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Examining the Relationship between Nonprofit Service Provision and Client Outcomes in a Performance-Based, Managed Care Contracting Environment¹

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Executive Summary

Examining the relationship between nonprofit human service provision and client outcomes is important in performance-based contracting environments since most performance initiatives reward nonprofit organizations for improving client outcomes rather than providing certain services. Nonprofit and public managers in these environments thus have a financial interest in minimizing caseworkers' efforts and resources devoted to non-essential services. Testing the linkage between services and client outcomes is particularly important given technical uncertainty, which occurs when providers are uncertain which services are essential to improve client outcomes and how, when, and by whom these services should be delivered.

The study examined the relationship between service provision and client outcomes for a sample of 175 foster children and families served by six nonprofit organizations in Wayne County (Detroit), Michigan that had contracted with Michigan's public welfare agency under a performance-based, managed care reimbursement system. Quantitative data were collected concerning the amounts of various services that organizations provided children and families; data were also gathered concerning the length of time children remained in foster care as well as the attainment

of various placements (e.g., reunification of children with their biological parents, placement with relatives, adoption). Qualitative data concerning organizational adaptations to the market-based environment were also gathered through 42 interviews with administrators and managers from these six nonprofit organizations. Using a merged data file that integrated portions of the qualitative and quantitative data, we examined the relationship between client outcomes and three service provision mechanisms: the organizational environment surrounding front-line service provision; the actual services provided to children and families over their foster care stay; and service intensity, defined as service provision per day in care.

Analyses identified some service delivery mechanisms associated with the client outcomes commonly desired by child welfare performance initiatives. While there were few differences in the total number of services provided to children and families experiencing different outcomes, significant differences existed in the intensity with which nearly all services were provided. In particular, greater service-related resources were expended to reunify children with biological parents than to achieve other outcomes. Multivariate analyses suggested that it took more organizational effort, as measured in services per day, to reunify

children with biological parents than to place children with adoptive parents or relatives, or to continue to serve them in foster homes.

Finally, we found that foster children served by agencies that had trained staff to expedite permanency planning for clients were less likely to be reunified with their parents and more likely to be placed with relative caregivers.

While limited by research design and methodological issues, these findings have implications for research and practice. These results suggest that some types of services were provided despite having no effect on client outcomes. It is in these service areas that the economic benefits of performance-based and managed care initiatives are putatively clearest: managers may redirect resources from “underperforming” services to those more tightly aligned with client outcomes, thereby improving cost-efficiency and effectiveness. These results also suggest that the structural incentives to reduce service-related costs found in many market-based contracting initiatives may lead to a “performance paradox”, in which service providers decrease important services to clients, thereby negatively affecting agency performance on commonly desired outcomes such as parent-child reunification. We conclude by arguing that policymakers and managers

should provide, at a minimum, sufficient amounts and intensities of services that are strongly associated with client outcomes. Performance contracting models should give nonprofit service providers incentives to serve clients appropriately, regardless of the dollars attached to their eventual destination.

Examining the Relationship between Nonprofit Service Provision and Client Outcomes in a Performance-Based, Managed Care Contracting Environment

Since the inception of the New Public Management movement, child welfare agencies have been characterized as being unnecessarily inefficient, inflexible, and unresponsive to child and family needs (Barzelay & Armajani, 1992; Behn, 1998; Osborne & Gaebler, 1992). In reaction to these claims, policymakers and public managers have sought to reorganize child welfare programs to improve performance, which is often measured by the number of foster youth who are reunified with their biological parents or who are placed adoptive families. More recently, since the passage of the Adoption and Safe Families Act in 1997 (PL 105-89) and performance-focused state laws, state child welfare systems have been pressured to identify innovative service models that move foster children out of state custody efficiently, without compromising their safety or well-being. Particularly in the wake of the first round of Child and Family Service Reviews, in which no state successfully met all 14 federal outcome and systemic benchmarks (Children's Bureau, 2007), states must improve the performance of their child welfare programs if they are to avoid financial penalties.

Given these heightened legislative expectations for child welfare system performance, public managers have embraced various forms of privatization under the assumption that private child welfare agencies will serve children and families more effectively and efficiently than public bureaucracies, particularly if they are required to compete with other private providers to secure public contracts (Flaherty, Collins-Camargo, & Lee, in press; Unruh & Hodgkin, 2004; Van Slyke, 2003). Public managers have embedded performance- and cost-related criteria into purchase of service contracts, and some states have received federal Title IV-E waivers to implement managed care demonstrations in order to improve child welfare program outcomes (James Bell Associates, 2007). For example, as of 1998, the most recent year for which national data are available, 29 state child welfare systems had initiated a total of 47 performance-based or managed care initiatives (McCullough & Schmitt, 2000; U.S. General Accounting Office (GAO), 1998). The net effect of the emphasis on privatization and performance-based contracting has been to give child welfare agencies financial incentives to increase the proportion of their foster care caseloads that attain permanency within preset time periods.

These trends have relevance for public management research, since they focus attention on how human service agencies and managers improve client outcomes in market environments. In contrast to the image of the Weberian command-and-control public bureaucracy that organizes and implements new programs incrementally, public and private human service agencies may initiate substantial, discontinuous programmatic changes in response to new performance mandates (Frumkin, 2001; Johnston & Romzek, 1999; Kelman, 2005). These agencies' responsiveness to performance-based mandates may be understood as a process in which front-line service provision is nested in an agency environment that is affected by institutional factors (Hill & Lynn, 2004; Lynn, Heinrich, & Hill, 2001). Using this hierarchical governance lens, it might be hypothesized that performance initiatives

affect the administrative and structural aspects of human service programming, which shapes front-line interactions between service recipients and case managers, thereby altering client outcomes. This model has found support in studies of the multi-site Job Training Partnership Act performance management program as well as other welfare-to-work initiatives (Barnow, 2000; Bloom, Hill, & Riccio, 2003; Heinrich, 2000; Hill, 2006).

Missing from the hierarchical governance literature is attention to the services delivered to clients, and the effects of different services on client outcomes in performance-focused environments. While evidence suggests that stable job design structures may shape human service provision and influence program performance (Bloom, Hill, & Riccio, 2003; Hill, 2006), the policy implementation literature finds that similar types of front-line caseworkers may respond to performance mandates by providing services in novel and unexpected ways (Brodkin, 1997; Sandfort, 2000). Examining the linkage between human service provision and client outcomes is particularly important given technical uncertainty, which occurs when agencies are uncertain which services are essential to improve client outcomes and how, when, and by whom these services should be delivered.

Some evidence suggests that the relationship between child welfare service provision and client outcomes may be weak or non-significant (Glisson & Himmergarn, 1998; Roth & Crane-Ross, 2002). Child welfare agencies may be less reliant than health care providers upon the medically-oriented intervention model that links diagnosis, treatment, and expected recovery, and uses multiple randomized trials to test service efficacy. With some exceptions (Barth, et al., 2005; Chaffin & Friedrich, 2004; Thomlinson, 2005), researchers have identified few evidence-supported interventions that move different types of foster children into appropriate permanent placements in a timely, consistent manner. Given poor diagnostic capacity and a wide selection of potential child welfare interventions (Field, 1996; Wernet, 1999), service providers may have difficulty “making services count”—that is, choosing and calibrating services precisely to differential client and agency-based conditions to improve client outcomes.

Reducing technical uncertainty is particularly important in performance-based human service environments since most performance initiatives reward agencies for improving client outcomes rather than providing certain services (Hatry, 1999). Public managers in these market environments thus have a financial interest in minimizing caseworkers’ efforts and resources devoted to non-essential services. What services are associated with child welfare outcomes in performance-based environments?

This paper considers this question in four sections. The first section identifies three mechanisms through which service provision might affect child welfare outcomes in market-based environments: the technical and task environment surrounding front-line service provision; the actual services provided to children and families over their foster care stay; and service intensity, defined as service provision per day in care. The second section describes the qualitative and quantitative data and analytic techniques used to examine the relationship between each of these three mechanisms and child welfare outcomes. Section three describes the results of

these analyses. The final section frames the major study findings in relation to the increased adoption of performance-based child welfare initiatives, and remarks upon research needed to improve the effectiveness of child welfare service provision.

Service Provision and Child Welfare Outcomes in Market Environments

By experimenting with performance contracting and managed care, child welfare agencies have sought to incorporate market-based models and practices from the health care sector. In these efficiency-driven models, state child welfare financing has become strongly linked to child and family outcomes (Wulczyn, 2000a, 2000b, 2005). It has been assumed that the use of these market-based approaches will lead to cost savings and improved performance through a reduction in the number of youth in foster care, improved rates of achievement of various permanent outcomes such as reunification and adoption, improved time to achievement of permanent outcomes, fewer replacements while in care, and lower rates of recidivism upon exit from foster care. Managed care and performance-based models are generally thought to improve these outcomes by penalizing agencies that fail to reach performance targets and, conversely, rewarding service providers that limit unnecessary, duplicative, and untimely service provision (Planning and Learning Technologies, Inc. and The University of Kentucky, 2006).

There are three mechanisms through which service provision might be expected to influence child welfare outcomes, and thus program effectiveness, in market-based environments. The first of these is the foster care technical and task environment, which supplies the organizational context in which front-line caseworkers serve foster youth and their families. Structural aspects of the foster care technical environment include the type and number of employees within foster care departments, staff roles and responsibilities, and the provision of training to clarify work tasks; as well as the chosen foster care service technology, defined as the agency-controlled means of production, usually involving assessment of client needs and strengths, development of a personalized service plan, coordination of services on behalf of the client, and the supervision of case-based activities (Hasenfeld, 1983; Sandfort, 2003). Structural aspects of the foster care task environment include intraorganizational and interorganizational collaborations that are developed in response to changing resource dependencies (Alter, 2000; Hasenfeld, 1992), such as formal and informal networks between foster care departments and other units within the child welfare agency as well as those involving the agency, other service providers, and the courts.

Studies suggest that agencies reorganize their staff structures, service technologies, and interorganizational relationships in order to manage the heightened financial risk in performance contracting and managed care environments. These adaptations include an emphasis on cost-effective service programming in capitated and performance-based settings as well as increased attention to the development of staff positions and interorganizational relationships that impact nonprofit organizations' ability to make case flow decisions and ultimately affect service efficacy (Beinecke, Goodman, & Lockhard, 1997; McBeath & Meezan, 2006; Mordock, 1996; Provan, Milward, & Issett, 2002).

While no study has examined the influence of changing foster care service technologies or interdepartmental and interorganizational relationships on child welfare outcomes, there has been some empirical analysis of the relationship between the characteristics of the child welfare workforce and client outcomes, albeit in non-performance-based environments. Worker turnover and caseload size have been hypothesized to negatively affect the movement of foster children out of care by reducing service contacts, continuity, and parent engagement (Children's Bureau, 2004; Goerge, Wulczyn, & Fanshel, 1994). Goerge (1994) and Ryan et al. (2006) found that the likelihood of reunification was negatively associated with the number of caseworkers serving a case. Other studies have found that permanency outcomes do not differ across caseworkers with MSW degrees versus those with only a bachelor's degree (Perry, 2006; Ryan et al., 2006).

