Published in final edited form as:

Child Youth Serv Rev. 2015 July 1; 54: 20–29. doi:10.1016/j.chilyouth.2015.04.012.

Are children safer with kin? A comparison of maltreatment risks in out-of-home care

Sarah Font, PhD

University of Texas at Austin, Population Research Center

In a given year, nearly 5 percent of U.S. children will reside away from their families of origin. Of these, nearly half a million reside in out-of-home care (OHC) under the supervision of a state or local child protection agency; the plurality are placed with non-relative foster parents, and a quarter are placed with kinship caregivers (U.S. Department of Health and Human Services, 2012). In addition to children in formal foster care placements, there are also over 2 million children in informal kinship care (IKC). These children may or may not be known to the child welfare system, though some evidence suggests that children enter IKC for some of the same reasons as children enter the formal foster care system: parent substance abuse, abandonment, instability, lack of resources, mental illness, and incarceration, though they may also enter for dissimilar reasons such as parental death or illness (Gleeson et al., 2009; Goodman, Potts, Pasztor, & Scorzo, 2004). Informal kinship caregivers may agree to care for children specifically to avoid involvement with the child protection system, or as a result of inaction by the child protection system (Gleeson et al., 2009). Thus, child welfare systems should be concerned about children in informal arrangements as well, given their potential vulnerability.

The extent to which children are safe in these different care arrangements is an important consideration for child welfare policy. The primary goal of placement in state-supervised OHC is to prevent further harm to children who were maltreated in their familial homes. Consequently, maltreatment experienced in OHC is a key safety metric that states are required to track and report each year. The federal performance standard mandates that the rate of substantiated maltreatment among children in OHC be less than half of one percent of all foster children in a given year, though many states do not meet this standard (U.S. Department of Health and Human Services, 2011). Moreover, the rate of substantiation for complaints of maltreatment in OHC is far lower than for familial complaints (Benedict, Zuravin, Brandt, & Abbey, 1994), and some scholars suggest that cases with sufficient evidence of maltreatment are left unsubstantiated due to decision-making processes that were faulty or affected by work factors unrelated to the alleged maltreatment (DePanfilis & Girvin, 2005). Consequently, the true rate of maltreatment in OHC may be substantially

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Contact: Sarah Font, University of Texas at Austin, 1 University Station A2702, Austin, TX 78704, Sfont@prc.utexas.edu, 512-375-7571.

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higher than state estimates. In addition, these rates do not capture informal kin placements, and there are no estimates available on the prevalence of maltreatment in IKC. Overall, maltreatment in OHC remains a problem for child welfare systems, and research can help states identify which factors place children in OHC at higher risk. Placement type is a particularly important consideration in maltreatment risk because the type of placement a child enters is within the control of the child protection system, whereas the characteristics of children entering placements are not.

This study seeks to address two questions: (1) What are the risks of maltreatment in three placement types: non-relative foster care (NRFC), formal kinship care (FKC), and informal kinship care (IKC)? and (2) How do these risks vary over time? These analyses contribute to current knowledge on safety in OHC placements in several ways. Generally speaking, very little research exists on maltreatment in OHC, partly because it is a very difficult outcome to capture in survey data. As the incidence rate is quite low, an empirical investigation of this issue requires a very large sample of children to be observed over a substantial time frame. Prior estimates of maltreatment across OHC arrangements have been limited by small, non-representative samples and a lack of longitudinal data, and thus have relied on bivariate, cross-sectional estimates of group differences. This study uses a statewide administrative database containing over 50,000 children across an 8 year span to estimate risk of maltreatment across placement types. This allows for a more robust estimate of risk, in that some potentially confounding factors can be controlled, and there is sufficient length of observation to assess changes in risk over time. Second, there are no known studies on maltreatment in informal kinship care, and thus, this study extends our understanding to that population. Notably, this study excludes children in congregate (group-based) care. This is done for two primary reasons: (1) the characteristics of children in congregate care differ in ways that make them incomparable to children in other settings (e.g., young children are very rarely placed in congregate care); (2) congregate care staff differ from foster parents and relative caregivers in their expected role (e.g. staff members are more comparable to child care providers than to surrogate parents) and are subject to different government regulations and monitoring.

Conceptual Framework

Several perspectives are relevant to the consideration of whether the risk of maltreatment would differ across placement types. I first discuss perspectives on why placement settings may present differential risks of maltreatment; I then discuss alternative explanations that would suggest a spurious association between placement type and maltreatment risk.

Caregiver Socioeconomic Conditions

Placements may differ in risk of maltreatment because the average characteristics of kinship and non-relative foster caregivers differ. In FKC, caregivers are, on average, far more socioeconomically disadvantaged than are caregivers in NRFC (Berrick, 1997; Dolan, Casanueva, Smith, & Bradley, 2009; Ehrle & Geen, 2002; Harden, Clyman, Kriebel, & Lyons, 2004; Stacks & Partridge, 2011). In part this may occur because income requirements to which non-relative foster parents are held may be waived for formal kin caregivers (U.S. Children's Bureau, 2011). Informal kinship caregivers are estimated to be

even more socioeconomically disadvantaged than are formal kinship caregivers (Strozier & Krisman, 2007). Socioeconomic disadvantage is consistently linked to increased risk of maltreatment and substandard parenting (Berger, 2004; 2007; Slack et al., 2011; Slack, Holl, McDaniel, Yoo, & Bolger, 2004), potentially through increased risk of material deprivation, and through the effects of poverty on the stress level of the caregiver (Conger, Ge, Elder, Lorenz, & Simons, 1994).

