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An Evaluation of Youth Services Trends and Outcomes in Colorado

Applied Research in Child Welfare (ARCH) Project

Social Work Research Center

Research for Results

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Applied Research in Child Welfare (ARCH) Project

Executive Summary

The Applied Research in Child Welfare (ARCH) Project is a partnership between Colorado State University (CSU), the Colorado Department of Human Services (CDHS), and the Departments of Human/Social Services in Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, and Pueblo counties. The purpose of the ARCH Project is to conduct applied research on child welfare interventions that informs social work practice and policy in Colorado. This report presents results from descriptive, comparative, longitudinal, and regression analyses of youth services programming and outcomes in Colorado, which was conducted by the Social Work Research Center in the School of Social Work at CSU with funding from the ARCH Project.

Public child welfare agencies in Colorado are interested in understanding the current county and statewide trends in outcomes for Program Area 4 (PA4) youth given its importance in meeting federal safety, permanency, and well-being guidelines, and in light of the fiscal impact of serving this challenging group given unprecedented budgetary constraints. Furthermore, there is a desire to examine the interplay between youth and case characteristics and interventions for what is known as the "youth in conflict" population. The rationale is that this information can help caseworkers to identify how and when to serve PA4 youth and families in the child welfare system.

Although most states have programs dedicated towards youth in conflict, Colorado is unique in that it primarily provides services to these youth in the child welfare system rather than in the juvenile justice system as in other jurisdictions. Given the fiscal challenges for public child welfare agencies, there are concerns about the effectiveness and efficiency of serving this population in this way. However, there is limited empirical literature on this topic, which calls for research that investigates outcomes, costs, and interventions for these youth.

This study employed a between-county and within-county research design to analyze the trends and outcomes for the youth in conflict population in 11 ARCH counties and the 53 non-ARCH counties that comprise the balance of the state. The descriptive and trend data were aggregated across seven years from 2007 to 2013 and the comparative data were aggregated across six years from 2007 to 2012. The longitudinal data were compared across seven years

from 2007 to 2013. In addition, a multi-category regression analysis was conducted on youth in conflict from 2007 to 2012. The key results are presented for the descriptive, comparative, longitudinal, and predictor studies.

Descriptive Study

For the assessment sample, the most frequent study pathway was assessments with a referral type of 'youth in conflict' for either PA4 or Program Areas 5 (PA5) assessments at 71%. The most common reporting party was court/probation at 36%, followed by family/relative at 17%, and law enforcement at 13%. As for living arrangement at entry, 77% started with the youth at home or with parents, and 21% started with the youth in Division of Youth Corrections (DYC) detention. The average age at referral was 14.7 years, the mean number of prior referrals was 5.0 and the mean number of prior assessments was 2.7.

As for prior involvement, 81% had a prior referral, 73% had a prior assessment, 20% had a prior founded assessment, 43% had a prior case, 4% had a prior adoption, 20% had a prior placement, 10% had a prior residential placement, 39% had prior DYC involvement, 33% had prior DYC detention, 1% had prior DYC commitment, 29% had prior DYC/Senate Bill 94 (SB94) involvement, 3% were a prior founded sexual victim, and 4% were a teen parent.

For presenting issues, 68% had a violence issue, 47% had a crimes against property issue, 35% had a sexual offense issue, 89% had a substance abuse issue, 66% had a truancy issue, 25% had a beyond the control of parents issue, 66% had a walkaway (from home or placement) issue, 22% had a weapons issue, and 28% had a gang membership issue.

For the case sample, a Core Service was authorized in 83% of all cases. There was an out-of-home placement during 52% of all cases, a residential placement during 38% of all cases, a walkaway during 14% of all cases, and a DYC commitment during 11% of all cases in the sample from 2007 to 2013. The overall permanency outcomes for the case sample included a 45% remain home rate and a 58% reunification rate.

Comparative Study

The following groups had the most positive outcomes from the permanency (remain home and reunification) analysis for the case sample:

- Youth 10-12 years old at referral
- Female youth
- Caucasian youth
- Youth who received public assistance
- Youth without a prior referral, assessment, case, placement, residential placement, DYC involvement, DYC commitment, or adoption
- Youth who were placed in a community setting as their first service
- Youth who were not placed in residential care during the case

Longitudinal Study

The following are the key findings from the longitudinal analysis for the youth services sample.

- Statewide, there was a 15% decrease in residential placement from 2007 to 2013. Overall, 38% of youth services cases resulted in a residential placement.

- Overall, 83% of all open youth services cases from 2007 to 2013 resulted in the authorization of at least one Core Service.

- Statewide, 26% of placement evaluations resulted in placements from 2007 to 2013.

- Statewide, 37% of all assessments from 2007 to 2013 were opened to a case for the youth services population.

- Statewide, an average of $15,323 was spent per youth services case on out-of-home placement costs and an average of $3,401 was spent per youth services case on Core Services. There was a downward trend in out-of-home costs for youth services cases from $20,412 in 2007 to $5,622 in 2013, which is a 72% decrease. There was also a downward trend in Core Service costs for youth services cases from $4,099 in 2007 to $2,274 in 2013, which is a decrease of 45%.

- Statewide, an average of $18,724 was spent per closed youth services case on out-of-home placement and Core Service costs. There was a downward trend for youth services cases from $24,511 in 2007 to $7,896 in 2013, which is a 68% decrease.

Predictor Study

The predictive model for the 10-15 age group explains about 42% of the variation, which suggests that a good set of predictors for youth case closure outcomes was selected.

- A youth's age at referral to the child welfare system and the number of months that the youth's case was open are both predictive of outcomes at case closure. Older youth and those with longer case durations had lower odds of remaining home or returning home.

- Several aspects of system involvement (child welfare or juvenile justice) are predictive of outcomes at case closure. First, a prior child welfare placement and, second, felony charges are both predictive of lower odds of remaining home. Placement and felony charges may also be predictive of lower odds for a return home permanency outcome, but evidence is limited.

- Several presenting issues are predictive of case closure outcomes, including violence against persons, crimes against property, gang membership, sexualized behaviors, past walkaway behavior, and truancy. The presence of any one of these issues predicts lower odds of either remaining home or returning home by the end of the current case involvement.

- The receipt of Core Services also predicts remaining home for youth in this age group. Youth who received Core Services were substantially more likely to have remained home at case closure. There is also some limited evidence for Core Services being associated with greater likelihood of returning home for youth who are placed.

The predictive model for the 16-17 age group explains about 32% of the variation, which suggests that a good set of predictors for youth case closure outcomes was selected.

- A youth's age at referral to the child welfare system and the number of months that the youth's case was open are both predictive of outcomes at case closure for youth ages 16 and 17 at referral. Older youth (age 17 versus age 16) and those with longer cases had lower odds of remaining or returning home.

- Regarding system involvement for youth ages 16-17, a prior child welfare placement predicts lower odds of remaining home and may also predict lower odds of returning home, however evidence is limited. Felony charges are not predictive of less permanent outcomes for older youth.

- Several presenting issues are predictive of case closure outcomes for youth ages 16-17, including violence against persons, crimes against property, gang membership, past walkaway behavior, weapons charges, and truancy. The presence of any one of these issues predicts lower odds of either remaining home or returning home (or both) by the end of the current case involvement.

Limitations

Perhaps the most notable limitation of this study is the lack of predictor and explanatory variables available in Trails for the youth in conflict population. Specifically, there are no data on presenting issues available for youth without DYC involvement. Thus, the predictor study could only be conducted with a subsample of youth who also had past or current DYC involvement, which impacts the generalizability of the findings. In addition, there are no measures of parent employment or education, and no accurate measures of family socio-economic status or mental health issues at the time of involvement with the child welfare system. There is also a lack of explanatory variables, as there were no available measures of family supports or family engagement during the study timeframe.

The nature of Core Services program data documentation and tracking is another important limitation to consider. The constraints of these data include variability in how services are recorded in different counties, difficulty in tracking case costs for some contracted services, diversity in the types of county-designed services offered, inconsistent data for county-provided services, and the inability to quantify service participation. It should be noted that new enhancements and functionalities in Trails will allow for the future collection and integration of data on service outcomes and participation. A related limitation is that the cost analysis cannot be a completely adequate reflection of cost, as any resources not documented in Trails are also not reflected in the cost per involvement metric.

Implications

This study has some important implications for child welfare policy and practice for the PA4 population in Colorado. Most notably, the analysis for prior involvement and presenting issues yielded several interesting findings. For older youth, any prior child welfare placement is a risk factor associated with a lower likelihood of remaining or returning home. Furthermore, based on the comparative data, if the first service type is congregate care instead of a community placement, then youth have worse follow-up outcomes including higher subsequent placement and DYC involvement. This would suggest that counties in Colorado continue efforts to reduce the use of residential placements and develop alternatives for effectively serving youth in the community.

Based on descriptive and comparative data, some presenting issues appear to be less prevalent in this population. For example, community safety issues such as crimes against property, weapons, and gang membership were reported by less than half of youth. On the other hand, substance abuse was reported for 89% of youth. Interestingly, better outcomes were documented for youth with a substance use issue as compared to other presenting issues. This may be due to the fact that substance use is the only presenting issue directly served by Core Services. The implication from these results is that human service agencies might consider accessing a wider array of community based services to address other presenting issues.

African American youth are at higher risk of poor outcomes as well, with much lower odds of remaining home or returning home, compared to Caucasian youth. This deeper penetration of African American youth into the criminal justice and human services systems reflects a need for better assessment at entry points into both systems. Counties should also examine the process of deciding which families are a "good fit" for Core Services to be sure that the needs of African American families are clearly understood and appropriate services rendered. For example, African American youth are more likely to be placed in congregate care, but less likely to get Core Services as a first service type. Furthermore, they have a higher likelihood to have a placement evaluation, and when a placement evaluation occurs, African American youth are more likely to be placed. This suggests that a shift in conversations with county courts should be targeted. If the court sends an African American youth to PA4 with a mandate that the youth be assessed for residential placement, these youth may be more likely to go to placement because it is the only option considered. Thus, it would be a positive step to allow child welfare to do more comprehensive evaluation so that options other than congregate care can be considered.

Overall, the predictor study found that older youth are less likely to achieve permanent outcomes, which indicates that they are harder to serve as they age out of the system. Similarly, poorer permanency outcomes were related to longer involvement durations. This suggests a strategy of targeting services at older youth with an eye to closing a case as quickly as possible, so that these youth do not remain in the system long-term, putting them at risk for poorer outcomes.

For youth ages 10-15, prior child welfare placement, felony charges, violence against persons, crimes against property, gang membership, sexualized behaviors and truancy all indicate that a youth is between 40% and 50% less likely to remain at home versus emancipation, DYC or walkaway at case closure. The one issue which has a substantially larger effect size is prior walkaway, which is associated with a 75% lower odds of remaining at home. Notable is the fact that sexualized behavior has an effect size similar to many of the other presenting issues. This suggests that a history of sexualized behaviors does not preclude a child from being served at home any more or less than several other presenting issues.

The Core Services program is designed to keep kids at home and to be administered at home. The odds of remaining at home are 204% greater for youth ages 10-15 youth who receive Core Services. These results suggest that, given an initial decision to serve children in the home, Core Services do help kids who start at home also remain at home throughout the case duration. It is likely that the non-significant effect size for Core Services associated with the return home outcome is due to the fact that these youth would not start receiving services until they had already returned home after being placed. For youth ages 16-17, the combination of starting at home and receiving Core Services is associated with a 277% greater odds of the youth remaining at home until case closure. For these older youth, the results suggest that they too, can stay successfully at home and there is not an *a priori* need to move older youth to an out-of-home setting such as residential care.

An Evaluation of Youth Services Trends and Outcomes in Colorado

Applied Research in Child Welfare (ARCH) Project

1. INTRODUCTION

The Applied Research in Child Welfare (ARCH) Project is a partnership between Colorado State University (CSU), the Colorado Department of Human Services (CDHS), and the Departments of Human/Social Services in Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, and Pueblo counties. The purpose of the ARCH Project is to conduct applied research on child welfare interventions that informs social work practice and policy in Colorado. This report presents results from descriptive, comparative, longitudinal, and regression analyses of youth services programming and outcomes in Colorado, which was conducted by the Social Work Research Center (SWRC) in the School of Social Work at CSU with funding from the ARCH Project.

1.1. Study Rationale

Public child welfare agencies in Colorado are interested in understanding the current county and statewide trends in outcomes for Program Area 4 (PA4) youth given its importance in meeting federal safety, permanency, and well-being guidelines, and in light of the fiscal impact of serving this challenging group given unprecedented budgetary constraints. Furthermore, there is a desire to examine the interplay between youth and case characteristics and interventions for what is known as the "youth in conflict" population. The rationale is that this information can help caseworkers to identify how and when to serve PA4 youth and families in the child welfare system.

1.2. Study Context

Although most states have programs dedicated towards youth in conflict, Colorado is unique in that it primarily provides services to these youth in the child welfare system rather than in the juvenile justice system as in other jurisdictions. Given the fiscal challenges for public child welfare agencies, there are concerns about the effectiveness and efficiency of serving this population in this way. However, there is limited empirical literature on this topic, which calls for research that investigates outcomes, costs, and interventions for these youth. To address this need, SWRC designed a study to answer the following descriptive, comparative, longitudinal, and predictor research questions.

1.3. Research Questions

The following three research questions guided the descriptive study for the youth in conflict population:

1. What are the pathways by which youth in conflict enter the child welfare system?
2. What are the characteristics and presenting issues of youth in conflict?
3. What interventions (services and placements) are provided for youth in conflict?

The following six research questions guided the comparative study for the youth in conflict population:

1. Are there differences in permanency and follow-up outcomes based on county?
2. Are there differences in permanency and follow-up outcomes based on age group at referral, gender, or primary ethnicity?
3. Are there differences in permanency and follow-up outcomes based on receipt of public assistance or prior child welfare involvement?
4. Are there differences in permanency and follow-up outcomes based on first service type (either in home or out-of-home)?
5. What are the permanency and follow-up outcomes when residential care is used for this population?
6. Are there differences in permanency and follow-up outcomes by presenting issues?

The following three research questions guided the longitudinal study for the youth in conflict population:

1. What are the longitudinal trends for the frequency of residential placements?
2. What are the longitudinal trends in the percentage of placement evaluation assessments that result in a placement or open to a case?
3. What are the longitudinal trends in out-of-home and Core Services costs for case involvements?

The following two research questions guided the predictor study for the youth in conflict population:

1. How should a successful outcome be defined for youth in conflict who also had prior youth corrections involvement?
2. What factors and characteristics predict successful outcomes at case closure?

2. METHODS

This study employed a between-county and within-county descriptive, comparative, longitudinal, and predictive research design to analyze the trends and outcomes for the youth in conflict population in 11 ARCH counties and the 53 non-ARCH counties that comprise the balance of the state. The descriptive and trend data were aggregated across seven years from 2007 to 2013 and the comparative data were aggregated across six years from 2007 to 2012. The longitudinal data were compared across seven years from 2007 to 2013. In addition, a multi-category regression analysis was conducted on youth in conflict from 2007 to 2012. The data collection techniques, sample selection, variable definitions, and data analysis procedures are described in the methods section.

2.1. Data Collection

The demographic, placement, and outcome data for this study were collected from individual case records entered into Trails, which is Colorado's Statewide Automated Child Welfare Information System (SACWIS). Trails is an online data management and analysis system used for child welfare case management documentation. To obtain the sample, the appropriate search terms, logic, and filters were used. The data were transmitted in Excel spreadsheets to the Social Work Research Center with the unique child identifiers removed.

2.2. Sample Selection

The inclusion criteria for the descriptive analysis was assessments or new case involvements from 2007 through 2013. The inclusion criteria for the comparative study was assessments or new case involvements from 2007 through 2012. Youth ages 10 to 17 from the 11 ARCH counties and the 53 non-ARCH counties were included in the study if they met the criteria for one of five pathways:

1. Youth in PA4 or Program Area 5 (PA5) assessments with a role in referral of 'Youth in Conflict'
2. Youth in a PA5 assessment with a prior PA4 assessment or case (excluding assessments in which the youth was a victim/alleged victim of sexual abuse)
3. Youth in PA5 assessment with youth as alleged perpetrator of sexual abuse
4. Youth opened to a PA4 case without going through assessment
5. Youth in a PA5 assessment with prior Division of Youth Corrections (DYC) Involvement

Study pathways were determined using the ordered-hierarchy shown above. If a youth met a 'higher-level' pathway, they were not checked for inclusion in a 'lower-level' pathway. A single assessment/case is only included in one pathway; however youth could have multiple assessments/cases during the study period and subsequent assessments/cases during the study period could be included in the same or different pathways.

2.3. Variable Definitions

The variables included in the descriptive and comparative analyses are grouped by youth characteristics, case characteristics, prior involvement, presenting issues, and interventions.

Youth Characteristics

1. *Age at Referral* – age of youth at time of referral that precipitated involvement in the youth services study
2. *Age Group at Referral* – age group of youth at time of referral that precipitated involvement in the youth services study (10-12, 13-14, 15, 16, or 17)
3. *Primary Ethnicity* – ethnicities were grouped into Caucasian, Hispanic, African American, Asian, Native American, and other. For children with multiple ethnicities, the variable was defined from the least frequent to the most frequent ethnicity with Hispanic having priority. The "other" ethnicity category consisted of Alaska Native and Native Hawaiian/Other Pacific Islander.
4. *Gender* – gender of youth (male or female)

Case Characteristics

1. *Referral Type* – type of referral (PA4 or PA5) for the youth services assessment
2. *Referral Reason(s)* – reason(s) for referral for the youth services assessment (placement evaluation/delinquency, parental conflict, walkaway, truancy, youth behaviors, substance abuse, coping, physical abuse, or neglect). Note: a given assessment can have more than one reason for referral.
3. *Reporting Party* – reporting party for the youth services assessment (court/probation, family/relative, law enforcement, therapist/service provider, school/educational, department of human services (DHS), medical/hospital, other, or unknown/anonymous)
4. *Public Assistance* – did the youth's family receive Medicaid, TANF/Colorado Works, or Food Assistance (Food Stamps) at the time of the involvement date (based on either the referral or case open dater) in the study.