The second mechanism through which service provision might be expected to influence child welfare outcomes in market-based environments is through the actual services provided over time to children and families in foster care. Child welfare agencies may provide case planning and case management, supervise parent-child visits, help clients access physical and mental health care, deliver parent education and training, and link clients to specialized services in the community. The common belief that parent engagement and parent-child visitation are essential precursors of reunification (Children's Bureau, 2006; Dawson & Berry, 2002) is supported by research (Davis, Landsverk, Newton, & Ganger, 1996; Farmer, 1996). The probability of reunification has also been positively associated with parental completion of court-ordered substance abuse treatment (Green, Rockhill, & Furrer, 2007; Gregoire & Schultz, 2001; Miller et al., 2006; Smith, 2003; Smith et al., 2007) and parent skills training (Fisher, Burraston, & Pears, 2005; Fisher & Chamberlain, 2000; Fraser et al., 1996; Miller et al., 2006).

Service intensity, defined as the number of services provided to foster children and their families per day, is the final mechanism agencies may use to influence client outcomes in performance contracting and managed care environments. While PL 105-89 requires child welfare agencies to expedite services and permanency planning for foster children, no study has either estimated foster care service intensity over time or examined the relationship between service intensity and child welfare outcomes. There are compelling reasons to study service intensity in market-based environments, however, since agencies in these environments have been found to adopt brief and intense service delivery strategies that focus on the resolution of clients' concrete needs. Case studies suggest that "the meter is running" in performance-based and managed care environments (Emenheiser, Barker, & DeWoody, 1995, p. xxii), as agencies have an incentive to initiate quick and accurate diagnostic procedures that result in immediate service provision (Simms et al., 1999; Stroul, Pires, & Armstrong, 2003). This emphasis on early service provision is designed to reduce the number of clients and length of time in care.

These findings have augmented results from more rigorous studies examining the per client effects of market-based models on foster care service utilization. These studies have identified considerable reductions in service provision to foster children and their families in performance-based, managed care environments

(McBeath & Meezan, 2008; Snowden, Cuellar, & Libby, 2003) and to child welfare-involved children in Medicaid managed care environments (Raghavan et al., 2006). The evidence thus suggests that while aggregate service provision may be substantially reduced, short-term service intensity may actually increase in performance-based and managed care environments.

The implications of these service dynamics on foster children and their families are unclear. Studies of the market-based Title IV-E demonstration projects provide mixed evidence concerning the relationship between market-based contracting and the achievement of various outcomes, with two state evaluations showing significant experimental/control group improvements in reunification rates and other permanency outcomes while four other state evaluations identified either no differences or mixed results in group-based tests of reunification and adoption rates as well as time in care (James Bell Associates, 2007). Because these studies did not control for differences in the services provided to different foster youth and their families, it remains unclear whether market-based reductions in service provision or increases in service intensity are associated with changes in child welfare outcomes.

Research Methods²

This study examined the relationship between service provision and permanency outcomes for a sample of foster children and families that were served by six nonprofit child welfare agencies in Wayne County (Detroit), Michigan from 2001 to 2004. These agencies contracted with Michigan's public human service agency—then known as the Family Independence Agency (FIA)—to provide foster care services, and transitioned over 1997-1999 from a fee-for-service payment system that reimbursed agencies for their case-related expenses on a per child, per-diem basis to a performance-based, managed care system that contained a lower per-diem rate, an initial lump sum payment to agencies for the provision of services, and financial bonuses for the movement of foster children into permanent placements and the sustainment of these placements (the "pilot" initiative).³ The fiscal structure of the pilot and non-pilot systems is compared in Table 1.

[Table 1 About Here]

Data Collection

Quantitative Data concerning the Experiences of Youth in Foster Care

² Much of the material in this section is taken from other publications by the authors (McBeath & Meezan, 2008, 2006; Meezan & McBeath, 2008a).

³ While the pilot initiative did not contain some common elements of managed care models, it was considered by FIA and the nonprofit agencies to be a managed care initiative. Official FIA documents described it as a managed care system (Family Independence Agency, 2000), and administrators from FIA and pilot agencies referred to it as a managed care system when they made public presentations.

In order to examine the placement experiences of children in the pilot contracting environment, 175 foster children served by study agencies were selected for inclusion in the sample between May and October of 2001. Children were included in the study if they were a resident of Wayne County; under the age of 13 or part of a sibling group in which at least one child was under the age of 13 (FIA mandated that only children under the age of 13, or those whose siblings were under this age, were eligible for pilot reimbursement payments); assigned to the agency through the FAS; ordered into care at the preliminary court hearing; and reentering foster care after at least 365 days had passed since the last non-relative out-of-home placement. If a child was reentering foster care in less than 365 days, then he/she was assigned to the agency that had prior supervisory responsibility.

In cases where two or more children from a sibling group were eligible for the study, only two siblings were included in the sample. If the sibling group consisted of two children, both children were admitted to the sample; where the sibling group consisted of more than two children, two children were randomly selected for study.

Information pertaining to the characteristics of foster children and their primary caregivers was collected once, 30 days after the child's entry into foster care. Information concerning the whereabouts of the children, the services provided to them and their families, and the characteristics of agency caseworkers serving sample children and families was collected at 30 days and then every 90 days thereafter, up to a total of 930 days in foster care. Data were gathered through quarterly reviews of case files, which contained reports from CPS, FIA-required assessments and service plans, and regularly updated case notes. Data collection stopped when the court terminated FIA's supervision of the family or at 930 days in care.

Qualitative Data concerning Changes in Foster Care Technical and Task Environments

Information concerning changes in agencies' foster care technical and task environments that were made during the transition to the performance-based, managed care contracting environment was gathered from a set of 42 telephone interviews completed between August and December 2001 with administrators (n = 30) and supervisors (n = 12) from study agencies. A purposive sampling strategy (Maxwell, 1998; Miles and Huberman, 1994) was used to select respondents based upon their knowledge of the foster care system as well as knowledge of their agency's service delivery structures and practices both before and after the transition to the pilot initiative. No front-line foster care workers were interviewed regarding the questions addressed in this paper (although interviews did take place with these workers) as it was determined that very few case managers had been employed at the pilot agencies prior to the inception of this initiative, and therefore they would not be able to address issues concerning changes that occurred due to its implementation.

Twenty-five of 30 pilot administrators (83%) and nine of 12 pilot supervisors (75%) had been working at their respective agencies prior to the inception of the pilot. At the administrative level, interviews were completed with each agency's executive director, chief operating officer, chief financial officer, information

technology (IT) officer, and foster care program director. Interviews were also completed with at least two senior foster care supervisors at each agency. In total, the response rate was 98 percent.⁴ Interviews were structured and contained mostly open-ended questions concerning the adaptations that child welfare agencies made in response to the pilot initiative in specific areas, including service delivery and interdepartmental and interorganizational relationships. Due to the nature of their positions and responsibilities, not all respondents were able to answer all questions. As a result, while most interviews lasted between an hour and an hour and a half, they ranged in length from 30 minutes to five hours.

Two interviewers conducted the telephone interviews. In order to facilitate comparability in the data collection process, they were trained extensively in foster care in general, the organization and delivery of foster care services in Wayne County, and the principles and processes of the pilot. The two interviewers, who had also been trained in qualitative research methods, analyzed the data using a procedure designed to maximize reliability and validity. First, a specific question from the interview was chosen, usually in the following form: What changes did the agency make (in area X) in order to move to the pilot? In these questions, X was an area such as service delivery, interdepartmental relationships between the foster care department and other agency units, or service-focused interorganizational relationships. A cross-case matrix display was then constructed for each question. Each full data matrix contained all responses to the identified question, organized by respondent type (administrator or supervisor) and agency, and included space for coding each response.

Coders independently read through each data matrix. Each individual constructed a preliminary list of codes that described common themes across individual responses (Miles & Huberman, 1994) as well as themes that were less common in frequency but that fit a priori propositions drawn from the literature (Boyatzis, 1998). Coders compared their preliminary lists of themes and agreed upon a set of codes. They then independently applied the codes to the responses, with each person noting where a response contained one of the agreed-upon themes. Coders compared their judgments and then resolved any differences as to whether a theme was present or absent in each response. Reliability was determined on a random sample of the qualitative analyses done for two sections of the interview, with an initial agreement of 75% between these raters as to whether a theme was present in the data.

Coders calculated the number of times a theme was present across the responses per agency (Boyatzis, 1998) and whether any respondent in each agency had mentioned a theme, and then identified which agencies had mentioned each theme. This information was used to construct quantitative dichotomous variables identifying which agencies had made specific changes in adapting to the pilot contracting environment; these dummy variables were then inputted into the foster youth-focused quantitative database. This procedure allowed for the creation of a

⁴ Information on respondent characteristics can be found in Meezan & McBeath, 2008b. All administrators that were asked to participate in the study completed an interview. One supervisor, who left the agency for other employment, did not complete an interview.

merged data file that contained information on organizational adaptations to the pilot contracting environment, youth, caregiver, and caseworker characteristics, and services to and permanency outcomes experienced by foster youth and their families.

Measures

Dependent Variables

Four dichotomous, mutually-exclusive measures operationalized the final disposition that each foster child experienced by the end of the study: reunification referred to whether the child had been returned to his or her biological parent(s); kinship care pertained to whether the child had been placed with a licensed relative caregiver; termination of parental rights (TPR) referred to whether the child's biological parents had their parental rights terminated but the child had not yet been placed in an adoptive home; and adoption referred to whether the child had either had his or her adoption finalized or had been placed in an adoptive home and was awaiting adoption finalization. In addition, analyses were conducted on the group of children who remained in care at the end of the study without reaching any of these statuses.

Primary Explanatory Variables

Three dichotomous measures identified whether the agency serving each foster child had made specific changes in its foster care technical and task environment in transitioning from fee-for-service to performance, based, managed care payment systems: whether the child was served by an agency that had increased interdepartmental case coordination; whether the child was served by an agency that had reduced its clinical staff levels; and whether the child was served by an agency that had trained staff to expedite permanency planning for foster youth. Because these measures were not mutually-exclusive, some youth were affected by more than one organizational change.

