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Residential Care for Youth in the Child Welfare System: Stop-Gap Option or Not?

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Abstract

This study provides national estimates for length of stay in residential care and examines within-group variability along salient predictors. Using data from the National Study on Child and Adolescent Well-Being, the sample included 254 youth with episodes in residential care. Descriptive analyses provided estimates for length of stay over the three-year study period. Negative binomial regression was used to examine the effect of predictor variables on length of stay. Results indicate that a minority of youth experienced short stays in residential care. Chronic health problems and a greater number of placements were associated with longer stays. Implications for practice and research are discussed.

Keywords

residential care; residential treatment; length of stay in care; child welfare; out-of-home care; negative binomial regression

Residential care¹ represents the highest level of care in the child welfare system's continuum of care. It is considered the most restrictive and most expensive form of child welfare services (Bates, English, & Kouidou-Giles, 1997) and fulfills a range of functions within the continuum of services for abused children (Baker & Calderon, 2004). Of the 408,425 children in child welfare out-of-home placements, about 15% reside in group

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¹In this article we use the generic term "residential care" to encompass residentially-based services such as residential treatment facilities and group homes.

homes or residential treatment facilities, according to the latest federal child welfare data available (U.S. Department of Health and Human Services, 2011). Cost, system of care philosophy stressing delivery of services within the least restrictive setting possible, and, more recently, increased emphasis on evidence- and community-based interventions have contributed to residential care placement being viewed as an adverse outcome (Fields & Ogles, 2002; Whittaker et al., 2006).

Extended stays in residential care are of particular concern. As a quality of care indicator, the duration of an episode raises questions about the validity of target outcomes, the overall effectiveness of residential care placement, the availability of alternative services, and the adequacy of child welfare placement monitoring procedures and policies (Lyons & McCulloch, 2006; McCurdy & McIntyre, 2004). However, countervailing arguments pose that efforts toward shortening residential care stays undermine necessary therapeutic processes that simply cannot be accelerated (Zimmerman, 1993) and may in fact increase the risk of subsequent admissions into higher level care (Case, Olfson, Marcus, & Siegel, 2007; Wickizer, Lessler, & Wickizer, 1999).

Lengthy stays in foster and residential care settings used to be common-place. In the child welfare system, little attention was paid to foster care drift until the passage of the Adoption Assistance and Child Welfare Act of 1980 (P.L. 96-272). As a result many children would linger in foster or residential care settings for years with no clear plan for discharge or permanency (Maluccio, 1988). Length of stay in residential care was also influenced by the primary therapeutic perspectives that shaped mental health service delivery. Until the emergence of managed care and system of care approaches, psychodynamic orientations dominated the mental health field (Leichtman, 2006). Emphasis was placed on the treatment process and the continuity and stability of the treatment milieu and its providers (Rosen, 1999; Wells, 1991). This presupposed extended treatment exposure, during which severe emotional problems such as intense negative transferences, chronic acting out, and personality disorders could be addressed.

The discussion whether residential care treatment should indeed be long-term treatment is not new (Bettelheim & Sylvester, 1948; Cohler & Friedman, 2004; Wells, 1991). Yet during the last two decades practice and policy in both child welfare and mental health systems have shifted significantly in favor of short-term family-focused care and evidence-based treatments delivered in the community (Farmer, Dorsey, & Mustillo, 2004; Whittaker et al., 2006). Arguments against long-term residential care have been made on clinical, empirical, legal, and ethical grounds (Burns & Hoagwood, 2002; Fields & Ogles, 2002; Leichtman, Leichtman, Barber, & Neese, 2001; Zimmerman, 1993). Many experts assert that residential care, if unavoidable, can only continue to be justified as a temporary intervention—a stop-gap solution for children who require behavioral and emotional stabilization and cannot be returned to their biological family or maintained in lower level care, that is, foster homes or kinship care (Barth, 2002, 2005; McCurdy & McIntyre, 2004).