5. *Living Arrangement at Entry* – where youth was living at time of involvement in the youth services study (parents, DYC detention, DYC commitment, or out-of-home care)

Prior Involvement

1. *Referral Count* – prior number of referrals (any type)
2. *Assessment Count* – prior number of assessments (any type)
3. *Referral* – did youth have a referral prior to the date of involvement in the study
4. *Assessment* – did youth have an assessment prior to the date of involvement in the study
5. *Founded Assessment* – did youth have a substantiated allegation of abuse or neglect prior to the date of involvement in the study
6. *Case* – did youth have a case prior to the date of involvement in the study
7. *Adoption* – did youth have an adoption prior to the date of involvement in the study
8. *Placement* – did youth have an out-of-home (OOH) placement prior to the date of involvement in the study
9. *Residential Placement* – did youth have a residential placement prior to the date of involvement in the study
10. *DYC Involvement* – did youth have a DYC detention or commitment prior to the date of involvement in the study
11. *DYC Commitment* – did youth have a DYC commitment prior to the date of involvement in the study
12. *SB94 Involvement* – did youth have a Senate Bill 94 (alternatives to detention for youth involved in the juvenile justice system) assessment or case prior to the date of involvement in the study
13. *Felony Charges* – does youth have prior felony referrals or adjudications or currently pending felony charges

Presenting Issues

The sexual abuse victim and teen parent presenting issues variables were measured by case information in Trails. The other presenting issues were measured by responses to questions in the Juvenile Detention Screening and Assessment Guide (JD SAG), which includes the Offenses Screening tool, or a Colorado Juvenile Risk Assessment (CJRA) (see Appendix A for DYC Assessment Crosswalk). Data from these tools were present for 60.6% of the assessment sample and 68.8% of the case sample.

1. *Sexual Abuse Victim (Founded)* – was the youth a victim of founded sexual abuse before entry into the study
2. *Teen Parent* – was the youth a teen parent before entry into the study
3. *Violence against Persons* – youth with any harassment offense, crimes against persons (except for sexual crimes), current crime of violence or weapon charge, crimes against persons, or weapon history, threatens victims or witnesses, against-person misdemeanor referrals, or against-person felony referrals
4. *Gang Involvement* – youth with organized crime offense, associates/identifies with delinquents/gang members, or history of gang membership/association
5. *Sexualized Behaviors* – youth with any sexual crimes, prostitution, risk of victimization/prostitution history, misdemeanor sexual offense referrals, or felony sexual offense referrals
6. *Walkaway* – youth with any runaway offense, escape offense, history of running from placements, history of repeated runaways, escapes, or history of runaways or times kicked out of home
7. *Substance Abuse* – youth with any drug offense, severe substance abuse, history of alcohol or drug use, alcohol or drug use within previous six months
8. *Weapons Use* – youth with any offense related to firearms or weapons, history of weapons use, or weapon referral
9. *Truancy* – youth with truancy offense, no stable school or work situation, or poor attendance in the most recent term
10. *Beyond Control of Parent* – youth with poor parental authority and control
11. *Crimes against Property* – youth with any property offense

Interventions

1. *First Service Category* – what was the first service category for the youth services case (Core Services, OOH-congregate, OOH-community, or no Core Services or OOH placement)
2. *Type of Service*
    a. Core Services – day treatment, intensive family therapy, life skills, home-based, mental health, sexual abuse, substance abuse, special economic assistance, multi-systemic therapy, family meetings, county-designed youth services, or county-designed family services
    b. OOH Placement – congregate (residential or group), foster, kin, psychiatric hospitalization

2.4. Outcome Measures

The outcome measures are grouped by permanency, follow-up, and cost outcomes.

Permanency Outcomes

1. *Closure Residence* – where did the youth reside at case closure (parents, DYC, emancipation, kin/guardianship, walkaway, or case still open)
2. *Remain Home* – no placement during case AND closure residence of parents or kin/guardians for closed cases only
3. *Did Not Remain Home* – placement during case for closed cases only
4. *Return Home* – placement during case AND closure residence of parents or kin/guardians for closed cases only
5. *Did Not Return Home* – placement during case AND closure residence of DYC, emancipation, or walkaway for closed cases only

Follow-up Outcomes

The follow-up outcomes were collected for youth ages 17 and under at the time of case closure and with a case closure date before 10/1/2013 to allow for one year of follow-up data to be collected. Furthermore, follow-up outcome data were collected for youth with all permanency statuses except for DYC, emancipation, or walkaway. This is because these youth who lacked a permanent outcome would have been unlikely to experience the follow-up outcomes as defined below.

1. *Referral* – new referral involving the youth within one-year post case closure
2. *Assessment* – new referral involving the youth within one-year post case closure that was accepted for assessment
3. *Founded Assessment* – new referral involving the youth within one-year post case closure that was accepted for assessment and founded
4. *Case* – new referral involving the youth within one-year post case closure that was opened for services
5. *OOH Placement* – new placement of youth in OOH care within one-year post case closure
6. *DYC Involvement* – new placement of youth in DYC detention within one-year post case closure
7. *DYC Commitment* – new placement of youth in DYC commitment within one-year post case closure

Costs

The following cost measures were calculated for each closed case involvement.

1. *Core Services Expenditures* – total dollar amount for Core Services expenditures recorded in Trails
2. *Placement Expenditures* – total dollar amount for OOH placement expenditures recorded in Trails

2.5. Data Analysis

The variable and outcome data were entered into the IBM Statistical Package for Social Sciences (SPSS), checked for missing and incorrect data, and recoded into the operational variables. Descriptive statistics were used to answer the research questions for the descriptive, comparative, and longitudinal analyses. Specifically, chi-square tests were used to analyze the results for the youth services outcome comparisons.

3. DESCRIPTIVE RESULTS

This section presents results from the descriptive analysis of both the assessment and case samples. The following tables describe the demographics, characteristics, and presenting issues of the youth services population in ARCH and non-ARCH counties from 2007 to 2013.

3.1. Assessment Sample

Overall, there were 38,784 duplicated assessments for 25,414 unduplicated youth in the assessment sample. As displayed in Table 1, non-ARCH counties comprised 18% of the total duplicated assessments and involvements in the overall sample, followed by El Paso at 16%, Arapahoe and Jefferson at 11% each, and Denver at 10%.

Table 1: *Youth Services Assessments from 2007-2013 by County (N = 38,784)*

County	Frequency	Percentage
Non-ARCH	7,069	18.2
El Paso	6,084	15.7
Arapahoe	4,284	11.0
Jefferson	4,268	11.0
Denver	3,863	10.0
Larimer	2,903	7.5
Pueblo	2,534	6.5
Adams	2,351	6.1
Mesa	2,241	5.8
Boulder	1,643	4.2
Douglas	1,226	3.2
Broomfield	318	0.8

As displayed in Table 2, the most frequent study pathway was PA4 or PA5 assessments with a referral type of 'youth in conflict' at 71%. The next most frequent study pathway was youth in a PA5 assessment (except those who were a victim of sexual abuse) with a prior PA4 assessment or case at 13%. The third most frequent study pathway was youth in a PA5 assessment as an alleged perpetrator of sexual abuse at 12%. Youth opened to a PA4 case without going through assessment comprised 2% of the sample, while youth in a PA5 assessment with a prior DYC involvement also comprised 2% of the sample. Overall, the referral type was PA4 for 69% of the assessments and PA5 for 31%.

Table 2: *Study Pathway and Referral Type for Assessments from 2007-2013 (N = 38,784)*

Characteristic	Frequency	Percentage
Pathway		
PA4 Assessment/YIC	27,658	71.3
Prior PA4 Assessment/Case	5,033	13.0
PA5 Sexual Abuse Perpetrator	4,675	12.1
PA4 Case/No Assessment	801	2.1
PA5 Assessment with Prior DYC	617	1.6
Referral Type		
PA4	26,721	68.9
PA5	12,063	31.1

On the following page, Table 3 shows that the most common reporting party was court/probation at 36%, followed by family/relative at 17%, law enforcement at 13%,

therapist/service provider at 10%, school/educational at 9%, department of human services (DHS) at 8%, and medical/hospital at 4%.

Table 3: *Reporting Party at Entry for Assessments from 2007-2013 (N = 37,974)*

Characteristic	Frequency	Percentage
Court/Probation	13,805	36.3
Family/Relative	6,497	17.1
Law Enforcement	4,819	12.7
Therapist/Service Provider	3,713	9.8
School/Educational	3,359	8.8
DHS	3,157	8.3
Medical/Hospital	1,401	3.7
Other	981	2.6
Unknown/Anonymous	251	0.7

As displayed in Table 4, 77% of living arrangements started with the youth at home or with parents, 21% started with the youth in DYC detention, 1% started with the youth in out-of-home (OOH) placement, and less than one percent started with the youth in DYC commitment.

Table 4: *Living Arrangement at Entry for Assessments from 2007-2013 (N = 38,784)*

Characteristic	Frequency	Percentage
Parents/Home	29,897	77.1
DYC Detention	8,083	20.8
OOH Care	527	1.4
DYC Commitment	277	0.7

On the following page, Table 5 shows that 64% of the assessment sample is male and 36% of the sample is female. For primary ethnicity, 46% of the assessment sample is Caucasian, 32% is Hispanic, and 12% is African American.

Table 5: *Demographic Characteristics for Assessments from 2007-2013 (N = 38,784)*

Characteristic	Frequency	Percentage
Gender		
Male	24,744	63.8
Female	14,040	36.2
Primary Ethnicity		
Caucasian	17,831	46.0
Hispanic	12,238	31.6
African American	4,552	11.7
Not Entered	3,550	9.2
Other	613	1.6
Race – White		
Yes	30,006	77.4
No	8,778	23.6
Race - Black		
Yes	4,976	12.8
No	33,808	87.2
Race – Native American		
Yes	337	0.9
No	38,447	99.1
Race - Asian		
Yes	352	0.9
No	38,432	99.1
Race – Hispanic		
Yes	12,238	31.6
No	26,546	68.4

On the following page, Table 6 shows the prior involvement characteristics for the assessments in the sample. Overall, 81% had a prior referral, 73% had a prior assessment, 20% had a prior founded assessment, 43% had a prior case, 4% had a prior adoption, 20% had a prior placement, 10% had a prior residential placement, 39% had prior DYC involvement, 33% had prior DYC detention, 1% had prior DYC commitment, 29% had prior DYC/SB94 involvement, 3% were a prior founded sexual victim, and 4% were a teen parent. The average age was 14.7 years, the mean number of prior referrals was 5 and the mean number of prior assessments was 2.7.

Table 6: *Prior Involvement Characteristics for Assessments from 2007-2013 (N = 38,784)*

Characteristic	Frequency	Percentage
Prior Referral		
Yes	31,542	81.3
No	7,242	18.7
Prior Assessment		
Yes	28,412	73.3
No	10,372	26.7
Prior Founded Assessment		
Yes	7,601	19.6
No	31,183	80.4
Prior Case		
Yes	16,526	42.6
No	22,258	57.4
Prior Adoption		
Yes	1,525	3.9
No	37,259	96.1
Prior Placement		
Yes	7,798	20.1
No	30,986	79.9
Prior Residential		
Yes	3,692	9.5
No	35,092	90.5
Prior DYC Any		
Yes	15,187	39.2
No	23,597	60.8
Prior DYC Detention		
Yes	12,685	32.7
No	26,099	67.3
Prior DYC Commitment		
Yes	410	1.1
No	38,374	98.9
Prior DYC/SB94		
Yes	11,322	29.2
No	27,462	70.8
Prior Sexual Abuse Victim Founded		
Yes	1,116	2.9
No	37,668	97.1
Prior Teen Parent		
Yes	1,360	3.5
No	37,424	96.5

As displayed in Table 7, only 1% of all assessments/involvements in the assessment sample were opened to a FAR assessment, while 37% were opened to a child welfare case.

Table 7: *Case Characteristics for Assessments from 2007-2013 (N = 38,784)*

Characteristic	Frequency	Percentage
FAR Assessment		
Yes	325	0.8
No	38,459	99.2
Opened to Case		
Yes	14,253	36.7
No	24,531	63.3

As displayed in Table 8, Larimer County had the highest percentage of assessments opened to a case at 55%, followed by Denver at 46%, Douglas at 45%, and non-ARCH counties at 42%.

Table 8: *Assessments Opened to Case from 2007-2013 by County (N = 38,784)*

County	Frequency	Percentage
Adams	692	29.4
Arapahoe	1,541	36.0
Boulder	630	38.3
Broomfield	91	28.6
Denver	1,786	46.2
Douglas	549	44.8
El Paso	1,651	27.1
Jefferson	1,294	30.3
Larimer	1,606	55.3
Mesa	639	28.5
Non-ARCH	2,995	42.4
Pueblo	779	30.7

On the following page, Table 9 shows the referral reasons for the assessments in the sample. The most frequent referral reasons were placement evaluations at 32%, physical abuse at 22%, parent conflict at 19%, neglect at 14%, and truancy at 11%.

Table 9: *Referral Reason for Assessments from 2007-2013 (N = 38,784)*

Reason	Frequency	Percentage
Placement Evaluation		
Yes	12,378	31.9
No	26,406	68.1
Parent Conflict		
Yes	7,461	19.2
No	31,323	80.8
Walkaway		
Yes	2,250	5.8
No	36,534	94.2
Truancy		
Yes	4,295	11.1
No	34,489	88.9
Behavior		
Yes	3,134	8.1
No	35,650	91.9
Substance Abuse		
Yes	1,876	4.8
No	36,908	95.2
Coping		
Yes	2,168	5.6
No	36,616	94.4
Physical Abuse		
Yes	8,707	22.4
No	30,077	77.6
Neglect		
Yes	5,562	14.3
No	33,222	85.7

On the following page, Table 10 shows the presenting issues for the assessments in the sample as measured by the JD SAG and CJRA pre-screen instruments. Overall, 68% had a violence issue, 47% had a crimes against property issue, 35% had a sexual offense issue, 89% had a substance abuse issue, 66% had a truancy issue, 25% had a beyond the control of parents (BCOP) issue, 66% had a walkaway issue, 22% had a weapons issue, and 28% had a gang membership issue.

Table 10: *Presenting Issues for Assessments from 2007-2013 (N = 23,506)*

Reason	Frequency	Percentage
Violence		
Yes	16,037	68.2
No	7,469	31.8
Crimes against Property (*N* = 23,300)		
Yes	10,847	46.6
No	12,453	53.4
Sexual Offense		
Yes	8,278	35.2
No	15,228	64.8
Substance Abuse		
Yes	20,929	89.0
No	2,577	11.0
Truancy		
Yes	15,399	65.5
No	8,107	34.5
Beyond Control of Parents (*N* = 20,141)		
Yes	5,094	25.3
No	15,047	74.7
Walkaway		
Yes	15,431	65.6
No	8,075	34.4
Weapons		
Yes	5,220	22.2
No	18,286	77.8
Gang Membership		
Yes	6,609	28.1
No	16,897	71.9

3.2. Case Sample

Overall, there were 11,698 unduplicated youth with 13,027 duplicated involvements in the case sample. The following details the case involvements for each study pathway for the cases from 2007 to 2013 in the ARCH and non-ARCH counties:

1. 10,095 – youth in PA4 or PA5 assessments with a role in referral of 'Youth in Conflict'
2. 1,058 – youth in a PA5 assessment (except for youth who were victims of sexual abuse) with a prior PA4 assessment or case
3. 924 – youth in PA5 assessment with youth as alleged perpetrator of sexual abuse
4. 799 – youth opened to a PA4 case without going through assessment

5. 151 – youth in a PA5 assessment with prior DYC Involvement

Table 11 displays the Core Services received by youth in the case sample during open cases.

Table 11: *Core Services during Case from 2007-2013 (N = 13,027)*

Reason	Frequency	Percentage
Any Core Service		
Yes	10,758	82.6
No	2,269	17.4
Intensive Family Therapy		
Yes	2,209	17.0
No	10,818	83.0
Home-based Services		
Yes	3,140	24.1
No	9,887	75.9
Substance Abuse Treatment		
Yes	2,349	18.0
No	10,678	82.0
Life Skills		
Yes	1,448	11.1
No	11,579	88.9
Sexual Abuse Treatment		
Yes	1,293	9.9
No	11,734	90.1
Mental Health		
Yes	3,099	23.8
No	9,928	76.2
Day Treatment		
Yes	1,816	13.9
No	11,211	86.1
Special Economic Assistance		
Yes	1,931	14.8
No	11,096	85.2
Family Meetings		
Yes	2,335	17.9
No	10,692	82.1
County-designed Youth Services		
Yes	10,080	77.4
No	2,947	22.6
County-designed Family Services		
Yes	1,472	11.3
No	11,555	88.7

Overall, a Core Service was authorized in 83% of all cases. Specifically, the most authorized Core Service was county-designed youth services at 77%, followed by home-based services and mental health at 24% each, substance abuse treatment and family meetings at 18% each, intensive family therapy at 17%, special economic assistance at 15%, day treatment and multi-systemic therapy at 14% each, life skills and county-designed family services at 11% each, and sexual abuse treatment at 10%.

As displayed in Table 12, there was an out-of-home placement during 52% of all cases, a residential placement during 38% of all cases, a walkaway during 14% of all cases, and a DYC commitment during 11% of all cases in the sample from 2007 to 2013. For the cases with an OOH placement, 62% of youth were placed within 60 days of case opening while 38% were placed after 60 days. For the cases with a residential placement, 53% of youth were placed within 60 days of case opening while 47% were placed after 60 days.

