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# Receipt of independent living services among older youth in foster care: An analysis of national data from the U.S.

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ABSTRACT

Fifteen years has passed since the Chafee Foster Care Independence Program was created under the Social Security Act, which marked an increased role of the U.S. federal government in supporting foster care youth to independence. It was not until the National Youth in Transition Database (NYTD) was launched in 2010 that all 50 states reported standard data on receipt of the 13 types of Chafee independent living services. This paper, which draws on the first two years of NYTD data, analyzes Chafee service receipt across the U.S. among youth in foster care (ages 16–21). About half of the 131,204 youth included in this analysis received at least one type of Chafee service, and considerable variation existed in the proportion of youth that received each of the 13 specific types of services. Females were more likely than males to receive all but one type of service, and African Americans were less likely to receive most of the services. An interaction effect indicated that Black youth were significantly less likely to receive services in large urban areas than other racial/ethnic groups. Young people with disabilities or medical/psychological conditions were generally more likely to receive services than youth without disabilities. Youth in large urban regions receive fewer services than youth residing in other areas, and substantial variation exists between states in proportions of service recipients. Recommendations are made for targeting services, future data collection, and research, including suggestions on ways to improve measurement of Chafee services.



## 1. Introduction

The turn of the millennium marked an important shift in the U.S. government's role in supporting foster care youth. The Foster Care Independence Act of 1999 (FCIA) established the Chafee Foster Care Independence Program (CFCIP), which allocates hundreds of millions of federal dollars each year to fund a variety of independent living services. Although this program has existed for 15 years and has expended over two billion dollars, there has yet to be an assessment on a national scale of which eligible youth receive Chafee services and whether regional variation exists in service receipt. This article draws on the first two years of data collected by a national reporting system to provide estimates of Chafee service receipt.

## 2. Background

### 2.1. Summary of the Foster Care Independence Act

Changes made in 1986 to Title IV-E of the Social Security Act established the Independent Living Program, which was the precursor of the Chafee program created under the FCIA over a decade later (Government Accountability Office, 1999b). Enacted in 1999, FCIA significantly strengthened the Independent Living Program in a few important ways.[1] First, the annual federal expenditure on independent living services for foster care youth was doubled to $140 million.[2] States could use this funding for Chafee services targeting secondary and postsecondary education and training, career exploration, job placement and retention, financial management and budgeting, daily living skills, substance abuse prevention, skills related to obtaining and keeping affordable housing, health-related services and education, and development of interpersonal relationship skills and linkages to mentors (P.L. 106–169, 113, Stat. 1882). Second, states were given considerable flexibility in defining eligibility criteria. For example, states could decide to offer services to youth outside of the previously set age limits of 16 to 21 (Government Accountability Office, 2004). This increased flexibility

[1] It is worth noting that while the FCIA broadened services to prepare youth for independence, a primary goal remains establishing permanency through reunification, adoption, or guardianship. As such, the language of the FCIA prioritizes permanency but acknowledges that a nontrivial proportion of youth will not establish permanency.

[2] The amount of funding that a given state received was dependent on its share of the national foster care population, and states had to provide a 20% match to the federal contribution. Funding is disbursed to all 50 states, D.C., Puerto Rico, and Indian Tribes. The matching contributions could be cash or in-kind contributions such as services, equipment, or property (Government Accountability Office, 2007).

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means that there can be considerable variation between states in who is eligible for services and which service types are prioritized.[3] Third, the FCIA created the option for states to use up to 30% of federal Chafee dollars to fund room and board expenses for youth aged 18 and older. Finally, the FICA allowed states to extend Medicaid coverage to age 21. By 2003, 46 states provided support for room and board to emancipated youth and 31 states offered Medicaid benefits to at least some youth who aged out of care (Government Accountability Office, 2004).

Two subsequent laws further expanded the Chafee program. The FCIA was amended in 2002 to create a new service: education and training vouchers (ETVs). Youth meeting the eligibility criteria could receive up to $5000 each year up to age 23 to cover costs associated with post-secondary education and training.[4] All 50 states participated in the ETV program by 2003 (Government Accountability Office, 2004). The second alteration of the FCIA took place through the Fostering Connections to Success and Increasing Adoptions Act of 2008, which gave states the option to extend CFCIP eligibility and/or ETV eligibility to youth who exit foster care after age 16 to adoption or kinship guardianship. As of May 2014, 43 states broadened Chafee eligibility and 47 states broadened ETV eligibility (Government Accountability Office, 2014).

Another key function of the FCIA was to address data collection and evaluation problems[5] by establishing a standardized federal data collection system.[6] The National Youth in Transition Database (NYTD) was intended to serve two general purposes: to track outcomes of cohorts of foster care youth as they transition to early adulthood, and to record the receipt of services funded through the Chafee program. Although the launch of NYTD was originally anticipated to occur by October 2003 (Department of Health & Human Services, 2001), the final rule establishing NYTD did not take effect until April 2008 and data collection began in fiscal year 2011 (45 CFR § 1356.80–86).[7]