Five measures operationalized the amount and type of services that agencies provided each foster child and family while in care. These measures captured the central services that child welfare agencies provide to foster children, their biological parents and/or primary caregivers, and their foster parents in order to facilitate the movement towards permanency (Unrau & Wells, 2005; U.S. Department of Health and Human Services, Children's Bureau, 1997), and included the number of in-agency, non-therapeutic service contacts provided to foster children and their families (primarily visitation and case management-related activities); the number of in-agency, therapeutic service contacts provided to foster children by counselors, psychiatrists, and/or psychologists; the number of phone calls that agency caseworkers made to FIA and other collateral agencies on behalf of the foster children or their families; the number of referrals for community services made on behalf of the foster children or

their families; and the number of different community services that foster children and their families received.⁵

Using these five measures of aggregate service provision, five additional variables were created to examine the intensity of service provision to foster youth and their families. In order to create a common metric of service intensity (i.e., number of services per day in care), the total number of each type of service was divided by the number of days children were in foster care.

Control Variables

Other measures, some of which had been identified in prior research as being associated with various permanency outcomes, pertained to the characteristics of children and primary caregivers. Measures related to the characteristics of each foster child included the child's days in care (Children's Bureau, 2006; Testa, 2004; Wulczyn, 2004), whether the child was African American or Caucasian (as no other races or ethnicities were present in the sample) (Courtney, 1995; Cuddeback, 2004; Wells & Guo, 1999), gender, and age in years at the point of entry into foster care (Courtney, 1994, 1995; Smith, 2003; Wells & Guo, 1999). Measures related to the characteristics of the primary caregiver of the child prior to entry into care included whether they had previously been involved with CPS, their age in years, and whether they led a female-headed household (Davis et al., 1997). Finally, two measures concerned the strengths and needs of foster children and their primary caregivers, and captured the physical, social, and material needs of foster children and their biological parents (Brooks, James, & Barth, 2002; Chamberlain et al., 2006; Grogan-Kaylor, 2000). These measures drew from a nine-item assessment of the child's strengths and needs and a 13-item assessment of the primary caregiver's strengths and needs that were completed within 30 days of the child's entry into foster care by caseworkers using FIA-developed forms. Items in the child assessment pertained to emotional behavior, physical health, substance use, family relationships, and non-family social relationships; the primary caregiver assessment concerned parenting skills, social support, domestic relationships, housing, and physical health.⁶

A set of dummy variables identified the precipitating formal allegation leading to the child's placement in foster care: whether neglect was the sole reason for

⁵ Psychometric analyses of the three measures of in-agency service provision, which were initially composed of multiple items, provided support for the use of summary measures (Meezan & McBeath, 2003): exploratory factor analyses of the items in each measure resulted in single factor solutions, suggesting it was appropriate to sum the individual items initially contained in the measure. Reliability analyses yielded Cronbach's alpha values between 0.65 and 0.79, suggesting the summary measures had acceptable internal consistency. Psychometric analyses could not be completed on the two measures of community service provision since these variables were not aggregated from multiple, independent items.

⁶ Analyses suggested that these measures of strengths and needs had acceptable psychometric properties (Meezan & McBeath, 2003). Exploratory factor analyses of the individual items in each measure of strengths and needs resulted in single factor solutions, suggesting that it was appropriate to sum each set of items into a single measure. Additionally, the Cronbach's alpha associated with the measures of child and primary caregiver needs and strengths were 0.75 and 0.79, respectively, suggesting that they had acceptable internal consistency.

removal of the child; whether the child had been abandoned by his or her biological parents; whether physical abuse was the sole reason for removal of the child; whether neglect and physical abuse were the reasons for removal of the child; whether sexual abuse was the sole reason for removal of the child; whether neglect as well as emotional and physical abuse were the reasons for removal of the child; whether incarceration of parents or child-related alcohol/drug abuse or behavior problems led to the removal of the child; and whether none of these factors led to the removal of the child. This set of measures reflected empirical estimates suggesting that children who experience different types of maltreatment may experience dissimilar permanency outcomes (Barth et al. 1994; Brooks, James, & Barth, 2002; Wind, Brooks, & Barth, 2006).

Other dichotomous measures captured conditions in the biological household with potential influence upon foster care permanency outcomes, including drug abuse, inadequate housing, domestic violence, failure to protect children from maltreatment, and alcohol abuse. The use of these measures reflected research identifying the co-occurrence of substance abuse, material hardship, and household violence among child welfare populations (Courtney, McMurtry, & Zinn, 2004; Kohl, Edleson, English, & Barth, 2005; Smith & Marsh, 2002).

Finally, because information on caseworkers was gathered quarterly, it was possible to identify changes in the caseworkers serving the foster children and their families in the sample. It was therefore possible to capture the number of caseworkers that served the foster child over his or her stay in care. Other measures included the average number of months of experience that each of the foster child's caseworkers had within the agency; and the average caseload for which each caseworker was responsible (measured as the number of families for whom the worker was responsible). Each caseworker's educational level was measured by a continuous variable and it was thus possible to calculate the percentage of a child's stay in care in which the foster child's caseworkers had more than a baccalaureate degree. The similarity of the child's and the caseworker's racial background was captured by measuring the percentage of time in care in which both the child and the caseworker were either Caucasian or African American.

Analytic Methods

Three sets of quantitative analyses were conducted. Univariate and bivariate analyses were completed to describe sample children and families, and multivariate analyses were used to parcel out the effect of each primary explanatory variable, controlling for client and caseworker characteristics. Initially, a multinomial logistic regression modeling approach (Long, 1997) was considered for conducting the multivariate analyses, using a five-point nominal dependent variable whose categories included reunification, kinship care, TPR, adoption, and no permanent placement achieved. This approach was discarded, however, in favor of separate multivariate logistic regression analyses in order to more clearly identify the contribution of various predictors to each type of outcome and to highlight the differences in the predictors of the various final dispositions.

Given a maximum sample size of 175 foster children, adequate statistical power could not be maintained if all covariates were included in multivariate statistical models. Therefore, to preserve statistical power and identify a consistent set of independent variables across all dependent variables, covariates that were significantly related at the $p < 0.05$ level with at least two final dispositions in bivariate logistic regression analyses were retained for inclusion in multivariate analyses. This procedure thus excluded those covariates that proved unrelated in bivariate analyses to all or most final dispositions under examination.⁷

Four regression models were specified for each final disposition under examination. The first two models regressed a specific outcome measure on different measures pertaining to the changing foster care technical and task environment, controlling for client and worker characteristics. The third model replaced the organizational change variables with the five measures of aggregate service provision. The fourth model substituted the five measures of service intensity in place of the original service measures.⁸

Due to the sampling frame used, where up to two siblings could be admitted into the study, the clustering of children within families and within agencies was of concern. Without correcting for the clustered or nested nature of the sample, estimates of variances would be artificially reduced, thus increasing the likelihood that coefficient estimates would be significant for no other reason than the non-independence of sample units (Guo, 2005; Guo & Wells, 2003; Wooldridge, 2002). To correct for this nesting of children within families and within agencies, clustered standard errors (STATA Corporation, 2008) were used in all logistic regression analyses. This statistical procedure was employed because of the small number of sample agencies and the fact that some agencies served very few sample children; both of these conditions severely limited the statistical power available at different levels of analysis and thus reduced the appropriateness of multi-level regression techniques.

Finally, in order to allow for the comparison of effect sizes, the coefficients for the multivariate logistic regression analyses were reported as relative odds ratios. These odds ratios, which were calculated by exponentiating the logistic regression coefficients, identify the expected relative change in the predicted odds of achieving the final disposition under examination associated with a one-unit change in the independent variable.

⁷ These excluded variables included: child race and gender; primary caregiver age, family structure, prior involvement with CPS, and needs and strengths; all formal allegations of child maltreatment except for abandonment and physical abuse; conditions in the biological household pertaining to alcohol abuse, inadequate housing, and failure to protect children from maltreatment; and caseworker race and educational level.

⁸ Due to multicollinearity concerns, the organizational adaptation measures were divided among two models. Additionally, the variable concerning the number of referrals per day was dropped from models due to its high level of correlation with the measure of intensity of community services per day. No further multicollinearity issues were identified. The variable concerning domestic violence was unable to be included in models predicting adoption since no youth was adopted after having been removed from a household in which domestic violence had been identified. Finally, the variable pertaining to time in care was omitted in Model 4, given that its values were incorporated into each measure of service intensity.

Results

Descriptive Results

At the end of the study, 49 children (28%) were reunified with their biological parents, 32 children (18%) were placed with relatives, 34 children (19%) had biological parents whose parental rights had been terminated but had not yet been placed in an adoptive home, and 47 children (27%) either had their adoption finalized or had been placed in an adoptive home and were awaiting finalization. Only 13 of the children (7%) had achieved no permanent placement by the end of the study period.

As seen in Table 2, half of sample children (n = 88) were served by an agency that had increased interdepartmental case coordination in transitioning to the pilot contracting environment. Respondents from three agencies identified two principal changes in interdepartmental relationships. First, more interdepartmental case planning occurred in order to promote the identification of appropriate placements for foster children and, where appropriate, to expedite concurrent planning. These interactions often occurred in response to administrative mandates establishing pilot-focused task forces and work groups involving departments that were historically familiar with one another, such as the foster care, licensing, and clinical departments. As noted by an administrator, “Staff now participate in weekly case conferences, where we talk about where the kid and family are at, what the barriers are, what we need to remove the barriers. And we do these meetings at 30, 90, 120 days, throughout the course of the case, with the worker, the therapist, both case manager supervisors, the foster care program director, and me. So it’s really a participatory thing to talk about what everybody’s view is on this family”. Second, departments that had been unfamiliar with each another—“on opposite sides of the building”, according to one administrator—began to collaborate on pilot-related tasks. Agencies strengthened the linkages between their foster care, accounting, and/or information technology departments in order to develop systems to track client status, upcoming pilot milestones, service histories, and financial information.

Nearly three-quarters of children (n = 127) were served by an agency that had reduced its clinical staff levels during the transition to the pilot contracting environment. Respondents from four agencies identified pilot-related changes in the number of foster care staff providing clinical or therapeutic services. Prior to the inception of the pilot, some agencies retained a unit of therapists or clinicians to reduce the costs of out-of-agency counseling services. Many respondents commented that it was difficult to continue to subsidize a unit devoted solely to clinical services, given the pilot’s reduced per diem reimbursement rates as well as questions concerning service effectiveness. An administrator noted,

Prior to the pilot, we had (staff) who either had MSWs or MAs in counseling, and we suddenly had to look each other in the eye and realize that the traditional 50-minute hour of counseling is not the greatest facilitator for reunifying families and children, that families and

foster parents would respond better to what I'll call paraprofessional help from case aides, behavioral specialists. These are people who aren't heavily trained clinically, aren't 23 years old, but have had some experience and have struggled in their lives and have an appreciation for what families and children have gone through, and are able to travel to their homes, rather than meet them in a nice, sterile office.

Roughly three-quarters of children (n = 121) were served by an agency that had trained staff to expedite permanency planning for foster youth. While all agencies trained staff in the goals, objectives, and timeframes of the pilot initiative, respondents from three agencies described how their agencies placed greater emphasis on immediately identifying relatives who might be willing to care for a child on either a temporary or permanent basis, thereby increasing agencies' likelihood of achieving the first pilot milestone. Other responses fitting under this theme highlighted agencies' efforts to move clients into permanent placements more quickly, thereby meeting performance timeframes. A supervisor noted, "The deadlines—the purpose of the pilot is to do faster, better business—so you have to do more assessment, more visiting, you basically need to know what the kid's about".

