Spring 5-15-2018

Does Privatization Matter? An Exploration of Foster Care Permanency Outcomes

Allison Early Dunnigan
Washington University in St. Louis

WASHINGTON UNIVERSITY IN ST. LOUIS

Brown School of Social Work

Dissertation Examination Committee:
Melissa Jonson-Reid, Chair
Derek Brown
Brett Drake
Patrick Fowler
Patricia Kohl

Does Privatization Matter? An Exploration of Foster Care Permanency Outcomes

by

Allison Dunnigan, MSW

A dissertation presented to
The Graduate School
of Washington University in
partial fulfillment of the
requirements for the degree
of Doctor of Philosophy

May 2018
St. Louis, Missouri

Table of Contents

List of Figures

List of Tables

Acknowledgments

I am eternally grateful for the community of scholars and teachers that have shaped me. These teachers took many forms, not always in the classroom. First, I would like to thank my dissertation chair and mentor, Melissa Jonson-Reid for her unwavering support throughout this journey. You have been a mentor in the truest sense of the word and your guidance has been invaluable to me. I am better for it. Thanks to my committee members: Trish Kohl, Brett Drake, Derek Brown, and Patrick Fowler. Your insight and expertise has broadened my skills and improved my work. I am indebted to you all.

Special thanks go to the 2012 PhD Cohort for the laughs, support, and camaraderie. In particular, thank you to Vithya Murugan, Ericka Lewis, and Tess Thompson who were my touchstones throughout this process. Thank you to the entire Brown School PhD community, past and present, it is an honor to be your colleague.

Finally, the greatest teachers I have are my family. Terry Dunnigan epitomizes what it means to be a partner and I am in awe of his selfless support. Words cannot state how grateful I am to my husband, my partner, for all that he has sacrificed so that I could achieve. My daughters, Charlotte and Hilary remind me every day why I am doing this. They are my motivation and my inspiration. Finally, to my parents, Margaret Barham and Thomas Early, who instilled in me a love of reading and learning from a young age and were outstanding role-models of how to continue to achieve your dreams.

Allison Dunnigan

Washington University in St. Louis

May 2018

The data used in this publication were made available by the National Data Archive on Child Abuse and Neglect, Cornell University, Ithaca, NY, and have been used with permission. Data from the Adoption and Foster Care Analysis and Reporting System (AFCARS) were originally collected by the Children's Bureau. Funding for the project was provided by the Children's Bureau, Administration on Children, Youth and Families, Administration for Children and Families, U.S. Department of Health and Human Services. The collector of the original data, the funder, NDACAN, Cornell University and their agents or employees bear no responsibility for the analyses or interpretations presented here.

ABSTRACT OF THE DISSERTATION

Does Privatization Matter? An Exploration of Foster Care Permanency Outcomes

by

Allison Dunnigan

Doctor of Philosophy in Social Work

Brown School of Social Work

Washington University in St. Louis, 2018

Professor Melissa Jonson-Reid, Chair

In the United States, at any given time, there are nearly 400,000 children in foster care due to maltreatment or for reasons such as parental incarceration, parental death or voluntary relinquishment. Youth in out of home care are a small proportion of all children served by the child welfare system, but they comprise the majority of the system costs and are at high risk for poor outcomes across a number of domains. Concerns regarding both cost and poor outcomes began a trend toward privatization of child welfare in the mid-1990s. Despite the long history, there has been very little evaluation of outcomes outside of assessing cost savings. This dissertation used data from the Adoption and Foster Care Analysis and Reporting System (AFCARS) supplemented with policy information available through the Child Welfare Gateway and state websites to assess whether youth permanency outcomes (length of stay, type of exit from care and re-entry into care) varied according to privatization of services. Results indicate that overall youth served by privatized systems stay longer in care and are somewhat less likely to have a positive exit (return home, adoption or permanent residence with relative). On the other hand, among those who did exit care, youth served in privatized systems were less likely to return to care. Implications for continued research, policy and program planning are discussed.

Chapter 1: Background and Introduction

At any given time, there are nearly 400,000 children in foster care in the United States (US DHHS, 2017a). While such youth represent a small proportion of the population of youth served by the child welfare system, they comprise much of the system costs and are at risk for a number of poor outcomes. Youth in foster care are at increased risk for negative outcomes including academic performance, mental illness, chronic physical health concerns, rule-breaking behavior, and homelessness (Jaudes, et al., 2012; Jonson-Reid, Dunnigan & Ryan, 2018; Romano, Babchishin, Marquis & Frechette, 2015; Simms, Dubowitz, & Szilagyi, 2000). In addition to the negative outcomes associated with a history of child welfare involvement, the economic burden for one child involved in the child welfare system is $73,094 and the nationwide estimates are over 29 billion dollars for the direct costs associated with the child welfare system (Gelles & Perlman, 2012). Daro (1988) estimated that long term foster care costs nearly $646 million which, based on inflation, is 1.3 billion in 2015 dollars.

1.1 Statement of the Problem

The total economic burden associated with children in foster care is great when considering the costs of mental health treatment, law enforcement, and acute medical treatment (Gelles & Perlman, 2012). Additionally, there have been a number of concerns regarding how long youth remain in care and the likelihood of exiting to a permanent and stable home as it is generally believed that the more quickly a youth can achieve permanence the better their chances of attaining positive developmental outcomes (Becker, Jordan & Larsen, 2007). To this end, there have been a variety of federal policy changes since 1990 designed to impact these altering

timelines, prioritizing kinship placements and incentivizing adoptions (Akin, 2011; Adoption and Safe Families Act of 1997). The high costs of serving children in foster care and ongoing concerns about outcomes coupled with changing political ideologies, resulted in a move toward privatizing child welfare systems across the U.S. beginning in the 1990s. Proponents of privatization believe that innovation and cost-savings can only be realized if the government is no longer providing services (Morgan and England, 1988). Critics of privatization in child welfare point to difficulties in implementation in a non-consumer based system and worries that achieving contractual outcomes will be prioritized over child well-being (McBeath & Meezan, 2009).

While some research has been done on cost savings associated with privatization, child level outcomes associated with the move away from the delivery of child welfare services from a public bureaucracy to a private or collaborative system has rarely been explored (McBeath et al, 2014; Menozzi, 2016). Indeed, the impact structural factors generally on child outcomes for children involved in child welfare is a field of study that is under-researched. Structural factors relevant to the child welfare system include state-level (governance, definition of maltreatment, funding streams), jurisdictional level (judicial philosophy and interpretation of policies and procedures, workforce training and education), and organizational level factors (privatization). In contrast to the attention paid to the individual organizational factors such as climate and culture, less attention has been paid to structural factors that operate at the state and jurisdictional levels (Glisson, Dukes, & Green, 2006; Glisson & Green, 2011; Aarons & Sawitzky, 2006).

Thus, despite nearly 20 years of implementation, we know almost nothing about how privatization and the subsequent variations in implementation and interpretation of policies and workforce factors impact placement, permanency, and child well-being measures. This

dissertation helps to fill this gap by exploring the relationship between privatization of foster care case management and permanency outcomes for youth in foster care.

1.2 History of Foster Care Policy

There are two key national components essential to understanding the political landscape that guides child welfare service delivery: federal child welfare policies and the New Federalism movement of the late twentieth century. Federal policies broadly define what services can and should be provided to children reported for maltreatment while the political ideology of New Federalism helps explain the variations in child welfare services across states as well as the political discourse regarding public goods and services. The first half of this chapter provides an overview of the key federal child welfare policies, starting with the Social Security Act of 1935 and reviewing the comprehensive child welfare laws of the 20th century and the revisions or clarifications of the early 2000's. The second half of this chapter will explore the evolution and resurgence of New Federalism and how this relates to child welfare service delivery.

Prior to the establishment of the U.S. Children's Bureau in 1912 (one of the key outcomes of the 1909 Conference on Children), services for indigent, neglected, and incorrigible youth were provided through a mostly unconnected network of charity and religious organizations. The case of Mary Ellen Wilson in 1874 is often cited as the impetus behind the establishment of federal child protection legislation (Richett and Hudson, 1979; Nelson, 1995; Jimenez, 1990). The case was made famous due to the authorities being reluctant to act until the intercession of Elbridge Thomas Gerry with the American Society for the Prevention of Animals. Mary Ellen Wilson was removed from the home and testified to the routine and severe physical abuse she experienced at the hands of her foster parents. This case is cited as a main reason behind the creation of the New York Society for the Prevention of Cruelty to Children

(NYSPCC) (Children's Bureau, n.d.). At the end of the 19th century, the NYSPCC was central to efforts establish and enforce legislation that protects children from abuse, neglect, and exploitation. This is the environment that led to the 1909 Conference on Children and subsequent federal legislation.

With the formalization of the Children's Bureau and the determination of the 1909 conference that children should be placed in home environments such as foster care, there were clear mandates for what services for maltreated children should look like but there was no mechanism for implementation nationwide. Following the 1909 Conference, 20 states passed legislation that provided financial assistance to mothers of children that would previously have been removed from the home and placed in almshouses or sent to rural communities on the Orphan Trains (Bremner, 1971). The role of the Children's Bureau, per se, was limited until the Social Security Act of 1935 (SSA) when the protection and of at risk children became the mandated purview of the Children's Bureau. With the passage of the SSA, additional funding mechanisms were established to support children and families in need. The Titles IV-B and IV-E of the SSA are the primary funding sources for state child welfare services. This act also established the Aid for Dependent Children program, which provides financial assistance to children. The SSA provided for services under a broad definition of child welfare, including poverty and general well-being. Subsequent policies were implemented specifically for the protection of children from maltreatment and the delivery of associated services.

It was not until the Child Abuse Prevention and Treatment Act of 1974 (CAPTA) that there was a federal definition of maltreatment (CAPTA, 1974). Maltreatment is broadly defined as abuse and/or neglect as evidenced by acts of commission or omission. In fact, there is significant variation in what constitutes maltreatment across, and within, state child welfare

systems and across various studies. Most children and youth enter foster care following an official report of maltreatment, although there are other reasons for entry such as parental death or incarceration or voluntary relinquishment (U.S. DHHS, 2017).

Following CAPTA, it took almost another decade before the Child Welfare Act of 1980 (also known as the Adoptions Assistance Act of 1980) overhauled the mandated services provided to maltreated children and their families and instituted a system of incentives aimed at decreasing the number of children in foster care (AACWA, 1980). Understanding the inherent differences and even conflicts between these two pieces of federal legislation is necessary to fully understand that nature of service delivery within the child welfare system today.

CAPTA not only established a federal definition of maltreatment but established a national clearinghouse for research, information dissemination, provision of technical assistance and allocation of federal funds, and tied state funding to the passage of mandated reporter legislation (CAPTA). This funding has been identified as a causal factor in the increase of foster care placements following the passage of CAPTA (Gibson & Lewis, 1980). Governmental hearings on child abuse, held following the implementation of CAPTA, referred to a dramatic increase in child abuse reports that overwhelmed the state child welfare systems (U.S. House Hearings, 1981). These hearings, held in 1977 and 1980 included testimony from social workers, medical professionals, and various child welfare professionals. One Massachusetts child welfare system official stated that there was a 700% increase in the number of child abuse reports since CAPTA (U.S. House Hearings, 1977). This increase in reports is not solely the function of incentives put in place by CAPTA but also due to the increased public awareness, passage of mandated reporting laws, and other infrastructure mechanisms established by CAPTA.

The increased public awareness that accompanied mandated reporting laws as well as the onset of the federal policies may explain the steep rise in the number of reports of child abuse and the associated increase of children in foster care (Jimenez, 1990). In 1983 the month of April was designated National Child Abuse Prevention Month and the Office on Child Abuse and Neglect (OCAN) coordinates both activities and the dissemination of statistics and information (Children's Bureau, n.d.).

The Adoption Assistance and Child Welfare Act of 1980 (AACWA) can be viewed as a response to the rise in child abuse reports and subsequent foster care placements and the concerns associated with "foster care drift" (Antler & Antler, 1978). Where CAPTA promotes and supports the role of the professional child welfare worker as a protector of children, AACWA aims to protect the family from the intrusion of the child welfare system and policies (Jimenez, 1990). Specifically, AACWA was aimed at both increasing the number of children adopted out of foster care and preventing the removal of children from their families of origin (AACWA, 1980).

Subsequent federal policies further clarified both the incentive system established in CAPTA and specified requirements for the provision of services to special populations. This includes the Indian Child Welfare Act of 1978 (ICWA) and the Multiethnic Placement Act of 1994 (MEPA). ICWA provides protections for American Indian tribes and children who are served within the child welfare system. Specifically, ICWA provides tribes with preference in placement for children identified as an "Indian child" under the purview of the child welfare system. MEPA was passed in response to the bias against transracial foster placement and adoption that resulted in minority children, primarily African-American, remaining in foster care for extended periods of time. MEPA was revised in 1996 to clarify the language. The revisions in

1996 were passed following intense criticism that the original wording allowed for discrimination with regards to children in care, the recruitment of potential foster/adoptive families, or communities. Specifically, the term "solely" was removed with the 1996 amendment from the law. Advocates of the revision argued that by stating that placement and adoption decisions could not be made "solely on the basis of the race, color, or national origin" of individuals allowed for such considerations to be included in the placement decision, in effect sanctioning some form of discrimination in the placement and adoption of children (Downs, Moore & McFadden, 2009). The issue of trans-racial placement and adoption continues to spark debate within the child welfare system, but no additional legislation has addressed this issue since the revisions of MEPA in 1996.

Despite the efforts of AACWA to stem the increase in children in the child welfare system, the numbers continued to rise through the 1980s and 1990s. Murray (2007) found that between 1986 and 1995 the number of children in foster care increased from 280,000 to almost 500,000. This is the byproduct of a number of societal and systemic factors including the prevalent crack-cocaine usage, mandatory drug sentencing, and the HIV/AIDS epidemic (Downs, Moore, and McFadden, 2009). Of further concern was the over-representation of African-American youths within the child welfare system, a by-product of the over-representation of African-Americans within the criminal justice system and the prevalence of poverty (Phillips & Mann, 2013).

Once again, the federal government sought to decrease the number of children in foster care and improve permanency outcomes through the passage of federal policy, the Adoption and Safe Families Act of 1997 (ASFA). ASFA was designed and passed with the hopes that it would decrease the length of time children spent in foster care as well as decreasing the number of

children in foster care. These goals were to be achieved through the implementation and enforcement of performance standards tied to financial penalties when states failed to show improvement in both child wellbeing and permanency. Reunification and family preservation services were encouraged, as was adoption of children in foster care. This was achieved through financial incentives awarded to states for the adoption of children out of foster care, instituting permanency timelines that required filing a petition to terminate parental rights if a child has been in an out-of-home placement for 15 of the last 22 months, and financial support for minority foster and adoptive family recruitment.

Since its inception, ASFA has been modified twice. In 2001 amendments were passed to strengthen family preservation and reunification efforts following concern that states were focusing efforts on adoption due to the financial incentives. Additional amendments in 2001 targeted adoption for older and minority youth who were spending long periods of time in foster care. In 2008 the Fostering Connections to Success and Increasing Adoptions Act was passed to increase adoptions and guardianships for older youth who would otherwise remain in foster care until reaching the age of majority. This Act also provided federal funding for states to provide transitional programs for youth until the age of 21.

1.3 The Move to Privatization

The federal policies reviewed represent the governmental response to the needs of maltreated children over time. Of course, such policies, including privatization, are influenced by the overall political environment. One of the most influential aspects of American political ideology related to the argument for privatizing child welfare services is federalism (Gerston, 2007; LaCroix, 2010). A review of the key tenets of this ideology as well as the opposing

ideologies illustrates key factors that led to the passage of the child welfare policies reviewed above as well as the interest in privatization.

1.3.1 New Federalism

Federalism at its core is a division of power between a central government and smaller, local governments (Gerston, 2007). Federalism has different meaning in different countries. For example, local government may be provinces as in Canada or states in the US. In the European context of the term, Federalism refers generally to a strong central government. This was also the case in the United States until the last twenty years of the 20th century with the evolving interpretation, ultimately identified as New Federalism (Gerston, 2007, LaCroix, 2010). The strong foundation of Federalism within the US has contributed to the argument in favor of states' rights to protect against the infringement from the federal government.

New Federalism is a modern interpretation of Federalism, a political concept that can be traced throughout Europe, south Asia, the pacific, and the United States. New Federalism, at its most basic level, is the political ideology that the federal government should transfer powers to local and state governments (Gerston, 2007). New Federalism has come to mean a belief that services, and governmental responsibilities are more efficiently provided by state governments in comparison to the federal government.

New Federalism traces its founding to student groups at 3 law schools (Yale, Harvard, and University of Chicago) in 1982 over what was perceived to be the overwhelming liberal bias within law schools. This student group evolved into The Federalist Society with chapters in over 200 US law schools and counts over 40,000 members. The Federalist Society claims five current or former Supreme Court justices as members (Scalia, Roberts, Alito, Thomas, and Gorsuch) and

plays an active role in advocacy and promoting debate on a number of issues related to judicial appointments and the US legal system (Federalist Society, n.d.).

The formation of the Federalist Society and the rise of New Federalism came into prominence at the same time as President Reagan's "devolution revolution" (Downs, Costin, and McFadden, 1996). Under President Reagan's administration there were increased efforts to transfer federal government powers to the states to implement as they saw fit. These efforts resulted in the wide implementation of block grants from the federal government to states for the resolution of social issues (Crum, 1998; Freeman, 2003; Freundlich & Gerstenzang, 2003). Kmiec and Diamond (1984, p. 324) expressed concern as to whether local governments were any improvement in the efficient delivery of services, advocating for the privatization "of all municipal services, except those which are related to the production of public goods, rigorously defined." While devolution does not necessitate privatization, it opened the door for private agencies to lobby state governments to establish a mechanism for competition with state agencies for the delivery of public goods.

The statements of Kmiec and Diamond (1984) proved prescient with the quick rise in privatization of municipal services including child support enforcement, healthcare, food stamps, welfare benefits and as discussed in Chapter 2, child welfare services. Although privatization is not mandated by federal policy, it has been seen nonetheless as both a means to decrease costs and obtain the permanency and stability outcomes that are mandated by federal policy (McBeath & Meezan, 2008; Menozzi, 2016). Indeed, the contracts that are developed between government and private agencies highlight the need for private agencies to achieve the metrics that are part of the federal Children and Youth Services Review process for all states.

1.4 Stability and Permanency Outcomes

Despite these reforms, permanency and stability remain a major focus of policy and program efforts. Stability may refer to both the number of moves during a period in care (usually called a spell) or, once exited from care, remaining safe and not re-entering foster care. While almost no research exits regarding the influence of privatization, research does exit regarding predictors of length of stay or exits from care. These serve as important controls for explorations of policy impact.

The number of discrete placements a youth resides in is of particular interest as an increase in placements is associated with negative outcomes including mental and physical health diagnoses, lower academic achievement, delinquency, and longer periods of time in foster care (Dunnigan, Thompson, Jonson-Reid, & Drake, 2017; Jonson-Reid, 2002; Lee, Jonson-Reid & Drake, 2012; Pecora et al, 2005; Bruskas, 2008; Lee & Jonson-Reid, 2009; Ryan, 2012). Placement instability has also been found to be associated with lower likelihood of a positive exit (i.e., reunification, adoption or guardianship) (Akin, 2011). At least one study found that exit types varied in likelihood over time, with reunification generally occurring rapidly while the likelihood of adoption increased dramatically over 12 months (Connell, Katz, Saunders & Tebes, 2006).

The type of placement is also key in many studies of foster care permanency. In particular, residential or group homes are associated with increased risk of negative outcomes including lower academic achievement, longer time in care, mental health diagnoses, and homelessness (Ryan & Testa, 2005; Williams et al, 2010; Ryan, Hong, Herz, & Hernandez, 2010; Ryan, Marshall, Herz, & Hernandez, 2008). It is important to note that certain placement types (e.g. residential facilities, transitional living programs, and group homes) are associated with older youth in care who are also more likely to have been in foster care for longer periods of

time and experience a greater number of placement disruptions (Ryan and Testa, 2005). Placement with kin (or relative care) is sometimes associated with longer stays in care (e.g., Winokur, Crawford, Longobard & Valentine, 2008), but is also cited as facilitating placement stability and permanency (Akin, 2011; O-Brien, 2012;). Both placement stability (number of placements) and type are control variables in the present study.

