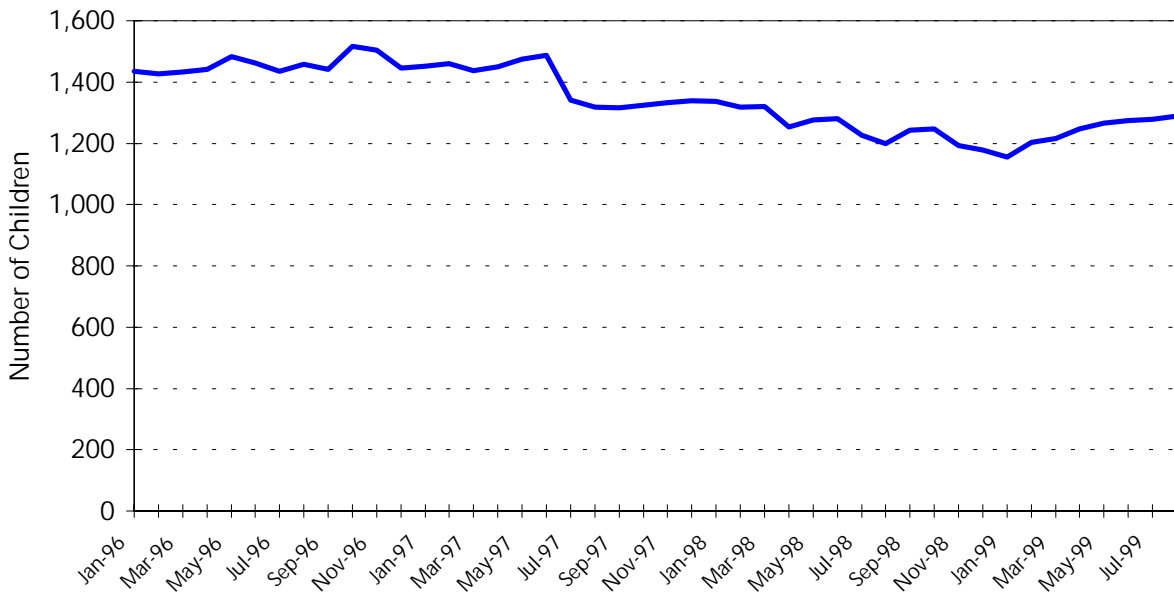


Exhibit 4.5 shows the average monthly federal cost for IV-E children in licensed care from Waiver counties. As the chart indicates, the average monthly costs ranged between \$485 and \$547 from January 1996 through March 1998. The average cost rose over the next several months. Between September 1998 through August 1999, the average cost of care ranged from approximately \$600 to \$640 per month.

<sup>1</sup> Total cost also will increase or decrease if the number of children and the monthly cost increase or decrease simultaneously.

Exhibit 4.5: The Average Federal Monthly Cost for IV-E Children in Licensed Care for Waiver Counties

