

IDENTIFYING HEALTH AND MENTAL HEALTH NEEDS AND FACILITATING
ACCESS TO CARE AMONG YOUTH IN FOSTER CARE

by

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ABSTRACT

KATHERINE STRATER HOGAN. Identifying health and mental health needs and facilitating access to care among youth in foster care. (Under the direction of DR. RYAN P. KILMER)

Youth placed in foster care typically confront a host of health and mental health conditions and related concerns. To address these potential health challenges early, federal legislation stipulates the need to develop case plans and coordinate the delivery of necessary health and mental health care services. As a critical step in this coordination, the American Academy of Pediatrics (AAP) recommends that comprehensive health and mental health assessments be completed within thirty days of a youth entering custody. Despite an emphasis on these assessments within federal, state, and local policies, few efforts have examined the extent to which assessments, when conducted, adhere to the best practices and guidelines set forth by advisory and regulatory bodies, and whether they translate into improved service delivery and enhanced systems functioning.

This study examines the Independent Psychological Assessments (IPAs) conducted by Teen Health Connection for youth over the age of five entering the custody of Mecklenburg County Department of Social Services (DSS)-Youth and Family Services (YFS). In addition to evaluating the degree to which the IPA practices align with best practice recommendations and guidelines, this study uses billing claims to explore the utilization of health and mental health services in the six months pre- and six months post-custody and the extent to which recommended mental health services are implemented.

Results suggest that, overall, the IPAs function in alignment with existing guidelines, including those related to the use of collateral sources of information, review of records, use of standardized measures, comprehensiveness of recommendations, and dissemination of information. Although IPAs are typically not fully complete until after the recommended thirty-day timeframe, they are available prior to important court proceedings involving the youth (i.e., adjudication and disposition hearings in which the youth and family's service plans are developed), which may be a more useful standard for these types of assessments. Billing data indicate that, within this sample, rates of mental health service utilization were high relative to those found in existing research and national samples. IPA recommendations for mental health services were associated with significant increases in the probability of subsequent service utilization, especially for outpatient mental health therapy and medication management. These results suggest that mental health diagnoses, particularly internalizing disorders (i.e., anxiety, depressive disorders, adjustment disorders, Post-Traumatic Stress and other trauma-related disorders); scores on the UCLA-PTSD Index, a measure of trauma exposure and impact; and pre-custody utilization of mental health services play significant roles in the utilization of mental health services post-custody. Factors including age, gender, race/ethnicity, placement at the time of the IPA, and previous DSS/YFS involvement were not found to be related to service utilization.

The results of this study suggest that the completion of routine psychological assessments for youth entering the custody of child welfare agencies can have positive implications for the delivery of mental health services for this population. That said, while the IPAs conducted by Teen Health Connection are related to the utilization of

mental health services, critical areas for improvement exist, including the delivery of mental health services to youth most critically in need of care, meaningful continuation of therapeutic services over time, coordination between child welfare agencies and local health and mental health systems to expedite service delivery, and ongoing monitoring and quality improvement.

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LIST OF ABBREVIATIONS

AFCARS	Adoption and Foster Care Analysis and Reporting System
BAI	Beck Anxiety Inventory
BANI	Beck Anger Inventory
BDI	Beck Depression Inventory
BDBI	Beck Disruptive Behavior Inventory
BSCI	Beck Self Concept Inventory
CBCL	Child Behavior Checklist
<i>DSM-5</i>	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
DSS/YFS	Department of Social Services – Youth and Family Services
GAL	Guardian ad Litem
IPA	Independent Psychological Assessment
NSCAW	National Survey of Child and Adolescent Wellbeing
PPSW	Permanency Planning Social Worker
PRTF	Psychiatric Residential Treatment Facility
WASI-II	Wechsler Abbreviated Scale of Intelligence, Second Edition

CHAPTER 1: INTRODUCTION

In 2014, 3,248,005 children – 122,085 of whom resided in North Carolina – were the subject of investigations for child abuse and neglect in the United States, according to the United States Department of Health and Human Services (U.S. DHHS, 2015). From these investigations, 702,208 children were found to be victims of child abuse and/or neglect across the country, with 20,966 in North Carolina. During the 2014-2015 fiscal year, 14,047 children were named in reports of suspected abuse and/or neglect in Mecklenburg County, NC alone. Of these reports, 1,143 were substantiated and required intervention, and 1,107 children and adolescents were taken into the custody of the Department of Social Services-Youth and Family Services (YFS; the child welfare division for Mecklenburg County) and placed in foster care (Council for Children's Rights, 2015). Despite the apparent high rate of child maltreatment across the U.S., it is widely recognized that these numbers are underestimates, as many cases of abuse and neglect are never reported to the police or social services (Centers for Disease Control and Prevention, 2014; Finkelhor, Turner, Ormond, & Hamby, 2013).

According to data from the Adoption and Foster Care Analysis and Reporting System of the U.S. DHHS (AFCARS; U.S. DHHS, 2015), approximately 64% of the youth in foster care across the U.S. are between the ages of 5-18. Many of these youth remain in alternative care for some time; national data suggest that approximately 37% of youth in protective custody remained in out-of-home care for two or more years, and up

to a median of five years in large urban areas such as Cook County, IL (George, Wulczyn, & Harden, 1999).

Youth placed in foster care typically confront a host of health and mental health conditions and related concerns (Center for the Study of Social Policy, 2013; Council on Foster Care, Adoption, and Kinship Care, Committee on Adolescence, & Council on Early Childhood, 2015). For many of these youth, these challenges are attributable, at least in part, to their broader family circumstances, including their experiences with maltreatment. Left untreated or improperly managed, these concerns can contribute to long-term negative health consequences for youth (Casanueva, Tueller, Smith, Dolan, & Ringeisen, 2014; Lyons & Rogers, 2004), place undue financial burden on child welfare and health services systems, and lead to additional lifelong challenges and costs as youth transition into adulthood (Pecora, 2010; Zlotnick, Tam, & Soman, 2012).

In an effort to address potential health and mental health challenges early, federal legislation, including the Fostering Connections to Success Act of 2008 (P.L. 110-351), stipulates the need to develop case plans and coordinate health and mental health care services for youth in foster care. As a critical step in this coordination, the American Academy of Pediatrics (AAP) recommends that initial health assessments occur within 72 hours of a youth entering protective custody as a means of identifying critical health needs (Council on Foster Care, Adoption, and Kinship Care et al., 2015), and that more comprehensive health and mental health assessments be completed within thirty days to identify less emergent concerns (AAP Task Force on Health Care for Children in Foster Care, 2005). These screenings and assessments are designed to improve the identification of health and physical health needs and inform the delivery of appropriate services and

supports in a coordinated and cost-effective manner. Despite emphasis on these assessments within federal, state, and local policies, few efforts have examined the extent to which assessments, when conducted, adhere to best practices and guidelines set forth by advisory and regulatory bodies, and whether they translate into enhanced systems functioning and improved service delivery for youth.

This project examines the quality and utility of mental health assessments conducted for youth placed in the custody of Mecklenburg County, NC due to child abuse and/or neglect. The Department of Social Services-Youth and Family Services (DSS/YFS) of Mecklenburg County maintains an exclusive partnership with Teen Health Connection to provide in-depth assessments for youth over the age of five when they are taken into county custody. These assessments are designed to identify youth needs and inform case planning and care coordination throughout the youths' involvement with child welfare services. This study explores the extent to which these assessments align with key practices recommended in the current literature, and examines access to mental health services after their completion. More specifically, this project examines the extent to which mental health services recommended through the assessment process are utilized by youth within six months of entering the custody of DSS/YFS. Potential differences in service utilization based on characteristics of the youth and processes involved with assessment completion are explored to better identify the factors that facilitate or inhibit service access.

1.1. Population of Interest

This work explores the needs and service utilization of youth taken into custody in Mecklenburg County, NC, and subsequently placed in alternative living arrangements.

The available literature includes varying (and occasionally conflicting) terms to describe the population of youth involved with child welfare systems. For example, in a review of the health care needs of this population, Simms, Dubowitz, and Szilagyi (2000) use the term “foster care” to refer to youth in traditional foster care placements as well as those living in kinship care placements. Similarly, Pecora (2010) uses “foster care” to refer to both family and non-family settings. In their report on child maltreatment data for the 2014-2015 fiscal year in Mecklenburg County, the Council for Children’s Rights (CFCR, 2016) uses the terms “children placed in foster care” and “children in custody in Mecklenburg County” to describe the same population of youth. For the purposes of describing the present work, the term “youth in foster care” will be used to describe the population of interest, which includes all youth taken into custody of Mecklenburg County DSS for child maltreatment and subsequently placed in alternative living arrangements, including kinship placements, traditional foster care, therapeutic foster care, or higher levels of residential care, depending on the youth’s level of need.

The U.S. child welfare system has been termed a “*de facto* public behavioral health care system” (Lyons & Rogers, 2004, p. 971), responsible for identifying and treating emotional and behavioral problems as a routine component of child protective services. Concerns over the mental health of youth, especially those in foster care, is not a new phenomenon. Jane Knitzer’s (1982) seminal publication, *Unclaimed Children*, underscored the neglect of child and adolescent mental health needs in the United States and the inadequacy of state and federal entities in meeting these needs. According to Knitzer, even then the child welfare system of the United States had become a service broker for youth with emotional and behavioral disturbances. Attributable at least in part

to Knitzer's crucial work, a wealth of research, legislation, and federal, state, and local initiatives have focused on meeting the health and mental health needs of youth, including those involved in child welfare systems and in foster care.

Although the body of research and knowledge has grown since Knitzer's 1982 publication, and new practice philosophies and methods have been established, children and adolescents involved with the U.S. child welfare system continue to experience significant challenges to their health and mental health. Substantive modifications and new mechanisms are required to improve how child welfare systems identify and respond to the needs of these vulnerable youth in order to provide adequate care for this population.

1.2. Health and Mental Health Needs of Youth in Foster Care

The National Survey of Child and Adolescent Wellbeing (NSCAW; Casanueva et al., 2014), a national representative, longitudinal survey of youth and families who have been investigated by Child Protective Services, serves as a primary means for researching needs and service utilization among youth in custody across the U.S. Data from this effort consistently point to high rates of mental health needs among youth in foster care. For instance, while individual studies vary in their estimates, almost half (42.4% - 47.9%) of all youth included in the initial two waves of the NSCAW exceeded clinical cut-off scores on the Internalizing (e.g., depressive symptoms, anxiety), Externalizing (e.g., aggression, oppositionality), or Total Problems scales of the Child Behavior Checklist (CBCL; Burns et al., 2004; Hurlburt et al., 2004). Results from the most recent wave of NSCAW data collection (wave 3; Casanueva et al., 2014) suggest slightly lower rates of behavioral or emotional problems, finding that approximately 31.0% of youth evidenced

scores in the clinical range on the Internalizing, Externalizing, or Total Problems subscales of the CBCL, the Child Depression Inventory, or the Intrusive Experiences and Dissociation subscales of the Trauma Symptoms Checklist (or similar measures for those ages eighteen to twenty). Nevertheless, this most recent wave points to a substantive need for behavioral health services among youth in foster care.

According to data from the NSCAW, such behavioral and emotional needs tend to be higher among older youth and adolescents, and among youth placed in non-kinship foster care (Burns et al., 2004). For instance, for youth ages eleven to fourteen years, estimates of clinical need increase to 65.7%, relative to 46.8% among youth ages six to ten, and 32.3% among those ages two to five. Regardless of the absolute variability across these data collection waves, or across age bands of youth, these results underscore that the population of youth in foster care evidences significant mental health needs.

Research conducted outside of the NSCAW similarly points to high prevalence rates of mental health needs. For instance, in an analysis of Medicaid claims, dosReis, Zito, Safer, and Soeken (2001) found that 57% of youth in foster care were diagnosed with at least one mental health disorder, with the most common primary diagnoses including: Attention-Deficit/Hyperactivity Disorder, major depressive disorder, and/or a developmental disorder (e.g., language disorders, learning disorders, autism spectrum disorders). According to these researchers, rates of mental health disorders were 2.2 times higher among youth in foster care than youth receiving Social Security Disability Income (SSDI), and 16 times higher than youth receiving other forms of public assistance (dosReis et al., 2001). Comorbidity is also common among youth involved with child welfare. Using a random selection of 302 youth in foster care, Zima, Bussing, Yang, and

Belin (2000) found even higher rates of mental health concerns. In their sample, 80% of youth received a psychiatric diagnosis from a county mental health clinician and, of these youth, 47% were identified as having at least one comorbid disorder.

Complicating their adjustment trajectories, exposure to trauma is a common experience among youth within the child welfare system (Dorsey et al., 2012). Although abuse and neglect are the most common potentially traumatic experiences for which youth are assessed (given the salience of these experiences for the justification of out-of-home placements), research indicates that these youth are typically exposed to a wider range of potential traumas. For example, examining rates of trauma exposure among youth in therapeutic foster care, Dorsey and colleagues (2012) found that 93% of youth had experienced at least one type of trauma as identified by foster parents, and that 48.5% of youth had experienced as many as four or more trauma types. Most commonly, youth experienced emotional abuse (85%) and exposure to domestic violence (65.4%), while relatively equal numbers of youth had experienced sexual abuse (52.7%), neglect (51.5%), and physical abuse (49.5%). Additionally, 46.8% of youth had experienced the death or incarceration of a parent, 17.7% had witnessed community violence, and 14.6% had experienced the violent death of a loved one or friend. These findings highlight the variety of potentially traumatic events to which youth entering foster care have been exposed.

While entering foster care is designed to protect youth from further harm, the process of removing a child from their home itself is considered an emotionally traumatizing event for most children (Council on Foster Care, Adoption, and Kinship Care et al., 2015). Beyond their initial removal, youth in foster care frequently experience

multiple placements and, in turn, caregivers over time. While not necessarily framed as traumatic events, placement disruption and relocation to new environments serve as additional transitions that can create inconsistency and reduce children's ability to form stable attachments (Newton, Litrownik, & Landsverk, 2000). Furthermore, frequent changes in placement are associated with increased likelihood of internalizing and externalizing behavioral problems (Newton et al., 2000), higher treatment costs (Rubin, Alessandrini, Feudtner, Mandell, Localio, & Hadley, 2004), increased utilization of emergency services (Rubin et al. 2004), and disruptions in care delivery (Mekonnen, Noonan, & Rubin, 2009).

A significant body of research has documented the effects of trauma on children and youth (e.g., National Child Traumatic Stress Network, n.d.; Shahinfar & Fox, 1997). These works suggest that exposure to chronically stressful conditions (e.g., family violence, neglect) can have a variety of deleterious effects on children, including prolonged activation of the body's stress response, disruption of normal developmental processes (e.g., emotional regulation, cognitive development), reduced focus and ability to learn in school, decreased capacity to develop trusting relationships, as well as negative effects on overall health and mental health (National Child Traumatic Stress Network, n.d.). Trauma exposure can also lead to a range of psychological disorders requiring specialized treatment, including Post-Traumatic Stress Disorder (PTSD), depression, and substance abuse (Ai, Foster, Pecora, Delaney, & Rodriguez, 2013; Center for the Study of Social Policy, 2013; Ford, 2013; Salmon & Bryant, 2002). As such, assessments conducted for youth in or entering foster care should specifically screen for

trauma and help to plan for the delivery of trauma-informed services and supports while the youth remains in alternative care (Ai et al., 2013).

In addition to these emotional and mental health concerns, youth in foster care also frequently have substantial physical health concerns that require attention. Using three years of NSCAW data, one study found that over 50% of youth in foster care had at least one special health care need, including chronic health conditions or developmental disabilities, substantially higher than the estimated 12.8% to 19.3% of youth within the general U.S. population with such needs (Ringeisen, Casanueva, Urato, & Cross, 2008). Furthermore, before their placement in foster care, these youth typically had limited access to health care services, a trend shown to continue post-placement (Council on Foster Care, Adoption, and Kinship Care et al., 2015).

1.3. Age Considerations

While considerable research has been conducted focusing on the needs of infants and toddlers in foster care (Horwitz et al., 2012; Jones Harden, 2004; Klein & Jones Harden, 2011; Osofsky, 2004), relatively less work has focused on the unique needs of and effective interventions for adolescents (Simmel, 2012), who face particular challenges to their well-being. The available literature suggests that adolescents are more likely to be placed in more restrictive, congregate care settings, including group homes and psychiatric residential treatment facilities, compared to children from other age groups, who are more likely to be placed in family-like settings, such as traditional foster care or kinship placements. Adolescents also experience more frequent disruptions and relocations in their placements and are less likely to achieve permanency (Wulczyn et al., 2007). Furthermore, re-entry into the child welfare system following reunification with

families of origin tends to be highest among adolescents aged 13-17 years (Wulczyn et al., 2007). These issues and the challenges faced by older youth highlight the critical need for services and supports to specifically address their transition to foster care, their interactions with their families of origin and foster families, and for the oldest segment of this population, their ability to live and care for themselves independently. Any assessments of their health, mental health, or psychosocial needs must take into account their unique needs and outline recommendations that support their transition to adulthood.

Youth over the age of sixteen represent roughly 16% of the 415,129 children in foster care across the United States (AFCARS, 2015), and these older adolescents in foster care (i.e., ages 16 and up), typically referred to as “transition age youth,” require special consideration. Older youth who have not yet achieved permanency in their placements are likely to be “emancipated” from care, meaning they “age out” of the foster care system without achieving reunification or adoption (Simmel, 2012). States establish their own policies around the age at which youth age out of care, varying between 18 and 21 years old. The available data indicate that more than 22,300 youth “aged out” of foster care in 2014 (AFCARS, 2015).

Historically, these older youth experience significant barriers to accessing care after leaving the foster care system (English, Moreale, & Larsen, 2003). While the extension of Medicaid until the age of 26 for youth exiting the foster care system, authorized through the passing of the Patient Protection and Affordable Care Act of 2010 (Lehmann, Guyer, & Lewandowski, 2012), represents an important step, it does not on its own meet the unique health needs of older youth. Youth who have aged out of foster care

show disproportionately higher rates of serious physical and behavioral problems, including chronic medical problems, moderate to severe mental health problems, substance dependence, and a range of challenges such as sexual risk behaviors and early pregnancy, homelessness, financial instability, unemployment, or involvement in the criminal justice system (see, e.g., Courtney & Dworsky, 2006; Emam & Golden, 2014; English, Stinnett, & Dunn-Georgiou, 2006). Ensuring access to and utilization of appropriate health, mental health, and social services is paramount for youth transitioning out of care, and assessments and transition planning must take into account and help plan for the ongoing health concerns and needs of this population.

The existing literature suggests that, left unaddressed, the problems experienced by youth in foster care, and those faced by older adolescents aging out of care, continue long into adulthood (Mekonnen, Noonan, & Rubin, 2005; Pecora, Jensen, Romanelli, Jackson, & Ortiz, 2009; Zlotnick, Tam, & Soman, 2012). Insufficient identification of physical and mental health concerns and poor access to health and social services during or after foster care involvement can have a negative influence on adult outcomes (Pecora et al., 2009; Zlotnick et al., 2012). Moreover, adults with a history of foster care involvement, especially those age 35 and older, are more likely to experience mental and physical health problems and are more likely to receive social security disability income (SSDI) due to their inability to work, than those without foster care histories (Zlotnick et al., 2012).

In that vein, results of the 2005 Northwest Alumni Study (a follow-up of adults who had been in foster care as youth, cited by Mekonnen et al., 2005) indicated that approximately 54% of foster care alumni reported having at least one major mental health

diagnosis, more than double the rate of 22% within the general population. Foster care alumni most commonly reported diagnoses of anxiety disorders (43%), post-traumatic stress disorder (25%), depression (20%), and substance abuse (12%). In addition, recent work suggests that co-morbid mental health diagnoses are more common among foster care alumni with histories of childhood behavioral disorders, those who were maltreated while in foster care, and those who perceived less support from foster parents (Foster et al., 2015).

1.4. Service Utilization among Youth in Foster Care

Rates of emotional, behavioral, physical, social, and other related problems among current and former foster care youth highlight the critical need for the delivery of high quality mental health services as youth become involved with child welfare systems (e.g., Pecora, 2010). Upon entering foster care, youth typically receive more health and mental health services for chronic physical conditions, psychiatric conditions, or developmental disorders than comparable peers not in foster care (Bilaver, Jaudes, Koepke, & Goerge, 1999). Reinforcing this pattern of differences, dosReis and colleagues (2001) compared the service utilization patterns of youth enrolled in a mid-Atlantic State Medicaid program and found that youth in foster care were far more likely to receive mental health services (87%) than youth receiving SSDI (31%) or other forms of aid (7%).

Despite the fact that youth in foster care are receiving higher levels of services than their same-aged peers, service systems still do not adequately meet the needs of all youth who become involved with child welfare (Burns et al., 2004; Horwitz, 2012; Hurlburt et al., 2004). Despite high levels of clinical needs found among youth in foster

care, researchers find that much smaller proportions (15.8% - 28.3%) of all youth in foster care receive a specialty mental health service within one year of the child welfare investigation (Burns et al., 2004; Hurlburt et al., 2004), and only one-fourth of those with evidence of strong clinical need receive a mental health service (Burns et al., 2004). According to survey data from the first wave of NSCAW collection, outpatient care was the most commonly utilized service among youth in foster care (15.1% utilization rate), and psychiatric hospitalization the least common (3.1%; Burns et al., 2004). Furthermore, examining service access alone is likely not sufficient; existing research suggests that, even among youth who receive treatment, the number of actual treatment sessions is low (Leslie et al., 2000) and is likely to decline over time as youth remain in care (Unrau & Wells, 2005). These patterns suggest a high need for, and striking underutilization of, mental health services (Pecora et al., 2009).

Although the available research consistently suggests that, overall, youth in foster care are not provided adequate services and supports to meet their mental health needs, when services are received, utilization has been found to be predicted by several factors. For example, levels of need, indicated by scores in the clinical ranges on standardized measures of functioning such as the CBCL, are significant predictors of service utilization (Burns et al., 2004, Hurlburt et al., 2004). Beyond level of need, research consistently suggests that older youth (Burns et al., 2004, Hurlburt et al., 2004) and youth who reside in out-of-home placements (i.e., in foster or formal kinship care arrangements or group home or residential programs) are more likely to receive specialty mental health services, even after accounting for levels of clinical need (Burns et al., 2004; Horwitz, 2012; Hurlburt et al., 2004). Researchers have also concluded that receipt of services

through other sectors, including school-based services and primary health care, can drive increases in the utilization of mental health services, as needs come to the attention of child-serving professionals (Horwitz et al., 2012). Those exploring racial disparities in service utilization also find consistently lower rates of utilization among non-white children, suggesting that minority families, who are overrepresented within the child welfare system, are less likely to receive needed mental health services (Horwitz, 2012; Hurlburt et al., 2004). In light of these findings pointing to variability in access and involvement, it is important to underscore that, despite these predictors, youth of all ages and races, and in all types of placement settings, continue to receive insufficient services and supports to adequately address their needs. Overall, substantial improvement efforts are needed to facilitate connections between youth in foster care and well-targeted, high quality mental and behavioral health services.

Notwithstanding this documented underutilization of mental health services, research indicates that youth in foster care show relatively high rates of psychotropic medication use relative to the general population; however, estimates of the actual prevalence of medication use vary. The NSCAW found that in 2012, 13.6% of youth in foster care were using psychotropic medications (Casanueva et al., 2014). Examining Medicaid billing data for a random sample of 472 youth in foster care (aged 0-19 years) who had been prescribed at least one psychotropic medication, Zito et al. (2008) found that on average, youth were prescribed 2.55 medications, which often represented more than one class of medication. Moreover, over 41% of youth on medication in their sample received three or more classes of psychotropic medications concomitantly, most commonly for diagnoses of depression, ADHD, and adjustment/anxiety disorders (Zito et

al., 2008). A more recent comprehensive study of psychotropic medication patterns examined 274,490 Medicaid-insured youth, identifying maltreatment through clinical diagnoses and codes included in billing data by their providers. Compared to non-maltreated youth, those with maltreatment histories were significantly more likely to be prescribed any psychotropic medication (13.5% vs. 28.9%), antipsychotic medications (3.4% vs. 14.1%), stimulant medications (7.8% vs. 15.8%), and antidepressant medications (3.4% vs. 12.1%; Burcu, Zito, Safer, & Ibe, 2014).