### 2.2. Research on receipt of independent living services

An important question is whether youth eligible for the Chafee program actually receive services. Several studies and reports have investigated this issue, and these analyses vary in methodological rigor, response rate, sample size, age range of the youth, and geographic region. Some studies used nonprobability sampling procedures and reported the proportion of participants who received services (e.g., Collins & Ward, 2011; Lemon, Hines, & Merdiner, 2005). A major drawback is that these samples may not reflect the local population of foster care youth, either in terms of service needs or participation, thus leading to potentially biased estimates. Other studies have used more rigorous sampling methods to study youth in a particular region of the U.S., and can thus provide more reliable estimates of independent living service receipt. One study, which evaluated service receipt before the FCIA, is a longitudinal study by Courtney and colleagues (2001). A random sample of 141 older adolescents in Wisconsin foster care were interviewed in 1994 and 1995. Participants were asked whether they received sixteen types of independent living skills training such as educational planning, food purchasing and preparation, and interpersonal skills. Rates of receipt were 70% or greater for 13 of the 16 types of training, the exceptions being training that addressed housing needs, legal skills, and parenting skills. The researchers also found that the proportion of youth receiving training in the largest urban area (71%) was smaller than the proportion of youth receiving training who resided in other counties throughout the state (78%). Despite the high rates of training receipt, in follow-up interviews two years after exiting care, respondents said that they received little training that helped with concrete tasks such as preparing for a job interview (12%) or finding housing (14%).

There have also been studies that drew representative samples of youth following the passage of the FCIA. The Midwest Evaluation of Adult Functioning of Former Foster Care Youth included 732 older adolescents preparing to leave foster care in Illinois, Iowa, and Wisconsin (Courtney, Terao, & Bost, 2004). The 17 year-olds were asked if they received different types of training and services to help them prepare to live on their own, which fell into six categories. The highest proportion of youth reported receiving at least one type of health education (68.9%), followed by employment or vocational support (67.5%), educational support (59.6%), budgeting and financial management training (56.2%), housing services (51.7%), and youth development services (e.g., youth conferences, mentoring) (46.1%). More recently, the California Youth Transitions to Adulthood Study (CalYOUTH Study) interviewed 727 17 year-olds in California foster care (Courtney, Charles, Okpych, & Halsted, 2014). Youth were asked to rate the amount of services or training they received in twelve domains. A majority of youth indicated that they received "a lot" or "some" preparation in all 12 service areas. More than four in five of youth reported receiving services in the areas of sexual health (90.7%), substance abuse (83.2%), relationship skills (83.2%), family planning (83.1%), education (81.4%), and daily living skills (80.3%). Housing was the category with the smallest proportion of service recipients (58.3%).

The studies referenced above estimate service receipt in specific geographic locations. Given the considerable amount of state discretion in defining Chafee service eligibility, findings from these studies may or may not reflect receipt in other geographic regions. Moreover, these studies probably also capture services that fall outside of the Chafee program. These studies are important because they measure the larger universe of services that youth are exposed to, regardless of who pays for them. However, in terms of gauging the extent to which Chafee services reach their intended targets, the above studies are limited because Chafee services cannot be distinguished from services funded through other mechanisms.

There have been a few reports over the last 15 years that provide a national picture of the receipt of services that were funded by the Independent Living Program (before 1999) or the Chafee Program (after 1999). A study by the Government Accountability Office (GAO) in 1999 summarized findings from state annual reports from fiscal years 1987 to 1996. The reports were aggregated because of missing and inconsistently reported data, which made it impossible to analyze years separately. Moreover, different definitions of "eligible" youth and "served" youth between states and over time led the authors to report the findings with caution. One overall conclusion was that the sheer number of youth served from 1989 to 1996 more than doubled, but this could have resulted from differences in foster care populations and/or changes in definitions (GAO, 1999b). A second GAO (2004) report presented early findings after the enactment of the FCIA. Based on the responses of 40 states that submitted annual reports with data

[3] That a sizable minority of child welfare departments operate as county administered systems adds an additional level of regional variation in the way policies and procedures could affect the provision of Chafee services (Dworsky & Havlicek, 2008).

[4] States are required to provide a matching contribution of 20% to receive ETV funding. Unlike funding for the Chafee program, ETV allocation is subject to Congressional reauthorization and the funding amount could change from year to year. The funding amount for the ETV program has decreased from the initial amount of $60 million in 2002, and has been below $45 million for fiscal years 2012 through 2014 (Catalog of Federal Domestic Assistance, 2014).

[5] Prior to the enactment of FCIA, the Department of Health and Human Services (DHHS) relied primarily on state annual reports to evaluate the provision of independent living services (Government Accountability Office, 1999a). A review of annual reports from fiscal years 1987 to 1996 indicated that there was considerable variation in the content, quality, and timeliness of data reported to the DHHS (Government Accountability Office, 1999a,b). These issues undermined federal monitoring of service delivery and impact.

[6] Difficulties in monitoring state performance on outcomes and delivering independent living services persisted even after FCIA was enacted. Indeed, there was still variability in the scope, content, and level of detail of state annual reports and multiyear independent living program plans (Government Accountability Office, 2004). The start of NYTD in 2010 was an important step in standardizing data that for the purposes of federal oversight and monitoring of state performance and progress over time.