A number of studies have investigated factors that predict residential care utilization (e.g., James et al., 2006; Wulczyn, Kogan, & Harden, 2003). However, relatively few studies have investigated length of stay specifically for residential care. The time a child spends in a particular residential care setting is in part dependent on the type of treatment facility, which may offer a short-term (e.g., DeSena et al., 2005) or long-term program (e.g., Landsman, Groza, Tyler, & Malone, 2001), and on contextual factors, such as policies and resources (Brown, Natzke, Ireys, Gilligam, & Hamilton, 2010). In some studies, average lengths of stays of one to two years in one residential care facility have been reported even for short study periods (e.g., Baker, Wulczyn, & Dale, 2005; Hussey & Guo, 2005). Such stays would not be considered short-term episodes. Beyond the type of residential care facility, a number

of different child- and family-level predictors (age at entry, race/ethnicity, parental substance abuse) have been inconsistently linked to longer stays in residential care. These factors appear to vary in part depending on the types of discharges from residential care, that is, whether youth were reunified, transferred to another placement or ran away (Baker et al., 2005). Presence of mental health problems appears to be the strongest and most consistent predictor of longer stays in residential care (Baker et al., 2005; Hussey & Guo, 2005). Despite considerable concerns about extended stays in residential care, there is indication from a few studies that longer stays in higher level settings may be predictive of positive outcome, such as better educational outcomes (Ringle, Ingram, & Thompson, 2010) and lowered risk of readmission (Lakin, Brambila, & Sigda, 2007).

Capitalizing on the availability of a national probability sample of children and families involved with the child welfare system (National Survey on Child and Adolescent Well-Being [NSCAW Research Group, 2002]), this study provides national estimates for length of stay in residential care facilities and examines within-group variability for length of stay along a range of predictor variables that have been found to be salient in the empirical and theoretical literature.

METHODS

The National Survey on Child and Adolescent Well-being was authorized under the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 (P.L. 104-193). It is the first national longitudinal study of its kind and examines the characteristics, needs, experiences, and outcomes of children and families referred to child welfare services (NSCAW Research Group, 2002).

Survey Design and Sample

NSCAW (NSCAW Research Group, 2002) used a stratified two-stage cluster sampling strategy to select 100 primary sampling units (PSU) from a national sampling frame, with the probability of PSU selection proportional to the size of the PSU's service population. Of the 100 PSUs identified by the sampling strategy, the NSCAW study ultimately collected child-level data in 92 PSUs representing 96 counties in 36 states. In participating counties, children were randomly selected from among the population of children, ages 0–14, for whom an investigation of abuse or neglect had been opened by the child welfare system during a 15-month period beginning in October 1999. The final NSCAW sample included 5,501 children. The NSCAW sampling strategy generates national estimates for the full population of children and families referred for child welfare services. Approval for this study was given by the U.S. Office of Management and the Budget and the Institutional Review Boards (IRB) of the Research Triangle Institute, University of California at Berkeley, Children's Hospital in San Diego, and numerous state or county IRBs representing PSUs involved with the study.

Survey Procedures

Field representatives conducted face-to-face interviews with youth, biological parents and/or foster caregivers, and caseworkers over five waves (baseline, 12 months, 18 months, 36 months, and 59–97 months). All data were directly entered into laptop computers. Field representatives participated in 12 days of training, including specific interview content and procedures for conducting effective interviews with diverse study respondents. They also completed certification exercises with regard to mastery of data collection procedures at the end of training.

Current Analysis

The current analysis is limited to the 36-month period that encompassed Waves 1 through 4. It reports on youth, two and older, who spent any time in residential care settings² and for whom Wave 1 and 4 behavioral data were available. Our final study sample included 254 youth, which constitutes 19.3 percent of the out-of-home care cohort in the NSCAW sample (NSCAW Research Group, 2002).

Variables and Measures

Length of stay—The dependent variable was operationalized in two ways: (a) overall length of stay in residential care settings throughout the study period; and (b) longest stay in one residential care facility. All models were run separately with each dependent variable.

Child sociodemographics—Children's age, sex, and race/ethnicity were collected as part of the initial case identification procedure and were confirmed through caregiver and child welfare worker interviews.