Similarly, other issues of socioeconomic status and social capital have been linked to maltreatment reports or risk of maltreatment, including education, social support, and neighborhood poverty (Coulton, Korbin, & Su, 1999; Kotch, Browne, Dufort, Winsor, & Catellier, 1999), all of which suggest higher risk among kinship placements. Specifically, kinship caregivers are more likely to have less support for parenting—specifically, they are more likely to be single caregivers and report lower amounts of social support, and tend to live in more impoverished communities (Ehrle & Geen, 2002; Harden et al., 2004). Thus, one may hypothesize that children in either formal or informal kinship placements would be at higher risk of maltreatment than children in NRFC, given consistent evidence that maltreatment risk is impacted by socioeconomic conditions.

Caregiver Attachment

Potential resource disadvantages for kin caregivers may be overcome purported benefits of kinship care. Most relevant to maltreatment risk may be blood lineage and possible pre-existing attachments. Animal studies have suggested that humans are innately driven to protect and nurture persons with shared blood lineage (Lawler, 2008). If true, this would suggest a lower propensity to maltreat a related child than a non-related child. Moreover, kin may have already invested some amount of resources, personal or financial, in their relative children, and caregivers are less likely to maltreat children in whom they have already invested (Malkin & Lamb, 1994). While a blood relation is not requisite for bonding (Dozier, Stoval, Albus, & Bates, 2001), non-relative foster parents require some amount of time to forge a bond with the foster child, whereas some kinship caregivers will have a pre-existing relationship with the foster care. A caregiver who is bonded with a child may be less likely to elicit, and more likely to tolerate, abhorrent or distressing temperaments and behaviors. Thus, all else equal, kin may be less likely to perpetrate maltreatment early on in the placement.

Interfamilial Patterns of Maltreatment

However, familial or biological ties could also disadvantage children in both formal and informal kinship care. It is suggested that familial patterns of maltreatment, parenting styles, substance abuse, and mental health problems are a product of both environmental and genetic traits that are shared across generations (Dixon, Browne, & Hamilton-Giachritsis, 2009; Kendler, Davis, & Kessler, 1997; Kim, 2009; McCloskey & Bailey, 2000; Pears & Capaldi, 2001; Van Ijzendoorn, 1992). Thus, grandparents, who are the most common kinship caregivers, may share some of the maladaptive traits of the maltreating parent. Although this is, by no means a perfect correlation, many parents involved with the child welfare system were victims of maltreatment in their own childhoods (Dixon, Browne, & Hamilton-Giachritsis, 2005). This is relevant for foster care placements because a history of

suspected or confirmed maltreatment is not an automatic disqualification for placement in all states, and states are more likely to waive licensure requirements to facilitate (Child Welfare Information Gateway, 2011). Moreover, as a substantial portion of maltreatment goes unreported, it is likely that children are sometimes placed with persons who have maltreated other children. Given that kinship caregivers, on average, have more risk factors for maltreatment, including but not limited to potential interfamilial patterns, the risk of being placed with a maltreating caregiver may be higher among kinship caregivers.

Alternative Explanations

Selection into caregiving—Lastly, it is important to understand that non-relative foster parents and kinship caregivers select into their roles for different reasons. Kinship caregivers are brought into the child welfare system due to the placement needs of a specific and known child, and thus their primary motivation may be to fulfill family obligations. Moreover, kinship caregivers may be sought out by the child welfare system (Berrick et al, 1994). To contrast, non-relative foster parents have had time to carefully consider the decision to foster. At the same time, because they are not motivated by the needs of a specific child, their desire to be a foster parent may not be actualized through a commitment to a given child in their care. Whether, and in what ways, these different motivations are likely to affect maltreatment risk is unclear.

Child selection into placement type—Not only does maltreatment affect children's development, children's cognitive and behavioral traits also influence their risk of being maltreated (Font & Berger, 2015). On the whole, known differences in the average characteristics of children in non-relative and kinship care would suggest that children in non-relative foster care are likely to be at higher risk of maltreatment. As compared with children in a kinship setting, children in NRFC are more likely to have disabilities or health problems (Beeman, Kim et al. 2000; Grogan-Kaylor 2000), and disability is linked with higher risk of maltreatment, (Hershkowitz, 2007; Westat, 1993). Particularly at the time of entry to OHC, children who enter non-relative placements tend to have more behavioral problems than children in formal kinship care (Font, 2014), and children with behavioral disorders experience maltreatment at higher rates (Jaudes & Mackey-Bilaver, 2008; Sullivan & Knutson, 2000). Children in formal kinship care also tend to have fewer familial risk factors and less severe histories of maltreatment than children in non-relative foster care (Font, 2014); this is likely to also be true for children in informal kinship care. Children with more severe maltreatment histories may have more difficulty attaching to a new caregiver, and may exhibit more behavioral and mental health problems than children with no or fewer past experiences of maltreatment. Yet, children in IKC are on average older than children in NRFC (Strozier & Krisman, 2007), who tend to be older than children in FKC (Grogan-Kaylor, 2000), and younger children are more frequently the victims of maltreatment (U.S. Department of Health and Human Services, 2011).

Differential risk of report—After considering that the risk of maltreatment may differ by placement type, I also suggest that the risk of being reported for maltreatment may differ by placement type (Biehal & Parry, 2010). That is, some proportion of maltreatment is likely to go unreported, and it may be the case that children experiencing maltreatment may be less

willing to disclose when the abuser is a relative. Additionally, caseworkers may make fewer visits to kinship foster homes than nonrelative foster homes (Iglehart, 1994) thus leaving less opportunity for maltreatment to be identified or disclosed. Although studies have not been able to assess this possibility directly, a comparison of studies using official maltreatment reports versus other measures of maltreatment risk suggests that the effect of placement type on safety is sensitive to measurement (Litrownik, Newton, Mitchell, & Richardson, 2003; Zuravin, Benedict, & Somerfield, 1993).