[Table 2 About Here]

Children and families received an average of 106 non-therapeutic service contacts and five in-agency therapeutic service contacts by agency personnel while in care. Caseworkers made an average of 42 service-related phone calls to collateral agencies on behalf of children and families. An average of 18 referrals for community services were made for each case, and children and their families accessed an average of nine community services while in care. In terms of service intensity, children and families received 0.16 non-therapeutic service contacts and 0.01 therapeutic service contacts per day. An average of 0.06 phone calls and 0.05 referrals for community services were made on behalf of children and their families, per day. Finally, 0.02 community services were accessed per day for each case.

While 71 children (41%) remained in care through the entire 930 days of data collection, children spent an average of 662 days in care. Since the study drew children primarily from Detroit, where large numbers of African Americans reside, it is not surprising that over three quarters of the sample (n = 136) was African American. Half of sample children (n = 89) were male, and children were seven years old on average upon entering foster care. The average standardized score for the caseworker-completed assessment of child needs and strengths was zero, suggesting that children demonstrated no more needs than strengths in terms of their social, emotional, and physical development.

Roughly half of primary caregivers (n = 71) had been previously investigated by CPS for child maltreatment. Primary caregivers were, on average, 34 years old at the point of their children's entry into care, and roughly two-thirds of them (n = 110) led female-headed households. The average standardized score for the caseworker-completed assessment of primary caregiver needs and strengths was 0.01, which

implies that primary caregivers demonstrated no more strengths than needs across dimensions including parenting skill, social support, and emotional stability.

Nearly all children were removed from their biological households because of a formal allegation of neglect, physical abuse, abandonment, sexual abuse, or some combination of these types of maltreatment. Ten children (6%) were placed in foster care in the absence of a formal allegation of child maltreatment. The legal justification for the removal of these children is unclear. Chronic neglect (unaccompanied by any other form of child maltreatment) was by far the most prominent reason for removal, with over half of the sample ($n = 98$) being removed for this reason. Roughly an eighth of the sample ($n = 22$) had been abandoned. Less than a tenth of the sample had been physically abused ($n = 17$), neglected and physically abused ($n = 10$), sexually abused ($n = 8$), or neglected as well as emotionally and physically abused ($n = 5$). Finally, four children (2%) were removed for other reasons, including incarceration of their parents or child-related substance abuse or behavior problems.

Over a third of the sample came from households in which drug abuse ($n = 70$) or inadequate housing ($n = 65$) had been identified by CPS and/or agency caseworkers. Roughly one tenth of sample children came from households in which domestic violence ($n = 15$) had been identified, or in which a household member was judged to have failed to protect a child ($n = 16$). Finally, 13 children (7%) had inhabited a household in which alcohol abuse had been noted.

Sample children and families were served by an average of three caseworkers while in care. These caseworkers had, on average, 17 months of experience and caseloads of about 22 families. Sample children were served by racially-similar caseworkers for roughly half their time in care, and were served by caseworkers with an advanced degree for about one tenth of their time in care.

Differences in Aggregate Service Provision versus Service Intensity by Type of Final Disposition

Using only those variables included in the final regression models, a series of tests examined whether children who experienced different final dispositions differed along organizational, service-related, child, primary caregiver, and caseworker dimensions. Children in different types of placements did not differ along most organizational and aggregate service-related measures. As seen in Table 3, proportionally more children from agencies that increased interdepartmental case coordination experienced TPR or no permanent placement whereas a smaller proportion of children from these agencies experienced adoption ($\chi^2 = 20.59$, $df = 4$, $p = 0.000$). And the relationship between final disposition and in-agency, non-therapeutic service provision was nearly significant: children who experienced TPR received the most non-therapeutic service contacts ($M = 130$), whereas adopted and reunified children received the fewest ($M = 81$ and $M = 100$, respectively) ($F(4, 170) = 1.95$, $p = 0.103$).

[Table 3 About Here]

In sharp contrast, however, the intensity of four of five types of service provision differed significantly among children who experienced different final dispositions, with tests showing that service intensity was considerably greater for reunified children than youth who experienced other outcomes. Reunified children received the most in-agency, non-therapeutic services per day ($M = 0.23$, or 6.9 per month), while adopted children received the fewest such services per day ($M = 0.10$, or three per month) ($F(4, 170) = 8.64$, $p = 0.000$). Similarly, reunified children had the most case-related phone calls placed on their behalf per day ($M = 0.09$, or 2.7 per month), whereas caseworkers made the fewest case-related phone calls on behalf of children who experienced adoption ($M = 0.04$, or 1.2 per month) ($F(4, 170) = 4.61$, $p = 0.002$). The most referrals for community services per day were made on behalf of reunified children ($M = 0.08$, or 2.4 per month), and children who experienced TPR received the fewest such services per day ($M = 0.02$, or 0.6 per month) ($F(4, 170) = 3.45$, $p = 0.0097$). Finally, reunified children received the most community services per day ($M = 0.04$, or 1.2 per month), while children who experienced TPR and kinship care received the fewest such services per day ($M = 0.01$, or 0.3 per month) ($F(4, 170) = 4.38$, $p = 0.002$).

Numerous group differences were also identified in the characteristics of foster youth, including their length of time in care, age upon entry into foster care, and the proportion who had experienced physical abuse or who had been removed from households in which drug abuse and domestic violence had been identified. Group differences were also seen in the number of caseworkers serving foster youth as well as these workers' caseloads.

Multivariate Results

As seen in Model 2 in Table 4, children served by agencies that had trained staff to expedite permanency planning for clients were 73% less likely to be *reunified* with their biological parents, controlling for other included covariates. As seen in Model 3, three types of aggregate services were associated with the odds of reunification: an additional in-agency, non-therapeutic service, and an additional phone call made on behalf of the foster child and family, were each associated with a 2% increase in the odds of reunification; whereas an additional referral for community-based service was marginally related to a 4% decrease in the likelihood of reunification. And as seen in Model 4, three measures of service intensity were also related to the odds of reunification. Because most services were provided infrequently, the magnitudes of the estimated service intensity coefficients were quite large. Adding additional in-agency, non-therapeutic services, making more case-related phone calls, and providing more community-based services per day were positively associated with the likelihood of reunification.

[Table 4 About Here]

Two other control variables were related to reunification at standard significance levels and across multiple models: an additional day in care was associated with a 1% decrease in the odds of reunification, and children who were removed from drug-abusing households were from 54% to 75% less likely to be reunified (depending on the particular model). Finally, while a significant, positive relationship emerged in Models 1 and 2 between the child's needs and strengths and the odds of reunification, this relationship was insignificant in the presence of the service provision measures.

As seen in Model 2 in Table 5, the odds of *relative placement* were 2.6 times higher for children served by agencies that had trained staff to expedite permanency planning for clients. While no measure of aggregate service provision was significantly associated with the use of kinship care, as seen in Model 4, adding an additional community service per day was negatively associated with the odds of relative placement. No statistically significant relationship emerged between kinship care and variables pertaining to other organizational adaptations or services.

[Table 5 About Here]

Similarly, few covariates were associated with kinship care across multiple models. An additional year in the child's age at entry into care was associated with an 18% to 22% increase in the odds of kinship placement by the end of the study. Children who were removed from households in which domestic violence had been found were four to six times more likely to be placed with relatives than youth from other families. Finally, adding an additional family to the caseload of the worker serving the child was associated with an 8% to 10% decrease in the odds of kinship care.

As seen in Models 1 and 2 in Table 6, children served by agencies that had increased interdepartmental case coordination were nine to 14 times more likely to have experienced *TPR* by the end of the study, controlling for other included covariates. And as seen in Model 1, children in agencies that had reduced their clinical staffing levels were six times more likely to experience *TPR* than children from other agencies. Two measures of service activity were related to the odds of experiencing *TPR*, as seen in Models 3 and 4: providing an additional community-based service was associated with a 9% increase in the odds of the child experiencing *TPR*; in contrast, daily phone call activity was negatively related to the likelihood of children having their parental rights terminated but not beginning the adoption process.

[Table 6 About Here]

An additional day in care was associated with less than a percent increase in the odds of the child experiencing *TPR*. And an additional year in the child's age at entry into care was associated with a 4% to 13% decrease in the odds of the child experiencing *TPR*. In Models 1 and 2, children from households in which domestic violence had been identified were 83% to 89% less likely to experience *TPR* by the close of the study than children from households in which this condition was not

present; this relationship changed direction in Model 4, however, with children from these households being almost four times more likely to experience TPR than other children. Finally, as seen in Models 3 and 4, involving an additional caseworker in a child's case was associated with a 10% to 84% increase in the odds of TPR.

In contrast with their positive relationship with the TPR activity, the organizational adaptation measures were negatively associated with the likelihood of *adoption* by the end of the study period. As seen in the first two models in Table 7, children served by agencies that had increased interdepartmental case coordination were 90% to 94% less likely to have experienced adoption by the end of the study. And children in agencies that had reduced their clinical staffing levels were 78% less likely to experience adoption than children from other agencies. The three measures of aggregate services that had been associated with reunification were also associated with adoption, albeit in opposite directions and at marginal levels of statistical significance. As seen in Model 3, an additional in-agency, non-therapeutic service, and an additional phone call made on behalf of the foster child and family, was each associated with a 1% decrease in the odds of adoption; whereas an additional referral for community-based service was related to a 1% increase in the likelihood of adoption. One measure of service intensity was related to the odds of adoption, as seen in Model 4, with the provision of an additional in-agency, non-therapeutic service per day decreasing the odds of adoption.

[Table 7 About Here]

Three other covariates were associated with adoption across multiple models. An additional year in the child's age at entry into care was associated with an 18% to 21% decrease in the odds of the child experiencing adoption. In Models 1, 2, and 4, abandoned children were 54% to 64% less likely to experience adoption by the close of the study, as compared with non-abandoned children. And as seen in the first two models, physically abused children were 85% to 87% less likely to be adopted, as compared to other children.

Additional multivariate analyses were conducted which are not reported in Tables 4 through 7, and which sought to identify factors associated with the lack of achievement of a final disposition. Older, abandoned youth with lower strengths-to-needs scores had higher odds of being in this category. None of the measures pertaining to either the changing technical and task environment or service provision was significantly associated ($p < 0.05$) with this outcome.

Discussion

In response to legislative, judicial, and interest group demands for improved performance, child welfare bureaucracies have hoped that market-based models will provide sufficient incentives for agencies to improve reunification rates and other permanency outcomes. Some public agencies that have chosen to steer rather than row have used performance-based and managed care contracts under the assumption that nonprofit service providers will find ways to structure service delivery so as to

reach desired client outcomes. Market-based contracts may therefore have cascading effects: contractual changes may lead providers to alter how they serve foster children and their families, which may lead to changes in permanency outcomes. Child welfare service provision in a performance environment thus involves governance in motion.