Permanency within the context of child welfare refers to an exit from the foster care system. Generally, desirable exits are reunification with the family of origin, adoption, or guardianship (Child Welfare Information Gateway, ND). Further, types of permanency are often considered to be tiered with adoption and reunification identified as the preferred permanency outcomes with guardianship next. Youth who exit out of foster care by reaching the age of majority are included in foster care statistics as "aging-out" youth and are not considered to have achieved permanency. Youth who exit due to running away, transfer to other agencies (e.g., incarcerated) or death are also not counted as achieving permanency goals. On the other hand, studies vary in their categorization of what is a positive exit from care. Some studies focus on reunification, adoption or guardianship (Akin, 2011; Courtney & Hook, 2012) while others also include transfers to other programs, informal placement with kin or emancipation from care as a successful exit (Becker et al., 2007).

A variety of factors have been associated with permanency in the research including child demographics, placement types and moves and jurisdiction variation (Becker et al., 2007; Courtney & Hook, 2012). Perhaps the most dominant focus on disparities in timely and positive exits has been related to race—most typically African American children compared to others (Courtney, 2012). The relationship of race to length of stay and exit to care has been mixed. For example, Courtney and Hook (2012) found that African American children were slightly less

likely to be reunified (about 9%) but there were no differences in likelihood of guardianship or adoption. Akin (2011) found that race did not predict reunification or guardianship, but African American children were less likely to be adopted than White children. Becker and colleagues (2007) found that white children compared to all non-white children were about 35% more likely to have a "successful" exit as defined earlier.

Other factors include age, child developmental difficulties, material needs, and removal reason. There is variation in findings between studies that may be indicative of state and regional differences. In Courtney & Hook (2012) children under the age of 5 were less likely to return home or enter guardianship and more likely to be adopted than school-age children. Older children were more likely to exit to guardianship. In contrast Akin (2011) found that all children over the age of 2 were more likely to be reunified and enter guardianship compared to infants, but reported similar results for infants being more likely to exit to adoption. Becker and colleagues (2007) found that children with a developmental disability or mental health disorder were less likely to have a successful exit. In Akin (2011) children with disabilities were less likely to exit to reunification and guardianship, but more likely to be adopted. In the same study, children who were removed for physical abuse were more likely to be reunified than children removed for neglect. Courtney & Hook (2012) found that child disability was similarly associated with a decreased likelihood with reunification but found an increased likelihood of guardianship and no association with adoption. Both Akin (2011) and Courtney & Hook (2012) found mixed associations with exit type and known mental health disorder. In Courtney & Hook (2012), neglect reduced the likelihood of reunification but increased the likelihood of guardianship and adoption. Becker and colleagues (2007) did not control for entry reason. Fowler and colleagues (2013) found the material issues such as barriers to housing impact impact

the likelihood of placement but it is unclear how such issues may impact subsequent reunification. Akin's (2011) study used data from a Midwestern state, Becker and colleagues (2007) used Florida data, and Courtney and Hook (2012) used data from Washington state. Becker and colleagues (2007) and Courtney and Hook (2012) also reported significant variation by jurisdictions within states (Florida and Washington respectively).

Another form of stability refers to remaining in a positive permanent home rather than re-entering care. While not uncommon, rates of re-entry vary widely by state, length of follow-up and the type of exit from care (Courtney, Piliavin & Wright, 1997; Shaw, 2006; Wulcyzn, 2004; Lee, Jonson-Reid & Drake, 2012). Similar to placement instability while in care, multiple re-entries into care are associated with poor outcomes (Cutuli et al., 2016; Jonson-Reid & Barth, 2003; Rubin et al., 2004). States that fail to meet standards for rates of re-entry may also face federal sanctions-particularly if re-entry occurs following reunification (Carnochan, Rizik-Baer & Austin, 2013; Kimberlin, Anthony & Austin, 2009).

While studies have identified a number of risk and protective factors including demographics, child health and behavior, caregiver risk factors and poverty (Kimberlin et al., 2009), findings for many factors are mixed. For example, several studies have found that very young or teenage youth or African American children are more likely to re-enter (Kimberlin et al., 2009). In contrast, Lee and colleagues (2012) found no differences in the likelihood of re-entry following reunification by child demographics, controlling for family poverty and caregiver risk factors. Children who stayed in care for 8-18 months compared to shorter stays were more likely to re-enter care. Other studies have found that children with shorter stays in care were more at risk of re-entry (Shaw, 2006; Wulczyn, 2004). Early studies found that child disability and behavioral problems predicted re-entry (e.g., Courtney et al., 1997). Barth and

colleagues (2008) also found that children with emotional or behavioral difficulties were more likely to re-enter care following reunification although the study was restricted to elementary school aged children.

1.5 Costs of Foster Care

In addition to concerns about outcomes for youth in care, concerns have also arisen around the costs of foster care. In addition to the negative outcomes associated with a history of child welfare involvement, the economic burden for one child involved in the child welfare system is $73,094 and the nationwide estimates are over 29 billion dollars for the direct costs associated with the child welfare system (Gelles & Perlman, 2012). Children who stay longer in care or re-enter care multiple times are even more costly (Kimberlin et al., 2009). The dual concerns about the continued problems attaining desired outcomes and the costs underlie most of the movement toward privatization of child welfare. Since the late 1990's the child welfare systems of most states have established some privatization initiative (Crum, 1998). While states have privatized both in-home and foster care services, the dominant focus has been on foster care (Flaherty, Collins-Camargo & Lee, 2008). Yet despite the long history, little is known about whether this particular reform has resulted in better outcomes for youth in foster care. This dissertation will help to fill some of this gap in knowledge.

1.6 Scope of Study

In this study, youth in the foster care system will consist of any child placed under the legal or physical jurisdiction of the court due to maltreatment. This may include youth who are also receiving services through the court due to delinquent or status offenses, for example 14% of youth in foster care in Nebraska have also committed a delinquent act and are under dual

jurisdiction with the court for that reason (Nebraska Department of Health and Human Services, 2009). For all youth, including those with dual jurisdiction, placement in foster care is the direct result of a determination that a youth was a victim of maltreatment that necessitates removal from the family of origin.

There are programs and services that provide out-of-home placement on a voluntary, non-formal basis; however, these are youth placed in foster care voluntarily by their legal guardian. There are fundamental differences between youth placed on a voluntary basis in comparison to youth placed in foster care involuntarily, however all children served by the foster care system are subject to the same policies, services, organizational factors that are of interest in this research. Attempts were made to identify the sub-populations of youth that were under the jurisdiction of both the juvenile justice and the foster care system in Nebraska as they may differ than other youth in foster care. However, attempts to identify these youths were unsuccessful through use of exit, placement, and removal reason variables as coded in AFCARS. Consequently, any youth that is placed in foster care, regardless of whether it is voluntary or involuntary, dually involved or solely under the jurisdiction of the foster care system, are considered to be part of the population of interest. Reason for placement, however, is controlled.

This study examines the likelihood of achieving permanency outcomes under privatized as compared to public agency systems. Two separate analyses were conducted: (1) a comparison of permanency outcomes (both initial exit and likelihood of re-entry) between similar states that differ by privatization; and (2) a pre-post comparison design between two states with one maintaining a public system while the other changed to a private system and then changed back to a public system.

1.7 Research Aims

Aim 1: Do youth receiving private foster care case management experience differential permanency and stability outcomes (no re-entry into care after exit) when compared to youth receiving public foster care case management?

H_1: Youth served by privatized foster care case managers differ from youth served by public foster care case managers in time to exit

H_2: Youth served by privatized foster care case managers differ from youth served by public foster care case manager in re-entry to foster care

H_3: Youth served by privatized foster care case managers differ from youth served by public foster care case managers in type of exit from foster care

H_4: These differences vary by county

H_5: These differences vary by state

Aim 2: Explore how privatization (and de-privatization) of foster care case management services impact permanency outcomes for youth in foster care

Q_1: Are there changes in the trajectory of permanency outcomes following a shift from public to private foster care case management?

Q_2: Are there changes in the trajectory of permanency outcomes following a shift from private to public foster care case management?

Hypotheses are not offered for AIM 2 given there is insufficient research on the impact of changes in and out of privatization.

Chapter 2: Theory Underlying Privatization and Empirical Findings

This chapter explores the economic principles that inform the state-led efforts to privatize child welfare services and are used to evaluate the success of these initiatives. One of the primary economic principles of interest is public goods, and more specifically quasi-public goods, with the associated concepts of altruism and the "warm glow" model. Another key concept is that of market forces, including competition. A review of three statewide privatization initiatives will illustrate how these concepts manifest in the privatization of child welfare services.

2.1 Child Welfare as a Public Good

Samuelson (1954) identifies public goods as those where "one man's consumption does not reduce some other man's consumption". It must contain both the characteristic of nonexcludability as well as jointness in consumption (Holcombe, 1997). Nonexcludability relates to open access for non-paying customers. Public goods also have the tendency of inefficient provision by private arrangements (Oakland, 1987). Efficiency within the field of economics has to do with the equality between the value of the good produced and the opportunity cost or the value of goods not produced. Value is determined differently between private and public goods due to the nonexcludability nature of public goods. Child welfare services are a quasi-public good, in that there are limits or exclusionary factors as to who can consume the good and, with the onset of privatization, there is competition in service delivery. The affiliated services that are part of the greater child welfare system such as mental health, parenting, and other supportive

services that families involved in the child welfare system utilize also constitute a quasi-public good.

The level of exclusionary factors varies by the service decision-making point in child welfare. All youth who are alleged to be maltreated according to state policies are federally mandated to receive an assessment or an investigation provided by the governing child welfare system in a particular jurisdiction (US DHHS, 2017). However, youth and/or families are only able to access child welfare services following a report based on eligibility which is determined by the child welfare system workers. While there is no numerical limit to the number of children that can be served, history has demonstrated that as the number of children and families served by the child welfare system increases, policy and practice shifts are enacted to decrease the burden on the system (Antler & Antler, 1978; Jimenez, 1990). Approximately 1.3 million children (roughly 38%) received some sort of service following a report in 2015 (US DHHS, 2017).

While the child welfare system is a quasi-public good, it is still subject to the free-rider problem, one of the dominant problems associated with the theory of public goods (Samuelson, 1954). At its most basic level, the free-rider problem occurs when individuals access services that they do not pay for, leading to the possibility of service over-use. When a public good is provided by the private sector, there is a need to overcome the free-rider problem to ensure sustainability. The expansion of privatized child welfare services indicates a belief that the free-rider problem would be over-powered by a combination of three factors: altruism, the "warm glow" model, and individual differences.

Altruism is the belief that individuals take into consideration the common benefits when making choices (Gruber & Wise, 2005; Bergstrom et al, 1988). Based on this belief, a privatized

child welfare system will be supported by the general population and their belief in the common good over the personal cost. This belief hinges on an informed, resourced, and motivated public that trusts the privatized model to provide the delineated services. One factor that is thought to engage the public and increase motivation to support a privatized model is the warm glow model (Andreoni, 1988, 1989). This model posits that individuals feel good when they give support to a particular public good. This can manifest through recognition such as the receipt of awards and accolades or be a direct result of individual motivations and beliefs. More generally speaking, an individual with beliefs and motivations that align with a public good actually view the good as a private good and are willing to contribute more than they would otherwise. Both altruism and the warm glow model are inherently individual factors. Accordingly, heterogeneity, or differences between individuals, is key to how public goods are viewed and subsequently compensated. An individual with a positive personal connection to the child welfare system would therefore be likely to contribute more when compared to an individual with no personal connection or a negative opinion of the child welfare system.

Altruism, the "warm glow" model, and the import of individual differences are evident in both the arguments for privatizing the child welfare system and in the fundraising efforts that are used to sustain private child welfare entities. While advocates of privatization do not overtly state the justification for fundraising that the free-rider problem will be overcome, private agencies certainly rely on charitable donations. The motivations for these donations is outside the scope of this study as the focus of this dissertation is on the shift of public funds to private organizations.

2.2 Market Forces

One of the more common arguments for a privatized market is that the government is inefficient at service delivery. Greater efficiency means that a privatized system would better serve the needs of youth and families. Another argument in support of a privatized system is that market forces and competition will improve service delivery and consequently result in cost-savings. These arguments are an indirect reference to the political ideology of New Federalism, which came into prominence at the same time as President Reagan's "devolution revolution" (Downs, 1996). Under President Reagan's administration there were increased efforts to transfer federal government powers to the states to implement programs as they saw fit. These efforts resulted in the wide implementation of block grants from the federal government to states. While this so-called "devolution" does not necessitate privatization, it opened the door for private agencies to lobby state governments to establish a mechanism for competition with state agencies for the delivery of public goods. Flaherty, Collins-Camargo, and Lee (2008) credit political ideology as one catalyzing reason for the increase in child welfare privatization efforts across states.

The idea of competition for delivery of public goods connotes not only a prioritization of efficiency but of cost-saving measures as well. These are the cornerstone arguments behind the move to privatize not just child welfare services, but all public goods (Blackstone & Hakim, 2003). The economic concept of competitive market equilibrium is where the supply equals the demand. As discussed earlier, the free-rider problem accounts for the market failure that occurs when public goods are under-provided, or overused. In the era of devolution during and following the Reagan administration, advocates for a privatized market successfully argued that

competition would yield improved services and cost-savings for the over-burdened public child welfare system.

Proponents of the privatization of child welfare have argued for the reliance on the free market force of competition for the delivery of foster care case management, adoption services, and family preservation services (McCullough and Schmitt, 2000, Blackstone, Buck & Hakim, 2004; Donner, 1985).

Proponents of the privatization of child welfare have argued for the reliance on the free market force of competition for the delivery of foster care case management, adoption services, and family preservation services (McCullough and Schmitt, 2000, Blackstone, Buck & Hakim, 2004; Donner, 1985). Critics of the approach also point out that there may be a disincentive to focus on the child's best interest in order to meet specific targets written into contracts for private agencies (McBeath & Meezan, 2009).

As an illustration of how a market approach might discount potential negative outcomes, let's consider a more radical argument made by Blackstone and Hakim (2003), that that an "auction model" should be implemented for adoption (Blackstone, Buck, & Hakim, 2004). In the auction model, the adoption of children with disabilities and less preferred characteristics (different race from the adoptive family and family of origin characteristics) will be subsidized by the adoption of children who are "preferred". (Blackstone, Buck, & Hakim, 2004). In this model, a more "preferred" child would garner a higher "bid" from potential adoptive parents, allowing the funds to off-set the lower "bid" for less "preferred" children. The potential negative consequences of the proposed auction model of adoption were not explored (Blackstone, Buck & Hakim, 2004) as this model has never been enacted. Many states do, however, currently incentivize the adoption of children with disabilities through larger adoption subsidies.

A market-driven model of adoption as outlined above has potential negative consequences for children and families. By providing a mechanism whereby children are assessed for their desirability, a two-tiered system is created where families interested in adopting will be limited by their financial capabilities as to how "desirable" of a child they are able to adopt. In such a scenario is possible that the intersection between resources and willingness to pay could lead to children who are deemed less desirable to be less likely to be adopted by families with the financial means. Desirability could mean very different things to potential adoptive families including that the child has fewer mental and physical health needs, be of a specific race/ethnicity, or of a specific age. This is just but one example of how a purely market-driven model of child welfare services could be unethical.

In contrast to the hypothetical auction model described above, other market-driven privatization efforts have generally been proposed as cost-saving measures (Flaherty, Collins-Camargo, & Lee, 2008). These efforts have varied from state-wide transitions from public to private child welfare systems, piece-meal contracting of some aspects of the child welfare system, hybrid system where private and public agencies work in collaboration, and demonstration projects in single counties or jurisdictions for a time-limited period. A review of the efforts, both successful and unsuccessful, provides a fuller understanding of the landscape within which this study takes place.

2.3 Privatization Mechanisms

Since the late 1990's the child welfare systems of most states have established some privatization initiative (Crum, 1998). The earliest initiative was in 1992 with one district in Florida contracting services with a single private agency to provide services to 150 children in foster care (McCullough and Schmitt, 2005). By 2000, 29 states had privatization initiatives that

ranged from a single jurisdiction, to a statewide system of contracted private agencies (McCullough and Schmitt, 2005).

The variation in structural designs and scope of the privatization initiatives makes it difficult to compare effectiveness across states (Collins-Camargo, McBeath & Ensign, 2011). Generally speaking, the structure relies on a contracted lead private agency to manage a service delivery network of other private agencies. The lead agency in this model is best compared to a managed care entity (MCE) where the MCE is responsible for differing degrees of responsibility (McCullough and Schmitt, 2005). The MCE is also a provider of services in addition to coordinating services provided by other private agencies (McCullough and Schmitt, 2005). Another privatization model is where the lead agency operates as a managed care organization (MCO) and does not provide services directly to consumers but solely coordinates the individual and network of providers of services (McCullough and Schmitt, 2005).

There are two dominant types of privatization contracts: fee-for-service and performance-based contracts (Freundlich and Gerstenzang, 2003). In a fee-for-service system a private agency, as the name suggests, is reimbursed based upon the services rendered. States that utilize performance-based contacts choose to prioritize, and incentivize, specific outcomes for the contracted agencies. These outcomes generally include targeted rates of youth in congregate care, youth achieving permanency (via adoption or other means) but can include whatever outcomes the state and private agency agree upon.

While there is widespread adoption of privatized models of child welfare services, there has not been widespread evaluation of these initiatives. There are a number of states that have engaged in evaluation of the privatization efforts with a focus primarily on cost saving with little attention to child well-being outcomes (Barillas, 2010). A recent exception is a dissertation

focused only on timely exits from care in performance-based compared to non-performance based systems (Menozzi, 2016). Study findings supported the hypothesis that privatized states reduced time in care, but there were several limitations in regard to informing the broader policy debate. This study focused on privatization that occurred with states that chose to focus outcomes of contracts on reducing time in care, used a baseline in the 1990s early in the process of implementation, collapsed race into White, African American and all other, and examined age as infant versus other. The selection criteria and time period may bias results toward success in the outcome and potentially introduces problems with the changes in timelines specific to AFSA implementation in the late 1990s, and other trends like emphasis on kin placements, that may have altered some of the between state variability in outcomes noted by earlier studies using AFCARS data (e.g., Snowden, Scott & Sieracki, 2008). The latter collapsing of race and age categories may mask important variations that create an overestimate of the magnitude of particular demographic categories. Further the dependent variable was time in years. While some youth do stay in foster care for multiple years, current federal guidelines specifically limit this practice making days or months in care a more relevant and sensitive variable. Finally, the study relied on classification of privatization based on a university report which is posted but no longer available on Child Welfare Gateway. As there is no standard means by which privatization is reported to the federal government it is unclear how accurate this description was throughout the study years.

A review of three examples of state implementation of privatized child welfare services and the subsequent outcomes for service delivery and child/family outcomes are provided to highlight variation (Ensign & Metzenthin, 2007; Hubel et al, 2013; Haslag, Matt, and Neal, 2012). Thus far, there are mixed results from these studies. By 2007, nine states had ended their

privatized initiatives due to concerns regarding a decrease in the quality of services provided and poor child outcomes- such as length of time in care, placement type, and permanency outcomes (Flaherty, Collins-Camargo & Lee, 2008). Findings suggest that in states where privatization failed they were ill-equipped to transition from a public system of child welfare (Flaherty, Collings-Camargo, & Lee, 2008; Lawrence-Webb, Field, & Harrington, 2006; Barillas, 2010). Better understanding of states' experiences with privatization sheds light on the market forces at work when these initiatives succeed and fail.