Differential context for placements—Maltreatment occurring in OHC care can be perpetrated by anyone with access to the child, not only the surrogate caregiver. It may be expected that different placements would present different types of risks. For instance, in IKC, there are no state-imposed restrictions or oversight on continued contact between children and their biological parents, and similarly, children in FKC have more contact with their families of origin than do children in NRFC. Thus, children in either type of kinship care may face a higher risk of maltreatment from their family of origin. Indeed, as many as a third of maltreatment allegations occurring while a child is in OHC care allege maltreatment by someone other than the foster caregiver, including the potential for retrospective allegations against a child's family of origin (Poertner, Bussey, & Fluke, 1999; Tittle, Poertner, & Garnier, 2001).

Literature Review

Although it is difficult to get an accurate account of maltreatment in OHC care, available studies suggest the rate may be higher than the federal mandate of .57 percent. Bolton and colleagues (1981) estimate the rate of maltreatment allegations in foster care to be 7 percent over 3 years, whereas others have suggested a rate of 15 percent over 5 years (Zuravin et al., 1993). Including children's complete durations in care, rates of reported maltreatment were estimated to be as high as 18.5 percent in NRFC and as low as 2.2 percent in FKC (Winokur, Crawford, Longobardi, & Valentine, 2008). States' estimates of substantiated maltreatment in foster care have ranged from 0.2 to 1.7 percent, with the lowest rates for sexual abuse and higher rates for physical abuse and neglect (Billings & Moore, 2004; California Department of Social Services, 2001; Spencer & Knudsen, 1992). The vast differences in available estimates reflect wide diversity in the localities sampled, sample size, when the data were collected, and duration of observation of these studies, among other factors. Moreover, the majority of studies have used administrative data, though one study that conducted interviews with foster children found that nearly 25 percent reported psychological maltreatment by a foster parent (Baker, Brassard, Schneiderman, & Donnelly, 2013).

The types of maltreatment reported in foster care are believed to differ from the general population. Whereas neglect is the most commonly experienced type of maltreatment among the population, sexual and physical abuse are the most frequently reported and substantiated forms of maltreatment in foster care (Benedict et al., 1994; Hobbs, Hobbs, & Wynne, 1999; Rosenthal, Motz, Edmonson, & Groze, 1991). This is perhaps unsurprising given that, at least among licensed placements, foster parents are often held to income requirements which would make physical neglect resulting from economic hardship less likely.

Few empirical studies investigate maltreatment in OHC by placement type. Some evidence indicates that reports of maltreatment were less likely to occur in formal kinship placements than in non-relative care (Zuravin et al., 1993), particularly sexual abuse (Benedict et al., 1994). However, these studies are limited by small, non-representative samples, and are primarily descriptive. Using a national sample, risk of a new maltreatment substantiation while in care appears equivalent between formal kinship and non-relative foster care, and informal kinship care appears to have lower risk (Testa, Bruhn, & Helton, 2009). To add perspective, there is a small body of research that, though not measuring maltreatment directly, examines maltreatment-related outcomes among foster children. For example, children in formal kin placements were found to have significantly higher exposure to physical violence when compared with children in non-relative care (Litrownik et al., 2003). Formal kin caregivers have also been found to use harsher disciplinary techniques than non-relative foster parents (Tripp De Robertis & Litrownik, 2004), view the use of corporal punishment more favorably (Gebel, 1996), and report a stronger reliance on physical disciplinary approaches (Gaudin & Sutphen, 1993). Similarly, Timmer and colleagues (2004) report that formal kin caregivers scored significantly higher on the Child Abuse Potential Index as compared with non-relative foster parents. Notably, these differences are likely to be, at least in part, explained by differences in the racial and socioeconomic characteristics of nonrelative and kinship caregivers. Yet, substandard parenting may also be considered a risk for maltreatment, and the evidence in that area is inconclusive. Harden and colleagues (2004) find more problematic parenting attitudes among kinship foster parents, though this appears to be primarily a function of kinship caregivers being older. However, Dolan and colleagues (2009) suggest that kinship grandmothers outperform non-relative foster parents in terms of overall home environment, despite displaying higher levels of physical discipline. No known studies have looked at maltreatment rates in informal kinship care.

Method

Data

This study uses an administrative dataset from the state of Wisconsin between the years 2005 and 2012. These data include all children who spent any time in foster care during those years. Additionally, these data include including children placed in informal (not court-ordered) kinship arrangements wherein the relative caregiver was compensated for providing care with a child-only grant through the Temporary Assistance for Needy Families (TANF) cash welfare program. The initial sample was 151,687 placements. Observations were dropped if it was believed they were entered in error: this includes observations where the begin date was equal to the end date of the placement, observations that appeared to duplicate other observations and observations which indicated a child as having been in two or more placements at the same time. Although it is likely that some of these entries were real placements, there is no reliable way to determine which were entered in error. After that exclusion, there were 147,687 placements involving 56,238 children. However, a few additional exclusions were made. First, placements which were believed to be incorrectly matched with child birthdate were excluded (732 placements).¹ Second, children who entered OHC before 2005 were excluded even if they continued in OHC past

2005 (37,305 placements). Third, placements in a setting other than NRFC, FKC, or IKC were excluded (35,394 placements).² This results in a final analytic sample of 75,130 placements involving 36,967 children. These placement data were then merged with information on CPS reports from an administrative database. Placement, rather than child, is the unit of observation for all analyses.

Measures

Outcome measures—The outcome of interest is maltreatment in OHC, operationalized in two primary ways. First, a dichotomous indicator of alleged maltreatment was constructed, equal to 1 if any CPS investigation occurred during a placement. A second indicator is equal to 1 if there were any substantiated CPS investigations during a placement. The date of any investigation or substantiated investigation was also used to identify the length of time between the beginning of a placement and any maltreatment.