This paper identifies some service-related mechanisms associated with the client outcomes commonly desired by child welfare performance initiatives. Using data from a performance-based, managed care contracting initiative in the Wayne County, Michigan foster care system, this study finds that while there were few differences in the total number of services provided to children and families experiencing different outcomes, significant differences existed in the intensity with which nearly all services were provided. In particular, greater service-related resources were expended to reunify children with biological parents than to achieve other outcomes. It took more agency effort, as measured in services per day, to reunify children with biological parents than to place children with adoptive parents or relatives, or to continue to serve them in foster homes.

Multivariate analyses suggest that these service efforts were related to the achievement of some permanency outcomes. Providing in-agency, non-therapeutic services, making case-related phone calls to other agencies, and accessing community services were positively associated with the likelihood of reunification. These findings generally held when the measures of aggregate service provision were replaced by the service intensity measures. These results suggest that researchers seeking to gauge the effectiveness of front-line service provision examine not only the number and type of services provided to clients but also the intensity with which services are delivered. It is reasonable to hypothesize that service intensity mediates service effectiveness in performance-based child welfare environments, particularly at the beginning of each foster care experience when caseworkers must construct service plans that respond to client needs and move them towards permanency and eventual system exit.

Reunification is generally considered the optimal placement outcome for most foster children and their parents and is usually the first option caseworkers consider in permanency planning. The service-related correlates of reunification identified in this study are consistent with prior research showing the importance of developing parent-child visitation schedules and increasing caseworker-child-parent interactions (Children's Bureau, 2006; Fanshel and Shinn, 1978; Thomlinson, n.d.). In comparison to more clinically-oriented interventions, parent-child visitation is a cost-efficient service technology, as non-master's degreed workers can be trained to facilitate and supervise parent-child interactions in the home and agency. While required by child welfare statutes and court officials, these in-person tasks are becoming more difficult for front-line caseworkers to attend to, given large caseloads and paperwork demands (Hasenfeld, 2005; Pecora et al., 2003; U.S. GAO, 2003). From a practical public management perspective, greater attention may be needed to ensure that foster children and their biological parents have sufficient opportunity to interact while youth are in care.

This study also found that the services that positively predicted reunification were negatively associated with the odds of adoption. While it is natural to expect that visitation services may be reduced for youth who have been or are in the process of being adopted, this result suggests that adopted youth received fewer in-agency case management services overall. Given that children often have strong service needs as they transition from TPR into an adoptive home (Festinger, 1996; Wind, Brooks, & Barth, 2006), this result suggests that researchers remain cautious when interpreting increased adoption rates in child welfare agencies. Unless appropriate amounts of supportive services can be marshaled during and after adoption, improved program performance may mask poorer child biopsychosocial outcomes.

Generally, the final dispositions under review were unaffected by the provision of in-agency therapeutic care and community services. Albeit derived from a quasi-experimental research design, these results suggest that some types of services were provided despite having no effect on permanency outcomes. It is in these service areas that the economic benefits of performance-based and managed care initiatives are putatively clearest: public managers may use utilization review systems to redirect resources from “underperforming” services to those more tightly aligned with client outcomes, thereby improving cost-efficiency and effectiveness—a strategic management approach that draws from supply chain management techniques in the for-profit manufacturing sector (McBeath, Briggs, & Aisenberg, 2009; Scott & Davis, 2007; Taylor, 1911). It is not clear how appropriate these management rubrics are for human service delivery systems, however. The methodological difficulty of establishing service effectiveness, the possibility that services may be related to some outcomes but not others, the prospect that some services may affect central outcomes but very weakly, and the fact that some services may be needed intensely (such as mental health care among the foster care population (Farmer et al., 2001; James et al., 2004)) despite being uncorrelated with outcomes, suggest that strong empirical, theoretical, and ethical justification should be provided before services are reduced for high-need clients.

This study also found that children served by agencies that had made specific changes to their foster care task and technical environments experienced different permanency outcomes than youth in other agencies. We view these estimates cautiously for two reasons: the study design and statistical power available prevented more rigorous control of potential selection mechanisms that allowed only some agencies to make changes in the financially-risky contracting environment; and the manner in which the qualitative data were gathered prevented more careful assessment of the depth of organizational change enacted by each agency. For example, the finding that children were more likely to experience TPR and less likely to be adopted if they were served by agencies that had increased interdepartmental case coordination, or if they were in agencies that had reduced clinical staffing levels, is difficult to interpret without additional agency-specific information. We couch our interpretation of these relationships in the need for more controlled research concerning the client-level effects of restructuring and retraining foster care departments.

This study identifies a potential agency-level mechanism through which the specific performance-based, managed care contracting initiative reduced reunification and promoted the placement of foster children with relatives. Foster children served by agencies that had trained staff to expedite permanency planning for clients were less likely to be reunified with their parents and more likely to be placed with relative caregivers. Some pilot agencies trained their staff to locate potential relative placements within the first 30 days of a child's entry into foster care and, where possible, place youth in kinship homes in order to attain the first pilot milestone. While all agencies were under the same financial pressure to place foster children quickly into approved placements, agencies emphasizing this "kinship search and placement" function may have developed a simple path to moderate financial risk within the pilot payment framework.

Research has found that changing the emphasis of human service technology to emphasize placement speed as opposed to traditional casework can influence client outcomes. For example, welfare recipients earn more over time if they are placed in welfare-to-work offices emphasizing the quick, intentional placement of clients in any job as opposed to improving clients' employability through skill-building (Bloom, Hill, & Riccio, 2003; Hill, 2006). In line with this research, the current study suggests that client outcomes respond to agencies' efforts to move clients quickly from program enrollment (e.g., "searching for work" or "in foster care") to program exit (e.g., "working any job" or "reached any pilot milestone").

Albeit limited by our research design, this line of reasoning informs results from our earlier studies of this specific performance initiative. Comparisons of the 175 foster children in this study with a comparable group of 68 children from three non-pilot agencies (operating under fee-for-service reimbursement) determined that children served by pilot agencies were less likely to be reunified and more likely to enter kinship foster homes than non-pilot youth, controlling for observable child, family, and caseworker characteristics (Meezan & McBeath, 2008a). Analyses also suggested that pilot children and families received fewer in-agency non-therapeutic services, in-agency therapeutic services, and community services than non-pilot children and families, controlling for a similar set of covariates (McBeath & Meezan, 2008). These results accorded with prior research on the effects of market-based models on child welfare service provision and permanency outcomes, although the precise means by which pilot children received fewer services and experienced different permanency outcomes were not identified.

The service-related mechanisms identified in the current study may also account for some of these market-based disparities, since the services that were reduced to pilot children and families were associated with increased odds of reunification. While generalizability is naturally limited, these results imply that the emphasis on reducing service-related costs found in many performance-based and managed care initiatives may reduce the amount of important services to clients and, by implication, decrease program performance for certain client outcomes. Dias and Maynard-Moody (2007) characterize this situation as a performance paradox, in which agencies in performance-based conditions choose service technologies and pressure caseworkers to serve clients in ways that negatively affect client outcomes, thereby

damaging program performance. The elements of strategic choice and agency are crucial areas for research on performance paradoxes. What logics do agencies employ to alter their task and technical abilities in performance-based and non-performance-based environments? How do front-line caseworkers serve clients when agencies “look at (clients) as dollars”, in the words of one pilot administrator?

We conclude with a normative note concerning the importance of developing performance-based child welfare contracts that incorporate client preferences. The New Public Management movement has been interpreted as requiring public managers to improve customer service and program outcomes. In the case of market-based foster care programming, improved permanency outcomes may be only lightly correlated with other client preferences concerning the services children and families receive and their familial relationships. In the current study, over a third of children experienced either kinship placement or had their parental rights terminated without being adopted. Although kinship placement and TPR were valid dispositions under the pilot reimbursement structure, the service-related efforts made on behalf of foster youth in these placements were substantially less than those for reunified youth, and these children remained in care much longer than those who had been reunified or adopted. Thus, while the pilot contracting environment may have legitimized the creation of separate and economically equivalent methods for achieving permanency, we would argue that the experiences of reunified and non-reunified youth were far from equitable.

It is not clear how client service preferences can be incorporated into principals’ and agents’ utility calculations in market-based environments. This paper argues that agents should provide, at a minimum, sufficient amounts and intensities of services that are strongly associated with client outcomes. Child welfare performance models should give agencies incentives to serve foster youth appropriately, regardless of the dollars attached to their eventual destination.

References

- Adoption and Safe Families Act of 1997, Pub. L. No. 105-89, § 111 Stat. 2115 (1997).
- Alter, C.F. (2000). Interorganizational collaboration in the task environment. In R.J. Patti (Ed.), *The Handbook of Social Welfare Management* (pp. 283-302). Thousand Oaks, CA: Sage Publications.
- Barnow, B.S. (2000). Exploring the relationship between performance management and program impact: A case study of the Job Training Partnership Act. *Journal of Policy Analysis and Management*, 19, 118-141.
- Barth, R.P., Courtney, M.E., & Berry, M. (1994). Timing is everything: An analysis of the time to adoption and finalization. *Social Work Research*, 18, 138-148.
- Barth, R.P., Landsverk, J., Chamberlain, P., Reid, J.B., Rolls, J.A., Hurlburt, M.S., Farmer, E.M.Z., James, S., McCabe, K.M., & Kohl, P.L. (2005). Parent-training programs in child welfare services: Planning for a more evidence-based approach to serving biological parents. *Research on Social Work Practice*, 15, 353-371.
- Barzelay, M., & Armajani, B.J. (1992). *Breaking through bureaucracy: A new vision for managing in government*. Berkeley, CA: University of California Press.
- Behn, R.D. (1998). The new public management paradigm and the search for democratic accountability. *International Public Management Journal*, 1, 131-164.
- Beinecke, R.H., Goodman, M., & Lockhard, A. (1997). The impact of managed care on Massachusetts mental health and substance abuse providers. *Administration in Social Work*, 21, 41-53.
- Bloom, H.S., Hill, C.J., & Riccio, J.A. (2003). Linking program implementation and effectiveness: Lessons from a pooled sample of welfare-to-work experiments. *Journal of Policy Analysis and Management*, 22, 551-575.
- Boyatzis, R.E. (1998). *Transforming qualitative information: Thematic analysis and core development*. Thousand Oaks, CA: Sage Publications.
- Brodkin, E.Z. (1997). Inside the welfare contract: Discretion and accountability in state welfare administration. *Social Service Review*, 71, 1-35.
- Brooks, D., James, S., & Barth, R.P. (2002). Preferred characteristics of children in need of adoption: Is there a demand for available foster children? *Social Service Review*, 76, 575-602.
- Chaffin, M., & Friedrich, B. (2004). Evidence-based treatments in child abuse and neglect. *Children and Youth Services Review*, 26, 1097-1113.
- Chamberlain, P., Price, J.M., Reid, J.B., Landsverk, J., Fisher, P.A., & Stoolmiller, M. (2006). Who disrupts from placement in foster and kinship care? *Child Abuse and Neglect*, 30, 409-424.
- Children's Bureau. (2006). *Family reunification: What the evidence shows*. Washington, D.C.: U.S. Department of Health & Human Services, Administration for Children & Families.
- Children's Bureau. (2007). *Child and family service reviews: Fact sheet for governors*. Washington, D.C.: U.S. Department of Health & Human Services, Administration for Children & Families.