2.3.1 Kansas

The state of Kansas transitioned to a privatized system of child welfare in 1995. Kansas was one of the first states to implement a privatization initiative in part due to the overwhelming support of the political community. Rather than reforming the public child welfare system, Kansas chose to implement wide-reaching privatization initiatives. It is important to note that Kansas was subject to an out-of-court settlement with the American Civil Liberties Union at the time that the transition to privatization began and it was hoped by some in the state government, that by reforming the child welfare system, the settlement requirements would no longer be enforced as the services were no longer directly being provided by the state government but by contracted entities (Ensign, 2007). This transition took place quickly, and in retrospect, is considered to have lacked appropriate planning prior to implementation (Ensign, 2007).

Kansas implemented a multi-tiered privatized system where, in each of five regions of the state, agencies bid for competitive performance-based contracts to provide case management services to children in foster care. A separate bidding process was created for the family preservation services and a third statewide contract was awarded for the creation of an adoption provider network (Freundlich & Gerstenzang, 2003). Under this system the state offices would

continue to be responsible for the investigation, assessment, and removal of children who were reported to the state hotline for abuse and/or neglect (Freundlich & Gerstenzang, 2003).

Over the first four years of privatization, Kansas experienced significant increases in the cost expenditures that required legislative intervention to cover the state-mandated privatized services. Private agencies also experienced difficulties with one lead agency filing for bankruptcy and another terminating its contract with the state due to budgetary concerns (Ensign, 2007). An independent audit, commissioned in 1999 found that the costs of the privatized child welfare system were 65% greater than anticipated (James Bell Associates, 2001). Kansas maintains a privatized system but has reverted to a fee-for-service system rather than a performance-based contract tied to child and family outcomes. It is anticipated that the public/private partnership in Kansas' child welfare system will continue to evolve over time with changes to what types of services and in what capacities they are transferred from public agencies to privatized agency networks.

2.3.2 Nebraska

In 2008, Nebraska undertook a statewide effort to privatize child welfare services. These efforts were advocated for by a stated need to improve child outcomes, protect children and improve service delivery to youth and families (Hubel et al, 2013). The proposed Nebraska system was an MCE structure with a lead agency identified for each of six regions and utilized a risk-based payment system. In contrast to fee-for-service reimbursement systems, a risk-based system has a guaranteed fixed rate of reimbursement that is paid in advance of services. The privatized system of services actually implemented in Nebraska only had five lead agencies as the sixth agency felt the funds allocated by the state were insufficient for the services expected. Consequently, the five lead agencies were responsible for approximately 8700 families across

Nebraska. By 2012 only one lead agency maintained a contract with the state of Nebraska. Each of the lead agencies terminating their contract with the state of Nebraska cited funding issues as the primary motivation to stop providing services through the MCE structure (Hubel et al, 2013).

A comprehensive evaluation of the Nebraska statewide privatization initiative found that the cost to the state increased by 27% and the service delivery was of a lower quality and less consistent than when under a public model (Hubel et al, 2013). In 2012, 4 years following the rollout of a statewide privatized system of child welfare services, Governor Heineman reported that Nebraska's number of children in foster care was two times the national average (Heineman, 2012). Based on reports, it is assumed that this increase of youth in foster care was not due to more entries of youth into care in Nebraska but a result of youth not progressing through the system and achieving permanency as frequently as they did under the prior system (Heineman, 2012, Hubel et al, 2013). Later that same year Nebraska was fined for failing to comply with federal regulations that govern states with a privatized child welfare system. Subsequently the Nebraska legislature passed a number of child welfare reform bills that brought back most services under the umbrella of state responsibility (O'Hanlon, 2012).

2.3.3 Missouri

The state of Missouri began issuing fee-for-service contracts for private agencies to assume responsibilities for case management services for children in foster care in 1997. These contracts subsequently transitioned in 2005 to performance-based-contracts after it was determined that the fee-for service model provided incentives for agencies to maintain children in foster care rather than return the children to their families of origin or secure alternative long-term placements (e.g. guardianship and adoption) (Haslag, Matt and Neal, 2012). The transition to performance-based contracts was mandated by the Missouri legislature, despite evidence that

measuring child and family outcomes in performance-based contracts is more difficult than the fee-for-service model (Perrins, 2008).

Haslag, Matt, & Neal (2012) found that there were no direct cost savings to Missouri under the performance-based contract model. This was due to the fact that Missouri maintained an active public child welfare system that provided all levels of services to families in many cases that varies by county. Consequently, the Missouri model is an example of a public/private partnership with the public and private entities both assuming responsibility for family preservation, case management, and adoption services. The public child welfare agency is the sole provider of investigations and assessments of reports of child abuse and neglect. The public agency is also the only party charged with the authority to request removal of a child from their family of origin (Haslag, Matt, & Neal, 2012).

2.4 Conclusion

The three examples outlined above demonstrate the variation in implementation and outcomes of statewide privatization efforts within the child welfare system. The failure of the Nebraska initiative has been attributed to a lack of adequate planning prior to implementing the privatization initiative (Hubel et al, 2013). The mixed results in Kansas are equally attributed to the over-reliance on political ideology in the face of contrary evidence as well as to an infrastructure that was ill equipped to scale-up a statewide initiative (Ensign, 2007). If Missouri can be considered a successful privatized system, this may be because there is sustained collaboration between public and private agencies. All approaches evolved over time, with the Nebraska model effectively transferring services back to the public sector.

Studies have just begun to assess the impact of privatization on child and family outcomes. Lawrence-Webb, Field, and Harrington (2006) found that the bureaucratic and

financial difficulties when a privatization initiative begins require so much effort that child and family outcomes are difficult to assess. One of the few studies that examined child outcomes in a privatized system found that youth experienced a greater number of foster care placements in a privatized system (Steen and Duran, 2013). Indeed, McBeath and colleagues (2014) identified over twenty key research questions that still need to be explored on the organizational change process that should guide future research within a privatized child welfare system (See Appendix D).

In a study of the differences in the workforce of public and private agencies, Hollingsworth and colleagues (2010) found that public agency workers had higher levels of education, related work experience, and that private agency workers had more negative attitudes regarding parents of children in the child welfare system. This study provides important descriptive information regarding the workforce but made no attempts to link workforce characteristics to child and family outcomes. Some point out, however, that the requisite training of a privatized workforce poses additional start-up costs that are exacerbated by the high turnover rate in the privatized child welfare workforce (Ortega and Levy, 2002). This suggests that there may be an impact on outcomes.

Zullo (2006) found that there were differences in how cases were allocated between public and private agencies. This has potential ramifications for service delivery if private agencies are disproportionately allocated cases with high service needs. In fact, Zullo (2006) found contradictory findings with private agencies more likely to be allocated cases with two-parent families with fewer siblings that require parental psychological services. In contrast, public agencies were more likely to be allocated cases with more sibling groups and serious substance use problems among the parents (Zullo, 2006). There has not been enough

investigation into the allocation of cases between public and private agencies to determine if there are such consistent differences across locations.

The privatization efforts of the last 20 years have yielded mixed results in terms of cost savings and the sustainability. The associated child and family outcomes for privatized compared to public systems and among differing models of privatization are largely unexplored. This is a key gap in the knowledge base, especially considering the arguments in favor of privatization center on effective service delivery and improved child outcomes. Certainly, there is evidence to suggest that privatization initiatives are cumbersome and require significant planning and forethought. Without rigorous research into child and family outcomes, it is impossible to assess whether a privatized child welfare system is an improvement over a public child welfare system.

Chapter 3: Methods

This study explored the relationship between privatization of foster care case management services and permanency outcomes for youth in foster care. There are two primary samples for this study which spans the time period of 2008-2014. A detailed description of the data sources, data management, and analysis plan will be provided in this chapter.

3.1 Data Sources

3.1.1 AFCARS

The primary data source for this study is the Adoption and Foster Care Analysis and Reporting System (AFCARS) dataset. All fifty states, the district of Columbia, and Puerto Rico report case-level data about children in foster care that populates AFCARS. This dataset is maintained by the Children's Bureau and is federally mandated. There are two yearly reporting periods that all title IV-E agencies must comply with (May 15 and November 14).

Variables within AFCARS include demographic information including sex, date of birth, gender, race, ethnicity. Other variables include indicators for physical and mental health needs of the child in foster care; placement data including placement type (relative, foster, institution, independent living, etc.), number of placements, length of time in placement, and demographic details of the placement providers; case planning data including removal reason (neglect, physical abuse, sexual abuse, abandonment, child behavior problems, substance use of parent, etc.), case goal (reunification, adoption, emancipation, long-term foster care, guardianship), exit and entry in foster care, and exit reason from foster care. These variables exist for each year and can be linked across years using the AFCARS id within states to create a case history that for some states spans the entirety of the AFCARS timeframe of 1999-2015. The data quality and the percent of states reporting information, however, has improved over time with most states having

complete coverage for at least the past six years. All selected states had linkage available for the entire study window.

3.1.2 Other data sources consulted

Other data sources consulted to help build the sample frame included the federal Child and Family Service Review report (Child Welfare Gateway, 2017) to help identify the privatization status of a given state followed by a search of the state child welfare websites for those states with some mention of privatization in the federal report.

3.1.3 Identifying Privatized States

Aim 1 of this study requires that states with privatized foster care case management systems are compared to states with public foster care case management systems. It is important to note that many, if not most states, contract with private agencies and providers for at least some of their child welfare services including investigation of reports, Intensive In-home services, residential services, and, of course, foster care case management. This study is solely focused on the provision of foster care case management services as this is the most common focus of privatization. The foster care case manager is charged with making day-to-day decisions for youth in foster care with regards to placement, services, and permanency.

There is no one master list of privatized states by year. A number of efforts were made to identify states who privatized foster care case management services. The first step was to read, in their entirety, the Round 2 of the Child and Family Service Report (CFSR) for each state (Child Welfare Gateway, 2017). These reports provide details of services, contracts, and progress toward federally mandated competencies. The reports also explain any discrepancies or areas of concern within the state child welfare system. There is, however, no consistent format for reporting of privatization of child welfare services. For example, the state of New York reported

details of its privatization of foster care case management in a footnote whereas Nebraska outlined in detail the obstacles encountered when switching from public to private foster care case management. Consequently, a search of each CFSR was done using the terms "contract" and "private" to ensure that all mentions of privatization and/or contracts were captured. A list of nine states were identified that indicated they privatized foster care case management to some degree. An in-depth review of the nine state child welfare websites provided more detail regarding the degree of privatization and whether that included foster care case management specifically. This list varied from states that had 100% privatized systems during at least part of the study period of interest (Nebraska and Kansas) to demonstration projects or single county projects (Minnesota, Tennessee) and is summarized in Table 1.

Table 1: Summarization of State Privatization Efforts

State	Private Services	Contract	Percent of Youth Served
Alaska	Family Reunification Services, Post Adoption Services	PBC	Statewide
Alabama	Therapeutic Foster Care	PBC	151 youth in 2008
Arizona	Foster Family Recruitment/Licensing, in-home services program	PBC	Statewide
California	Permanency Planning, foster parent training/licensing	PBC	41 Counties
Colorado	Behavioral Health, family finding; case management		Statewide; select locations
Connecticut	Therapeutic foster care, foster and adoption support teams	PBC	Statewide
Delaware	Group homes, parent aide, home-based support	PBC	Statewide
District of Columbia	Family Preservation, low-moderate risk	PBC	District Wide
Florida	All services	PBC	Statewide
Georgia	Foster Care Attempt failed 2014, 2016; family finding, therapeutic foster care	PBC	Statewide
Hawaii	Family Strengthening Services, Substance Use	PBC	Statewide
Idaho	Resource Families	PBC	2 Regions
Illinois	Foster Care, residential/group care	PBC	75% of youth in state
Indiana	Hotline Calls; case management	PBC	1 county, regionally determined
Iowa	Resource families, family preservation, permanency programming	PBC	
Kansas	All Services	PBC	Statewide
Kentucky	Independent Living	PBC	Statewide

Louisiana	Intensive-In home services, Independent Living	PBC	Statewide
State	Private Services	Contract	Percent of Youth Served
Maine	Family Reunification, home studies	PBC	Statewide
Maryland	Family Preservation	PBC	6 of 18 departments
Massachusetts	Residential Services, hotline investigators, Intensive Foster Care	Fee for Service	Statewide
Michigan	Foster Care, Residential	PBC	41% of youth in care
Minnesota	Adoption Services	PBC	Statewide
Mississippi	Intensive In-home Services, post-adoption	PBC	Statewide
Missouri	Foster care, adoption services	PBC, Fee for Service	5 regions across state
Montana	In-home reunification services	PBC	Larger communities, some rural
Nebraska	All services	PBC/Risk-Based	Statewide until 2012, Omaha continues
Nevada	Supervised visitation, Independent living Specialist	Fee for service	Regional
New Hampshire	Family Support programs	PBC	Statewide
New Jersey	Post reunification services, intensive permanency services	PBC	Statewide
New Mexico	Adoptive and Foster homes	PBC	Statewide
North Carolina	Special Need Adoptions, Foster care	PBC, fee for service	Statewide
North Dakota	Adoption Services	PBC	Statewide
Ohio	5-year demonstration project	PBC	1 region
Oklahoma	Placement management, adoption		
Oregon	Independent Living Programs, substance use; family based-services	PBC	Statewide; 13 counties
Pennsylvania	All child welfare services	PBC	Contracts procured by county
Rhode Island	Adoption services, foster homes	PBC	Statewide
South Carolina	Adoption services; case management for special needs youth	PBC	statewide
South Dakota	Independent Living program	PBC	Statewide
Tennessee	Visitation, home studies, mental health	PBC	Statewide
Texas	Foster Care, Adoption	PBC	7 counties
Utah	Foster family recruitment; respite care	PBC	statewide
Vermont	Post-adoption support, case management	PBC	Determined by district
Virginia	Independent living	PBC	5 regions
Washington	Foster Care Demonstration project; Independent Living	PBC	
West Virginia	Hotline services, home studies	PBC	Statewide
Wisconsin	Adoption; Foster Care	PBC	Statewide; Hennepin County
Wyoming	Residential Treatment	PBC	Statewide

As illustrated, despite the large number of states that used a privatized model for some aspect of child welfare services, relatively few included foster care case management specifically. For states that did not privatize 100% of their foster care case management, a rule needed to be applied to determine whether or not to include as a privatized state in the present

study. This is because AFCARS does not have organizational level data, making it impossible to know if a youth is served by a private or public agency within a given state. Therefore, states were selected as privatized for analysis if they had 75% or more of youth served by a private foster care case manager. This cut-off was selected as to allow for sufficient certainty in analysis that differences between states was due to privatization.

This yielded a final sample of 4 privatized states (Nebraska, Kansas, Illinois and Florida) that were matched according to socio-demographic factors primarily race and ethnicity with 4 states that maintained public foster care case management. Note that "public system" states may be listed in Table 1 as privatized because they had contracts with private agencies for other ancillary services such as Intensive In-home services, family finding, or other services but foster care case management remained under the auspices of the public child welfare system. None of the public states selected in the present study, however had privatized foster care. The matching process required the identification of states in the same region of the United States as the private state, that utilized public foster care case management systems. Next, states were evaluated on socio-demographic variables, (e.g. race and ethnicity) and the proportional size of the foster care population within the state. Those that were most similar across these factors were selected as matches. This yielded stratified-matched states of Kansas (private) and Arkansas (public), Nebraska (private) and Iowa (public), Illinois (private) and Ohio (public), and Florida (private) and Georgia (public).

Other matching techniques were considered including Propensity Score Matching (PSM), Mahalanobis Distance Matching (MDM) and Coarsened Exact Matching (CEM). However, matching techniques are not always preferable in observational studies and, as noted by Menozzi (2016), AFCARS lacks many of the predictor variables that might be desired to effectively use

Table 2: State Demographic Comparisons Aim 1 Sample (2008)

Private States		Florida	Illinois	Kansas	Nebraska
Number Served	N	7455	5331	1761	1679
Gender					
Male	N(%)	3655 (49.03)	2701 (50.67)	819 (46.51)	862 (51.34)
Female	N(%)	3800 (50.97)	2630 (49.33)	942 (53.49)	817 (48.66)
Race					
African-American	N(%)	2906 (38.98)	2408 (45.17)	305 (17.32)	286 (17.03)
White	N(%)	4661 (62.52)	2681 (50.29)	1450 (82.34)	994 (59.20)
Asian	N(%)	47 (.63)	31 (.58)	6 (.34)	6 (.36)
Unknown	N(%)	62 (.83)	207 (3.88)	14 (.80)	226 (13.46)
American-Indian	N(%)	40 (.54)	9 (.17)	15 (.85)	183 (10.90)
Hawaiian	N(%)	13 (.17)	0	5 (.28)	2 (.12)
Hispanic					
Yes	N(%)	1126 (15.10)	335 (6.28)	122 (6.93)	191 (11.38)
No/Unknown	N(%)	6329 (84.90)	5205 (97.64)	1639 (93.07)	1488 (88.62)
Removal Reason					
Physical Abuse	N(%)	2737 (36.71)	1145 (21.48)	604 (34.30)	368 (21.92)
Neglect	N(%)	5138 (68.92)	4060 (76.16)	1254 (71.21)	1388 (82.67)
Sex Abuse	N(%)	671 (9.00)	126 (2.36)	212 (12.04)	86 (5.12)
Diagnosed Disability					
Yes	N(%)	281 (3.83)	813 (15.38)	303 (17.21)	355 (21.14)
No	N(%)	7053 (96.17)	4473 (84.62)	1458 (82.79)	1324 (78.86)
DSM III Dx					
Yes	N(%)	102 (1.37)	564 (10.58)	248 (14.08)	186 (13.21)
No	N(%)	7353 (98.63)	4767 (89.42)	1513 (85.92)	1222 (86.79)
Age in Years	Mean(SD)	6.44(5.23)	5.79(5.32)	7.65(5.42)	6.92(5.44)
Public States		**Georgia**	**Ohio**	**Arkansas**	**Iowa**
Number Served	N	6367	4552	2140	1407
Gender					
Male	N(%)	3151 (49.50)	2236 (49.15)	1024 (47.85)	669 (47.55)
Female	N(%)	3215 (50.50)	2313 (50.85)	1116 (52.15)	738 (52.45)
Race					
African-American	N(%)	3346 (52.55)	1677 (36.84)	617 (28.83)	204 (14.50)
White	N(%)	3182 (49.98)	2793 (61.36)	1617 (75.56)	1050 (74.63)
Asian	N(%)	43 (.68)	12 (.26)	20 (.93)	19 (1.35)
Unknown	N(%)	51 (.80)	68 (1.55)	20 (.93)	117 (8.35)
American-Indian	N(%)	18 (.28)	18 (.40)	25 (1.17)	35 (2.49)
Hawaiian	N(%)	6 (.09)	6 (.13)	8 (.37)	10 (.71)
Hispanic					
Yes	N(%)	505 (7.93)	196 (4.31)	172 (8.04)	139 (9.88)
No/Unknown	N(%)	5862 (92.07)	4356 (95.69)	1968 (91.96)	1268 (90.12)
Removal Reason					
Physical Abuse	N(%)	2024 (31.79)	1292 (28.38)	567 (26.50)	320 (22.74)
Neglect	N(%)	5409 (84.95)	3278 (72.01)	1437 (67.15)	1077 (76.55)
Sex Abuse	N(%)	302 (4.74)	288 (6.33)	300 (14.02)	99 (7.04)
Diagnosed Disability					
Yes	N(%)	1336 (20.98)	197 (14.80)	156 (8.25)	256 (18.19)
No	N(%)	5031 (79.02)	1134 (85.20)	1735 (91.75)	1151 (81.81)
DSM III Dx					
Yes	N(%)	816 (12.82)	81 (1.78)	80 (3.90)	102 (7.25)
No	N(%)	5551 (87.18)	4471 (98.22)	1973 (96.10)	1305 (92.75)
Age in Years (Mean(SD))	Mean(SD)	7.35(5.76)	6.42(5.36)	7.16(5.37)	5.99(5.15)

these approaches. Further, the match is not as much about the individuals living in the state as it is the states themselves and with only four private states it was determined that there were insufficient variables at the state-level to make an appropriate state-to-state match. Ultimately, stratified-matching was chosen given the concerns outlined by King and Nielsen (2016) in using propensity scores for matching purposes. State demographic comparisons appear in Table 2.