Because the date of the referral is not per se the date of the alleged maltreatment, some steps are taken to ensure investigations are being attributed to the correct placement. Any report that occurred within the first 2 days of a placement was attributed to the child's preceding placement (either a different foster placement or, most frequently, the pre-placement home). Although some of these instances were potentially wrongly reattributed, given that the majority of investigations occurring on the first 2 days of a placement allege the perpetrator to be a biological, step or adoptive parent, it is believed that these are unlikely to be maltreatment incidents that occurred during the early stages of a placement.

However, these measures alone are inadequate. First, some reports of maltreatment that occur during a placement may be delayed disclosures of maltreatment by children's pre-placement caregivers, or allegations of maltreatment that occurred during visitation with those caregivers. Thus, further analyses explore investigations by perpetrator type. The identity of the perpetrator was categorized in the data by the relation of the perpetrator to the alleged victim. These data were used to construct indicators of any investigated and any substantiated maltreatment by two groups of perpetrators – biological, step or adoptive parents (pre-placement caregivers), and out-of-home placement (OHP) caregivers. Unfortunately, this still presents some potential for error, given the available categories. For example, a category of relative includes both kinship foster parents as well as other relatives with whom children may have had contact prior to placement.

Predictor variables—The primary predictor for this study is placement type. Two variables were constructed to represent formal kinship care and informal kinship care, and non-relative foster care was the reference. In this study, non-relative foster care included only family foster care, not institutional or group homes.

¹These were cases where the ID number of the child in the placement was linked to a birthdate that indicated the child was not yet born or an adult at the time of placement.

²This was done for three primary reasons: (1) there is some ambiguity in these data as it pertains to restrictive placements, in terms of whether the placements were through CPS or the juvenile justice system, (2) some of these other placements, such as hospitals and shelters, are expected to be very short term, and (3) the characteristics of children in these placements are vastly different than their counterparts in NRFC, IKC, or IKC, particularly in terms of age and gender.

Covariates—As this study uses administrative data, potential covariates are limited. However, models control for some demographic characteristics: race and ethnicity, age, and sex. Race/ethnicity was measured with the following dummy variables: white (reference), black, Hispanic, American Indian, and other race. Age refers to age at start of placement and was categorized into 4 developmental groupings: years 0 to 2, 3 to 5, 6 to 10, and 11 to 18. In addition, to account for the extent and type of maltreatment experienced prior to entering OHC, official records of maltreatment investigations pertaining to these children that occurred in the six months prior to their initial entry into an OHP were retrieved.³ From these data, a series of non-exclusive dummy variables were created to indicate whether children were alleged to have experienced neglect (supervisory or physical), physical abuse, or sexual abuse prior to entering OHC.⁴ Finally, county characteristics were also controlled. These included logged population, number of CPS reports per 1000 children, number of maltreatment victims per 1000 children, and a dichotomous indicator of whether the county is racially homogenous (equal to 1 if the county is more than 90% white).⁵ County fixed effects would be a better adjustment; however, these were not included due to concerns about statistical power in estimates for some of the lower incidence events, particularly substantiated investigations. Nevertheless, as Wisconsin is a county-based CPS system, variation in the use of formal and informal kinship care, and in decisions to investigate and substantiate maltreatment allegations, is expected.

Analytic Approach

This study took two approaches to estimation. First, the lifetime risk of experiencing a maltreatment investigation or substantiation during a placement was estimated, as a function of placement type, length of placement, and child characteristics. The models were estimated as logistic regression models, and the predicted probabilities were obtained from those estimations. Standard errors were clustered by child. Observations included in these estimates are restricted to those placements which were fully observed (meaning the placement ended prior to the end of observation on December 31, 2012). This model was overly simplistic, however. It estimated only the overall risk, thus failing to account for the possibility that risk may change over time. Moreover, it does not account for the length of placement, which varies systematically by placement type with IKC placements lasting much longer on average than either FKC or NRFC placements.

Next, piecewise exponential survival models were used to estimate the risk of maltreatment in OHC as a function of placement type and a set of covariates. Survival analysis is an approach used to estimate a dichotomous outcome that occurs both as a function of characteristics and time. It is the preferred approach when respondents in the data enter and exit observation at different times, and are observed for different durations of time, such as the case with children in OHC. The piecewise exponential model has several advantages. First, unlike the more common semi-parametric Cox proportional hazards model,

³These records are believed to be not entirely complete prior to mid-2004. Thus, no records prior to that time are used.

⁴Maltreatment history is believed to affect children's socio-emotional and behavioral well-being, and in turn, behavioral problems are associated with a higher risk of being maltreated (Font & Berger, 2014). The effect of maltreatment on these outcomes is believed to vary both by type and chronicity.

⁵Some prior research has suggested that higher concentrations of minority groups may be associated with lower levels of CPS-reported maltreatment (Molnar, et al, 2003; Maguire-Jack & Font, 2014).

proportionality need not be assumed. This is important because the hazards are not proportional across placement types. Second, a piecewise model is not restricted by assumptions about the baseline hazard in the way that fully parametric models are. That is, parametric models can be modeled using various distributions, but all of them assume that the constant is flat or changing at a constant rate. To the contrary, piecewise exponential models identify intervals of time across which the baseline hazard may vary; however, they assume constancy of the hazard within time points. Several time intervals were considered; however, goodness of fit tests suggested that segmenting time at the 25th, 50th, and 75th percentiles produced the best model of the underlying hazard. These cutoffs equated to time segments of 0–3 months, 4–8 months, 9–17 months, and 18–60 months. As the effect of placement type on the hazard function may vary over time, placement type was interacted with time to produce a series of dummy variables for each placement type-time segment combination. The reference group was NRFC placements in months 0–3. The primary unit of observation for these models was the placement, rather than the child, though standard errors were adjusted to account for clustering at the child level. Notably, there are nearly 1,000 instances of a placement having more than 1 investigation. The primary models do not allow for multiple failures given that this is a small proportion of the sample; however, multiple failure models were estimated as a sensitivity test (not shown), and no substantial differences were found.

