

DATA BRIEF: Allegheny County Child Welfare Home Removal Costs, 2012 Cohort

June 2015

During a crisis, a child or youth may be removed from home in order to ensure safety and well-being. The next steps can look very different depending upon the child's age, physical and mental health needs, and/or the availability of friends or family members to become a caretaker. As a result, home removals can vary in length of time, in the number and types of placements and in the level of care required. As these factors vary, costs associated with child welfare home removals can also differ considerably.

This brief examines the placement costs paid by the Allegheny County Department of Human Services (DHS) for child welfare home removals. It highlights a cohort of children and youth who were removed from home in 2012 and placed in an out-of-home care setting paid for by child welfare. The relationships between placement costs and a number of factors are considered, including the type of placement, the number of days spent in care, the child's age upon entry, and the relationship between first vs. subsequent home removals.¹

¹ An upcoming brief about out-of-home placement dynamics will explore in more depth the populations being served by specific placement types.

The following terms/concepts are used in this analysis:

Congregate Care: Out-of-home care in a non-family setting such as a group home or residential care facility

First Home Removal: The first-ever time a child is removed from home and placed into a child welfare placement

Foster Care: Out-of-home care by a trained caregiver in a family setting

Group Home: Out-of-home care in a facility-based, non-family setting

Independent Living: Out-of-home care for older youth transitioning from the foster care system; may be in scattered-site or semi-supervised apartments, clustered or supervised apartments, or shared homes

Intensity of Care: The level of care provided to a child in an out-of-home setting; care may be more or less intensive depending on a child's physical and mental health needs (and billed at different rates accordingly).

Kinship Care: Out-of-home care in a family setting with a relative or family friend

Residential Care: Out-of-home care in a large-scale, structured living facility in which youth may receive care from doctors, therapists, social workers and child care workers

Subsequent Home Removal: A home removal that occurs after a child has had one or more previous out-of-home child welfare placements

Analysis of the data revealed the following:

- Group home placements were the most expensive placements within 2012 home removals, costing approximately four times as much per day as kinship care.
- The average cost per day of out-of-home care tends to be higher as the child's age at entry increases.
- However, type of placement is an even stronger driver of cost than entry age. Since older youth are much more likely to be in the most expensive types of placement, their higher cost removals can be attributed, at least in part, to placement type.
- Subsequent home removals — during which a child is much more likely to be placed in a group setting than during the first removal — cost more per day than initial home removals. Subsequent removals accounted for about 31 percent of the total cost of all home removals in 2012.

COHORT DESCRIPTION

The cohort included 1,148 children and youth who were removed from home and placed in out-of-home care during 2012. Approximately 85 percent of the cohort experienced one home removal during 2012; the remaining 15 percent experienced two or more removals in 2012, resulting in 1,245 total distinct home removals. Of these 1,245 home removal episodes that occurred in 2012, 910 represented “first-ever” home removals for a child, while 335 were subsequent home removals in a child's service lifetime.

METHODOLOGY

All placement data in the report were extracted from the Allegheny County DHS Key Information and Demographics System (KIDS) child welfare database on January 16, 2015. Only those removals that occurred in 2012 are considered in this analysis; home removals that began in prior or subsequent years are not included. Cost data include only the DHS-paid placement costs of out-of-home care (costs of other services provided during home removals are not included). If a child/youth had more than one home removal in 2012, each removal was treated as a separate, independent event. For the purposes of this report, “home removal” refers to the period of time that begins when a child/youth is placed in out-of-home care and ends when the child/youth is returned home; one home removal may include stays in more than one placement or placement type.

At the time of the data extract, 88 percent of all children/youth removed from home during 2012 had returned home, and all cost information for these removals is final; the remaining 12 percent were still in out-of-home care when the data was extracted. Cost data for ongoing home removals reflect total costs at the time of the data extract; because future cost information for these removals is unknowable, their total costs are under-reported to the extent that they continue to remain in care beyond this analysis. Since all children/youth in the cohort were removed from home at some point in 2012, those still in care at the time of the data extract had been in care for a minimum of 24 months.