Table 12: *Placement Characteristics during Cases from 2007-2013 (N = 13,027)*

Reason	Frequency	Percentage
OOH Placement		
Yes	6,723	51.6
No	6,304	48.4
Residential Placement		
Yes	4,955	38.0
No	8,072	62.0
Walkaway		
Yes	1,852	14.2
No	11,175	85.8
DYC Commitment		
Yes	1,442	11.1
No	11,585	88.9

As displayed in Table 13, the mean number of placement during cases was 2.1, the mean number of placement days was 329 days, and the mean number of residential placement days was 217 days.

Table 13: *Placement Characteristics during Cases from 2007-2013*

Characteristic	*Min*	*Max*	*Mean*
Number of Placements (*N* = 6,723)	1	22	2.14
Placement Days (*N* = 6,723)	0	5,568	329.1
Residential Placement Days (*N* = 4,955)	0	2,328	216.7

As displayed in Table 14, the closure residence was parents in 60% of the cases, followed by DYC in 11%, kin/guardians and emancipation in 8% each, and walkaway in 5%. In addition, 8% of cases were still open at the time of data collection.

Table 14: *Closure Residence for Cases from 2007-2013 (N = 13,027)*

Characteristic	Frequency	Percentage
Parents	7,827	60.1
DYC	1,469	11.3
Kin/Guardians	1,027	7.9
Emancipation	1,006	7.7
Case Still Open	1,005	7.7
Walkaway	682	5.2
Death	11	0.1

As displayed in Table 15, the overall permanency outcomes for the case sample included a 45% remain home rate and a 58% reunification rate.

Table 15: *Permanency Outcomes during Cases from 2007-2013*

Reason	Frequency	Percentage
Remain Home (*N* = 12,022)		
Yes	5,451	45.3
No	6,571	54.7
Reunification (*N* = 5,914)		
Yes	3,403	57.5
No	2,511	42.5

On the following page, Table 16 shows the follow-up outcomes within one year after case closure for youth with a closure residence of home/parents or kin/guardians. Specifically, the referral rate within one year after case closure was 38%, the assessment rate was 27%, the founded assessment rate was 3%, the case rate was 12%, the OOH placement rate was 6%, the residential placement rate was 4%, the DYC involvement rate was 24%, and the DYC commitment rate was 5%.

Table 16: Follow-up Outcomes for Cases from 2007-2013 (N = 5,561)

Reason	Frequency	Percentage
Referral		
Yes	2,546	45.8
No	3,015	54.2
Assessment		
Yes	1,887	33.9
No	3,674	66.1
Founded Assessment		
Yes	207	3.7
No	5,354	96.3
Case		
Yes	928	16.7
No	4,633	83.3
OOH Placement		
Yes	485	8.7
No	5,076	91.3
Residential Placement		
Yes	312	5.6
No	5,249	94.4
DYC Involvement		
Yes	1,520	27.3
No	4,041	72.7
DYC Commitment		
Yes	286	5.1
No	5,275	94.9

4. COMPARATIVE RESULTS

This section presents the results from the comparative analysis of the youth services case sample. Specifically, chi-square tests were used to determine if there were statistically significant relationships between the youth, case, and prior involvement characteristics and the permanency outcomes. A chi-square test for independence asks whether two categorical variables (that is, two or more categories each) are related or not. The null hypothesis is that they are independent. The alternative hypothesis is that they are not independent. If the p-value for the chi-square test is significant, then we reject the null hypothesis that they are independent and accept the alternative hypothesis that they are related.

4.1. Permanency Outcomes

The following tables display the permanency outcomes for comparisons based on county, age group at referral, gender, primary ethnicity, public assistance, prior case involvement, prior residential placement, prior DYC involvement, first service category, and residential placement during involvement span.

As displayed in Table 17, Larimer had the highest remain home rate at 76% followed by Mesa at 57% and Boulder at 55%. Pueblo had the highest reunification rate at 77% followed by non-ARCH counties at 66%, and Douglas at 60%.

Table 17: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes from 2007 to 2012*

	Remained Home		Reunified	
County	**Frequency**	**Percent**	**Frequency**	**Percent**
Adams	248	41.5	145	49.3
Arapahoe	553	41.8	354	53.2
Boulder	282	55.4	98	52.1
Broomfield	19	29.7	21	47.7
Denver	398	26.2	591	57.2
Douglas	220	48.7	127	60.2
El Paso	495	34.4	405	46.6
Jefferson	309	32.7	328	55.0
Larimer	1,018	75.9	128	53.8
Mesa	313	57.2	119	58.0
Pueblo	283	40.2	308	77.4
Non-ARCH	1,313	51.0	779	66.4
Total	**5,451**	**45.3**	**3,403**	**57.5**

On the following page, Table 18 shows that there is a statistically significant relationship ($p < .001$) between age at referral, remaining home (yes or no), and being reunified (yes or no)[1]. The descriptive statistics suggest that a lower percentage of youth 16 years old at referral (39.4%) remained home while a higher percentage of youth 10-12 years old at referral (63.9%) remained home. Furthermore, a lower percentage of youth 17 years old at referral (43.2%) were reunified while a higher percentage of youth 10-12 years old at referral (73.3%) were reunified.

[1] This indicates that the distribution of the outcome variable ("yes" on remain home or reunification) are different depending on age at referral.

Table 18: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Age Group at Referral from 2007 to 2012*

	Remained Home		Reunified	
Age Group at Referral	**Frequency**	**Percent**	**Frequency**	**Percent**
10-12 years old	904	63.9	365	73.3
13-14 years old	1,548	47.7	984	63.0
15 years old	1,155	42.3	831	58.7
16 years old	1,123	39.4	829	54.2
17 years old	721	40.4	394	43.2

As displayed in Table 19, there is a statistically significant relationship ($p < .001$) between gender and the reunification outcome. The descriptive statistics suggests that a lower percentage of male youth (55.2%) were reunified while a higher percentage of female youth (61.2%) were reunified. There was no relationship between gender and the remain home outcome for female youth (45.9%) and male youth (45.0%).

Table 19: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Gender from 2007 to 2012*

	Remained Home		Reunified	
Gender	**Frequency**	**Percent**	**Frequency**	**Percent**
Female	1,937	45.9	1,321	61.6
Male	3,514	45.0	2,082	55.2

As displayed in Table 20, there was a statistically significant relationship ($p < .001$) between ethnicity and the remain home and reunification outcomes. The descriptive statistics suggest that a lower percentage of African American youth (30.7%) remained home while a higher percentage of Caucasian youth (47.9%) remained home. Furthermore, a lower percentage of African American youth (48.3%) were reunified while a higher percentage of Caucasian youth (59.9%) were reunified.

Table 20: *Remain Home (N = 11,552) and Reunification (N = 5,914) Outcomes by Primary Ethnicity from 2007 to 2012*

	Remained Home		Reunified	
Ethnicity	**Frequency**	**Percent**	**Frequency**	**Percent**
African American	484	30.7	469	48.3
Caucasian	2,784	47.9	1,667	59.9
Hispanic	1,650	41.9	1,196	59.0
Other	96	42.5	61	50.4

As displayed in Table 21, there is a statistically significant relationship ($p < .01$) between public assistance and the reunification outcome. The descriptive statistics suggest that a lower percentage of youth who did not receive public assistance (54.7%) were reunified and a higher percentage of youth who received public assistance (58.8%) were reunified. There was no relationship between public assistance and the remain home outcome for youth who received public assistance (45.3%) and youth who did not receive public assistance (45.5%).

Table 21: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Prior Public Assistance from 2007 to 2012*

	Remained Home		Reunified	
Public Assistance	**Frequency**	**Percent**	**Frequency**	**Percent**
No	1,713	45.5	1,006	54.7
Yes	3,738	45.3	2,397	58.8

As displayed in Table 22, there is a statistically significant relationship ($p < .001$) between prior referral and the remain home and reunification outcomes. The descriptive statistics suggest that a lower percentage of youth with a prior referral (43.6%) remained home while a higher percentage of youth without a prior referral (54.0%) remained home. Furthermore, a lower percentage of youth with a prior referral (56.5%) were reunified while a higher percentage of youth without a prior referral (64.2%) were reunified.

Table 22: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Prior Referral from 2007 to 2012*

	Remained Home		Reunified	
Prior Referral	**Frequency**	**Percent**	**Frequency**	**Percent**
No	1,074	54.0	519	64.2
Yes	4,377	43.6	2,884	56.5

On the following page, Table 23 shows that there is a statistically significant relationship ($p < .01$) between prior assessment and the remain home and reunification outcomes. The descriptive statistics suggest that a lower percentage of youth with a prior assessment (43.5%) remained home while a higher percentage of youth without a prior assessment (51.0%) remained home. Furthermore, a lower percentage of youth with a prior assessment (56.5%) were reunified while a higher percentage youth without a prior assessment (61.3%) were reunified.

Table 23: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Prior Assessment from 2007 to 2012*

	Remained Home		Reunified	
Prior Assessment	**Frequency**	**Percent**	**Frequency**	**Percent**
No	1,534	51.0	796	61.3
Yes	3,917	43.5	2,607	56.5

As displayed in Table 24, there is a statistically significant relationship ($p < .001$) between prior founded assessment and the remain home outcome. The descriptive statistics suggest that a lower percentage of youth with a prior founded assessment (41.3%) remained home while a higher percentage of youth without a prior founded assessment (46.3%) remained home. There was no relationship between prior founded assessment and the reunification outcome for youth with a prior founded assessment (55.2%) and youth without a prior founded assessment (58.2%).

Table 24: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Prior Founded Assessment from 2007 to 2012*

	Remained Home		Reunified	
Prior Founded Assessment	**Frequency**	**Percent**	**Frequency**	**Percent**
No	4,489	46.3	2,700	58.2
Yes	962	41.3	703	55.2

As displayed in Table 25, there is a statistically significant relationship ($p < .001$) between prior case and the remain home and reunification outcomes. The descriptive statistics suggest that a lower percentage of youth with a prior case (38.4%) remained home while a higher percentage of youth without a prior case (51.0%) remained home. Furthermore, a lower percentage of youth with a prior case (52.2%) were reunified while a higher percentage of youth without a prior case (63.1%) were reunified.

Table 25: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Prior Case Involvement from 2007 to 2012*

	Remained Home		Reunified	
Prior Case	**Frequency**	**Percent**	**Frequency**	**Percent**
No	3,359	51.0	1,827	63.1
Yes	2,092	38.4	1,576	52.2

On the following page, Table 26 shows that there is a statistically significant relationship ($p < .001$) between prior placement and the remain home and reunification outcomes. The

descriptive statistics suggest that a lower percentage of youth with a prior placement (28.2%) remained home while a higher percentage of youth without a prior case (49.7%) remained home. Furthermore, a lower percentage of youth with a prior placement (50.7%) were reunified while a higher percentage of youth without a prior placement (60.2%) were reunified.

Table 26: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Prior Placement from 2007 to 2012*

	Remained Home		Reunified	
Prior Placement	**Frequency**	**Percent**	**Frequency**	**Percent**
No	4,756	49.7	2,568	60.2
Yes	695	28.2	835	50.7

As displayed in Table 27, there was a statistically significant relationship ($p < .001$) between prior residential placement and the remain home and reunification outcomes. The descriptive statistics suggest that a lower percentage of youth with a prior residential placement (20.5%) remained home while a higher percentage of youth without a prior residential placement (48.0%) remained home. Furthermore, a lower percentage of youth with a prior residential placement (45.2%) were reunified while a higher percentage of youth without a prior residential placement (59.7%) were reunified.

Table 27: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Prior Residential Placement from 2007 to 2012*

	Remained Home		Reunified	
Prior Residential	**Frequency**	**Percent**	**Frequency**	**Percent**
No	5,212	48.0	3,009	59.7
Yes	239	20.5	394	45.2

On the following page, Table 28 shows that there was a statistically significant relationship ($p < .001$) between prior DYC involvement and the remain home and reunification outcomes. The descriptive statistics suggest that a lower percentage of youth with a prior DYC involvement (35.2%) remained home rates while a higher percentage of youth without a prior DYC involvement (54.3%) remained home. Furthermore, a lower percentage of youth with a prior DYC involvement (51.9%) were reunified with a higher percentage of youth without a prior DYC involvement (64.1%) were reunified.

Table 28: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Prior DYC Involvement from 2007 to 2012*

	Remained Home		Reunified	
Prior DYC Involvement	**Frequency**	**Percent**	**Frequency**	**Percent**
No	3,460	54.3	1,750	64.1
Yes	1,991	35.2	1,653	51.9

As displayed in Table 29, there was a statistically significant relationship ($p < .001$) between prior DYC commitment and the remain home and reunification outcomes. The descriptive statistics suggest that a lower percentage of youth with a prior DYC commitment (12.2%) remained home while a higher percentage of youth without a prior DYC commitment (45.7%) remained home. Furthermore, a lower percentage of youth with a prior DYC commitment (18.8%) were reunified while a higher percentage of youth without a prior DYC commitment (58.2%) were reunified.

Table 29: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Prior DYC Commitment from 2007 to 2012*

	Remained Home		Reunified	
Prior DYC Commitment	**Frequency**	**Percent**	**Frequency**	**Percent**
No	5,436	45.7	3,385	58.2
Yes	15	12.2	18	18.8

As displayed in Table 30, there was a statistically significant relationship ($p < .001$) between prior DYC/SB94 involvement and the remain home and reunification outcomes. The descriptive statistics suggest that a lower percentage of youth with a prior DYC/SB94 involvement (36.2%) remained home while a higher percentage of youth without a prior DYC/SB94 involvement (50.3%) remained home. Furthermore, a lower percentage of youth with a prior DYC/SB94 involvement (52.1%) were reunified while a higher percentage of youth without a prior DYC/SB94 involvement (61.1%) were reunified.

Table 30: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Prior DYC/SB94 from 2007 to 2012*

	Remained Home		Reunified	
Prior DYC/SB94 Involvement	**Frequency**	**Percent**	**Frequency**	**Percent**
No	3,916	50.3	2,188	61.1
Yes	1,535	36.2	1,215	52.1

As displayed in Table 31, there was a statistically significant relationship ($p < .001$) between prior adoption and the remain home and reunification outcomes. The descriptive statistics suggest that a lower percentage of youth with a prior adoption (3.7%) remained home while a higher percentage of youth without a prior adoption (46.7%) remained home. Furthermore, a lower percentage of youth with a prior adoption (15.6%) were reunified while a higher percentage of youth without a prior adoption (59.8%) were reunified.

Table 31: *Remain Home (N = 12,022) and Reunification (N = 5,914) Outcomes by Prior Adoption from 2007 to 2012*

	Remained Home		Reunified	
Prior Adoption	**Frequency**	**Percent**	**Frequency**	**Percent**
No	5,437	46.7	3,355	59.8
Yes	14	3.7	48	15.6

As displayed in Table 32, there was a statistically significant relationship ($p < .001$) between first service category and the reunification outcome. The descriptive statistics suggest that a lower percentage of youth who did not receive Core Services or OOH placement as their first service (51.9%) were reunified while a higher percentage of youth who were placed in a community setting as their first service (63.9%) were reunified.

Table 32: *Reunification Outcome by First Service Category from 2007 to 2012 (N = 5,914)*

	Reunified		Not Reunified	
First Service Category	**Frequency**	**Percent**	**Frequency**	**Percent**
Core Services	974	57.2	728	42.8
OOH – Congregate	1,780	56.0	1,397	44.0
OOH – Community	595	63.9	336	36.1
No Core Services or OOH	54	51.9	50	48.1

On the following page, Table 33 shows that there was a statistically significant relationship ($p < .001$) between residential placement during a case and the reunification outcome. The descriptive statistics suggest that a lower percentage of youth who were placed in residential care during the case (54.7%) were reunified while a higher percentage of youth who were not placed in residential care during the case (65.3%) were reunified.

Table 33: *Reunification Outcome by Residential Placement during Case from 2007 to 2012 (N = 5,914)*

	Reunified		Not Reunified	
Residential Placement	**Frequency**	**Percent**	**Frequency**	**Percent**
No	1,027	65.3	545	34.7
Yes	2,376	54.7	1,966	45.3

4.2. Follow-up Outcomes

The following tables display the follow-up outcomes for comparisons based on county, age group at referral, gender, primary ethnicity, public assistance, prior case involvement, prior residential placement, prior DYC involvement, first service category, residential placement during involvement span, presenting issues, and placement evaluation reason. The follow-up outcomes include referral, assessment, founded assessment, case, out-of-home placement, residential placement, DYC involvement (detention or commitment), and DYC commitment within one year of case closure.

On the following page, Table 34 shows that non-ARCH counties had the lowest referral rate within one year of case closure at 29%, followed by Douglas at 33%, and Broomfield at 35%. Non-ARCH counties also had the lowest assessment rate at 20%, followed by Boulder at 21%, and Broomfield at 23%. Broomfield had the lowest founded assessment rate at 0%, followed by Pueblo at 1%, and Douglas at 2%. Boulder had the lowest case rate at 5%, followed by Arapahoe at 9%, and Bromfield at 10%.

Boulder had the lowest OOH placement rate at 2%, followed by Larimer at 4%, and Arapahoe and non-ARCH counties at 5%. Boulder had the lowest residential placement rate at 1%, followed by Larimer at 2%, and Arapahoe and non-ARCH counties at 3%. Boulder had the lowest DYC involvement rate at 17%, followed by Broomfield and non-ARCH counties at 18%, and Larimer at 22%. Lastly, Boulder had the lowest DYC commitment rate at 1%, followed by Broomfield, Larimer, and Pueblo at 3%, and El Paso and non-ARCH counties at 4%.