Results

Descriptive Results

Table 1 describes the characteristics of placements by type. Compared to NRFC or FKC, IKC placements are less likely to involve white or American Indian children, and more likely to involve black children. IKC. NRFC placements more frequently involve older children, whereas FKC has the highest proportion of children under age 5. IKC placements are also more likely to be in more diverse and heavily population counties, with higher rates of CPS reports. Additionally, neglect is the most common form of prior maltreatment experienced in all groups, but this is especially true for FKC placements. NRFC placements are more likely than IKC or FKC to involve children with histories of sexual abuse.

Logistic Regression Results

Investigations—Table 2 shows the results of logistic regression models predicting any maltreatment investigation, as well as investigations of an OHP caregiver or a pre-placement caregiver. The probability of experiencing a given outcome is also expressed as the predicted proportion of placements experiencing the outcome by placement type. Results suggest that about 14.5 percent of IKC placements experience a maltreatment investigation, a rate at least 60 percent higher than NRFC or FKC placements. Compared with NRFC placements, FKC placements are slightly less likely to experience any investigation (7.6 percent versus 8.5 percent).

In addition, IKC placements experience higher rates of investigations of OHP caregivers than either FKC or NRFC placements, with over 6 percent of IKC placements experiencing that outcome. FKC and NRFC placements are approximately equally likely to experience an

investigation of an OHP caregiver. The difference between the two groups, though statistically significant, suggests that FKC placements are .3 percentage points (about 16 percent) less likely to have an investigation of an OHP caregiver. The largest difference, however, is for investigations of pre-placement caregivers. Compared with NRFC or FKC placements, IKC placements are nearly 4 percentage points more likely to experience an investigation of a pre-placement caregiver – a more than two-fold increase in the odds.

Substantiations—Table 3 shows the results of logistic regression models predicting any maltreatment substantiation, as well as substantiations of an OHP caregiver or a pre-placement caregiver. FKC and NRFC placements are equally likely to experience any substantiated investigation, at a rate of 1.7 and 1.8 percent, respectively, whereas IKC placements are slightly more likely. The probability of a substantiated investigation of an OHP caregiver is very low across all groups, with no more than ½ of 1 percent of placements experiencing that outcome. Specifically, FKC and NRFC placements are equally likely to have a substantiated investigation of an OHP caregiver (.21 and .26 percent probability), whereas IKC placements are roughly twice as likely as the others (.5 percent probability). Lastly, substantiations against pre-placement caregivers, which are also quite uncommon overall, occur at roughly equal rates across placement types.

Survival Model Results

Investigations—Table 4 displays the results of the survival model predicting the hazard of a maltreatment investigation. The initial model (M1) suggests that, in the first 3 months of a placement, FKC placements are about 34 percent less likely to experience a maltreatment investigation as compared with NRFC placements, whereas IKC placements are about 50 percent less likely. That is, NRFC placements have a rate of 21.3 investigations per 1,000 placement months in the first three months, whereas FKC placements have a rate of 14.0 and IKC placements have a rate of 10.7. Over time, the gap in the risk level for placements diminishes. The rate for NRFC placements drops from 21.3 to 7.8 investigations per 1,000 placement-months, a decrease of 63 percent; the rates for FKC and IKC declined by approximately 54 percent and 61 percent (to 6.4 and 4.2), respectively.

Turning to investigations of OHP caregivers, the results suggest that NRFC placements have a higher rate than FKC and IKC placements have the lowest rate for all time periods. The gap between IKC placements and FKC placements grows over time, but the gap between NRFC and FKC placements narrows. This is because the rates for IKC and NRFC placements drop by 49 and 40 percent, respectively, between months 0–3 and months 18–60, compared with a decline of 16 percent for FKC placements. The rate of investigation for pre-placement caregivers is initially highest in NRFC placements as compared with both IKC and FKC placements, but the gap substantively disappears after 8 months. Rates for all groups decline dramatically after the first three months.

Substantiations—Table 5 displays the survival models predicting substantiated maltreatment generally, by an OHP caregiver, and by a pre-placement caregiver. There are no differences in risk of any substantiated investigation between FKC and NRFC placements at any time period. IKC placements have a lower initial risk of a substantiated

investigation than either NRFC or FKC, though FKC and IKC have equal risk after the first 3 months. Again, it is important to note that the differences observed here, even where statistically significant, are of such a small magnitude that the risk of a substantiated investigation is essentially equal across placement types.

Turning to substantiated maltreatment by an OHP caregiver, estimates suggest that NRFC placements are at higher risk than FKC and IKC placements in the first 3 months (.6 substantiations per 1,000 placements months versus .2 and .1, respectively), but there are no statistically significant differences after that time. Notably, the risk of having a substantiated investigation of an OHP caregiver is very low; indeed, only 220 instances were observed across over 75,000 placements. Substantiated maltreatment by a pre-placement caregiver is most common in the first three months of a placement, with FKC and NRFC placements more likely to experience this outcome than IKC placements. However, risk of substantiated maltreatment by a pre-placement caregiver is primarily equivalent after the first three months.

Supplemental Models

Maltreatment history—Although all models control for maltreatment history, it is important to note that IKC placements are significantly less likely to have a maltreatment history at all, and hardly any placements involve children with a history of multiple maltreatment investigations. There are also a few NRFC and FKC placements that have no documented maltreatment history. This may occur when a child is removed from the home following a maltreatment investigation in which another child in the home is the alleged victim. Thus models were estimated excluding all children who were not the alleged victim on any maltreatment reports preceding OHC. This exclusion slightly diminished some of the observed differences by placement type, but findings were generally similar.