3.2 Data Management

All data management efforts were conducted in SAS vs. 9.4. Although states are required to report to AFCARS, there are state variations in the data elements reported and/or the way in which data elements are recorded. Table 3 outlines the footnotes identified in AFCARS documentation about differences in how data is recorded across the states that were included in the study. A dichotomous variable was created to reflect whether or not an observation was within a state deemed private (Florida, Illinois, Kansas, or Nebraska) or public (Georgia, Ohio, Arkansas, and Iowa) according to the aforementioned definition.

3.2.1 Dependent variables

The present study is focused on permanency as an outcome for youth in care. Current policy mandates and services focus on shortening the time in a "non-permanent setting", exiting to a desired permanent setting (i.e., reunification, adoption or guardianship), and remaining stable and safe in the setting following exit as measured by re-entry. Therefore, the three dependent variables of interest are: Time to permanency (time from entry to exit in the first spell during the study period), exit type (reunification, adoption, guardianship, runaway, transfer to other agency, aging out/remaining in care without exit, or death), and re-entry into care following an exit during the study period.

Table 3: Notes from AFCARS on Data for Included States

Florida	Illinois	Kansas	Nebraska
Performance-Based Contracts Excludes children whose most recent review is after their discharge date May not include dispositional hearings if they also meet requirements of a judicial review Some records show no placement because initial and only placement is a hospital, DJJ facility or runaway Does not exclude placements of less than 24 hours duration from placement count Does not capture trial home visits	**Performance-Based Contracts** No Notes	**Performance-Based Contracts** No Notes	**Risk-Based Reimbursement and Performance-Based Contracts** 12 Counties deal with more cases than just those in their county provides an estimated DOB Unable to determine race includes 'other' Clinical diagnosis is required to be answered approved or unlicensed relative homes are included in relative foster homes State policy does not define "live with other relatives" as a case plan goal
Georgia	Ohio	Arkansas	Iowa
34 children who finalized to adoption had an improperly documented TPR Analysis of the file indicates that case managers have been confused about correct protocol for entering foster caretaker detailed information in the system 1084 records show no family structure on relative placement, date of birth or race information	215 records excluded where discharge date=removed date 1005 records where child was >=19, subsequently excluded	No Notes	Adoption workers cover more than one county, children appear to be from limited number of counties Clinical diagnosis is must be given by a qualified professional Defines physical abuse as damage to any bodily tissue that must undergo a healing process or results in death. Defines sexual abuse as commission of sexual offenses with or to a child as a result of acts or omissions of a caretaker Does not use emancipation, clients coded as aged out of the system Juvenile Justice population is included.

Appendix to the AFCARS 2009 Foster Care File User's Guide NDACAN Dataset Number Version 4

A caveat is needed in regard to re-entry and placement stability while in care. Because of the way AFCARS data are programmed, it is possible to count the number of placements in a given year but not the length of stay in a given type of placement. Further dates are available only for a prior or current spell in foster care at the start of a reporting period and the most recent entry and or exit dates. Aligning the dates of entry and exit has to be done with great care across linked years. Further, if a child re-entered care multiple times within a given reporting year, middle entry dates would be lost. Therefore, the re-entry variable includes the first re-entry noted in AFCARS following an exit from care. While it is unclear how often interim spell dates are absent, given the median times in foster care and the time it takes to re-enter, this is likely to be a small proportion of cases.

3.2.2 Control and Independent Variables

Given the dearth of research specific to privatization, control variables were selected based on studies of foster care exits and re-entries reviewed earlier. Covariates included in the models are gender (female or male), race (African American, American Indian/Alaskan Native, Asian, Hawaiian/Pacific Islander, Multiracial, White or unknown), ethnicity (Hispanic or not), mental health diagnosis (yes/no), diagnosed disability(yes/no), other medical diagnosis(yes/no), placement type [pre-adoptive, relative foster home (kinship care), non-relative foster home, group home/institution, independent living (for youth emancipating from care), runaway, or trial home visit], age in years at entry, number of placements, and removal reason (neglect, physical abuse, sexual abuse, other). Limitations on control variables included are due to the information available in AFCARS. For example, AFCARS does not provide data on family or caregiver risk factors.

Original variables that included a “not applicable” or “not yet determined” option was being of Hispanic origin, diagnosis of a disability, other medical diagnosis, and mental health diagnosis were recoded to dummy variables with “not applicable” and “not yet determined” recoded to “no”. This decision was because states were inconsistent with using the “not applicable” and “not yet determined” codes and inclusion of these codes could bias the models. There was a proportionally small amount of missing data, as noted in Tables 5 and 8.

3.3 Sample Description

3.3.1 Aim 1 Sample

For the purposes of this study, a cohort of entries into foster care was identified for the year of 2008 (n=52,569). These cases were tracked from the time of entry through 2014 or until a terminal exit occurred. Data are linked across years by a unique child id within state. While AFCARS extends back into the mid-1990s, many states did not consistently report data until relatively recently. Further, it is unclear whether measuring privatization very early in the adoption process would result in findings that are stable given the significant change in uptake of this reform since 2000. This time period was also selected as it captures the time period when all of the states had private foster care case management, is sufficiently past the implementation of the Adoption and Safe Families Act (ASFA) which instituted permanency timelines for youth in foster care and is before the implementation of Fostering Connections to Success (2008) efforts which also targeted enhancing permanency outcomes for youth in care.

If a youth re-entered care after an exit, this was used as a marker for stability of permanency, but the youth was not tracked through the subsequent spells in care. Cases were not limited to first entries and the mean number of total prior removal was 1.21 (SD=.51). Deaths

that occurred to youth who were in foster care were not excluded from analysis. Table 3 shows the variables of interest by the eight states in Aim 1.

3.3.2 Aim 2 Sample

This aim focused on how child level outcomes may change overtime as privatization is implemented compared to a state that remained public. This analysis attempted to determine if there were changes in the trajectory of outcomes following a policy change (privatization and then subsequent return to public foster care case management). Nebraska was selected as the state to study these changes because the transition from public child welfare to private child welfare and back to public child welfare all took place within the timeframe that data is available from AFCARS. While other states did experience shifts in privatization, states such as, Kansas, Florida and Illinois began privatizing child welfare prior to reliable AFCARS data collection and therefore, cases could not be tracked throughout these changes. The state of Iowa was selected as the public child welfare comparison based on having a child welfare system of comparable size and similar sociodemographic factors to the foster care population of Nebraska. All youth who entered into foster care were examined for every year from 2008-2014 for Nebraska and Iowa (n=706,208).

3.4 Data Analysis Plan

3.4.1 Aim 1

The dependent variables of interest for analysis are length of time in care (continuous), exit reason, and re-entry (both categorical). The primary independent variable was privatization. Covariates included in the models are gender (female or male), race (African American, American Indian/Alaskan Native, Asian, Hawaiian/Pacific Islander, Multiracial, White or unknown), ethnicity (Hispanic or not), mental health diagnosis (yes/no), diagnosed

disability(yes/no), other medical diagnosis(yes/no), placement type [pre-adoptive, relative foster home (kinship care), non-relative foster home, group home/institution, independent living (for youth emancipating from care), runaway, or trial home visit], age in years at entry, number of placements, and removal reason (neglect, physical abuse, sexual abuse, other).

Bivariate analyses included Spearman correlations, chi-square and t-tests as appropriate to the dependent variable of interest. Three different Multi-level models were tested for each dependent variable:

1) 2-level multi-level model of Individuals nested within counties
2) 2-level multi-level model of Individuals nested within states
3) 3-level multi-level model of Individuals nested within counties, nested within states

Multi-level models were chosen not only because of the nature of clustering of children within geographic units but because some studies have found significant variation in permanency outcomes within states (e.g., Courtney & Hook, 2012).

All linear models were run using PROC MIXED to assess both fixed and random effects in SAS vs. 9.4. This model build approach follows the recommendations outlined by Luke (2007). For each of these nested models a secondary model build approach was undertaken to finalize the fixed and random effects within each model. This approach, as recommended by Bell, Ene, Smiley, and Schoeneberger (2013) is outlined in Table 4.

All binary models were run using PROC GLIMMIX to assess both fixed and random effects in SAS vs 9.4. The model specification for the binary models was informed by guidelines outlined by Bell and colleagues (2013) as well as Kiernan, Tao and Gibbs (2012). There are nine possible exit types, however models were run on a collapsed categorical variable with 4 levels (0=no exit, 1=reunification, 2=live with a relative/guardianship, 3=adoption, 4=other). Models

were first attempted on the full 9-level variable, but the models failed to converge due to over-specification. Models were also attempted as binary logistic models with dummy variable for seven of the nine outcome variables. Child death (n=15) and runaway (n=16) were too rare of events within this sample for the models to yield meaningful results. Consequently, these observations were excluded from this set of models. The binary logistic models yielded inconsistent results, with some models being over-specified and failing to converge.

When convergence failed, the models were re-specified following recommendations outlined by Kiernan, Tao, and Gibbs (2012). These re-specification efforts included using INITGLM option in the PROC GLIMMIX statement to limit the number of outer iterations, TECH=NRRIDG and TECH=NEWRAP in the NLOPTIONS statement which is indicated in binary models, increasing the number of optimizations using MAXOPT to 20,000, and increasing the number of iterations using MAXITER to 20,000. Each of these efforts were tried individually and in conjunction but three models still failed to converge- likely due to the fact that even in a very large sample some of the exit types are comparatively rare and this in combination with the number of levels of control variables was problematic. Consequently, a collapsed exit reason variable was used for binary analysis of exits with 4 levels (0=no exit, 1=reunification, 2=living with a relative/guardianship, 3=adoption, 4=other).

3.4.2 Aim 2

Difference-in-difference analyses were run for two outcomes of interest: exit type and length of time in care. For exit type, rates of youth exiting to adoption and reunification were selected as those are the prioritized exit types as stated in Nebraska's CFSR. Each was treated as a discrete entity with no matching of case ids across years. In a difference-in-differences analysis there is no assumption of independence of observation so there was no need to match

Table 4: Model Build Approach for 2- and 3-Level Multi-Level Models

2-Level Models				
Model 1 Null Model	**Model 2**	**Model 3**	**Model 4**	**Final Model**
No predictor, only random effect for the intercept	Model 1 + level 1 fixed effects	Model 2 + random slopes for level 1 predictors	Model 2 + random slopes for level 1 predictors	Model 4 + Interactions

3-Level Models					
Model 1 Null Model	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Final Model**
No predictors, only random effect for intercept	Model 1 + level 1 fixed effects	Model 2 + random slopes for level 1 predictors	Model 3 + level 2 fixed effects	Model 4 + random slopes for level 2 predictors	Model 5 + level 3 fixed effects and interactions

Model Fit			
AIC	**BIC**	**ICC**	**VPC**
Smaller is Better for overall model	Smaller is Better for overall model	Larger is better fit for 2nd level predictor	Larger is better fit for 2nd level predictor

observations across years. Therefore, each year was treated as a discrete time frame (Abadie, 2005). For this reason, re-entry was not used as an outcome of interest in Aim 2. In accordance with a difference-in-difference analysis, dummy variables were created for the state variable (0=Iowa, 1=Nebraska), as well as for each year (in09-in14 where 0=no case in that year and 1=case in that year), and finally dummy variables were created for each time period (private: 0=no, 1=yes; post: 0=no, 1=yes). Two models were run for each outcome variable, one using 'private' as the interaction term with the state dummy variable and one using 'post' as the interaction term with the state dummy variable.

A key assumption of a difference-in-differences analysis is that there are parallel trends in the period prior to the treatment period, what would be the privatization period for this study. This assumption appeared violated based on graphs of trends (see Results). The round 2 CFSR for both states were analyzed in detail to confirm that there were no statewide efforts targeting adoption and/or reunification during the timeframe leading up to privatization of Nebraska's child welfare system. In 2009, Iowa awarded a 3-year grant to run a family finding program to facilitate adoption services as implementation of the Fostering Connections to Success and Increasing Adoptions Act of 2008. This effort was begun in 26 counties with a target service population of 200 youth. With regards to increasing reunification of youth in foster care, in 2007 Iowa piloted a parent-partner program for families with youth in care with a case goal of reunification. This program was ultimately expanded to 22 counties across the state by July of 2009. By the time of the round 2 CFSR report, 450 families were served by this report, but no indication was provided as to whether participation in this program increased likelihood of reunification or speed with which this goal was attained. These two efforts alone would not explain the difference in the trends of exit out of care prior to privatization. No other state-wide policy was identified that could account for this difference. The difference-in-difference analysis was conducted despite this violation of the assumption.

Chapter 4: Results

As outlined in Chapter 3, the analyses for both Aim1 and Aim 2 were conducted following extensive data cleaning and management of the corresponding sub-samples of the AFCARS dataset. Univariate and bivariate analysis was conducted for all variables of interest and covariates. Because of the very large sample sizes, only those findings that are practically large and significant or non-significant are noted. Univariate analyses for both aims are presented first to provide an overview of the distribution of cases by independent and control variables.

The research questions for the present study were (1) Do youth receiving private foster care case management experience differential permanency (time to exit and type of exit) & stability (re-entry into care) outcomes when compared to youth receiving public foster care case management? and, Aim 2) Do changes in privatization (onset and de-privatization) of foster care case management services impact permanency outcomes for youth in foster care?

4.1 Bivariate Analyses

Spearman correlations, chi-squares, and t-tests were run for both Aim 1 and Aim 2 samples. Spearman correlations were run to account for the categorical and skewed count variables. Tables 5 and 6 show bivariate differences between private and public states according to categorical or continuous variable types and independent as compared to dependent variables.

4.1.1 Aim 1

Due to the large sample size, of more interest are the variables where no significant difference was found. Among independent categorical variables (Table 5) there was no difference by privatization in gender (χ^2=2.01, p=.16), being categorized as Asian χ^2=3.67,

Table 5: AIM 1: Bivariate Relationships of Predictor and Dependent Variables to Private Vs. Public Status (8 State Sample)

	Total Sample	*Missing*	*Private*	*Public*	*Bivariate*
	N(%)	N(%)	N(%)	N(%)	X^2(p)
Gender					
Male	26912 (50.81)	11(0%)	14231(50.52)	12681(51.14)	2.01(.16)
Female	26055 (49.19)		13938(49.48)	12117(48.86)	
Race					
White	32757(61.83)	0(0%)	17537(62.26)	15220(61.35)	4.61(.0319)
African-American	19131(36.11)	0(0%)	9845(34.95)	9286(37.43)	35.17(<.0001)
Asian	298(.56)	0(0%)	142(.50)	156(.63)	3.67(.055)
Am. Indian/Alaska	680(1.28)	0(0%)	463(1.64)	217(.87)	61.56(<.0001)
Hawaiian/Pac. Isl.	86(.16)	0(0%)	32(.11)	54(.22)	8.81(.003)
Unknown	1450(2.76)	353(1%)	838(2.97)	612(2.5)	10.91(.001)
Multiracial	966(3.16)	0(0%)	323(2.00)	643(4.46)	151.03(<.0001)
Ethnicity					
Hispanic	4600(8.68)	0(0%)	3023(10.73)	1577(6.36)	1325.23(<.0001)
Not-Hispanic	27782 (90.92)		14389 (89.08)	13393(92.97)	
Diagnosed Disability					
Yes	5892(13.00)	7653(14%)	3127(11.21)	2765(15.86)	3909.2 (<.0001)
No/Undetermined	23264 (86.37)		24767(88.79)	14666(84.14)	
Other Medical Issue					
Yes	2473(4.74)	788(1%)	1231(4.47)	1242(5.04)	9.22(.002)
No	49717(95.26)		26301(95.53)	23416(94.96)	
Mental Health Dx					
Yes	3711(7.11)	788(1%)	2120(7.70)	1591(6.45)	30.67(<.0001)
No	48479(92.89)		25412(92.30)	23067(93.55)	
Removal Reason					
Physical Abuse	9057(17.10)	17(0%)	4854(17.23)	4203(16.95)	.722(.3954)
Sexual Abuse	2084(3.93)		1095(3.89)	989(3.99)	.36(.5471)
Neglect	23041(43.51)		11840(42.03)	11201(45.18)	53.16(<.0001)
Casegoal					
Reunification	36206(71.87)	2602(5%)	20063(72.10)	16143(71.58)	3085.30(<.0001)
Live with Relatives	748(1.48)		223(.80)	525(2.33)	
Adoption	3073(6.10)		2369(8.51)	704(3.12)	
Long-term foster	943(1.87)		571(2.05)	372(1.65)	
Emancipation	960(1.91)		626(2.25)	334(1.48)	
Guardianship	1632(3.24)		1578(5.67)	54(.24)	
Not yet established	6814(13.53)		2395(8.61)	4419(19.60)	
Placement Setting					
Pre-adoptive home	473(.90)	240(0%)	348(1.24)	125(.51)	3274.35(<.0001)
Relative foster home	17273(32.75)		12192(43.30)	5081(20.67)	
Non-relative foster	22229(42.15)		9721(34.53)	12508(50.88)	
Group home	2704(5.13)		1282(4.55)	1422(5.78)	
Institution	4070(7.72)		1735(6.16)	2335(9.50)	
Independent Living	130(.25)		70(.25)	60(.24)	
Runaway	587(1.11)		240(.85)	347(1.41)	
Trial home visit	5272(10.00)		2568(9.12)	2704(11.00)	
DEPENDENT VARIABLES					
Exit Reason					
N/A (Still in care)	25519(49.17)	1079(2%)	16449(60.29)	9070(36.84)	5037.38(<.0001)
Reunification	15585(30.03)		7067(25.90)	8518(34.60)	
With relative	3797(7.32)		306(1.12)	3491(14.18)	
Adoption	2961(5.71)		1578(5.78)	1383(5.62)	
Emancipation	1815(3.50)		713(2.61)	1102(4.48)	
Guardianship	1879(3.62)		1077(3.95)	802(3.26)	
Other Agency	171(.33)		49(.18)	122(.50)	
Runaway	128(.25)		23(.08)	105(.43)	
Child Death	44(.08)		20(.07)	24(.10)	
Re-entry (as of 2015)					
Yes	6973 (13.16)	0	3775(13.40)	3198(12.89)	3.01(.08)
No	46005 (86.84)		24394(86.60)	21611(87.11)	

p=.055, a removal reason of physical abuse (χ^2=.722, p=.40) or sexual abuse (χ^2=.36, p=.55). Among dependent variables there was no difference in proportion of youth who re-entered case (χ^2=3.01, p=.08), but there was a practically large difference in exit from care. Youth served in privatized states were almost twice as likely to still be in care during the observation period and were many times less likely to exit to relative care.

In regard to continuous variables, the largest practical difference can be seen in the length of time in care between privatized and public systems (see Table 6). The difference in total time in care (days in the spell) was about 240 days or nearly 8 months with the youth in privatized states staying longer.

Table 6: Bivariate Relationships Private vs. Public of Continuous Variables (8 State Sample)

	Total Sample	*Private*	*Public*	*Bivariate*
	Mean(SD)	Mean(SD)	Mean(SD)	t(p)
Total Number Removals	1.21(.54)	1.27(.58)	1.29(.67)	-3.88(.0001)
Days in current placement	103.17(93.74)	114.1(95.09)	91.82(93.02)	-27.09(<.0001)
Age at Removal	6.59(5.40)	6.36(5.29)	6.85(5.51)	7.97(<.0001)
Number of placements	2.67(3.37)	1.75(1.38)	1.71(1.22)	-3.09(.002)
DEPENDENT VARIABLE				
Total Days of Spell	559.04(574.97)	672(642.7)	432.5(455.9)	-37.86(<.0001)

Next relationships among the predictor variables were assessed to look for potential problems with multi-collinearity in multivariate models. Table 7 shows the correlation matrix for

Aim 1 sample of 52,569 youth in eight states (4 public and 4 private). For the Aim 1 sample, there are numerous significant correlations, but given the large sample size and the fact that the majority of the correlations are weak in magnitude there is little concern of multicollinearity. There is a small positive relationship between having a mental health diagnosis and another medical diagnosis (r=.19, p<.0001). The remaining correlations are weak, however due to the large sample size, the significant correlations are not practically significant and do not indicate issues with multicollinearity.