Maltreatment history—Child welfare workers identified the types of suspected maltreatment using a modified Maltreatment Classification Scale (Manly, Cicchetti, & Barnett, 1994). Out of this variable, NSCAW (NSCAW Research Group, 2002) constructed a variable that identified the primary type of maltreatment identified. Categories include: (a) physical abuse; (b) sexual abuse; (c) failure to provide care; (d) neglect/abandonment; and (e) other abuse.

Family risk assessment—This variable is a composite score of the initial assessment of 21 risk items, used in the determination of case decisions, including prior history of abuse or neglect, caregiver substance abuse, domestic violence in the home, caregiver mental health problems, poor parenting skills, excessive discipline, and so forth. A family risk rate was developed to capture the proportion of total risks present during the investigation for each family.

Behavior problems—The Child Behavior Checklist (CBCL) (Achenbach, 1991) was used to estimate baseline emotional and behavioral problems in the clinical range for youth. Two caregiver report forms of the CBCL were used: one for children ages 2–3 years and another for children ages 4–18 years. Children falling at or above the clinical cut-point (T 64) on internalizing and externalizing problems were categorized as having clinically significant levels of need.

Developmental functioning—Risk for developmental problems was assessed using several standardized measures for different age residentials. The Preschool Language Scale (PLS- 3) (Zimmerman, Steiner, & Pond, 1992) was used to assess language delay; cognitive delays were assessed by the Battelle Developmental Inventory (BDI) (Newborg, Stock, Wnek, Guidubaldi, & Svinicki, 1984) for children younger than 4 years and by the Kaufman Brief Intelligence Test (K-BIT) (Kaufman & Kaufman, 1990) for children 4 years of age or older; adaptive functioning delays were determined by the Vineland Adaptive Behavior Scale-Screener (Sparrow, Balla, & Cicchetti, 1984), a standardized measure that assesses the child's competence and independence in his/her daily living environment. Children were classified as "delayed" if they scored 2.0 standard deviations or more below the mean on at least one standardized measure in any of the three developmental domains measured: language, cognition, and/or adaptive behavior. We chose the cut-off point of 2.0 standard

²Defined as placement in group home or residential treatment facility.

deviations below the mean as this level of delay would warrant further evaluation of a child's developmental status in a number of states with early intervention or special education services.

Health status—Information about chronicity of children's health problems was obtained from caregivers. They were asked the following question: Does the child have any health problems that last a long time or come back again and again?

Number of placements—In the NSCAW study (NSCAW Research Group, 2002), placement into out-of-home care was defined as any removal from home with at least one overnight stay. To be counted as a placement change, the child's physical location of residence needed to have changed. Hence, if the child fled placement for several days but was returned to the same residence, no placement change would have been recorded. By contrast, if the child was placed into a shelter or detention, then a placement change would have occurred.

Days in out-of-home care—The total number of days in out-of-home placements was calculated.

Urbanicity—This dichotomous variable indicates a children's place of residency within a PSU based on a classification of a geographic area by population size and density. Consistent with Census Bureau definitions, urban was defined as greater than 50% of the population living in an urban area.

Insurance type—Insurance information was obtained from the caregiver interview. Our variable included three categories: Medicaid, private insurance, or no insurance.

Analysis

To estimate the relationship between predictors and longest stay in residential care, we used negative binomial regression. Negative binomial regression, like Poisson regression, is an appropriate analytic method when modeling count data (Gardner, Mulvey, & Shaw, 1995). Both methods fall into the larger category of generalized linear models and are based on maximum likelihood estimations (Dobson, 1990). They have the advantage of being precisely tailored to the discrete, often highly skewed distribution of count data. Using traditional general linear models in such instances could lead to biased statistical inferences (Long, 1997).

For this study, models were first run with Poisson regression using STATA version 9 with models being run for "overall length of stay in residential care settings" and "longest residential care episode." Covariates included sociodemographic characteristics (gender, age, race/ethnicity), placement considerations (primary type of maltreatment, family risk factors), clinical characteristics (externalizing behavior problems, internalizing behavior problems, chronic health status, developmental problems), placement factors (psychiatric hospitalization, number of placements), and resource factors (urbanicity and insurance type). To adjust for the varying lengths of time in care for each child, "total length of stay in out-of-home care" was integrated into the equation through the OFFSET model option.