Risk dependence—Additionally, the primary models assume that the censoring mechanism (the reason a placement leaves observation) is independent of the risk of failure (experiencing a maltreatment outcome). For placements that simply continue past the end of observation (December 2012), there is no reason to expect censoring to be associated with failure risk. However, this may not be true for cases in which a placement ends prior to any maltreatment incident, which may occur due to reunification, adoption, aging out, or placement disruption. Of these, placement disruption is least likely to be independent of maltreatment risk. For example, sometimes placements end due to conflict between the child and foster parent. In such a case, had the placement not ended, maltreatment may have occurred. Models excluding placements which ended due to factors related to the child or caregiver were estimated, and results were largely similar.

Licensure—The risk of maltreatment in OHC is believed to differ by licensure status for kin placements (Nieto, Fuller, & Testa, 2009). Models comparing NRFC and IKC placements to unlicensed FKC placements were estimated (not shown). Results suggest that unlicensed kin placements are not as safe as licensed kin placements, but are similar to NRFC placements. Maltreatment by pre-placement caretakers is more common in unlicensed kin placements.

Prior placements—Many children in the sample experienced multiple placements, and at times, even multiple placement types. (Though, this was fairly uncommon for children in IKC.) In this sample, initial placements were more likely to involve a maltreatment investigation than were later placements. Adjustments for the number and type of prior placements were implemented in two sets of survival models. First, I stratified models by the number of prior placements. This did not impact the results in any substantive way. Second, I ran a set of models that included dummy variables indicating whether, for a given placement, the child in that placement had previously experienced NRFC, FKC, IKC, and congregate care placement(s). Because children in IKC were less likely than children in NRFC or FKC to have experienced prior placements, the inclusion of these additional controls primarily affected the findings for IKC. These models estimated a slightly larger gap between IKC and the other placement types than did the primary estimates.

Discussion

This study estimated the risk of officially reported maltreatment in out-of-home care across placement types. The body of research on this topic is small, and its conclusions are primarily limited to small samples and bivariate relations. Available knowledge on this question is of great importance, however, given two facts: (1) it is the sole indicator used by the federal government to assess safety for children in OHC; and (2) child safety has been and continues to be the primary mandate of the child welfare system. Moreover, given policy preferences for kinship care, and the use of informal kinship placements as a way of keeping children out of the formal foster care system, an understanding of how maltreatment risk varies across placement type is vital to evaluating those policies and practices.

This study suggests that a maltreatment investigation occurs during approximately 8 percent of out-of-home placements, though only about half of those investigations include allegations against the OHP caregiver. Lifetime risk of maltreatment, either investigated or substantiated, is highest in TANF-funded IKC placements by a sizable margin. Yet, because these IKC placements have a much longer average duration, these placements have a significantly lower risk in any given month than either FKC or NRFC placements. FKC placements tend to be of slightly lower risk both overall and at most times points, when compared with NRFC placements. Yet, for both FKC and NRFC placements, risk decreases substantially if the placement endures past 3 months, suggesting that placements may need additional supports early on to facilitate positive attachments between children and caregivers. Alternatively, heightened risk in the first 3 months may represent an ill-fit between children and caregivers. Increased understanding of how to appropriately match children and foster homes may decrease the risk of maltreatment allegations. Overall, the small size and duration of differences in maltreatment suggest that giving preference to specific placement types would do little to improve child safety in foster care. However, the high overall rate of investigations and substantiations in IKC would suggest caution is warranted when using informal placements as a diversionary tactic to limit the size of the formal foster care system. Yet, given that FKC and NRFC homes receive, ostensibly, rigorous pre-placement screening and ongoing monitoring, one would perhaps expect them to be far safer than IKC placements. As this was born out by the data, it may be that the

screening processes or standards for prospective foster homes is doing little to promote safety in care.

Additionally, across placement types, only 0.3 percent of placements experience substantiated maltreatment perpetrated by the OHP caregiver. This suggests that rate of substantiation for allegations of maltreatment by an OHP caregiver is far lower than the substantiation rate overall. Thus, it may be the case that OHP caregivers are at higher risk for false allegations of maltreatment; or, as has been suggested elsewhere, investigations of maltreatment in out-of-home care are not being substantiated when they should be. Factors such as work overload, insufficient numbers of foster homes, or a lack of alternative placement options for a foster child may lead caseworkers to underestimate or minimize child safety risks (DePanfilis & Girvin, 2004). In addition, faulty decision-making may occur unequally across types of placements. For instance, DePanfilis and Girvin note that inappropriate treatment of children appeared to be implicitly accepted in some circumstances, particularly in kinship care arrangements.

Yet, the risk of a maltreatment investigation, or even the risk of a maltreatment substantiation, is not equivalent to the risk of maltreatment. The National Incidence Studies estimate that up to a third of maltreatment incidents go unreported (Sedlak et al, 2010) and the factors that affect the likelihood of a maltreatment incident being reported are not well understood, particularly in the context of out-of-home care. It is possible that there are disparities in reporting by placement type that reflect differences in the willingness of children to disclose maltreatment by a relative versus a non-relative. Future research should assess the extent to which a maltreatment investigation, or substantiation, is an accurate measure of maltreatment incidence in out-of-home care. Moreover, even though the federal government focuses its performance assessment in this area on substantiated investigations, the rate of investigation warrants consideration as well. Several scholars have suggested that substantiated and unsubstantiated investigations are no different in their consequences (Hussey et al., 2005; Leiter, Myers, & Zingraff, 1994), and thus a focus on substantiated investigations may overlook children at risk. Moreover, studies using behavioral measures of maltreatment risk tend to find higher risk in kinship care, whereas studies using official records tend to find equal or lower risk. Thus, the results of this study may be more indicative of the probability of being *accused* of maltreatment—and perhaps the willingness of a child to disclose—than of actual maltreatment behaviors. Future research must consider using multiple measures of maltreatment within a single study to identify whether findings on the safety of kinship care are robust to measurement. Nevertheless, at least by the standard metrics, foster care is quite safe overall, particularly when compared to previously published estimates of reported maltreatment among children who remain in the home after an investigation (23 percent are re-reported within 2 years of investigation), or are returned home after foster care (26 percent within 2 years of reunification) (Connell et al., 2009; Lipien & Forthofer, 2004).