Rates of psychotropic medication use are especially high in child welfare populations, seemingly reflecting an effort to address high rates of youths' mental health challenges. At least in some cases, these medications likely achieve their therapeutic effects. However, the multimodal approaches (i.e., multiple coordinated methods of treatment including therapy, medications, and, in some cases education) that are recommended to address mental health concerns (Burcu et al., 2014) are often difficult to accomplish successfully for youth involved with child welfare systems. The relatively high rates of psychotropic medication use, in conjunction with relatively low utilization rates of mental health services (relative to documented needs), can largely be attributed to insufficient resources dedicated towards proper assessment and a decreased use of outpatient therapy and evidence-based treatments (Olfson, Blanco, Liu, Moreno, & Laje, 2006) as well as, more broadly, fragmented systems of care (Mekonnen, Noonan, & Rubin, 2005). Critically, many youth in foster care do not receive the mental health services they require because many of these children are not identified as in need of care by the child welfare system and, subsequently, are not offered support through local mental health systems.

1.5. Child Welfare Policy around Health and Mental Health

There is wide agreement that, for all youth who experience abuse or neglect, it is of the utmost importance to identify their needs early, connect them with appropriate mental health service providers and supports, and tailor services to the youth's particular needs. In support of these steps, collaboration between child welfare and mental health systems is crucial (Center for the Study of Social Policy, 2013). For decades, federal policy has aimed to improve the lives and experiences of youth removed from their homes due to child maltreatment and subsequently placed in foster care or alternative custody arrangements. More recently, child welfare systems have moved beyond providing for the immediate safety of youth and are increasingly required to adopt the role of health and human service providers and navigators. Many federal policies and funding initiatives passed in recent decades have supported and encouraged this shift, putting into direct focus the physical and mental health needs of this vulnerable population of youth, and placing these needs under the direct jurisdiction of child welfare systems. For example, the Systems of Care funding initiative through the Children's Bureau was designed to have a direct impact on the lives of youth in foster care with severe emotional and behavioral health concerns by providing support for improved care coordination and service delivery (U.S. DHHS, 2010). Nevertheless, despite this shift in policy, scope, and function for child welfare, as well as the ongoing availability of flexible federal funding to support youth in foster care, many states continue to struggle to adequately meet these youths' service needs (U.S. Government Accountability Office, 2013). Mandated health and mental health assessments and structures supporting access to services are promising solutions for better serving these youth and managing the

delivery of relevant, comprehensive health services (Ai et al., 2013; Allen, 2010; Kerns et al., 2014).

In an effort to address the fragmented and insufficient mental health care provided to youth in foster care, the Fostering Connections to Success and Increasing Adoptions Act of 2008 (P.L. 110-351) required state child welfare systems to plan for the oversight and coordination of health and mental health services and psychotropic medications. Oversight of services was defined to include timely and regular medical visits with primary providers, schedules and timelines for health screenings and assessments and appropriate follow up services, shared health information, monitoring of psychotropic medications and polypharmacy (i.e., the simultaneous use of multiple medications to address one or more conditions), and continuity of care through the medical home model (Council on Foster Care, Adoption, and Kinship Care et al., 2015). Later, the Child and Family Services Improvement and Innovation Act of 2011 (P.L. 112-34) called for additional oversight of the health, mental health, and developmental needs of youth in foster care, including the assessment and treatment of emotional trauma and protocols around the appropriate use and monitoring of psychotropic medications.

In most states, youth in custody are categorically eligible for Medicaid, and thus are afforded health-related screenings and assessments through the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) benefit (Allen, 2010), introduced in 1967. The EPSDT benefit provides for comprehensive and preventive health services for youth enrolled in Medicaid and includes reimbursement for the basic screening of physical, mental, developmental, hearing, dental, and vision problems as well as follow-up diagnostic and treatment services. Via this provision, youth can receive regular,

developmentally appropriate screening throughout their involvement in foster care to assess for existing or developing concerns.

1.6. Best Practices and Guidelines for Mental Health Assessment and Treatment

In accordance with policy mandates, several advisory groups and professional associations have established guidelines and best practices focusing on the completion of health and mental health screenings as well as more comprehensive assessments of youth in foster care. For instance, according to the American Academy of Pediatrics, the Council on Accreditation (Allen, 2010) and guidelines established at the 2007 Best Practices for Mental Health in Child Welfare Consensus Conference (Hunter Romanelli et al., 2009), initial screenings for emergent risks and acute physical and mental health needs should occur within 72 hours after a child is taken into custody. Additional assessments evaluating the need for mental health or substance abuse services, academic supports, developmental therapies, and dental health services, and that examine functioning within relevant settings such as at school, within peer groups, at home, and in the community, are recommended within 30 days of a youth being placed in foster care (Allen, 2010; Hunter Romanelli et al., 2009).

While early screeners are critical to assess for acute needs and risks warranting immediate attention, later, more in-depth assessments allow youth to adjust to new living situations and arrangements and can provide a more complete picture of the youth's needs and functioning (Council on Foster Care, Adoption, and Kinship Care et al., 2015). These more comprehensive assessment protocols are recommended to examine more fully particular symptoms; establish a diagnosis; assess for psychosocial risk factors, trauma, and adaptive functioning; and link children to appropriate mental health services

(Hunter Romanelli et al., 2009). This protocol of screening followed by in-depth assessment is designed to improve early identification of physical and mental health needs and inform the delivery of needed services and supports in a coordinated and cost-effective manner.

To facilitate the delivery of needed services and supports once the youth's needs are identified, the results of assessments should be shared with caregivers and professionals, as well as integrated into the youth's health, social service, or permanency plan (Council on Foster Care, Adoption, and Kinship Care et al., 2015). Well-conducted, comprehensive assessments should accomplish more than simply facilitating referrals for mental health services; when disseminated properly, they can reduce duplication of information gathering and provide clinically meaningful baseline information about current emotional and behavioral needs for mental health service providers (Kerns et al., 2014). Furthermore, whenever possible, foster parents, birth parents, and adoptive parents should receive information about the health and mental health concerns of the youth in their care and participate as appropriate in treatment planning (Council on Foster Care, Adoption, and Kinship Care et al., 2015).

In addition to guidelines around the timing of these screenings and assessments, recommendations exist pertaining to the processes used to conduct them. Because, in many cases, reunification with families of origin is a goal of the case plan for youth in foster care, it is recommended that families be included in mental health assessments and treatment delivery whenever possible and appropriate; doing so increases the likelihood that issues arising from family dynamics can be addressed, and family members are aware of the youth's needs and ways to support them (Hunter Romanelli et al., 2009).

Assessment procedures should also utilize evidence-based screening instruments to reduce bias, ensure accuracy, and improve standardization of the assessments performed (Hunter Romanelli et al., 2009). Moreover, according to guidelines from the American Psychological Association (APA, 2013), clinicians conducting psychological assessments should utilize multiple methods of gathering data, including the review of case files, records, and reports from child protection agencies, health care providers, law enforcement, schools, and mental health providers, among others. Clinicians should try to interview or observe parents or families of origin and conduct interviews with extended family members whenever possible. In light of the high rate of trauma exposure among youth in foster care, it is recommended that these assessments routinely screen for trauma exposure and related distress or impairment (Council on Foster Care, Adoption, and Kinship Care et al., 2015).

Gathering extensive health and psychosocial information – via existing records, interviews with key collateral sources (e.g., teachers, caregivers, professional providers), and direct assessment of the youth – is a necessary component of these assessments to ensure that concerns are properly identified and that appropriate and needed health and mental health services are provided for youth. Child welfare caseworkers are ultimately responsible for the gathering of this health information but, in actual practice, the level of coordination and systems navigation that is needed to acquire these records is difficult for even the most highly trained caseworkers to accomplish. Health care providers or managers are often better suited to coordinate this record gathering process and to contact schools, health and mental health care providers, health departments, early intervention programs, and other relevant entities to obtain critical information about youth and family

functioning. This information should be included in assessment protocols, added to a youth's health records, and disseminated appropriately to professionals and caregivers involved with the youth, depending on the nature of their involvement and responsibilities for the delivery of care (Council on Foster Care, Adoption, and Kinship Care et al., 2015).

Guidelines established by the 2007 Best Practices for Mental Health in Child Welfare Consensus Conference (Hunter Romanelli et al., 2009) outlining the delivery of mental health assessments also outline the delivery of services, promoting evidence-based interventions, better known as evidence-based treatments (EBTs), among child welfare involved youth. Despite emphasis on EBTs, including parent-child interaction therapy, child-parent psychotherapy, trauma-focused cognitive behavioral therapy, and attachment-, self-regulation-, and competency-focused models, these therapies are not widely accessible for child welfare involved youth due to the limited availability of providers and insurance- or reimbursement-related barriers (Council on Foster Care, Adoption, and Kinship Care et al., 2015). It is also recommended that interventions and treatment plans are individualized to the particular needs of youth and incorporate strength-based strategies, while actively involving current caregivers and families of origin whenever possible (Hunter Romanelli et al., 2009).

To that end, effective treatment interventions must also be supplemented by other supports and activities that can foster well-being, such as involvement in social events, sports or the arts, hobbies, and clubs (Pecora, 2010). Clinical professionals developing the service recommendations for youth in foster care must go beyond formal mental health treatment modalities and include community-based informal resources and

supports (e.g., social and extracurricular activities, educational supports). In fact, continuation of involvement in activities and extracurricular programs among youth in foster care has been found to relate positively to youth's adaptation to and experience with foster care (Affronti, Rittner, & Jones, 2015; Fong, Schwab, & Armour, 2006). In alignment with such findings, recent federal legislation, the Preventing Sex Trafficking and Strengthening Families Act of 2014 (P.L. 113-183) was passed to promote normalcy for youth in foster care through participation in age-appropriate experiences such as extracurricular and social activities, allowing caregivers and foster parents to use reasonable judgment to make daily decisions around these activities, thus improving the likelihood that youth will participate in such experiences. In order to be most effective, it is critical that mental health assessments support engagement with informal community resources, such as existing or new extracurricular and other supportive programs, in addition to promoting effective treatments and EBTs.

1.7. Implementation of Assessment Programs for Youth in Foster Care

Variability in implementation across states. Although a variety of guidelines and best practices have been established around the delivery of health and mental health assessments for youth in foster care, substantial variation continues to exist in how these assessments are carried out across different states and counties in the U.S. (Allen, 2010; Mackie et al., 2011; Raghavan, Inoue, Ettner, Hamilton, & Landsverk, 2010). A 50-state survey conducted by the Center for Health Care Strategies in 2010 (Allen, 2010) examined state requirements for physical, oral, and behavioral health screenings and assessments for youth in foster care. Results of the survey indicate that almost all (98%) of the forty-seven responding states required initial physical health screenings, 81%

required initial behavioral health screenings, and 65% of states required screenings across all three health domains. Only 23% of states required physical health screenings within three days of a youth's removal from their home, consistent with recommendations from the American Academy of Pediatrics (AAP) and the Council on Accreditation (COA; Allen, 2010).

According to this same survey, more in-depth assessment in at least one domain was required by only 63% of states – 51% required in-depth physical health assessments, and 57% required in-depth behavioral health assessments. Examining policies and practice guidelines through multi-state interviews, document review, and U.S. Census data, Mackie et al. (2011) found even lower rates of endorsement of mental health assessments across states. Specifically, these researchers found that 47.9% of states endorsed mental health evaluations in their child welfare policies and guidelines. Among states requiring behavioral health assessments, the majority specified a particular timeframe for completion, most commonly between 30 and 60 days after the removal of the youth from the home (Mackie et al., 2011), while physical health exams were most commonly required within 30 days by the states requiring these assessments (Allen, 2010). In a similar vein, only 52.7% of states maintained policies and guidelines for the oversight of psychotropic medications for youth in the child welfare system (Mackie et al., 2011). These results point to a disconnect among recommendations, guidelines, and policy from what occurs in actual practice. This notion is further bolstered by a probability study (Raghavan et al., 2010) finding that, despite standards around the timeline for delivery of mental health assessments, only a third (34.5%) of youth in foster care were actually assessed in a manner that complied with these standards. Further

complicating the matter, many states maintain their own standards around the completion of in-depth assessments, with timelines varying from five days to six months (Allen, 2010). In North Carolina, where the current project takes place, initial physical, mental, and oral health screenings are expected to occur within the first seven days of a youth entering foster care, and in-depth assessments are expected to occur within fourteen days (Allen, 2010).

Quality of assessment procedures. Currently, little research exists on the effectiveness of different approaches to mental health assessment for youth in foster care. The California Evidence-Based Clearinghouse for Child Welfare (n.d.), a primary resource for child welfare professionals outlining best practice, research-based interventions for youth in custody, provides minimal guidance related to screening or assessment procedures around mental health. Similarly, although the American Psychological Association (APA, 2013) puts forth guidelines around preparing for and conducting mental health assessments for youth in foster care, these guidelines provide limited information about the required components and practical applications of these assessments, focusing more on their ethical considerations. In turn, considerable variety exists across states, agencies, and individual child welfare systems regarding the required components of assessments and mental health evaluations (Mackie et al., 2011).

One in-depth effort by Budd and colleagues (2002) that assessed the key features of psychological assessments completed for youth involved in child protection cases in Cook County, IL warrants specific mention. Their empirical analysis revealed noteworthy variability in the assessments themselves – including in the degree to which assessments involved collateral sources of background information and record review; used

standardized measures, observations, and assessments in natural environments; described findings such as personal attributes (i.e., strengths and weaknesses); integrated information about current relationships; and incorporated descriptions of primary concerns – as well as in their use of specific recommendations across a variety of domains individualized to the particular youth and community (Budd, Felix, Poindexter, Naik-Polan, & Sloss, 2002). In this review, the three most common recommendations made for youth included therapy or counseling (82.1%), educational services (62.7%), and recommendations related to case dispositions (i.e., decisions around placement, visitation, reunification, or adoption; 56.0%). Notably, recommendations for medical or physical health services (20.9%) and social or activity enhancement (17.9%) were low in light of the importance of these domains for youth in foster care. Of the recommendations involving therapy or counseling, 91% of them were considered specific to the child in that they referenced a specific kind of therapy or a particular issue that should be addressed, or otherwise specific conditions of the therapy that should be provided.

While screening and assessment protocols can often sufficiently identify the need for mental health or supportive services, these assessments do not guarantee that a youth's needs will be met or that needed services and supports will be provided. To that end, although well-conducted assessments (with well-targeted recommendations) can help to improve coordination and collaboration between child welfare and mental health systems (Hurlburt et al., 2004), the available literature suggests that not all youth are adequately served when assessments detect issues needing treatment or additional supports. That is, even when sound assessments are available, caseworkers may experience difficulty applying the results to case planning, identifying where or how to

access recommended services locally, and communicating needed information to mental health providers (Kerns et al., 2014). The results from the present work are intended to shed light on the degree to which an assessment program can facilitate access to services for youth based on their needs and the particular recommendations of the assessment, as well as the potential gaps and challenges in the delivery of services.

Collaboration across systems. To implement models of assessment and treatment delivery promoted through federal legislation and advocacy groups, collaboration between child welfare and mental health systems is crucial (Hunter Romanelli et al., 2009). Child welfare agencies are increasingly held responsible for not only the safety of children and preservation of families, but for the well-being of children and their families as well. Ensuring the well-being of youth in foster care often requires services and programs delivered by agencies outside of the child welfare system, including health and mental health, developmental supports and early intervention, and education.

Substantial cross-system barriers exist to providing needed services for youth in foster care and their families, and to fostering effective collaboration among youth and family serving systems. These challenges to effective collaboration include the “silo-ed” delivery of services by different child-serving systems (Lyons & Rogers, 2004), restricted funding mechanisms, and difficulty presenting as a unified team during service delivery (Blakey, 2014). The existing divisions in the delivery of and responsibilities for relevant services and supports often lead to “finger pointing” and lack of shared accountability (Lyons & Rogers, 2004). There is a tendency to further take sides and deepen divisions

when services from mental health and child welfare systems are not adequately provided (Blakey, 2014).

Obstacles to coordinated service delivery include the fact that the goals for those working with youth and/or families in the mental health and child welfare systems often do not align (Blakey, 2014), and these systems each evidence a noteworthy lack of uniform methods for monitoring the quality or outcomes of the services and supports that are provided. Basic collaborative strategies are not employed consistently within and across service systems and, not surprisingly, insufficient communication and limited information sharing between those working in the child welfare and mental health systems can substantially inhibit the coordination of care, especially for youth and families who present with significant challenges (Blakey, 2014; Kerns et al., 2014). Finally, funds are often not available to develop and sustain mechanisms that match the needs of youth with appropriate services and treatments, or to increase availability of accessible community-based services, resulting in the overutilization of costly higher-level services and an absence of “step-down” processes to re-integrate youth after they transition from more structured treatment or rehabilitation settings (Lyons & Rogers, 2004).

This lack of collaboration and communication is a salient issue, and several factors have been identified that serve as barriers to communication and knowledge sharing across child-serving systems working with child welfare agencies (Alan, Hyde, & Leslie, 2012; Blakey, 2014; Kerns et al., 2014). For instance, there is clear variability between child welfare and early intervention or treatment systems in their values, priorities, and overall orientation to families; while intervention programs are frequently

voluntary and family-driven, child welfare tends to be viewed as mandatory, investigation-oriented, and adversarial (Alan et al., 2012). Additionally, child welfare agencies face considerable time pressures related to legal requirements and the need to find suitable placements when a child enters custody. In turn, these agencies must often take immediate action to put into place interventions for the youth and/or family due to state and federal mandates, while other child-serving systems, including early intervention, specialized treatment, and mental health programs, are frequently slowed by service authorization and information sharing delays (Alan et al., 2012). The sometimes contradictory requirements, goals, and timelines for child welfare and other systems can strain working relationships between social workers and service providers and impede the development of inter-organizational partnerships. In addition, concerns over a youth and family's right to confidentiality can impede and delay the sharing of critical information that can inform service and treatment planning as well as impact service eligibility (Alan et al., 2012; Kerns et al., 2014).

Federally-funded initiatives and federal policy such as the Fostering Connections to Success and Increasing Adoptions Act of 2008 (P. L. 110-351) have led to substantial modifications of the service requirements for youth in foster care and were designed to support more collaborative relationships between child welfare and mental health systems through the shared delivery and oversight of care. However, relatively few studies have assessed whether these arrangements have led to actual changes in service access and utilization. In an effort to examine this type of partnership between child welfare agencies and mental health systems, Bai, Wells, and Hillemeier (2009) measured indicators of "interorganizational relationships" – defined in their study as including joint resource

allocation, staff cross-trainings, interagency agreements and memoranda of understanding, joint policy formulation for service delivery, and information sharing, among other types of linkages – through data available from the NSCAW. These authors found that, for each additional type of approach to coordination between child welfare agencies and mental health providers, the odds of youth receiving mental health services increased by 4%, as did the probability that youth exhibited improved emotional and behavioral functioning as indicated by the CBCL.

While these findings are promising, they shed little light on the efficacy of particular mechanisms designed to increase collaborative linkages. Among these are mental health assessments, which are thought to play a pivotal role in linking youth involved with child welfare systems to mental health providers. To better understand the impacts of these policies around service oversight and further enhance how these systems function, additional information is needed regarding how mechanisms such as mental health assessments translate into services and associated outcomes for youth and families over time.

To date, although comprehensive assessments are recommended widely, minimal research has directly examined whether these assessments result in individualized, cost-effective service arrays for youth, or whether they ultimately lead to improved, long-term outcomes. As a means of examining service utilization and outcomes, Brownell and Jutte (2013) suggest linking administrative records across various child- and family-serving systems. However, in most states, data from diverse child welfare services are maintained in separate databases (e.g., reporting systems for child abuse, out-of-home care, adoption, service utilization, and Medicaid databases). In view of the present work's context and

goals, this study links information available from a program providing comprehensive psychological assessments for youth entering the custody of Mecklenburg County DSS/YFS to billable service claims available through local health and mental health systems to explore the role of these assessments in the delivery of health and mental health care services for these youth.

1.8. Guiding Theoretical Frameworks

Despite the substantial research base documenting the needs of youth in foster care, theoretical frameworks have rarely been applied directly to the work of child welfare agencies to guide the development and selection of strategies for intervention, support, and the delivery of services (Van Wert, Mishna, & Malti, 2016). To date, the use of theoretical models, including an organizational-developmental framework (Flynn, Cicchetti, & Rogosch, 2014; Kim-Spoon, Cicchetti, & Rogosch, 2013; Sroufe, 2005) and attachment and social rank theories (Sloman & Taylor, 2016), to explore the impact of child maltreatment on self-worth, relationship quality, symptomatology, and psychopathology, has contributed to understanding of how maltreatment becomes associated with behavioral or mental health problems and what effective strategies for intervention might look like (e.g., Cicchetti, Rogosch, & Toth, 2006). Additional applications of theory to the larger child welfare system can be critical when considering and addressing the systemic issues that impact the ability of child welfare agencies and service providers to meet the complex needs of youth and families (Van Wert et al., 2016).

The ecological model (Bronfenbrenner, 1977, 1994; Bronfenbrenner & Morris, 2006) provides a useful lens for understanding how the causes of maltreatment are

ecologically nested, as are the factors and conditions that influence individual development and adaptation after the experience of maltreatment (e.g., Belsky, 1993). According to this model, physical, emotional, and social development, as well as individual adjustment and adaptation, are influenced by interactions among diverse proximal and distal factors within an individual's environment, including family, peer, school, neighborhood, and community contexts. Thus, maltreatment is the result of potential risk factors interacting within a youth and family's various environments, and a youth's reactions and responses in the aftermath of maltreatment are similarly influenced by their own and their family's contexts (Belsky, 1993; Tabone et al., 2011).

In the context of maltreatment, multiple frameworks (Cicchetti, & Rogosch, 2014; Sloman & Taylor, 2016; Van Wert et al., 2016) have been used to conceptualize the psychological and social processes that contribute to negative emotional and behavioral consequences of abuse and neglect. The ecological model provides a framework for understanding the linkages between the availability, or lack thereof, of resources and supports across the youth and family's environmental contexts and an array of child outcomes (Tabone et al., 2011). To successfully address youth and family needs, a range of strategies and interventions, spanning across multiple contexts, is often required; the ecological model underscores that the delivery of services can be most effective when multiple ecological levels are targeted (Jenson & Fraser, 2006).

It is important to note that while there may be a tendency for researchers, or stakeholders, to focus specifically on the child and/or the child's family context, child welfare workers also operate in their own ecologies, and their ability to impact multiple levels of a child's environment and provide effective services depends greatly on not only

their own skills, but on the management, policies, resources, funding structures, collaborative partnerships, and larger legal context within which they and child welfare agency functions (Baumann, Dalgleish, Fluke, & Kern, 2011). Child welfare workers can help facilitate access to services and supports that can address the complex and multidimensional needs of youth to the extent that their own ecological contexts, and the structures and resources available to them within those contexts, provide them with the capacity to engage effective, needed interventions (Van Wert et al., 2016).

CHAPTER 2: LOCAL CONTEXT – MECKLENBURG COUNTY, NC

Within Mecklenburg County, NC, as in other counties and states across the U.S., youth entering foster care evidence a variety of a significant health, mental health, and psychosocial needs. To better identify youth needs and facilitate timely access to appropriate services, Teen Health Connection, through the state-mandated work of the Mecklenburg County Child Fatality Prevention and Protection Team, was selected to provide service-independent assessments for youth entering the custody of Mecklenburg County. These assessments, termed Independent Psychological Assessments (IPAs), were established as a routine process for youth entering custody through a partnership among Teen Health Connection, Mecklenburg County’s Behavioral Health Division, the Department of Social Services-Youth and Family Services (DSS/YFS), and the Mecklenburg County Juvenile District Court. The IPA program is supported by a unique blend of funding, including county contracts, grant dollars, and billable services; thus, the IPA process and completion of the report are not restricted in duration or scope by billing parameters or service definitions.

These assessments are considered “service independent” in that Teen Health Connection does not provide any of the recommended mental health services, reducing potential bias and self-referrals for services. Furthermore, the IPA recommendations do not specify potential providers of billable mental health services; rather, recommendations indicate the specific services that would most benefit the youth

regardless of the service offerings of local providers. While not eligible for mental health services at Teen Health Connection, youth in foster care can continue to receive primary physical health care through Teen Health Connection's ambulatory medical services.

Teen Health Connection has provided IPAs (formally known as Comprehensive Clinical Assessments) since September of 2011 for youth in the custody of DSS/YFS. Originally these assessments were conducted for youth over the age of 11, reflecting the age parameters of the Teen Health Connection patient population. However, the assessment program was expanded in August of 2012 to include the provision of assessments for all youth ages 5-18 years to address the needs of the high proportion of younger youth entering custody. According to AFCARS data available from the U.S. Department of Health and Human Services, youth aged 5-18 constitute roughly 64% of all youth in foster care (U.S. DHHS, 2015); similar data are not available regarding the proportion of youth within this age range in who are in the custody of Mecklenburg County's child welfare system.