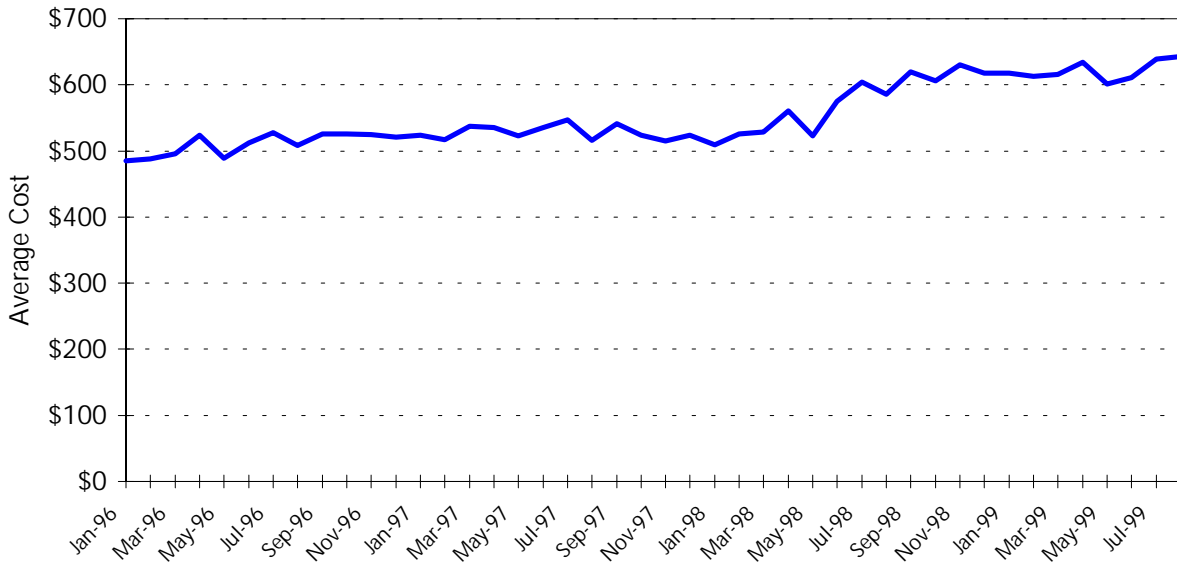
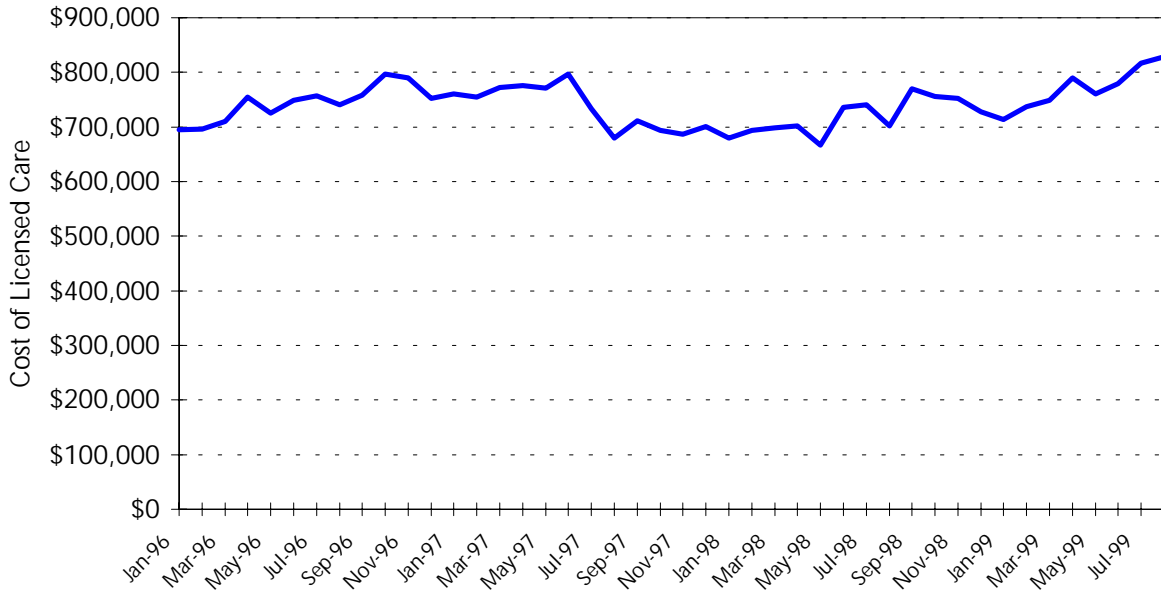


Exhibit 4.6 shows the total monthly federal maintenance cost for IV-E children from Waiver counties in licensed care. Measured in this way, the cost has remained somewhat steady over time, fluctuating between \$700,000 and \$800,000 per month. These costs have not shown a substantial decrease, even though the number of children in licensed care has declined, nor an increase, which might be associated with the increase in the average monthly cost of care shown in Exhibit 4.5. The increase in the monthly cost of licensed care appears to have been offset by the decrease in the number of children.

Exhibit 4.7 compares the number of IV-E children in licensed care from Waiver counties with the number from comparison counties. It indicates that the numbers of children in licensed care in Waiver and comparison counties were nearly identical in February 1997 (1,460 from Waiver counties, 1,466 for comparison counties). While the number of children in licensed care from Waiver counties began to fall several months later, the number of children from comparison counties began to rise. In August 1997, comparison counties had 250 more children in licensed care than Waiver counties (1,587 for comparison counties; 1,317 for Waiver counties). The number of children in licensed care from comparison counties began to fall in April 1998. At that time, there were 321 more children in licensed care in comparison counties than Waiver counties (1,575 compared to 1,254). The number of children in licensed care from Waiver counties also fell at about the same rate.