4.1.2 Aim 2

Similar findings were found in the bivariate analysis for the Aim 2 (Nebraska vs. Iowa) comparison state sample, as shown in Table 8 for the categorical variables and Table 9 for the continuous variables. Gender is not significantly different in the Aim 2 sample (χ^2=.04, p=.84), nor is there a difference between Nebraska and Iowa youth in foster care based on sex abuse as a removal reason (χ^2=2.48, p=.12).

Table 9 illustrates between state differences for continuous independent and dependent variables. There was no significant difference in the Aim 2 sample between Nebraska and Iowa on the total number of removals (t=1.18, p=.24) with Nebraska foster care population having a mean of 1.30 (SD=.61) removals and Iowa foster care youth having a mean of 1.32(SD=.73) removals.

Table 10 shows the correlation matrix for the Aim 2 sample (n=11,947) for the independent variables to be included in the two-state model. In contrast to the Aim 1 sample, there is a strong negative correlation between diagnosed disability and mental health diagnosis (r=-.79, p<.0001). There is also a moderate negative correlation between case goal and current placement setting (r=-.499, p<.0001), but given the large sample size and there is little concern

Table 7: Correlation Matrix for Independent Variables: AIM 1 (8 State Sample)

	Am. Indian	African-American	Hawaiian	Asian	White	Hispanic	Multiracial	Race Unknown	Current Placement	Neglect	Physical Abuse	Sex Abuse	Gender	Age (years)	Other Medical	DSM III DX	Diagnosed Disability	Number of Placements
American Indian	--																	
African-American	**-.0710**	--																
Hawaiian	-.0028	**-.0197**	--															
Asian	-.0064	**-.0445**	-.0018	--														
White	**-.1200**	**-.8386**	**-.0333**	**-.0752**	--													
Hispanic	**-.0087**	**-.1842**	.0035	**-.0120**	**.1256**	--												
Multiracial	**-.0187**	**-.1304**	-.0051	**-.0117**	**-.2204**	**-.0152**	--											
Race Unknown	**-.0189**	**-.1321**	-.0052	**-.0119**	**-.2232**	**.1603**	**-.0347**	--										
Current Placement	**.0187**	**-.0376**	**.0127**	**.0158**	-.0035	**-.0018**	.0013	**.0645**	--									
Neglect	.0020	**.0357**	.0043	**-.0020**	**.0238**	**-.0132**	-.0049	-.0238	**-.0699**	--								
Physical Abuse	**-.0251**	**.0533**	-.0057	.0057	**-.0445**	**.0306**	.0080	-.0127	**-.0283**	**-.1081**	--							
Sex Abuse	**-.0126**	**-..0415**	**.0385**	**.0385**	**.0418**	**.0384**	-.0079	-.0050	**.0115**	**-.0797**	**-.0397**	--						
Gender	-.0034	**-.0098**	-.0057	-.0053	**.0154**	.0032	-.0009	**-.0107**	**-.0248**	**.0105**	**-.0001**	**.0863**	--					
Age (years)	-.0008	.0004	-.0024	**.0151**	**.0120**	**-.0317**	**-.0454**	**-.0077**	**.3003**	**-.1618**	**.0530**	**.0941**	**.0283**	--				
Other Medical	**.0096**	-.0046	-.0001	-.0051	.0024	**-.0153**	-.0005	-.0026	**.0620**	**.0372**	.0056	-.0028	**-.0360**	.0278	--			
DSM III Dx	**.0199**	**-.0287**	-.0051	.0078	**.0255**	**-.0261**	**-.0106**	-.0046	**.1455**	**.0143**	-.0013	.0070	**-.0279**	**.2281**	**.1876**	--		
Diagnosed Disability	.0077	**-.0177**	-.0034	.0050	**.0141**	**-.0368**	-.0082	**-.0109**	**.1387**	**.0418**	.0058	.0023	**-.0387**	**.1806**	**.6204**	**.7684**	--	
Number of Placements	**.0136**	**.0615**	-.0001	**-.0147**	**-.0413**	**-.0236**	-.0013	**-.0401**	**.1456**	**.0252**	**.0228**	**.0155**	-.0055	.1531	**.0655**	**.1455**	**.1387**	--

Table 8: Bivariate Relationships Nebraska vs. Iowa Sample, Categorical Variables

	Total Sample N(%)	*Missing* N(%)	*Nebraska* N(%)	*Iowa* N(%)	*Bivariate* X^2(p)
Gender					
Male	6553 (54.87)	4(.00)	2977 (54.97)	3576 (54.79)	.0383 (.8449)
Female	5390 (45.13)		2439 (45.03)	2951 (45.21)	
Race					
White	8196 (68.60)	0(.00)	3288 (60.70)	4908 (75.16)	287.54 (<.0001)
African-American	2252 (18.85)	0(.00)	1076 (19.86)	1176 (18.01)	6.65 (.0099)
Asian	94 (.79)	0(.00)	34 (.63)	60 (.92)	3.22 (.07)
Am. Indian/Alaska	736 (6.16)	0(.00)	547 (10.10)	189 (2.89)	265.76 (<.0001)
Hawaiian/Pac. Isl.	24 (.20)	0(.00)	1 (.02)	23 (.35)	16.45 (<.0001)
Ethnicity					
Hispanic	1164 (9.74)	0(.00)	642 (11.85)	522 (7.99)	348.16 (<.0001)
Not-Hispanic	10783 (90.26)		4775 (88.15)	6008 (92.01)	
Diagnosed Disability					
Yes	4741 (39.89)	62(1%)	2831 (52.86)	1910 (29.25)	741.72 (<.0001)
No/Undetermined	7144 (60.11)		2525 (47.14)	4619 (70.75)	
Other Medical Issue					
Yes	2236 (19.03)	198(2%)	1545 (29.60)	691 (10.58)	680.59 (<.0001)
No	9513 (80.97)		3675 (70.40)	5838 (89.42)	
Mental Health Dx					
Yes	3541 (30.14)	198(2%)	2187 (41.90)	1354 (20.74)	616.76 (<.0001)
No	8208 (69.86)		3033 (58.10)	5175 (79.26)	
Child Behavior Problems		3(0)			
Yes	3907 (32.71)		1739 (32.12)	2168 (33.20	1.57 (.21)
No	8037 (67.29		3675 (67.88)	4362 (66.80)	
Removal Reason					
Physical Abuse	1213 (10.16)	3(0)	609 (11.25)	604 (9.25)	12.96 (.0003)
Sexual Abuse	437 (3.66)	3(0)	182 (3.36)	255 (3.91)	2.48 (.1153)
Neglect	4260 (35.67)	3(0)	2427 (44.83)	1833 (28.07)	362.26 (<.0001)
Casegoal					
Reunification	6080 (51.67)	181(0)	3028 (56.60)	3052 (47.57)	2624.54 (<.0001)
Live with Relatives	386 (3.28)		0	386 (6.02)	
Adoption	2720 (23.12)		1107 (20.69)	1613 (25.14)	
Long-term foster	1258 (10.69)		0	1258 (19.61)	
Emancipation	631 (5.36)		631 (11.79)	0	
Guardianship	680 (5.78)		573 (10.71)	107 (1.67)	
Not yet established	11 (.09)		11 (.21)	0	
Placement Setting					
Pre-adoptive home	1160 (9.71)	0(0)	120 (2.22)	1040 (15.93)	1011.88 (<.0001)
Relative foster home	1291 (10.81)		799 (14.75)	492 (7.53)	
Non-relative foster	2923 (24.47)		1607 (29.67)	1316 (20.15)	
Group home	962 (8.05)		360 (6.65)	602 (9.22)	
Institution	683 (5.72)		442 (8.16)	241 (3.69)	
Independent Living	291 (2.44)		148 (2.73)	143 (2.19)	
Runaway	208 (1.74)		127 (2.34)	81 (1.24)	
Trial home visit	4429 (37.07)		1814 (33.49)	2615 (40.05)	
DEPENDENT VARIABLE					
Exit Reason					
N/A (Still in care)	5596 (46.84)	0(0)	2618 (48.33)	2978 (45.66)	144.23 (<.0001)
Reunification	3518 (29.45)		1633 (30.15)	1885 (28.87)	
With relative	40 (.33)		0	40 (.61)	
Adoption	1434 (12.00)		538 (9.93)	896 (13.72)	
Emancipation	746 (6.24)		307 (5.67)	439 (6.72)	
Guardianship	527 (4.41)		248 (4.58)	279 (4.27)	
Other Agency	42 (.35)		42 (.78)	0	
Runaway	40 (.33)		27 (.50)	13 (.20)	
Child Death	4 (.03)		4 (.07)	0	
Ever Adopted					
Yes	398 (3.33)	0(0)	54 (1.00)	344 (5.27)	1986.57 (<.0001)
No	11549 (96.67)		5363 (99.00)	6186 (94.74)	

Table 9: Bivariate Relationships Iowa vs. Nebraska Sample, Continuous Variables

	Total Sample Mean(SD)	*Nebraska* Mean(SD)	*Iowa* Mean(SD	*Bivariate* t(p)
Total Number Removals	1.29(.67)	1.30(.61)	1.32(.73)	1.18(.24)
Age at End of Year	10.71(5.96)	11.10(6.04)	10.63(6.03)	-4.25(<.0001)
Number of placements	3.66(3.43)	4.03(3.99)	3.55(3.26)	-7.12(<.0001)

Table 10: Correlation Matrix for Independent Variables for AIM 2 (Nebraska and Iowa)

	Am. Indian	African-American	Hawaiian	Asian	White	Hispanic	Case Goal	Exit Reason	Current Placement	Neglect	Physical Abuse	Sex Abuse	Gender	Child Behavior	Other Medical	DSM III DX	Diagnosed Disability	Ever Adopted
American Indian	--																	
African-American	**-0.1030**	--																
Hawaiian	-0.0037	**-0.0216**	--															
Asian	-0.0071	**-0.0381**	-0.0100	--														
White	**-0.3330**	**-0.6280**	**-0.0040**	**-0.1071**	--													
Hispanic	**-0.0768**	**0.0828**	-0.0623	**0.0247**	**0.0877**	--												
CaseGoal	**0.0306**	0.0009	-0.0051	0.0042	0.0178	0.0141	--											
Exit Reason	0.0040	**-0.0518**	-0.0023	-0.0093	0.0177	**0.0346**	**0.06551**	--										
Current Placement	-0.0112	**-0.0380**	0.0018	-0.0058	0.0100	**0.0221**	**-0.49851**	**0.0694**	--									
Neglect	**0.0345**	**0.0340**	-0.0022	-0.0129	**-0.0452**	**-0.0480**	**0.02634**	**-0.0208**	**-0.1461**	--								
Physical Abuse	-0.0158	-0.0019	-0.0089	-0.0080	0.0142	-0.0037	**0.02664**	-0.0121	**-0.0397**	-0.0131	--							
Sex Abuse	**-0.0221**	**-0.0392**	-0.0087	**0.0180**	**0.0501**	0.0018	**0.08876**	**-0.0189**	**-0.0430**	-0.0055	**0.0319**	--						
Gender	**0.0233**	-0.0092	-0.0106	0.0087	0.0006	0.0027	**0.07737**	**0.0352**	**-0.0747**	**0.0549**	**0.0209**	**0.0634**	--					
Child Behavior	**-0.0570**	**-0.0248**	0.0046	-0.0136	**0.0413**	**0.0190**	**-0.07711**	**-0.0357**	**0.2724**	**-0.4532**	**-0.1801**	**-0.0532**	**-0.1288**	--				
Other Medical	-0.0148	-0.0133	**-0.0219**	**-0.0237**	**0.0347**	0.0013	**0.13754**	**-0.0421**	**-0.0865**	**0.0399**	0.0160	**0.0403**	**-0.0896**	**0.0518**	--			
DSM III Dx	**-0.0316**	-0.0058	**-0.0215**	-0.0063	0.0322	-0.0023	**0.20147**	**-0.0254**	**-0.0609**	**-0.1036**	0.0008	**0.0546**	**-0.0274**	**0.2558**	**0.2708**	--		
Diagnosed Disability	**0.0339**	**0.0197**	**0.0233**	0.0095	**-0.0497**	0.0161	**-0.23563**	**0.0325**	**0.1357**	**0.0321**	-0.0128	**-0.0620**	**0.0499**	**-0.1668**	**-0.5862**	**-0.7941**	--	
Ever Adopted	**-0.0306**	**-0.0396**	0.0054	-0.0001	**0.0634**	0.0451	**0.05492**	-0.0042	0.0031	**-0.0634**	**0.0209**	**0.0271**	-0.0102	**0.0259**	**-0.0602**	**-0.0631**	**0.0566**	--

of multicollinearity. Similar to the Aim 1 sample, the majority of significant correlations are weak and therefore do not indicate issues with multicollinearity for the subsequent multivariate models.

4.2 Multivariate Analyses

4.2.1 Aim 1: Time to Permanency

Multi-level linear models were run using PROC MIXED with Time to Permanency as the dependent variable. Significant parameters are in bold in each table. Table 11 has the full model results for the 2-level model of individuals nested in counties as well as the 2-level model of individuals nested in states. Two-level models allow for comparison between considering county level variation or state level variation as the more important factor. Table 12 illustrates the final model for a 3-level model of individuals, nested in counties, nested in states.

The significant main fixed effects in the 2-level county model include the presence of a diagnosed disability (b=118.51, t=3.85, p=.0001), age in years (b=-10.45, t=-11.83, p<.0001), number of placements (b=91.75, t=22.78, p<.0001), and private foster care (b=202.29, t=28.61, p<.0001). All placement types were associated with longer stays in comparison to trial visit home, which makes sense given that exit is a precursor to finalizing reunification. Trial home visit was selected as the reference group as youth placed in this setting are conceivably the closest to achieving permanency (reunification in this case). These results indicate that youth with a diagnosed disability take 118.5 days longer to achieve permanency than youth without a diagnosed disability. Similarly, for every additional placement a child in foster care experiences, it takes an additional 92 days to achieve permanency. Youth removed for physical abuse stayed fewer days than youth placed for reasons other than maltreatment, but the difference (slightly over 8 days was not large). Youth served by private foster care case managers take 202 days

longer to achieve permanency than youth served by public foster care case managers. Interaction terms suggest that for youth served by privatized agencies, number of placements is not as strongly associated with longer stays although it does not moderate the effect by a practically large number of days compared to the joint increase associated with each

Table 11: 2 Level Multi-Level Models with Time to Permanency as Outcome (8 State Sample)

	2 Level (County) Model			2 Level (State) Model		
Fixed Effects	**b**	**SE**	**t ratio**	**b**	**SE**	**t ratio**
Time to Permanency (Intercept)	-40.1745	52.4154	.77	-2.11	78.33	-.03
Gender	-15.53	4.04	**-3.84**	-12.32	4.17	**-2.95**
Race (Ref=Unknown)						
White	-17.29	12.69	-1.36	30.16	20.05	1.50
African-American	7.09	17.60	.40	77.01	17.99	**4.28**
Asian	108.69	75.79	1.43	46.75	33.87	1.38
Hawaiian/PI	-94.07	73.04	-1.29	-57.39	69.69	-.82
Am. Indian/AK	-1.71	23.68	-.07	12.51	23.25	.54
Multiracial	-53.10	16.77	**-3.17**	63.75	18.45	**3.46**
Hispanic	-12.75	7.48	-1.70	20.13	9.13	**2.20**
Mental Health DX	14.90	29.83	.50	14.23	20.80	.68
Diagnosed Disability	118.51	30.79	**3.85**	67.72	23.84	**2.84**
Other Medical DX	13.69	23.94	.57	22.14	13.64	1.62
Placement Type (Ref=Trial Home Visit)						
Pre-adoptive	233.97	62.01	**3.77**	146.73	63.80	**2.30**
Foster-relative	325.63	48.50	**6.71**	250.93	55.72	**4.50**
Foster-nonrelative	437.40	48.30	**9.06**	324.14	55.57	**5.83**
Group home	336.29	52.03	**6.46**	270.12	56.92	**4.75**
Institution	312.36	50.78	**6.15**	183.93	56.20	**3.27**
Ind. Living	214.10	80.16	**3.92**	203.38	74.17	**2.74**
Runaway	184.55	58.22	**3.17**	106.03	60.00	1.77
Age (years)	-9.91	.89	**-11.09**	-11.05	1.21	**-9.23**
Num. of Placements	91.75	4.03	**22.78**	95.68	7.05	**13.58**
Removal Reason (Ref=Other)						
Physical Abuse	-8.67	4.03	**22.78**	1.74	19.98	.09
Neglect	17.74	10.45	1.70	30.54	13.28	**2.30**
Sexual Abuse	31.70	23.18	1.37	54.38	19.10	**2.85**
Private Foster Care	202.29	7.07	**28.61**	273.92	95.18	**2.88**
# Placement*Private FC	-31.92	1.66	**-19.17**	-29.53	9.93	**-2.97**
Disability*Age	-7.69	1.91	**-4.02**	-	-	-
Model Fit	**AIC**	**BIC**	**ICC**	**AIC**	**BIC**	**ICC**
	655136.5	655191.2	.1920	650555.3	650555.6	.1509

Significance denoted by bold

main effect. The interaction between age at placement and disability indicates that the trend toward shorter stays for older youth is stronger for those with disabilities. The only association between race and time to permanency in the 2-level county model was for multiracial youth compared to youth recorded as "unknown (b=-53.10, t=-3.17, p<.0001). Unknown was selected as the reference group for all subsequent models.

For the 2-level State model, gender (b=-12.32, t=-2.95, p=.0031; male compared to female), having a diagnosed disability (b=67.72, t=2.84, p=.0045), age (b=-11.36, t=-10.76, p<.0001), and number of placements (b=95.68, t=13.58, p<.0001) are all significantly associated with the time to permanency. In addition to the change to significance for gender, the magnitude of association of disability with time to permanence decreases by about half in the state model compared to the county. In addition, in this model a significant relationship was found between two of the three removal reasons and time to permanency: neglect (b=30.54, t=13.28, p=.028) and sex abuse (b=54.38, t=2.85, p=.004) were significant while physical abuse (b=1.74, t=.09, p=.93) was not significantly associated with time to permanency when compared to youth who entered for non-maltreatment reasons. The relationship between private foster care case management and time to permanency is similarly strong in terms of days in care but weaker in regard to statistical significance (b=273.92, t=2.88, p=.028) suggesting greater variance. Youth served by private foster care case managers take almost 274 days longer to achieve permanency in comparison to youth served by public foster care case managers.