[7] A final part of FCIA set aside a small portion of Chafee dollars to fund rigorous evaluation of promising or innovative independent living programs that could be of national importance. 1.5% of the Chafee allocation was reserved for evaluation, as well as technical assistance, performance measurement, and DHHS data collection activities (Government Accountability Office, 2007).

on Chafee services, 13 states (32.5%) reported that 75 to 100% of eligible youth who were still in care received independent living services in 2003, 14 states (35.0%) reported that 51 to 75% of eligible youth were served, 8 states (20.0%) reported that 25 to 50% of eligible youth received services, and just 5 states (12.5%) reported that 0 to 25% of youth were served.[8]

A final source of national data on receipt of Chafee services comes from annual Data Briefs that summarize NYTD findings from each fiscal year (Children's Bureau, 2012, 2013, 2014). All three reports provide a concise snapshot of demographic breakdowns of youth who received at least one service, as well as the proportion of youth who received each of the 13 types of services. However, these reports only describe characteristics of served youth; they do not provide estimates of how many youth who are eligible for Chafee services actually receive them. Moreover, the Briefs do not report state and regional differences in service receipt.

Given the limitations of existing studies, we do not have a national picture of which youth in foster care receive Chafee services, and the extent to which receipt varies across individual and regional characteristics.

## 3. Methods

### 3.1. Data and sampling frame

The two datasets used in the present analysis are the Adoptions and Foster Care Analysis and Reporting System (AFCARS) and the NYTD Services File. AFCARS is the national data system for children in foster care and children who were adopted with involvement of agencies operating under Title IV-E of the Social Security Act. Youth demographic characteristics, foster care involvement, and disabilities and medical/psychological conditions were retrieved from AFCARS, while data on receipt of Chafee services were taken from the NYTD Services file.

The sampling frame for this analysis is all youth who were in U.S. foster care for at least three months between the ages of 16 and 21 during fiscal years 2011 and 2012.[9] The decision to examine service receipt only while youth were in care is based on a few considerations. Not only is there a substantive interest in examining services youth receive while they are in state care, but data on service receipt may be less reliable once they leave.[10] The age range was selected because youth aged 16 to 21 will be eligible for services across the U.S. Although a majority of states have extended eligibility of Chafee services to earlier than 16 and some have extended eligibility beyond age 21, not all states have (Dworsky & Havlicek, 2008). Additionally, service types such as supervised independent living placements, education support for post-secondary education, and ETVs have limited relevance or applicability to younger adolescents. A minimum of three months stay in foster care excluded youth who had only brief stints in foster care. Finally, the analysis is restricted to October 1, 2010 and September 31, 2012 because these are the dates for which NYTD data were available at the time of the analysis. For youth with multiple foster care episodes, only the most recent episode was evaluated.

### 3.2. Sample creation

The sample for the analysis was created by merging the AFCARS and NYTD Services files for fiscal years 2011 and 2012. After removing cases due to duplication, not meeting sample criteria, or data errors,[11] a total of 153,455 youth remained in the AFCARS dataset. These cases were merged with the 162,713 youth (excluding Puerto Rico) in the NYTD services file, which includes all youth who received at least one independent living service that was provided or funded by a State agency that administers the Chafee Independent Living program. Since some states structure service provision such that Chafee-funded agencies also provide services to other populations (e.g., incarcerated youth, homeless youth), the NYTD Services files contains both youth who have and have not been in foster care. Of the 153,455 youth in the AFCARS dataset who met the study criteria, 88,987 were matched in the NYTD Services data file. The remaining 64,468 unmatched cases include youth in care who had not received a Chafee-funded IL service. Additionally, there were 73,726 cases in the NYTD Services file that were not matched to records in the AFCARS file. These unmatched cases included youth who were not in foster care during the analysis period (n = 57,803) and youth who fell outside of the age criteria (n = 15,185), and both groups were excluded from the analysis.[12]

The next step involved creating an exposure time variable for each youth. In the context of the present analysis, "exposure time" denotes the number of days each youth met all of the sampling frame criteria specified above. A youth's start date for the exposure time was the latest date of the following: foster care entry date, the start of the analysis time frame (i.e., October 1, 2010), or the date they turned 16. A youth's exposure end date was the earliest of the following: foster care exit date, the day before the youth turned 21, or the end of the analysis time frame (i.e., September 30, 2012). After the exposure start and end dates were identified, additional cases were dropped due to erroneous dates (n = 313)[13] or because youth met the study criteria for less than 90 days (10,340),[14] which reduced the number of eligible youth to 142,802.

After an initial review of the data, it was discovered that New York did not report service receipt outcomes in FY2011 and FY2012 but was included in the NYTD Service file. After excluding youth residing

[8] Note that these proportions do not include youth who exited foster care but were eligible for Chafee services.

[9] Broadly, the decision was made to use a common sample criteria that applies to all states, rather than use the idiosyncratic eligibility criteria of each state (and each municipality, for states with county-administered systems). This decision was made principally for two reasons. First, from a practical standpoint, it would have been difficult (if not impossible) identify eligible youth due state variation in policy, changes in policy during the study period, and lack of variables in AFCARS and NYTD Services. Second, from an analytic standpoint, it may make more sense to use a common ruler to make between-state and between-region comparisons rather than use different rulers for each state or municipality based on idiosyncratic eligibility criteria.