Exhibit 4.6: The Monthly Federal Cost of IV-E Children In Licensed Care from Waiver Counties



By November 1998, there were still 298 fewer children in licensed care from Waiver counties than comparison counties (1,192 compared to 1,490). In February 1999 the number of children in licensed care from Waiver counties began to rise while the number from comparison counties held somewhat steady. By August 1999, there were still 148 more children from comparison counties in licensed care than from Waiver counties (1,437 compared to 1,289).

Exhibit 4.8 shows the average federal monthly cost for IV-E children in licensed care from Waiver and comparison counties. As the chart illustrates, the average costs for Waiver and comparison counties are similar and have increased at about the same rate. The average cost for comparison counties dropped in mid-1998 and has remained below the cost in Waiver counties. In June 1998, the average cost for licensed care for children in Waiver counties was \$575 while the average cost for children from comparison counties was \$13 lower at \$562. Three months later, in September 1998, the average cost for children from comparison counties was \$60 less, \$560, compared to \$620 for Waiver counties. In August 1999, the average cost for children from comparison counties was \$52 less, \$590 compared to \$642 for Waiver counties.

Exhibit 4.7: The Number of IV-E Children in Licensed Care for Waiver and Comparison Counties

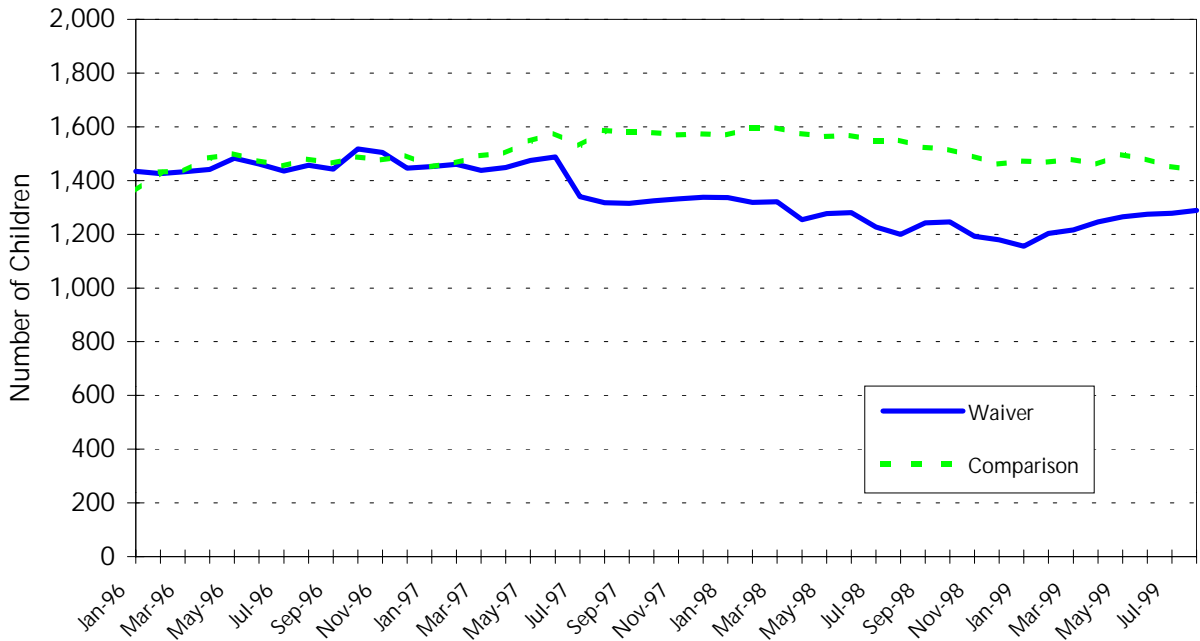


Exhibit 4.8: The Average Federal Monthly Cost for IV-E Children in Licensed Care for Waiver and Comparison Counties