A substantial proportion of the investigations and substantiations that occurred in care identified the biological, step, or adoptive parent as a perpetrator. This suggests one of two things: potentially high rates of delayed disclosure, or some children are being inadequately supervised during visits with their parents. This is not able to be cleanly assessed in these

data, though the substantial drop in allegations and substantiations after the first week in out-of-home care (particularly for children in formal foster care) suggests that a large portion of these reports may represent delayed disclosures. This would be consistent with Tittle and colleagues (2009), who find that 9 percent of reports in kinship foster homes and 23 percent of reports in non-relative foster care are retrospective. Moreover, I argue it is unlikely that the majority of alleged maltreatment by pre-placement caregivers reflects new maltreatment during parental contact. If true, the data should have shown higher rates of maltreatment by pre-placement caregivers in formal and informal kinship care than in non-relative care, given that children in informal and formal kinship care tend to have more contact with their family of origin, and are less likely to have contact supervised directly by CPS. As the data do not show that, I argue retrospective disclosures are likely behind those new investigations and substantiations of pre-placement caregivers.

Future research must replicate these findings in other state or national samples. Although these data include the full foster care population of Wisconsin, these results may not be generalizable to all states. Foster care systems' standards for investigation and substantiation vary across states, as do their practices regarding the placement of children in formal or informal care, preferences for kinship care, and use of group or institutional care. In addition, these analyses should not be interpreted as causal estimates. Due to limitations in available covariates, there are important variables that are not controlled in the models. Such factors include disability status, preceding behavior problems, and characteristics of the biological parents. These are factors that are known to differ across placement types, with children in non-relative care tending to be less advantaged prior to entering placement (Font, 2014). Since children with disabilities and behavioral problems are at higher risk for maltreatment, these estimates may incorrectly identify benefits of kin placement that are actually attributable to the different average characteristics of children who enter either placement type. Lastly, these data are likely to include siblings; however, sibling pairs were not able to be identified for this study. Hence, there may be unobserved interdependence among some observations.

Conclusion

In sum, maltreatment in out-of-home placement is a rare event when measured by the federal standard of substantiated maltreatment by an out-of-home placement caregiver. However, maltreatment investigations during an out-of-home placement are much more common, particularly in the first three months of a non-relative or formal kinship placement. The higher risk of maltreatment early in a placement suggests, perhaps, that children and foster caregivers may benefit from more intensive supportive services provided at the time of placement. In addition, over the life of a placement, informal kinship care placements are at higher risk than formal foster care placements. A maltreatment investigation took place during nearly 15 percent of all informal TANF-funded kinship placements, and 6 percent of those placements had allegations of maltreatment against the primary out-of-home caregiver. Yet, these placements generally receive little oversight or supportive services. Providing those informal kinship caregivers with increased awareness of, and access to, voluntary support services may benefit children in these arrangements.

Acknowledgments

This research was supported by the Robert Wood Johnson Foundation Health and Society Scholars dissertation grant and by postdoctoral funding through a NICHD training grant (5 T32 HD007081) awarded to the University of Texas at Austin Population Research Center.

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Highlights

- Focus on formal and informal kinship (FKC, IKC) and non-relative foster care (NRFC)
- Lower risk of maltreatment investigation, but not substantiation, in FKC than NRFC
- Largest difference in risk between FKC and NRFC in first three months of placement
- IKC has higher overall risk but lower monthly risk due to longer placement duration
- Less than half of investigations alleged maltreatment by out-of-home caregiver

Table 1

Descriptive Statistics by Placement Type

	NRFC		IKC		FKC	
	%	M	%	M	%	M
<i>N</i>		36,840		16,922		21,368
CPS Investigation	7.9		11.2		7.0	
Substantiated investigation	1.7		2.0		1.6	
Investigation of out-of-home caretaker	3.2		4.7		2.9	
Substantiation of out-of-home caretaker	0.2		0.4		0.2	
Investigation of pre-placement caretaker	2.7		5.2		2.8	
Substantiation of pre-placement caretaker	0.6		0.8		0.8	
Male	50.7		49.2		49.9	
NH White	43.3		30.1		46.9	
NH Black	30.9		47.6		28.7	
American Indian	4.9		3.7		5.9	
Hispanic	9.7		9.3		9.7	
Other/multiracial	11.3		9.3		8.8	
Age 0 to 2	21.2		13.6		21.9	
Age 3 to 5	19.2		20.1		24.2	
Age 6 to 10	21.8		26.3		25.1	
Age 11 to 18	37.7		40.0		28.7	
History of neglect	43.7		12.1		49.8	
History of physical abuse	15.0		3.0		15.0	
History of sexual abuse	4.8		1.1		3.9	
County > 90% white	46.8		28.9		44.6	
Malreatment victims per 1,000 children		3.7		3.7		3.9
Logged population 2012		12.1		12.6		12.2
CPS reports per 1,000 children		32.9		37.4		34.2

Table 2**Risk of Investigated Maltreatment over Life of Placement**

	Any			OHP Caregiver			Pre-Placement Caregiver		
	<u>OR</u>	<u>SE</u>	<u>Risk</u>	<u>OR</u>	<u>SE</u>	<u>Risk</u>	<u>OR</u>	<u>SE</u>	<u>Risk</u>
Non-Relative Foster Care	1.000		8.5%	1.000		3.4%	1.000		2.9%
Formal Kinship Care	.828	.028	7.6%	.839	.044	3.1%	1.003	.054	3.0%
Informal Kinship Care	1.600	.058	14.5%	1.554	.087	6.1%	2.309	.124	6.8%
NRFC = FKC	***				**				
NRFC = IKC	***				***			***	
FKC = IKC	***				***			***	

Notes: Results of logistic regression models controlling for child demographics, maltreatment history, and geographic characteristics. Risk calculated at the mean of covariates. Standard errors clustered by child.