[10] Data on service receipt among youth who exited care may be less reliable than service receipt data among youth who are in foster care. A Government Accountability Office (2004) report indicated that states had considerable difficulty in tracking youth after they exited care, and in most cases less than half of the youth were able to be contacted. Furthermore, states vary in the mechanisms they use to count service receipt. For example, some states rely on caseworkers to report service receipt, others rely on service providers, while still other states use both (personal communication with NYTD program specialist on September 9, 2014). This may introduce state variation in service receipt outcomes that results from data collection procedures rather than actual differences in service receipt, which is particularly susceptible to misreporting for youth no longer in contact with the foster care system.

[11] The follow is the breakdown of cases removed from the AFCARS dataset (n = 876,992): duplicate cases (n = 47), youth residing in Puerto Rico (n = 6518), missing or erroneous foster care dates (n = 5177), youth older than 21 (n = 325), youth discharged from care before their 16th birthday (n = 366,381), youth who were younger than age 16 on the last day of the analysis time frame (n = 321,581), youth had not been in foster care for at least 90 days during the observation period after their 16th birthday (n = 30,068), and youth who entered/reentered care within 90 days of turning 21 (n = 5). Note that youth who entered care after July 1, 2012 are excluded from the analysis, regardless of age. These youth would have been observed for less than 90 days.

[12] Of the 57,803 cases who were not in foster care during the observation period, 32,744 were identified using a variable that designates youth who were not in foster care in FY11–FY12. The remaining 25,059 unmatched cases were suspected to be youth who were last in foster care prior to October 1, 2010 but who received services sometime between October 2010 and September 2012. To examine this supposition, these youth were matched with AFCARS records from FY2004 to FY2010. All 25,059 cases had an AFCARS record from an earlier year, thus confirming the supposition. Since these youth received services after exiting care, they were excluded from the analysis.

[13] These 313 youth had exposure end dates that were before the start of the analysis period (October 1, 2010).

[14] In other words, these youth were between 16 and 21 and in foster care between October 1, 2010 and September 30, 2012 for fewer than 90 days. This ensures that the exposure time was a reasonable duration of time for a youth to have potentially received a Chafee service.

in New York (n = 11,840), the proportion of missing data on any one of the 13 Chafee services dropped from about 8.1% to less than 0.1%. Additionally, Pennsylvania did not report NYTD Service data for FY2011, but since these youth were not included in the Services file the sample size was not affected. The sample includes Pennsylvania youth from just FY2012. The final sample size is 131,204.

### 3.3. Variable descriptions

#### 3.3.1. Individual and regional variables

The individual-level variables that were used to compare service receipt outcomes include sex, a composite variable for race and ethnicity, and types of disabilities or medical/psychological conditions. Similar to the convention used in the NYTD Briefs (Children's Bureau, 2012, 2013, 2014), six mutually exclusive race/ethnicity categories were used: White, Black/African American, Alaskan Native/American Indian, Asian/Hawaiian/Pacific Islander, multiracial, and Hispanic. [15] If a youth identified as Hispanic, they were coded as Hispanic and not any of the other race categories. Youth disability or condition are captured by five categories from the AFCARS dataset: physical disability, visual or hearing impairment, emotional disturbance, mental retardation, and another medical condition. See Table A1 in the Appendix for a description of each disability or condition. Several additional individual-level variables were used to describe the sample: five variables pertaining to youths' foster care background [length of stay for the current foster care episode, number of placements in the most recent foster care episode, most recent placement type, reason for most recent removal,[16] and total number of removals (lifetime)] and two variables pertaining to exposure time [age of youth at their exposure begin date, and the total amount of exposure time (measured in 30-day months)]. See Tables 2 and 3 below for the complete list of categories for each variable.[17]

Two additional variables captured the geographic location of the child welfare agency responsible for the youth. The first is a state variable that includes 49 U.S. states (not NY) and Washington D.C. The second variable is a measure of county urbanicity. Each county was classified into one of nine categories of the 2013 Rural–urban Continuum Codes created by the U.S. Office of Management and Budgeting (U.S. Department of Agriculture, 2014).[18] Three metropolitan codes are based on population size, and six nonmetropolitan codes are based on degree of urbanization and adjacency to metropolitan areas. For this study, the nine codes were collapsed into four categories: large metropolitan, metropolitan, nonmetropolitan, and rural. See Table A2 in the Appendix for a description of each category. A small proportion of the 64,494 youth who were in foster care during both fiscal years 2011 and 2012 changed county types between years (1.7%). For these youth, the most recent county was used.

#### 3.3.2. Outcome variables: receipt of Chafee independent living services

The NYTD Services dataset captures services that are paid for or provided by the State Chafee Foster Care Independence Program (SCFCIP). These include services that are provided directly by local child welfare agency staff or an agent of the State (e.g., group home workers, foster parents), or by entities that are contracted by the SCFCIP agency to provide services (e.g., a local nonprofit). States use different procedures to collect and report service receipt data. For example, in some states a youth's case manager is responsible for gathering data from service providers and reporting it to the state, other states allow providers to directly enter data on service receipt into the child information system, while still other states use a hybrid approach in which providers input data and case managers at the state level review and approve services for final entry into the system (personal communication with NYTD program specialist on September 9, 2014). The services that are documented in the NYTD system may not be funded exclusively by Chafee dollars. Services can also be funded by state dollars, private dollars, or a mix of funding sources, depending on how the SCFCIP is structured.[19]