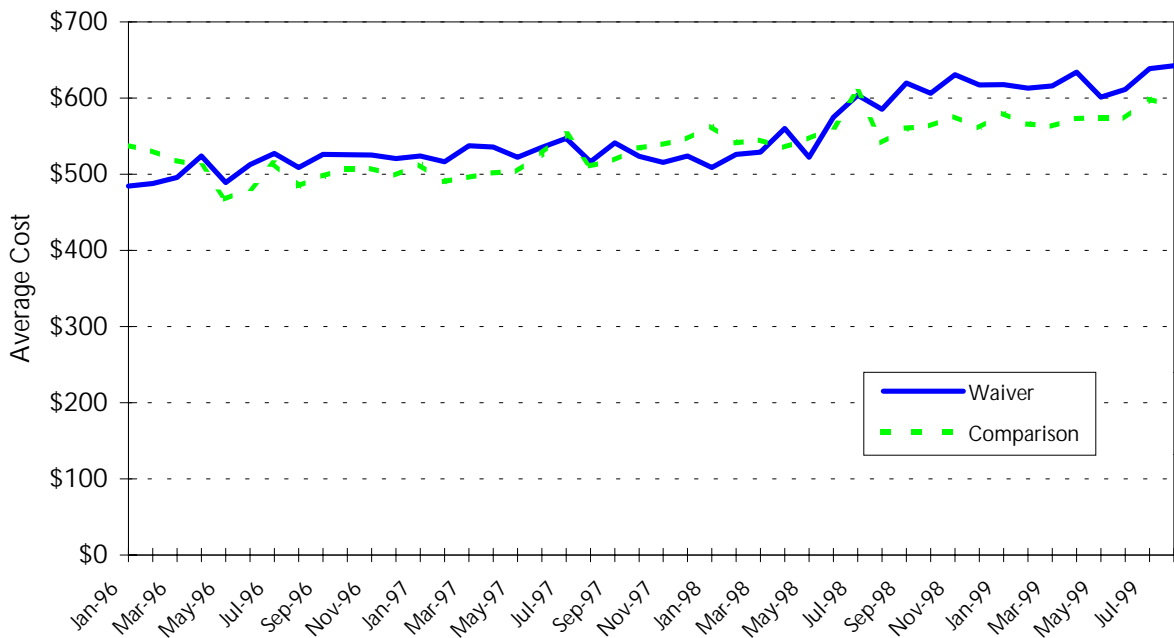
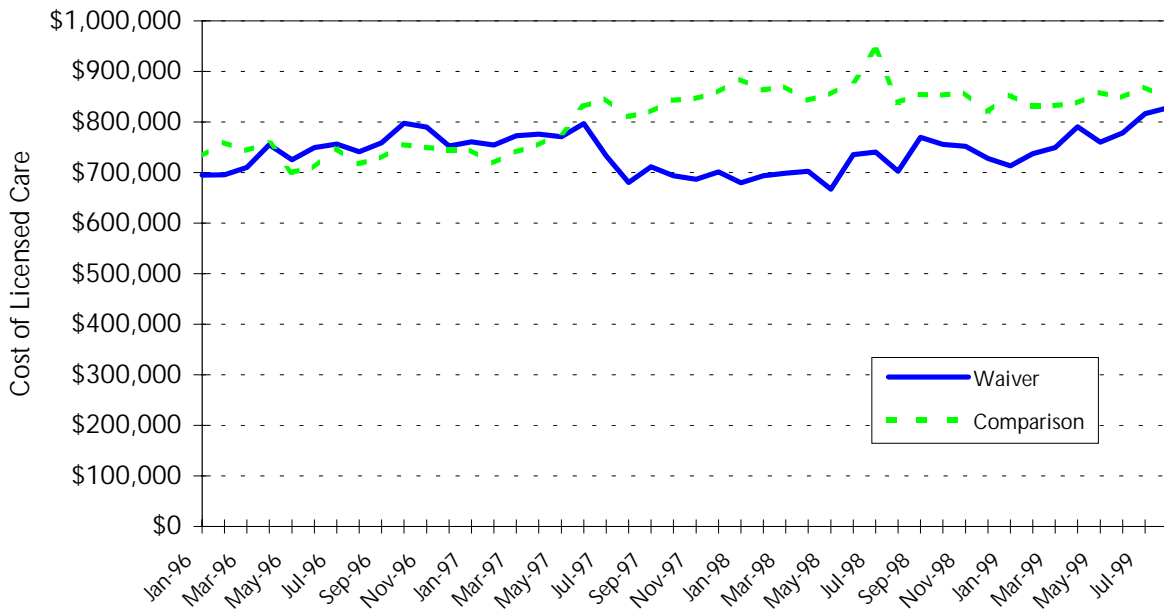