- Courtney, M.E. (1994). Factors associated with the reunification of foster children with their families. *Social Service Review, 68*, 81-108.
- Courtney, M.E. (1995). Reentry to foster care of children returned to their families. *Social Service Review, 69*, 228-241.
- Courtney, M.E., McMurtry, S.L., & Zinn, A. (2004). Housing problems experienced by recipients of child welfare services. *Child Welfare, 83*, 393-422.
- Cuddeback, G.S. (2004). Kinship family foster care: A methodological and substantive synthesis of research. *Children and Youth Services Review, 26*, 623-639.
- Davis, I., Landsverk, J., & Newton, R. (1997). Duration of foster care for children reunified within the first year of care. In J.D. Berrick, R.P. Barth, & N. Gilbert (Eds.), *Child welfare research review* (vol. 2, pp. 272-293). New York: Columbia University Press.
- Davis, I.P., Landsverk, J., Newton, R., & Ganger, W. (1996). Parental visiting and foster care reunification. *Children and Youth Services Review, 18*, 363-382.
- Dawson, K., & Berry, M. (2002). Engaging families in child welfare services: An evidence-based approach to best practice. *Child Welfare, 81*, 293-317.
- Dias, J.J., & Maynard-Moody, S. (2007). For-profit welfare: contracts, conflicts, and the performance paradox. *Journal of Public Administration Research and Theory, 17*, 189-211.
- Emenhiser, D., Barker, R., & DeWoody, M. (1995). *Managed care: An agency guide to surviving and thriving*. Washington, D.C.: CWLA Press.
- Family Independence Agency. (2000). *Guidelines for the permanency pilot*. Unpublished document. State of Michigan Family Independence Agency.
- Fanshel, D., & Shinn, E. (1978). *Children in foster care: A longitudinal investigation*. New York: Columbia University Press.
- Farmer, E. (1996). Family reunification with high-risk children: Lessons from research. *Children and Youth Services Review, 18*, 403-424.
- Farmer, E., Burns, B.J., Chapman, M.V., Phillips, S.D., Angold, A., & Costello, E.J. (2001). Use of mental health services by youth in contact with social services. *Social Service Review, 75*, 605-624.
- Field, T. (1996). Managed care and child welfare. *Public Welfare, Summer*, 4-10.
- Fisher, P.A., & Chamberlain, P. (2000). Multidimensional treatment foster care: A program for intensive parenting, family support, and skill building. *Journal of Emotional and Behavioral Disorders, 8*, 155-164.
- Fisher, P.A., Burraston, B., & Pears, K. (2005). The Early Intervention Foster Care Program: Permanent placement outcomes from a randomized trial. *Child Maltreatment, 10*, 61-71.
- Flaherty, C., Collins-Camargo, C., & Lee, E. (In press). Privatization of child welfare services: Lessons from experienced states regarding site readiness assessment and planning. *Children and Youth Services Review*.
- Fraser, M.W., Walton, E., Lewis, R.E., Pecora, P.J., & Walton, W.K. (1996). An experiment in family reunification: Correlates of outcomes at one-year follow-up. *Children and Youth Services Review, 18*, 335-361.

- Frumkin, P. (2001). Managing for outcomes: Milestone contracting in Oklahoma. The PricewaterhouseCoopers Endowment for the Business of Government.
- Glisson, C., & Hemmelgarn, A. (1998). The effects of organizational climate and interorganizational coordination on the quality and outcomes of children's service systems. *Child Abuse and Neglect*, 22, 401-421.
- Goerge, R.M. (1994). The effect of public child welfare worker characteristics and turnover on discharge from foster care. In R.P. Barth, J.D. Berrick, & N. Gilbert (Eds.), *Child welfare research review* (vol. 1, pp. 205-217). New York: Columbia University Press.
- Goerge, R.M., Wulczyn, F.W., & Fanshel, D. (1994). A foster care research agenda for the '90s. *Child Welfare*, 93, 525-549.
- Green, B.L., Rockhill, A., & Furrer, C. (2007). Does substance abuse treatment make a difference for child welfare case outcomes? A statewide longitudinal analysis. *Children and Youth Services Review*, 29, 460-473.
- Gregoire, K.A., & Schultz, D.J. (2001). Substance-abusing child welfare parents: Treatment and child placement outcomes. *Child Welfare*, 80, 433-452.
- Grogan-Kaylor, A. (2000). Who goes into kinship care? The relationship of child and family characteristics to placement into kinship foster care. *Social Work Research*, 24, 132-141.
- Guo, S. (2005). Analyzing grouped data with hierarchical linear modeling. *Children & Youth Services Review*, 27, 637-652.
- Guo, S., & Wells, K. (2003). Research on timing of foster care outcomes: One methodological problem and approaches to its solution. *Social Service Review*, 77, 1-24.
- Hasenfeld, Y. (1983). *Human service organizations*. Englewood Cliffs, NJ: Prentice Hall.
- Hasenfeld, Y. (1992). *Human services as complex organizations*. Newbury Park, CA: Sage Publications.
- Hasenfeld, Y. (2005). *Worker-client relations: Social policy in practice*. Paper presented at the Workshop on New Directions for Research on Social Policy and Organizational Practices, The National Poverty Center at the University of Michigan, Ann Arbor, MI.
- Hatry, H.P. (1999). *Performance measurement: Getting results*. Washington, D.C.: The Urban Institute Press.
- Heinrich, C.J. (2000). Organizational form and performance: An empirical investigation of nonprofit and for-profit job-training service providers. *Journal of Policy Analysis and Management*, 19, 233-262.
- Hill, C.J. (2006). Casework job design and client outcomes in welfare-to-work offices. *Journal of Public Administration Research and Theory*, 16, 263-288.
- Hill, C.J., & Lynn, L.E., Jr. (2004). Governance and public management, an introduction. *Journal of Public Analysis and Management*, 23, 3-11.
- James Bell Associates. (2007). *Profiles of the child welfare demonstration projects*. Unpublished report. Arlington, VA.

- James, S., Landsverk, J., Slymen, D.J., & Leslie, L.K. (2004). Predictors of outpatient mental health service use: The role of foster care placement change. *Mental Health Services Research, 6*, 127-141.
- Johnston, J.M., & Romzek, B. (1999). Contracting and accountability in state Medicaid reform: Rhetoric, theories, and reality. *Public Administration Review, 59*, 383-399.
- Kelman, S. (2005). *Unleashing change: A study in organizational renewal in government*. Washington, D.C.: Brookings Institution Press.
- Kohl, P.L., Edleson, J.L., English, D.J., & Barth, R.J. (2005). Domestic violence and pathways into child welfare services: Findings from the National Survey of Child and Adolescent Well-Being. *Children and Youth Services Review, 27*, 1167-1182.
- Long, J.S. (1997). *Regression models for categorical and limited dependent variables*. Thousand Oaks, CA: Sage Publications.
- Lynn, Jr., L.E., Heinrich, C.J., & Hill, C.J. (2001). *Improving governance: A new logic for empirical research*. Washington, D.C.: Georgetown University Press.
- Maxwell, J.A. (1998). Designing a qualitative study. In L. Bickman and D.J. Rog (Eds.), *Handbook of applied social research methods* (pp. 69-100). Thousand Oaks, CA: Sage Publications.
- McBeath, B., & Meezan, W. (2006). Nonprofit adaptation to performance-based, managed care contracting in Michigan's foster care system. *Administration in Social Work, 30*, 39-71.
- McBeath, B., & Meezan, W. (2008). Market-based disparities in foster care service provision. *Research on Social Work Practice, 18*, 27-41.
- McBeath, B., Briggs, H.E., & Aisenberg, G.A. (2009). The role of child welfare managers in promoting child welfare agency performance through experimentation. *Children and Youth Services Review, 31*, 112-118.
- McCullough, C., & Schmitt, B.J. (2000). Managed care and privatization: Results of a national survey. *Children and Youth Services Review, 22*, 117-130.
- Meezan, W., & McBeath, B. (2003). *Moving toward managed care in child welfare: First results from the evaluation of the Wayne County foster care pilot initiative*. Unpublished monograph. Ann Arbor: University of Michigan School of Social Work.
- Meezan, W., & McBeath, B. (2008a). Market-based disparities in foster care outcomes. *Children and Youth Services Review, 30*, 388-406.
- Meezan, W., & McBeath, B. (2008b). The implementation of market-based child welfare innovations. In D. Lindsey & A. Shlonsky (Eds.), *Child welfare research: Advances for practice and policy* (pp. 242-260). New York: Oxford University Press.
- Miles, M.B. & Huberman, A.M. (1994). *Qualitative data analysis* (2nd Ed.). Thousand Oaks, CA: Sage Publications.
- Miller, K., Fisher, P.A., Fetrow, B., & Jordan, K. (2006). Trouble on the journey home: Reunification failures in foster care. *Children and Youth Services Review, 28*, 260-274.