The outcomes for the present study are 13 categories of independent living services from the NYTD Services dataset and two global measures of service receipt. For each service type, a binary variable indicated whether the youth received that service during a six-month NYTD reporting period.[20] Nine of the service categories include academic support for secondary education, postsecondary education support, career preparation, employment support, budgeting and money management, housing education and home management, health education and risk prevention, family support and healthy marriages, and mentoring. Three types of financial assistance (room and board, education, and other needs) are three additional categories. The final service type includes supervised independent living placement (SILP), which is a housing option made available to older youth who are prepared to live in a more independent setting and have a desire to do so. See Table A3 in the Appendix for brief descriptions of each service type. In addition to the NYTD measures, two variables were created for this analysis: a binary variable of whether or not a youth received any Chafee service, and a count variable of the number of different types of services that a youth received (0–13).

## 4. Analyses

The analyses are divided into five parts. First, descriptive statistics of the sample are presented. Second, we examine differences in service receipt along individual level factors including gender, race/ethnicity, and disability/condition status.[21] We use three measures of global service receipt: a) the proportion of youth who received at least one service, b) the average number service types received, and c) the average number of service types received among just youth who received at least one service. Following these global measures, we assess receipt of each of the 13 specific types of Chafee services. For services that apply to only or predominantly older adolescents (i.e., SILP, financial assistance for room and board, and education funding), estimates are provided for just youth age 18 and above. Third, we analyze service receipt on the county group level. The focus is on testing whether youth living in counties that differ in degree of urbanicity have different likelihoods of receiving services, both overall (three global measures) and for each specific kind of service. Fourth, between-state differences are assessed in terms of the proportion of youth who received at least one service. The fifth and final section contains a supplemental analysis, which revisits racial/ethnic differences in the proportion of youth

[15] Originally, Asian (0.86% of sample) and Hawaiian/Pacific Islander (0.20% of the sample) were separate categories, but were combined into a single category similar to procedure in the NYTD reports. Sensitivity analyses were conducted to examine whether these three groups differed on any measure of overall service receipt or receipt of specific services. There was only one statistically significant difference between the groups (proportion receiving education financial assistance), which is noted in a footnote in the Results section.

[16] The original AFCARS variable for reason for removal contained 15 categories. In this analysis, parent drug abuse and parent alcohol abuse were collapsed into a single category, as were youth drug abuse and youth alcohol abuse.

[17] Data on education such as highest completed grade, enrollment status, and special education status, are not included in this analysis because information is available only for youth in the NYTD Services database.

[18] FIPS codes for each county were provided by staff at the Cornell University National Data Archive for Child Abuse and Neglect.

[19] For example, if a given SCFCIP administers independent living services to populations not covered under FCIA (e.g., homeless youth, adolescents in the juvenile justice system) and uses state and foundation dollars to pay for services to these other populations, then a given service received by a foster care youth may have been funded by a combination of sources.

[20] There are four reporting periods in the present analysis: 1st period (Oct. 1, 2010–Mar. 31, 2011), 2nd period (Apr. 1, 2011–Sep. 30, 2011), 3rd period (Oct. 1, 2011–Mar. 31, 2012), and 4th period (Apr. 1, 2012–Sep. 30, 2012).

[21] Age at which services were received would be another pertinent independent variable, but given that service receipt is measured in six-month blocks it would be difficult to pinpoint how old a youth was when they received a service.

served in combination with county urbanicity. T-tests and z-tests are used to analyze mean and proportion differences, respectively, and logistic regression is used for the supplemental analysis to consider the partial and interaction effects of race/ethnicity and county urbanicity. Given the large sample sizes, significance tests are conducted at the 99% confidence level. Stata version 13 was used to complete all analyses.

Since the purpose of this analysis is to present national estimates of service receipt, the analyses described above do not control for covariates. One covariate that perhaps deserves special consideration is the youth's exposure time, which ranges from 90 to 730 days. Presumably, if youth were eligible for a longer time, they will be more likely to receive services. Furthermore, if group differences are observed service receipt, and the groups also differ in terms of how long they were observed, it is reasonable to ask whether the group differences would remain after exposure time is controlled. Although there were no statistically significant differences in exposure time by gender, there were some differences by race, disability, and county urbanicity.[22] While there is likely a relationship between exposure time and the duration of foster care involvement, the two are not interchangeable.[23] As a sensitivity analysis, all comparative analyses were rerun controlling for exposure time. In most instances, the results were similar in that neither the statistical significance nor the direction of the relationship changed. In keeping with the purpose of the article, unadjusted estimates are reported below with footnotes indicating when controlling for exposure time led to a change in statistical significance.