The basic Poisson regression model is based on several assumptions, one being that the conditional mean of the outcome is equal to the conditional variance. The equality of the mean and the variance is known as equidispersion. This assumption is seldom met in practice with the conditional variance frequently exceeding the conditional mean, a condition called overdispersion (Gardner et al., 1995; Long, 1997). Overdispersion does not

affect the size of the coefficients, but it leads to underestimation of the standard errors and overestimation of *chi*-square statistics. Over- or underdispersion is detected using the deviance fit estimate and Pearson *chi*-square divided by the degrees of freedom. Values greater than 1 indicate overdispersion, that is, the true variance is bigger than the mean. When this is the case, the Poisson distribution is an inadequate fit, and other methods such as negative binomial regression, which can account for variation greater than Poisson and is based on the negative binomial distribution, are indicated. For this analysis, goodness-of-fit statistics for Poisson regression models showed that the ratio between the Pearson *chi*-square statistics and the degrees of freedom was far larger than 1. We subsequently ran the models with negative binomial regression. The Goodness-of-Fit statistic approached 1, indicating adequate fit.

Wave 4 weights adjusted for attrition between Waves 1 and 4 and were constructed to represent the original target population based on data from study participants present at Wave 4. Standard errors for percentages and other parameter estimates reflect the clustering of cases within counties. Unless otherwise indicated all data in text and tables in this article are weighted.

RESULTS

Sample Description

Table 1 presents the characteristics of the study sample. Boys made up more than 60% of the residential care sample (62.2%). The average age was 10.4 ($SE = 0.7$). Close to half of the sample were Black (46.5%), 38% White, 11.6% Hispanic, and 3.8% of other racial/ethnic origin. With regard to primary maltreatment type, 39.9% of youth had been referred for physical abuse, 10.5% for sexual abuse, 10.4% for failure to provide, 33.7% for neglect/abandonment, and 5.5% for other types of maltreatment. The mean risk score at the time of assessment was 0.4 ($SE = 0.3$). Close to 40% (39.2%) were classified as experiencing internalizing behavior problems and 62.1% were classified as experiencing externalizing behavior problems in the clinical range. About one-fifth of the sample (19.6%) presented with developmental problems, and 38.1% experienced chronic health problems. Several variables described the placement experience of the youth. Youth experienced an average of 4.3 placements in various out-of-home care settings ($SE = 0.42$). This included an average of 2.6 family-based placements ($SE = 0.3$) and 1.7 ($SD = 0.1$) residential care placements. Thirteen percent (13.3%) experienced psychiatric hospitalizations over the course of the four waves. Sixteen percent of youth came from rural communities; 83.1% received Medicaid, 14.5% had private insurance, and 2.4% had no insurance.

Variables, which had a statistically significant and positive association with longest stay in residential care, included total number of placements and number of days in out-of-home care. For the longest stay in a single residential care setting, chronic health problems were also a significant predictor.

Lengths of Stay in Residential Care

Of the 254 youth in the residential care sample, 59% experienced one residential care episode over the course of the four waves. Over one quarter (27.5%) had two episodes, and about 11% experienced three to four episodes in residential care. The remaining 3.3% stayed in 5 to 11 different residential care facilities. The mean number of days across all residential care stays was 335 days ($SE = 33.6$). Table 2 shows that about one-third of youth spent up to half a year in residential care settings, another third from one-half to one year and the final third between one to three years. With regard to the longest stay in one residential care setting, the mean number of days was 270.8 ($SE = 23.8$). Slightly more than one-third of

youth spent up to half a year in one residential care facility, 45% were placed in one facility between one half to one year, and the remaining 19% spent between one to three years in one facility. Of the 254 youth, 23.9% were reunified by the end of the study period. The remaining youth resided in a range of different settings.