The primary purpose of the IPA process is to conduct mental health assessments for youth in the custody of DSS/YFS and develop service recommendations based on the unique needs and best interests of the youth. Teen Health Connection receives automated notifications once youth are taken into custody. To initiate the IPA process, court orders authorizing the completion of the IPA are typically signed at the Preliminary Protective Hearing, held five to seven days after a youth enters custody, unless parental consent to treatment was already obtained.

The IPAs include:

1. Extensive review of existing records available for the youth and his/her family, including academic, medical, legal, and mental health records;
2. Clinical interview with the youth, conducted by a licensed, doctoral-level psychologist;
3. Collateral interviews with the youth's biological or adoptive parents, foster parents, siblings, social workers with DSS/YFS, the Guardian Ad Litem (GAL), therapists, and other persons of significance, conducted by the psychologist responsible for assessing the youth;
4. Completion of self-report or psychologist-administered standardized measures, including the Beck Youth Inventories, the UCLA- PTSD Reaction Index, and the Wechsler Abbreviated Scale of Intelligence (WASI-II), as well as additional assessment procedures such as sentence completion and/or drawing tasks, to assess the youth's behavioral, emotional, and cognitive functioning and exposure to traumatic events;
5. A final narrative report, summarizing background information, mental health diagnoses using the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, clinical assessments of functioning, and comprehensive service recommendations specific to the needs of the youth;
6. A debriefing session, during which the psychologist conducting the assessment reviews and explains the information in the report with the youth, the legal guardian, and other supports for the youth or decision makers regarding his or her care in attendance; and

7. Ongoing availability of consultation (as requested, on a case-by-case basis) from the psychologist conducting the IPA, related to treatment decisions, case plans, and court processes.

Teen Health Connection's protocol is to complete the IPA prior to the youth's first adjudication hearing so that needed information can be available to inform the work of professionals and the service-related decisions and recommendations of the court.

Adjudication hearings are held to determine whether sufficient evidence exists to keep the youth in custody, and they are intended to occur within sixty days after a youth enters custody (however, in Mecklenburg County, they have occurred up to three months after a youth has entered custody due to court scheduling and restrictions). These hearings are often combined with the disposition hearing, used to develop a court-ordered service plan for the youth and family. Assessments are not designed to be used as evidence of maltreatment, but rather to address the health, mental health, and psychosocial needs of the youth.

IPA reports are provided directly to the permanency planning social workers (PPSW) responsible for the youth, the GAL assigned to the case, medical professionals providing physical health care, and representatives from the local managed care organization who can support billing authorizations and access to recommended mental health services. PPSWs are expected to distribute a copy of the full report to District Court Juvenile Judges by attaching it to their court summary prior to the youth's adjudication hearing, and to mental health professionals who are responsible for providing care to the youth. The PPSW is also expected to share relevant information with foster parents or kinship care providers through a summary document provided by

the psychologist conducting the assessment; this document consists of the integrative summary, mental health diagnoses, and recommendations from the IPA report.

Information is expected to be shared by the PPSW as needed with members of the youth's multidisciplinary care team (i.e., Child and Family Team), as well as school personnel and special education staff; however, a full copy of the report is typically not provided to all professionals involved in care. This sharing of information is designed to inform the Court Judges; provide needed information to child- and family-serving professionals, caregivers (i.e., foster parents or caregivers within kinship placements), and family members; and inform the decisions of the care team working with the youth and family regarding the delivery of services and supports.

CHAPTER 3: PRIMARY AIMS AND RESEARCH QUESTIONS

This work was guided by two primary aims and three multicomponent research questions. Due to the exploratory and descriptive nature of the aims and research questions, specific hypotheses and detailed plans of analysis were not proposed.

3.1. Aim 1: Adherence to Guidelines and Best Practices

The project's first aim was to explore the IPAs conducted by Teen Health Connection, the processes for their completion, and their adherence to guidelines established by the American Academy of Pediatrics (2005), the Best Practices for Mental Health in Child Welfare Consensus Conference (Hunter Romanelli et al., 2009), the Council on Accreditation (Allen, 2010), the Council on Foster Care, Adoption, and Kinship Care et al. (2015), and the American Psychological Association (2013). Related to this aim, this project explored the following research questions:

Research question 1. Are the IPAs at Teen Health Connection completed in a manner that is consistent with current guidelines, including:

1. Timelines for completion (i.e., within 30 days of a youth entering custody)?
2. Methods of data collection (i.e., the use of multiple sources of data, including health and school records, collateral interviews, and standardized assessments)?
3. Comprehensiveness of recommendations (i.e., addressing a variety of domains)?

4. Dissemination of information (i.e., sharing of assessment findings through a debriefing process that is attended by interdisciplinary professionals, foster parents, and family members responsible for the care of the child)?

3.2. Aim 2: Utilization of Health and Mental Health Services

Extending beyond exploratory analyses and description of the quality of the IPAs (i.e., their alignment with published standards), the project examined the extent to which these assessments translated into the delivery of needed health and mental health services. Put another way, did the youth receive the needed services delineated in the IPAs' recommendations?

This second research aim connects information from the IPAs to Medicaid claims for health and mental health services delivered within a six-month timeframe following the completion of the assessment. Thus, it focuses on formal services, not informal supports or programming. Of particular interest was whether the utilization of services was influenced by factors related to the youth (e.g., age, gender, race) or those related to the assessment itself (e.g., number of days between entering custody and the completion of the assessment, etc.).

Research question 2. Are the health and mental health services received by youth within the six-months post-custody consistent with recommendations from the IPAs?

Research question 3. Is utilization of recommended health and mental health services influenced by youth-related factors or factors specific to the IPA, including:

Youth Factors:

1. Demographics (gender, age, race/ethnicity)?
2. Mental health diagnoses (primary and secondary *DSM-5* diagnoses)?

3. Level of need, indicated by scores on standardized assessments of functioning (i.e., Beck Youth Inventories, UCLA-PTSD Index, and the Wechsler Abbreviated Scale of Intelligence (WASI-II))?

IPA factors:

4. Time to assessment completion (i.e., time between a youth entering custody and the completion of the IPA report)?

Due to the exploratory, descriptive nature of the present study and the lack of available contextual data (e.g., placement disruptions, adjudication outcomes and reunification, etc.), additional analyses related to factors influencing service timing (i.e., how long after entering custody were services received), dosage (i.e., the number of treatment sessions received), and other characteristics are not performed. A diverse range of factors likely influence whether youth receive a recommended service at all, and an even larger set contribute to the timing and dosage of these services. To properly assess the factors and conditions influencing the timing and length of service delivery, additional characteristics would need to be assessed and controlled for that are not available for the purposes of this research. Thus, findings related to the utilization of services at all during the six-months post-custody should be interpreted cautiously, due to the limited contextual information available.

CHAPTER 4: METHODS

4.1. Participants

The study's sample includes youth over the age of five in the custody of DSS/YFS who entered custody and received an IPA between July 1, 2014 and June 30, 2015. Although twenty-four youth received IPAs during this timeframe who were not new to custody (i.e., they did not receive an IPA upon entering custody and were referred by their permanency planning social worker), only those new to custody were included in the study sample. IPAs conducted by Teen Health Connection were available for 145 youth entering the custody of DSS/YFS during this timeframe. The youths' average age at the time of the assessment was 11.03 years ($SD = 4.06$). Demographic characteristics of these youth are summarized in Table 1.

4.2. Procedures

This study is a retrospective, multi-component program evaluation relying on secondary data collected by Teen Health Connection and its partners for the purposes of case management, assessing service satisfaction, and annual reporting. Data related to billed mental and physical health services are compiled by Community Care Partners of Greater Mecklenburg (CCPGM) across multiple health care systems and provider networks to monitor service utilization across high risk pediatric and adult populations. The study integrated multiple sources of data and sought to provide a comprehensive picture of the functioning and impact of the IPA program.

Table 1. Demographic Characteristics of Youth Receiving IPAs

Characteristic	Frequency	Percent
Gender		
Male	79	54.48%
Female	66	45.52%
Age		
5-6	27	18.62%
7-8	22	15.17%
9-10	14	9.66%
11-12	22	15.17%
13-14	19	13.10%
15-16	25	17.24%
17-18	16	11.03%
Race/Ethnicity		
African American	86	59.31%
Caucasian/White	28	19.31%
Hispanic/Latino	12	8.28%
Multiracial	12	8.28%
Other	7	4.83%
Previous YFS Involvement		
Any Involvement	106	73.10%
Family Interventions	85	58.62%
Custody	35	24.14%
Placement at the time of IPA		
Foster Care	62	42.76%
Kinship Care	45	31.03%
Group Home	13	8.97%
Parent	12	8.28%
Detention Center	1	0.69%
(Information Missing)	12	8.28%

Note. Parent refers to non-DSS involved parents (i.e., divorced or separated). YFS = Youth and Family Services. IPA = Independent Psychological Assessment. $N=145$

4.3. Measures

Youth demographics. To assess whether service utilization was related to youth-level factors, demographics (i.e., age, race/ethnicity, and gender), mental health diagnoses (i.e., primary *DSM-5* diagnoses), placement at the time of the IPA, previous

involvement with child welfare, etc. were drawn from the IPA reports themselves, as part of the routine data entry and management for the IPA program.

Standardized assessments of functioning. To assess whether service utilization was related to the level of need identified in the IPA, scores on standardized measures of functioning were used as indicators of overall functioning. The measures listed below were available for the majority of youth for whom an IPA was completed between July 1, 2014 and June 30, 2015. Youth may not have received a particular assessment measure due to the age-related parameters (or restrictions) of the measure, cognitive limitations of the youth, or youth noncompliance with assessment procedures and determination by the psychologist that scores were not valid indicators of true functioning.

Social and emotional functioning. The Beck Youth Inventories (BYI; Beck, Steer, & Carbin, 1988) assess children's level of emotional and social impairment across five different domains. The BYI is composed of five distinct inventories, including (a) the Beck Anxiety Inventory (BAI), reflecting children's fears, worry, and physiological symptoms indicative of anxiety; (b) the Beck Depression Inventory (BDI), identifying symptoms of depression such as negative thoughts about oneself, one's life, and one's future; feelings of sadness, and other physiological indicators of depression; (c) the Beck Anger Inventory (BANI), reflecting perceptions of mistreatment, negative thoughts about others, feelings of anger, and physiological arousal; (d) the Beck Disruptive Behavior Inventory (BDBI), indicative of attitudes and behaviors associated with conduct disorder and oppositional-defiant behaviors; and (e) the Beck Self Concept Inventory (BSCI), which explores self-perceptions including competency, potency, and positive self-worth. Across the BDI, BAI, BANI, and BDBI, higher scores are reflective of increased levels

of symptoms or impairment; on the BSCI subscale, higher scores reflect higher perceptions of self-competence and positive self-worth. Raw scores on each index are transformed into *T* scores to reflect degrees of clinical elevation. On the BAI, BDI, BANI, and BDBI, *T* scores under 55 are considered “non-elevated,” scores between 55 and 60 are “mildly elevated,” scores between 60 and 70 are “moderately elevated,” and scores over 70 are considered “extremely elevated” (Beck, Beck, & Jolly, 2005). On the BSCI, scores below 40 are considered “much lower than average,” scores between 40 and 45 are “lower than average,” scores between 45 and 55 are “average,” and scores above 55 are considered “above average” (Beck, Beck, & Jolly, 2005).

Each of the BYI subscales has been shown to have good internal reliability (i.e., exceeding .80, using Cronbach’s coefficient alpha method of assessing consistency within norm groups; Bose-Deakins & Floyd, 2004). The BDI, in particular, is a widely used screening tool for depression in adolescent populations (see Stockings et al., 2015), showing strong convergent validity with other measures of childhood depression, including the Children’s Depression Inventory (Smith & Schwartz, 2004).

Trauma exposure and related distress. The UCLA-PTSD Reaction Index (PTSD-RI; Steinberg, Brymer, Decker, & Pynoos, 2004) is designed to be a measure of the degree to which children have been exposed to and are impacted by traumatic events. The measure was designed to coincide with the diagnostic criteria for Post-Traumatic Stress Disorder (PTSD) of the *DSM-IV* and was updated to align with these criteria in the revised *DSM-5*. The measure is intended to assist mental health clinicians with making a diagnosis of PTSD. Its items assess the impact of trauma exposure across three PTSD symptom domains, including re-experiencing, arousal, and avoidance, asking children to

report how often they experienced these symptoms during the past month on a scale ranging from 0 (none) to 4 (most of the time). These separate scales can be combined into a total PTSD reaction score, the PTSD-RI. The measure also includes a trauma history profile, including the total number of traumas reported, a symptoms scale and symptom frequency rating sheet, and a clinician checklist to identify clinically significant distress and related functional impairment.

While the three separate categories of PTSD symptoms (re-experiencing, arousal, and avoidance) constitute separate indicators of PTSD reactions, for the current study, only the UCLA-PTSD RI total score, and the total number of traumatic events reported by the youth, were used as indicators of trauma exposure and related distress. The PTSD-RI total score has been found to have excellent internal consistency within a sample of 6,291 children and adolescents ages seven to eighteen years (Cronbach's $\alpha = .90$) and was associated with an increased odds ratio for functional and behavioral problems (OR = 1-1.80; Steinberg et al., 2013). Formal "cut off" scores or thresholds are not available for the current version of this measure (aligned to the *DSM-5* criteria); however, PTSD-RI total scores of 38 were determined to have sufficient sensitivity and specificity among adolescents using the diagnostic criteria of the *DSM-IV* and the prior version of the screening measure (Steinberg et al., 2004).

Cognitive functioning. The Wechsler Abbreviated Scale of Intelligence (WASI-II; Wechsler, 2011) is a brief screener of verbal, non-verbal, and general cognitive ability. The full measure includes four subtests (vocabulary, similarities, block design, and matrix reasoning), while the abbreviated version includes two subtests (vocabulary and matrix reasoning). During the IPAs, the two-subtest version of the WASI-II is

administered for youth who meet the age restrictions of the measure and only full-scale IQ (FSIQ-2) estimates are reported, per administration guidelines. Psychometrics for this brief screen have been evaluated, and the WASI-II two-subtest version is considered a reliable and valid measure of intellectual functioning for youth and adults aged six to ninety years old (e.g., McCrimmon & Smith, 2013). The FSIQ-2 showed excellent split-half reliability in the child standardization sample (ages 6-16 years), comparable to the four-subscale version (.93 and .96 respectively), as well as in the adult standardization sample (.94 and .97 respectively). The child sample also demonstrated acceptable to excellent test-retest reliability across both subscale and FSIQ scores (ranging from .79 to .90). Finally, subscale and FSIQ scores of the WASI-II exhibit acceptable to excellent concurrent validity with the original WASI, the Wechsler Intelligence Scale for Children (WISC-IV), and the Wechsler Adult Intelligence Scale (WAIS-IV; ranging from .71 to .92; McCrimmon & Smith, 2013). The FSIQ-2 measure also shows good convergent validity with other assessments of cognitive functioning for children, adolescents, and adults, including the Wide Range Intelligence Test (WRIT) global scale IQ ($r = .86$; Canivez, Konold, Collins, & Wilson, 2009).

Level of functioning on the WASI-II is categorized using ranges in FSIQ-2 scores, such that scores of 130 and above are considered “very superior,” scores between 120-129 are considered “superior,” scores between 110-119 are considered “high average,” scores between 90-109 are considered “average,” scores between 80-89 are considered “low average,” scores between 70-79 are considered “borderline,” and scores of 69 and below are considered “extremely low,” and may be indicative of mental retardation or severe cognitive delays (Wechsler & Zhou, 2011). For the purposes of the current study,

the WASI-II FSIQ-2 score (based on the vocabulary and matrix reasoning subtests), considered a measure of the youth's general cognitive ability, were used.

For youth under the age of six, the Reynolds Intellectual Screening Test (RIST-2) is used as a substitute screener of intellectual ability. The RIST-2 Index can be used with individuals ages 3 to 94 years (Reynolds & Kamphaus, 2015) and is made up of two subtests from the Reynolds Intellectual Assessment Scales (RIAS-2). Composite scores are reported as standardized IQ scores parallel to those found for the WASI-II ($M=100$, $SD=15$). Reliability coefficients for the RIST-2 Index range from .88 to .95 across different age groups, and test-retest reliability coefficients exceeded .90. The RIAS-2 is noted as a valid assessment of intellectual functioning and is correlated with subtest and composite scores from other measures of intelligence, including the WASI-II; however more research is needed related to the validity of the RIST-2 specifically (Reynolds & Kamphaus, 2015). Analyses involving scores on cognitive screeners (i.e., the WASI-II) and the influence of this youth-factor on service utilization do not include youth who completed the RIST-2 screener.

IPA process indicators. Several assessment-related processes, procedures, and characteristics were tracked and used to gauge the degree to which IPA practices aligned with best practices and guidelines. These include 1) the time to IPA completion, determined by the number of days between the date that the youth entered custody and the date the report was provided to the DSS/YFS social worker (either through a debrief or by other means such as email); 2) the collateral interviews conducted during the IPA process, recorded by the psychologist performing the assessment and tracked in administrative data for each IPA report; and 3) the direct dissemination of IPA results to

key partners through the debrief meetings, measured through attendance sheets signed at each meeting and later coded according to the roles in attendance (i.e., GAL, foster parent, youth). Process indicators including the time to IPA completion were assessed as potential influences for whether services were implemented for youth receiving IPAs. Process indicator data are tracked by IPA staff and available in administrative record keeping spreadsheets at Teen Health Connection.

IPA recommendations. Recommendations from the IPAs were coded to reflect the life domain addressed (e.g., mental health, physical health, extracurricular, education/academic, etc.) as well as the nature of the specific recommendation itself for recommendations related to health and mental health services (i.e., trauma-focused CBT, routine physical exam, etc.). An initial coding scheme was developed through an open coding process (Strauss & Corbin, 1990) using twenty IPA reports selected randomly from the sample used for this study. An iterative approach was employed, such that unique codes were established to reflect the nature of the recommendations and subsequently modified based on similarities or discrepancies found as additional data were examined. Once the coding scheme was developed, the full sample of IPA reports was reviewed. Additional modifications to coding categories were necessary when the full sample was coded. For instance, teen parenting supports were not identified in the original sample of IPAs but were added as a coding category subsequent to the review of the full sample. Once all recommendations were assigned a unique code, all similarly coded recommendations were reviewed together, without reference to individual youth, to ensure internal consistency within each code category. Each report was then dummy coded to indicate whether it included a recommendation corresponding to each code

category. Mental health recommendations were dummy-coded in additional detail to reflect whether recommendations were made related to specific service categories (e.g., outpatient therapy, family therapy, multi-systemic therapy, etc.).

Billable services. Medicaid service claims were examined for each youth who received an IPA between July 1, 2014 and June 30, 2015. These service claims were available through Community Care Partners of Greater Mecklenburg's (CCPGM) online case management system. Service claims are provided by community partners, including managed care organizations and hospital systems, and are typically updated in the system on a three-month delay following service delivery.

For the purposes of this study, services billed over a 12-month period – i.e., six months preceding the date the youth entered custody, and six months following the date the youth entered custody – were collected from the case management system. This time window was selected for use because it would permit examination of pre-custody services, and services received within this timeframe post-custody are proximal enough to be attributable to the IPA. In addition, as time from custody increases, it is more likely that youth will experience foster care placement disruptions, changes in social workers, or even reunification with families of origin. Limiting this study to the first six months post-custody reduces the likelihood that these external factors would influence service utilization. Furthermore, to be of benefit, it is important that mental health services are implemented early during a youth's experience in foster care.

For each unique office visit, these claims data include information about the date of service delivery, the specific type of service provided, the primary and secondary diagnoses the service addresses (using coding from the *International Statistical*

Classification of Diseases and Related Health Problems – ICD-10 – classification system rather than the *DSM-5* system), and the agency or attending provider delivering the service. Similar information is available for emergency room visits and physical health office visits.

Due to variability in billing data for parallel service types (i.e., psychotherapy vs. behavioral health counseling), services were coded using categories comparable to those applied to the mental health recommendations of the IPAs. Physical health office visits were coded to indicate whether the youth was seen for a routine physical exam, sick visit (e.g., infection, illness, or injury), reproductive health, ongoing care of a chronic condition (e.g., asthma, diabetes, skin conditions), dental or vision problems, abuse or neglect, or other reasons. It is important to note that these physical health visits may not fully capture dental and vision care as these services often use different billing or reporting systems than those supplying data for this study. Emergency department visits were coded as “mental health-related” or “physical health-related” based on the primary and secondary diagnoses indicated in the billing data. Cases were then dummy coded to indicate whether a particular service type was received pre- or post- custody to allow direct comparison between the services that were recommended through the IPA and the services that were utilized. The IPA assessments conducted by Teen Health Connection are not included in the claims data; the service was not billed for at the time the IPAs included in this study were conducted.

Additional claims data are available for the prescription medications filled during the twelve-month window. These data include the date the medication was filled, the drug description, the class of medication, the quantity dispensed, and the corresponding

number of days for which the medication was prescribed, the prescriber of the medication, and the pharmacy filling the prescription order. For the purposes of the present work, only claims related to medical (i.e., medical office visits, emergency room utilization) and mental health (i.e., outpatient therapy, intensive in-home services, multi-systemic therapy, etc.) services were used. Claims related to psychotropic medication refills were not used in the current analyses as the IPAs do not provide specific recommendations beyond the need for additional assessment or medication management. Using the claims data available through CCPGM, additional indicators of interest, including the service dosage (i.e., number of service sessions received over the 6-month timeframe following the IPA), and time to first service (i.e., the number of days between the completion of the report and the date of the first service session) were calculated, based on the available data for each unique service session or office visit.

CHAPTER 5: ANALYTICAL APPROACH

5.1. Aim 1: Adherence to Guidelines and Best Practices

The first aim of the current work was to explore the extent to which the IPAs conducted by Teen Health Connection were completed in a manner that is consistent with current guidelines set forth by the American Academy of Pediatrics (2005), the Best Practices for Mental Health in Child Welfare Consensus Conference (Hunter Romanelli et al., 2009), the Council on Accreditation (Allen, 2010), the Council on Foster Care, Adoption, and Kinship Care et al. (2015), and the American Psychological Association (2013). Descriptive analyses were used to address the primary research question for this aim.

Research question 1. Several indicators were assessed to determine if the IPAs at Teen Health Connection align with guidelines regarding the timeline for their completion, methods of data collection, the comprehensiveness of their recommendations, and the dissemination of the assessment findings. To determine the extent to which IPAs included recommendations across different life domains, the percentage of assessments that included recommendations within each separate domain identified during coding processes was calculated. Similar descriptive analyses explored the extent to which psychologists interviewed persons of significance (i.e., collateral contacts, such as biological parents, foster parents, and mental health providers) during assessment processes, and the extent to which debrief meetings were similarly attended by key

persons (e.g., foster parents, youth, GALs). The percent of assessments that were completed within the thirty-day timeframe of a youth entering custody, as recommended by the AAP (2005), and the average number of days spent across all assessments, were also calculated. Overall, these descriptive results were used to assess the degree to which IPA practices and processes align with the principles, guidelines, and policies put forth regarding assessments in the child welfare context.

5.2. Aim 2: Utilization of Health and Mental Health Services

The second research aim focused on the extent to which physical and mental health services recommended in the IPAs were accessed during the six months following the assessment (research question 2), and the extent to which service utilization was influenced by factors such as youth demographics, level of need, and IPA-related processes (research question 3).

Based on feedback from IPA psychologists and administrative staff responsible for data entry, there was great variability in determining the specific date on which the IPA was considered complete. Psychologists from the IPA team work with social workers and members of the Child and Family Teams throughout the IPA process. Psychologists are typically in contact with the PPSW within one to two weeks of the youth entering custody (i.e., when the court order is received), per protocols of the IPA program, and may make informal recommendations as to the immediate needs of the youth prior to the completion of the report. Psychologists may also provide copies of the full IPA report prior to court hearings for the youth, and will hold a debrief meeting after these proceedings, at which point the IPA would be considered “completed” according to program data. This ambiguity over when a PPSW or members of the CFT may have first

received the IPA report (i.e., the date of the debrief meeting, the date the report was sent to DSS/YFS, etc.), or whether recommendations were made prior to the completion of the report, presented a challenge to segmenting the data as “pre” and “post” IPA.