## 5. Results

### 5.1. Description of the sample

As displayed in Table 1, females make up less than half of the sample, and most youth were identified as being either White, Black, or Hispanic. About two-thirds of the sample is between 16 and 17 years old when they were first observed. A sharp decrease occurs between ages 17 and 18, reflecting the fact that youth must exit foster care before their 18th birthday in most states.[24] About four in ten youth had at least one type of disability or condition, with the emotional disturbance being the most prevalent condition. Table 2 describes characteristics of foster care involvement. The average time that youth were in care for their current foster care episode is roughly 3.5 years, which is about half of a year less than the time in care for all foster care episodes during their lifetime.[25] The majority of youth have been in care for under three years, and only 7% being in care for 10 or more years. The average number of foster care placements youth have resided in during the current foster care episode is 5.4, with about half of the youth living in 3 or fewer placements. Almost one-third of youth were placed in a non-relative foster home, an additional 10% were in a foster home with relatives, and about 20% were in either a group home or institution. The remaining 28% of youth were either in a SILP, a pre-adoptive home, a trial home visit, or they ran away from their placement. The most common reasons youth were removed from their caregivers include youth behavior problems (41%), neglect (37%), and caretaker's inability to cope (21%). The figures in Table 3 report that over half of youth reside in a large metropolitan area and an additional 32% reside a metropolitan region. Just 2% of youth in the sample come from rural areas.

**Table 1**
Demographic characteristics.

| Variable name | N | % | Mean (SD) | % missing |
|---|---|---|---|---|
| Female | 61,158 | 46.6 | | <.001 |
| Race/ethnicity | | | | 1.05 |
| White | 54,498 | 42.0 | | |
| Black/African American | 42,352 | 32.6 | | |
| American Indian | 11,932 | 1.5 | | |
| Asian/Hawaiian/Pacific Islander | 1375 | 1.1 | | |
| Multiracial | 5431 | 4.2 | | |
| Hispanic | 24,241 | 18.7 | | |
| Age at start of observation | | | 16.80 (.80) | None |
| 16 | 83,753 | 63.8 | | |
| 17 | 37,286 | 28.4 | | |
| 18 | 6816 | 5.2 | | |
| 19 | 2223 | 1.7 | | |
| 20 | 1126 | 0.9 | | |
| Youth disability or condition (can include more than one) | | | | 1.45 |
| Physical disability | 2247 | 1.7 | | |
| Visual/hearing impairment | 5937 | 4.6 | | |
| Emotional disturbance | 40,046 | 31.0 | | |
| Mental retardation | 5233 | 4.1 | | |
| Other medical condition | 19,687 | 15.2 | | |
| Any of the above | 52,030 | 40.6 | | |

**Table 2**
Foster care background characteristics.

| Variable Name | N | % | Mean (SD) | % missing |
|---|---|---|---|---|
| Length of stay (lifetime) | | | 3.91 (3.89) | 10.9 |
| Length of stay (cur. episode) | | | 3.47 (3.65) | None |
| <1 year | 34,108 | 26.0 | | |
| 1–3 years | 46,981 | 35.8 | | |
| 3–6 years | 26,871 | 20.5 | | |
| 6–10 years | 13,797 | 10.5 | | |
| 10+ years | 9447 | 7.2 | | |
| Exposure time (in months) | | | 12.25 (6.59) | None |
| # of placements (cur. episode) | | | 5.44 (5.97) | .28 |
| 1 placement | 27,482 | 21.0 | | |
| 2–3 placements | 39,656 | 30.3 | | |
| 4–6 placements | 29,035 | 22.2 | | |
| 7–15 placements | 26,503 | 20.3 | | |
| 16+ placements | 8157 | 6.2 | | |
| Current placement type | | | | .89 |
| Non-relative foster home | 38,894 | 29.9 | | |
| Relative foster home | 13,397 | 10.3 | | |
| Group home | 17,920 | 13.8 | | |
| Institution | 23,756 | 18.3 | | |
| SILP | 10,561 | 8.1 | | |
| Pre-adoptive home | 2347 | 1.8 | | |
| Trial home visit | 14,226 | 10.9 | | |
| Runaway | 8941 | 6.9 | | |
| Removal reason (can include more than one) | | | | .43 |
| Physical abuse | 15,359 | 11.8 | | |
| Sexual abuse | 9130 | 7.0 | | |
| Neglect | 48,668 | 37.3 | | |
| Parent drug/alcohol abuse | 19,223 | 14.7 | | |
| Youth drug/alcohol abuse | 7614 | 5.8 | | |
| Youth disability | 6045 | 4.6 | | |
| Youth behavior problem | 53,087 | 40.6 | | |
| Parental death | 1885 | 1.4 | | |
| Parent incarceration | 4952 | 3.8 | | |
| Caretaker inability to cope | 27,129 | 20.8 | | |
| Abandonment | 10,635 | 8.3 | | |
| Relinquishment | 2757 | 2.1 | | |
| Inadequate housing | 8744 | 6.7 | | |

[22] In terms of the average number of days that youth were observed, females (368.5) and males (366.7) were comparable. White (351.8), American Indian/Alaskan Native (360.0), and Hawaiian/Pacific Islander (368.5) youth were observed for a comparable number of days, but Hispanic (366.0), Multiracial (371.3), Asian (379.4), and Black (389.7) youth were observed for a significantly greater number of days. Youth in rural (344.6) and non-metropolitan (338.5) counties were observed for fewer days than youth in metropolitan (355.8) and large metropolitan (378.3) counties.

[23] The correlation between the number of days observed and the number of days in care for the foster care episode is 0.350.

[24] States allow youth to remain in care past age 18 under certain circumstances, but the majority of youth do not remain in care beyond age 18 (Dworsky & Havlicek, 2008).

[25] Note that data on lifetime foster care stay is missing for almost 11% of the sample and the estimate should be interpreted with caution.