Table 34: *Follow-up Outcomes for Youth Services Cases from 2007 to 2013 (N = 5,561)*

Outcomes	Adams	Arapahoe	Boulder	Broomfield	Denver	Douglas	El Paso	Jefferson	Larimer	Mesa	Non-ARCH	Pueblo	Total
Referral	52.6%	49.4%	40.8%	55.0%	51.9%	49.7%	44.6%	55.6%	52.1%	52.2%	33.7%	45.3%	45.8%
	(122)	(219)	(93)	(11)	(309)	(80)	(223)	(225)	(422)	(176)	(475)	(191)	(2,546)
Assessment	35.8%	37.2%	24.6%	40.0%	35.3%	37.3%	34.4%	44.4%	39.3%	41.5%	22.9%	40.8%	33.9%
	(83)	(165)	(56)	(8)	(210)	(60)	(172)	(180)	(318)	(140)	(323)	(172)	(1,887)
Founded Assessment	4.7%	3.2%	3.1%	0.0%	4.7%	1.9%	3.2%	4.9%	4.7%	4.5%	3.7%	0.7%	3.7%
	(11)	(14)	(7)	(0)	(28)	(3)	(16)	(20)	(38)	(15)	(52)	(3)	(207)
Case	14.2%	13.8%	6.6%	20.0%	16.6%	18.0%	17.0%	15.1%	26.0%	16.6%	14.7%	15.9%	16.7%
	(33)	(61)	(15)	(4)	(99)	(29)	(85)	(61)	(211)	(56)	(207)	(67)	(928)
OOH Placement	8.6%	8.6%	3.1%	15.0%	12.8%	11.2%	12.6%	11.1%	5.1%	11.0%	6.7%	10.2%	8.7%
	(20)	(38)	(7)	(3)	(76)	(18)	(63)	(45)	(41)	(37)	(94)	(43)	(485)
Residential Placement	7.3%	6.1%	1.3%	15.0%	9.1%	6.8%	7.8%	8.4%	1.9%	7.7%	3.9%	6.6%	5.6%
	(17)	(27)	(3)	(3)	(54)	(11)	(39)	(34)	(15)	(26)	(55)	(28)	(312)
DYC Involvement	29.7%	37.0%	15.4%	20.0%	31.3%	41.0%	30.6%	40.5%	23.7%	26.4%	18.8%	31.8%	27.3%
	(69)	(164)	(35)	(4)	(186)	(66)	(153)	(164)	(192)	(89)	(264)	(134)	(1,520)
DYC Commitment	6.0%	7.2%	0.9%	0.0%	7.1%	5.0%	4.2%	11.6%	3.2%	7.7%	3.9%	3.1%	5.1%
	(14)	(32)	(2)	(0)	(42)	(8)	(21)	(47)	(26)	(26)	(55)	(13)	(286)

As displayed in Table 35, there is a statistically significant relationship ($p < .01$) between age at referral and all of the follow-up outcomes. The descriptive statistics suggest the following:

- A higher percentage of youth 13-14 years old at referral (47.5%) had a new referral while a lower percentage of youth 16 years old at referral (40.4%) had a new referral.
- A higher percentage of youth 13-14 years old at referral (36.6%) had a new assessment while a lower percentage of youth 16 years old at referral (29.1%) had a new assessment.
- A higher percentage of youth 10-12 years old at referral (4.7%) had a new founded assessment while a lower percentage of youth 15 years old at referral (2.6%) had a new founded assessment.
- A higher percentage youth 13-14 years old at referral (18.9%) had a new case while a lower percentage of youth 16 years old at referral (13.8%) had a new case.
- A higher percentage of youth 13-14 years old at referral (10.3%) had a new placement while a lower percentage of youth 16 years old at referral (6.6%) had a new placement.
- A higher percentage of youth 13-14 years old at referral (7.0%) had a new residential placement while a lower percentage of youth 16 years old at referral (3.9%) had a new residential placement.
- A higher percentage of youth 15 years old at referral (33.3%) had a new DYC involvement while a lower percentage of youth 10-12 years old at referral (13.4%) had a new DYC involvement.
- A higher percentage of youth 15 years old at referral (7.3%) had a new DYC commitment while a lower percentage of youth 10-12 years old at referral (1.1%) had a new DYC commitment.

Table 35: *Follow-up Outcomes by Age Group from 2007 to 2012 (N = 5,561)*

Outcome	10-12 year old		13-14 year old		15 year old		16 year old	
	N	%	N	%	N	%	N	%
Referral	542	47.0	1,039	47.5	684	44.8	281	40.4
Assessment	386	33.5	799	36.6	500	32.7	202	29.1
Founded Assessment	54	4.7	94	4.3	39	2.6	20	2.9
Case	195	16.9	413	18.9	224	14.7	96	13.8
OOH Placement	84	7.3	226	10.3	129	8.4	46	6.6
Residential Placement	57	4.9	152	7.0	76	5.0	27	3.9
DYC Involvement	154	13.4	635	29.0	509	33.3	222	31.9
DYC Commitment	13	1.1	123	5.6	111	7.3	39	5.6

As displayed in Table 36, there is a statistically significant relationship ($p < .05$) between gender and the founded assessment, DYC involvement, and DYC commitment outcomes. The descriptive statistics suggest the following:

- A higher percentage of female youth (4.5%) had a new founded assessment while a lower percentage of male youth (3.3%) had a new founded assessment.
- A higher percentage of male youth (32.3%) had a new DYC involvement while a lower percentage of female youth (19.3%) had a new DYC involvement.
- A higher percentage of male youth (7.2%) had a new DYC commitment while a lower percentage of female youth (1.7%) had a new DYC commitment.

There is no relationship between gender and the following outcomes:

- New referral outcome for female youth (47.1%) and male youth (45.0%).
- New assessment outcome for female youth (34.4%) and male youth (33.6%).
- New case outcome for female youth (17.1%) and male youth (16.4%).
- New placement outcome for female youth (9.1%) and male youth (8.5%).
- New residential placement outcome for female youth (5.3%) and male youth (5.8%).

Table 36: *Follow-up Outcomes by Gender from 2007 to 2012 (N = 5,561)*

Outcome	Female		Male	
	N	%	N	%
Referral	994	47.1	1,552	45.0
Assessment	726	34.4	1,161	33.6
Founded Assessment	94	4.5	113	3.3
Case	361	17.1	567	16.4
OOH Placement	191	9.1	294	8.5
Residential Placement	112	5.3	200	5.8
DYC Involvement	406	19.3	1,114	32.3
DYC Commitment	36	1.7	250	7.2

On the following page, Table 37 shows that there is a statistically significant relationship ($p < .01$) between ethnicity and the referral, assessment, OOH placement, DYC involvement, and DYC commitment outcomes. The descriptive statistics suggest the following:

- A higher percentage of African American youth (53.9%) had a new referral while a lower percentage of Caucasian youth (45.0%) had a new referral.
- A higher percentage of African American youth (40.8%) had a new assessment while a lower percentage of Caucasian youth (33.3%) had a new assessment.
- A higher percentage of Hispanic youth (10.7%) had a new placement while a lower percentage of Caucasian youth (7.8%) had a new placement.
- A higher percentage of African American youth (35.8%) had a new DYC involvement while a lower percentage of Caucasian youth (23.5%) had a new DYC involvement.
- A higher percentage of African American youth (7.5%) had a new DYC commitment while a lower percentage of Caucasian youth (4.3%) had a new DYC commitment.

There is no relationship between ethnicity and the following outcomes:

- New founded assessment for African American (4.5%), Caucasian (3.8%), and Hispanic youth (3.7%).
- New case for African American (17.5%), Caucasian (16.7%), and Hispanic youth (17.7%).
- New residential placement for African American (7.2%), Caucasian (5.4%), and Hispanic youth (6.3%).

Table 37: *Follow-up Outcomes by Primary Ethnicity from 2007 to 2012 (N = 5,271)*

Outcome	African American		Caucasian		Hispanic		Other	
	N	%	N	%	N	%	N	%
Referral	309	53.9	1,264	45.0	857	47.7	38	40.4
Assessment	234	40.8	936	33.3	639	35.6	30	31.9
Founded	26	4.5	108	3.8	67	3.7	3	3.2
Case	100	17.5	469	16.7	317	17.7	16	17.0
OOH	61	10.6	219	7.8	193	10.7	10	10.6
Residential	41	7.2	151	5.4	113	6.3	5	5.3
DYC Involve	205	35.8	661	23.5	594	33.1	29	30.9
DYC Commit	43	7.5	121	4.3	118	6.6	4	4.3

On the following page, Table 38 shows that there is a statistically significant relationship ($p < .01$) between prior public assistance and all follow-up outcomes except for DYC commitment. The descriptive statistics suggest the following:

- A higher percentage of youth with public assistance (50.4%) had a new referral while a lower percentage of youth without public assistance (34.8%) had a new referral.
- A higher percentage of youth with public assistance (37.8%) had a new assessment while a lower percentage of youth without public assistance (24.7%) had a new assessment.
- A higher percentage of youth with public assistance (4.4%) had a new founded assessment while a lower percentage of youth without public assistance (2.2%) had a new founded assessment.
- A higher percentage of youth with public assistance (18.5%) had a new case while a lower percentage of youth without public assistance (12.4%) had a new case.
- A higher percentage of youth with public assistance (9.8%) had a new placement while a lower percentage of youth without public assistance (6.1%) had a new placement.
- A higher percentage of youth with public assistance (6.1%) had a new residential placement while a lower percentage of youth without public assistance (4.3%) had a new residential placement.
- A higher percentage of youth with public assistance (29.0%) had a new DYC involvement while a lower percentage of youth without public assistance (23.3%) had a new DYC involvement.

There is no relationship between public assistance and new DYC commitment for youth with public assistance (5.5%) and youth without public assistance (4.3%).

Table 38: *Follow-up Outcomes by Public Assistance from 2007 to 2012 (N = 5,561)*

Outcome	No Public Assistance		Public Assistance	
	N	%	N	%
Referral	568	34.8	1,978	50.4
Assessment	404	24.7	1,483	37.8
Founded Assessment	36	2.2	171	4.4
Case	202	12.4	726	18.5
OOH Placement	100	6.1	385	9.8
Residential Placement	71	4.3	241	6.1
DYC Involvement	380	23.3	1,140	29.0
DYC Commitment	71	4.3	215	5.5

On the following page, Table 39 shows that there is a statistically significant relationship ($p < .01$) between prior referral and all follow-up outcomes. The descriptive statistics suggest the following:

- A higher percentage of youth with a prior referral (50.0%) had a new referral while a lower percentage of youth without a prior referral (27.2%) had a new referral.
- A higher percentage of youth with a prior referral (37.3%) had a new assessment while a lower percentage of youth without a prior referral (19.2%) had a new assessment.
- A higher percentage of youth with a prior referral (4.1%) had a new founded assessment while a lower percentage of youth without a prior referral (2.0%) had a new founded assessment.
- A higher percentage of youth with a prior referral (18.0%) had a new case while a lower percentage of youth without a prior referral (10.7%) had a new case.
- A higher percentage of youth with a prior referral (9.5%) had a new placement while a lower percentage of youth without a prior referral (5.2%) had a new placement.
- A higher percentage of youth with a prior referral (6.1%) had a new residential placement while a lower percentage of youth without a prior referral (3.7%) had a new residential placement.
- A higher percentage of youth with a prior referral (29.0%) had a new DYC involvement while a lower percentage of youth without a prior referral (20.2%) had a new DYC involvement.
- A higher percentage of youth with a prior referral (5.5%) had a new DYC commitment while a lower percentage of youth without a prior referral (3.5%) had a new DYC commitment.

Table 39: *Follow-up Outcomes by Prior Referral from 2007 to 2012 (N = 5,561)*

Outcome	No Prior Referral		Prior Referral	
	N	%	N	%
Referral	281	27.2	2,265	50.0
Assessment	199	19.2	1,688	37.3
Founded Assessment	21	2.0	186	4.1
Case	111	10.7	817	18.0
OOH Placement	54	5.2	431	9.5
Residential Placement	38	3.7	274	6.1
DYC Involvement	209	20.2	1,311	29.0
DYC Commitment	36	3.5	250	5.5

As displayed in Table 40, there is a statistically significant relationship ($p < .05$) between prior assessment and all follow-up outcomes. The descriptive statistics suggest the following:

- A higher percentage of youth with a prior assessment (50.8%) had a new referral while a lower percentage of youth without a prior assessment (31.8%) had a new referral.
- A higher percentage of youth with a prior assessment (38.1%) had a new assessment while a lower percentage of youth without a prior assessment (22.2%) had a new assessment.
- A higher percentage of youth with a prior assessment (4.2%) had a new founded assessment while a lower percentage of youth without a prior assessment (2.4%) had a new founded assessment.
- A higher percentage of youth with a prior assessment (18.5%) had a new case while a lower percentage of youth without a prior assessment (11.7%) had a new case.
- A higher percentage of youth with a prior assessment (9.8%) had a new placement while a lower percentage of youth without a prior assessment (5.8%) had a new placement.
- A higher percentage of youth with a prior assessment (6.2%) had a new residential placement care while a lower percentage of youth without a prior assessment (3.9%) had a new residential placement.
- A higher percentage of youth with a prior assessment (29.2%) had a new DYC involvement while a lower percentage of youth without a prior assessment (22.1%) had a new DYC involvement.
- A higher percentage of youth with a prior assessment (5.5%) had a new DYC commitment while a lower percentage of youth without a prior assessment (4.0%) had a new DYC commitment.

Table 40: *Follow-up Outcomes by Prior Assessment from 2007 to 2012 (N = 5,561)*

Outcome	No Prior Assessment		Prior Assessment	
	N	%	N	%
Referral	464	31.8	2,082	50.8
Assessment	324	22.2	1,563	38.1
Founded Assessment	35	2.4	172	4.2
Case	170	11.7	758	18.5
OOH Placement	84	5.8	401	9.8
Residential Placement	57	3.9	255	6.2
DYC Involvement	322	22.1	1,198	29.2
DYC Commitment	59	4.0	227	5.5

On the following page, Table 41 shows that there is a statistically significant relationship ($p < .05$) between prior founded assessment and all follow-up outcomes except residential placement, DYC involvement, and DYC commitment and commitment. The descriptive statistics suggest the following:

- A higher percentage of youth with a prior founded assessment (55.0%) had a new referral while a lower percentage of youth without a prior founded assessment (43.6%) had a new referral.
- A higher percentage of youth with a prior founded assessment (41.1%) had a new assessment while a lower percentage of youth without a prior founded assessment (32.2%) had a new assessment.
- A higher percentage of youth with a prior founded assessment (5.3%) had a new founded assessment while a lower percentage of youth without a prior founded assessment (3.3%) had a new founded assessment.
- A higher percentage of youth with a prior founded assessment (20.0%) had a new case while a lower percentage of youth without a prior founded assessment (15.9%) had a new case.
- A higher percentage of youth with a prior founded assessment (10.7%) had a new placement while a lower percentage of youth without a prior founded assessment (8.3%) had a new placement.

There is no relationship between prior founded assessment and the following outcomes:

- New residential placement for youth with a prior founded assessment (6.6%) and youth without a prior founded assessment (5.4%).
- New DYC involvement for youth with a prior founded assessment (28.7%) and youth without a prior founded assessment (27.0%).
- New DYC commitment for youth with a prior founded assessment (5.2%) and youth without a prior founded assessment (5.1%).

Table 41: *Follow-up Outcomes by Prior Founded Assessment from 2007 to 2012 (N = 5,561)*

Outcome	No Prior Founded Assessment		Prior Founded Assessment	
	N	%	N	%
Referral	1,954	43.6	592	55.0
Assessment	1,444	32.2	443	41.1
Founded Assessment	150	3.3	57	5.3
Case	713	15.9	215	20.0
OOH Placement	370	8.3	115	10.7
Residential Placement	241	5.4	71	6.6
DYC Involvement	1,211	27.0	309	28.7
DYC Commitment	230	5.1	56	5.2

On the following page, Table 42 shows that there is a statistically significant relationship ($p < .05$) between prior case and all follow-up outcomes except residential placement, DYC involvement, and DYC commitment. The descriptive statistics suggest the following:

- A higher percentage of youth with a prior case (52.6%) had a new referral while a lower percentage of youth without a prior case (41.1%) had a new referral.
- A higher percentage of youth with a prior case (39.3%) had a new assessment while a lower percentage of youth without a prior case (30.2%) had a new assessment.
- A higher percentage of youth with a prior founded assessment (4.3%) had a new founded assessment while a lower percentage of youth without a prior case (3.3%) had a new founded assessment.
- A higher percentage of youth with a prior case (19.5%) had a new case while a lower percentage of youth without a prior case (14.8%) had a new case.
- A higher percentage of youth with a prior case (10.1%) had a new placement while a lower percentage of youth without a prior case (7.8%) had a new placement.

There is no relationship between prior case and the following outcomes:

- New residential placement for youth with a prior case (5.9%) and youth without a prior case (5.4%).
- New DYC involvement for youth with a prior case (28.7%) and youth without a prior case (26.4%).

- New DYC commitment for youth with a prior case (5.5%) and youth without a prior case (4.9%).