The 3-level nested model is very similar to the state model, gender (b=-12.34, t=-3.16, p<.0001), presence of a diagnosed disability (b=59.62, t=2.78, p<.0001), age (b=-11.15, t=-14.79, p<.0001), and number of placements (b=95.17, t=12.34, p<.0001) are all significant. The

Table 12: 3 Level Multi-Level Models with Time to Permanency as Outcome (8 State Sample)

	3 Level (Counties in States) Model		
Fixed Effects	**b**	SE	t ratio
Time to Permanency (Intercept)	10.51	81.90	.13
Gender	-12.34	3.91	**-3.16**
Race (Ref=Unknown)			
White	35.77	16.96	2.11
African-American	66.46	17.01	**3.91**
Asian	75.78	45.72	1.66
Hawaiian/PI	-55.45	68.71	-.81
Am. Indian/AK	9.91	23.17	.43
Multiracial	64.91	20.62	**3.15**
Hispanic	8.39	9.11	.92
Mental Health DX	-7.04	20.90	-.34
Diagnosed Disability	59.62	21.41	**2.78**
Other Medical DX	20.28	13.47	1.50
Placement Type (Ref=Trial Home Visit)			
Pre-adoptive	163.39	65.89	**2.48**
Foster-relative	265.37	57.12	**4.65**
Foster-nonrelative	349.84	56.98	**6.14**
Group home	272.93	58.60	**4.66**
Institution	198.42	57.94	**3.42**
Ind. Living	218.71	75.69	**2.89**
Runaway	124.27	61.62	**2.02**
Age (years)	-11.15	.75	**-14.79**
Num. of Placements	95.17	7.71	**12.34**
Removal Reason (Ref=Other)			
Physical Abuse	-1.65	18.14	-.09
Neglect	29.94	13.85	**2.16**
Sexual Abuse	54.05	20.61	**2.62**
Private Foster Care	265.47	98.59	**2.69**
Placement*Private FC	-29.50	10.45	**-2.82**
Model Fit	**AIC**	**BIC**	**ICC**
	649494.6	649498.8	.1688 (2 Level) .0258 (3 Level)

Significance denoted by bold

similarity is also evident in the very small movement of the AIC and BIC model fit between the two-level and the three level models. For every additional placement, youth take an additional 95 days to achieve permanency. Similarly, if a youth has a diagnosed disability, it takes 59.6 days longer to achieve permanency. With regards to age, for every additional year in age, the time to achieve permanency decreases by 11 days. Additionally, the relationship between neglect as the removal reason (b=29.94, t=2.16, p<.01) and sex abuse as the removal reason (b=54.05, t=2.62, p<.01) with time to permanency is statistically significant. Finally, youth receiving services from private foster care case managers remain in care 265 days longer than youth served by public foster care case managers (b=265.47, t=2.69, p=.0071).

There were two goodness of fit measures evaluated for these models: the Akaike information criterion (AIC) and the Bayesian information criterion (BIC). In general, smaller AIC's and BIC's are better so comparing these indices within models is a method of determining whether the model-build process has been successful. Table 13 has the AIC and BIC goodness of fit values for each of the models for Time to Permanency, demonstrating that the model build process was successful and improved the fit of the models. On the other hand, only the comparison to the fit of the null model showed a practically large improvement. There were very small differences between the two-level models and the two and three level models.

The other measure of fit is the Intraclass Correlation Coefficient (ICC) which indicates the amount of variance in the dependent variable is accounted for by the random effect. The ICCs were calculated for each model based off the Null model, as recommended by Luke (2004) and Bell et al (2013). The ICCs indicate that 17% of the variation in time to permanency is accounted for by the county in the 2-level county model and 13.9% of the variance in time to permanency is accounted for by the state in the 2-level state model. This suggests that there is more variation by

county than by state. In the 3-level nested model, only 2% of the variance in time to permanency is accounted for by the state and 8% is accounted for by the county nested within the state. While this demonstrates that the county is more impactful when considering variation in time to

Table 13: Fit Statistics of Time to Permanency Multi-level Models (8 State Model)

	Time to Permanency State 2-Level Models				
	Model 1 Null Model Used to calculate ICCs	**Model 2** Level 1 Fixed Effects	**Model 3** (Model 2 + random slopes for level 1 predictors)	**Model 4** (Model 3 + level 2 fixed effects)	**Final Model** (Model 4 + Interactions)
AIC	801452.2	654592.6	650562.9	650559.3	650555.3
BIC	801452.5	654644.6	650566.0	650562.4	650558.6
	Time to Permanency County 2-Level Models				
AIC	803671.3	658807.9	655931.7	655503.9	655136.5
BIC	803675.4	658843.5	655983.7	655558.6	655191.2
	Time to Permanency 3-Level Models				
AIC	800519.7	654100.3	649501.1	649497.9	649494.6
BIC	800520.0	654102.5	649505.2	649502.0	649498.8

permanency for youth in foster care, the ICCs are low and suggest that the county and state do not account for a practically significant amount of variance in the time to permanency.

4.2.2 AIM 1: Exit Type

Multinomial logistic mixed models were run in PROC GLIMMIX. The collapsed variable has four levels: 0=No exit, 1=reunification, 2=Living with a relative/Guardianship, 3=Adoption, and 4=All Other exit types. The same model build approach was taken as for the time to permanency models outlined in Table 4. The 3-level model was over-specified and is not reported here. Privatization of foster care case management was significantly associated with exit type in the 2-level county model (b=-.08, t=-3.07, p<.0001, OR.92) but is not significantly associated with exit type in the 2-level state model (b=.22, t=.31, p=.75, OR=1.2). Every placement type, except for runaway vs. trial home visit, are significantly associated with exit type in both 2-Level county models: Pre-adoptive (b=-1.93, t=-19.20, p<.0001, OR=10.9),

Table 14: AIM 1: Converging Multi-level Models of Exit Type (8 State Sample)

	2 Level (County) Model			2 Level (State) Model		
Fixed Effects	**b**	**SE**	**t (OR)**	**b**	**SE**	**t (OR)**
Intercept						
No Exit vs. Other	-.38	.27	-1.38	-.75	.50	-1.51
Reunification vs. Other	1.22	.27	**4.49**	1.27	.50	**2.54**
Guardianship vs. Other	2.10	.27	**7.71**	2.25	.50	**4.51**
Adoption vs. Other	2.99	.27	**10.94**	3.20	.50	**6.40**
Gender	-.01	.02	-.35(.99)	-.001	.02	-.07(.99)
Race (Ref=Unknown)						
White	.15	.06	**2.57(1.2)**	.27	.06	**4.32(1.3)**
African-American	-.05	.06	-.76(.96)	.14	.06	**2.18(1.2)**
Asian	-.20	.15	-1.37(.82)	-.22	.16	-1.38(.81)
Hawaiian/PI	.15	.35	.42(1.2)	.13	.39	.34(1.1)
Am. Indian/AK	1.11	.14	**8.08(3.0)**	.98	.16	**6.20(2.7)**
Multiracial	.18	.08	**2.23(1.2)**	.21	.08	**2.54(1.2)**
Hispanic	.04	.04	1.00(1.0)	-.08	.04	**-2.23(.92)**
Mental Health DX	.21	.07	**2.88(1.2)**	.22	.08	**2.96(1.3)**
Diagnosed Disability	-.45	.07	**-6.40(.63)**	-.48	.07	**-6.37(.62)**
Other Medical DX	.65	.07	**9.16(1.9)**	.52	.07	**6.95(1.7)**
Placement Type (Ref=Trial Home Visit)						
Pre-adoptive	-1.93	.10	**-19.20(10.9)**	-2.04	.11	**-17.90(12.3)**
Foster-relative	.45	.03	**13.39(9.7)**	.47	.04	**11.60(11.1)**
Foster-nonrelative	.34	.03	**10.58(19.0)**	.36	.04	**9.24(19.1)**
Group home	1.01	.06	**17.54(7.6)**	.91	.06	**14.77(10.8)**
Institution	.10	.05	**2.17(4.0)**	.34	.05	**6.50(4.5)**
Ind. Living	-.54	.23	**-2.32(7.5)**	-.53	.22	**-2.39(9.0)**
Runaway	.08	.11	.74(6.9)	.16	.11	1.38(7.7)
Age (years)	-.02	.002	**-10.77(.97)**	-.03	.002	**-16.28(.97)**
Num. of Placements	.07	.004	**15.13(1.1)**	.04	.004	**8.84(1.0)**
Days in FC Spell	.0001	0	**Inf.(.99)**	.0004	0	**Inf.(1.0)**
Removal Reason (Ref=Other)						
Physical Abuse	.02	.03	.64(1.0)	.21	.03	**7.35(1.2)**
Neglect	-.24	.02	**-11.41(.79)**	.03	.02	1.07(1.0)
Sexual Abuse	-.02	.05	-.42(.98)	.01	.05	.15(1.0)
Private Foster Care	-.08	.03	**-3.07(.92)**	.22	.70	.31(1.2)
Model Fit	**AIC**	**BIC**	**VPC**	**AIC**	**BIC**	**VPC**
	90753	90794	.8052	81082.18	81084.56	.2647

Significance denoted by bold

Relative Foster (*b*=.45, *t*=13.39, *p*<.0001, OR=9.7), Non-Relative Foster (*b*=.34, *t*=10.58, *p*<.0001, OR=19.00), Group home (*b*=1.01, *t*=17.54, *p*<.0001, OR=7.6), Institution (*b*=.10, *t*=2.17, *p*<.0001, OR=4.0), Independent Living (*b*=-.54, *t*=-2.32, *p*<.0001, OR=7.5); and 2-Level State models: Pre-adoptive (*b*=-2.04, *t*=-17.90, *p*<.0001, OR=12.3), Relative foster (*b*=.47, *t*=11.60, *p*<.0001, OR=11.1), Non-Relative Foster (*b*=.36, *t*=9.24, *p*<.0001, OR=19.1), Group home (*b*=.91, *t*=14.77, *p*<.0001, OR=10.8), Institution (*b*=.34, *t*=.6.50, *p*<.0001, OR=4.5), Independent Living (*b*=-.53, *t*=-2.39, *p*<.0001, OR=9.0).

4.2.3 AIM 1: Re-entry

The final series of models for the 8-state sample used Re-entry as the dependent variable. Re-entry into foster care after exit from the prior spell in care was coded as a dummy variable (yes or no). Binomial logistic mixed models were run in PROC GLIMMIX, again following the guidelines of Kiernan, Tao, and Gibbs (2012), but the three-level model did not converge. This is most likely due to over-specification and to the rarity of re-entry with only 13% (n=6973) of the sample re-entering care during the study period.

Table 15 shows the results of the models that did converge. Receipt of private foster care case management services decreased likelihood of "no" re-entry for the 2-level county model (*b*=-.08, *t*=-3.07, *p*=.0007, OR=.92). However private foster care case management is not significantly associated with re-entry in the 2-level state model (*b*=-.01, *t*=-.02, *p*=.98, OR=.99) In both models, sexual abuse as the removal reason was associated with an increased likelihood of no re-entry (2-level county: *b*=.13, *t*=2.86, *p*<.0001, OR=1.26; 2-level state: *b*=.21, *t*=2.64, *p*<.0001, OR=1.24) as was age (2-level county: b=.03, t=10.16, p<.0001, OR=1.03; 2-level state: b=.03, t=10.24, p<.0001, OR=1.03), and number of placements (2-level county: b=-.04, t=-10.18, p<.0001, OR=.96; 2-level state: *b*=-.03, *t*=-8.28, *p*<.0001, OR=.97) and being of Hispanic

Table 15: AIM 1: Converging Multi-level Models of Re-Entry to Foster Care (8 State Sample)

	2 Level (County) Model			2 Level (State) Model		
Fixed Effects	**b**	**SE**	**t(OR)**	**b**	**SE**	**t(OR)**
Re-entry: no (Intercept)	1.33	.14	9.67	1.36	.24	5.74
Gender	-.001	.03	-.03(.99)	-.006	.03	-.22(.99)
Race (Ref=Unknown)						
White	-.23	.09	**-2.47(.79)**	-.24	.10	**-2.51(.79)**
African-American	-.10	.10	-.99(.91)	-.12	.10	-1.25(.88)
Asian	-.06	.25	-.22(.95)	-.06	.25	-.22(.95)
Hawaiian	-.27	.49	-.55(.76)	-.27	.49	-.55(.76)
Am. Indian/AK	-.49	.16	**-3.14(.61)**	-.46	.16	**-2.94(.63)**
Multiracial	-.43	.12	**-3.63(.65)**	-.38	.12	**-3.18(.68)**
Hispanic	.15	.05	**2.78(1.16)**	.24	.05	**4.37(1.27)**
Mental Health DX	-.18	.10	-1.74(.83)	-.23	.10	**-2.17(.80)**
Diagnosed Disability	.09	.11	.89(1.10)	.09	.11	.83(1.09)
Other Medical DX	-.01	.10	-.14(.99)	.03	.10	.32(1.03)
Placement Type (Ref=Trial Home Visit)						
Pre-adoptive	2.41	.32	**7.64(.17)**	2.40	.30	**.81(.204)**
Foster-relative	.66	.05	**13.58(.19)**	.81	.05	**15.25(.207)**
Foster nonrelative	.72	.05	**15.36(.15)**	.83	.05	**15.97(.169)**
Group home	.53	.08	**7.05(.16)**	.62	.08	**8.17(.164)**
Institution	.54	.07	**7.98(.85)**	.59	.07	**8.33(.851)**
Ind. Living	2.24	.72	**3.11(.23)**	2.24	.70	**3.19(.223)**
Runaway	.93	.18	**5.25(.09)**	.90	.17	**5.24(.090)**
Age (years)	.03	.002	**10.16(1.03)**	.03	.003	**10.24(1.03)**
Num. of Placements	-.04	.004	**-10.18(.96)**	-.03	.004	**-8.28(.97)**
Days in FC Spell	-.001	0	**Inf(1.00)**	3.7E-6	0	**Inf.(1.0)**
Removal Reason (Ref=Other)						
Physical Abuse	.14	.04	**3.68(1.16)**	.07	.04	1.73(1.07)
Neglect	.12	.03	**3.96(1.13)**	-.04	.03	-1.27(.96)
Sexual Abuse	.23	.08	**2.86(1.26)**	.21	.08	**2.64(1.24)**
Private Foster Care	-.13	.04	**-3.40(.880)**	-.01	.29	-.02(.99)
Model Fit	**AIC**	**BIC**	**VPC**	**AIC**	**BIC**	**VPC**
	33488	33525	.0502	33213	33215	.0347

Significance denoted by bold

origin (2-level county: *b*=.15, *t*=2.78, *p*<.0001, OR=1.16; 2-level state: *b*=.24, *t*=4.37, *p*<.0001, OR=1.27).

The binary logistic multi-level models with re-entry as the dependent variable used three measures of goodness of fit. Similar to the linear multi-level models, the AIC and BIC are measures of goodness of fit that are used to compare models with the smaller the value indicating the better fit. In contrast to the linear multi-level models, in the binary logistic multi-level models, the Variance Partition Coefficient (VPC) is used to assess the amount of variance in the dependent variable that is accounted for by the random effect (county or state in these models). In binary models, the VPC is calculated as: $\frac{\tau^2}{\tau^2+\frac{\pi^2}{3}}$ (Goldstein, Browne, and Rasbash, 2002; Austin and Merlo, 2017). The re-entry models both have very small VPC's (2-level County VPC=.03, 2-Level State VPC=.05) indicating that there is very little variance in re-entry of youth in foster care that is accounted for by the 2nd level variable (state or county respectively). Once again, the three-level model did not converge.

4.2.4 AIM 2

Similar to AIM 1, all analyses were run in SAS VS 9.4. Difference in Difference models were run using PROC REG to examine differences in rates of exit before and after privatization compared to a control (Iowa). Difference-in-Difference analysis requires the use of linear regression even when using a categorical dependent variable (Warton, Parker, & Karter, 2017). The means of each outcome of interest were graphed by state across the study period to track any change in the trajectory in the rate of exit to adoption and/or the rate of exit to reunification in Iowa and Nebraska (see Figures 1 and 2). As can be seen in both figures (note that the scale is changed for ease of display in Figure 2) there are very small practical variations in exit to reunification or adoption between states during the observation period.

Figure 1: Iowa and Nebraska Sample Exit to Reunification 2007-2014

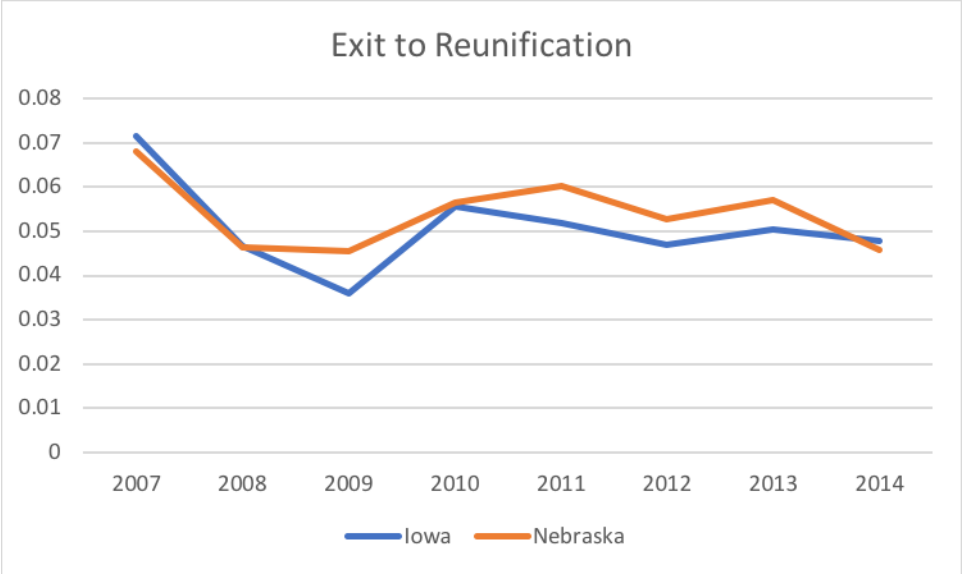
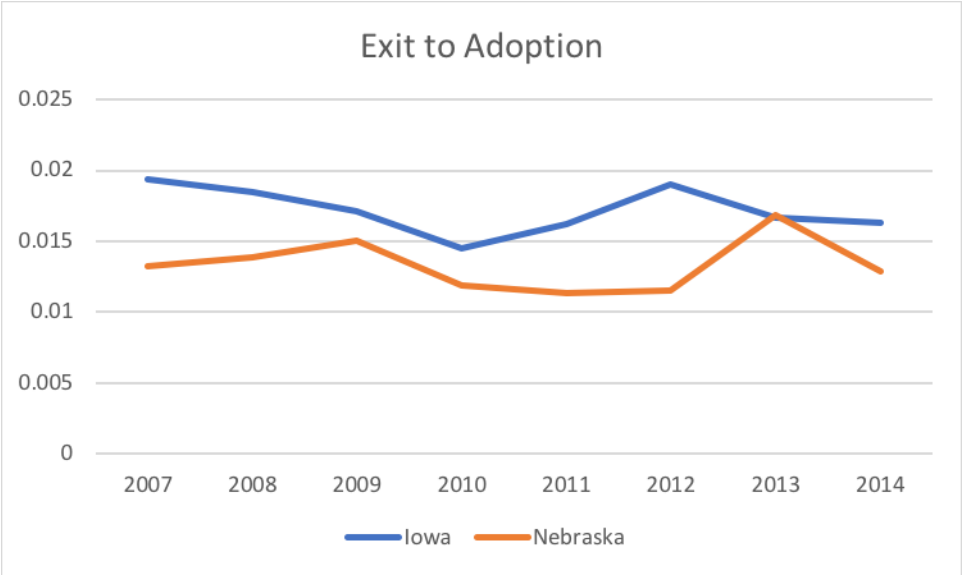


Figure 2: Iowa and Nebraska Sample Exit to Adoption 2007-2014



Despite the small visually evident differences, difference-in-differences ordinary least squares regressions were still run for three different outcomes: exit to adoption dummy variable, exit to reunification dummy variable, and exit vs. no exit. The exit vs. no exit model was further tested to see if differences exist when stratified by case goal (e.g. case goal is adoption or reunification).

Nebraska privatized foster care case management (and all public child welfare services) in October of 2010. By the end of fiscal year 2012, all of Nebraska's child welfare system had reverted back to public control. Therefore, two separate difference-in-differences analyses were run for each model, one with privatization as the 'treatment' period and a second for the entire timeframe (2009-2014). All analyses were run in SAS using PROC REG.

The assumptions of a difference-in-difference analysis must be met in order for the analysis to be valid (Abadie, 2005). Specifically, the two groups, Iowa and Nebraska in this study, must have parallel trends prior to the treatment (privatization) period. Figures 1 and 2 show the trajectory of exit to adoption and reunification over the study period for the state of Nebraska and the state of Iowa. It appears that there are violations to the assumption of parallel trends.

Table 16 displays the final results for all models where the privatization period is the 'treatment period' from 2011-2012. Table 17 has the full results for all models for the full timeframe. While the models converged, there was no consistent significance across time periods and the state level variables. Further some models were not significant.

It may be that despite no evident explanation for other efforts within the states that would confound the results, the violations simply do not allow for the analyses to be valid. It should be noted again, however, that the plots themselves suggested little practical variation.