Exhibit 4.9 illustrates the federal share of the monthly maintenance cost for children in licensed care from Waiver and comparison counties. The monthly maintenance costs are relatively

similar from January 1996 through the first five months of 1997. In May 1997, the federal share of the maintenance for Waiver counties was \$770,652 while the share for the comparison counties was \$779,396. By July 1997, the federal share of the maintenance cost for Waiver counties was more than \$100,000 less than the cost for comparison counties. By November 1997, the cost for the Waiver counties was \$159,834 less than the cost for the comparison counties (\$686,579 compared with \$846,413). By July 1998, the federal share of the cost for the Waiver counties was more than \$200,000 less the cost for the comparison counties. By September 1998, the difference between the two was only \$84,355, \$769,839 to \$854,174. The difference in the federal share of the maintenance costs between the two groups of counties continued to fall through 1999. By August 1999, the maintenance cost for the Waiver counties, while still lower, was within \$20,000 of the cost for comparison counties.

The difference in the maintenance cost for licensed care for the two groups is a primary reason that the Waiver project is cost neutral. The sum of the maintenance cost for the Waiver counties is less than the sum of the maintenance cost for the comparison counties. While cost neutrality includes maintenance and administrative cost, the difference between the two sets of costs shown in Exhibit 4.9 is responsible for a large part of the cost savings observed by the Waiver group.

Exhibit 4.9: The Total Monthly Federal Maintenance Cost for IV-E Children in Licensed Care from Waiver and Comparison Counties



One reason that the costs for the Waiver counties are less than that for the comparison group is that from mid-1997 through at least September 1999 there were fewer children in licensed care in the Waiver counties. The average cost of licensed care for the two groups is almost the same (although the comparison counties did record a drop in the mean cost of licensed care in August 1998 and remained lower than the cost for the Waiver counties through September 1999). In spite of the difference in the average cost since August 1998, the Waiver counties have been able to maintain a lower overall federal cost for IV-E children in licensed care.

### Comparative Case Studies

The connections between county practice standards and costs are illustrated in the next three exhibits, based on the experiences of two counties. The counties, identified as County A and County B, were selected for several reasons. First, County A is the least cost-neutral of all counties in the Waiver in terms of maintenance expenditures. By the end of March 2000, County A's federal maintenance costs were more than \$800,000 above what they would have needed to be for the county to be cost neutral. County B was selected because it is located near County A. While the counties are not contiguous, County B has a similar economic base. Neither county is adjacent to a large metropolitan county. At the end of March 2000, County B's federal maintenance costs were cost neutral by more than \$280,000.

Exhibit 4.10 shows the number of IV-E children in licensed care in County A and County B. As the exhibit indicates, from January 1997 through March 1998, County A had from 50 to 60 children in licensed care each month (although the number of children in licensed care jumped to approximately 70 in June 1997). From January 1997 through January 1998 the number of IV-E children in licensed care each month in County B ranged between 60 and 70. From February 1998 through December 1998, both counties had about the same number of children in licensed care. From January 1999 through August 1999, county B had between 10 to 15 more children in licensed care each month than County A.

Exhibit 4.11 illustrates the average monthly federal maintenance costs for children in licensed care for County A and County B. It shows that the average cost for IV-E children in licensed care in County B ranged from about \$400 to around \$600 for most months. The average cost for County A ranged between \$600 to around \$800 from January 1997 through May 1998. In June 1998, the average monthly federal cost for licensed care almost doubled for County A, from \$746 in May to \$1,402 in June. Although the average cost fell in subsequent months, it ranged close to \$1,200 per month through March 1999. The cost dropped to near \$900 in June 1999, but rose again