FINDINGS

Costs of Care at a Glance

The distribution of home removal costs and days in care is displayed in the table below (**Table 1**). In the table, a percentile indicates that a certain percentage of the population’s values fall below a given value, while the rest of the population’s values fall above it. For example, the 25th percentile for total costs was \$3,559. This means that 25 percent of the population had total costs below \$3,559, while the remaining 75 percent had total costs at or above \$3,559.

The median total cost for a 2012 home removal was \$17,159, with the average considerably higher at \$24,936. This discrepancy suggests that there are some much costlier outliers pulling up the average value. Among these outliers, the 30 highest-cost home removals in the cohort ranged from \$107,845 to \$236,890 to date, with an average of 808 child welfare paid care days at an average daily rate of \$172.91. (As mentioned above, since 12 percent of children/youth removed from home in 2012 remained in care as of January 16, 2015, their total removal cost and paid care days should be expected to rise as time goes on.)

TABLE 1: Distribution of Costs, Care Days and Per-Day Costs

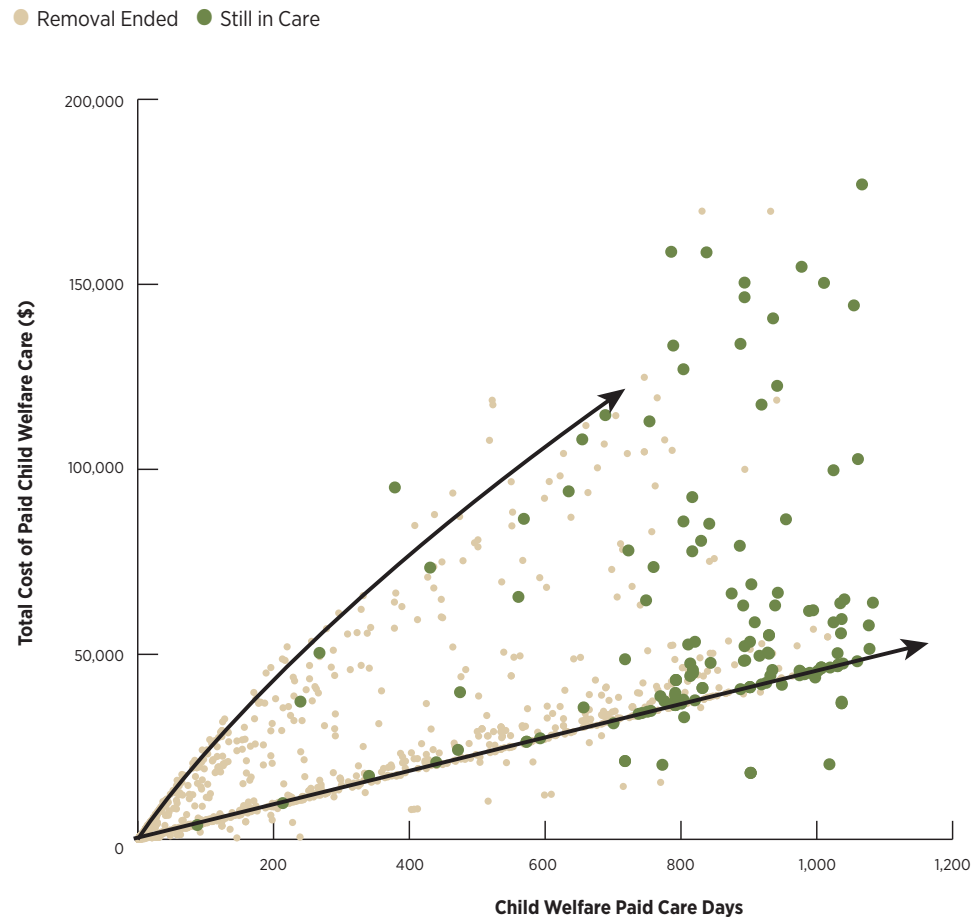
	TOTAL COST	TOTAL PAID CARE DAYS	AVERAGE COST/ CARE DAY
25th Percentile	\$3,559	37	\$45.75
Median	\$17,159	232	\$52.59
Average	\$24,936	342	\$98.00
75th Percentile	\$36,697	629	\$153.76

One challenge in attempting to define the “typical” cost of a home removal is the reality that many removals follow divergent trajectories, with very few looking like what a data average suggests. The chart on page 4 (**Figure 1**) illustrates this by plotting each removal by its number of care days and total cost.