Table 16: Iowa vs. Nebraska Regression Output: Public Time 1 (2009-2010) vs. Private (2011-2012)

	Model 1: Exit to Adoption	Model 2: Exit to reunification	Model 3: Exit vs. No Exit	Model 4: Exit w/ case goal adoption	Model 5: Exit w/ case goal reunification
	b (95% CI)	b (95% CI)	b (95% CI)	b (95% CI)	b (95% CI)
Intercept	**.011(.011,.012)**	**.039(.039,.040)**	**.951(.950,.952)**	**.591(.579,.603)**	**.518(.511,.524)**
2010	**.012(.011,.012)**	**.027(.025,.028)**	**-.093(-.095,-.091)**	**-.100(-.116,-.084)**	**-.012(-.021,-.004)**
2011	**.007(.006,.009)**	**.006(.004,.008)**	**-.054(-.057,-.051)**	.008(-.014,.031)	**-.059(-.071(-.048)**
2012	**.010(.009,.011)**	**.024(.022,.026)**	**-.147(-.150,-.144)**	**-.133(-.153,-.113)**	**-.135(-.145,-.124)**
State	**-.003(-.004,-.002)**	**.001(.000,.003)**	-.001(-.002,.001)	**-.021(-.040,-.002)**	**-.014(-.024,-.005)**
2011*State	**-.003(-.005,-.001)**	.001(-.002,.004)	**-.016(-.020,-.012)**	**-.039(-.073,-.006)**	**-.021(-.037,-.006)**
2012*State	**-.004(-.006,-.002)**	-.000(-.003,.003)	**-.001(-.011,-.003)**	-.026(-.060,.007)	-.007(-.022,.008)
Model Statistics					
F (R^2)	563.45(.005)	757(.006)	11890.5(.092)	179.84(.044)	518.65(.036)

Significance denoted in bold

Table 17: Iowa vs. Nebraska Regression Output: Private (2011-2012) vs. Public Time 2 (2013-2014)

	Model 1: Exit to Adoption	Model 2: Exit to reunification	Model 3: Exit vs. No Exit	Model 4: Exit w/ case goal adoption	Model 5: Exit w/ case goal reunification
	b (95% CI)	b (95% CI)	b (95% CI)	b (95% CI)	b (95% CI)
Intercept	**.013(.012,.013)**	**.039(.038,.040)**	**.980(.979,.981)**	**.655(.643,.667)**	**.623(.616,.630)**
2010	**.011(.010,.012)**	**.027(.025,.028)**	**-.109(-.111,-.107)**	**-.135(-.151,-.119)**	**-.059(-.067,-.051)**
2011	**.007(.006,.008)**	**.009(.006,.011)**	**-.074(-.077,-.071)**	**-.064(-.087,-.042)**	**-.100(-.111,-.088)**
2012	**.010(.009,.011)**	**.010(.008,.012)**	**-.082(-.086,-.079)**	.017(-.007,.042)	**-.094(-.106,-.082)**
2013	**.004(.003,.005)**	**.028(.025,.030)**	**-.072(-.075,-.069)**	**-.039(-.068,-.011)**	-.000(-.013,.012)
2014	**-.010(-.011,-.009)**	**-.014(-.016,-.012)**	**-.108(-.110,-.105)**	**-.305(-.333,-.277)**	**-.287(-.299,-.276)**
State	**-.004(-.004,-.003)**	**.003(.002,.004)**	**-.002(-.004,.000)**	**-.042(-.061,-.023)**	**-.030(-.040,-.020)**
2011*State	**-.002(-.004,-.001)**	-.001(-.004,.002)	**-.011(-.015,-.007)**	.004(-.030,.037)	-.011(-.026,.004)
2012*State	**-.005(-.007,-.003)**	**.006(.002,.010)**	.004(-.001,.008)	-.034(-.077,.008)	**.033(.015,.051)**
2013*State	.002(.000,.004)	**-.009(-.012,-.005)**	-.005(-.010,.000)	.028(-.017,.074)	**-.041(-.060,-.023)**
2014*State	.001(-.001,.003)	**-.004(-.007,-.001)**	-.004(-.008,.001)	.033(-.009,.075)	**.049(.032,.066)**
Model Statistics					
F(R^2)	381.45(.005)	533.35(.008)	10160.4(.126)	256.03(.099)	907.27(.098)

Significance denoted in bold

Chapter 5: Discussion

The results show that privatization of foster care case management, at least in the AIM 1 multi-state comparison, does impact permanency outcomes of youth in foster care. The variation in time was impressive but the expected additional variance by county or state was minimal. The ICCs, were low, suggesting that the amount of variance accounted for by the second level (and third level for the 3-level model) variables is minimal. Consequently, the increase in time in care (244.80 days in the 2-level county model, 252.11 days in the 2-level state model, and 263.32 days in the 3-level model) does not vary by state or county. While this is not consistent with Courtney & Hook (2012) or Becker and colleagues (2007), the states included in the present study were different and the regions within states were counties rather than court jurisdictions. Further the prior studies generally sampled earlier years, varied in the length of follow-up and had somewhat different control variables. The remaining discussion focuses first on permanency, then on stability following exit and finally on the lack of difference in difference findings.

5.1 Time to Exit and Exit Type

Although there is little literature on permanency outcomes with which to compare findings regarding the impact of privatization, the increased length of stay and lower likelihood of positive exit are consistent with the more established cost analyses that suggest that privatization does not typically lead to cost savings (Freundlich, & Gerstenzang, 2003a). In other words, while private agencies may "win" contracts based on projected costs per child, the actual costs will increase based on days in care. Further a focus on rapid exits may lead to less child-centered outcomes (McBeath and Meezan, 2009), this may lead to less desirable outcomes for

those who do exit. Notably, however, while the effect on length of stay was practically large, the effect size for privatization on exit type was very modest.

Race/ethnic categories were rarely statistically significant and never practically large. This is interesting given literature that suggests that African American children tend to spend longer in care (Becker, Jordan & Larsen, 2007; Courtney & Hook, 2012; Shaw, 2010). This varies in conclusion from a recent unpublished doctoral dissertation that conducted a similar analysis using fewer and different states which implemented PBC with an intent to reduce time to exit (Menozzi, 2016). On the other hand, the Menozzi study also focuses on early adopters of privatization that submitted complete data to AFCARS in the mid-1990s and collapses race into white, black or other. AFSA (1997) significantly altered permanency timelines but state implementation of federal policy is often delayed. It seems likely that states included might still be reacting to AFSA during the early years of the follow-up period. It is also unclear how collapsing race and age in that study may have inflated differences or obscured other trends.

Findings regarding placement type being important in relation to time in care is more consistent with prior work (e.g., Courtney & Hook, 2012). However, the practical significance of factors like relative care was actually limited to how this compared to the reference group, which was pre-adoptive placement. Placement with relatives was actually associated with a slightly lower length of stay in regard to the magnitude of effect than placement in non-relative care (refer back to Tables 10 & 11). In most studies of placement type and exit from care, relative care (or kinship care) is associated with an increased length of stay (Courtney, 1994; O-Brien, 2012). It may be that increased emphasis on permanence and termination of parental rights has led to greater numbers of exits to some form of permanent relative care or guardianship.

Of course, time in care is not always a marker for positive outcomes. As stated in the introduction, policy prioritizes certain outcomes as positive such as reunification, adoption and some form of relative care (Carnochan et al., 2013). Ideally, stays in care are both as short as possible and result in the most positive exit to a permanent home. A few findings crosscut both metrics.

The findings regarding having a disability and spending more time in care as well as being less likely to exit in a positive manner were not unexpected based on prior research (e.g., Akin, 2011; Courtney & Hook, 2012). Indeed, the adoption auction posited by Blackstone and Hakim (2003) stems from the recognition that children that are more difficult to care for may be less desirable to take on in regard to a permanent placement without ongoing formal supports. This finding also appears to extend beyond the US system (Welch, Stalker, Jones & Stewart, 2015). It is perhaps not surprising that this factors in as a strong independent predictor regardless of privatization. It is less clear why a child with a mental health or physical health condition did not face similar barriers to positive exits- although prior findings related to mental health have varied by type of exit (e.g., Courtney & Hook, 2012). Physical health, per se, has not been as commonly studied. It is not possible to assess the level of impairment associated with these categories which may have had some effect. It is also possible that there are greater supports available for children with these issues as compared to those with a diagnosed disability. Regardless of privatization, children of special needs appear to require additional resources in order to achieve equal likelihood of permanency.

While race was not a significant predictor of time in care, there was a small significant effect for White children compared to those categorized as “other” and a strong positive effect for American Indian/Alaskan Native (AI/AN) children related to increased likelihood of a

positive exit type. It may be that the latter finding is a hopeful sign in regard to the impact of special heightened attention to both removal and permanency for AI/AN children related to the Indian Child Welfare Act (Fletcher, Singel and Fort, 2009). On the other hand, cross-reporting of data from tribal child welfare organizations to the state systems is not consistent (Fox, 2003). It is not known, therefore if there is something unique about the group of AI/AN children that is represented in the federal data.

Finally, the bulk of the focus on child welfare outcomes for youth in foster care has been on children entering care for reasons of maltreatment (Shaw, Bright & Sharpe, 2015). In the present study, children who were placed in care for reasons of maltreatment stayed somewhat longer than those placed for other reasons. This appears to contrast somewhat with Courtney & Hook (2012) though it is not clear that their sample included the full range of other reasons for entry.

Children placed for reasons of neglect were less likely to exit to a positive outcome. Prior studies have found similar results specific to certain exit types (Akin, 2011; Courtney & Hook, 2012) but these were generally in comparison to other maltreatment types. Given the scant literature it is not clear why this result was obtained. It may be that relatives or other families are easier to find for children who enter for reasons of parental death or incarceration. For children who enter care through voluntary placement due to emotional or behavioral problems these children may exit more quickly to other systems or once they receive intervention may return home more easily. It is also possible that neglect is a proxy for greater materials needs that are more difficult to address (e.g., housing). More work is needed to understand trajectories for these children.

5.2 Re-entry

A final metric used in the present study was re-entry following an exit from care. Generally, re-entry is not uncommon, particularly when follow-up periods are longer (Lee, Jonson-Reid & Drake, 2012; Goering & Shaw, 2017). While the literature on foster care re-entry is not large, there is some consistency in studies finding greater stability in exit for children placed with relatives (Goering & Shaw, 2017) and higher risk of re-entry associated with shorter stays in care (Goering & Shaw, 2017; Jonson-Reid, 2003; Shaw, 2006). In the present study, youth served in privatized systems stayed longer in care but were also less likely to re-enter once exited. Without knowing what services were provided during foster placement, it is unclear if the increased time in care was actually a positive indicator of time spent stabilizing children according to their needs or responding to family needs required prior to reunification. AFCARS does not provide data on the family of origin in regard to the plans for reunification nor does it provide data on pre-adoptive services.

In regard to neglect, relatively few studies focused on foster care have looked at reason for entry by type of maltreatment as a predictor for outcomes. Studies of re-entry into care have found no effect or a similar effect regarding neglect but these did not include children placed for other reasons (Connell et al., 2009; Jonson-Reid et al, 2003). On the other hand, studies of neglected children generally find higher rates of recurrence (White, Hindley & Jones, 2015) and worse or equally poor developmental outcomes when compared to other forms of maltreatment (Gilbert et al., 2009). The fact that neglected children may also fair worse in certain metrics for foster care outcomes is additional cause for concern.

5.3 AIM 2 Findings

Similar to Menozzi (2016), this study also sought to look at a how variations in placement trends might be explained by onset of privatization, cessation and subsequent return to public child

welfare. While her study focused on four states during an earlier period in the privatization movement did find significant differences the present study did not find meaningful results. The plots of exits did not reveal practically significant differences between state trends, but neither were they parallel. The subsequent difference-in-difference models, while they successfully ran, did not result in models that were meaningful. This may be because the data failed meet the primary assumption of parallel trends prior to the treatment period (privatization). As detailed earlier, attempts were made to identify state specific variations in other policies that may have impacted foster care exit, but no sufficiently robust large-scale efforts were uncovered. It is possible that with propensity score matching or matching to a different state that these models will satisfy the assumptions of a difference-in difference analysis. It is also possible that because Nebraska was ultimately an example of a failed attempt that it was unrealistic to expect significant variation from a public system.

5.4 Limitations

There are two primary limitations of this study. The failure of the re-entry and exit type three-level models within AIM 1, 8-state models to converge uniformly and the poor ICCs (or VPCs for binary logistic models) indicate that these models may not be specified accurately. Kiernan, Tao, and Gibbs (2012) provided strategies for specifying models in PROC GLIMMIX for binomial outcome variables. These steps were taken but not all models converged given the memory space available in the computers used. Additional research is needed to determine how to resolve the over-specification issue with the 3-level multinomial and binomial models.

Secondly, there are substantial limitations in the data captured by AFCARS. First, AFCARS does not have organizational level data to confirm that youth were served by private agencies. Inclusion criteria for states was established to account for the lack of organizational

data. States were only selected for inclusion as "private" if at least 75% of the foster care population were served by private foster care case managers. However, at least 25% of the foster care population in those states could be served by public agencies and there is no way to identify which individuals that is. It is possible that there are systematic differences within a state as to who is served by a private foster care agency and who is served by a public foster care agency. This risk is lessened by the fact that of the four states included as "private" Illinois, Kansas, and Nebraska were 100% private during the study period. The structure of contracts with private agencies vary, and as established through the experiences of Kansas and Nebraska, not all private agencies are prepared to undertake the financial burdens that accompany foster care case management (Ensign & Metzenthin, 2007; Hubel et al, 2013).

Organizational level data would be helpful to determine if there are organizational differences between permanency outcomes for youth served by agency or consortium. This data could include information about the contract, including targeted and incentivized outcomes for youth and families served, as well as information about staff such as training, turnover, and supervision that might inform permanency outcomes for youth in foster care. The results of this study call for further exploration of the impact of privatization of child welfare services on youth and families.

This study solely focused on privatization of foster care case management and did not explore the impact of privatization of any other services. As shown in Table 1, many states have contracted with private agencies for some child welfare services. Research is needed to determine whether these services are achieving the stated goals of meeting outcomes for youth and families.

AFCARS data also lacks information on caregiver and family risks that have been named in prior research as factors associated with permanency outcomes (Kimberlin et al., 2009). Exits from care similar to other child welfare service outcomes are often dependent on resources and services provided by other systems (Jonson-Reid et al., 2017). AFCARS lacks data on family level variables that may inform reunification plans. It also lacks data on what services were accessed to address a child's needs that may help to prepare them for a return home or other positive exit. While the National Study of Child and Adolescent Well-being offers a greater window on risk and protective factors, it too lacks the type of details on services utilization that would better help explain outcomes and the sample is likely too small to explore the various demographic and placement characteristics available in the present study. That being said, even the scale of the present study was insufficient to explore important but rare exit types such as child death.

5.5 Implications for Policy

As recent as 2015, the State of Georgia contemplated privatizing all child welfare services. This effort failed but is not an anomaly as more states explore cost-cutting measures for child welfare services. While states such as Nebraska have had high-profile negative experiences with privatization of foster care services, there are other states such as Missouri, New York, and Wisconsin that have established privatized systems. This study contributes important information to the field about how privatization of foster care case management impacts permanency outcomes for youth in foster care. Specifically, this study demonstrates that youth served by private foster care case managers remain in care longer than youth served by public foster care case managers. This should be considered by policy-makers when considering any privatization efforts of foster care case management.

Further, as privatization efforts expand within child welfare services to other types of services (e.g. adoption services, family finding, residential services), consideration should be given to the evaluation and assessment of these services as well as the time necessary to transition from a public system to a private system. Private agencies in Kansas and Nebraska went bankrupt due to the financial burdens associated with assuming the costs of private foster care case management. The associated disruption of services to families that accompanies the bankruptcy of an agency must be guarded against. These are considerations that must be made by legislators contemplating expanded the privatization of child welfare.

5.6 Implications for Research

There are a number of avenues for future research on privatization of child welfare services. This includes the impact that incentives built within performance-based contracts have on targeted outcomes, exploring the population of youth served by private agencies to determine if they differ substantially from youth served by public agencies in hybrid states, and exploring whether receiving services from different private agencies is driving outcomes. These questions were outside the scope of this study but are necessary to better understanding the full context of privatization of child welfare services and the associated impact on youth and family outcomes.

Another issue for further exploration is the county-level data within AFCARS. AFCARS does not report county for an individual if there are less than 1000 individuals in foster care in the county. This means that all youth served in these counties are aggregated into a common county. This necessarily impacts the specificity of county level analysis. Future research that is disaggregated by the county variable is called for to better assess if there are county level differences in outcomes for youth in foster care.

Finally, this study has no information about service referral or completion by youth and/or families. Whether or not a youth (or their family of origin) completed services is a fundamental part of every case plan for a family involved in the child welfare system. Future study should include service information for youth to provide further context to a family's experience with the child welfare system.

5.7 Implications for Practice

The key takeaways for practitioners from this study is to be aware that there are differential permanency outcomes for youth served by private foster care case managers when compared to youth served by public foster care case managers. These differences do not vary by race/ethnicity or age, but presence of physical and mental health conditions is associated with increased time to permanency. It is well established that youth in foster care have higher rates of diagnosis for mental health issues when compared to the general population (Bronsard et al, 2016, Clausen et al, 1998). Consequently, child welfare practitioners, and medical professionals working with youth in foster care, should screen for mental and physical health conditions. The move toward medical homes for youth in foster care are a promising practice (Jaudes et al, 2012) that should be explored further. Finally, efforts targeting a reduction in the time required to achieve permanency is indicated, particularly for specific populations such as youth with a disability. Federal policy, such as ASFA and Fostering Connections to Success, did target permanency timelines for youth in foster care, but there may be a need to examine how privatization efforts may require different strategies to attain quicker exits. Future research should also explore whether or not all or a portion of this apparent increased time in care among privatized states relates to providing more extensive services that increase stability following exit.

5.8 Conclusion

This study sought to explore the relationship between privatization of foster care case management and permanency outcomes and stability for youth in foster care. Some of the findings appeared consistent with other studies of foster care outcomes not focused on privatization and some of the null findings in regard to cost savings. On the other hand, the present findings did vary from a prior study of time to permanence. Clearly more study is needed to understand how and for whom privatization effects child and family outcomes. Arguably, even if studies of cost savings were uniformly positive, there is a moral imperative to assure that child level outcomes are also positive for children that the state has assumed custody and therefore responsibility.

References

Aarons, G. A, & Sawitzky, A. C. (2006). Organizational climate partially mediates the effect of culture on work attitudes and staff turnover in mental health services. *Administration and Policy in Mental Health*, *33*(3), 289–301. doi:10.1007/s10488-006-0039-1

Abadie, A. (2005). Semiparametric difference-in-differences estimators. *The Review of* Economic Studies, 72(1), p.1-19.

Adoption and Foster Care Analysis and Reporting System (AFCARS). National Data Archive on Child Abuse and Neglect. Administration for Children and Families.

Akin, B. (2011). Predictors of foster care exits to permanency: A competing risks analysis of reunification, guardianship and adoption. *Children and Youth Services Review, 33*(6), 999-1011.

Andreoni, J. (1988). Privately provided public goods in a large economy: The limits of altruism. Journal of Public Economics, 35, p57-73.

Andreoni, J. (1989). Giving with impure altruism: Applications to charity and Ricardian equivalence. *Journal of Political Economy, 97(*6), 1447-1458.

Antler, J. & Antler, S. (1979). From child rescue to family protection. *Children and Youth* Services Review, 1 p177-204.

Barillas, K. H. (2011). State Capacity: The Missing Piece in Child Welfare Privatization. *Child Welfare, 90*(3), 111-127.

Becker, M.A., Jordan, N., & Larsen, R. (2007). Predictors of successful permanency planning and length of stay in foster care: The role of race, diagnosis and place of residence. *Children and Youth Services Review, 29(*8), 1102-1113.

Bell, B.A., Ene, M., Smiley, W., & Schoeneberger, J.A. (2013). A multilevel model primer using SAS PROC MIXED. SAS Institute, Cary, NC.