Thus, for the purposes of analyses (including those using mental health service data) the date the youth entered custody was used to delineate billing data as “pre-custody” and “post-custody” rather than “pre-IPA” and “post-IPA.” For example, in analyses of youth recommended for outpatient mental health services, youth are considered to have received services relevant to this recommendation if the service date was after the date the youth entered custody, rather than the date of the IPA as originally proposed. This enhances clarity of the findings and facilitates more direct comparisons to existing research on service utilization among youth in foster care (i.e., Burns et al., 2004; Horwitz, 2012; Hurlburt et al., 2004).

Research question 2. To explore service utilization among youth who received IPAs, descriptive analyses first examined the extent to which mental health services were received at all by each youth within the sample. Using the date of custody and the date of service, billing data were transformed to reflect when services were received in relation to the youth entering custody, rather than on a chronological calendar timeline (e.g., 52 days post custody vs. January 5, 2015).

Descriptive analyses were used to examine the percentage of youth who received services pre- and post- custody and to assess whether youth who received services pre-custody continued to receive these services post-custody. Chi-square analyses were then used to examine the likelihood that youth received specific services that had been recommended by the IPA, including outpatient therapy, family therapy, additional

assessments, and medication management. These descriptive data shed critical light on system function by highlighting the degree to which recommended services, at least in the mental health domain, were put into place during the six months post-custody.

Research question 3. A series of Chi-square analyses were used to assess for differences in service utilization based on factors of the youth or the IPA process. Mental health diagnoses were coded as “none,” “internalizing,” “internalizing/externalizing comorbid,” “externalizing,” “substance abuse comorbid,” “intellectual/learning,” “intellectual/learning comorbid,” and “personality” to facilitate a Chi-square analysis and relative comparison of the probability of service utilization in relation to diagnosis. Chi-square analyses were also used to examine differences in service utilization post-custody based on race/ethnicity, gender, previous child welfare involvement, pre-custody service receipt, and other categorical or binary factors.

To explore in more detail the predictors of service utilization among youth in this study, logistic regression was used to examine the extent to which several linear variables, including youth age, standardized assessment scores, and process-related variables (i.e., time to assessment completion) influenced whether youth received recommended mental health services.

5.3. Treatment of missing data. IPA process indicators (i.e., the collateral interviews conducted), mental health diagnoses, and screening scores were generally available for all youth; however, because of missing data, sample sizes vary across analyses. For instance, billable service data were not accessible for 21 youth. This resulted in a total sample of 124 youth across all analyses requiring these data. Because this work is largely descriptive across aims and research questions, the reported results

utilize the largest sample available for each set of analyses; thus, if participants were missing a data source not relevant to the analysis in question, their data were included.

CHAPTER 6: RESULTS

6.1. Aim 1: Adherence to Guidelines and Best Practices

The first aim of this project explored the extent to which the IPAs at Teen Health Connection are aligned with the guidelines and best practices set forth by the American Academy of Pediatrics (2005), the Best Practices for Mental Health in Child Welfare Consensus Conference (Hunter Romanelli et al., 2009), the Council on Accreditation (Allen, 2010), Council on Foster Care, Adoption, and Kinship Care et al. (2015), and the American Psychological Association (2013). These guidelines pertain to the timeframes for assessment completion, use of collateral information, comprehensiveness of recommendations, and dissemination of information to appropriate parties.

Timeframes. Guidelines for the delivery of mental health assessments for youth entering the custody of DSS/YFS emphasize that they should be performed early, typically within thirty-days of custody. On average, the clinical assessment portion of the IPA (i.e., clinical interview, completion of standardized clinical assessments) occurred within 29.19 ($SD=11.53$) days of a youth entering custody. IPA reports were considered “complete” on average 42.51 ($SD=12.71$) days after a youth entered custody. In this sample, 64.34% of the IPA clinical assessments were performed within the 30-day guidelines, but only 16.78% of reports were considered complete within this timeframe.

IPA reports were available prior to the adjudication hearing for 97.93% of youth. For these youth, the reports were completed on average 17.64 ($SD=15.21$) days prior to

the hearing. It is worth noting, given that adjudication hearings should occur within sixty days of the original court petition, there was substantial variability in the lengths of time between a youth entering custody and their adjudication hearing across the sample ($M=59.17$, $SD=16.99$).

Collateral information and methods of assessment. Best practices for the completion of assessments include the integration of a variety of sources and types of information when putting forth diagnostic impressions or making service recommendations. Psychologists conducting the IPAs at Teen Health Connection make use of a variety of collateral information to support their clinical decision-making. This includes conducting collateral interviews with key individuals in the life of the youth. On average, 4.75 ($SD=1.70$) collateral interviews were conducted during the assessment process for each youth receiving an IPA. Besides the permanency planning social workers, who were interviewed in all IPAs, families of origin (i.e., biological or adoptive parents) and GALs were interviewed most commonly, over 70% of the time, during the IPA process (see Figure 1). It bears mention that although school staff were interviewed for less than 5% of youth, extensive school records are requested for each youth receiving an IPA, and interviews are conducted only when additional information is required. Furthermore, available medical records available through two large local hospital systems are reviewed for all youth.

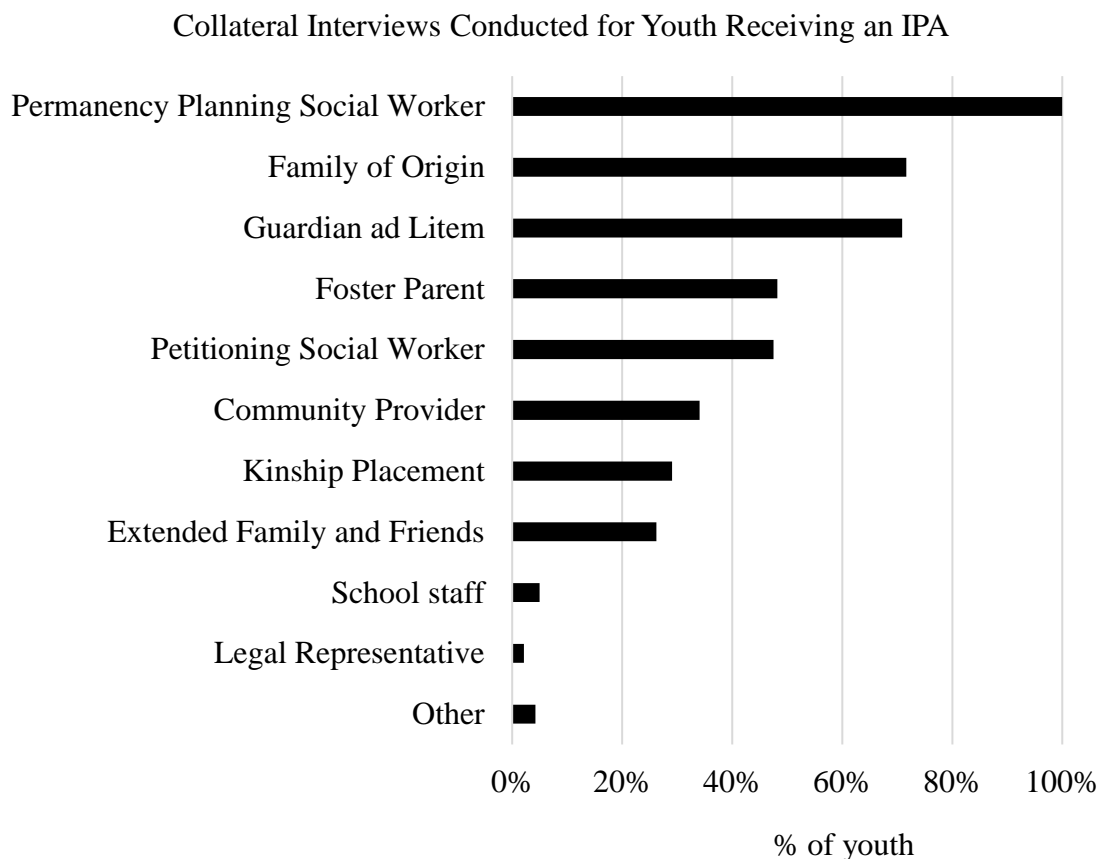


Figure 1. Collateral Interviews Conducted for Youth Receiving an IPA

Note. Family of Origin includes biological and/or adoptive parent(s). Kinship Placement includes family (aunts, grandparents) who are providing care and housing for the youth while in custody.

To inform their clinical judgment, psychologists conducting the IPAs also routinely used a variety of standardized assessments, including the Beck Youth Inventory, during the IPA clinical assessment. This inventory is standardized for use with youth ages seven to eighteen. Among youth over the age of seven, at least one completed Beck Youth Inventory scale was available in 89.52% of cases, with very few youth missing individual indices. To screen for potential intellectual problems, psychologists use the WASI-II or, for younger youth, the RIST-2. One of these cognitive screeners was used and available for 93.62% of youth receiving an IPA. The UCLA-PTSD Index,

intended for use with youth over the age of six as an indicator for trauma exposure and the impact of trauma on a youth's wellbeing (Steinberg et al., 2004), was used in 93.70% of age-eligible cases. Finally, all IPAs used some method of projective personality assessment, typically in the form of a sentence completion or drawing activity.

Comprehensiveness of recommendations. Another guideline for mental health assessments for youth entering custody centers on their clinical and non-clinical recommendations – specifically, these recommendations should address multiple domains of the youth's life, be individualized to the unique needs and assets of the youth and family, and be culturally competent. On average, IPAs included 10.62 ($SD=3.16$) recommendations per youth. Among the total absolute number of recommendations across all youth, the most common recommendations of the IPAs pertained to the mental health needs of the youth (representing 18.02% of all recommendations), followed by their physical health needs (15.24% of recommendations) and their academic or educational needs (13.57% of recommendations). These three categories accounted for over 46% of all recommendations made via the IPAs.

Examination of the IPA recommendations for individual youth underscores that the IPAs emphasized mental health, physical health, and academic recommendations across all youth. Over 95% and 92% of the IPAs made specific recommendations in the mental health and physical health domains, respectively. While these assessments are primarily driven by the health (i.e., physical and mental) needs of the youth, twenty-three additional unique recommendation categories were identified through the open coding process (for a full listing of categories, representative examples, and frequencies of recommendations across youth, see Appendix A), suggesting that the IPAs provide a

comprehensive assessment of functioning and needs across a wide variety of critical life domains. Among the recommendations that were not health-specific, IPA recommendations attended most commonly to the educational needs of the youth (87.32%), as well as their needs in their current living environment. For instance, 73.24% of IPAs made specific reference to the youth's current living placement (e.g., foster home) and environmental factors or caregiving strategies (e.g., discipline, reward systems, etc.) that could be effective with the youth or help manage any behavioral concerns.

Overall, 73.45% of youth receiving an IPA were recommended for some form of outpatient therapy (including general therapy, trauma-specific therapy, and Dialectical Behavioral Therapy), and an additional 14.79% of IPAs included recommendations about the potential for outpatient therapy and encouraged monitoring of symptoms for possible problems (see Appendix B for mental health recommendation categories, category examples from the IPAs, and their frequencies across youth). The tendency for service recommendations to involve outpatient therapy, typically in combination with other supports, suggests that IPA psychologists are inclined to favor services that are least-restrictive. Moreover, the relatively frequent recommendation of family therapy suggests that the IPA psychologists largely recognize DSS/YFS goals of reunification with families of origin. Finally, the relative frequency of recommendations for additional mental health assessments suggests that the processes of the standard IPA may not be adequate for the assessment and diagnosis of all youth, particularly for those with more severe or complex needs.

The majority of IPAs made recommendations around primary care for the youth, including general physical, dental, or vision care (see Appendix C for examples and frequencies of physical health recommendations). Only recommendations that specifically addressed vision (e.g., the youth does not have needed glasses) or dental (e.g., unaddressed cavities) problems were included under “Vision (specific)” and “Dental (specific)” domains. For youth without specified health concerns or vision and dental problems, IPAs regularly recommended routine medical, dental, and vision care; these non-specific, physical health-related recommendations were coded as “Primary Care.” Roughly one-third of IPAs included recommendations for specified assessment or treatment, while identifying a condition to be addressed (e.g., asthma, diabetes, eczema); however, they typically remained broad in scope, articulating that treatment should be sought related to these conditions, or noting their existence in the youth’s medical record and encouraging follow-up with a medical provider. Overall, recommendations related to the physical health of the youth were not as specific or as individualized as the recommendations related to mental health. This is to be expected given the mental health focus of the IPA and their completion by a doctoral-level psychologist.

The most common academic recommendations of the IPAs revolved around attendance and the need to ensure that the youth attended school daily (see Appendix D for full listing of academic recommendations and examples). Over one-fifth of the youth in this sample were recommended for additional academic or achievement testing to diagnose potential learning disabilities and explore the need for additional academic supports. While psycho-educational testing is a necessary component of the Individualized Education Plan (IEP) process, 15.49% of IPAs included recommendations

specific to an IEP that was noted to be already in place. Relatively few IPAs included recommendations for early childhood learning or pre-kindergarten programs as youth in this sample were largely older than the age eligibility range for such programs. IPAs also frequently included recommendations that alternative placements or work levels be pursued for the youth. This included changes in school assignment, pursuit of a General Equivalency Diploma (GED), remedial coursework, homeschooling, and the like. IPA recommendations also frequently referenced more informal educational supports, including tutoring (10.56%) and caretaker involvement (17.61%). Only 3.52% included recommendations for specific educational support programs such as Communities in Schools and ProjectLIFT, community-based multi-school programs or initiatives designed to provide additional support and guidance for students. Such specificity did not characterize most educational support recommendations for tutoring – for instance, when it was recommended, there was typically no specific reference to how or where a tutor could be identified.

Although IPAs center on the needs of the youth, they frequently make reference to the needs of the family of origin, particularly for one or both parents (see Appendix E for examples and frequencies of recommendations for parents and family members). Most commonly, recommendations for family members focused on parenting skills education and mental health services. Only 7.04% of IPAs recommended a Parenting Capacity Evaluation, a forensic evaluation used to determine if termination of parental rights should be pursued by the courts. The frequency with which these types of recommendations were included suggests that the IPAs generally support goals of reunification with families of origin, providing recommendations that would contribute to

the success of the parent(s) and improve their ability to care optimally for their child(ren). At the same time, these recommendations tend to fall outside of the objectives, focus, and immediate scope of the assessment and are not based on direct assessments of parents or family members; as such, they are framed as in the best interest of the youth.

Information dissemination. Sign-in sheets were available for ninety-four debrief meetings. These ninety-four meetings represented 135 youth; according to program procedures, the IPAs of siblings are frequently reviewed together in the same debrief meeting. Eight youth (5.52% of the overall sample of youth entering custody) did not have a debrief meeting to review the results of their IPA.

On average, debrief meetings were attended by 2.93 ($SD=1.53$) individuals; the largest debrief meeting had nine attendees. Only one person was in attendance, the permanency planning social worker, in 21.30% of the debrief meetings (see Figure 2).

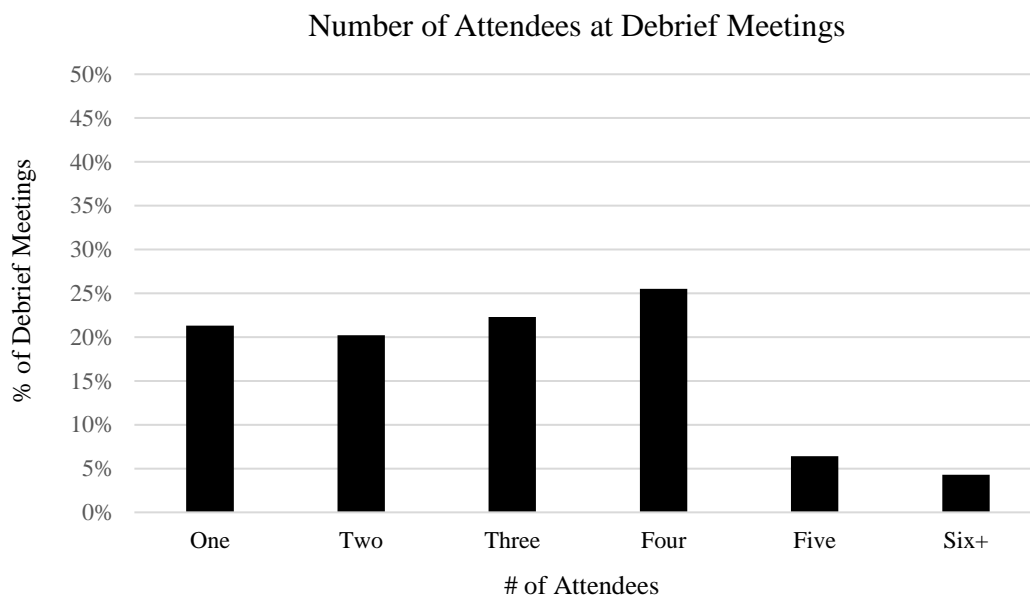


Figure 2. Number of Attendees at Debrief Meetings

$N=94$ debrief meetings

The composition of the debrief meetings (i.e., who was in attendance) is a more useful indicator of information dissemination attributable to the IPA than meeting size. Debrief meetings are scheduled around the Permanency Planning Social Worker, and the individual in this role is the only required attendee for the meeting to occur. Those entrusted with the care of the youth (i.e., foster parents, kinship caregivers) have perhaps the most to gain from the IPA debrief meeting, as it represents an opportunity to learn about the unique needs of the youth residing in their home and provides recommendations specific to the parenting approach or living environment that would likely be most beneficial. In this sample of debrief meetings, only 36.17% were attended by a kinship caregiver, foster parent, foster parent supervisor, or group home/residential treatment facility staff. The variety of attendees at debrief meetings and their frequency of attendance is shown in Figure 3.

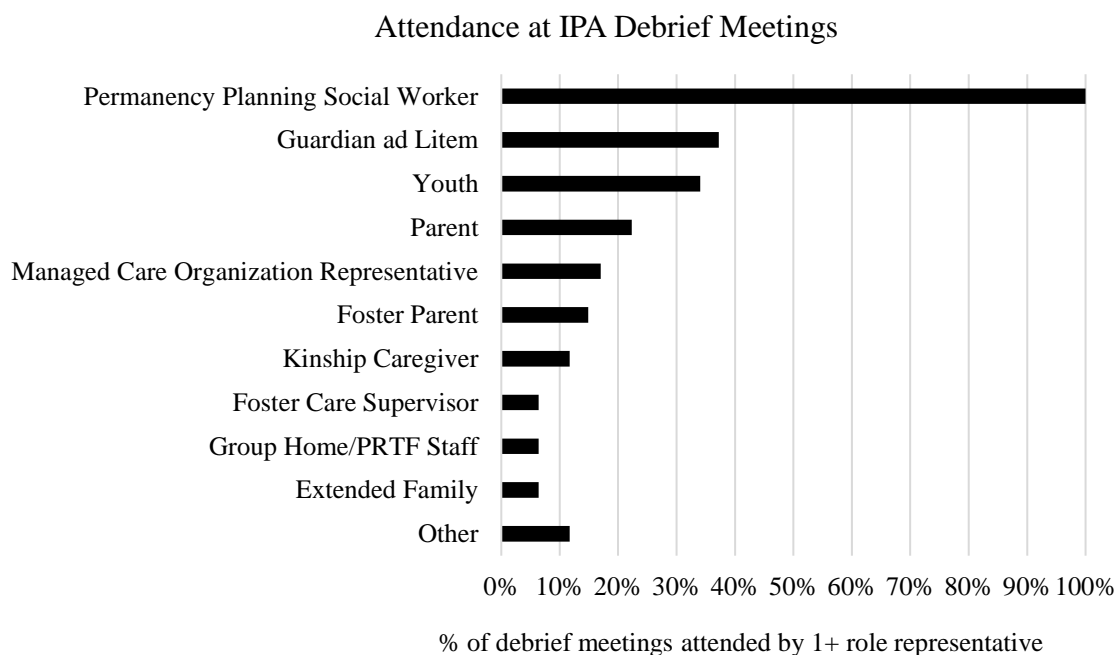


Figure 3. Attendance Rates by Role at IPA Debrief Meetings

Note. PRTF=Psychiatric Residential Treatment Facility; *N*=94 debrief meetings

Debrief meetings can offer a unique opportunity for youth to engage in discussions around their needs and respond to the recommendations presented; however, it is advised that only youth over the age of eleven participate in these meetings as younger youth may experience less benefit from attending and can, in fact, detract from the purpose of the meeting. Among the sixty-three debrief meetings that could have had a youth in attendance based on the age of the children receiving an IPA, only 50.79% were attended by a youth.

6.2. Aim 2: Utilization of Health and Mental Health Services

The second aim of this research project explored the extent to which youth entering the custody of DSS/YFS due to abuse and/or neglect, who received an IPA at Teen Health Connection, received needed mental health services post-custody.

Overall utilization. Within the six months prior to entering custody, 35.48% of youth received at least one mental health service (at some point during that window) prior to entering custody, with nearly 23% of youth receiving mental health services at any given time. In the six months after entering custody, this percentage increased to 58.87%, with as many as 50% of youth receiving mental health services at any given time within that six-month window. Within this sample, 31.15% of youth did not receive any type of mental health service pre- or post-custody. The percent of the total youth sample engaged in at least one mental health service at any given time is shown chronologically (i.e., over time, within the six months pre- and post-custody) in Figure 4.

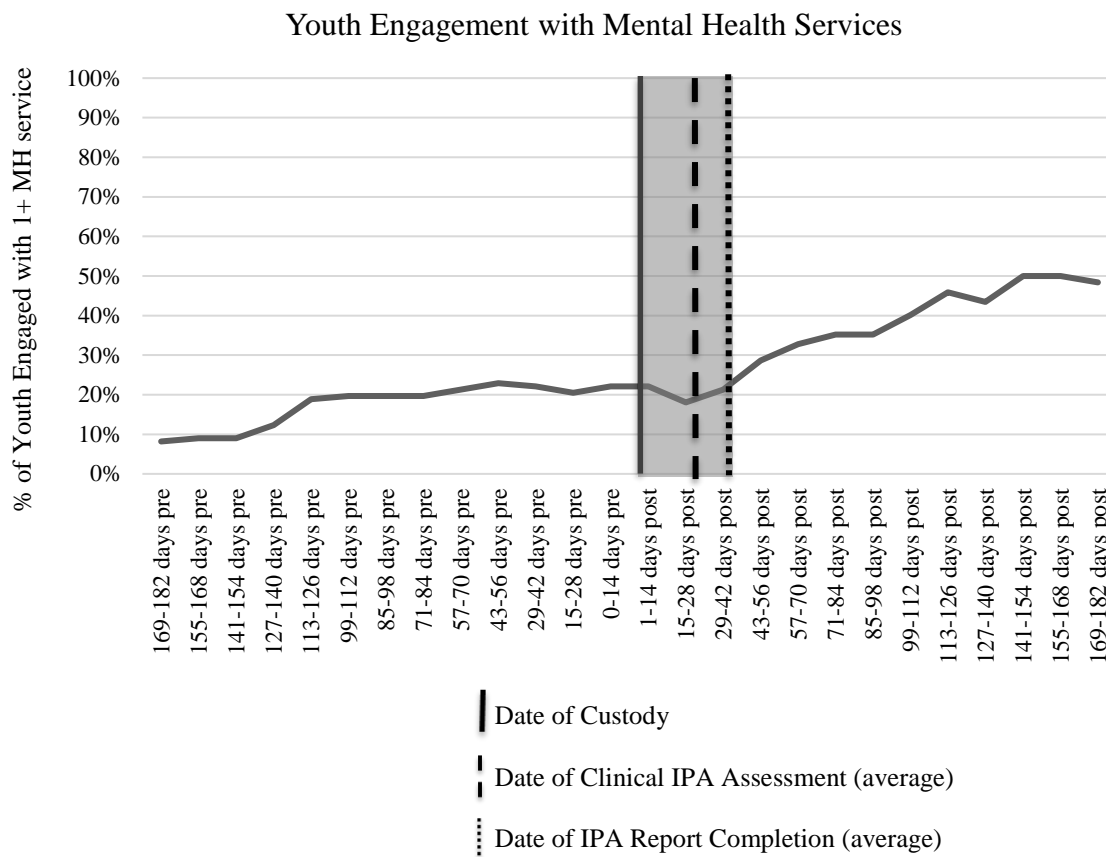


Figure 4. Youth engagement with mental health services six months pre- and six months post-custody

$N=123$ youth

Engagement in services appears to be relatively consistent, with less than 23% of youth receiving mental health services at any given time, until approximately 29-42 days post-custody, at which point service utilization begins to increase. It is during this timeframe that the IPA assessment is typically conducted, and the final IPA report is made available to the social worker and others involved in the youth's care. This upward trend, beginning at the point of the IPA, suggests that the assessment process plays an important role in connecting youth to mental health services, either by providing an opportunity for the social worker and care-managing team to add to their understanding

of the youth and his or her needs, or by making direct mental health service recommendations. It is notable that the proportion of youth receiving at least one service does not reach its peak until roughly 141-154 days post-custody, indicating that connecting youth to mental health services can take several weeks to months.