Table 42: *Follow-up Outcomes by Prior Case Involvement from 2007 to 2012 (N = 5,561)*

Outcome	No Prior Case		Prior Case	
	N	%	N	%
Referral	1,357	41.1	1,189	52.6
Assessment	998	30.2	889	39.3
Founded Assessment	109	3.3	98	4.3
Case	487	14.8	441	19.5
OOH Placement	256	7.8	229	10.1
Residential Placement	179	5.4	133	5.9
DYC Involvement	871	26.4	649	28.7
DYC Commitment	161	4.9	125	5.5

On the following page, Table 43 shows that there is a statistically significant relationship ($p < .01$) between prior placement and all follow-up outcomes except founded assessment and DYC involvement. The descriptive statistics suggest the following:

- A higher percentage of youth with a prior placement (55.6%) had a new referral while a lower percentage of youth without a prior placement (43.9%) had a new referral.
- A higher percentage of youth with a prior placement (41.7%) had a new assessment while a higher percentage of youth without a prior placement (32.4%) had a new assessment.
- A higher percentage of youth with a prior placement (19.9%) had a new case while a lower percentage of youth without a prior placement (16.1%) had a new case.
- A higher percentage of youth with a prior placement (13.6%) had a new placement while a lower percentage of youth without a prior placement (7.8%) had a new placement.
- A higher percentage of youth with a prior placement (8.4%) had a new residential placement while a lower percentage of youth without a prior placement (5.1%) had a new residential placement.
- A higher percentage of youth with a prior placement (31.8%) had a new DYC involvement while youth a lower percentage of youth without a prior placement (26.5%) had a new DYC involvement.

There is no relationship between prior placement and the following outcomes:

- New founded assessment for youth with a prior placement (4.5%) and youth without a prior placement (3.6%).
- New DYC commitment for youth with a prior placement (5.8%) and youth without a prior placement (5.0%).

Table 43: *Follow-up Outcomes by Prior Placement from 2007 to 2012 (N = 5,561)*

Outcome	No Prior Placement		Prior Placement	
	N	%	N	%
Referral	2,041	43.9	505	55.6
Assessment	1,508	32.4	379	41.7
Founded	166	3.6	41	4.5
Case	747	16.1	181	19.9
OOH Placement	361	7.8	124	13.6
Residential Placement	236	5.1	76	8.4
DYC Involvement	1,231	26.5	289	31.8
DYC Commitment	233	5.0	53	5.8

On the following page, Table 44 shows that there is a statistically significant relationship ($p <$ .01) between prior residential placement and all follow-up outcomes except founded assessment and case. The descriptive statistics suggest the following:

- A higher percentage of youth with a prior residential placement (58.5%) had a new referral while a lower percentage of youth without a prior residential placement (45.0%) had a new referral.
- A higher percentage of youth with a prior residential placement (44.0%) had a new assessment while a lower percentage of youth without a prior residential placement (33.3%) had a new assessment.
- A higher percentage of youth with a prior residential placement (14.9%) had a new placement while a lower percentage of youth without a prior residential placement (8.3%) had a new placement.
- A higher percentage of youth with a prior residential placement (10.2%) had a new residential placement while a lower percentage of youth without a prior residential placement (5.3%) had a new residential placement.

- A higher percentage of youth with a prior residential placement (39.9%) had a new DYC involvement while a lower percentage of youth without a prior residential placement (26.6%) had a new DYC involvement.
- A higher percentage of youth with a prior residential placement (9.0%) had a new DYC commitment while a lower percentage of youth without a prior residential placement (4.9%) had a new DYC commitment.

There is no relationship between prior residential placement and the following outcomes:

- New founded assessment for youth with a prior residential placement (5.6%) and youth without a prior residential placement (3.6%).
- New case for youth with a prior residential placement (20.1%) and youth without a prior residential placement (16.5%).

Table 44: *Follow-up Outcomes by Prior Residential Placement from 2007 to 2012 (N = 5,561)*

Outcome	No Prior Residential		Prior Residential	
	N	%	N	%
Referral	2,357	45.0	189	58.5
Assessment	1,745	33.3	142	44.0
Founded Assessment	189	3.6	18	5.6
Case	863	16.5	65	20.1
OOH Placement	437	8.3	48	14.9
Residential Placement	279	5.3	33	10.2
DYC Involvement	1,391	26.6	129	39.9
DYC Commitment	257	4.9	29	9.0

On the following page, Table 45 shows that there is a statistically significant relationship ($p < .05$) between prior DYC involvement and all follow-up outcomes except founded assessment, case, and residential placement[2]. The descriptive statistics suggest the following:

- A higher percentage of youth with prior DYC involvement (48.2%) had a new referral while a lower percentage of youth without prior DYC involvement (44.6%) had a new referral.

[2] The findings for prior DYC/SB94 involvement were identical to the findings for prior DYC involvement. There was no significant relationship between prior DYC commitment and any of the follow-up outcomes.

- A higher percentage of youth with prior DYC involvement (37.0%) had a new assessment while a lower percentage of youth without prior DYC involvement (32.4%) had a new assessment.
- A higher percentage of youth with prior DYC involvement (10.6%) had a new placement while a lower percentage of youth without prior DYC involvement (7.8%) had a new placement.
- A higher percentage of youth with prior DYC involvement (47.3%) had a new DYC involvement while a lower percentage of youth without prior DYC involvement (15.5%) had a new DYC involvement.
- A higher percentage of youth with prior DYC involvement (11.5%) had a new DYC commitment while a lower percentage of youth without prior DYC involvement (2.0%) had a new DYC commitment.

There is no relationship between prior DYC involvement and the following outcomes:

- New founded assessment for youth with prior DYC involvement (3.3%) and youth without prior DYC involvement (3.9%).
- New case for youth with prior DYC involvement (17.6%) and youth without prior DYC involvement (16.2%).
- New residential placement for youth with prior DYC involvement (6.3%) and youth without prior DYC involvement (5.3%).

Table 45: *Follow-up Outcomes by Prior DYC Involvement from 2007 to 2012 (N = 5,561)*

Outcome	No Prior DYC Involvement		Prior DYC Involvement	
	N	%	N	%
Referral	1,667	44.6	879	48.2
Assessment	1,212	32.4	675	37.0
Founded	147	3.9	60	3.3
Case	607	16.2	321	17.6
OOH Placement	291	7.8	194	10.6
Residential Placement	197	5.3	115	6.3
DYC Involvement	658	17.6	862	47.3
DYC Commitment	76	2.0	210	11.5

As displayed in Table 46, there is no statistically significant relationship between prior adoption groups and any of the follow-up outcomes:

- New referral for youth without a prior adoption (45.8%) and youth with a prior adoption (44.4%).
- New assessment for youth without a prior adoption (34.0%) and youth with a prior adoption (22.2%).
- New founded assessment for youth without a prior adoption (3.7%) and youth with a prior adoption (0.0%).
- New case for youth without a prior adoption (16.7%) and youth with a prior adoption (16.7%).
- New placement for youth without a prior adoption (8.7%) and youth with a prior adoption (11.1%).
- New residential placement for youth without a prior adoption (5.6%) and youth with a prior adoption (11.1%).
- New DYC involvement for youth without a prior adoption (27.4%) and youth with a prior adoption (16.7%).
- New DYC commitment for youth without a prior adoption (5.2%) and youth with a prior adoption (0.0%).

Table 46: *Follow-up Outcomes by Prior Adoption from 2007 to 2012 (N = 5,561)*

Outcome	No Prior Adoption		Prior Adoption	
	N	%	N	%
Referral	2,538	45.8	8	44.4
Assessment	1,883	34.0	4	22.2
Founded	207	3.7	0	0.0
Case	925	16.7	3	16.7
OOH Placement	483	8.7	2	11.1
Residential Placement	310	5.6	2	11.1
DYC Involvement	1,517	27.4	3	16.7
DYC Commitment	286	5.2	0	0.0

On the following page, Table 47 shows that there is a statistically significant relationship ($p < .05$) between first service category and all follow-up outcomes except assessment and founded assessment. The descriptive statistics suggest the following:

- A higher percentage of youth who did not receive Core Services or OOH placement (48.3%) had a new referral while a lower percentage of youth who received a community OOH placement (39.6%) had a new referral.
- A higher percentage of youth who did not receive Core Services or OOH placement (19.9%) had a new case while a lower percentage of youth who received a congregate OOH placement (12.8%) had a new case.
- A higher percentage of youth who received a congregate OOH placement (10.5%) had a new placement while a lower percentage of youth who received Core Services (7.9%) had a new placement.
- A higher percentage of youth who received a congregate OOH placement (7.6%) had a new residential placement while a lower percentage of youth who received Core Services (4.9%) had a new residential placement.
- A higher percentage of youth who received a congregate OOH placement (35.1%) had a new DYC involvement while a lower percentage of youth who received a community OOH placement (21.4%) had a new DYC involvement.
- A higher percentage of youth who received a congregate OOH placement (10.0%) had a new DYC commitment while youth who did not receive Core Services or OOH placement (3.2%) had a new DYC commitment.

There is no relationship between first service category and the following outcomes:

- New assessment for youth who did not receive Core Services or OOH placement (36.9%), youth who received a community OOH placement (30.5%), youth who received a congregate OOH placement (32.5%), and youth who received Core Services (34.1%).
- New founded assessment for youth who did not receive Core Services or OOH placement (4.5%), youth who received a community OOH placement (3.1%), youth who received a congregate OOH placement (2.6%), and youth who received Core Services (3.9%).

Table 47: *Follow-up Outcomes by First Service Category from 2007 to 2012 (N = 5,561)*

Outcome	Core Services		OOH - Congregate		OOH - Community		No Core/OOH	
	N	%	N	%	N	%	N	%
Referral	1,642	46.4	407	43.9	152	39.6	345	48.3
Assessment	1,205	34.1	301	32.5	117	30.5	264	36.9
Founded Assessment	139	3.9	24	2.6	12	3.1	32	4.5
Case	617	17.5	119	12.8	50	13.0	142	19.9
OOH Placement	279	7.9	97	10.5	35	9.1	74	10.3
Residential Placement	173	4.9	70	7.6	20	5.2	49	6.9
DYC Involvement	913	25.8	325	35.1	82	21.4	200	28.0
DYC Commitment	153	4.3	90	10.0	17	4.4	23	3.2

On the following page, Table 48 shows that there is a statistically significant relationship ($p < .01$) between residential placement during a case and all follow-up outcomes except referral, assessment, and founded assessment. The descriptive statistics suggest the following:

- A higher percentage of youth without a residential placement during (17.5%) had a new case while a lower percentage of youth with a residential placement during (13.7%) had a new case.
- A lower percentage of youth with a residential placement during (10.9%) had a new placement while a higher percentage of youth without a residential placement during (8.1%) had a new placement.
- A lower percentage of youth with a residential placement during (8.1%) had a new residential placement while a higher percentage of youth without a residential placement during (4.9%) had a new residential placement.
- A lower percentage of youth with a residential placement during (35.9%) had a new DYC involvement while a higher percentage of youth without a residential placement during (24.9%) had a new DYC involvement.
- A lower percentage of youth with a residential placement during (10.6%) had a new DYC commitment while a higher percentage of youth without a residential placement during (3.6%) had a new DYC commitment.

There is no relationship between residential placement during a case and the following outcomes:

- New referral for youth without a residential placement during (45.6%) and youth with a residential placement during (46.4%).
- New assessment for youth without a residential placement during (33.6%) and youth with a residential placement during (35.1%).
- New founded assessment for youth without a residential placement during (3.7%) and youth with a residential placement during (3.7%).

Table 48: *Follow-up Outcomes within One Year by Residential Placement during Involvement Span in ARCH Counties from 2007 to 2012 (N = 5,561)*

Outcome	No Residential		Residential	
	N	%	N	%
Referral	1,976	45.6	570	46.4
Assessment	1,456	33.6	431	35.1
Founded Assessment	162	3.7	45	3.7
Case	760	17.5	168	13.7
OOH Placement	351	8.1	134	10.9
Residential Placement	212	4.9	100	8.1
DYC Involvement	1,079	24.9	441	35.9
DYC Commitment	156	3.6	130	10.6

On the following page, Table 49 shows that there is a statistically significant relationship ($p < .01$) between placement during a case (for youth with a placement evaluation) and the case, DYC involvement, and DYC commitment follow-up outcomes. The descriptive statistics suggest the following:

- A higher percentage of youth who were not placed during (20.0%) had a new case while a lower percentage of youth who were placed during (13.6%) had a new case.
- A higher percentage of youth who were placed during (48.0%) had a new DYC involvement while a lower percentage of youth who were not placed during (40.2%) had a new DYC involvement.
- A higher percentage of youth who were placed during (15.7%) had a new DYC commitment while a lower percentage of youth who were not placed during (6.3%) had a new DYC commitment.

There is no relationship between placement during a case (for youth with a placement evaluation) and the following outcomes:

- New referral for youth who were not placed during the case (48.1%) and youth who were placed during the case (46.8%).
- New assessment for youth who were not placed during the case (36.9%) and youth who were placed during the case (36.6%).
- New founded assessment for youth who were not placed during the case (3.9%) and youth who were placed during the case (2.9%).
- New placement for youth who were not placed during the case (10.7%) and youth who were placed during the case (10.8%).
- New residential placement for youth who were not placed during the case (7.0%) and youth who were placed during the case (6.8%).

Table 49: *Follow-up Outcomes Placement during Case for Youth with Placement Evaluation Reason from 2007 to 2012 (N = 1,791)*

Outcome	No Placement		Placement	
	N	%	N	%
Referral	550	48.1	303	46.8
Assessment	422	36.9	237	36.6
Founded Assessment	45	3.9	19	2.9
Case	229	20.0	88	13.6
OOH Placement	122	10.7	70	10.8
Residential Placement	80	7.0	44	6.8
DYC Involvement	460	40.2	311	48.0
DYC Commitment	72	6.3	102	15.7

On the following page, Table 50 shows the permanency and follow-up outcomes by presenting issues. Chi-square testing was not done for these comparisons[3].

- Substance abuse had the highest remain home rate (33.6%) while gang involvement had the lowest remain home rate (24.4%).
- Substance abuse had the highest reunification rate (47.3%) while gang involvement had the lowest reunification rate (40.6%).

[3] However, the presence of each presenting issue by itself was associated with significantly worse permanency and follow-up outcomes (not shown in this report).

- Violence against persons had the lowest referral rate (54.9%) while BCOP had the highest referral rate (63.8%).
- Violence against persons had the lowest assessment rate (43.1%) while BCOP had the highest assessment rate (50.8%).
- Truancy had the lowest founded assessment rate (3.9%) while sexual abuse had the highest founded assessment rate (6.5%).
- Substance abuse had the lowest case rate (22.3%) while BCOP had the highest case rate (30.6%).
- Substance abuse had the lowest placement rate (13.9%) while BCOP had the highest OOH placement rate (18.7%).
- Substance abuse had the lowest residential placement rate (9.2%) while BCOP had the highest residential placement rate (13.9%).
- Violence against persons had the lowest DYC involvement rates (50.3%) while gang membership had the highest DYC involvement rate (65.1%).
- Substance abuse had the lowest DYC commitment rate (10.0%) while gang membership had the highest DYC commitment rate (17.2%).

Table 50: *Permanency and Follow-up Outcomes by Presenting Issues from 2007 to 2012*

Outcome	Violence	Property	Sexual	Substance	Truancy	BCOP	Walk	Weapon	Gang
Remain	32.2	31.5	27.4	33.6	30.4	29.1	28.7	27.2	24.4
Return	45.3	43.8	41.5	47.3	45.0	42.2	44.4	42.9	40.6
Referral	54.9	58.4	63.4	55.3	57.9	63.8	59.7	56.4	63.3
Assess	43.1	46.6	48.7	43.8	46.3	50.8	47.7	44.3	50.1
Founded	4.4	5.1	6.5	4.6	3.9	4.5	5.0	4.6	5.2
Case	22.3	24.2	28.4	22.8	24.1	30.6	25.4	22.5	25.5
OOH	14.0	14.6	18.5	13.9	15.1	18.7	15.9	15.8	16.3
Residential	9.4	9.6	13.4	9.2	10.2	13.9	10.8	9.6	12.0
DYC Involve	50.3	61.0	54.4	51.1	56.6	59.8	55.3	59.4	65.1
DYC Commit	11.5	14.9	12.9	10.0	11.6	12.5	11.7	16.5	17.2

5. LONGITUDINAL RESULTS

Table 51 displays the longitudinal trends for the percentage of youth services cases in which a youth was placed in residential care. Statewide, there was a 15% decrease from 41% in 2007 to 35% in 2013. Overall, 38% of youth services cases resulted in a residential placement.

Table 51: *Percentage of Youth Services Cases in which Youth was placed in Residential Care by Year Opened from 2007 to 2013*

County	2007	2008	2009	2010	2011	2012	2013	Total	Change from 2007-2013
Adams	60% 59/99	44% 51/115	42% 43/102	49% 45/91	47% 36/76	45% 35/78	48% 43/89	48% 312/650	**20% decrease**
Arapahoe	50% 120/241	40% 98/246	40% 93/230	46% 104/227	50% 77/155	42% 64/154	26% 48/188	42% 604/1441	**48% decrease**
Boulder	36% 42/117	28% 29/104	30% 26/86	38% 25/65	17% 11/63	24% 14/59	25% 12/48	29% 159/542	**31% decrease**
Broomfield	50% 7/14	80% 12/15	62% 8/13	43% 3/7	71% 5/7	71% 5/7	44% 4/9	61% 44/72	**12% decrease**
Denver	59% 257/433	62% 190/308	59% 108/182	50% 93/185	63% 93/148	55% 99/181	46% 91/197	57% 931/1634	**22% decrease**
Douglas	72% 28/39	61% 37/61	44% 29/66	47% 33/70	34% 32/94	40% 46/116	23% 18/79	42% 223/525	**68% decrease**
El Paso	35% 82/234	50% 101/202	51% 128/252	45% 106/235	42% 99/238	27% 58/213	31% 69/223	40% 643/1597	**11% decrease**
Jefferson	55% 114/206	61% 113/185	53% 75/142	49% 60/122	62% 79/128	53% 81/154	56% 63/113	56% 585/1050	**2% increase**
Larimer	23% 31/137	12% 27/227	11% 38/334	10% 25/262	6% 10/164	4% 7/159	3% 3/114	10% 141/1397	**87% decrease**
Mesa	15% 17/110	29% 26/91	29% 27/92	21% 17/82	22% 17/77	27% 22/82	48% 29/61	26% 155/595	**220% increase**
Pueblo	26% 30/117	29% 40/139	40% 45/113	40% 40/99	41% 42/102	42% 41/97	47% 43/92	37% 281/759	**81% increase**
Non-ARCH	29% 152/530	31% 157/506	28% 112/404	33% 118/359	37% 121/328	34% 113/330	34% 104/308	32% 877/2765	**17% increase**
Total	**41% 939/2277**	**40% 881/2199**	**36% 732/2016**	**37% 669/1804**	**39% 622/1580**	**36% 585/1630**	**35% 527/1521**	**38% 4955/13027**	**15% decrease**

Table 52 displays the longitudinal trends in Core Service provision for youth services cases. Overall, 83% of all open youth services cases from 2007 to 2013 resulted in the authorization of at least one Core Service. This percentage was very stable over the study time period.