Exhibit 4.10: The Number of IV-E Children in Licensed Care in Counties A and B

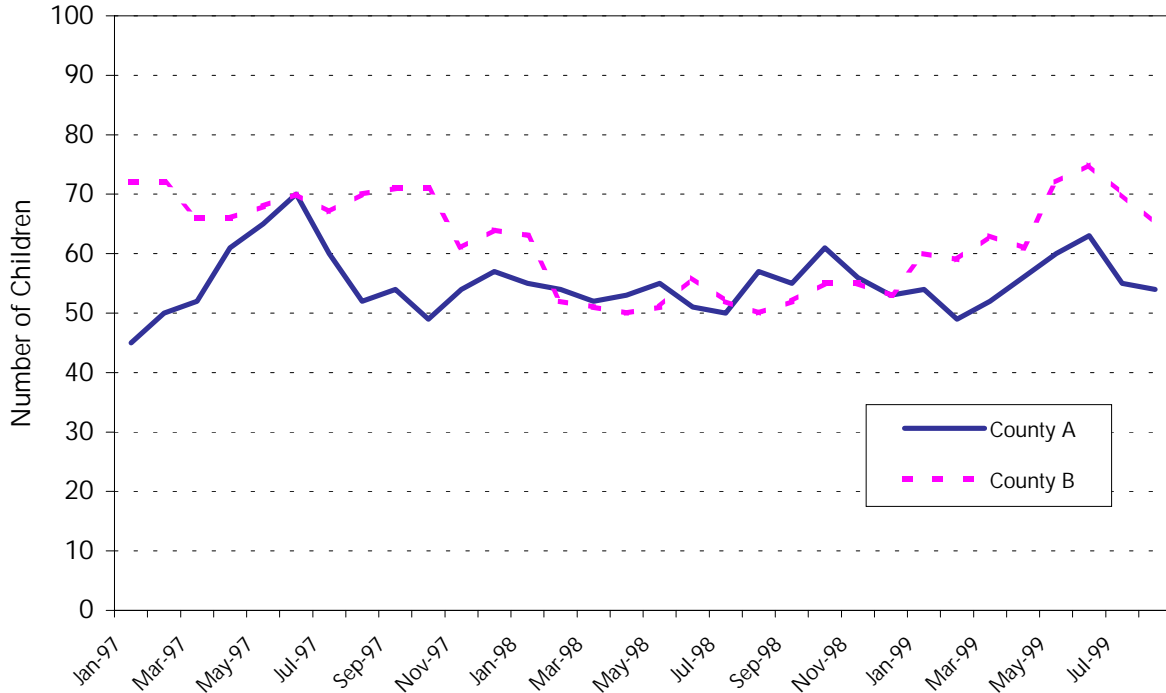
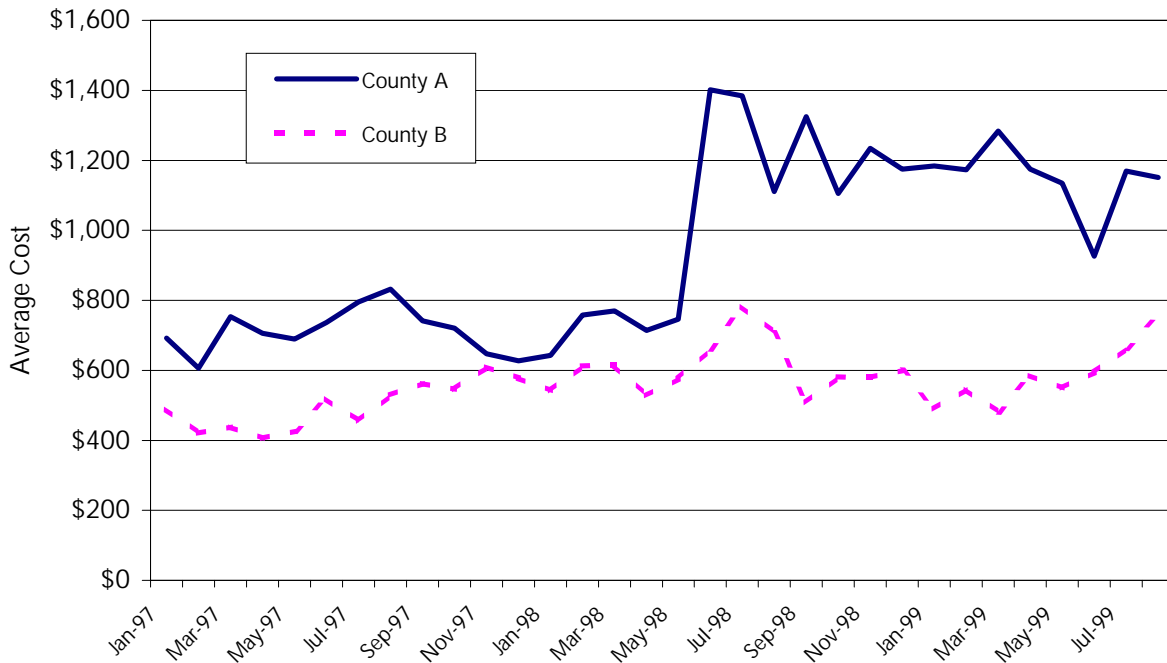