Table 2
Mental health service utilization pre- and post- custody

Type of Mental Health Service	# of Youth Receiving Service Pre-Custody	# of Youth Receiving Service Post-Custody	# of Youth Receiving Service Pre- and Post-Custody
Assessment/Evaluation	24	45	10
Outpatient Therapy	17	62	12
Developmental Services	2	3	0
Family Therapy	12	25	8
Medication Management	13	29	9
Wraparound Services	7	8	1
Day Treatment	1	1	1
Emergency Department/Inpatient Hospitalization	14	18	8
Multi-Systemic Therapy	1	1	1
Group Therapy	1	0	0
Speech and Language Services	3	4	2
Any Mental Health Service [±]	44	73	35

N=123; [±] *Any Mental Health Service* is an unduplicated count of the number of youth who received one or more mental health services.

As shown in Table 2, service utilization increased in the six months post-custody across all service types except day treatment, multi-systemic therapy, and group therapy, which all evidenced very low rates of utilization both pre- and post-custody (i.e., no more than one youth during the time window). Among youth who received a mental health service pre-custody, 79.55% received some type of mental health service post-custody, although the service type and provider may have changed. It should be noted that there

was only one instance in which a youth who received a mental health service pre-custody was not recommended for mental health services through the IPA.

A considerably larger number of youth ($n = 62$) participated in at least one session of outpatient therapy post-custody, with 50 youth engaging in therapy post-custody who did not receive this service pre-custody. The total number of therapy sessions youth received remained consistent; on average, youth participating in outpatient therapy had 6.63 ($SD=5.22$) therapy sessions pre-custody and 7.03 ($SD=4.66$) sessions post-custody. This dosage was consistent for youth who continued therapy with the same providers after entering custody. Among the seventeen-youth receiving outpatient mental health therapy pre-custody, nine continued to receive treatment from the same provider after coming into custody. While dosage is consistent pre- and post- custody, the overall number of sessions is low (for a six-month window) and does not seem to indicate meaningful engagement in ongoing therapy. Among youth who participated in outpatient mental health treatment after entering custody (not including youth who continued treatment with the same provider), services started on average 107.71 ($SD=43.08$) days after entering custody, suggesting a substantial delay in initiating services. Service continuity (i.e., ongoing care with the same provider) can be especially important for youth entering foster care, as they adjust to new environments and arrangements.

Among the twelve youth participating in family therapy sessions pre-custody, five had at least one family therapy session with the same provider after coming into custody. Although more youth participated in family therapy post-custody ($n = 25$), the average number of sessions decreased. On average, youth participated in 5.92 ($SD=5.77$) family therapy sessions pre-custody, and 3.50 ($SD=4.51$) family therapy sessions post-custody.

This low dosage of family therapy similarly seems to indicate a lack of meaningful ongoing family work. It is important to note that, in some cases, family therapy may not have been successful due to contextual challenges or parental factors (e.g., lack of parent attendance; parental blame or resentment) such that ending sessions would be in the best interest of the youth. Moreover, this analysis examines only the six months immediately following a youth entering custody; family therapy may not be advisable or successful until parents gain additional stability, which could take longer than six months to occur. Among youth who began family therapy after entering custody (i.e., not including youth who continued treatment with the same provider), family therapy sessions started on average 130.25 ($SD=34.57$) days after entering custody.

Among the fourteen youth requiring emergency department visits or inpatient hospitalizations for mental health reasons pre-custody, eight required additional hospitalization post-custody. The average number of days in the emergency department or hospital remained relatively consistent; youth stayed in the emergency department or hospital on average 3.53 ($SD=3.39$) days pre-custody and 3.84 ($SD=5.12$) days post-custody. Emergency department visits and hospitalizations occurred an average of 84.79 ($SD=42.78$) days post-custody, suggesting that these visits tended to occur prior to the delivery of non-emergency mental health services, such as outpatient therapy or medication management ($M=117.94$, $SD=49.02$), and that they may have prompted the receipt of these services upon discharge.

These emergency department visits and hospitalizations for mental health reasons are not included in the following results, which examine the extent to which youth received “any mental health services” as recommended by the IPA. These acute-care

services are typically not planned for by the social worker or CFT, nor are they recommended by the IPA. One purpose of this study is to examine the implementation of the IPA service recommendations that would help to avoid emergency-based services through the implementation of lower-cost, less-restrictive interventions. These emergency services should be utilized as a last resort in the mental health treatment for youth in foster care.

Across all types of mental health services, seventy unique providers of mental health services were identified in the billing data. This large network of providers underscores the needs for effective communication, collaboration, and oversight in the delivery of mental health services for youth in foster care. The IPA report can provide considerable relevant and substantive information to these service providers to inform the delivery of care and should be provided by the DSS/YFS social worker or requested from Teen Health Connection whenever possible.

IPA recommendations and utilization. The central research question of the current work revolves around the extent to which service utilization post-custody can be attributed to the IPA program and the recommendations of the IPA report. While the context of the IPA program within the child welfare system does not allow for causal conclusions about the direct impact of the assessment on service utilization, findings underscore the important role of the IPA in the delivery of health and mental health services.

Youth whose IPAs included a recommendation for any type of mental health service were significantly more likely to receive at least one type of mental health service post-custody than were youth who were not recommended for any type of service [$\chi^2(1,$

N=123)=16.07, $p<0.01$; see Table 3]. Among youth who were recommended for a mental health service, 67.96% ultimately received some type of mental health service post-custody, whereas only 20% of those not recommended for a mental health service received one post-custody.

Table 3
Mental Health Service Recommendations and Mental Health Services Utilization

Mental Health IPA Recommendations	Receipt of any Mental Health Services Post Custody		χ^2	Φ
	Mental Health Services Received	Mental Health Services not Received		
Mental Health Services Recommended	70 (7.87)	33 (-7.87)	16.07**	0.36
Mental Health Service not Recommended	4 (-7.87)	16 (7.87)		

Note. ** $p<.01$. Adjusted standardized residuals appear in parentheses below group frequencies.

Those for whom the IPAs did not include a recommendation for mental health services reflected a smaller subgroup ($n=20$, about 16%) of the sample for whom service data were available; given that they were engaged in a multi-component, comprehensive assessment, it would appear that those youth did not need services. As such, this significant difference is neither unexpected nor noteworthy. Rather, it serves to highlight that the presence of at least one recommendation for services was related to a greater likelihood of service receipt. Put another way, youth whose IPAs included a recommendation for mental health services were disproportionately more likely to receive a mental health service. That said, it is important to note that, among youth

recommended for mental health services by the IPA, about one-third did not receive any services post-custody, and 27.18% received no services pre- or post- custody.

While, overall, the recommendation of any mental health service was significantly associated with utilization of a mental health service post-custody, results were mixed when examining the implementation of specific service recommendations. Youth whose IPA recommended that they receive outpatient mental health services were significantly more likely to receive outpatient therapy post-custody than youth whose IPAs did not include recommendations for outpatient therapy [$\chi^2(1, N=123)=20.41, p<0.01$; see Table 4]. Among youth for whom outpatient therapy was recommended, 64.29% participated in at least one therapy session post-custody; 20.51% of youth who were not recommended for therapy subsequently participated in at least one session.

Table 4

Outpatient Therapy Recommendations and Outpatient Therapy Utilization

IPA Recommendations	Receipt of Outpatient Therapy		χ^2	Φ
	Outpatient Therapy Received	Outpatient Therapy not Received		
Outpatient Therapy Recommended	54 (11.66)	30 (-11.66)	20.41**	0.41
Outpatient Therapy not Recommended	8 (-11.66)	31 (11.66)		

Note. ** $p<.01$. Adjusted standardized residuals appear in parentheses below group frequencies.

Among youth who were recommended specifically for trauma-focused outpatient therapy, this recommendation was also significantly related to the subsequent receipt of outpatient therapy [$\chi^2(1, N=123)=7.38, p<0.01$]. Specifically, 69.44% of youth

recommended for trauma-focused therapy ultimately participated in at least one session of outpatient therapy, although it could not be determined whether the therapy received was trauma-specific because this information is not specified in the available billing data. Nevertheless, youth with this recommendation evidenced a slightly greater likelihood of receiving outpatient therapy.

Table 5
Medication Management Recommendations and Medication Management Utilization

IPA Recommendations	Receipt of Medication Management		χ^2	Φ
	Medication Management Received	Medication Management not Received		
Medication Management Recommended	16 (10.46)	15 (-10.46)	32.10**	0.51
Medication Management not Recommended	6 (-10.46)	86 (10.46)		

Note. ** $p < .01$. Adjusted standardized residuals appear in parentheses below group frequencies.

Youth whose IPA recommended a medication evaluation or ongoing medication management were significantly more likely to receive medication management post-custody, as indicated by at least one session with a psychiatrist or medical provider for psychotropic consult [$\chi^2(1, N=123)=27.36, p<0.01$; see Table 5]. Among youth who were recommended for medication management, 58.06% received an evaluation or ongoing management post-custody. It is noteworthy that among the many youth not recommended for medication management by the IPA, only 11.96% subsequently received a medication-related service (i.e., assessment, observation). This finding suggests that the

majority of youth receiving medication monitoring for mental health reasons were indicated as clinically in need of this care by the IPA. Furthermore, among youth receiving medication monitoring for their mental health symptoms, 89.66% received at least one other mental health service post-custody, with 79.31% participating in outpatient therapy.

On the other hand, IPA recommendations for family therapy did not meaningfully translate into the delivery of family therapy services [$\chi^2(1, N=123)=1.14, p=.29$]. Only 28% of youth recommended for family therapy participated in at least one family therapy session post-custody. Alternatively, 18.37% of youth who were not recommended for family therapy participated in at least one session post-custody, suggesting that the delivery of family-based therapy may not necessarily be attributable or related to the IPA recommendations.

Although a comprehensive assessment in itself, a frequent recommendation coming out of the IPA was that an additional assessment be conducted for the youth, either for mental health (18.31% of youth) or psychoeducational (21.83% of youth) purposes. However, recommendations for additional assessments were not significantly related to whether youth ultimately received an assessment [$\chi^2(1, N=123)=.12, p=0.73$; see Table 6]. Only 38.64% of youth who were recommended for an additional assessment received an assessment post-custody, and only 37.80% of all youth who received such assessments were recommended for one by the IPA. These results did not vary based on whether a mental health assessment or psychoeducational assessment was recommended. These findings suggest that not only are youths' needs for additional assessments not being adequately met, but the IPA is not successfully identifying youth who do

subsequently receive an additional assessment. Utilization of assessments among youth not recommended for them could be the result of local providers' practices. For instance, within many local provider organizations, a comprehensive clinical assessment is often conducted and billed for prior to the initiation of services – this practice likely contributed to more youth participating in additional assessments in the six months post-custody than had been indicated as clinically necessary.

Table 6

Additional Assessment Recommendations and Additional Assessment Utilization

IPA Recommendations	Receipt of Additional Assessment		χ^2	Φ
	Additional Assessment Received	Additional Assessment not Received		
Additional Assessment Recommended	17 (0.90)	27 (-0.90)	0.12	0.03
Additional Assessment not Recommended	28 (-0.90)	51 (0.90)		

Note. Adjusted standardized residuals appear in parentheses below group frequencies.

While outpatient therapy, family therapy, medication management, and additional assessments were frequently recommended via the IPAs, recommendations for higher levels of services (i.e., PRTFs) were far less common. Among the eleven youth recommended for a PRTF, group home, or other structured treatment setting, 45.45% were placed in a group home at the time of the IPA clinical assessment. Two youth in group homes received no other billable mental health service during the six months post-custody, while others received services including assessments, outpatient therapy sessions, family therapy sessions, and medication consultations. A total of 27.27% of youth recommended for higher levels of services did not receive any mental health

services post-custody (including emergency department or hospital utilization), according to the available billing data. Given that these recommendations reflect the presence of more significant youth needs, the lack of any mental health treatment is a noteworthy gap. An additional 27.27% of youth recommended for higher-level services were seen in the emergency department for a mental health concern at least once post-custody; these youth all received alternative services post-custody, including outpatient therapy, medication consultations, wraparound services, and/or additional assessments. Similarly, among youth seen in an emergency department or who required inpatient hospitalization for a mental health concern post custody, all were recommended for mental health services through the IPA, and 94.44% received at least one other mental health service post-custody.

In this sample, only one youth was engaged in multi-systemic therapy either before or after entering custody. This service was received for 36 sessions prior to custody, and only three sessions post-custody. No alternative services were put in place for this youth, although the IPA recommended outpatient and family therapy.

Overall, this pattern of findings appears to point to a gap in adequate services for those youth who are most highly in need of critical mental health services. The majority of youth identified by the IPA as most in need of higher levels of service either received no mental health services post custody or received services and yet still required mental health-related emergency care or hospitalization. This suggests that, even among youth who did receive care, the services available for this subset of high risk youth do not adequately manage their mental health concerns.

Utilization of physical health care services. While the primary purpose of this study was to explore the utilization of mental health services for youth entering foster care, access to primary care has also been noted as a significant challenge for this population (Council on Foster Care, Adoption, and Kinship Care et al., 2015). Parallel guidelines exist for the delivery of physical health exams for youth entering custody as they do for mental health assessments; best practices suggest that a comprehensive physical exam be conducted within thirty days of a youth entering custody. Within this sample, only 48.78% of youth had a physical exam within this thirty-day window, and only 69.35% had a physical exam at all within the six months post-custody. did not receive primary care pre-custody had any primary care visits post custody.

Table 7
Medical Visits Pre- and Post- Custody

Reason for Medical Visit	# of Youth Receiving Care Pre-Custody	# of Youth Receiving Care Post-Custody
Emergency Visit	24	30
Sick Visit (i.e., illness, injury, allergies, sinus, infection)	23	43
Routine Physical Exam	22	86
Reproductive Health Visit	5	13
Ongoing Care (i.e., asthma/diabetes management, skin conditions)	12	20
Dental	0	1
Vision	0	6
Abuse/Neglect	3	3
Other	6	12
Any Primary Care Visit [±] (i.e., sick visit, physical exam, reproductive health)	40	92

N=124; [±]*Any Primary Care Visit* is an unduplicated count of the number of youth who received one or more medical office visits for routine physical exams, sick visits, reproductive health visits, or ongoing care for existing conditions.

Overall, utilization rates for all health care services increased post-custody (see Table 7). Among youth included in this study, 32.26% had one or more visit with a primary care provider in the six months pre-custody, whereas 74.19% had one or more primary care visit post-custody. Receipt of primary care visits post-custody was significantly more likely among youth who received primary care pre-custody than those who did not [$\chi^2(1, N=124)=20.54, p<.01$]. All youth receiving primary care pre-custody continued to receive primary care visits post-custody, whereas only 61.91% of youth who

The receipt of primary care services post-custody was also significantly related to the receipt of mental health services post-custody [$\chi^2(1, N=124)=6.51, p<.05$], such that 66.30% of those youth who received primary physical care also received a mental health service, and 82.43% of youth who received a mental health service also saw a primary care provider, but only 40.63% of youth who did not receive primary care received any type of mental health service post-custody. Overall, 49.19% of youth received both primary care and mental health services post-custody, while 15.32% of youth did not receive either primary care or mental health services post-custody, according to the available billable data. These findings indicate that the child welfare system and its partners are not adequately serving a noteworthy proportion of youth with either physical or mental health care.

Furthermore, utilization of the emergency department for physical health concerns is relatively high in this sample (24.19%) compared to annual utilization rates among all youth in the U.S. ages 6 to 17 (14.5%; National Center for Health Statistics, 2017). Use of the emergency department, however, did not reflect a lack of engagement in primary care as research has suggested (Johnson & Rimsza, 2004); 88.89% of youth who were

seen in the emergency department for a physical health complaint also received at least one visit with a primary care provider during the six months post-custody. It should be noted that utilization of the emergency department for mental health reasons also occurred within the study sample; however, these instances were reported alongside rates of utilization for other mental health services.

Table 8
Specified Health Problems and Receipt of Care

Physical Health Specified Treatment/Assessment	Receipt of Care for Ongoing Health Problem		χ^2	Φ
	Care Received	Care not Received		
Specified Treatment/Assessment Recommended	10 (4.7)	31 (-4.7)	7.19**	0.24
Specified Treatment/Assessment not Recommended	6 (-4.7)	77 (4.7)		

Note. ** $p < .01$. Unadjusted residuals appear in parentheses below group frequencies.

Youth whose IPAs recommended care for specific medical conditions were more likely to receive care for ongoing conditions than youth who were not recommended for specific medical assessment or treatment [$\chi^2(1, N=124)=7.19, p < .01$; see Table 8]. Significant gaps exist, however, in the delivery of care for these conditions; 75.61% of youth with specific health care needs noted in the IPA did not receive care for these conditions during the six months after entering custody. For youth receiving care for ongoing medical conditions (i.e., asthma, skin conditions, diabetes), the first appointment specific to this care was on average, 61.65 days after the youth entered custody ($SD=48.85$). Furthermore, only 56.10% of youth recommended for condition-specific health care received a routine physical exam in the six months after entering custody.

6.3. Influence of Youth and IPA Characteristics on Service Utilization.

As one of the main objectives, this study sought to explore the extent to which youth- or IPA-related factors influenced service utilization post-custody. The next set of results focuses on youth-related factors and their implications for service utilization.

Youth-related characteristics. A first set of analyses examined the role of basic demographic characteristics. No significant relationship was found between gender and the receipt of mental health services [$\chi^2(1, N=124)=0.10, p=0.76$]. Logistic regression did not reveal a significant effect of age on the receipt (yes/no) of mental health services [$\chi^2(1)=.57, p=0.45$]. Although race and ethnicity did not significantly influence the probability of a youth receiving services overall, there appears to be a tendency for youth of Hispanic or Latino backgrounds to be less likely to receive a mental health service post-custody (see Table 9). That is, while 65.22% of all Caucasian youth and 62.67% of all African American youth received at least one mental health service post-custody, only 33.33% of Hispanic or Latino youth, and 54.55% of all biracial youth received a mental health service post-custody.

In light of these non-significant differences, exploratory analyses tested for differences in the likelihood that an IPA psychologist recommended mental health services based on the youth's race or ethnicity. There was no significant difference; however, based on the absolute proportions, youth of Hispanic/Latino backgrounds were slightly less likely to be recommended for mental health services (66.67%) compared to African American (85.54%) and Caucasian (82.14%) youth. While there are substantially fewer youth of Hispanic/Latino or biracial backgrounds included in the present sample, these findings point to an area that warrants further monitoring as it may suggest disparity

in the identification of needs and receipt of mental health services based on race and ethnicity.

Table 9
Race/Ethnicity and Mental Health Services Utilization
Receipt of any Mental Health
Services Post Custody

Race	Mental Health Services Received	No Mental Health Services Received	χ^2	Φ
Caucasian	15 (1.46)	8 (-1.46)	4.95	0.20
African American	47 (2.85)	28 (-2.85)		
Hispanic/Latino	3 (-2.30)	6 (2.30)		
Biracial	6 (-0.48)	5 (0.48)		
Other	2 (-1.53)	4 (1.53)		

Note. Unadjusted residuals appear in parentheses below group frequencies.

Previous YFS involvement. No significant relationship was observed between whether or not a family had previous involvement of any kind with DSS/YFS and the likelihood the youth received a mental health service post custody, [$\chi^2(1, N=113)=0.96, p=0.33$]. Similarly, whether the family of origin participated in family intervention services with DSS/YFS pre-custody [$\chi^2(1, N=112)=0.85, p=0.36$] or had lost custody of children previously [$\chi^2(1, N=111)=0.10, p=0.76$] did not relate to post-custody service receipt for youth. These results did not change when examining only youth who were recommended for mental health services via the IPA. It is important to note that the number of times, or the timelines of when, families were previously involved with DSS/YFS are unknown.

Placement. The youth's placement at the time of the IPA assessment (i.e., foster care, kinship care, etc.) was not significantly related to the receipt of mental health services among youth whose IPA recommended mental health services [$\chi^2(3, N=96)=6.00, p=0.11$]. Among youth in foster care and kinship care, 77.50% and 70.30% received at least one mental health service post custody, respectively. Among youth who were noted as residing with a (non-offending) parent at the time of the IPA assessment, only 57.10% of those recommended for a mental health service received any services post-custody. Although the sample of youth residing with a parent was small, these differences are notable and merit further exploration in light of research indicating that youth in out-of-home placements are more likely to receive mental health services (Burns et al., 2004; Horwitz, 2012; Hurlburt et al., 2004).

Mental health diagnoses. Among youth receiving an IPA, 70.34% had at least one primary mental health diagnosis on the basis of the IPA clinical assessment; 29.66% had no primary mental health diagnosis, 35.86% of youth had only one diagnosis, 18.62% had two diagnoses, 13.10% had three diagnoses, and less than 1% had five diagnoses. These rates do not include V codes from the *DSM-5*, which are used to identify conditions or significant factors that may play a role in symptoms, be a focus of diagnosis or treatment, or influence the delivery of care (e.g., academic or educational problem, homelessness, sibling relational problem) but do not represent a primary mental health condition. For example, youth identified as having no primary mental health diagnosis may have been assigned a V code in the IPA report in order to reflect their current needs or circumstance. The three most common primary diagnostic categories

included disruptive, impulse-control, and conduct disorders; PTSD and other trauma-related disorders; and Attention Deficit Hyperactivity Disorder (see Figure 5).

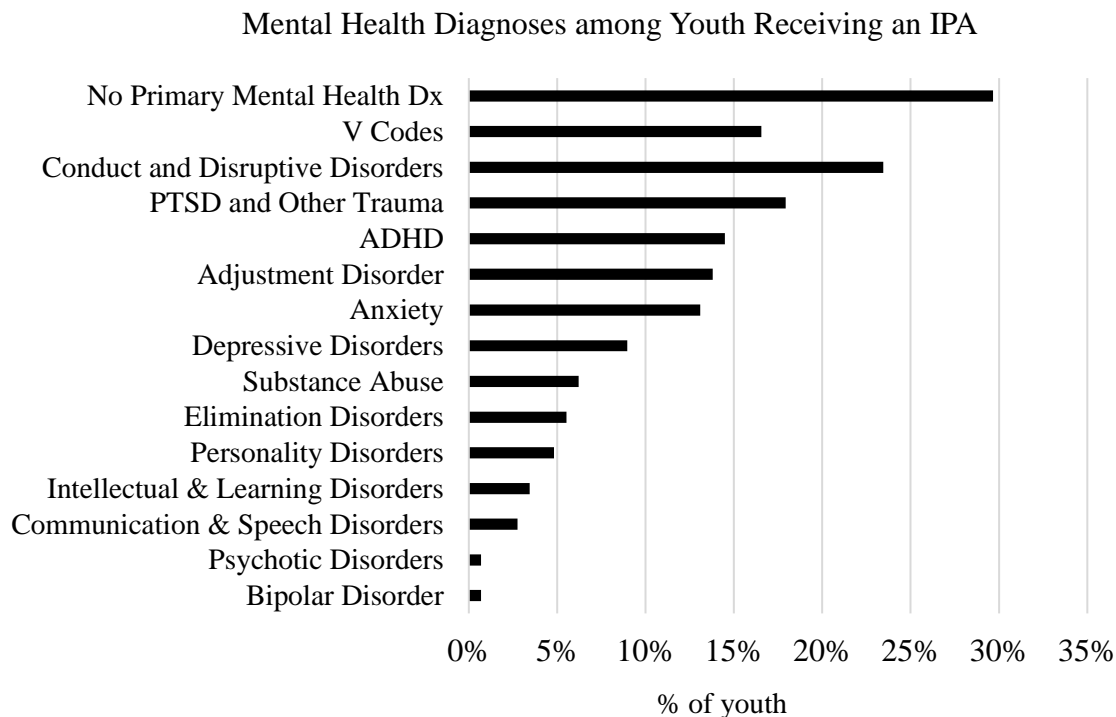


Figure 5. Mental health diagnoses among youth receiving an IPA

$N=145$

The existence of a primary mental health diagnosis at the time of the IPA was significantly related to the receipt of a mental health service post custody [$\chi^2(1, N=124)=7.67, p<0.01$; see Table 10]. Among youth with a mental health diagnosis, 67.47% received a mental health service post-custody and, among youth with two or more mental health diagnoses, 77.78% received a mental health service post-custody. Of note, 23.29% of youth who subsequently received a mental health service had not been indicated as having a mental health diagnosis in the IPA report. This underscores the fact that, particularly in the context of the child welfare system, the presence of a *DSM-5*

diagnosis is not the sole indicator that a youth may benefit from care and support in the context of therapy.