In a hypothetical scenario in which the daily rate is the same for each child/youth and each day of care, **Figure 1** would show a positive linear relationship between days in care and total cost of care, i.e., as number of days increases so does total cost of care. Instead, there is a varied distribution that suggests other influential factors. There appear to be two primary trajectories for removal costs: removals that trace the lower line on the chart include placements in foster and kinship environments and with lower care-intensity levels, while the removals tracing more steeply upward include placements in group home settings and those with higher care-intensity required.

Figure 1: Each dot represents a home removal in 2012, plotted by number of care days and overall cost for that removal. The two arrows emphasize two main cost trajectories that are most frequent. Two home removals with higher-end costs were omitted to enhance chart legibility.

2012 Home Removals: Total Cost of Care vs. Paid Care Days



Variation by Age

Age is one factor by which costs associated with home removals tend to vary. As illustrated in **Table 2**, the cost for a removal trends upward as the age at time of removal increases. When costs are further analyzed by age, the median and average removal costs appear to have relative peaks for infants and pre-teens/teens, while children aged one through eight tend to have less costly removals. The age range with the highest median removal cost was nine-through-11-year-olds, who had a median total cost of \$23,394. This higher cost is due in part to the longer lengths of stay common in this age group (as **Table 8** will show). The 12-through-14-year-old age group had the highest average removal cost at \$31,151, with the average pulled up by congregate care placements and higher care intensities; the median removal cost dips for this age range due to an increased prevalence of home removals that last fewer than 60 days.

TABLE 2: Total Removal Costs by Age at Removal

AGE AT REMOVAL	25TH PERCENTILE	MEDIAN	AVERAGE	75TH PERCENTILE	MAXIMUM
Under 1	\$4,010	\$20,169	\$20,901	\$36,719	\$64,057
1-2	\$3,485	\$14,928	\$19,375	\$31,640	\$54,719
3-5	\$2,770	\$15,653	\$19,911	\$34,092	\$104,734
6-8	\$2,031	\$11,094	\$20,164	\$31,776	\$118,676
9-11	\$4,097	\$23,394	\$25,716	\$37,888	\$144,402
12-14	\$4,023	\$17,684	\$31,151	\$37,405	\$220,456
15-17	\$4,496	\$17,056	\$29,585	\$42,890	\$236,890

Table 3 shows total cost, care days and cost per day, subdivided by age at removal. A steady cost increase can be seen as age increases; by age 14, an average day in care costs around twice that of youth below age 10. The main driver of this cost increase is care type; national research has shown that placement type shifts sharply toward more costly group homes in teen years, and the same is true for Allegheny County.

TABLE 3: System Costs and Care Days, by Age at Removal

AGE AT REMOVAL	NUMBER OF HOME REMOVALS	TOTAL COSTS	TOTAL PAID CARE DAYS	AVERAGE COST/ CARE DAY
Under 1	168	\$3,511,442	70,576	\$49.75
1-2	142	\$2,751,262	57,352	\$47.97
3-5	158	\$3,145,898	63,984	\$49.17
6-8	116	\$2,339,074	40,677	\$57.50
9-11	105	\$2,700,217	44,903	\$60.13
12-14	190	\$5,918,722	58,892	\$100.50
15-17	352	\$10,403,524	87,724	\$118.59
18+	14	\$264,261	1,893	\$139.60
Total	1,245	\$31,034,400	426,001	\$72.85

Variation by Care Type

Although costs vary by age, age in itself does not seem to be the primary factor causing the variation once certain other factors are held constant; care type and care intensity appear to be more direct drivers, while costs across age groups stay fairly consistent within a given care type.

Table 4 shows the breakdown of individual care days and cost by care type — both in aggregate and broken down into average daily cost by age.²

² Most analyses in this brief aggregate child costs at the home removal episode level, but Table 4 further subdivides removals into their component individual placement days. A child's removal episode can sometimes span multiple placement types, and Table 4 computes average rates by care type using only the care days each child spent in placements of that care type.