Exhibit 4.11: The Average Monthly Federal Cost for IV-E Children in Licensed Care for Counties A and B



to close to \$1,200 again by August 1999. From January 1997 through November 1997, the average cost for County B were between \$150 and \$250 per month less than County A. In December 1997, County B's average cost was \$49 less than that for County A.

The average cost for licensed care for County B also rose in 1998, but it did not rise as sharply as it did in County A. The average cost for County B was \$576 per month in May 1998. By July 1998, the average cost rose to \$783. In September 1998, County B's cost fell to \$508. County B's costs ranged between \$500 and \$600 through June 1999, when they began to rise again.

The rise in cost for County A is associated with an increase in the rates charged by child caring institutions (CCIs) or group homes. County A tends to rely on CCIs for foster care. A rise in these rates results in an increase in the average cost of licensed care. County B also uses CCIs for foster care, but to a lesser extent than County A. As a result, the increase in rates had a smaller impact on the average cost.

The impact of the cost increase by CCIs is also shown in Exhibit 4.12. This chart illustrates the total federal maintenance cost for licensed care for County A and County B. As it indicates, there was a sharp rise in the federal maintenance cost for County A associated with the CCI rate increase in June 1998. The exhibit also shows that the monthly maintenance cost for County B have tended to range between \$30,000 and \$40,000 per month. County B's cost have generally been less than those of County A. In fact, during the 32-month period covered by the chart, County A's costs have been less than County B's only four times. All four of those months occurred between January 1997 and January 1998, when County A's licensed care caseload was smaller than that of County B. The difference in maintenance cost is likely due to differences in county practice standards.

The difference in county practice standards is also shown in Exhibit 4.13. The table shows the number of children in foster care placed in non-family settings over time. As the data indicate, County A placed 15 children in non-family settings in 1995, while County B placed 40 children – more than twice as many--in non-family. Of the five years of data presented here, County B placed more than twice as many children in non-family settings than County A in three separate years. Only in 1999 did County A place significantly more children in non-family settings. Even though County B tended to place more children in non-family settings, they were able to keep the federal share of their average monthly costs lower than County A.

Exhibit 4.12: The Federal Monthly Cost for IV-E Children in Licensed Care for County A and County B