- Moore, M.H. (1995). *Creating public value: Strategic management in government*. Harvard, MA: Harvard University Press.
- Mordock, J.B. (1996). The road to survival revisited: Organizational adaptation to the managed care environment. *Child Welfare, 75*, 195-218.
- Osborne, D., & Gaebler, T. (1992). *Reinventing government: How the entrepreneurial spirit is transforming the public sector*. Reading, MA: Addison-Wesley.
- Pecora, P.J., Whittaker, J.K., Maluccio, A.N., & Barth, R.P. (2000). *The child welfare challenge: Policy, practice, and research* (2nd ed.). New York: Aldine de Gruyter.
- Perry, R. (2006). Do social workers make better child welfare workers than non-social workers? *Research on Social Work Practice, 16*, 392-405.
- Planning and Learning Technologies, Inc. and The University of Kentucky. (2006). *Literature review on the privatization of child welfare services*. Unpublished monograph.
- Provan, K.G., Milward, H.B., & Isett, K.R. (2002). Collaboration and integration of community-based health and human services in a nonprofit managed care system. *Health Care Management Review, 27*, 21-32.
- Raghavan, R., Leibowitz, A.A., Andersen, R.M., Zima, B.T., Schuster, M.A., & Landsverk, J. (2006). Effects of Medicaid managed care policies on mental health service use among a national probability sample of children in the child welfare system. *Children and Youth Services Review, 28*, 1482-1496.
- Roth, D., & Crane-Ross, D. (2002). Impact of services, met needs, and service empowerment on consumer outcomes. *Mental Health Services Research, 4*, 43-56.
- Ryan, J.P., Garnier, P., Zyphur, M., & Zhai, F. (2006). Testing the effects of caseworker characteristics in child welfare. *Children and Youth Services Review, 28*, 993-1006.
- Sandfort, J.R. (2000). Moving beyond discretion and outcomes: Examining public management from the front lines of the welfare system. *Journal of Public Administration Research and Theory, 10*, 729-756.
- Sandfort, J.R. (2003). Exploring the structuration of technology within human service organizations. *Administration and Society, 34*, 605-631.
- Scott, W.R., & Davis, G.F. (2007). *Organizations and organizing: Rational, natural, and open system perspectives*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Simms, M.D., Freundlich, M., Battistelli, E.S., & Kaufman, N.D. (1999). Delivering health and mental health care services to children in family foster care after welfare and health care reform. *Child Welfare, 78*, 166-183.
- Smith, B.D. (2003). How parental drug use and drug treatment compliance relate to family reunification. *Child Welfare, 82*, 335-365.
- Smith, B.D., & Marsh, J.C. (2002). Client-service matching in substance abuse treatment for women with children. *Journal of Substance Abuse Treatment, 22*, 161-168.

- Smith, D.K., Johnson, A.B., Pears, K.C., Fisher, P.A., & DeGarmo, D.S. (2007). Child maltreatment and foster care: Postnatal parental substance use. *Child Maltreatment, 12*, 150-160.
- Snowden, L.R., Cuellar, A.E., & Libby, A.M. (2003). Minority youth in foster care: Managed care and access to mental health treatment. *Medical Care, 41*, 264-274.
- STATA Corporation. (2008). *STATA user's guide*. College Station, TX: STATA Press.
- Stroul, B.A., Pires, S.A., & Armstrong, M.I. (2003). Health care reform tracking project: Tracking state managed care reforms as they affect children and adolescents with behavioral health disorders and their families - 2003 state survey. Tampa, FL: Research and Training Center for Children's Mental Health, Department of Child and Family Studies, Division of State and Local Support, Louis de la Parte Florida Mental Health Institute, University of South Florida.
- Taylor, F.W. (1911). *The principles of scientific management*. New York: Harper & Brothers.
- Testa, M.F. (2004). When children cannot return home: Adoption and guardianship. *The Future of Children, 14*, 115-130.
- Thomlinson, B. (2005). Using evidence-based knowledge to improve policies and practices in child welfare: Current thinking and continuing challenges. *Research on Social Work Practice, 15*, 321-322.
- Thomlinson, B. (n.d.). A selective review of family reunification services research. In *A system of care for children's mental health: expanding the research base: 10th annual research conference proceedings*. Calgary, Alberta, Canada: The University of Canada.
- U.S. Department of Health and Human Services, Children's Bureau. (1997). *National study of protective, preventive and reunification services delivered to children and their families*. Washington, D.C.: U.S. Government Printing Office.
- U.S. General Accounting Office. (1998). *Child welfare: Early experiences implementing a managed care approach* (GAO/HEHS-99-8). Washington, D.C.: Author.
- U.S. General Accounting Office. (2003). *Child welfare: HHS could play a greater role in helping child welfare agencies recruit and retain staff* (GAO-03-357). Washington, D.C.: Author.
- Unrau, Y.A., & Wells, M.A. (2005). Patterns of foster care service delivery. *Children and Youth Services Review, 27*, 511-531.
- Unruh, J.K., & Hodgkin, D. (2004). The role of contract design in privatization of child welfare services: The Kansas experience. *Children and Youth Services Review, 26*, 771-783.
- Van Slyke, D.M. (2003). The mythology of privatization in contracting for social services. *Public Administration Review, 63*, 296-315.
- Wells, K., & Guo, S. (1999). Reunification and reentry of foster children. *Children and Youth Services Review, 21*, 273-294.
- Wernet, S.P. (1999). *Managed care in human services*. Chicago, IL: Lyceum Books.

- Wind, L.H., Brooks, D., & Barth, R.P. (2006). Adoption preparation: Differences between adoptive families with and without special needs. *Adoption Quarterly, 8*, 45-74.
- Wooldridge, J.M. (2002). *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.
- Wulczyn, F.W. (2000a). Federal fiscal reform in child welfare services. *Children and Youth Services Review, 22*, 131-159.
- Wulczyn, F.W. (2000b). Fiscal reform and managed care in child welfare services. *Policy and Practice of Public Human Services, 58*, 26-31.
- Wulczyn, F.W. (2004). Family reunification. *The Future of Children, 14*, 95-114.
- Wulczyn, F.W. (2005). *Testimony before the Subcommittee on Human Resources of the House Committee on Ways and Means*. June 9, 2005.

Table 1: Per Child Reimbursement Structure of the Wayne County Foster Care Permanency Pilot Initiative

	<u>Non-Pilot (\$)</u>	<u>Pilot (\$)</u>
Per-diem rate	18 - 34	13.20
Payment upon intake into pilot	0	2,210
<u>Performance Incentives</u>		
Achievement of performance standard (either the child's return home or to a relative, or achievement of legal guardianship or independent living in 290 days; or achievement of termination of parental rights in 515 days)	0	1,900
Child at home six months after initial discharge	0	1,290
Child at home 12 months after initial discharge	0	1,600
Adoption placement made within seven months of termination of parental rights	0	1,290

Table 2: Sample Characteristics

	<u>%</u>	<u>Mean</u> <u>(S.D.)</u>	<u>Min</u>	<u>Max</u>
<u>Permanency Outcomes</u>				
Reunification	28			
Kinship care	18			
TPR	19			
Adoption	27			
None	7			
<u>Technical and Task Environment</u>				
Increased interdepartmental case coordination	50			
Reduced clinical staff	73			
Trained staff to expedite permanency planning for clients	69			
<u>Aggregate Service Provision</u>				
In-agency, non-therapeutic services		106.09 (88.87)	0	419
In-agency, therapeutic services		5.21 (11.56)	0	66
Phone calls		41.55 (40.99)	0	227
Referrals for community services		17.50 (14.43)	1	81
Community services		8.86 (7.95)	1	69
<u>Service Intensity</u>				
In-agency, non-therapeutic services per day		0.16 (0.12)	0	0.79
In-agency, therapeutic services per day		0.01 (0.01)	0	0.07
Phone calls per day		0.06 (0.06)	0	0.48
Referrals for community services per day		0.05 (0.09)	0	0.81
Community services per day		0.02 (0.04)	0	0.36
<u>Client Characteristics</u>				
Time in care		661.81 (297.40)	43	930
Child is African American	78			
Child is male	51			

Child age		6.74 (4.79)	1.12	17.42
Child needs and strengths		0.09 (4.01)	-15.64	9.63
Caregiver had been previously investigated by CPS for child maltreatment	47			
Caregiver age		33.96 (9.87)	18.03	71.4
Female-headed household	69			
Caregiver needs and strengths		0.01 (6.94)	-14.73	19.83
<u>Formal Allegation of Child Maltreatment</u>				
None	6			
Neglect	56			
Abandonment	13			
Physical abuse	10			
Neglect and physical abuse	6			
Sexual abuse	5			
Neglect and emotional and physical abuse	3			
Other	2			
<u>Conditions in the Biological Household</u>				
Drug abuse in the household	40			
Inadequate housing	37			
Domestic violence	9			
Failure to protect	9			
Alcohol abuse in the household	7			
<u>Caseworker Characteristics</u>				
Number of caseworkers over child's stay		2.91 (1.48)	1	7
Caseworkers' months of agency experience		16.63 (16.94)	0.50	155.70
Caseworkers' caseload		22.14 (4.48)	2.38	32
% of child's stay where caseworker/child race matched	52			
% of child's stay where caseworker had more than a BA/BS degree	8			

Note: N = 175. For caseworker characteristics, N pertains to the number of valid child cases for which data were available.

Table 3: Group-Based Differences by Type of Final Disposition

	<u>Reunification</u> (n = 49)		<u>Kinship Care</u> (n = 32)		<u>TPR</u> (n = 34)		<u>Adoption</u> (n = 47)		<u>None</u> (n = 13)		χ^2 or F
	%	<u>Mean</u> (S.D.)	%	<u>Mean</u> (S.D.)	%	<u>Mean</u> (S.D.)	%	<u>Mean</u> (S.D.)	%	<u>Mean</u> (S.D.)	
<u>Technical and Task Environment</u>											
Increased											
interdepartmental case coordination	49		41		76		32		77		20.59 ***
Reduced clinical staff	78		78		62		77		54		5.77
Trained staff to expedite permanency planning for clients	67		78		59		77		54		5.63
<u>Aggregate Service Provision</u>											
In-agency, non-therapeutic services		99.69 (87.60)		119.59 (114.94)		130.03 (58.67)		81.28 (84.42)		124.00 (88.75)	1.95
In-agency, therapeutic services		3.86 (7.56)		6.28 (11.58)		3.97 (7.18)		7.11 (17.20)		4.08 (7.45)	0.68
Phone calls		43.57 (57.30)		47.16 (38.18)		41.94 (25.46)		31.53 (28.14)		55.31 (44.15)	1.26
Referrals for community services		14.90 (11.71)		16.81 (14.28)		16.68 (8.70)		21.09 (20.20)		18.23 (9.45)	1.18
Community services		8.12 (5.63)		7.47 (5.71)		9.82 (8.28)		9.21 (10.82)		11.23 (7.19)	0.78
<u>Service Intensity</u>											
In-agency, non-therapeutic services per day		0.23 (0.15)		0.14 (0.12)		0.14 (0.06)		0.10 (0.09)		0.16 (0.09)	8.64 ***
In-agency, therapeutic		0.01		0.01		0.00		0.01		0.01	0.37

services per day	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)		
Phone calls per day	0.09 (0.10)	0.06 (0.04)	0.05 (0.03)	0.04 (0.04)	0.07 (0.05)	4.61	**
Referrals for community services per day	0.08 (0.16)	0.03 (0.03)	0.02 (0.01)	0.04 (0.05)	0.03 (0.02)	3.45	**
Community services per day	0.04 (0.07)	0.01 (0.01)	0.01 (0.01)	0.02 (0.03)	0.02 (0.01)	4.38	**
<u>Client Characteristics</u>							
Time in care	417.71 (274.38)	719.53 (291.67)	894.03 (90.94)	666.57 (253.82)	815.15 (247.58)	21.48	***
Child age	7.56 (4.32)	9.90 (4.99)	4.89 (3.40)	4.27 (4.07)	9.62 (5.09)	11.76	***
Child needs and strengths	0.53 (4.80)	-0.31 (4.67)	0.17 (3.43)	0.42 (2.66)	-1.94 (4.00)	1.13	
Abandonment	6	16	15	11	31	6.20	
Physical abuse	27	6	3	2	0	23.09	***
Drug abuse in the household	21	31	59	57	23	20.86	***
Domestic violence	15	16	9	0	0	9.82	*
<u>Caseworker Characteristics</u>							
Number of caseworkers over child's stay	2.10 (1.16)	2.91 (1.30)	3.82 (1.34)	3.13 (1.61)	2.77 (1.42)	8.35	***
Caseworkers' months of agency experience	16.23 (17.24)	14.05 (10.96)	18.49 (25.31)	16.72 (14.32)	19.36 (8.85)	0.38	
Caseworkers' caseload	21.57 (4.44)	21.29 (5.22)	22.90 (4.73)	21.96 (3.71)	24.95 (3.69)	2.08	+

Note: N = 175. Group comparisons made by ANOVA, Kruskal-Wallis, or cross-tabulations (depending on measurement level and normality considerations). + = (p < 0.10), * = (p < .05), ** = (p < .01), *** = (p < 0.001).