**Table 3**
Municipality category of child welfare agency serving the youth (.21% missing).

| | N | % |
|---|---|---|
| Large metropolitan area | 68,097 | 52.0 |
| Metropolitan area | 41,530 | 31.7 |
| Nonmetropolitan area | 18,696 | 14.3 |
| Rural area | 2599 | 2.0 |

### 5.2. Chafee service receipt by youth characteristics

Table 4 presents differences in overall service receipt by gender, race/ethnicity, and presence of a disability, impairment, or psychological/medical condition. About half of youth in the sample received at least one Chafee service (50.2%), and the average number of different types of services received was 2.31. Among just service recipients, youth received an average of 4.6 different types of services. Females were more likely than males to receive at least one service and they received more types of services. Racial/ethnic differences are also present for service receipt. Overall, multiracial (58.6%) and Hispanic (54.8%) youth were more likely to receive at least one service than most other groups, and African American youth were the least likely to receive a Chafee service out of all racial/ethnic groups (46.8%). Among only served youth, Alaskan Native/American Indian youth received significantly more types of services (5.43) than any other group, and African American received fewer types of services than nearly all other groups (4.25). Thus, African American youth were the least likely to receive any Chafee service and received fewer kinds of services. Youth with a disability or condition were more likely to receive Chafee services (54.9%) than youth with no disability or condition (47.8%).[26] The proportion of youth who received services ranged from 54.7% for youth with an emotional disturbance to 59.2% for youth with another medical condition. On average, young people with visual/hearing conditions received more types of services than both youth with other types of disabilities/conditions and youth with no disabilities/conditions.

Fig. 1 shows the proportion of youth who received each service type. There is considerable variation across services, ranging from about 8% for financial assistance for room and board to just over 30% for academic services for secondary education. There are six types of services that were used by at least one in five young people. These services target secondary school and career preparation, housing and home management, health education and risk prevention, financial management, and family and healthy marriage education. The other seven services that are received by fewer than one in five youth are the three types of financial assistance, job training, mentoring, postsecondary education services, and placement in SILPs. Although not depicted here, females were significantly more likely than males to receive 12 of the 13 Chafee services. The one exception was employment services (females = 14.7% vs. males = 14.9%). In most of the remaining service areas, there was about a three to four percentage difference in service receipt. However, the gender gap was wider for SILPs (14.4% vs. 9.9%) and financial assistance for education (21.9% vs. 14.7%).

Differences in receipt of specific services also varied by race/ethnicity. Results presented in Table 5 are color-coded to identify specific racial groups that different significantly from the overall sample proportion of service receipt. For the reader's reference, the first column reproduces the proportions in Fig. 1. Cells that are highlighted in blue indicate that a significantly greater proportion of the racial/ethnic group received services than the overall sample, cells highlighted in yellow indicate the group receiving significantly fewer services, and cells not highlighted indicate that there was no statistically significant difference. Multiracial youth were more likely to receive every type of service than all youth, with most of the differences ranging from about 3 to 5%. An equal or greater percentage of Alaskan Native/Hawaiian/American Indian youth received services than all youth except for SILPs, in which significantly less likely to receive services. For the service types where Alaskan Native/American Indian youth received more services than the overall average, these differences were large relative to other group differences, commonly over 4% and as high as 8.9% (employment training). White youth received each of the 13 services in similar or greater proportions than the overall group on all service types, and when they did receive more services it was only by about 1 to 3%. The proportion of Hispanic youth receiving service was equal to or greater than the group average in 11 of the 13 service areas. Asian/Hawaiian/Pacific Islander youth received services in similar proportion to the overall group in most service categories. The three areas where they received more services pertained to education, and financial management training and money for room and board were the two areas where they received services in smaller proportion than the overall group. Black youth were about as likely to be placed in SILPs and receive funding for room and board and for other expenses as all other youth, but they were less likely to receive services in the 11 remaining service areas. Most of these gaps were about 3 to 4% differences.

Table 6 reports differences in receipt of specific Chafee services by disability/condition type and follows a color-coding scheme similar to Table 6. The reference group is youth with no disability or condition. Youth with a visual/hearing disability, an emotional condition, or another medical condition were as likely or more likely to receive 12 of the 13 Chafee services than youth without a disability or condition. The differences are larger for youth with a visual or hearing impairments, with ten service areas having a difference equaling 7% or more. Differences in proportions between youth with other medical conditions and youth with no condition were particularly large in two areas: academic support for secondary education (8.3%) and other money (10.0%). Youth with physical disabilities were more likely to receive services in three Chafee service domains than youth without disabilities and conditions, and less likely to receive services in four domains. Proportion differences between youth with emotional disturbances and no conditions were particularly large in the service areas of secondary education support, housing education and home management, and other money. Overall, youth with any one of the specific disabilities or conditions were more likely to receive academic support for secondary education, health education and risk prevention, and funding for other expenses. They were consistently less likely to receive financial assistance for room and board than young people without disabilities or conditions.

### 5.3. Variation in service receipt by county urbanicity

In terms of county types, many significant differences emerged in service receipt based on the degree of urbanicity of the county (Table 7). Youth served in rural and nonmetropolitan areas were the most likely to receive services, and youth in large metropolitan areas were the least likely to receive any Chafee service. Similarly, youth in large metropolitan areas receive fewer types of services and youth in less densely populated areas receive more kinds of services.