Table 52: *Percentage of Youth Services Cases that Received Core Services from 2007 to 2013*

County	2007	2008	2009	2010	2011	2012	2013	Total
Adams	72% 71/99	84% 97/115	81% 83/102	88% 80/91	84% 64/76	88% 69/78	89% 79/89	**84%** **543/650**
Arapahoe	80% 192/241	76% 186/246	84% 194/230	86% 195/227	88% 137/155	88% 136/154	87% 164/188	**84%** **1204/1441**
Boulder	81% 95/117	84% 87/104	80% 69/86	80% 52/65	90% 57/63	86% 51/59	79% 38/48	**83%** **449/542**
Broomfield	86% 12/14	87% 13/15	85% 11/13	100% 7/7	100% 7/7	71% 5/7	100% 9/9	**89%** **64/72**
Denver	96% 414/433	89% 273/308	81% 148/182	74% 137/185	80% 119/148	81% 146/181	72% 141/197	**84%** **1378/1634**
Douglas	56% 22/39	64% 39/61	52% 34/66	69% 48/70	81% 76/94	82% 95/116	87% 69/79	**73%** **383/525**
El Paso	82% 191/234	77% 156/202	74% 186/252	74% 173/235	77% 184/238	81% 172/213	85% 190/223	**78%** **1252/1597**
Jefferson	86% 178/206	89% 164/185	75% 107/142	70% 85/122	84% 107/128	85% 131/154	71% 80/113	**81%** **852/1050**
Larimer	99% 135/137	97% 221/227	100% 334/334	95% 248/262	87% 142/164	88% 140/159	92% 105/114	**95%** **1325/1397**
Mesa	67% 74/110	69% 63/91	80% 74/92	78% 64/82	78% 60/77	93% 76/82	85% 52/61	**78%** **463/595**
Pueblo	77% 90/117	81% 112/139	80% 90/113	81% 80/99	88% 90/102	87% 84/97	91% 84/92	**83%** **630/759**
Non-ARCH	82% 434/530	79% 401/506	79% 321/404	79% 283/359	79% 260/328	82% 272/330	79% 244/308	**80%** **2215/2765**
Total	**84%** **1908/2277**	**82%** **1812/2199**	**82%** **1651/2016**	**80%** **1452/1804**	**82%** **1303/1580**	**84%** **1377/1630**	**83%** **1255/1521**	**83%** **10758/13027**

Table 53 displays longitudinal trends for the percentage of placement evaluation assessments that result in placement for youth services cases. Statewide, 26% of placement evaluations resulted in placements from 29% in 2007 to 27% in 2013.

Table 53: *Percentage of Placement Evaluation Assessments that Resulted in Placement from 2007 to 2013*

County	2007	2008	2009	2010	2011	2012	2013	Total
Adams	22% 42/192	13% 33/252	17% 28/162	19% 28/150	17% 22/132	16% 28/175	18% 33/185	**17%** **214/1248**
Arapahoe	21% 84/394	22% 94/431	24% 97/396	23% 78/339	21% 48/225	22% 46/210	24% 49/208	**23%** **496/2203**
Boulder	32% 38/117	20% 19/94	14% 10/72	24% 15/62	10% 7/71	21% 11/52	8% 5/61	**20%** **105/529**
Broomfield	42% 5/12	41% 9/22	37% 7/19	33% 3/9	67% 6/9	43% 3/7	25% 2/8	**41%** **35/86**
Denver	37% 142/379	39% 82/210	38% 49/128	35% 59/169	39% 49/125	56% 61/109	47% 70/148	**40%** **512/1268**
Douglas	50% 26/52	27% 28/103	22% 24/109	22% 25/114	20% 25/123	32% 33/102	22% 18/83	**26%** **179/686**
El Paso	29% 91/310	36% 92/259	40% 98/246	42% 98/234	43% 98/226	42% 79/188	40% 66/166	**38%** **622/1629**
Jefferson	25% 82/327	24% 93/390	17% 60/349	17% 57/340	18% 61/332	21% 60/284	29% 70/243	**21%** **483/2265**
Larimer	20% 2/10	18% 20/111	19% 42/219	15% 27/177	11% 13/122	14% 14/100	1% 1/75	**15%** **119/814**
Mesa	43% 20/46	38% 13/34	18% 6/34	19% 7/36	29% 13/45	27% 13/49	30% 13/43	**30%** **85/287**
Pueblo	31% 14/45	23% 10/43	20% 8/41	23% 9/39	27% 15/56	49% 17/35	31% 19/61	**29%** **92/320**
Non-ARCH	32% 62/191	39% 67/171	24% 36/148	37% 49/133	37% 46/123	30% 41/136	24% 34/141	**32%** **335/1043**
Total	**29%** **608/2075**	**26%** **560/2120**	**24%** **465/1923**	**25%** **455/1802**	**25%** **403/1589**	**28%** **406/1447**	**27%** **380/1422**	**26%** **3277/12378**

As displayed in Table 54, statewide, 37% of all youth services assessments from 2007 to 2013, were opened to a case. This percentage was very stable over the study time period.

Table 54: *Percentage of Youth Services Assessments that were Opened to a Case for ARCH Counties from 2007 to 2013*

County	2007	2008	2009	2010	2011	2012	2013	Total
Adams	30% 105/355	28% 118/417	32% 106/330	30% 94/310	27% 81/295	29% 92/322	30% 96/322	**29%** **692/2351**
Arapahoe	35% 259/738	37% 259/697	37% 245/667	39% 246/626	31% 165/529	31% 162/523	41% 205/504	**36%** **1541/4284**
Boulder	43% 124/289	39% 122/311	42% 109/260	36% 86/238	33% 67/202	41% 67/164	31% 55/179	**38%** **630/1643**
Broomfield	27% 16/60	31% 19/62	30% 19/64	20% 9/44	27% 9/33	30% 9/30	40% 10/25	**29%** **91/318**
Denver	50% 468/930	50% 341/676	34% 205/601	40% 206/517	44% 160/362	55% 197/358	50% 209/419	**46%** **1786/3863**
Douglas	45% 39/86	40% 64/161	41% 71/175	37% 75/201	41% 96/234	56% 120/214	54% 84/155	**45%** **549/1226**
El Paso	30% 234/785	25% 205/818	26% 258/975	24% 247/1012	28% 245/875	26% 223/854	31% 239/765	**27%** **1651/6084**
Jefferson	41% 241/591	35% 248/705	28% 189/664	23% 152/666	22% 142/639	34% 183/535	30% 139/468	**30%** **1294/4268**
Larimer	47% 159/338	55% 275/499	67% 400/600	58% 302/525	48% 176/363	54% 171/318	47% 123/260	**55%** **1606/2903**
Mesa	34% 112/334	32% 93/295	28% 96/342	30% 91/299	27% 90/338	28% 92/334	22% 65/299	**29%** **639/2241**
Pueblo	32% 117/365	36% 143/400	29% 114/387	29% 105/361	28% 105/374	33% 98/296	28% 97/351	**31%** **779/2534**
Non-ARCH	47% 556/1180	48% 549/1135	43% 458/1053	40% 393/983	39% 353/906	38% 354/936	38% 332/876	**42%** **2995/7069**
Total	**40%** **2430/6051**	**39%** **2436/6176**	**37%** **2270/6118**	**35%** **2006/5782**	**33%** **1689/5150**	**36%** **1768/4884**	**36%** **1654/4623**	**37%** **14253/38784**

On the following page, Table 55 displays the longitudinal trends in average out-of-home and Core Services costs for closed youth services case involvements.

Table 55: *Average Out-of-Home and Core Services Costs per Closed Youth Services Case Involvement from 2007 to 2013*

County	Type	2007	2008	2009	2010	2011	2012	2013	Total
Adams	OOH	$27,373	$15,580	$13,959	$23,466	$17,344	$13,417	$5,021	**$17,179**
	CORE	$4,747	$6,088	$5,000	$6,628	$5,471	$5,835	$4,736	**$5,512**
	Cases	99	113	98	85	71	65	67	**598**
Arapahoe	OOH	$25,757	$17,616	$15,567	$16,150	$17,085	$11,509	$5,145	**$16,626**
	CORE	$4,126	$3,445	$3,880	$3,315	$3,668	$3,633	$1,850	**$3,502**
	Cases	241	245	227	216	138	122	134	**1,323**
Boulder	OOH	$19,974	$10,603	$14,523	$14,759	$4,747	$5,420	$2,777	**$12,161**
	CORE	$5,602	$5,996	$3,861	$7,262	$5,499	$3,255	$4,746	**$5,284**
	Cases	115	102	84	63	59	54	32	
Broomfield	OOH	$18,546	$53,904	$66,132	$9,603	$24,058	$21,752	$14,673	**$35,211**
	CORE	$3,765	$6,748	$4,753	$7,476	$2,352	$6,260	$5,120	**$5,169**
	Cases	14	15	12	6	6	4	7	**64**
Denver	OOH	$22,707	$20,664	$15,645	$17,192	$19,216	$17,884	$7,566	**$18,679**
	CORE	$7,530	$4,081	$3,378	$3,570	$4,755	$4,186	$2,673	**$4,862**
	Cases	430	306	180	178	137	157	133	**1,521**
Douglas	OOH	$41,416	$33,960	$19,484	$24,781	$12,904	$9,852	$2,423	**$19,312**
	CORE	$1,798	$2,056	$1,736	$4,138	$4,276	$4,473	$3,351	**$3,336**
	Cases	39	60	66	67	85	95	40	**452**
El Paso	OOH	$20,318	$27,154	$28,236	$27,259	$18,544	$12,286	$3,801	**$20,749**
	CORE	$3,600	$3,651	$3,668	$4,641	$4,328	$3,485	$2,373	**$3,760**
	Cases	231	199	241	224	219	187	140	**1,441**
Jefferson	OOH	$22,868	$27,786	$19,056	$18,505	$22,798	$15,271	$10,083	**$20,790**
	CORE	$5,085	$7,449	$4,147	$5,383	$7,101	$4,818	$2,316	**$5,446**
	Cases	204	183	138	110	113	129	68	**945**
Larimer	OOH	$11,075	$3,629	$3,970	$3,044	$1,657	$1,209	$232	**$3,645**
	CORE	$1,810	$1,938	$1,714	$1,076	$2,267	$1,912	$1,591	**$1,720**
	Cases	137	224	331	256	160	149		**1,341**
Mesa	OOH	$9,289	$14,469	$8,266	$11,265	$9,670	$8,295	$6,121	**$9,941**
	CORE	$326	$533	$464	$532	$39	$248	$344	**$366**
	Cases	110	88	90	79	70	73	37	**547**
Pueblo	OOH	$10,666	$10,669	$11,020	$11,793	$12,544	$10,932	$11,443	**$11,235**
	CORE	$859	$1,020	$521	$1,039	$1,543	$1,628	$944	**$1,061**
	Cases	116	138	110	97	98	88	57	**704**
Non-ARCH	OOH	$19,359	$17,110	$16,017	$15,104	$13,245	$10,732	$5,864	**$14,970**
	CORE	$2,948	$2,992	$2,849	$3,073	$3,156	$2,265	$1,771	**$2,801**
	Cases	526	495	395	341	303	288	229	**2,577**
Total	**OOH**	**$20,412**	**$17,917**	**$15,238**	**$15,851**	**$14,095**	**$10,989**	**$5,622**	**$15,323**
	CORE	**$4,099**	**$3,602**	**$2,904**	**$3,364**	**$3,750**	**$3,173**	**$2,274**	**$3,401**
	Cases	**2,262**	**2,168**	**1,972**	**1,722**	**1,459**	**1,411**	**1,028**	**12,022**

Statewide, an average of $15,323 was spent per case on out-of-home placement costs and an average of $3,401 was spent per case on Core Services. There was a downward trend in out-of-home costs from $20,412 in 2007 to $5,622 in 2013, which is a 72% decrease. There was also a downward trend in Core Service costs from $4,099 in 2007 to $2,274 in 2013, which is a decrease of 45%.

Table 56 displays the longitudinal trends in average total child welfare costs for closed youth services case involvement. Statewide, an average of $18,724 was spent per closed case on out-of-home placement and Core Service costs. There was a downward trend from $24,511 in 2007 to $7,896 in 2013, which is a 68% decrease.

Table 56: *Average Child Welfare Costs (Out-of-Home + Core Services) per Closed Youth Services Case Involvement from 2007 to 2013*

County	2007	2008	2009	2010	2011	2012	2013	Total
Adams	$32,120	$21,669	$18,959	$30,094	$22,815	$19,253	$9,757	**$22,691**
Arapahoe	$29,884	$21,062	$19,447	$19,465	$20,753	$15,142	$6,995	**$20,128**
Boulder	$25,576	$16,600	$18,383	$22,021	$10,246	$8,675	$7,524	**$17,445**
Broomfield	$22,312	$60,652	$70,886	$17,080	$26,410	$28,012	$19,793	**$40,380**
Denver	$30,238	$24,745	$19,024	$20,763	$23,971	$22,069	$10,239	**$23,540**
Douglas	$43,214	$36,016	$21,220	$28,919	$17,180	$14,325	$5,775	**$22,647**
El Paso	$23,918	$30,804	$31,924	$31,900	$22,872	$15,771	$6,174	**$24,509**
Jefferson	$27,953	$35,235	$23,203	$23,888	$29,899	$20,089	$12,399	**$26,236**
Larimer	$12,885	$5,567	$5,684	$4,119	$3,924	$3,121	$1,822	**$5,365**
Mesa	$9,615	$15,002	$8,730	$11,797	$9,709	$8,543	$6,465	**$10,307**
Pueblo	$11,525	$11,689	$11,540	$12,832	$14,086	$12,560	$12,387	**$12,295**
Non-ARCH	$22,307	$20,101	$18,866	$18,176	$16,401	$12,997	$7,635	**$17,771**
Total	**$24,511**	**$21,519**	**$18,142**	**$19,215**	**$17,845**	**$14,162**	**$7,896**	**$18,724**

6. PREDICTOR STUDY

The youth services predictor study built on the work of the descriptive and comparative studies and used a subsample of the larger data set previously described. The goal was to examine case closure outcomes (at the end their current child welfare involvement) for a sample of youth who had contact with the Division of Youth Corrections. Contact with DYC was indicated by completion of a Juvenile Detention Screening and Assessment Guide (JD SAG, includes the Offenses Screening tool) or a Colorado Juvenile Risk Assessment (CJRA). Either of these assessment tools could have been completed for the youth's current case involvement (that is, the case selected for the study) or for a previous involvement with DYC. Youth with a CJRA or JDSAG assessment completed after the end of the current case involvement, although included in the larger datasets discussed previously, were excluded for the predictor study. This ensured that youth and case characteristics could be actual predictors of permanency outcomes because they temporally preceded outcomes.

6.1. Methods

The predictor study's design is observational and used administrative data from Trails. Both child welfare involvement data and youth corrections data were obtained from Trails. Analyses were completed using the SAS/STAT statistical software package.

6.1.1. Sample Selection

The sample for the predictor study included child welfare assessments and new case involvements between January 1, 2007 and December 31, 2013 for youth ages 10-17. Assessments and case involvements were included in the sample using the following criteria:

1. Youth involved in a child welfare assessment (later opened to a case) for which the youth's role was considered 'youth in conflict.' These youth may not have been maltreated; they could have entered the child welfare system as PA4 or PA5.
2. Youth involved in a PA5 assessment (later opened to a case) with a prior 'youth in conflict' assessment or case. Excluded were assessments for which the youth was an (alleged) victim of sexual abuse.
3. Youth involved in a child welfare assessment (later opened to a case) for which the youth's role was alleged perpetrator of sexual abuse.
4. Youth involved in a 'youth in conflict' case where no assessment occurred prior to case opening (and so would not be included in the above pathways).

5. Youth involved in a PA5 assessment (later opened to a case) with prior DYC involvement.

Unlike the sample for the descriptive and comparative studies, the sample for the predictor study consisted of unduplicated youth. Therefore, if using the above criteria resulted in multiple assessments or case involvements for one youth in the descriptive and comparative samples, only the first (earliest) involvement was retained for the predictor study sample. The sample was constructed in this manner to ensure independence among observations of youth. Additionally, the predictor study analytic sample excluded any youth for whom a child welfare case was *still open* as of December 31, 2013.

Finally, the predictor study included only youth who had some contact with the Division of Youth Corrections, as measured by completion of the JD SAG, which includes the Offenses Screening tool, and/or the CJRA. This effectively means that the predictor study was completed for a higher-risk sample of youth, as youth assessed by DYC using these tools (for the current or a prior involvement) have had either a criminal charge or a warrant for their arrest. The total sample size of the predictor study included 5,971 youth aged 10-17.