Family settings like kinship care and foster care are encouraged when possible because they are less disruptive and more desirable than group home settings for children/youth. In addition to the benefits that family settings provide to children/youth, kinship and foster care also offer financial benefits to DHS. The roughly \$190 average cost for a day of group home care is about four times greater than the average cost for a day of kinship care, due, in part, to the finances needed to pay for the staff and facilities associated with non-family settings. Such stark cost differences between group home and family settings highlight additional benefits to the county's ongoing efforts at reducing group placements when possible.

TABLE 4: Average Rate per Day in Care by Age and Care Type, and Summary Statistics by Care Type

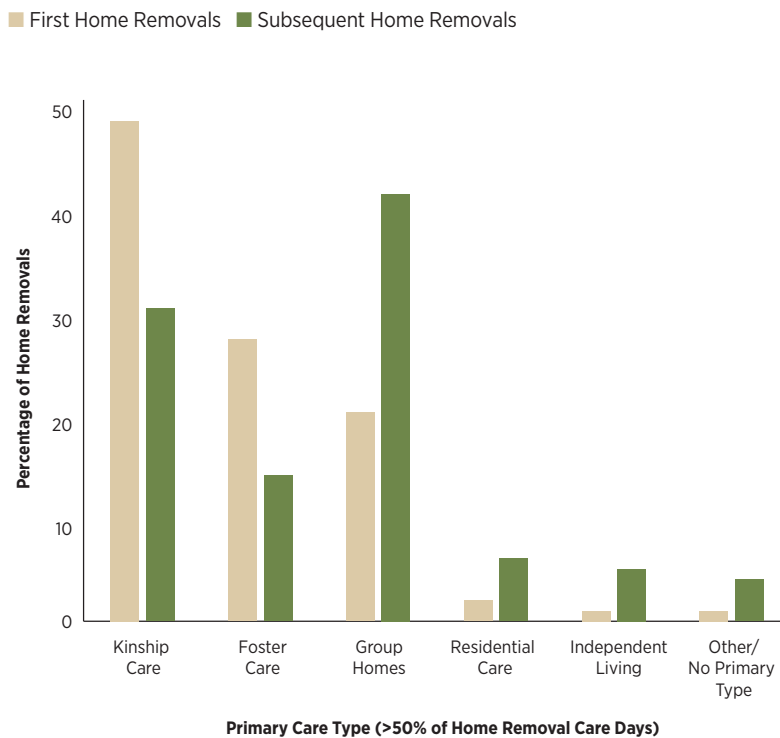
AGE AT REMOVAL	KINSHIP CARE	FOSTER CARE	GROUP HOMES	RESIDENTIAL	INDEPENDENT LIVING
Under 1	\$44.94	\$52.94	—	—	—
1-2	\$44.82	\$53.15	—	—	—
3-5	\$45.87	\$54.57	—	—	—
6-8	\$45.23	\$64.88	\$207.87	—	—
9-11	\$45.51	\$62.89	\$197.80	—	—
12-14	\$46.34	\$59.82	\$181.79	\$182.44	\$175.20
15-17	\$47.25	\$69.73	\$191.88	\$165.27	\$139.22
18+	\$47.29	\$57.77	\$196.41	—	\$113.92
Total Cost	\$10,376,925	\$6,661,838	\$10,548,205	\$2,004,497	\$1,378,692
Total Paid Care Days	226,982	117,706	55,732	11,585	9,904
Average Cost/Care Day	\$45.72	\$56.60	\$189.27	\$173.03	\$139.21

Subsequent Home Removals

While child welfare aims to return children and youth to their homes permanently whenever possible, subsequent removals³ are an occasional necessity. These subsequent home removals are more likely to result in placement in group homes than in more desirable settings such as kinship care or foster care. Out of all home removals in the year 2012, 910 were a child being removed from the home for the first time, while 335 were subsequent child welfare removals in a child’s lifetime service history. **Figure 2** shows the care type distribution of first home removals relative to subsequent home removals in terms of the primary placement care type during that removal episode (as defined by what care type was utilized for at least 50 percent of care days during that episode in care).

³ A subsequent home removal is any removal that occurs after a child/youth’s first-ever removal and exit from care.

FIGURE 2: Percentages of 2012 Home Removals by Primary Out-of-Home Placement Type



This reality of subsequent home removals more often ending up in group care is a large reason that care days during subsequent removals cost approximately \$19 more per day on average than first removals, as seen in **Table 5**, below.