**
 $p < .01$;

 $p < .001$

Table 3**Risk of Substantiated Maltreatment over Life of Placement**

	Any			OHP Caregiver			Pre-Placement Caregiver		
	<u>OR</u>	<u>SE</u>	<u>Risk</u>	<u>OR</u>	<u>SE</u>	<u>Risk</u>	<u>OR</u>	<u>SE</u>	<u>Risk</u>
Non-Relative Foster Care			1.8%			0.3%			0.7%
Formal Kinship Care	.923	.064	1.7%	.803	.149	0.2%	1.184	.124	0.8%
Informal Kinship Care	1.265	.096	2.5%	1.933	.365	0.5%	1.356	.160	1.0%
NRFC = FKFC									
NRFC = IKC	**				***			*	
FKC = IKC	***				***				

Notes: Results of logistic regression models controlling for child demographics, maltreatment history, and geographic characteristics. Risk calculated at the mean of covariates. Standard errors clustered by child.

* $p < .05$;

** $p < .01$;

*** $p < .001$

Table 4

Hazard of a Maltreatment Investigation

Months	Placement	Any			OHP Caregiver			Pre-placement caregiver		
		HR	SE	Risk per 1,000 placement-months	HR	SE	Risk per 1,000 placement-months	HR	SE	Risk per 1,000 placement-months
0-3	NRFC	1.000	.	21.3	1.000	.	8.3	1.000	.	7.7
	FKC	.655	.031	14.0	.555	.045	4.6	.866	.062	6.7
	IKC	.501	.027	10.7	.425	.039	3.5	.808	.061	6.2
	NRFC=FKC	***	***			***			*	
	NRFC=IKC	***	***			***			**	
	FKC=IKC	***	***			***				
4-8	NRFC	.640	.028	13.6	.758	.050	6.3	.543	.040	4.2
	FKC	.490	.027	10.5	.578	.047	4.8	.477	.042	3.7
	IKC	.371	.021	7.9	.359	.032	3.0	.572	.046	4.4
	NRFC=FKC	***	***			**				
	NRFC=IKC	***	***			***				
	FKC=IKC	***	***			***				
9-17	NRFC	.462	.025	9.8	.589	.045	4.8	.381	.035	2.9
	FKC	.380	.025	8.1	.469	.045	3.9	.372	.041	2.9
	IKC	.240	.015	5.1	.316	.028	2.6	.287	.027	2.2
	NRFC=FKC	*	*			*				
	NRFC=IKC	***	***			***			*	
	FKC=IKC	***	***			**				
18-60	NRFC	.367	.028	7.8	.505	.051	4.2	.278	.037	2.1
	FKC	.302	.031	6.4	.466	.059	3.9	.218	.041	1.7
	IKC	.195	.011	4.2	.256	.021	2.1	.211	.018	1.6
	NRFC=FKC									
	NRFC=IKC	***	***			***				
	FKC=IKC	***	***			***				

Notes: NRFC in months 0-3 is the reference group for all hazard ratios. Standard errors clustered by child.

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Table 5

Hazard of a Substantiated Maltreatment Investigation

Months	Placement	Any			OHP Caregiver			Pre-placement caregiver		
		HR	SE	Risk per 1,000 placement-months	HR	SE	Risk per 1,000 placement-months	HR	SE	Risk per 1,000 placement-months
0-3	NRFC	1.000	.	5.0	1.000	.	0.6	1.000	.	2.4
	FKC	0.873	0.079	4.3	0.390	0.127	0.2	1.118	0.135	2.7
	IKC	0.377	0.046	1.9	0.240	0.100	0.1	0.403	0.068	1.0
	NRFC=FKC					**				
	NRFC=IKC	***				**			***	
	FKC=IKC	***							***	
4-8	NRFC	0.489	0.046	2.4	0.569	0.146	0.3	0.281	0.046	0.7
	FKC	0.395	0.047	2.0	0.789	0.202	0.5	0.234	0.050	0.6
	IKC	0.317	0.038	1.6	0.509	0.147	0.3	0.347	0.057	0.9
	NRFC=FKC									
	NRFC=IKC	***								
	FKC=IKC									
9-17	NRFC	0.295	0.037	1.5	0.599	0.159	0.4	0.203	0.042	0.5
	FKC	0.216	0.038	1.1	0.402	0.147	0.2	0.127	0.041	0.3
	IKC	0.159	0.023	0.8	0.548	0.143	0.3	0.105	0.026	0.3
	NRFC=FKC									
	NRFC=IKC	***							*	
	FKC=IKC									
18-60	NRFC	0.206	0.038	1.0	0.451	0.167	0.3	0.146	0.045	0.4
	FKC	0.119	0.038	0.6	0.168	0.122	0.1	0.050	0.036	0.1
	IKC	0.123	0.016	0.6	0.369	0.097	0.2	0.062	0.015	0.2
	NRFC=FKC									
	NRFC=IKC	*								
	FKC=IKC									

Notes: NRFC in months 0-3 is the reference group for all hazard ratios. Standard errors clustered by child.

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