Multivariate Findings

Negative binomial regression was used to estimate the relationship between predictors and longest stay across residential care settings as well as maximum stay in one residential care setting. The predictor variable “insurance type” was excluded from multivariate analysis due to very small cell sizes for some categories and resultant large confidence intervals. Given overlapping and sparse multivariate findings only the model for longest stay in one residential care setting is presented (see Table 3). Two variables were statistically significant in the multivariate context. Children with chronic health problems had a 3.37 rate ratio increase in length of stay in one residential care setting. Additionally, a one unit increase in number of placements was related to a 2.44 times rate ratio increase in length of stay in one residential care facility. None of the other variables, including behavioral indicators, were associated with length of stay in residential care at a statistically significant level.

DISCUSSION

This study used national data to derive estimates of length of stay in residential care for a subsample of youth who experienced stays in residential care settings. It was motivated by questions about the average lengths of stay in the context of continuing discussions about the role of residential care in the placement and treatment of children in the child welfare system. While children from all primary child-serving systems (mental health, child welfare, juvenile justice) enter residential care settings (Garland, Hough, Landsverk, & Brown, 2001), this study specifically focused on children placed by the child welfare system. This group of children makes up a large proportion of the population of youth in residential care settings (National Center for Juvenile Justice [NCJJ], 2008; Pottick, Warner, & Yoder, 2005; U.S. Department of Health and Human Services, 2011). Furthermore, there is indication that 75% of youth who are still in out-of-home care by the time they are 17 will have experienced residential care episodes (McMillen et al., 2004).

Descriptive results of the current study show that only about one quarter of youth with episodes in residential care settings experienced what could be called short-term stays. While there is no clear delineation between short-and long-term residential care programs, “short-term” under managed care generally implies three months of treatment or less (Leichtman et al., 2001). In the residential care literature, programs lasting less than nine months often describe themselves as short-term (James, 2011). For instance, the Stop-Gap residential treatment model, developed by McCurdy and McIntyre (2004), was described as short-term, lasting no longer than 150 days, but “the shorter the better” (Zakriski, Wright, & Parad, 2006). Altogether, slightly more than one-third of youth in our study experienced stays of up to 180 days in residential care settings, and the longest stay in one setting lasted up to 180 days for slightly less than one-third of the youth. Thirty-two percent and 45% of youth, respectively, stayed in residential care settings between half a year to one year or in one particular residential care setting. Moreover, within the three-year study period one third of youth spent between one to three years in residential care settings and about 19% spent that time period in one setting.

What determines the length of a stay in a program? Similar to the few studies in this area, this study examined sociodemographic, need, placement, service use, and resource factors. Our findings reveal that only two variables—presence of chronic health problems and number of placements—were associated with longer stays in care. The odds of staying in

residential care an additional day increased threefold with the presence of chronic health problems. The strongest predictor of longer stays in care was the number of out-of-home placements. Number of placements is a variable that has been much discussed in the child welfare literature (e.g., Aarons et al., 2010; James, 2004). While the relationship between placement instability and residential care utilization is not surprising, the directionality of effects remains unclear. A prior analysis showed that many children experienced multiple placement changes after their first placement into a residential care setting, not before (James et al., 2006). Surprisingly, none of the behavioral functioning variables explained variability in length of stay. This is counter to findings from some other studies (e.g., Baker et al., 2005; Hussey & Guo, 2005), which have found emotional and behavioral difficulties to be related to longer stays in care. Reasons for the lack of this finding in our study are unclear. Placement disruptions are often seen as a proxy for behavior problems, and there is evidence of bi-directional effects between the two variables (Aarons et al., 2010; Newton, Litrownik, & Landsverk, 2000). We ran follow-up analyses to assess whether behavior problems and number of placement changes functioned as confounders, but that was not the case. Another interpretation is possible. Other studies in this area have been based on regional samples, and samples are often drawn from one residential care facility (e.g., Baker & Calderon, 2004; DeSena et al., 2005). In contrast, NSCAW (NSCAW Research Group, 2002) captures a national sample that reflects the heterogeneity of the child welfare population placed in various residential care settings, which have different functions and serve youth with a range of characteristics and problems. Across multiple programs nationwide, mental health problems may play less of a role in determining length of stay; instead, other variables may be more important. This would be in line with findings from some studies, which have found that placement decisions, including residential care placement, may be based on factors that often have little to do with a child's clinical needs (James, 2004; Lee, Shaw, Gove, & Hwang, 2010). In addition, there is some evidence that children in residential care settings are not always significantly different from children who are placed in family-based out-of-home placements (e.g., James, Roesch, & Zhang, 2011; Lyons, Libman-Mintzer, Kisiel, & Shallcross, 1998).