6.1.2. Predictor Variables

Based on practice experience, the ARCH workgroup identified the accessible variables thought to predict successful youth outcomes at case closure. As defined in Section 2.3, the following youth and case characteristics, measures of prior involvement (i.e., prior to selection for the current study) and presenting issues and interventions were considered for the predictor models.

- Youth and case characteristics included:
    1. Age at referral
    2. Primary ethnicity
    3. Gender
    4. Months open (current case)
    5. Prior public assistance
    6. County

- Prior child welfare involvement variables included:
    1. Assessment
    2. Founded assessment

3. Case
4. Prior adoption
5. Placement
6. Residential placement

- Legal or youth corrections involvement:
    1. Prior DYC involvement
    2. Prior or current felony charges

- Presenting issues included:
    1. Sex abuse victim
    2. Teen parent
    3. Violence against persons
    4. Gang involvement
    5. Sexualized behaviors
    6. Walkaway
    7. Substance abuse
    8. Weapons use
    9. Truancy
    10. Crimes against property

- Interventions included:
    1. Core services
    2. Placement (any type)
    3. Residential placement
    4. First service category

Most of these predictor variables were included in a best-subsets variable selection algorithm to determine the 10 most significant predictors of case outcomes. However, due to the definitions of the outcome variables (see below), the only intervention variable which could be considered for the predictive model was Core Services. That is because some services could not have been received at all by youth with a specified outcome. For example, a placement intervention would not be provided to any child whose outcome was remain home. Similarly, the first service category variable could not be used because children who remained home would never have received a placement or residential service. Thus, Core Services was the only

intervention variable included in the variable selection algorithm. Two presenting issues, teen parent and prior adoption, were dropped from the variable selection algorithm because there were not sufficient numbers of both "yes" and "no" observations for each outcome. Finally, county and case open year were used as covariates in the predictive model to control for differences between counties and between years and to allow a look at results which were more generalizable for the entire state.

6.2. Outcome Definitions

One of the guiding research questions for the predictor study was to define what constitutes a successful outcome for youth in conflict who have prior DYC involvement. From a child welfare perspective, the best outcomes are to promote safety, permanency and well-being for youth served in the child welfare system. Thus, the best outcome was to be able to serve a child in their home and to maintain continuity of caregiving by parents or kin or guardians. This was considered the most successful permanency outcome for purposes of this study. If safety issues preclude a child from remaining at home, then the next most successful permanency outcome was to serve a youth out-of-home, to simultaneously address parent needs and to facilitate the youth's return to parents or kin or guardians. Finally, the least desirable outcome from a child welfare perspective is one where the youth does not achieve permanency, such as emancipating from the child welfare system, further involvement with youth corrections or a youth who walks away.

6.2.1. Permanency Outcomes

With these principles in mind, permanency case closure outcomes were defined as follows:

1. *Remain Home* – these are youth who experienced no placement during their case and their closure residence was with parents or kin/guardians.
2. *Return Home* – these youth experienced placement during their case, but their closure residence was with parents or kin/guardians.
3. *Other* – these are youth whose closure residence was coded as emancipation, DYC, or walkaway.

6.3. Analytic Strategy

The predictive model used in the study is a multi-category logit regression model for nominal outcomes. A multi-category logit model is appropriate for data where the outcome consists of

belonging to one of a set of mutually exclusive categories[4], in this case remaining home, returning home or a non-permanent outcome. Results of such a model are expressed in terms of odds ratios. Odds ratios compare the odds of remaining home to the baseline category of "other" outcomes and also the odds of returning home as compared to one of the other outcomes. All analyses, including the variable selection process were completed using PROC LOGISTIC in the SAS/STAT software package. Separate analyses were completed for two subsamples, youth 10-15 years old at the time of the current case involvement and youth aged 16-17. Two separate predictive models were completed to allow a separate set of predictors to emerge for both younger and older youth.

6.4. Results

The results from the predictive model for case closure outcomes is presented for the 10-15 and 16-17 age groups.

6.4.1. Youth and Case Characteristics for Youth ages 10 – 15 Years

Tables 57 and 58 summarize results for youth aged 10-15 years at the time of referral to the child welfare system. The percentage of variation in outcomes explained by this model is approximately 42% out of 100% (max rescaled R^2 = .42). A model with predictor variables that accounted for *all* of the variation in outcomes among the participants would explain 100% of the variation in outcomes. This model explains about 42% of the variation, which suggests that the modeled variables are a good set of predictors for youth case closure outcomes.

On the following page, Table 57 shows that both the youth's age at referral to the child welfare system and the number of months that the youth's case was open are predictive of outcomes at case closure.

<u>Age and Case Duration</u>

Results for the 'remain home' permanency outcome (compared to non-permanent outcomes) are shown in the third column of Table 57.

- The first row shows that a youth who was, for example, 11 years at referral () was 24% less likely to have remained home at case closure versus experiencing a non-permanent outcome (emancipation, DYC or walkaway) than was a youth who aged 10 years at

[4] Agresti, A. (2007). *An introduction to categorical data analysis* (2nd ed.). Wiley: Hoboken, NJ.

referral. This finding (i.e., 24% less likely to have remained home versus a non-permanent outcome) applies to a youth 12 years old instead of 11 years, 13 years instead of 12 years, and so on.

- For a youth with a case duration of one additional month (see row 2; based on case closure minus case open dates), that youth is 12% less likely to have remained at home.

Table 57: *Odds Ratios for Youth and Case Characteristics for Youth Ages 10-15 (N = 3,279)*

Youth and Case Characteristics (1)	Comparison Categories (2)	Estimated OR: Remain vs. No Permanency (3)	Estimated OR: Return vs. No Permanency (4)
Age at referral	One year older	0.76* (0.69, 0.85)	0.86* (0.79, 0.94)
Months open	Additional month open	0.88* (0.86, 0.89)	0.98* (0.98, 0.98)
Ethnicity	African American vs. White	0.66* (0.48, 0.91)	0.67* (0.51, 0.88)
Ethnicity	Hispanic vs. Caucasian	0.98 (0.76, 1.25)	0.87 (0.70, 1.08)
Ethnicity	African American vs. Hispanic	0.68* (0.49, 0.93)	0.77 (0.59, 1.01)
Gender	Male vs. Female	0.82 (0.64, 1.05)	0.70* (0.56, 0.87)
Open year	Included so that all comparisons of interest are independent of case opening year.		
County	Included so that all comparisons of interest are independent of practice variations by county.		

*$p<.05$

Results for the return home permanency outcome (compared to non-permanent outcomes) are shown in the fourth column of Table 57.

- The first row shows that a youth who was 11 years at referral was 14% less likely to have returned home at case closure versus experiencing a non-permanent outcome (emancipation, DYC or walkaway) than was a youth who aged 10 years at referral.
- For a youth with a case duration of one additional month (see row 2; based on case closure minus case open dates), that youth is 2% less likely to have returned at home.

Ethnicity and Gender

- Compared to Caucasian youth, African American youth have 34% lower odds of remaining at home compared to experiencing a non-permanent outcome (row 3, column 3).
- African American youth have 33% lower odds of returning home than do Caucasian youth (again, when compared to a non-permanent outcome).
- There is no difference between the odds of remaining home versus non-permanent outcomes for Hispanic youth when compared to Caucasian youth.
- There is some support for a slightly lower (13% lower odds) for returning home for Hispanic youth when compared to Caucasian youth.
- Finally, for male youth the odds of remaining home versus a non-permanent outcome are 18% lower than for female youth, but the difference is not statically significant. The odds of returning home versus a non-permanent outcome are 30% lower than for female youth.

6.4.2. System Involvement, Presenting Issues, and Interventions for ages 10 -15

Several aspects of prior system involvement for youth ages 10-15 are predictive of outcomes at case closure, as shown on the following page in Table 58.

- The first row of Table 58 shows that a prior out-of-home placement in the child welfare system is predictive of permanency outcomes. Youth with a prior child welfare placement are 39% *less* likely to remain home during their current case involvement (compared to a non-permanent outcome) than are youth without a child welfare prior placement. Prior placement is not, however, as predictive of returning home; children with a prior placement are somewhat less likely to return home versus experiencing a non-permanent outcome, but the evidence is limited.

Table 58: *Odds Ratios for System Involvement, Presenting Issues, and Interventions for Youth Ages 10-15 (N = 3,279)*

System Involvement, Presenting Issues and Interventions (1)	Comparison Categories (2)	Estimated OR: Remain vs. No Permanency (3)	Estimated OR: Return vs. No Permanency (4)
Prior CW placement	Yes vs. no	0.61* (0.46, 0.82)	0.87 (0.69, 1.09)
Felony	Yes vs. no	0.68* (0.53, 0.88)	0.94 (0.75, 1.18)
Violence against persons	Yes vs. no	0.54* (0.42, 0.71)	0.59* (0.47, 0.75)
Crimes against property	Yes vs. no	0.62* (0.50, 0.78)	0.62* (0.51, 0.75)
Gang membership	Yes vs. no	0.59* (0.46, 0.76)	0.75* (0.60, 0.92)
Sexualized behaviors	Yes vs. no	0.54* (0.42, 0.68)	0.57* (0.47, 0.71)
Walkaway	Yes vs. no	0.25* (0.19, 0.33)	0.51* (0.40, 0.66)
Truancy	Yes vs. no	0.64* (0.50, 0.81)	0.71* (0.57, 0.89)
Core Services	Yes vs. no	3.04* (2.22, 4.15)	1.24 (0.94, 1.62)

*p<.05

- Felony charges are predictive of remaining but not returning home. Youth with felony involvement are 32% less likely to remain home than youth with no documented felony involvement.

Several presenting issues are predictive of permanency outcomes at case closure, including violence against persons, gang membership, sexualized behaviors, past walkaway behavior and truancy. The presence of any one of these issues predicts a lower likelihood of either remaining home or returning home by the end of the current case involvement.

- Violent behavior against persons (see row 3) predicts a 46% lower likelihood of remaining home and a 41% lower likelihood of returning home, compared to the non-permanent

outcomes of emancipation, Division of Youth Corrections involvement or a youth's walking away.

- Crimes against property (see row 4) predicts a 38% lower likelihood of either remaining home or returning home, compared to non-permanent outcomes.
- Gang membership predicts a 41% lower likelihood of remaining home and a 25% lower likelihood of returning home, compared to non-permanent outcomes.
- Sexualized behaviors predicts a 46% lower likelihood of remaining home and a 43% lower likelihood of returning home, compared to non-permanent outcomes.
- One or more past walkaways predicts a 75% lower likelihood of remaining home and a 49% lower likelihood of returning home, compared to non-permanent outcomes.
- Truancy predicts a 36% lower likelihood of remaining home and a 29% lower likelihood of returning home, compared to non-permanent outcomes.

Finally, the receipt of Core Services also predicts remaining home, but is less predictive of returning home) for youth in this age group. Youth who received Core Services were 204% more likely to have remained home at case closure.

6.4.3. Youth and Case Characteristics for Youth ages 16 – 17 Years

Tables 59 and 60 summarize results for youth aged 16-17 years at the time of referral to the child welfare system. The percentage of variance in the outcomes explained by this model is approximately 32% out of 100% (max rescaled R^2 = .32).

On the following page, Table 59 (see row 1) shows that both age and the number of months a youth's case has been open are predictive of outcomes at case closure for youth ages 16 and 17 at referral. A 17-year-old youth is 33% less likely to remain home and 43% less likely to return home (compared to no permanency) than a 16-year-old youth. A youth whose case was open one month longer was 11% less likely to have remained at home by case closure (versus experiencing one of the other outcomes), compared to a youth whose case was one month shorter. For example, a youth with a 6-month case duration was 11% less likely to have remained home than a youth with a 5-month case duration. A youth with a one month longer case duration was 2% less likely to have left home and returned by case closure, compared to the non-permanent outcomes (emancipation, DYC or walkaway).

Table 59: *Odds Ratios for Youth and Case Characteristics for Youth Ages 16-17 (N = 2,692)*

Youth and Case Characteristics (1)	Comparison Categories (2)	Estimated OR: Remain vs. No Permanency (3)	Estimated OR: Return vs. No Permanency (4)
Age at referral	Additional year	0.67* (0.54, 0.84)	0.57* (0.47, 0.71)
Months open	Additional month	0.89* (0.87, 0.91)	0.98* (0.97, 0.99)
Ethnicity	African American vs. Caucasian	0.94 (0.68, 1.30)	0.71* (0.52, 0.96)
Ethnicity	Hispanic vs. Caucasian	1.22 (0.95, 1.57)	0.91 (0.72, 1.16)
Ethnicity	African American vs. Hispanic	0.77 (0.56, 1.06)	0.78 (0.57, 1.06)
Gender	Male vs. Female	0.96 (0.75, 1.23)	0.83 (0.66, 1.04)
County	Included so that all comparisons of interest are independent of practice variations by county.		

*p<.05

Results are also presented by ethnicity and gender. Compared to Caucasian youth, African American youth have no significant difference in the odds of remaining at home compared to experiencing a non-permanent outcome. African American youth have 29% lower odds of leaving and returning home by case closure than do Caucasian youth. There is no difference between the odds of remaining home or returning versus the non-permanent outcomes for Hispanic youth when compared to Caucasian youth. Finally, for male youth, the odds of remaining home versus a non-permanent outcome are the same as for female youth, but there is some evidence that the odds of returning home are lower (about 17%) for male than for female youth.

6.4.4. System Involvement, Presenting Issues and Interventions for ages 16 -17

On the following page, Table 60 shows that prior involvement with child welfare system is predictive of permanency outcomes at case closure for youth ages 16-17.

- Prior placement in the child welfare system negatively predicts remaining home. Youth with a prior placement are 29% *less* likely to remain home during their current case

involvement (compared to a non-permanent outcome) than are youth without a prior placement.

- There is some evidence that youth with a prior placement are also less likely (about 18%) to leave and return home during their current case involvement than are youth without a prior child welfare placement.

Table 60: *Odds Ratios for System Involvement, Presenting Issues, and Interventions for Youth Ages 16-17 (N = 2,692)*

System Involvement, Presenting Issues & Interventions (1)	Comparison Categories (2)	Estimated OR: Remain vs. No Permanency (3)	Estimated OR: Return vs. No Permanency (4)
Prior placement	Yes vs. no	0.71* (0.54, 0.94)	0.82 (0.65, 1.05)
Violence against persons	Yes vs. no	0.77* (0.61, 0.98)	0.75* (0.60, 0.94)
Gang membership	Yes vs. no	0.62* (0.47, 0.81)	0.73* (0.57, 0.94)
Crimes against property	Yes vs. no	0.72* (0.58, 0.89)	0.64* (0.52, 0.79)
Walkaway	Yes vs. no	0.45* (0.35, 0.57)	0.80 (0.63, 1.02)
Weapons	Yes vs. no	0.74* (0.57, 0.97)	0.64* (0.49, 0.83)
Truancy	Yes vs. no	0.57* (0.45, 0.72)	0.77* (0.62, 0.98)
Core Services	Yes vs. no	3.77* (2.91, 4.88)	1.33* (1.07, 1.66)

*$p<.05$

Several presenting issues are predictive of case closure outcomes for youth ages 16-17, including violence against persons, crimes against property, gang membership, past walkaway behavior, weapons charges and truancy. The presence of any one of these issues predicts a lower likelihood of either remaining home or returning home (or both) by the end of the current case involvement.

- Violent behavior against persons predicts an approximate 23% - 25% lower likelihood of remaining home or returning home, compared to the non-permanent outcomes of emancipation, DYC involvement, or a youth's walking away.
- Gang membership predicts a 38% lower likelihood of remaining home and a 27% lower likelihood of returning home, compared to other outcomes.
- Past walkaway behavior predicts a 55% lower likelihood of remaining home and there is some evidence for a lower likelihood of returning home (about 20% lower).
- Past weapons use a 26% lower likelihood of remaining home, compared to non-permanent outcomes, and a 36% lower likelihood or returning home
- Truancy predicts a 43% lower likelihood of remaining home and a 23% lower likelihood of returning home, compared to non-permanent outcomes.
- Finally, the receipt of core services also predicts remaining and returning home for youth in this age group. Youth who received core services were 277% more likely to have remained home at case closure and 33% more likely to have returned home.

7. DISCUSSION

The discussion summarizes the findings from descriptive, comparative, longitudinal and predictive studies of child welfare outcomes for youth in conflict. The conclusions and implications should be interpreted in light of the methodological limitations of the study.

7.1. Conclusions

The key conclusions are presented for the descriptive, comparative, longitudinal, and predictor studies.

<u>Descriptive Study</u>

For the assessment sample, the most frequent study pathway was assessments with a referral type of 'youth in conflict' for either PA4 or PA5 assessments at 71%. The most common reporting party was court/probation at 36%, followed by family/relative at 17%, and law enforcement at 13%. As for living arrangement at entry, 77% started with the youth at home or with parents, and 21% started with the youth in DYC detention. The average age at referral was 14.7 years, the mean number of prior referrals was 5.0 and the mean number of prior assessments was 2.7.

As for prior involvement, 81% had a prior referral, 73% had a prior assessment, 20% had a prior founded assessment, 43% had a prior case, 4% had a prior adoption, 20% had a prior placement, 10% had a prior residential placement, 39% had prior DYC involvement, 33% had prior DYC detention, 1% had prior DYC commitment, 29% had prior DYC/SB94 involvement, 3% were a prior founded sexual victim, and 4% were a teen parent. Lastly, 68% had a violence issue, 47% had a crimes against property issue, 35% had a sexual offense issue, 89% had a substance abuse issue, 66% had a truancy issue, 25% had a beyond the control of parents (BCOP) issue, 66% had a walkaway issue, 22% had a weapons issue, and 28% had a gang membership issue.