In addition to costing more per day, subsequent removals accounted for a combined 31 percent of all child welfare removal costs in the 2012 entry cohort (compared to only 26 percent of all care days), as shown in **Table 5**. To the extent that re-entries into the child welfare system could be reduced, up to 31 percent of a given year's home removal costs might be prevented.

TABLE 5: Distribution of Care Days and Costs: First Removals vs. Subsequent Removals

REMOVAL TYPE	TOTAL PAID CARE DAYS	TOTAL COST	AVERAGE COST/DAY	PERCENT OF TOTAL CARE DAYS	PERCENT OF TOTAL COST
First Removals (n = 910)	314,239	\$21,346,757	\$67.93	74%	69%
Subsequent Removals (n = 335)	111,827	\$9,698,151	\$86.72	26%	31%
Total	426,066	\$31,044,909	\$72.86	100%	100%

Applying the distinction between first removals and subsequent removals to **Table 1's** breakdown of total costs, total care days and costs per day (as shown in **Table 6**), we can see that subsequent removals cost more, on average, in total and per day of care, despite seeming to have fewer care days — a further result of subsequent removals being more likely to happen in costlier group home settings.

TABLE 6: Distribution of Costs, Care Days and Per-Day Costs: First Removals vs. Subsequent Removals

	FIRST REMOVALS (N = 910)			SUBSEQUENT REMOVALS (N = 335)		
	TOTAL COST	CARE DAYS	COST/DAY	TOTAL COST	CARE DAYS	COST/DAY
25th Percentile	\$3,272	38	\$45.64	\$4,195	35	\$47.29
Median	\$15,799	242	\$52.02	\$20,688	215	\$89.38
Average	\$23,458	345	\$91.22	\$28,950	334	\$116.42
75th Percentile	\$35,457	632	\$136.24	\$41,476	594	\$168.79

Aggregate costs and care days for first home removals compared to subsequent removals can be slightly distorted since the population of the latter is inherently skewed toward older youth; however, when removal age is held constant, there are still substantive differences between the two groups. **Table 7** shows the differences in care days and costs between first and subsequent removals, broken down by the child's age at time of removal.

For most age groups, subsequent removals tend to be longer than first removals. For older youth, subsequent removals tend to cost more on average (due to the prevalence of group home

placements in that age range). Among 15-through-17-year olds, both average care days and average cost converge somewhat for first and subsequent removals, likely due to group home placements becoming prevalent in both of these categories.

TABLE 7: First vs. Subsequent Removals: Cost Differences within Age Groups

AGE AT REMOVAL	FIRST REMOVALS (N = 910)		SUBSEQUENT REMOVALS (N = 335)		CARE DAY DIFFERENCE (SUBSEQUENT MINUS FIRST REMOVALS)	COST/DAY DIFFERENCE (SUBSEQUENT MINUS FIRST REMOVALS)
	AVERAGE CARE DAYS	AVERAGE COST/DAY	AVERAGE CARE DAYS	AVERAGE COST/DAY		
Under 1	408	\$49.30	534	\$53.03	125	3.72
1-2	402	\$48.69	413	\$45.14	12	-3.54
3-5	399	\$50.01	429	\$45.96	29	-4.05
6-8	332	\$52.81	399	\$67.32	67	14.51
9-11	423	\$59.08	449	\$64.35	27	5.27
12-14	294	\$94.92	352	\$112.90	57	17.99
15-17	247	\$117.87	253	\$119.70	5	1.84

Note: 18+ age range removed due to insufficient data for comparison

CONCLUSIONS

These analyses demonstrate that there are significant differences in the costs associated with home removals. In addition to increasing with length of stay, costs vary alongside differences in age and care type — although the impact of age alone is minimal once care type is held constant. Group home settings were the most expensive within 2012 home removals, costing roughly four times as much as family settings. Subsequent removals also accrued relatively higher costs, driven largely by the increased use of group care in such removals.

Since many child welfare clients may be active in other service areas, further analyses could involve analyzing the costs of non-placement services. However, examining placement costs alone illustrates clear fiscal dynamics that are prevalent in the child welfare system, and points toward additional benefits of the system's ongoing efforts to reduce re-entries into care and the use of group home settings.

ANALYSIS AND CONTENT

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