Length of stay in residential care may in part be determined by a program's treatment elements and objectives. However, residential care program-level characteristics are largely unmeasured in the literature, including this study. Practitioners often talk about "working the program," suggesting that to be successful a youth would have to complete the steps or elements of a treatment program. A recent review of prominent treatment models in residential care (James, 2011) showed that these models were more or less well specified. All defined essential or core elements and the treatment format in which these elements ought to be delivered. While all programs shared objectives, target goals to be accomplished while enrolled in the program varied somewhat depending on the focus and theoretical orientation of the program. All programs were designed to be completed within a year or less, with the Stop-Gap Model being the most short-term program. This means that the inherent design of a residential treatment program, which has been developed with particular goals in mind as well as timelines during which these goals can be accomplished, may in part determine how long a youth stays in the program. Traditional residential programs, which were often shaped by psychodynamic conceptualizations, generally aimed to address problems that were believed to be the result of early trauma and longstanding intrapsychic conflict (Leichtman, 2006). Separation from the biological family was sometimes seen as a necessary ingredient to resolving these conflicts, and by design, youth often spent years in such programs. Short-term programs tend to be more skills and behavior-oriented and have aims that are meant to be accomplished in a much shorter time period. In the case of the Stop-Gap model mentioned earlier, objectives include stabilization through a structured and skills-oriented environment, reduction of the most serious behavior problems through intensive individualized intervention and concurrent discharge-related activities (McCurdy

& McIntyre, 2004). Given evidence that short interventions can have good outcomes along with greater efforts to step down youth more quickly to community-based, less restrictive programs, even programs that use models that tend to be middle-range in length (i.e., around 18 months), such as the Teaching Family Model, have shortened the lengths of stay in their programs (personal communication, R. Thompson, Boystown, NE, September 2, 2011).

Unfortunately, very little is known about the treatment models of usual care residential home care. Programs are generally required to submit a program statement outlining their treatment components in order to become licensed. However, how well individual facilities implement their stated programs is something that is simply not known empirically. In order to advance the field, researchers will have to begin measuring programmatic aspects of residential care settings. Unfortunately, lack of information about program characteristics (as in the case of the NSCAW [NSCAW Research Group, 2002] study), lack of specificity about residential care models, heterogeneity between and within programs, and small sample sizes are significant obstacles to gathering data in this area. One notable exception is Helgerson and colleagues' (Helgerson, Martinovich, Durkin, & Lyons 2005) analysis, which used multilevel modeling to determine how much variability in outcomes can be explained by program level components. While not measuring specific elements of each program, they did find that the rate of improvement varied across 62 different facilities, suggesting program-level effects.

Beyond program components, there may be other variables that deserve to be included in future studies. Recent work by Lee et al. (2010) showed that beyond factors accounted for in our analysis, a youth's wishes, existing school connections, and youths' social skills also shaped caseworkers' placement decisions.

Limitations

The current study was limited by the comparably small number of children with residential care stays in the NSCAW study (NSCAW Research Group, 2002), and as a result the limited number of predictors that could be included. However, we did include the most salient variables that have appeared in the research literature. As mentioned earlier, NSCAW also does not provide information about the types of group homes or residential treatment facilities in which youth were placed. However, it needs to be remembered that NSCAW provides national and representative estimates, and as such findings from this source provide an important perspective for the child welfare field.