Table 4: Logistic Regressions for Reunification

	(1)	(2)	(3)	(4)
<u>Technical and Task Environment</u>				
Increased interdepartmental case coordination	1.32 (0.51)	1.29 (0.37)		
Reduced clinical staff	0.35 (0.25)			
Trained staff to expedite permanency planning for clients		0.27 (0.14)	*	
<u>Aggregate Service Provision</u>				
In-agency, non-therapeutic services			1.02 (0.00)	***
In-agency, therapeutic services			0.97 (0.04)	
Phone calls			1.02 (0.01)	**
Referrals for community services			0.96 (0.02)	+
Community services			1.01 (0.05)	
<u>Service Intensity</u>				
In-agency, non-therapeutic services per day				12391.45 (31708.06) ***
In-agency, therapeutic services per day				0.00 (0.00)
Phone calls per day				50532.85 (282475.70) +
Referrals for community services per day)

6.78 x 10⁸ *
(5.93 x 10⁹)

Community services per day

Client Characteristics

Time in care	0.99 **	0.99 **	0.99 **	
	(0.00)	(0.00)	(0.00)	
Child age	1.02	1.02	0.98	1.01
	(0.04)	(0.04)	(0.08)	(0.06)
Child needs and strengths	1.11 ***	1.12 ***	1.11	1.03
	(0.03)	(0.02)	(0.08)	(0.05)
Abandonment	0.36 +	0.38 +	0.43	0.39
	(0.20)	(0.21)	(0.31)	(0.41)
Physical abuse	3.00	2.15	3.59 +	2.10
	(2.27)	(1.32)	(2.77)	(1.44)
Drug abuse	0.25 **	0.26 **	0.46 **	0.44 *
	(0.13)	(0.13)	(0.14)	(0.17)
Domestic violence	15.38	17.93	1.53	1.33
	(26.10)	()	(1.43)	(0.53)

Caseworker Characteristics

Number of caseworkers	1.30	1.31	1.16	0.57 **
	(0.44)	(0.45)	(0.55)	(0.11)
Agency experience	0.99	0.99	0.99	1.01
	(0.01)	(0.02)	(0.02)	(0.03)
Caseload	1.04	1.05	0.98	0.92
	(0.05)	(0.04)	(0.05)	(0.05)
(-2 ln L)	-61.75	-60.76	-52.60	-60.68

Note: Results are logistic regression coefficients reported as odds ratios, with robust standard errors (clustered by agency) in parentheses. + = (p < 0.10), * = (p < .05), ** = (p < .01), *** = (p < 0.001). N = 166.

Table 5: Logistic Regressions for Kinship Care

	(1)	(2)	(3)	(4)
<u>Technical and Task Environment</u>				
Increased interdepartmental case coordination	0.82 (0.27)	1.03 (0.44)		
Reduced clinical staff	1.78 (0.82)			
Trained staff to expedite permanency planning for clients		2.62 (1.36)	+	
<u>Aggregate Service Provision</u>				
In-agency, non-therapeutic services			1.00 (0.00)	
In-agency, therapeutic services			0.98 (0.03)	
Phone calls			0.99 (0.01)	
Referrals for community services			1.02 (0.01)	
Community services			0.94 (0.05)	
<u>Service Intensity</u>				
In-agency, non-therapeutic services per day				0.36 (0.71)
In-agency, therapeutic services per day				0.00 (0.00)
Phone calls per day				0.00 (0.00)
Referrals for community services per day				

Community services per day					1.93 x 10 ⁻¹⁷ ** (2.62 x 10 ⁻¹⁶)
<u>Client Characteristics</u>					
Time in care	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)		
Child age	1.18 * (0.09)	1.18 * (0.09)	1.21 * (0.10)		1.22 ** (0.09)
Child needs and strengths	1.00 (0.04)	0.99 (0.05)	0.99 (0.02)		1.01 (0.03)
Abandonment	1.24 (1.29)	1.26 (1.29)	1.05 (1.36)		0.93 (1.04)
Physical abuse	0.43 (0.22)	0.56 (0.21)	0.41 (0.25)		0.38 (0.31)
Drug abuse	0.57 (0.38)	0.57 (0.37)	0.53 (0.36)		0.50 (0.26)
Domestic violence	2.20 (1.79)	1.78 (1.27)	4.14 * (2.74)		5.84 *** (1.44)
<u>Caseworker Characteristics</u>					
Number of caseworkers	0.80 (0.29)	0.79 (0.29)	0.89 (0.27)		0.97 (0.20)
Agency experience	0.97 (0.02)	0.97 (0.02)	0.98 + (0.01)		0.98 (0.02)
Caseload	0.91 (0.04)	0.90 ** (0.04)	0.92 * (0.03)		0.95 (0.03)
(-2 ln L)	-66.19	-65.64	-64.95		-62.69

Note: Results are logistic regression coefficients reported as odds ratios, with robust standard errors (clustered by agency) in parentheses. + = (p < 0.10), * = (p < .05), ** = (p < .01), *** = (p < 0.001). N = 166.

Table 6: Logistic Regressions for TPR

	(1)	(2)	(3)	(4)
<u>Technical and Task Environment</u>				
Increased interdepartmental case coordination	14.18 (9.46)	*** 9.04 (7.81)	*	
Reduced clinical staff	6.05 (2.81)	***		
Trained staff to expedite permanency planning for clients		3.17 (2.46)		
<u>Aggregate Service Provision</u>				
In-agency, non-therapeutic services			1.00 (0.01)	
In-agency, therapeutic services			0.98 (0.01)	
Phone calls			0.98 (0.02)	
Referrals for community services			0.96 (0.03)	
Community services			1.09 (0.02)	***
<u>Service Intensity</u>				
In-agency, non-therapeutic services per day				7.58 (34.11)
In-agency, therapeutic services per day				0.00 (0.01)
Phone calls per day				1.48×10^{-8} (7.68×10^{-8}) **
Referrals for community services per day				

Community services per day						0.00 (0.00)	
<u>Client Characteristics</u>							
Time in care	1.01 (0.00)	* 	1.01 (0.00)	* 	1.01 (0.01)	+	
Child age	0.87 (0.04)	** 	0.87 (0.04)	** 	0.87 (0.04)	**	0.96 (0.02) +
Child needs and strengths	0.98 (0.05)		0.99 (0.05)		0.99 (0.05)		0.97 (0.03)
Abandonment	2.26 (1.53)		1.86 (1.35)		1.07 (0.79)		1.23 (0.76)
Physical abuse	11.24 (24.72)		14.70 (36.39)		2.69 (3.73)		1.27 (1.70)
Drug abuse	3.11 (3.25)		2.74 (2.74)		1.91 (1.20)		1.86 (0.71)
Domestic violence	0.11 (0.07)	*** 	0.17 (0.14)	* 	1.66 (1.09)		3.82 (2.52) *
<u>Caseworker Characteristics</u>							
Number of caseworkers	1.00 (0.17)		1.04 (0.16)		1.10 (0.06)	+	1.84 (0.13) ***
Agency experience	0.98 (0.03)		0.99 (0.03)		1.00 (0.05)		1.00 (0.02)
Caseload	0.89 (0.06)	+ 	0.91 (0.06)		0.96 (0.07)		1.04 (0.05)
(-2 In L)	-50.72		-51.83		-51.51		-65.15

Note: Results are logistic regression coefficients reported as odds ratios, with robust standard errors (clustered by agency) in parentheses. + = (p < 0.10), * = (p < .05), ** = (p < .01), *** = (p < 0.001). N = 166.

Table 7: Logistic Regressions for Adoption

	(1)	(2)	(3)	(4)
<u>Technical and Task Environment</u>				
Increased interdepartmental case coordination	0.06 (0.02)	***	0.10 (0.05)	***
Reduced clinical staff	0.22 (0.04)	***		
Trained staff to expedite permanency planning for clients			0.52 (0.32)	
<u>Aggregate Service Provision</u>				
In-agency, non-therapeutic services			0.99 (0.00)	+
In-agency, therapeutic services			1.05 (0.05)	
Phone calls			0.99 (0.00)	+
Referrals for community services			1.01 (0.01)	+
Community services			1.00 (0.02)	
<u>Service Intensity</u>				
In-agency, non-therapeutic services per day				0.00 (0.00) *
In-agency, therapeutic services per day				2.61 x 10 ²¹ (7.85 x 10 ²²)
Phone calls per day				0.03 (0.07)
Referrals for community services per day				6.20 (26.57)

Community services per day

Client Characteristics

Time in care	1.00 (0.00)		1.00 (0.00)		1.00 (0.00)		
Child age	0.79 (0.04)	***	0.80 (0.03)	***	0.82 (0.05)	**	0.82 (0.05)
Child needs and strengths	0.97 (0.04)		0.97 (0.05)		1.00 (0.05)		1.01 (0.04)
Abandonment	0.36 (0.12)	**	0.40 (0.14)	**	0.56 (0.30)		0.46 (0.17)
Physical abuse	0.15 (0.14)	*	0.13 (0.14)	*	0.24 (0.26)		0.41 (0.39)
Drug abuse	1.37 (0.44)		1.48 (0.53)		1.78 (1.11)		1.48 (0.63)

Caseworker Characteristics

Number of caseworkers	1.04 (0.10)		1.03 (0.12)		1.07 (0.26)		1.08 (0.26)
Agency experience	1.02 (0.03)		1.01 (0.02)		1.01 (0.01)		1.00 (0.01)
Caseload	1.07 (0.10)		1.05 (0.07)		1.02 (0.05)		1.03 (0.07)
(-2 <i>In L</i>)	-68.81		-70.19		-71.40		-69.89

Note: Results are logistic regression coefficients reported as odds ratios, with robust standard errors (clustered by agency) in parentheses. + = (p < 0.10), * = (p < .05), ** = (p < .01), *** = (p < 0.001). N = 166.