Table 10

Mental Health Diagnosis and Mental Health Services Utilization

Mental Health Diagnosis	Receipt of any Mental Health Services Post Custody		χ^2	Φ
	Mental Health Services Received	Mental Health Services not Received		
1+ Mental Health Diagnosis	56 (7.14)	27 (-7.14)	7.67**	-0.25
No Mental Health Diagnosis	17 (-7.14)	24 (7.14)		

Note. ** $p < .01$. Unadjusted residuals appear in parentheses below group frequencies.

The relationship between mental health diagnosis and service utilization is largely explained by youth with internalizing mental health diagnoses, including anxiety, depressive disorders, adjustment disorders, Post-Traumatic Stress Disorder, and other trauma-related disorders. These youth were more likely to receive a mental health service after entering custody than youth with other diagnoses or no diagnosis [$\chi^2(7, N=124)=17.48, p < .05$] (see Table 11). Among youth diagnosed with an internalizing mental health disorder, 78.38% received a mental health service post-custody, and among those with comorbid (i.e., co-occurring) internalizing and externalizing disorders, 72.73% received a mental health service.

Table 11

Mental Health Diagnosis Categories and Mental Health Services Utilization

Mental Health Diagnosis	Receipt of any Mental Health Services Post Custody		χ^2	Φ
	Mental Health Services Received	No Mental Health Services Received		
Internalizing Disorders	29 (6.92)	8 (-6.92)	17.48*	0.38
Internalizing/Externalizing Comorbid Disorders	8 (1.44)	3 (-1.44)		
Externalizing Disorders	9 (-.55)	7 (.55)		
Substance Abuse Comorbid Disorders	3 (.61)	1 (-.61)		
Intellectual/Learning Disorders	3 (-1.18)	4 (1.18)		
Intellectual/Learning Comorbid Disorders	4 (1.61)	0 (-1.61)		
Personality Disorders	1 (-.19)	1 (.19)		
No Diagnosis	17 (-8.66)	26 (8.66)		

Note. * $p < .05$. Unadjusted residuals appear in parentheses below group frequencies.

Standardized assessment scores. Scores on standardized assessments provide a useful indicator of youth functioning and levels of need, factors that should be related to the utilization of mental health services post-custody.

Beck Youth Inventories. As a whole, average *T* scores on the Beck Youth Inventory indices fell within non-clinically elevated ranges (see Figure 6). Although the majority of youth received scores that suggested that they were functioning within the

normative range in the domains assessed by these screening tools, this set of measures identified many youth with elevated needs (as indicated by the standardized clinical cutoff scores), particularly in areas assessed by the Anxiety Inventory and the Anger Inventory, with 39.58% and 36.46% of youth reporting mildly to extremely elevated scores, respectively (see Table 12). Age was positively associated with scores on the Depression Inventory ($r=.24, p<.05$) and the Disruptive Behavior Inventory ($r=.42, p<.01$), such that older youth endorsed higher levels of these symptoms.

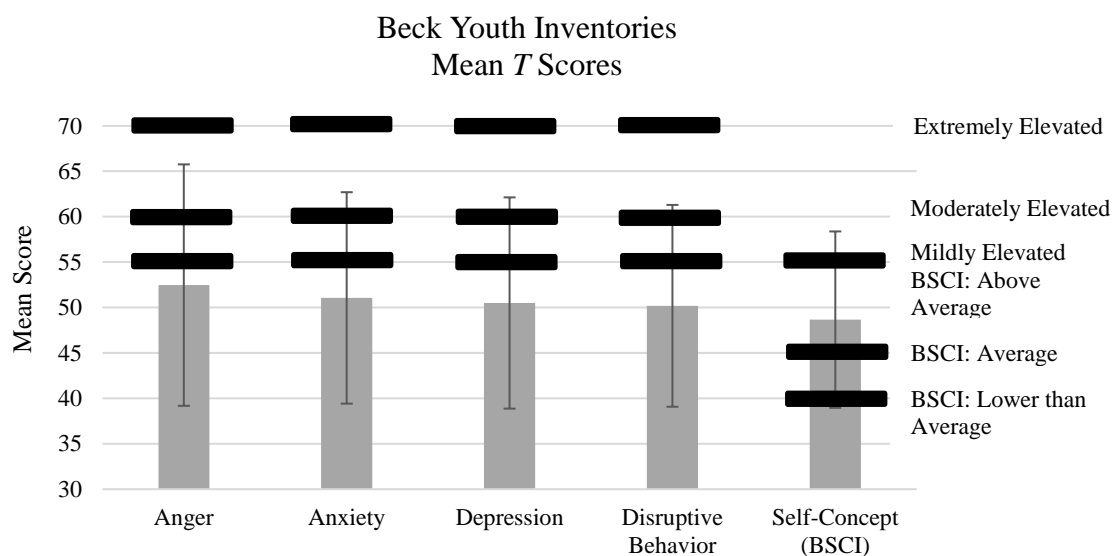


Figure 6. Mean *T* scores on the Beck Youth Inventories

$N=96$

Initially, separate logistic regressions were used to ascertain the unique influence of each index on the likelihood (yes/no) that youth received mental health services post-custody. Of the Beck Youth Inventories, the models were only significant for the Anxiety Inventory [$\chi^2(1)=6.17, p<0.05$] and the Depression Inventory [$\chi^2(1)=3.91, p<0.05$], such that higher scores were related to higher likelihood of service receipt; however, each

model accounted for a small amount of the variance in service receipt (10.38% and 6.67%, respectively; Nagelkerke R^2). When entered into a regression model simultaneously, the Anxiety Inventory and Depression Inventory were no longer unique predictors of service receipt, although the overall model remained significant [$\chi^2(2)=6.34$, $p<0.05$], accounting for 10.66% of the variance in service receipt. This likely reflects the high levels of co-occurrence of these internalizing symptoms.

Table 12

Distribution of T Scores on Beck Youth Inventory Indices

Beck Youth Inventory Index	% of Youth			
	Extremely Elevated (>70)	Moderately Elevated (60-70)	Mildly Elevated (55-60)	Non Elevated (<55)
Anger	12.50%	13.54%	10.42%	63.54%
Anxiety	8.33%	11.46%	19.79%	60.42%
Depression	7.29%	9.38%	13.54%	69.79%
Disruptive Behavior	8.33%	8.33%	15.63%	67.71%
	Much Lower than Average (<40)	Lower than Average (40-45)	Average (45-55)	Above Average (>55)
Self Concept	17.71%	11.46%	39.58%	31.25%

Note. $N=96$; Percentages do not include youth for whom the screener was not performed or was not valid.

UCLA-PTSD RI Total Score. Rates of trauma exposure within this study's sample were high: on this measure, 84% of youth reported experiencing at least one traumatic event and, on average, youth reported experiencing 2.63 events ($SD=2.25$), with some youth experiencing as many as ten. Among youth who experienced a traumatic event, 59.09% reported some level of distress or impairment associated with it. However, on average, the youth who reported experiencing at least one traumatic event scored in the non-clinically significant range for the composite UCLA-PTSD Reaction Index total

score ($M=17.20$; $SD=18.95$). Among youth reporting some level of impairment, the average score was 29.11 ($SD=16.12$), indicating mild to moderate levels of symptomatology. Although these averages are below the informal “cut off” score of 38, they do indicate moderate levels of traumatic distress and functional impairment. Furthermore, 18.18% of youth reported UCLA-PTSD RI scores at or above the “cut off” score of 38 (with some youth scoring as high as 66).

Scores on the UCLA-PTSD Index were significantly higher among youth who subsequently participated in outpatient therapy ($M=20.60$, $SD=20.80$) after entering custody than among those who did not participate in outpatient therapy ($M=13.20$, $SD=16.28$; $t(96.59)=2.03$; $p<.05$). Logistic regression analysis was used to further examine the influence of trauma on the receipt of mental health services. No significant effect was found for mental health services overall [$\chi^2(1)=3.69$, $p=0.06$], but there was a relationship between scores on this measure and the receipt of outpatient mental health services [$\chi^2(1)=7.13$, $p<.01$], such that the predicted odds of participating in at least one session of outpatient therapy post custody were 1.03 times greater for each point of increase on the UCLA-PTSD RI total score. However, this model only accounted for 10.11% of the variance in outpatient therapy receipt.

As an exploratory step, given the frequent co-occurrence of other internalizing problems with PTSD symptoms (and their significant relation to service receipt, cf. above), the Beck Anxiety and Beck Depression indices were entered into the regression. The overall model remained significant [$\chi^2(3)=9.76$, $p<.05$] and accounted for 16.82% of the variance in outpatient therapy utilization. Although the inclusion of these additional screeners accounted for more variance, the UCLA-PTSD RI score was the only factor

that contributed significantly to the model ($p < .05$) such that the predicted odds of participating in at least one outpatient therapy session post custody were 1.04 times greater for each point of increase on the index. These results suggest that, while this set of screeners is generally predictive of outpatient therapy utilization, the UCLA-PTSD Index stands out as the measure most strongly associated with subsequent service utilization.

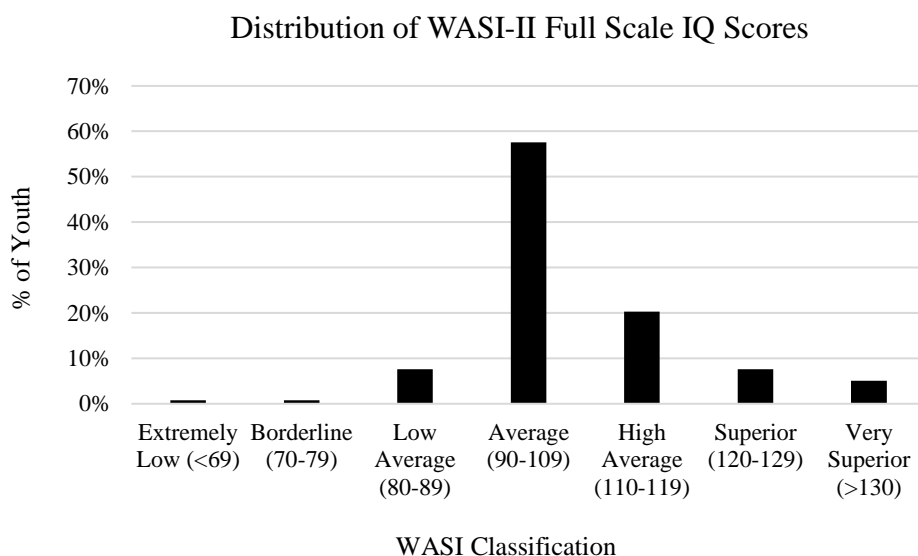


Figure 7. Distribution of WASI-II Full Scale IQ Screener Scores

WASI-II. The average score on the WASI-II screener was 94.09 ($SD=13.04$), and 90.60% of youth were classified as average intelligence or above. Logistic regression did not detect differences in the utilization of mental health services based on the WASI-II screener scores [$\chi^2(1)=0.24$, $p=.62$]. Youth classified as Borderline or Extremely Low based on the WASI-II screener would likely have a high need for services or supports. Among these two youth (i.e., those scoring in the WASI-II's two lowest categories), one received any mental health or developmental (e.g., services billed as “therapeutic

activities to improve functioning,” “self-care and home management training”) services post-custody.

Prior receipt of services. Among youth recommended for a mental health service by the IPA, receipt of a mental health service prior to custody was significantly associated with the receipt of a service post custody [$\chi^2(1, N=103)=12.44, p<.01$] (see Table 13). That is, youth who had been engaged in some kind of mental health service prior to custody were more likely to receive a mental health service post custody. Among those youth recommended for a mental health service who also received a service pre-custody, 87.50% received a mental health service post-custody, although often with a different provider. A different pattern emerged among youth who had not received any type of mental health service prior to custody but who were recommended for a mental health service via their IPAs, such that only 54% received a mental health service post custody.

This pattern – that prior receipt of a mental health service related to a greater likelihood of post-custody receipt – was consistent across primary recommendations and service types, including outpatient therapy and family therapy. Among youth recommended for outpatient therapy, 85.71% of those who participated in a therapy session pre-custody also participated in at least one session post-custody, while only 60.00% of those who had not received the service pre-custody subsequently received any sessions post-custody. Among youth recommended for family therapy, 100% of those who received a family therapy session pre-custody participated in this treatment modality post-custody; only 14.29% of those who did not receive family therapy pre-custody received it post-custody, despite IPA recommendations for the service.

Ensuring continuity of services for youth entering custody due to abuse and/or neglect should be a priority of social workers and care providers to support therapeutic progress and to encourage appropriate adjustment to new environments and routines. While youth receiving a mental health service pre-custody were more likely to receive a service post-custody, the service was often with a different provider. As noted above, 52.94% of youth receiving outpatient therapy pre-custody had at least one session with the same provider post-custody, and 41.67% of youth participating in family therapy had at least one session with the same provider post-custody.

While the continuation of service delivery for youth can be viewed as a positive indicator within the child welfare system, taken together, these findings also underscore that those youth whom the IPA newly identified as in need of services were less likely than youth who had been engaged in services pre-custody to receive any type of mental health support.

Table 13

Mental Health Services Pre-Custody and Mental Health Services Utilization

Mental Health Services Pre-Custody	Receipt of any Mental Health Services Post Custody		χ^2	Φ
	Mental Health Services Received	Mental Health Services not Received		
Mental Health Services Received Pre-Custody	35 (8.2)	5 (-8.2)	12.44**	0.35
Mental Health Services Not Received Pre- Custody	34 (-8.2)	29 (8.2)		

Note. ** $p < .01$. Unadjusted residuals appear in parentheses below group frequencies.

IPA-related characteristics. IPA-specific factors were not found to be significantly related to the implementation of recommended services or supports. Time to report completion did not relate to utilization of mental health services [$\chi^2(1)=0.86$, $p=.35$], nor did the number of days between report completion and the adjudication hearing [$\chi^2(1)=0.03$, $p=.88$].

CHAPTER 7: DISCUSSION

The primary aims of this study were to 1) assess the Independent Psychological Assessments (IPAs) conducted by Teen Health Connection in relation to legislative expectations and best practice guidelines, and 2) explore utilization of health and mental health services both pre- and post-custody. Using billing data as an indicator of service utilization, this study sought to assess the extent to which the service recommendations of the IPA translated into meaningful mental health treatment for youth, and to identify service gaps or inequities in the delivery of mental health care for this vulnerable population.

The IPAs conducted by Teen Health Connection represent a systematized, comprehensive approach to providing mental health assessments for youth entering the custody of DSS/YFS for abuse and/or neglect. Overall, the results of this study indicate that the IPAs generally function in alignment with legislative guidelines and the best practices established and disseminated by multiple professional groups or associations. Furthermore, youth included in this sample tended to access needed mental health services after entering the custody of DSS/YFS, and the IPAs were associated with improvements in access to these services. While these results are promising, this study's findings also highlight critical areas for improvement in regard to how youth are assessed as they enter custody and how they are subsequently linked to needed mental health services and supports.

7.1. Needs of youth in foster care. Youth in this study evidenced moderate to high levels of need, as indicated by their mental health diagnoses, their scores on standardized screeners, and the nature of the recommendations made in their IPAs. Within this sample, over 70% of youth were assigned at least one primary mental health diagnosis via the IPA; 84% reported exposure to at least one traumatic event; 18% reported PTSD symptoms at clinically salient levels; and nearly 40% had at least mildly elevated scores on at least one Beck Youth Inventory. In addition, 28% of youth in the sample had already received at least one mental health service prior to entering custody, and 73% were recommended for outpatient therapy via the IPA.

Although the needs of this sample of youth are high, they are comparable to those found in the existing research on youth in foster care. For instance, scores on the Beck Youth Inventories are generally consistent with findings that between 31% and 48% of youth in foster care exceed clinical cut off scores on symptom-focused measures of functioning (Burns et al., 2004; Casanueva et al., 2014). The rate of mental health diagnosis in the current sample (roughly 70% with at least one diagnosis) was relatively higher than the 57% reported by dosReis, and colleagues (2001), but lower than the 80% estimated by Zima et al. (2000). Given the time that has passed since those prior works, the methods employed, diagnostic systems used, and even the nature of the population studied may differ meaningfully and impact the comparability of these efforts. Regardless, these results align with and build on research pointing to high levels of mental health needs among youth in foster care and underscore the importance of comprehensive mental health assessments to properly identify mental health concerns and link youth to needed treatment services and supports. The paragraphs that follow will (a)

review the relative strengths of the IPA program, in its practices and in the degree to which the assessment process has helped link youth in foster care to needed physical and mental health services, and (b) discuss the gaps in the IPA procedures and in the subsequent implementation of service recommendations.

7.2. Quality and practices of the IPA program. One central aim of this study was to explore the extent to which the IPAs conducted by Teen Health Connection for youth entering the custody of Mecklenburg County DSS/YFS aligned with available best practice guidelines. The routine completion of comprehensive mental health assessments should be considered a critical element of the child welfare system's response to youth entering custody due to abuse and/or neglect. Proper identification and treatment of concerns, including mental health and physical health problems, educational challenges, and social problems, as well as challenges within the family of origin, not only supports the wellbeing of the youth, but can contribute meaningfully to salient child welfare indicators of reunification, placement stability, and youth safety (Wulczyn, Kogan, & Harden, 2003). While several entities have established basic guidelines for the completion of these types of assessments, few practical examples exist for implementing mental health assessments as the standard of care when youth enter custody.

As a result of the procedures and protocols of the IPA program, IPA psychologists are able to conduct the clinical assessment with the youth, on average, within 29 days of a youth entering custody. While the clinical assessment itself is performed within the 30-day timeframe called for by professional groups, the report itself is typically not available until, on average, 42.5 days post-custody. Existing guidelines are not entirely clear regarding application of the 30-day timeframe and whether a youth must present for an

assessment within thirty days, or whether a report summarizing the assessment must be available within thirty days.

It also bears mention that the thirty-day timeframe does not relate meaningfully to procedures within the child welfare system. For example, when youth are taken into custody, they present first for a preliminary protective hearing, typically within 5 to 7 days. The IPA cannot be initiated until parental consent for treatment or a court order is received, typically signed by a judge at the initial hearing. The next court hearing, the adjudication hearing, must occur within 60 days to determine if there is sufficient evidence to keep the youth in custody. If the youth remains in custody, a disposition hearing, often combined with the adjudication hearing proceedings, is held to create a plan addressing the needs of the youth and parent(s).

Child welfare professionals are responsible for developing plans of care that will meet the needs of youth and for complying with key judicial timeframes and orders. In principle, providing social workers with the IPA, which can serve as a “roadmap” to the services and supports that would most benefit the youth, allows them to make appropriate service referrals and engage the youth with available supports prior to answering to judicial authority. In turn, the IPAs provide local district court judges with the needed information to oversee the care of the youth and ensure their needs are being met. Completion of a mental health assessment within the timeframe between the initial hearing and the adjudication hearing, and making findings available to social workers prior to court proceedings, may be more useful indicators of the timeliness of these mental health assessments. On average, IPAs were available 17.64 days prior to this adjudication hearing (not accounting for weekends or holidays). This time window would

seem to allow for sufficient time to initiate and follow up on service referrals prior to court proceedings.

Multiple entities recommend that mental health assessments for youth in foster care use a multimethod, multisource, and multisession approach (e.g., APA, 2013; Council on Foster Care, Adoption, and Kinship Care, 2015; Hunter Romanelli et al., 2009). While research assessing the methodologies for psychological assessments for youth in foster care is scarce, Budd and colleagues' (2002) analysis of psychological assessments and other evaluations performed within a large urban child welfare setting provides a useful comparison for the IPAs.

The clinical assessment portion of the IPA, including the completion of screeners and clinical observation, is conducted in one session, typically on location in the Teen Health Connection medical office. Although multiple sessions of observation and assessment are recommended as a best practice, the majority of evaluation types reviewed by Budd et al. similarly utilized one session of clinical observation and assessment (though one type used an average of five sessions of clinical observation, including assessment in the home setting). Overall, in the context of this limited research base, it would appear that the Teen Health Connection IPAs are about on par with other assessment types, in terms of the number of sessions for clinical assessment.

Other methodological features of the IPAs, including the methods of assessment employed and the use of collateral information, are aligned with best practices and are, in many ways, superior to the models outlined in existing research. In this sample, all assessments included an interview with the child welfare social worker, and over 70% included interviews with GALs. Families of origin (i.e., biological or adoptive parents)

were interviewed in over 70% of assessments, and additional extended family members in 26%. Just under half of the IPAs included interviews with the current foster parent, 30% included interviews with kinship caregivers, and 34% a community mental health provider. In contrast, in the psychological assessments reviewed by Budd et al. (2002), foster parents or kinship caregivers were interviewed in 53.7% of assessments, biological parents were interviewed in only 1.5%, mental health therapists were interviewed in 40.3%, and written records were reviewed in only 53.7% of assessments. Only one evaluation method reviewed by Budd et al., the Parenting Assessment Team assessment, was comparable to the IPAs in the variety of collateral informants; however, this program provided an assessment of both parent and child and was not solely focused on the needs of the youth, unlike the IPA.

The IPA's use of standardized measures of functioning is comparable to psychological assessments reviewed by Budd et al. (2002), in which over 90% of evaluations used cognitive testing or projective personality methods. Alternatively, the IPAs far surpass similar assessments in the use of norm-based screeners for social and adaptive functioning, whereas Budd and colleagues found that only 17.9% of assessments used measures comparable to the Beck Youth Inventories. That said, work in this area does point to an area for potential improvement for the IPAs: in the assessments reviewed by Budd et al., achievement testing was conducted in roughly three-quarters of cases. In light of the frequency with which IPA recommendations indicate the need for additional assessments, building the capacity to conduct more in-depth psychological assessments (i.e., trauma-focused assessments) or achievement and academic testing into the

methodology of the IPA may help to enhance the value of the IPA program for child welfare partners.

The comprehensiveness of recommendations is also cited as a critical aspect of assessments for youth entering custody due to abuse and/or neglect (Pecora, 2010). This study assessed the extent to which the IPAs made recommendations across a variety of key life domains. Overall, the IPAs are considered a mental health assessment and, as such, are geared towards identifying and addressing mental health challenges. Although the vast majority of youth (95.07%) had at least one recommendation specific to their mental health needs, mental health recommendations as a whole accounted for just over 18% of the total number of recommendations. This suggests that the IPAs take into account multiple domains and areas of functioning, providing a comprehensive picture of the needs of the youth. The present data indicate that the IPAs typically address a broader range of domains than the psychological assessments reviewed by Budd et al. (2002), in which only 62.7% included recommendations for educational services or supports, 20.9% for medical or health services, 17.9% for social or extracurricular activities, 3.7% for mentoring and vocational services respectively, and 20.9% for additional assessments. The specific inclusion of recommendations for mental health outpatient therapy or counseling was comparable between the IPAs (73.45%) and the psychological assessments reviewed by Budd et al. (82.1%; 2002).

The multiple domains represented in the IPA recommendations suggest that the plans of care informed by these reports could be individualized to the unique needs and context of each unique youth. The relative strength of the IPAs in addressing the need for social and extracurricular involvement is notable in light of more recent shifts towards

“normalcy” for youth in foster care and concentrated efforts to engage these youth in activities such as extracurricular sports, hobbies, and summer camps (Pecora, 2010). Taken together, the findings regarding the nature of the recommendations made in the IPA reports suggest that the results of these comprehensive mental health assessments can inform broader case planning across a wide range of youth needs (Kerns et al., 2014), potentially improving the ability of the child welfare system and its partners to intervene effectively across multiple ecological levels (Jenson & Fraser, 2006).