Bergstrom, T. C., Roberts, J. A., Rubinfeld, D. L., & Shapiro, P. (1988). A test for efficiency in the supply of public education. *Journal of Public Economics*, *35*(3), 289-307.

Blackstone, E. A., Buck, A. J., & Hakim, S. (2004). Privatizing adoption and foster care: Applying auction and market solutions. *Children & Youth Services Review, 26*(11), 1033-1049. doi: 10.1016/j.childyouth.2004.08.004

Blackstone, E. A., & Hakim, S. (2003). A market alternative to child adoption and foster care. *CATO Journal, 22*(3), 485.

Bremner, R.H. (1971). (Ed.). Children and youth in America: A documentary history (Vol. II: 1866-1932). Cambridge, MA: Harvard University Press.

Bronsard, G., Alessandrini, M., Fond, G., Loundou, A., Auquier, P., Tordjman, & Boyer, L. (2016). The Prevalence of mental disorders among children and adolescents in the child welfare system: A systematic review and meta-analysis. *Medicine*, 95(*7), e*2622.

Bruskas, D. (2008). Children in Foster Care: a vulnerable population at risk. *Journal of Child and Adolescent Psychiatric Nursing,* 21(2).

Child Welfare Information Gateway. (2016) *Major federal legislation concerned with child protection, child welfare, and adoption.* Washington, DC: US. Department of Health and Human Services, Children's Bureau.

Child Welfare Information Gateway (2017). Child & Family Services Reviews. http://www.acf.hhs.gov/cb/monitoring/child-family-services-reviews.

Child Welfare Information Gateway. (n.d.) *Permanency*. Available at https://www.childwelfare.gov/topics/permanency/

Children's Bureau (n.d.) available at http://www.acf.hhs.gov/programs/cb

Children's Bureau (n.d.). Available at https://library.childwelfare.gov/cwig/ws/cwmd/docs/cb_web/SearchForm

Clausen, J.M., Landsverk, J., Ganger, W., Chadwick, D., & Litrownik, A., (1998). Mental health problems of children in foster care. *Journal of Child and Family Studies*. *7(*3), 283-296.

Collins-Camargo, C. (2007). Private Delivery. *State News (Council of State Governments), 50*(1), 23-25.

Collins-Camargo, C., Hall, J., Flaherty, C., Ensign, K., Garstka, T., Yoder, B., & Metz, l. (2007). Knowledge Development and Transfer on Public/Private Partnerships in Child Welfare Service Provision: Using Multi-Site Research to Expand the Evidence Base. *Professional Development, 10*(3), 14-31.

Collins-Camargo, C., McBeath, B., & Ensign, K. (2011). Privatization and Performance-Based Contracting in Child Welfare: Recent Trends and Implications for Social Service Administrators. *Administration in Social Work, 35*(5), 494-516. doi: 10.1080/03643107.2011.614531

Connell, Vanderploeg, Katz, Caron, Saunders, & Tebes (2009) Maltreatment following reunification: Predictors of subsequent child protective services contact after children return home. *Child Abuse & Neglect, 33(*4), 218-228.

Courtney, M.E. & Hook, J.L. (2012). Timing of exits to legal permanency from out-of-home care: The importance of systems and implications for assessing institutional accountability. *Children and Youth Services Review, 34(*12), 2263-2272.

Courtney, M. (1994). Factors associated with the reunification of foster children with their families. *Social Service Review. 68(*1).

Craig, C., Kulik, T., James, T., & Nielsen, S. (1998). *Blueprint for the Privatization of Child Welfare*.

Crum, T. (1998). The Shift Toward Private Sector Service Delivery: Restructuring Child Welfare Systems in the Name of Children. *Journal of Children & Poverty, 4*(2), 39.

Cutuli, J. J., Goerge, R. M., Coulton, C., Schretzman, M., Crampton, D., Charvat, B. J., ... & Lee, E. L. (2016). From foster care to juvenile justice: Exploring characteristics of youth in three cities. *Children and youth services review*, *67*, 84-94.

Daro, D. (1988). *Confronting child abuse: Research for effective program design*. Simon and Schuster.

Donner, D. S. (1996). The Emerging Adoption Market: Child Welfare Agencies, Private Middlemen, and 'Consumer' Remedies. *University of Louisville Journal of Family Law, 35*(3), 473-535.

Downs, W. M. (1996). Federalism achieved: The Belgian elections of may 1995.

Downs, S.W. & Sherraden, M.W. (1983). The orphan asylum in the nineteenth century. *Social* Service Review, 57(2), 272-290.

Downs, S., Moore, E., McFadden, E. & Costin, L. (2009). Child Welfare and Family Services: Policies and Practice, 8th Edition. Pearson.

Dunnigan, A., Thompson, T., Jonson-Reid, M., & Drake, B (2017). Chronic Health Conditions and Children in Foster Care: Determining demographic and placement-related correlates of asthma. *Journal of Public Child Welfare.*

Eloy, M. (Jan 9, 2015). Foster Care Privatization Put on Legislative Back Burner. Downloaded from: www.wabe.org/foster-care-privatization-put-legislative-back-burner

Eggers, W. D. (1997). There's no place like home. *Kansas has turned its child welfare services over to private nonprofits*(83), 43-47.

Ensign, K., & Metzenthin, J. (2007). Achieving Desired Outcomes by Privatizing Child Welfare Service Delivery: Lessons Learned through the Kansas Experience. *Professional Development (10974911), 10*(2), 7-15.

Flaherty, C., Collins-Camargo, C., & Lee, E. (2008). Privatization of Child Welfare Services: Lessons Learned from Experienced States. *Professional Development (10974911), 11*(1), 6-18.

Fletcher, M. L., Singel, W. T., & Fort, K. E. (2009). *Facing the Future: The Indian Child Welfare Act at 30*. Michigan State University Press.

Fox, KA. (2003). Collecting data on the abuse and neglect of American indian children. *Child Welfare, 82(*6), 707-726).

Freeman, M. B. (2003). Privatization of child protective services: Getting the lion back in the cage? *Family Court Review, 41*(4), 449-456. doi: 10.1177/15312445030414005

Freundlich, M., & Gerstenzang, S. (2003a). *Child Welfare Privatization Initiatives: Six Case Studies*.

Freundlich, M., & Gerstenzang, S. (2003b). *Key Themes in the Privatization of Child Welfare Services & Recommendations*.

Freundlich, M., Gerstenzang, S., & Child Welfare League of America, I. W. D. C. (2003). *An Assessment of the Privatization of Child Welfare Services: Challenges and Successes*.

Gelles, R. J., & Perlman, S. (2012). *Estimated Annual Cost of Child Abuse and Neglect*. Chicago, IL.

Gerston, L. N. (2007). American federalism: A concise introduction. New York, NY: M.E. Sharpe.

Gibson, T. and M. R. Lewis (1980). Sowing the seeds of trouble: an historical analysis of compliance structures in child welfare. Journal of Sociology and Social Welfare, 7, 679-701

Gilbert, R., Widom, C. S., Browne, K., Fergusson, D., Webb, E., & Janson, S. (2009). Burden and consequences of child maltreatment in high-income countries. *The lancet*, *373*(9657), 68-81.

Glisson, C., Dukes, D., & Green, P. (2006). The effects of the ARC organizational intervention on caseworker turnover, climate, and culture in children's service systems. *Child Abuse & Neglect*, *30*(8), 855–80; discussion 849–54. doi:10.1016/j.chiabu.2005.12.010

Glisson, C., & Green, P. (2011). Organizational climate, services, and outcomes in child welfare systems. *Child Abuse & Neglect*, *35*(8), 582–91. doi:10.1016/j.chiabu.2011.04.009

Goering, E. S., & Shaw, T. V. (2017). Foster care reentry: a survival analysis assessing differences across permanency type. *Child abuse & neglect*, *68*, 36-43.

Goldstein, H., Browne, W., & Rasbash, J. (2002). Partitioning variation in multilevel models. *Understanding statistics: statistical issues in psychology, education, and the social sciences*, *1*(4), 223-231.

Gruber, J., & Wise, D. (2005). *Social security programs and retirement around the world: Fiscal implications, introduction and summary* (No. w11290). National Bureau of Economic Research.

Haslag, L., Matt, R.L, & Neal, M. (2012). Missouri's developing public-private partnership for child welfare: Using performance-based contracting to achieve system-wide results. *Journal of Public Child Welfare, 6,* p 67-82.

Heineman, D. (2012). Nebraska's Children's Commission. Available online at http://childrens.nebraska.gov/PDFs/MeetingDocuments/2012/NCC/08.14.2012/NCC%20Handouts%2008.14.2012.pdf

Holcombe, R.G. (1997). A Theory of the theory of public goods. *Review of Austrian Economics, 10*(1) p.1-22.

Hollingsworth, L. D., Bybee, D., Johnson, E. I., & Swick, D. C. (2010). A comparison of caseworker characteristics in public and private foster care agencies. *Children & Youth Services Review, 32*(4), 578-584. doi: 10.1016/j.childyouth.2009.12.004

Hubel, G.S., Schreier, A., Hansen, D.J., & Wilcox, B.L (2013). A case study of the effects of privatization of child welfare on services for children and families: The Nebraska experience. *Children and Youth Services Review, 35,* p2049-2058.

James Bell and Associates, External Review of the Kansas Child Welfare System Year End Report (January – December 1999), April 28, 2000, James Bell and Associates, Arlington, VA.

Jaudes, P.K. Champagne, V., Harden, A., Masterson, J., & Bilaver, L.A. (2012). Expanded medical home model works for children in foster care. *Child Welfare, 91*(1), 9-33.

Jimenez, M.A. (1990). Permanency planning and the child abuse and prevention and treatment act: The paradox of child welfare policy. *Journal of Sociology and Social Welfare, 17, p55-72.*

Jonson-Reid, M. (2002). Exploring the relationship between child welfare intervention and juvenile corrections involvement. *American Journal of Orthopsychiatry, 74*(4), 559-576.

Jonson-Reid, M., Dunnigan, A. & Ryan, J. (2018). Foster care-juvenile justice systems integration of services. In E. Trejos & N. Trevino (Eds) *Handbook of foster youth*. Routledge.

Jonson-Reid, M., Drake, B. Kohl, P., Guo, S., Brown, D., McBride, T., Kim, H, & Lewis, E. (2017). What do we really know about usual care child protective services? *Children and Youth Services Review, 82,* 222-229.

Jonson-Reid, M., Drake, B., Chung, S., & Way, I. (2003). Cross-type recidivism among child maltreatment victims and perpetrators. *Child Abuse & Neglect, 27(*8*), 899-917.*

Jonson-Reid, M. & Drake, B. (2018). *After the cradle Falls: What child abuse is, how we respond to it and what you can do about it.* Oxford University Press.

Jonson-Reid, M., & Barth, R. P. (2003). Probation foster care as an outcome for children exiting child welfare foster care. *Social Work*, *48*(3), 348-361.

Kiernan, K., Tao, J., & Gibbs, P, (2012). Tips and strategies for mixed modeling with SAS/STAT procedures. SAS Institute, Cary, NC.

King, G. & Nielsen, R. (2016) *Why Propensity scores should not be used for matching.* Institute for Quantitative Social Science, Harvard University. Cambridge, MA.

Kmiec, D. W., & Diamond, E. L. (1984). New Federalism is Not Enough: The Privatization of Non-Public Goods. *Harvard Journal of Law & Public Policy*, *7*, 321.

Lawrence-Webb, C., Field, T., & Harrington, D. (2006). Permanency for children: An organizational analysis of first year start-up issues in a child welfare managed care organization. *Children and Youth Services Review*, *28*(3), 292-305.

LaCroix, A. L. (2010). *The ideological origins of American federalism*. Harvard University Press.

Lee, S., Jonson-Reid, M. & Drake, B. (2012). Foster care re-entry: The role of foster care placement experiences, child welfare and cross sector services. *Children and Youth Services Review. 34*(9), 1825-1833.

Lee, M.Y. & Jonson-Reid, M., (2009). Needs and outcomes for low income youth in special education:Variations by emotional disturbance diagnosis and child welfare contact. *Children and Youth Services Review, 31*(7). 722-731.

Lindsey, D. (1994) The welfare of children. Oxford Univ Press.

Luke, D. A. (2004). *Multilevel modeling* (Vol. 143). Sage.

McBeath, B., Collins-Camargo, C., Chuang, E., Wells, R., Bunger, A. C., & Jolles, M. P. (2014). New directions for research on the organizational and institutional context of child welfare agencies: Introduction to the symposium on "The Organizational and Managerial Context of Private Child Welfare Agencies." *Children and Youth Services Review*, *38*, 83–92. doi:10.1016/j.childyouth.2014.01.014

McBeath, B., Jolles, M. P., Chuang, E., Bunger, A. C., & Collins-Camargo, C. (2014b). Organizational responsiveness to children and families: Findings from a national survey nonprofit child welfare agencies. *Children and Youth Services Review*, *38*, 123–132. doi:10.1016/j.childyouth.2014.01.0

McBeath, B., & Meezan, W. (2008). Governance in Motion: Service provision and child welfare outcomes in a performance-based, managed care contracting environment. *Journal of Public Administration Research and Theory, 20,* i101-i123.

McCullough, C., & Schmitt, B. (2000). Managed care and privatization: results of a national survey. *Children & Youth Services Review, 22*(2), 117-130. doi: 10.1016/S0190-7409(00)00069-4.

Menozzi, C. (2016). Performance based contracting as a policy tool for promoting timely exits from out-of-home care: A comparative analysis (Doctoral dissertation). Retrieved from LSE Theses Online.

Morgan, D. R., & England, R. E. (1988). The two faces of privatization. *Public Administration Review*, 979-987.

Murry, K.O. (2007). The child welfare financing Structure. Available online at http://pewfostercare.org/research/docs/MurryPapers2.

Nebraska Department of Health and Human Services (2009). *Child and Family Services Review Round 2 Report.* Division of Children and Family Services. Downloaded from https://library.childwelfare.gov/cwig/ws/cwmd/docs/cb_web/SearchForm

Nelson, B. (1984). Making an issue of child abuse: Political agenda setting for social problems. Chicago: The University of Chicago Press.

O'Hanlon, K. (2012). Privatization fails: Nebraska tries again to reform child welfare. *the Center for Public Integrity, August*, *21*.

Ortega, D. M., & Levy, M. M. (2002). Facing the challenge of a changing system: Training child welfare workers in a privatized environment. *Journal of health & social policy*, *15*(3-4), 177-187.

Oakland, W. H. (1987). Theory of public goods. In *Handbook of public economics* (Vol. 2, pp. 485-535). Elsevier.

Pecora, P.J., Kessler, R.C., Williams, J., O'Brien, K., Downs, A.C., English, D., White, J.,

Hiripi, E. White, C.R., Wiggins, T., and Holmes, K. (2005) Improving family foster care: Findings from the northwest foster care alumni study, Casey Family Programs, Seattle, WA.

Pecora, P. J., Kessler, R. C., Williams, J., Downs, A. C., English, D., White, J., & O'Brien, K. (2010). What works in foster care. *Key Components of Success from the*.

Phillips, C. M., & Mann, A. (2013). Historical analysis of the Adoption and Safe Families Act of 1997. *Journal of Human Behavior in the Social Environment*, *23*(7), 862-868.

Richett, D. M., & Hudson, J. R. (1979). The socio-legal history of child abuse and neglect: An analysis of the policy of children's rights. *J. Soc. & Soc. Welfare*, *6*, 849.

Romano, E., Babchishin, L., Marquis, R., & Fréchette, S. (2015). Childhood maltreatment and educational outcomes. *Trauma, Violence, & Abuse*, *16*(4), 418-437.

Rosenthal, M. G. (2000). Public or Private Children's Services? Privatization in Retrospect. *Social Service Review, 74*(2), 281.

Rubin, D. M., Alessandrini, E. A., Feudtner, C., Mandell, D. S., Localio, A. R., & Hadley, T. (2004). Placement stability and mental health costs for children in foster care. *Pediatrics*, *113*(5), 1336-1341.

Ryan, J. P. (2012). Substitute care in child welfare and the risk of arrest: does the reason for placement matter? *Child maltreatment*, *17*(2), 164–71. doi:10.1177/1077559512443125

Ryan, J. P., & Testa, M. F. (2005). Child maltreatment and juvenile delinquency: Investigating the role of placement and placement instability. *Children and Youth Services Review*, *27*(3), 227–249. doi:10.1016/j.childyouth.2004.05.007

Ryan, J. P., Marshall, J. M., Herz, D., & Hernandez, P. M. (2008). Juvenile delinquency in child welfare: Investigating group home effects. *Children and Youth Services Review*, *30*(9), 1088–1099. doi:10.1016/j.childyouth.2008.02.004

Ryan, J. P., Hong, J. S., Herz, D., & Hernandez, P. M. (2010). Kinship foster care and the risk of juvenile delinquency. *Children and Youth Services Review*, *32*(12), 1823–1830. doi:10.1016/j.childyouth.2010.08.003

Samuelson, P.A. (1954). The pure theory of public expenditure. *The Review of Economics and Statistics, 36(*4), p387-389.

Sedlak, A., Mettenburg, J., Basena, M., Petta, I., Mcpherson, K., Green, A., & Li, S. (2010). Fourth National Incidence Study of Child Abuse and Neglect (NIS-4) Report to Congress.

Shaw, TV. (2006). Reentry into the foster care system after reunification. *Children and Youth Services Review, 28,* 1375-1390. http://dx.doi.org/10.1016/j.childyouth.2006.02.006

Shaw, TV. (2010). Reunification from foster care: Informing measures over time. *Children and Youth Services Review, 32(*4), 475-481.

Shaw, T. V., Bright, C. L., & Sharpe, T. L. (2015). Child welfare outcomes for youth in care as a result of parental death or parental incarceration. *Child Abuse & Neglect*, *42*, 112-120.

Simms, M.D., Dubowitz, H., & Szilagyi, M.A. (2000). Health care needs of children in the foster care system. *Pediatrics, 122*(3), e703-e709.

Snowden, J. Scott, L., & Sieracki, J. (2008). Predictors of children in foster care being adopted: A classification tree analysis. *Children and Youth Services Review, 30(*11), 1318-1327.

Steen, J. A., & Duran, L. (2013). The impact of foster care privatization on multiple placements. *Children & Youth Services Review, 35*(9), 1503-1509. doi: 10.1016/j.childyouth.2013.06.007

Steen, J. A., & Smith, K. S. (2011). Foster parent perspectives of privatization policy and the privatized system. *Children & Youth Services Review, 33*(9), 1483-1488. doi: 10.1016/j.childyouth.2011.03.007

Sullivan, A., & Child Welfare League of America, I. W. D. C. (1998). *Adoption and Privatization: An Issue Brief*.

U.S. Department of Health and Human Services, (2017a). *The AFCARS Report, Preliminary FY* 2016 estimates as of October 20, 2017. Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. Washington, DC. Retrieved from: https://library.childwelfare.gov/cwig/ws/cwmd/docs/cb_web/SearchForm

U.S. Department of Health and Human Services. (2017b) *Child Maltreatment 2015: Summary of key findings.* Washington, D.C. U.S. Department of Health and Human Services, Children's Bureau.

Warton, E.M., Parker, M.M., & Karter, A.J. (2017). How D-I-D you do that? Basic difference-in-differences models in SAS. SAS Institute, Cary, NC.

Welch, V., Stalker, K., Jones, C., & Stewart, A. (2015, May). Permanence achieved through adoption or foster care: a review of international literature regarding disabled children's experiences and outcomes. In *NNDR 13th Research Conference*.

White, O. G., Hindley, N., & Jones, D. P. (2015). Risk factors for child maltreatment recurrence: An updated systematic review. *Medicine, Science and the Law*, *55*(4), 259-277.

Zullo, R. (2006). Is Social Service Contracting Coercive, Competitive, or Collaborative? Evidence from the Case Allocation Patterns of Child Protection Services. *Administration in Social Work, 30*(3), 25-42. doi: 10.1300/J147v30n03