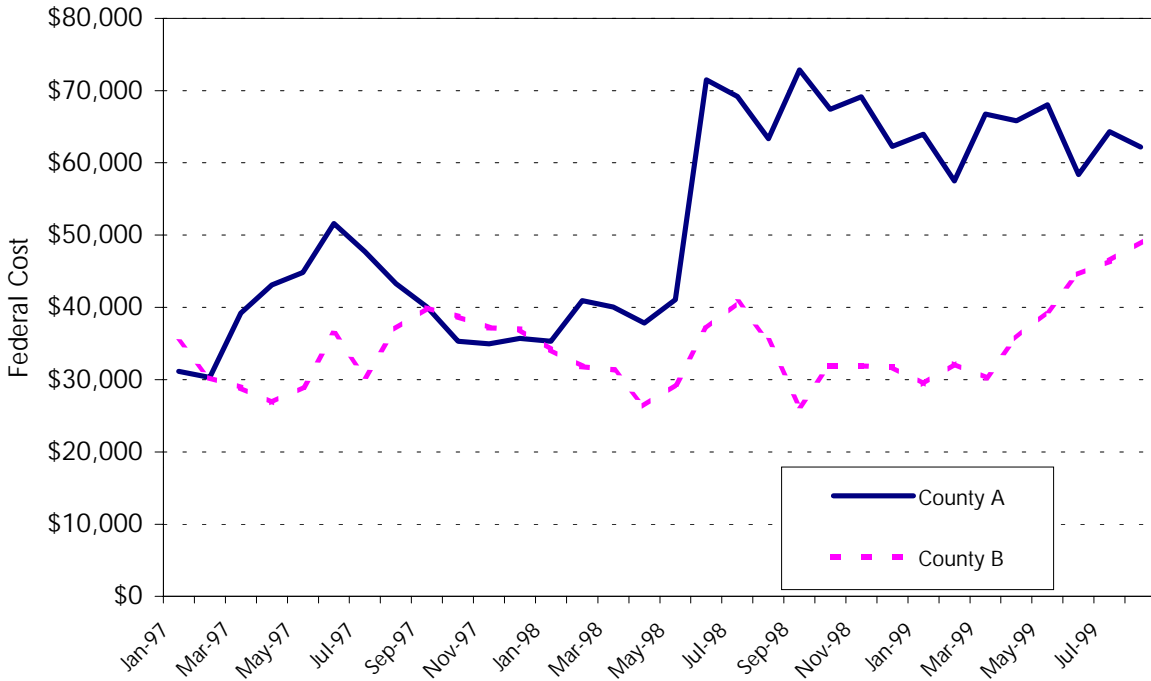


Exhibit 4.13: The Number of Children Placed in Non-Family Settings

Year	County A	County B
1995	15	40
1996	12	28
1997	16	17
1998	12	25
1999	38	17

One reason that County B has been able to keep its caseload and costs low is that its children tend to remain in licensed care for a much shorter length of time than County A. Exhibit 4.14 reports the median length of days children remain in licensed facilities for the two counties. Licensed facilities include licensed foster homes, group homes, CCIs, as well as other living arrangements. The number in parentheses indicates the number of children placed in licensed facilities. As the table indicates, both counties had similar lengths of stay in 1994, 186 for County A compared to 190 for County B. In 1995, the median length of stay increased to 249 days for County A, while it dropped to 75 days for County B. While the median length of stay for children from

County B more than doubled in 1997, the length of stay for that year is still less than County A. Also, across all five years, the median length of stay for County B is 117 days, compared to 313 for County A.

**Exhibit 4.14: Median Days in Licensed Facilities**

Year	County A (N)	County B (N)
1994	186 (48)	190 (96)
1995	249 (42)	75 (96)
1996	599 (35)	77 (78)
1997	313 (53)	194 (62)
1998	124 (26)	102 (76)
All Years	313 (218)	117 (415)

The table also indicates that County B places more children into licensed facilities than County A. In 1994, 1995, and 1996, County B placed at least twice as many children in licensed facilities as County A. In 1998, County B placed almost three times as many children in licensed facilities as County B. Because the children that are placed in licensed facilities by County B remain there for a shorter period of time, County B is able to maintain a total caseload close to that of County A. In other words, County B is able to provide services to about twice as many children over time, but that at any given time has only about the same number of children in licensed care as County A.

### Summary

What does the preliminary analysis of the individual level cost data indicate? First, it suggests that the decisions made by caseworkers concerning individual children can have a large cumulative effect on costs. The first decision is whether to place a child in foster care. Once the child is in foster care, the next decision involves placement. Kinship care—where a child is placed with a relative—may have no direct maintenance cost. Children placed in licensed foster homes or in assisted guardianship will have maintenance costs associated with them. Those costs, though, are small compared to maintenance costs associated with placing a child in a group home or other CCI.

The next decision made by the caseworker may concern how long the child stays in a particular living arrangement. Decisions to move children to less restrictive and therefore less costly situations reasonably should be driven by the needs of the child. Nevertheless, these decisions have important fiscal consequences.

The findings presented above indicate that external factors also affect maintenance costs. If facilities raise rates, maintenance costs will increase. There may be few options available when rates rise. One way to minimize the impact of this external factor is to modify the agency's practice standards. This involves evaluating the needs of the child on an ongoing basis and possibly minimizing the length of time the child remains in foster care. Another set of practice standards involves the types of facilities used. By having an array of facilities at different costs and varying levels of restrictiveness, maintenance costs may be less affected by external factors.