In addition to identifying the mental health, behavioral, and psychosocial needs of youth, the IPA process is intended to address many of the barriers that impede the delivery of mental health services to youth in foster care. The debrief meetings, held to review the results of the assessment and provide an opportunity to discuss how the recommended services and supports can be implemented, are designed to function as a practical solution for the challenges of disseminating needed information among child welfare partners and the realities of duplicative information gathering (Council on Foster Care, Adoption, and Kinship Care, 2015; Kerns et al., 2014). The debrief meetings can help to circumvent concerns over confidentiality (Alan et al., 2012; Kerns et al., 2014) and initiate processes necessary for service referrals and authorization. The involvement of representatives from multiple systems in the debriefing process, including social workers, mental health providers, managed care representatives, and foster parents, as well as the family of origin, is designed to facilitate collaborative planning to address the identified needs of the youth. The inclusion of biological or adoptive parents (present in 22.34% of meetings) and foster parents or other caregiving individuals (present in 36.17% of meetings) is notable given that their involvement can increase the likelihood

that youth meaningfully engage with mental health services and that any potential issues arising from family dynamics are addressed (Hunter Romanelli et al., 2009). That said, the available numbers also point to the fact that a sizable minority (over 40%) of debriefs do not include biological, adoptive, or foster caregivers, which underscores an area that should be targeted for improvement.

In fact, more generally, the reach and potential impact of the debrief meetings included in this study are likely limited given that the recorded attendance at these meetings was typically low (on average, 2.93 attendees per meeting). Although beyond the scope of the present work, subsequent research efforts should examine the degree to which representation and attendance at the debrief meeting, particularly of foster parents or managed care representatives, relates to the utilization of recommended services from the IPA.

7.3. Utilization of health and mental health services. A second core aim of this study explored the extent to which the IPA assessments conducted by Teen Health Connection translate into meaningful service utilization for youth in the six months after they enter the custody of DSS/YFS, as well as the factors that relate to utilization. In the six-months prior to custody, 35.48% of the youth included in this study received at least one mental health service, compared to 58.87% post-custody. Moreover, youth accessed more total services in the six months post-custody than in the six months pre-custody, and the overall percentage of youth engaged with at least one mental health service increased steadily throughout the six-month timeframe post-custody. This increase appeared to align (at least approximately) with the dates of the IPA assessment and report completion. These are positive indicators overall, suggesting that, subsequent to custody,

a large proportion of youth are connected with mental health services. This is a salient finding, given that these youth are a traditionally underserved and marginalized group.

To that end, relative to national findings, utilization of any service across the sample was high. That is, the results of prior works indicate that, despite similarly high levels of clinical needs, only 15.8% to 28.3% of youth in foster care receive a mental health service within one year (Burns et al., 2004; Hurlburt et al., 2004), compared to 58.87% of the current sample. In the present study, the most common mental health service was outpatient therapy, recommended for 73.45% of youth receiving an IPA, and received by 50% of youth for whom service data were available. These rates exceed those identified in national efforts, which have indicated that only 15.1% of youth in foster care receive outpatient therapy (Burns et al., 2004). It is important to note that while overall utilization was relatively higher in this sample, dosage of services (i.e., the number of service sessions with the same provider), including outpatient therapy, family therapy, and medication management, was low. This suggests that, while youth may be connected to a mental health service, they tend to utilize these services infrequently and do not meaningfully engage in ongoing treatment.

Overall, findings indicate that IPA recommendations for mental health services were associated with significant increases in the probability of subsequent service utilization. These findings, however, varied based on the type of service recommended. Youth whose IPA recommended outpatient mental health services were significantly more likely to receive outpatient therapy post-custody. Similarly, IPA recommendations for medication management were significantly associated with a higher probability of receiving medication consultation. Among all youth in this sample, 17.74% received

medication management services post-custody, and more specifically, 51.61% of those recommended for medication management in the IPA received this service. These rates of utilization are slightly higher than national estimates of the utilization of psychotropics in foster care samples (13.6%; Casanueva et al., 2014). The majority of youth who received medication management post-custody received at least one other mental health service, most commonly outpatient therapy. This is notable considering research documenting an overuse of psychotropic medications due to a lack of resources for other service types, and a subsequent underuse of outpatient therapy and mental health services, among youth in foster care (Olfson et al., 2006).

While the IPAs were overall found to be associated with a higher probability of service utilization, the present data highlight that critical gaps remain in the delivery of mental health services for youth in foster care. Over 35% of youth recommended for outpatient therapy, and 48% of those recommended for medication management, did not receive these services post-custody. Furthermore, recommendations of family therapy did not meaningfully translate into the delivery of this service, nor did recommendations for additional assessments, either specific to mental health or psychoeducational domains. Rates of non-utilization stood out for these two services – over 72% of youth for whom family therapy was recommended did not receive this service, and over 61% of youth for whom additional assessment was recommended did not receive one. Of particular relevance, among all youth recommended for mental health services, approximately 33% did not receive any service post-custody, and 23% did not receive any type of service either pre- or post-custody. These youth in particular represent a collective failure of the

child welfare system and its partners to respond to the needs of youth entrusted to their care.

Further gaps were apparent in the pattern of service utilization among youth for whom IPAs included recommendations for higher levels of services (i.e., PRTFs and other structured treatment settings) seemingly pointing to a gap in adequate services for those youth who are most highly in need of critical mental health services. In this sample, either these youth received no services, or they received services such as outpatient therapy and medication management, yet still required emergency intervention for mental health concerns. This is an unexpected finding in light of research suggesting that child welfare systems typically provide services to those most critically in need of them based on symptomatology (Burns et al., 2004).

There were also many cases where the IPA did not include recommendations for mental health services for a youth, and yet these services were utilized post-custody. Among the youth not recommended by the IPA for a mental health service, one-fifth subsequently utilized at least one service post-custody. Similarly, over 23% of youth who received a mental health service post-custody were not indicated by the IPA as having a mental health diagnosis. The service areas that contributed most to this discrepancy were family therapy and additional assessments. While this study found an underutilization of these two services among youth recommended for them through the IPA, they were also the services most commonly utilized by those youth not specifically recommended for them. To that end, among youth who did receive family therapy or additional assessments post-custody, over 72% and 62% (respectively) were not recommended for the service by the IPA. While additional assessment could be conducted for the purposes of service

initiation with a particular provider, this possibility is unlikely to account for the observed findings, given that the utilization of outpatient therapy without an IPA recommendation was relatively low; only 13% of those who received outpatient therapy post-custody were not directly recommended for it by the IPA. These findings also underscore that youth, when confronted with the adjustments to new environments and routines that are required when entering foster care, may develop the need for mental health treatment, or may be seen as likely to benefit from therapeutic services and supports, regardless of their specific diagnostic profile.

Utilization of physical health care services, including both primary care and emergency-based treatment, followed similar trends to those seen for mental health services. While overall access to primary care increased in the six months post-custody such that almost 75% of youth received a primary care visit, compared to 32% in the six months pre-custody, significant gaps remain in access to care. In particular, less than half of the youth for whom billable data were available received a physical exam within the thirty days of entering custody recommended by current guidelines for the delivery of health care services for youth entering foster care.

Additionally, while the present study results indicate that youth whose IPA recommendations noted specific health conditions were significantly more likely to receive a primary care visit specific to an ongoing health condition (relative to youth whose IPA did not note a specific health condition), this does not adequately reflect this study's overall findings regarding access to health care for these youth. Over 75% of those identified as having an ongoing medical condition within the IPA recommendations did not receive a primary care visit specific to the noted condition and, on average, those

who did receive services did not see a provider for their condition until 62 days after entering custody. These findings underscore the need for concentrated efforts around the delivery of health care services for youth in foster care and clear protocols with medical providers to ensure timely access to primary care and the delivery of physical exams within thirty-day guidelines.

The present results suggest that recommended procedures for mental health assessments for youth in foster care occur as part of IPA protocol, and subsequently services were utilized by a meaningful proportion of youth. Almost half of all youth received both primary care and mental health services within the six months post-custody. The receipt of mental health services during the six months post-custody was significantly more likely among youth who already received services pre-custody, and those who received primary care post-custody. However, a substantive proportion of youth continue to “slip through the cracks” of the child welfare and mental health systems. Among all youth in this study, 15.32% received neither primary care nor mental health services post-custody, representing a particularly disconnected subset of at-risk youth. It will be crucial for subsequent work to review the specific nature of how the system has functioned in response to these youth, with the goal of understanding the factors and conditions that seemingly impeded their access to services.

Such results underscore the importance of detailed, well-targeted analyses designed to identify the individual, familial, and contextual factors and processes that contribute to service utilization for a given youth. This work provides some preliminary findings that can enhance understanding of the factors and conditions that influence the ability of the IPA to improve service utilization for youth in foster care. Overall, youth

demographics such as age, gender, and race/ethnicity did not significantly influence the probability of service utilization. While not significant, youth of Hispanic/Latino and biracial backgrounds were less likely to receive any mental health services when one was recommended than were youth from African American or Caucasian backgrounds. To date, the literature has consistently identified lower rates of utilization among non-white children, suggesting that minority families, who are overrepresented within the child welfare system, are less likely to receive needed mental health services (Horwitz, 2012; Hurlburt et al., 2004). Although the sample size for these subgroups was small in this study, youth and families of Hispanic or Latino background may face unique challenges to service utilization that warrant further exploration.

Beyond the service recommendations of the IPAs, indicators of mental health functioning identified in the reports, including screening scores and mental health diagnoses, were significantly associated with service utilization in the six months after entering custody. Youth with mental health diagnoses identified by the IPA, particularly diagnoses of internalizing disorders (i.e., anxiety, depressive disorders, adjustment disorders, Post-Traumatic Stress and other trauma-related disorders), were significantly more likely to utilize a mental health service than those without an internalizing diagnosis. Although the subset of youth with non-comorbid externalizing disorders was small (n=16), the lower rates of service utilization among this group are concerning in light of research indicating that youth with these disruptive behaviors are more likely to experience disruptions in their foster care placements and delays in achieving permanency (James, Landsverk, & Slymen, 2004). Improving access to services and providing foster parents with behavioral management strategies via programs, supports,

or services put forth by the IPA recommendations are of critical importance for these youth as they can help to prevent the escalation of problems in the home and avoid delays in permanency.

This study's finding that the UCLA-PTSD Index was predictive of service utilization post-custody aligns with its more general results around mental health diagnoses; youth evidencing higher levels of internalizing, and particularly trauma-related, disorders were more likely to receive mental health services. While multiple screening measures, including the Beck Anxiety and Depression Inventories, were found to be associated with higher likelihood of service utilization, the UCLA-PTSD RI total score stood out as most predictive of service utilization post-custody. In light of increasing recognition of the long-term effects of childhood trauma (National Child Traumatic Stress Network, n. d.), it is critical that child welfare systems proactively identify and address the experience of trauma among youth entering custody. The inclusion of the UCLA-PTSD Index in the clinical assessment of nearly 94% of age-eligible youth, and the apparent responsiveness of the child welfare system to this indicator of trauma, suggest that the processes of the IPA may contribute to the creation of a trauma-informed system in Mecklenburg County. The adoption of trauma-informed practices when youth enter custody due to abuse and/or neglect has been a policy priority for some time (Greeson et al., 2011; Ko et al., 2008), and the IPA program is a promising application of these principles.

In this study, involvement with child- and family-serving systems, particularly health and mental health systems, prior to entering custody was an important factor in the utilization of mental health services post-custody. Previous involvement specifically with

DSS/YFS (i.e., through family interventions or legal custody) was not associated with higher likelihood of service utilization. However, youth who received mental health services pre-custody were more likely to receive services recommended through the IPA than were youth who had not been engaged with mental health services previously. While the IPA process can ideally serve to newly identify youth in need of mental health services, the present results indicate that youth who had not previously come to the attention of mental health systems were less likely to receive services in the six months after entering custody. Thus, while the IPAs may provide useful information about the youth's needs, for youth with no mental health service experience (at least in the half year before custody), engagement in recommended services is less likely. Given that a key objective of establishing guidelines and processes for comprehensive clinical assessments for youth in foster care is the acknowledgment of the adversities they have experienced and the recognition that these youth have been disconnected from adequate care, likely evidencing undetected mental health challenges, this finding has substantive implications for the IPA process and system providers.

Among youth who did receive services both pre- and post- custody, continuation with the same service provider (i.e., the same therapist or agency) was more common than would be expected. For instance, among youth participating in outpatient or family therapy pre-custody, 52.94% and 41.67%, respectively, continued services with the same provider post-custody, although it is unclear whether family therapy was continued with the family of origin or with the youth's foster parent or kinship caregiver (or, for that matter, whether continuation of therapy with the family of origin would have been appropriate among those whose services did not continue). Data are not currently

available to determine the extent to which youth continued their involvement with non-billable programs, such as extracurricular or academic activities, after entering custody. The continuation of these types of supports may contribute meaningfully to adjustment and normalcy post-custody for all youth and may have particular benefit for those with internalizing mental health disorders (Abraczinskas, Kilmer, Haber, Cook, & Zarrett, 2016); this notion holds specific relevance here, given the high percentage of youth with internalizing problems identified in the present sample.

7.4. Study limitations. Overall, the current set of findings suggests that the IPAs conducted by Teen Health Connection have positive implications for the utilization of mental health services among youth entering DSS/YFS custody. Recommendations, scores on standardized screeners, and mental health diagnoses are collectively associated with increased likelihood of service utilization. While the results of this study contribute to our understanding of the mental health needs, service utilization rates, and the potential role of mental health assessments for youth entering the custody of child welfare agencies, several limitations must be noted. Most notably, due to the nature of the data available and the lack of analytic control (and options for comparison) within the context of the child welfare system, it is not possible to assess for causal relationships between the IPA and service utilization; that is, the services a youth received post-custody cannot be directly attributable to the IPA and its recommendations for services. While, taken together, the present findings appear to suggest that the IPAs play a significant role in service utilization post-custody, youth engagement in mental health services is likely due to a host of interrelated factors. Furthermore, without additional contextual data, more fine-grained analyses examining the factors that influence the initiation and timing of

service utilization (i.e., the number of days between custody and first session) or the dosage of interventions may be misleading, given the inability to control for placement disruptions, reunification with families of origin, participation in non-billable supports, and other such factors and conditions.

Secondly, at the time of this study, Teen Health Connection was not notified by DSS/YFS when youth were reunified with their families of origin and no longer in custody. To minimize the likelihood that youth were reunified with their families during the time period examined for this study, analyses were restricted to service data from the first six months after a youth entered custody. However, it is likely that several youth included in the study's sample were no longer in the custody of DSS/YFS during the full six-month timeframe, and youth who are reunified with families of origin may be even less likely to receive mental health services (Burns et al., 2004; Horwitz, 2012). Thus, service utilization, or lack of utilization, cannot be directly attributable to DSS/YFS intervention. Although difficult to currently track, youth who are reunified with their families within the first six months warrant special attention and ongoing support to ensure their mental health needs continue to be met.

In addition to custody status, several other relevant factors may have changed over the course of the six-month timeframe examined in this study. For example, the placement of the youth (i.e., foster care, kinship care, group home, etc.) was documented at the time of the IPA clinical observation, which was on average within the first 30-days of custody. Research has documented relatively high rates of placement disruptions among youth within child welfare systems (including within Mecklenburg County), and it is likely that youth may have changed foster homes, or even (although less likely)

changed from a foster home to a kinship placement, during the six-month timeframe examined in this study.

Furthermore, the use of billable service data as the sole indicator of service implementation likely does not capture the full spectrum of services and supports these youth may be receiving. For example, services provided through entities such as the local public-school system (i.e., psychoeducational assessments, meetings with school psychologists or counselors) or faith communities are not included in the billing data used here. Additionally, the success of the child welfare system in meeting the needs of youth should not depend only on the delivery of formal, billable physical and mental health services. Although the IPA is a mental health assessment, limiting evaluation of service implementation and system functioning to the degree to which recommendations of mental health services have seemingly been followed provides a limited view of both the purpose and the functioning of the IPA program. The implementation of recommendations regarding academics, youths' living environment(s), or extracurriculars can have a more significant impact on youth functioning than the receipt of mental health services alone and, in some cases, lower levels of service utilization can be achieved with the appropriate use of community-based recourses and supports. A more thorough review of the IPA program would evaluate implementation of recommendations beyond mental health services. Future research into the efficacy of the IPAs should include alternative methods of data collection, including reports from social workers and/or GALs, related to the status of academic, extracurricular, and other recommendations of the IPA.

In a similar vein, based on the available billing data, it is not possible to distinguish differences in utilization within major service categories. For example, the

IPA differentiates between various treatment modalities for outpatient therapy, including trauma-focused CBT and Dialectical Behavioral Therapy. Based on the service data available that indicates the receipt of outpatient therapy only, it is unclear if youth received the recommended modality. Of crucial importance, these data do not convey the quality of the service received, or whether therapy was delivered with fidelity to the treatment model recommended.

Finally, the results of the present study are limited to the child welfare system in Mecklenburg County, NC. Findings specific to the utilization of services post-custody are heavily influenced by the context and processes of the local child welfare system and the infrastructure that exists, which includes the IPA program, the juvenile courts, and the network of local mental health providers. While these results are contextually dependent, they still hold relevance for improving child welfare policy and practice both locally and nationally. In light of the relatively limited research around practices for the identification and treatment of mental health problems among youth in foster care, these findings may be particularly salient for other urban communities, where child- and family-serving systems are typically more structurally complex and are required to serve large numbers of youth. These findings speak to the overall value of implementing a mental health assessment protocol for youth entering the custody of child welfare due to abuse and/or neglect, and highlight notable challenges to the meaningful application of these assessments in the coordination and delivery of care.

7.5. Recommendations and future directions. While the findings from this study suggest improved rates of service utilization compared to national child welfare estimates, critical areas for improvement exist. To enhance the influence of the IPAs on

service delivery within the child welfare system and further improve this mechanism for interorganizational partnership (Bai, Wells, & Hillemeier, 2009), ongoing collaboration between Teen Health Connection and the local child welfare and mental health systems should emphasize the following factors related to the IPAs and mental health service utilization:

Expand the number of sessions for clinical assessment and observation, to include two sessions with one attended by the foster parent or kinship caregiver. While the use of collateral information (i.e., interviews, standardized screeners) to inform clinical impressions during the completion of an IPA exceeds current standards, the time allotted for clinical observation and assessment could be extended to include at least two clinical interviews. Adding an additional interview would necessarily add length to the total time for the assessment – on average, IPAs took a total of 17.01 ($SD=5.67$) hours to complete – but it would likely add invaluable insight into the functioning of the youth and relevant factors from the youth’s environment. Due to the unique funding for the IPA program, clinical assessment time is not restricted by the parameters of billable reimbursement, and opportunities to expand clinical assessment time could be explored. If attended by a foster parent or kinship caregiver, this additional assessment period could provide a unique opportunity to make targeted recommendations to improve the likelihood of success in that placement.

Improve attendance at IPA debrief meetings to include additional relevant professionals (e.g., medical professionals such as DSS/YFS nurses) as well as foster parents, foster parent supervisors, or group home staff. The debrief meetings provide a critical opportunity to review findings from the IPA and gain commitment (and “buy in”)

from members of the youth's Child and Family Team towards supporting the mental health related recommendations. The planning and problem solving that ensues can range from identifying appropriate service providers or other supports to making plans for transportation. The success of a plan of care can heavily depend on the consideration of such logistics and potential complications. Oftentimes, foster parents or those providing direct care for the youth will be responsible for ensuring youth attend therapy appointments and practice related skills at home, requiring them to miss work or otherwise prioritize the mental health needs of the youth above other obligations. The debrief meeting provides a unique opportunity to engage caregivers and relevant professionals in planning for the delivery of mental health services and related recommendations

Furthermore, the IPAs not only provide critical information about the health, mental health, academic, social, and other needs of the youth, they also have the potential to provide guidance regarding approaches to caregiving and discipline in the home. Indeed, 73% of IPAs included recommendations specific to strategies or modifiable environmental factors that could facilitate more positive functioning in the home environment. Based on this study's data, it is clear that this potential for the IPAs is not realized as many relevant parties are not present at the debrief meetings. In the sample of debrief meetings assessed here, only 36% were attended by a kinship caregiver, foster parent, foster parent supervisor, or group home/residential treatment facility staff member. In light of high rates of placement disruptions among foster care youth (Mekonnen, Noonan, & Rubin, 2009; Newton et al., 2000; Rubin et al., 2004), providing

caregivers with information such as that contained in the IPA could help to better manage behaviors in the home and stabilize these placements.

Since data for this study were collected, concentrated efforts have been made within the IPA program to include DSS/YFS nurses in the debrief meetings. Their participation in these meetings could help to improve access to primary care overall, and particularly for those youth identified as having ongoing health conditions requiring assessment or treatment. These nurses can also help to disseminate information from the IPA to relevant medical professionals providing care for the youth, including school nurses or primary care providers. Additional efforts should explore the barriers to foster parent participation and strategies to overcome them. Future research should examine the extent to which attendance at the debrief meeting, including the nature of the roles represented at the meeting, is related to the utilization of health and mental health services post-custody.

Create a proactive process for linking youth to recommended services following the completion of the IPA. Improved procedures and coordination with managed care organizations and provider networks can help to ensure that recommended mental health services are implemented for youth following entry into custody, and that any concerns over physical health are identified early and addressed by a medical provider. This is especially critical for youth with the highest levels of mental health needs. According to the available data, youth recommended for these types of services frequently received lower levels of services, or no services, and several required mental health-related emergency care. Furthermore, although youth recommended for lower levels of service were more likely to receive them, notable gaps existed between recommendations for and

receipt of multiple services, including outpatient therapy, medication management, and, most notably, family therapy and additional assessment. Improving coordination among the IPA team, the managed care organization, and local provider networks would help to authorize and implement needed services more efficiently. In addition, in light of the low service dosage observed in this sample, ongoing coordination is warranted to ensure that youth receive adequate levels of needed services over appropriate time periods.

Important features of the IPAs at Teen Health Connection are their neutrality and service-independence; to prevent conflicts of interests, Teen Health Connection will not provide the recommended mental health services for youth in foster care, and psychologists do not specify community providers when making recommendations for mental health services. As such, while Teen Health Connection can contribute to service coordination efforts, such processes must be the responsibility of Mecklenburg County DSS/YFS or the Mecklenburg County Behavioral Health Division, responsible for oversight of a local mental health provider network, in collaboration with the local managed care organization, Cardinal Innovations Healthcare, responsible for their own network of providers. Alternatively, representatives from the Behavioral Health Division or Cardinal Innovations Healthcare could be required to attend debrief meetings to facilitate more timely referrals and authorizations.

Work with local mental health providers to incorporate family therapy sessions into their outpatient treatment of youth in foster care. Youth in this sample were likely to participate in outpatient therapy when recommended for the service through the IPA; however, participation in family therapy sessions was less likely among youth recommended for this service. When family therapy sessions were received, they were

often delivered through the same provider, appropriately building off the work accomplished in individual therapy. The addition of family components, when clinically appropriate, can have a meaningful impact on youth and family outcomes. Local mental health providers should be provided professional development and continuing education opportunities focused on effectively incorporating family therapy into their treatment of youth in foster care, so that more mental health clinicians providing therapy to youth in foster care are able to provide this service.

Ensure youth in foster care have priority access to primary care visits with Teen Health Connection medical providers. While Teen Health Connection maintains service independence in regard to mental health services, the organization is the medical home for youth in the custody of DSS/YFS. As such, Teen Health Connection should examine its scheduling procedures for youth in foster care. Improving communication with child welfare workers (i.e., social workers and nurses) and retaining appointment times specifically for these youth would improve access to care for this medically vulnerable population. This includes access to physical exams, which should occur within 30 days of a youth entering custody, as well as primary care visits following the completion of the IPA to address any health concerns noted in the report. While the IPA report is already shared with medical providers through the patient's electronic medical record, additional efforts should concentrate on improving utilization of assessment results during the delivery of health care services to enhance integration of care and improve the likelihood that youth needs are met. Even if physical health care services are not pursued through Teen Health Connection, additional efforts to link youth with needed medical care and

preventative visits would help improve the utility of the IPA in improving access to primary care.

Expand supervision of child welfare social workers to include review of IPAs and identification of service providers or community organizations for recommended services and supports. While the IPAs represent a substantial contribution to the resource network surrounding social workers themselves (Baumann, Dalgleish, Fluke, & Kern, 2011), additional support should be made available to these workers to assist them to effectively apply the IPA recommendations within their case management practices. Child welfare workers can only help to facilitate access to services and programs to the extent that their own networks, and the infrastructure available to them, provide them with the capacity to engage needed interventions (Van Wert et al., 2016). While supervisory processes are already in place through DSS/YFS, these processes could be enhanced through routine discussion of the IPA, including consideration of barriers encountered, with the goal of actively supporting social workers in their efforts to implement recommendations.