Implications and Conclusion

Findings of this study converge with the few studies that have examined length of stays in residential care settings in regional samples, indicating that residential care is far from a stop-gap option for the vast majority of youth. The lack of a relationship between length of stay and mental health needs suggests that overall other factors determine how long a youth remains in a residential care setting. Given findings from multiple studies which have shown that many children are in residential care for reasons other than their clinical needs, child welfare systems and practitioners are urged to carefully review the justification for a child's initial and continued placement in residential care. However, as indicated earlier, much more needs to be understood about these factors before policy recommendations can be made. Until then, it is expected that the debate about the appropriateness and effectiveness of residential care placement will continue.

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TABLE 1Sample Characteristics ($n = 254$)

	% (SE)	Mean (SE)
Gender		
Male	62.2 (7.2)	
Female	37.8 (7.2)	
Age		10.4 (0.7)
Race		
Black	46.5 (8.0)	
White	37.8 (7.3)	
Hispanic	11.8 (4.3)	
Other	3.8 (1.1)	
Primary type of maltreatment		
Physical abuse	39.9 (8.2)	
Sexual abuse	10.5 (2.8)	
Failure to provide	10.4 (3.9)	
Neglect/abandonment	33.7 (7.9)	
Other	5.5 (2.2)	
Family risk score		0.4 (0.03)
Internalizing behavior problems (W1) – (64)		
Yes	39.2 (8.3)	
No	60.8 (8.3)	
Externalizing behavior problems (W1) – (64)		
Yes	62.1 (8.4)	
No	37.9 (8.4)	
Developmental problems		
Yes	19.6 (5.9)	
No	80.4 (5.9)	
Chronic health problems -/**		
Yes	38.1 (9.4)	
No	61.9 (9.4)	
Number of OOH placements **/**		4.33 (0.42)
Number of days in out-of-home care**/**		
Psychiatric hospitalization		
Yes	13.3 (3.4)	
No	86.7 (3.4)	
Urbanicity		
Rural	16.3 (5.8)	
Urban	83.7 (5.8)	
Insurance type		
Medicaid	83.1 (6.6)	
Private insurance	14.5 (6.7)	

	% (SE)	Mean (SE)
No medicaid	2.4	(1.0)

Note. Asterisks indicate variables significant in the univariate context; asterisk before the / indicates significance for variables related to overall length of stay in residential care; asterisk after the / indicates significance for longest stay in one residential care setting.

TABLE 2

Length of Stay in Residential Care

	Length of stay in all residential care settings	Maximum stay in one residential care setting
	<i>N</i> (weighted %)	<i>N</i> (weighted %)
1–90 days	44 (23.9)	46 (24.9)
91–180 days	31 (10.7)	42 (11.6)
181 days–1 yr	71 (32.3)	88 (44.7)
1–2 yrs	65 (20.0)	58 (13.9)
2–3 yrs	43 (13.1)	20 (5.0)

TABLE 3

Negative Binomial Findings of Predictors of Maximum Length of Stay in a Residential Care Setting

	Rate ratio (95% CI)	<i>p</i>
Gender	2.70 (2.15, 3.63)	.955
Age	2.69 (2.60, 2.78)	.486
Race (ref: White)		
Black	2.59 (2.15, 3.25)	.639
Hispanic	2.63 (2.13, 3.45)	.788
Other	2.18 (1.75, 2.96)	.138
Maltreatment type		
Sexual abuse	2.54 (2.09, 3.23)	.538
Failure to provide	2.33 (1.85, 3.21)	.306
Failure to supervise	2.27 (1.92, 2.80)	.086
Other type	3.31 (2.62, 4.44)	.102
Family risk	2.48 (1.86, 3.81)	.626
Externalizing problems	3.12 (2.30, 4.73)	.412
Internalizing problems	2.48 (1.90, 3.63)	.584
Chronicity of health problems	3.37 (2.79, 4.22)	.025
Developmental problems	2.40 (2.01, 2.99)	.240
Number of placements	2.44 (2.38, 2.51)	.000
Psychiatric hospitalization	3.54 (2.55, 5.46)	.126
Urbanicity (ref. no)	3.07 (2.36, 4.33)	.390