For the case sample, a Core Service was authorized in 83% of all cases. There was an out-of-home placement during 52% of all cases, a residential placement during 38% of all cases, a walkaway during 14% of all cases, and a DYC commitment during 11% of all cases in the sample from 2007 to 2013. The overall permanency outcomes for the case sample included a 45% remain home rate and a 58% reunification rate.

Comparative Study

The following groups had the most positive outcomes from the permanency (remain home and reunification) analysis for the case sample:

- Youth 10-12 years old at referral
- Female youth
- Caucasian youth
- Youth who received public assistance
- Youth without a prior referral, assessment, case, placement, residential placement, DYC involvement, DYC commitment, or adoption
- Youth who were placed in a community setting as their first service
- Youth who were not placed in residential care during the case

Longitudinal Study

The following are the key findings from the longitudinal analysis.

- Statewide, there was a 15% decrease in residential placement from 2007 to 2013. Overall, 38% of youth services cases resulted in a residential placement.

- Overall, 83% of all open youth services cases from 2007 to 2013 resulted in the authorization of at least one Core Service. This percentage was very stable over the study time period.
- Statewide, 26% of placement evaluations resulted in placements from 2007 to 2013.

- Statewide, 37% of all assessments from 2007 to 2013 were opened to a case for the youth services population. This percentage was very stable over the study time period.

- Statewide, an average of $15,323 was spent per youth services case on out-of-home placement costs and an average of $3,401 was spent per youth services case on Core Services. There was a downward trend in out-of-home costs for youth services cases from $20,412 in 2007 to $5,622 in 2013, which is a 72% decrease. There also was a downward trend in Core Services costs for youth services cases from $4,099 in 2007 to $2,274 in 2013, which is a decrease of 45%.

- Statewide, an average of $18,724 was spent per closed youth services case on out-of-home placement and Core Services costs. There was a downward trend for youth services cases from $24,511 in 2007 to $7,896 in 2013, which is a 68% decrease.

Predictor Study

The predictive model for the 10-15 age group explains about 42% of the variation, which suggests that a good set of predictors for youth case closure outcomes was selected.

- A youth's age at referral to the child welfare system and the number of months that the youth's case was open are both predictive of outcomes at case closure. Older youth and those with longer case durations had lower odds of remaining home or returning home.

- Several aspects of system involvement (child welfare or juvenile justice) are predictive of outcomes at case closure. First, a prior child welfare placement and, second, felony charges are both predictive of lower odds of remaining home.

- Several presenting issues are predictive of case closure outcomes, including violence against persons, crimes against property, gang membership, sexualized behaviors, past walkaway

behavior and truancy. The presence of any one of these issues predicts lower odds of either remaining home and/or returning home by the end of the current case involvement.

- The receipt of Core Services also predicts remaining home for youth in this age group, and there is some evidence to support that Core Services also predict returning home. Youth who received Core Services were substantially more likely to have remained home at case closure.

The predictive model for the 16-17 age group explains about 32% of the variation, which suggests that a good set of predictors for youth case closure outcomes was selected.

- Seventeen year olds are less likely to remain home or to be placed and return home than 16-year-olds. Also, the number of months that the youth's case was open is predictive of outcomes at case closure for youth ages 16 and 17 at referral, with longer cases predicting lower odds of both remaining and returning home.

- For male youth, the odds of returning home are slightly lower than for female youth, but there is no difference in the odds of remaining home.

- A prior child welfare placement predicts lower odds of remaining home and slightly lower odds of returning home.

- Several presenting issues are predictive of case closure outcomes for youth ages 16-17, including violence against persons, crimes against property, gang membership, past walkaway behavior, weapons charges, and truancy. The presence of any one of these issues predicts lower odds of either remaining home or returning home (or both) by the end of the current case involvement.

7.2. Limitations

Perhaps the most notable limitation of this study is the lack of predictor and explanatory variables available in Trails for the youth in conflict population. Specifically, there are no data on presenting issues available for youth without DYC involvement. Thus, the predictor study could only be conducted with a subsample of youth who also had past or current DYC involvement, which impacts the generalizability of the findings. In addition, there are no

measures of parent employment or education, and no accurate measures of family socio-economic status or mental health issues at the time of involvement with the child welfare system. There is also a lack of explanatory variables, as there were no available measures of family supports or family engagement during the study timeframe.

The nature of Core Services program data documentation and tracking is another important limitation to consider. The constraints of these data include variability in how services are recorded in different counties, difficulty in tracking case costs for some contracted services, diversity in the types of county-designed services offered, inconsistent data for county-provided services, and the inability to quantify service participation. It should be noted that new enhancements and functionalities in Trails will allow for the future collection and integration of data on service outcomes and participation. Counties might also benefit from being able to include services not paid for through Core Services in Trails. Currently, many counties maintain multiple databases to record data on services provided to families through grants, or using private insurance. If Trails was able to record and report data on these services, it could assist in the quality and completeness of Core Services data available for study. A related limitation is that the cost analysis cannot be a completely adequate reflection of cost, as any resources not documented in Trails are also not reflected in the cost per involvement metric.

A final limitation is that an observational research design can only yield information regarding correlation (the relationship between two variables) and not causation (providing service A or presenting issue B will lead to outcome C). This is an important point to emphasize when disseminating this study so that practitioners and policymakers are able to apply the findings within the proper context.

7.3. Implications

This study has some important implications for child welfare policy and practice for the PA4 population in Colorado. Most notably, the analysis for prior involvement and presenting issues yielded several interesting findings. For older youth, prior child welfare placement is a risk factor associated with a lower likelihood of remaining or returning home. Based on the comparative data, if the first service type is congregate care instead of a community placement, then youth have worse follow-up outcomes including higher subsequent placement and DYC involvement. This would suggest that counties in Colorado continue efforts to reduce the use of residential placements and develop alternatives for effectively serving youth in the community.

Based on descriptive and comparative data, some presenting issues appear to be less prevalent in this population. For example, community safety issues such as crimes against property, weapons, and gang membership were reported by less than half of youth. On the other hand, substance abuse was reported for 89% of youth. Interestingly, better outcomes were documented for youth with a substance use issue as compared to other presenting issues. This may be due to the fact that substance use is the only presenting issue directly served by Core Services. The implication from these results is that human service agencies might consider accessing a wider array of community-based services to address other presenting issues.

Next, we consider the intersection of DYC involvement and race/ethnicity. All youth who are involved in the criminal justice system in Colorado are automatically referred to the child welfare system for services through Program Area 4. Thus, if there is a bias toward overrepresentation of African American youth in the criminal justice system, this may also lead to overrepresentation among African American youth involved in youth in conflict cases. Given that child welfare agencies in Colorado are likely to serve a disproportionate number of African American youth, counties should ask whether there are culturally appropriate services available for African American youth and families. Outcomes may be worse if Core Services are less relevant to or less effective for African American families.

African American youth are at higher risk of poor outcomes as well, with much lower odds of remaining home or returning home, compared to Caucasian youth. This deeper penetration of African American youth into the criminal justice and human services systems reflects a need for better assessment at entry points into both systems. Counties should also examine the process of deciding which families are a "good fit" for Core Services to be sure that the needs of African American families are clearly understood and appropriate services rendered. For example, African American youth are more likely to be placed in congregate care, but less likely to get Core Services as a first service type. Furthermore, they have a higher likelihood to have a placement evaluation, and when a placement evaluation occurs, African American youth are more likely to be placed. This suggests that a shift in conversations with county courts should be targeted. If the court sends an African American youth to PA4 with a mandate that the youth be assessed for residential placement, these youth may be more likely to go to placement because it is the only option considered. Thus, it would be a positive step to allow child welfare to do more comprehensive evaluation so that options other than congregate care can be considered.

Overall, the predictor study found that older youth are less likely to achieve permanent outcomes, which indicates that they are harder to serve as they age within the system. Similarly, poorer permanency outcomes were related to longer involvement durations. This suggests a strategy of targeting services at older youth with an eye to closing a case as quickly as possible, so that these youth do not remain in the system long-term, putting them at risk for poorer outcomes.

For youth ages 10-15, prior child welfare placement, prior judicial involvement, violence against persons, crimes against property, gang membership, sexualized behaviors and truancy all indicate that a youth is between 40% and 50% less likely to remain at home versus emancipation, DYC or walkaway at case closure. The one issue which has a substantially larger effect size is prior walkaway, which is associated with a 75% lower odds of remaining at home. Notable is the fact that sexualized behavior has an effect size similar to many of the other presenting issues. This suggests that a history of sexualized behaviors does not preclude a child from being served at home any more or less than several other presenting issues.

The Core Services program is designed to keep kids at home and to be administered at home. The odds of remaining at home are 204% greater for youth ages 10-15 youth who receive Core Services. These results suggest that, given an initial decision to serve children in the home, Core Services do help kids who start at home also remain at home throughout the case duration. It is likely that the non-significant effect size for Core Services associated with the return home outcome is due to the fact that these youth would not start receiving services until they had already returned home after being placed. For youth ages 16-17, the combination of starting at home and receiving Core Services is associated with a 277% greater odds of the youth remaining at home until case closure. For these older youth, the results suggest that they too, can stay successfully at home and there is not an *a priori* need to move older youth to an out-of-home setting such as residential care.

APPENDICES

Appendix A: DYC Assessment Crosswalk

Appendix B: Referral Reasons for Youth Services Assessments

Appendix A: DYC Assessment Crosswalk

The Offenses Screening tool, JD SAG assessment, and CJRA pre-screen were used to create presenting issues for the youth population that may serve as predictor variables in the analysis.

Presenting Issues	Offenses Screening	JD SAG	CJRA
Violence	Any harassment offense	Q1: Current crime of violence or weapon charge	CHQ5: Against-person misdemeanor referrals
	Any person crimes (except for sexual in nature)	Q8: Crimes against persons, arson, or weapon history Q18: Threatens victims or witnesses	CHQ6: Against-person felony referrals
Prior Judicial		Q4: Prior felony adjudications Q5: Pending felony charge(s)	CHQ3: Felony referrals
Gang involvement	Organized crime (gang)	Q10: Associates/ identifies with delinquents/gang members	SHQ3b: History of gang membership/ association SHQ4b: Currently a gang member/associate
Sexualized behaviors	Any person crimes (sexual in nature)	Q12: Risk of victimization/ prostitution history	CHQ7: Misdemeanor sex offense referrals
	Prostitution		CHQ8: Felony sex offense referrals

Presenting Issues	Offenses Screening	JD SAG	CJRA
Walkaway	Any runaway offense	Q13: History of running from placements	CHQ11: Escapes
	Any escape offense	Q22: History of repeated runaways	SHQ6: History of runaways or times kicked out of home
Substance abuse	Any drug offense	Q14: Severe substance abuse	SHQ11a: History of alcohol use SHQ11b: History of drug use SHQ11c: Alcohol use within previous 6 months SHQ11d: Drug use within previous 6 months
Weapons use	Any offense related to firearms or weapons	Q17: History of weapons use	CHQ4: Weapon referrals
Truancy	Truancy	Q23: No stable school or work situation	SHQ2c: Youth's attendance in the most recent term
Beyond Control of Parent			SHQ10: Current parental authority and control
Crimes against Property	Any property offense		

Appendix B: Referral Reasons for Youth Services Assessments in ARCH Counties from 2007 to 2013

		Adams	Arapahoe	Boulder	Broomfield	Denver	Douglas	El Paso	Jefferson	Larimer	Mesa	Non-ARCH	Pueblo	Total
Overall	**Assessments**	**2,351**	**4,284**	**1,643**	**318**	**3,863**	**1,226**	**6,084**	**4,268**	**2,903**	2,241	**7,069**	**2,534**	**38,784**
	Placement Eval.	53%	51%	32%	27%	33%	56%	27%	53%	28%	13%	15%	13%	32%
	Truancy	4%	6%	8%	6%	7%	2%	40%	4%	1%	5%	6%	13%	11%
	Physical Abuse	29%	21%	23%	27%	26%	20%	17%	21%	25%	20%	30%	6%	22%
	Youth Sub Abuse	3%	6%	8%	9%	6%	7%	2%	5%	1%	3%	8%	5%	5%
	Parent-Child Conflict	7%	14%	14%	19%	11%	14%	5%	10%	23%	45%	25%	67%	19%
2007	**Assessments**	**355**	**738**	**289**	**60**	**930**	**86**	**785**	**591**	**338**	5%	**1,180**	**365**	**6,051**
	Placement Eval.	54%	53%	40%	20%	41%	60%	39%	55%	3%	4%	16%	12%	34%
	Truancy	4%	3%	7%	3%	10%	0%	28%	2%	1%	334	8%	16%	9%
	Physical Abuse	29%	21%	15%	38%	20%	33%	17%	18%	36%	14%	28%	8%	21%
	Youth Sub Abuse	2%	4%	9%	5%	5%	1%	1%	2%	1%	7%	9%	5%	5%
	Parent-Child Conflict	3%	12%	16%	17%	6%	8%	4%	4%	33%	13%	28%	58%	18%
2008	**Assessments**	**417**	**697**	**311**	**62**	**676**	**161**	**818**	**705**	**499**	5%	**1,135**	**400**	**6,176**
	Placement Eval.	60%	62%	30%	35%	31%	64%	32%	55%	22%	51%	15%	11%	34%
	Truancy	7%	3%	8%	11%	6%	1%	39%	7%	0%	7%	6%	13%	10%

		Adams	Arapahoe	Boulder	Broomfield	Denver	Douglas	El Paso	Jefferson	Larimer	Mesa	Non-ARCH	Pueblo	Total
	Physical Abuse	20%	20%	24%	24%	26%	22%	18%	21%	30%	4%	30%	8%	23%
	Youth Sub Abuse	5%	4%	12%	18%	7%	2%	1%	6%	1%	295	8%	9%	5%
	Parent-Child Conflict	13%	8%	18%	23%	9%	4%	2%	5%	28%	12%	26%	65%	19%
2009	**Assessments**	**330**	**667**	**260**	**64**	**601**	**175**	**975**	**664**	**600**	4%	**1053**	**387**	**6118**
	Placement Eval.	49%	59%	28%	30%	21%	62%	25%	53%	37%	19%	14%	11%	31%
	Truancy	3%	4%	8%	5%	6%	3%	42%	4%	1%	2%	5%	17%	11%
	Physical Abuse	34%	20%	25%	28%	28%	23%	16%	25%	21%	51%	32%	6%	23%
	Youth Sub Abuse	4%	3%	8%	8%	8%	4%	2%	6%	1%	5%	7%	3%	4%
	Parent-Child Conflict	8%	6%	20%	20%	10%	10%	3%	8%	20%	1%	25%	66%	18%
2010	**Assessments**	**310**	**626**	**238**	**44**	**517**	**201**	**1012**	**666**	**525**	342	**983**	**361**	**5782**
	Placement Eval.	48%	54%	26%	20%	33%	57%	23%	51%	34%	10%	14%	11%	31%
	Truancy	2%	7%	7%	5%	6%	2%	46%	4%	0%	6%	4%	14%	12%
	Physical Abuse	31%	18%	29%	30%	32%	19%	18%	18%	24%	18%	33%	5%	23%
	Youth Sub Abuse	3%	8%	6%	11%	8%	5%	1%	5%	0%	2%	7%	2%	4%
	Parent-Child Conflict	8%	18%	13%	20%	15%	15%	3%	13%	21%	53%	25%	70%	20%
2011	**Assessments**	**295**	**529**	**202**	**33**	**362**	**234**	**875**	**639**	**363**	4%	**906**	**374**	**5150**
	Placement Eval.	45%	43%	35%	27%	35%	53%	26%	52%	34%	3%	14%	15%	31%

		Adams	Arapahoe	Boulder	Broomfield	Denver	Douglas	El Paso	Jefferson	Larimer	Mesa	Non-ARCH	Pueblo	Total
	Truancy	4%	12%	10%	6%	6%	0%	46%	6%	0%	299	6%	8%	13%
	Physical Abuse	34%	22%	23%	12%	27%	17%	15%	18%	22%	12%	31%	3%	21%
	Youth Sub Abuse	2%	9%	6%	6%	6%	9%	1%	7%	2%	7%	7%	3%	5%
	Parent-Child Conflict	6%	19%	9%	30%	16%	23%	4%	18%	23%	20%	23%	72%	22%
2012	**Assessments**	**322**	**523**	**164**	**30**	**358**	**214**	**854**	**535**	**318**	2%	**936**	**296**	**4884**
	Placement Eval.	54%	40%	32%	23%	30%	48%	22%	53%	31%	49%	15%	12%	30%
	Truancy	3%	8%	6%	3%	6%	3%	41%	4%	2%	3%	6%	9%	11%
	Physical Abuse	32%	23%	20%	23%	29%	15%	18%	22%	21%	1%	28%	2%	22%
	Youth Sub Abuse	1%	10%	9%	3%	5%	12%	2%	5%	1%	338	7%	5%	5%
	Parent-Child Conflict	4%	24%	9%	13%	11%	21%	6%	11%	16%	13%	22%	75%	19%
2013	**Assessments**	**322**	**504**	**179**	**25**	**419**	**155**	**765**	**468**	**260**	3%	**876**	**351**	**4623**
	Placement Eval.	57%	41%	34%	32%	35%	54%	22%	52%	29%	22%	16%	17%	31%
	Truancy	4%	6%	8%	8%	9%	3%	34%	4%	2%	1%	5%	10%	10%
	Physical Abuse	26%	29%	24%	20%	22%	23%	21%	23%	27%	50%	30%	5%	24%
	Youth Sub Abuse	3%	6%	4%	8%	4%	9%	3%	5%	2%	1%	7%	6%	5%
	Parent-Child Conflict	7%	14%	4%	8%	15%	8%	11%	7%	19%	1%	22%	66%	18%