Following the completion of data collection for this study, Teen Health Connection created a resource navigator position to provide support to social workers as they navigate the IPA recommendations. Integrating this position effectively into the existing supervision processes for, and resources considered by, social workers will be important to its success. Additional research will evaluate the extent to which such additional supports for social workers contribute to higher rates of service utilization among the youth they serve.

Closely monitor service utilization within the first three months of a youth entering custody. While the findings from this study suggest that, compared to national

estimates, a higher proportion of youth are accessing mental health services post-custody, these services are typically initiated a few to several months after the youth enter custody. Early access to care for youth entering the child welfare system can help to ensure mental health needs are effectively addressed while the youth remains in custody and can help to facilitate adjustment to new environments and routines. In light of research indicating that the majority of placement disruptions occur in the first six months post-custody (Wulczyn, Kogan, & Harden, 2003), timely intervention and treatment may be especially critical to improving placement stability. Provision of these needed services and supports can contribute substantively to positive youth outcomes, both during and after their experience with child welfare. This is especially important in light of the fact that many youth who are taken into custody are eventually reunified with their families of origin. Before this reunification takes place, it is critical that the youth's mental health needs and the family dynamics contributing to these needs are addressed.

Currently, judicial proceedings represent the primary method for monitoring the implementation of IPA recommendations; however, no specific efforts are made to routinely track this information. As such, reliable data are not available to ascertain the extent to which non-mental health recommendations were implemented for youth post-custody. As one practical step to address this issue, Teen Health Connection's "resource navigator," – the member of the IPA team responsible for supporting social workers after the completion of the IPA – should be included in supervision processes for DSS/YFS social workers to provide an opportunity to routinely collect data on access to services and supports across a broad spectrum of life domains. Establishing a communication loop with social workers regarding the implementation of recommended services and supports

can reinforce case management and data collection efforts simultaneously. Juvenile District Court Judges could also be provided a “bench card” that lists the recommendations of the IPA for each youth in order to encourage more routine monitoring of implementation in the courts. This bench card would be especially important for documenting the status of recommendations and ongoing needs of the youth and family during reunification-related proceedings.

Use the results presented in this study as a baseline against which to measure the impact of program improvements intended to increase the utilization of recommended services after the completion of the IPA. The results of this study can be used to create realistic benchmarks against which to monitor the success of efforts aimed at improving service utilization for youth entering the custody of DSS/YFS. Improvements to the IPA program, including the addition of the resource navigator and targeted efforts to increase attendance at debrief meetings, should bring with them improvements in utilization rates.

Develop a collaborative, cross-systems research group to develop methodology for assessing youth outcomes and evaluating the delivery of multi-disciplinary services and supports for youth in foster care. To evaluate access to supports beyond billable mental health services, a cross-systems research entity should be formed and tasked with monitoring utilization and outcomes among youth in foster care, especially those services received within the local public school system or youth’s participation in extracurricular and social activities, which may have direct implications for youth outcomes while in custody. Engaging a cross-systems research group could identify new data collection mechanisms and further help to elucidate gaps, and the reasons for these gaps, in service delivery. In light of the often conflicting goals of child welfare partners (Blakey, 2014),

unified efforts towards the implementation of IPA recommendations for youth entering the custody of DSS/YFS could help to realign the priorities of these partners towards the comprehensive needs of the youth and family, which could help improve the efficiency of and overall experience with child welfare.

Build capacity among child welfare partners to draw on and use data effectively.

The current study employed a replicable methodology for monitoring the needs of youth in foster care and tracking the subsequent delivery of health and mental health services. This serves as an important potential contribution that can support the work of the proposed cross-systems research group and other community partners. That said, to optimize the potential utility and impact of such a research group, critical partners, including CCPGM and DSS/YFS, should enhance their capacity to collect, store, and retrieve meaningful data. This includes enhanced use of data management systems, improved reporting functionality, and dedicated staff or research partners responsible for data management and collaborative analysis.

7.6. Conclusion. Research has consistently documented high rates of mental health needs among youth in foster care (Burns et al., 2004; Casanueva et al., 2014; dosReis et al., 2001; Hurlburt et al., 2004) as well as an underutilization of needed services (Burns et al., 2004; Hurlburt et al., 2004; Leslie et al., 2000; Pecora et al., 2009). Collaboration and interorganizational linkages between child welfare and mental health systems are critical components for successfully meeting the needs of youth in foster care (Bai, Wells, & Hillemeier, 2009) and further improving rates of service utilization. The results of this study suggest that the completion of routine psychological assessments for youth entering the custody of child welfare agencies can have positive implications for

the delivery of mental health services for this population. The IPAs represent a practical mechanism for improving coordination of health, mental health, and educational services and supports among child welfare and other youth-serving systems. Made possible through multisector collaboration among the local child welfare agency, the juvenile district court, the county behavioral health division, and mental health agencies, the IPAs have laid substantial groundwork in developing a structure for the delivery of routine, in-depth mental health assessments as well as mechanisms (i.e., the IPA report itself, the debrief) for disseminating key results and recommendations. While the results of this study indicate that the IPA program provides a promising structure and is associated with positive utilization outcomes, maximizing the benefits of these assessments towards the comprehensive care of the youth remains a challenge. Additional cross-system efforts will be needed to increase access to mental and physical health services when clinically appropriate.

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APPENDIX A: IPA RECOMMENDATION FREQUENCY

Table 14. Frequency of IPA Recommendations by Youth

Recommendation Category	Examples	% of youth with at least one recommendation in category
Mental Health	Sam can benefit from continued involvement with psychotherapy on a weekly basis. Although behavioral issues are important to address, the therapy should focus in large part on issues of trauma and will require a licensed clinician well-versed in treating trauma in the younger child. If his therapist wants to pursue a possible ADHD diagnosis, administering rating scales to guardians and school personnel is suggested. If rating scales suggest the likelihood of ADHD, then referral to a pediatrician or other medical specialist for a medication evaluation is suggested.	95.07%
Physical Health	John should continue to receive regular medical and dental care. His weight should be monitored and the current efforts regarding exercise and avoidance of junk food should be continued.	92.96%
Academics	Jenny is of average intelligence and yet her academics are often behind. Consulting with her teacher regarding ways to help enhance her academic skills as well as reading with her and practicing math facts are suggested. It is possible that there may be triggers for dissociative periods within the school setting and this may be interfering with her learning. If, after she is engaged in treatment, her academics continue to lag, the school might be asked to formally assess her for a possible learning disability.	87.32%
Living Environment/Parenting Approach	Shameika will do best in a household where positive behaviors are noticed and reinforced. Corrections and/or discipline should be handled in as a matter-of-fact way as possible. Maintaining a calm posture and even voice tone will be better than becoming loud and emotional.	73.24%
Extracurricular	Harold needs whatever resources and help can be brought to bear to take him outside his current peer group and provide a more positive focus for his life. He is good at soccer. Perhaps, involvement with a soccer team outside his neighborhood/current peer group could be a place to begin. Alternately, he is interested in boxing. Mandy would benefit from involvement in varied extracurricular activities and hobbies. Enrichment activities can aid her with her gaining confidence, knowledge, motivation, and purpose in her own life. Activities focused on her specific interests could develop meaningful connections with other peers with	61.97%
Parent/Family Needs	Ms. Jone's mental health functioning, including substance use problems, is extremely central to her interactions and parenting abilities displayed towards Bobby and his siblings. The statements of various collateral contacts indicate strong concern over Ms. Jone's mental health functioning. A concerted effort should be taken to monitor her mental health functioning and adherence to treatment.	41.55%
Domestic Violence Services	As Maria reportedly witnessed domestic violence within the home, it is further recommended that she receive psychoeducation regarding physically violent relationships. Such may occur with the same outpatient therapist, if that provider is skilled in this subject matter, or through an assessment with the Women's Commission's HERO Program.	25.35%
Visitation Considerations	Tina very much misses her younger brother, but she does not presently desire to interact with her mother or her brother's father. Therefore, it is recommended that outings be planned where the two siblings can interact without their parents' involvement. Such an outing may be going to a movie together, meeting for lunch at a neutral location, or attending a sporting event together.	25.35%

Note: All names have been changed to protect confidentiality.

Table 14. Frequency of IPA Recommendations by Youth (cont.)

Recommendation Category	Examples	% of youth with at least one recommendation in category
Family Compliance with DSS	Ms. Cruz should maintain compliance in communicating with DSS/YFS and ultimately, meeting her children's health and educational needs. She should also establish awareness of effective communication. This includes being accessible (i.e., having an up to date and functional number) and responding in an acceptable time frame.	22.54%
Supervision, Monitoring, and Safety	Significant monitoring of negative sexualized behaviors should occur due to Alan's history of such problems. Jonas should not have any unsupervised access to guns of any kind, and DSS needs to reassess whether guns are secured prior to Jonas continuing to have unsupervised visits.	19.72%
Placement Considerations	The options are few if Frank needs a more secure placement than a Level 2 foster placement. A group home may not be an improvement over foster placement, as he can still potentially come and go at will and has the disadvantage of him being in close contact with peers whom he typically does not get along with in a living situation (per his history and his great aunt). Frank will need the structure/rules of a PRTF if he cannot be kept safe in his current outpatient setting.	19.72%
Family Relationships and Dynamics	The status of Myra's relationship with her father needs to be clarified. She has expressed disappointment and anger regarding what she described as repeated promises that are not kept. She needs to know that the adults in her life mean what they say and will be cognizant of the impact that their words and actions, or lack thereof, have on her.	16.20%
Transition Aged Programs and Supports	If Terri expresses specific interest in enhancing independent living and vocational skills, a CARS (Contractual Agreement for Residential Services) agreement should be considered and independent living skills/activities should be offered by DSS/YFS. As noted earlier, Barry will turn 18 years of age shortly. He is in need of an independent living specialist to talk and work with him about his options and the skills that he will need to have in order to make it on his own, should he choose to do this. Providing him with as many choices as possible may help him feel more in control. Barry may be counting on receiving a disability check when he turns 18. It is possible that he'll be reevaluated at age 18 and that he may or may not receive such a	14.08%
Substance Use	Further assessment and monitoring of marijuana use is necessary in light of Alan's admission to very regular and frequent marijuana use. His admitted use both in his mother and grandfather's homes indicates the need for more stringent household restriction of such behavior. Assessment of the extent of his marijuana use and general substance abuse patterns should be initiated through an agency that conducts such assessments with adolescents.	11.27%
Mentoring	If an informal or formal mentor could be identified for Kayla, this would be ideal. She appears to respond to one-on-one interactions. Having an adult "reading buddy" to regularly meet with her would be another way to approach this.	10.56%
Peer Relationships and Natural Supports	Due to Rachel's many behavioral disruptions and law-breaking activity occurring in the context of specific peers, this clinician recommends for close and regular monitoring and that Rachel have no contact with such peers and that telephone, internet, and social media contacts be monitored, limited and/or altogether prohibited. Nate presently appears to have no external support system and could benefit from some family/community supports if at all possible. His great aunt has been the most constant relationship in his life. If the aunt is deemed at all appropriate, it might be to Nate's benefit to see if she would consider being a visiting resource for Nate or to otherwise be involved in his life.	11.97%

Note: All names have been changed to protect confidentiality.

Table 14. Frequency of IPA Recommendations by Youth (*cont.*)

Recommendation Category	Examples	% of youth with at least one recommendation in category
Speech & Language Assessment/Services	Ashley is in need of an assessment of her speech difficulties. It is likely that a referral to a Speech Pathologist need come from her pediatrician.	8.45%
Cultural/Spiritual Considerations	Because Cynthia has firmly expressed spiritual preferences, it is recommended that she have the opportunity to participate in spiritual pursuits, such as church involvement, if she desires to.	7.75%
Juvenile Justice	Due to her problematic pattern of legal infractions and general non-compliance with rules and structure, this clinician recommends ongoing consistent involvement from Bri's legal system representatives. Ongoing review of her probation criteria and consistent reinforcement of legal consequences in response to violations should continue.	4.93%
Foster Parent Recommendations	It may also be to Liam's benefit for his caretaker to seek supportive therapy for assistance in dealing with Liam's challenging behaviors and changing family dynamics that may result from him entering the family.	3.52%
Health Education	It is recommended that there be further investigation of the role of substance use in Steven's father's life as well as in the life of his mother. If substance abuse has been significant, then Steven may benefit from a time-limited, psycho-educational program specifically dealing with this issue.	3.52%
Specialized Assessment	Will is in need of a Neuropsychological Assessment by a licensed Neuropsychologist to better understand his cognitive processing strengths and weaknesses.	2.82%
Developmental Disability	Due to his cognitive and maturational deficits, Gary should continue with CAP/MRDD services. Due to the long-term nature of his considerable deficits, Gary will likely continue to require similar assistance, even as he ages and moves into adulthood. Any special funding and available services relating to Gary's intellectual and developmental disabilities, such as CAP/MRDD, should be considered and accessed as needed.	2.82%
Teen Parent Services	Taylor will be in need of substantial support in preparing for the birth of her child. In addition to basic parenting skills and prenatal care, attention also needs to be given to the emotional and practical consequences of becoming a parent at such a young age.	2.11%
DSS Record Review/Investigation	It is recommended that efforts to obtain more detailed Durham County Social Services records continue in order to better understand the extent of Ms. Brown's presenting difficulties that need to be addressed and any other concerns that may not have been articulated to this point.	2.82%

Note: All names have been changed to protect confidentiality.

APPENDIX B: MENTAL HEALTH RECOMMENDATION FREQUENCY

Mental Health Category: Service & Supports	Examples	% of youth recommended for service/support
Outpatient Therapy - General Therapy	Ariel could benefit from supportive therapy to help her deal with the separation from her sister, which might well be long-term or permanent. Such therapy could also provide an opportunity to deal with the separation from her mother.	38.73%
Outpatient Therapy - Trauma-Specific	Jordan should engage in therapy with a licensed provider who is trained in trauma work. Therapy should go beyond domestic violence, to work on sequela from being terribly burned as a young child and the painful experience of grafting and being called "snake."	30.99%
Medication Management	Tristan is in need of an appointment with a psychiatrist or other medical personnel to evaluate whether or not he would benefit from medication for his ADHD.	27.46%
Family Therapy	Nick is in need of family therapy to address the strong family dynamics within his close-knit family trio. In order for Nick to get better, he will need the support of his parents to encourage him to mature apart from them.	21.13%
Additional Assessment	Tanner is in need of an updated, comprehensive evaluation in order to determine the specific nature and degree of his delays. While his speech and language disorders are clear, it was not possible to clearly determine the extent of other issues based on the screening tools used in the IPA. Further evaluation should be considered to clarify Paul's diagnosis of Attention Deficit Disorder, due to inconsistency with medication as well as the confounding presence of a trauma disorder and previously identified sensory processing disorder. These two established diagnoses can strongly influence inattention, which emphasizes the need to rule out Attention Deficit Disorder in order to better clarify treatment and psychotropic medication plans. Due to validity questions regarding her first intellectual assessment from a psychological evaluation in 2014, and due to the screening nature of the WASF-II, this clinician would recommend that another attempt to thoroughly assess Jessie's intellectual capabilities be made in the future to clarify her true intellectual potential.	18.31%
Monitor for Potential Problems	Sean does not appear to be exhibiting significant mental health symptoms at this time which would necessitate mental health treatment. Symptoms of a re-emergence of his aggressiveness, unusual fears, poor appetite, or poor sleep patterns were discussed with his foster mother as signs that mental health treatment may be indicated in the future.	14.79%
Intensive-In Home Therapy	Oliver appears to be connected to an Intensive In-Home services team which his grandmother reports is helpful. Therefore, it is recommended that he continue this treatment. It is recommended that the treatment team involve his grandmother to provide her guidance as to how to respond when Oliver and his younger sister squabble.	5.63%

Note: All names have been changed to protect confidentiality.

Table 15. Frequency of IPA Mental Health Recommendations by Youth (<i>cont.</i>)		% of youth recommended for service/support
Mental Health Category: Service & Supports	Examples	
Psychiatric Residential Treatment Facility (PRTF)	Jennifer continues to display highly problematic behaviors and potentially self-endangering decision-making... Due to the acuity of her behavior, a higher level of treatment is necessary to establish emotional-behavioral stability and safety. Jennifer should be enrolled in a secure treatment setting, as exemplified by a Psychiatric Residential Treatment Facility (PRTF).	4.23%
Outpatient Therapy - Dialectical Behavioral Therapy	It is recommended that Laura attend outpatient therapy with a licensed clinician. Based on her diagnoses, treatment with components of Dialectical Behavioral Therapy (DBT) is recommended. Such a therapy approach targets interpersonal and mood dysregulation problems, as affected by Borderline Personality Disorder patterns.	3.52%
Foster Parent Involvement in Treatment	Given Thomas's young age, it is imperative that his caretaker(s) be involved in his treatment to learn how to help de-escalate him when he is excessively emotional, and to provide information to his therapist as to how his treatment is progressing.	2.82%
Group Therapy	Mary could benefit from a counseling group focusing on healthy sexuality and esteem, based on her reported tendencies associated with these problem areas and increased risk when factoring in her elopement tendencies. Her reportedly abusive and dysfunctional relationship with her son's father also demonstrates the need to focus on esteem, increased education of relationships, and healthy versus unhealthy aspects of them.	2.82%
Record Review	Lina has been in some form of mental health treatment for at least half of her life. It is unclear which, if any, of these therapies has had a positive impact on her life. It may prove useful to contact the therapeutic boarding school in Florida and speak with treatment personnel there to see if they have any insights about what was more effective during her time there.	2.11%
Managed Care Organization Care Coordinator	Given Henry's complex and heightened symptoms, it is recommended that a Care Coordinator be assigned by his Managed Care Organization (MCO) to assist his guardian and foster providers with appropriate treatment referrals.	1.41%
Therapy Attendance	More consistent attendance would aid with the effectiveness of therapy, as Holly and her siblings' therapist have all indicated that consistency of attendance has sometimes been a negative issue.	1.41%
Partial Hospitalization	The high level of problems recently shown in school settings suggest the need for stabilization in a structured day treatment setting, such as the Partial Hospitalization Program at the Behavioral Health Center. Upon transitioning from such a program, a public school program with a high level of structure and accommodations for containing disruptive behavior is recommended.	0.70%

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APPENDIX C: PHYSICAL HEALTH RECOMMENDATION FREQUENCY

Table 16. Frequency of IPA Physical Health Recommendations by Youth

Physical Health Category: Service & Supports		% of youth recommended for service/support
Primary Care	It is recommended that Monica continue to receive regular eye, medical and dental care.	85.21%
Specified Assessment or Treatment	Jessica's eczema condition should be appropriately addressed by medical personnel. It is important that Patrick's caregivers be aware that he has a reported allergy to amoxicillin and a history of significant constipation. Joan was previously diagnosed with asthma. It is important that her caretakers have an understanding of this medical condition and know how to respond in an emergency. Contact should be made with an endocrinologist to determine if any intervention is needed regarding the advanced bone age that was found at the visit when Linda was younger.	33.80%
Vision (specific)	During his last physical examination, Cody was referred to an ophthalmologist. If not already completed, then it is recommended that an appointment be made and all recommendations of that specialist be followed.	10.56%
Weight and Nutrition	Patrice is generally healthy, although overweight. Paying attention to and assisting her with diet and exercise is important for her future health.	8.45%
Dental (specific)	One of Brooke's front teeth was broken several years ago and she reported that she did not go to a dentist about that problem and has not been to one since then. Follow up with a dentist is recommended.	3.52%

Note: All names have been changed to protect confidentiality.

APPENDIX D: ACADEMIC RECOMMENDATION FREQUENCY

Table 17. Frequency of IPA Academic Recommendations by Youth

Academic Category: Services & Supports	Examples	% of youth recommended for service/support
Attendance Monitoring	Renee needs to be in school daily. This is important for any child, but especially one who evidences the need for extra support.	33.10%
Additional Assessment	Assessment of Alex's current academic achievement levels should be completed to determine if any additional academic support might be necessary. Any relevant concerns from such assessment information should be adequately complied with through home-school or public school settings.	21.83%
Alternative Placement/Alternative Work	Derek is so far behind his age based peers in school that returning to a traditional school setting may not prove fruitful. Therefore, the goal of obtaining his GED appears more realistic. According to Chris's school counselor, teachers have remarked of Chris's exceptional academic potential and proposed involvement in Honors level classes to aid with motivation and focus. This clinician recommends processes to investigate Chris's appropriateness in qualifying for such academic programming.	19.01%
Caretaker and Staff Involvement	A parent or parent figure is encouraged to make frequent contact with Kelly's classroom teacher to check on behavior and academics, and to work with the teacher to help solve any difficulties that might arise.	17.61%
IEP Plan	Raymond should continue with his IEP and "Other Health Impaired" designation at school.	15.49%
Tutoring	Ryan has a history of poor school performance and a demonstrated discrepancy between verbal and nonverbal performance in this assessment. While he was found ineligible for Exceptional Children's services when evaluated in 2nd grade, he could still benefit from tutoring or other forms of academic support. Additional tutoring/special instruction is likely needed to help Jayla catch-up or learn concepts where she is currently struggling.	10.56%
Behavior Management	Any patterns of disruptive behavior should be addressed directly and immediately with behavioral management plans from intervening school staff. Specific planning with consequences for negative behavior and reinforcement for positive decision-making should be concretely established and shared with Joey. Additionally, specific coping skills and responses, as addressed in therapy should be tied to classroom scenarios and encouraged.	8.45%
Monitor for Potential Problems	Given the multiple changes in her school and home placements, Katie's progress should be monitored to ensure that she is on track or to identify any need for support in this area.	6.34%
Record Review	Harriet has the cognitive acumen to do well in school. As her school records were not available for review, it is recommended that her guardian review her records and coordinate any remedial assistance with the CMS Liaison assigned to Harriet's school.	6.34%
Pre-K Services	Xavier is in need of ongoing educational stimulation. He will be eligible to enter kindergarten in the fall and is behind where he should be for his age. He should continue in a pre-K program until such time as he enters kindergarten.	3.52%
Additional supports (i.e., Project LIFT, CIS)	Billy is at serious risk for dropping out of school. If it were available and if he would agree to participate in a program such as Communities in Schools, he could benefit from the structure, one-on-one attention, support and positive opportunities that such programs provide.	3.52%
Specific Classroom Accommodations	There are reports from his therapist that Quinton has glasses that he doesn't wear. He may benefit from preferential seating in the classroom in order to see the board clearly.	4.23%

Note: All names have been changed to protect confidentiality.

APPENDIX E: PARENT/FAMILY RECOMMENDATION FREQUENCY

Table 18. Frequency of IPA Parent/Family Recommendations by Youth

Parent/Family Category: Services & Supports		% of youth recommended for service/support
Parenting Skills Education	Yesina may benefit from her mother and father participating in a parenting class specifically for parents of teens. Both the support from other parents and the information learned would be of value.	20.42%
Mental Health Services	Brad's parents' mental health is pivotal to his own progress. It is recommended that his parents' address their mental health needs so that they are better equipped to parent Brad. Both of his parents' continued contact with an outpatient mental health provider is highly recommended.	18.31%
Parenting Capacity Evaluation	In light of Kathy's mother's expressed desire to pursue reunification, a Parenting Capacity Evaluation is recommended due to Ms. Tolbert's documented mental health and substance abuse problems that have contributed to past patterns of neglect and parental ineffectiveness.	7.04%
Domestic Violence Services	David will do best when his parents are doing their best. To this end, it is recommended that Ms. Smith continue to participate in the services provided by the Women's Commission as recommended by her providers at that agency, and for Mr. Smith to complete the recommended classes at NOVA.	4.23%
Substance Abuse Assessment/Treatment	Mr. Long should adhere to all random drug screens and DSS/YFS criteria, in being the caretaker for Harvey. DSS/YFS should continue to closely monitor Mr. Long and Harvey, especially in light of Harvey's past marijuana use.	3.52%
Language services	Juan could benefit from his mother learning to speak English better, so that among other things, she can more easily monitor what her son(s) are saying and be a better resource for her sons as they interact with an English-speaking world.	2.11%
Legal	Drew's accusations of his father's alleged marijuana cultivation should also be investigated, especially if reunification between Drew and his father is a long-term goal.	1.41%
Occupational Support	In order to support Ariana, it may be necessary to provide assistance to her mother in terms of job training or other resources to help her with employment, a necessary precursor to stable housing.	2.11%
Psychoeducation	Janey's parents may benefit from psycho-education about the varied, multiple effects of trauma.	1.41%
Cultural/Spiritual Considerations	Because Ms. O'Reilly stated the importance of spiritual influence with her and her children, it is encouraged if not already done, that she finds a church setting in which she and her children are comfortable.	0.70%

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