Table 8 displays variation in receipt of specific types of services across the metropolitan categories, and same color-coding scheme is used as in Tables 5 and 6 above. The comparison group is the entire sample. Overall, youth in large metropolitan areas were less likely to receive 10 of 13 service types, whereas youth in less urban areas were more likely to receive most service types than the overall average. Particularly large gaps exist in financial management training, health education and risk prevention, and family and health marriage education. There were

[26] Mental retardation was excluded from the comparative analyses because some of the service categories may not be relevant for youth below a certain level of functioning (e.g., postsecondary education support, supported independent living programs). Additionally, many of these youth may receive services through other administrations and programs such as state departments of developmental disabilities. Consistent with these contentions, sensitivity analyses revealed that estimates of Chafee service receipt among youth with mental retardation were generally lower than youth with other types of disabilities/conditions and youth with no disabilities/conditions.

**Table 4**
Overall service receipt separated by sex, race/ethnicity and disability.

| Variable | Proportion served | | Average number of service types (all youth) | | Average number of service types (served only) | |
|---|---|---|---|---|---|---|
| | % | 99% CI | Mean | 99% CI | Mean | 99% CI |
| All youth | 50.2 | (49.8, 50.6) | 2.31 | (2.28, 2.33) | 4.59 | (4.56, 4.62) |
| Sex | | | | | | |
| Female | 53.5 | (53.0, 54.0) | 2.50 | (2.47, 2.54) | 4.67 | (4.63, 4.72) |
| Male | 47.4 | (47.0, 47.8) | 2.13 | (2.11, 2.16) | 4.51 | (4.46, 4.55) |
| Race/ethnicity | | | | | | |
| White | 50.3 | (49.8, 50.8) | 2.43 | (2.40, 2.47) | 4.84 | (4.79, 4.89) |
| Black/Afr. Am. | 46.8 | (46.2, 47.4) | 1.99 | (1.95, 2.02) | 4.25 | (4.19, 4.30) |
| Asian/Haw./Pac Isl. | 53.5 | (49.9, 56.9) | 2.44 | (2.21, 2.67) | 4.56 | (4.28, 4.87) |
| American Indian | 52.3 | (49.4, 55.2) | 2.83 | (2.63, 3.05) | 5.43 | (5.17, 5.69) |
| Multiracial | 58.6 | (56.9, 60.3) | 2.82 | (2.70, 2.94) | 4.81 | (4.67, 4.96) |
| Hispanic | 54.8 | (54.0, 55.6) | 2.44 | (2.39, 2.49) | 4.50 | (4.39, 4.53) |
| Condition or disability | | | | | | |
| Visual/hearing | 59.0 | (57.4, 60.6) | 3.11 | (2.99, 3.24) | 5.28 | (5.13, 5.43) |
| Physical disability | 56.0 | (53.3, 58.7) | 2.27 | (2.11, 2.43) | 4.05 | (3.85, 4.26) |
| Emotional disturb. | 54.7 | (54.0, 55.4) | 2.53 | (2.49, 2.57) | 4.62 | (4.57, 4.67) |
| Other med. condition | 59.2 | (58.3, 60.1) | 2.62 | (2.57, 2.69) | 4.44 | (4.36, 4.51) |
| Any cond./dis. | 54.9 | (54.3, 55.5) | 2.53 | (2.49, 2.57) | 4.61 | (4.56, 4.66) |
| No cond./dis. | 47.8 | (47.3, 48.3) | 2.19 | (2.16, 2.22) | 4.58 | (4.54, 4.62) |

few or no differences in the three kinds of financial assistance (housing, education, and other). Youth in rural and nonmetropolitan areas were less likely to be placed in SILPs.

### 5.4. State differences in proportion of youth receiving services

Fig. 2 compares data from the 2004 GAO report and the current analysis on the proportion of eligible youth who were still in foster care and who received Chafee services. The GAO estimates are based on data from the annual reports of 40 states for fiscal year 2003. States were grouped into four categories based on the state proportion of youth who received at least one Chafee service: 0 to 25%, 26 to 50%, 51 to 75%, and 76 to 100%.[27] The y-axis represents the percentage of states that fall into each of these four categories. It is important to note a couple differences between youth included in the GAO sample and youth in the current analysis. First, the GAO report is based on data from only 40 states that submitted annual reports, while data from the current analysis is based on data from 49 states and the District of Columbia. Second, the designation of "eligible youth" in the GAO report was based on state-specific definitions (e.g., some states extended the eligibility below age 16 and over 21), whereas the current analysis uses common eligibility criteria. For these and other reasons, the results reported in Fig. 2 are not intended to be analyzed as differences over time in equivalent measures of service receipt.

Despite differences in state representation and methodology, estimates from the 2004 GAO report and the current analysis are consistent in some respects. Approximately one-fifth of states serve 26–50% of eligible youth, and just over one-third of states serve 51–75% of youth. Noticeable differences are present in the tails of the distributions. The GAO report has a higher estimate for the high service category (32.5% vs. 24.0%) and lower estimate for low service category (12.5% vs. 16.0%). One potential explanation for this disagreement may come from the states that did not submit data in fiscal year 2003. If the states that did not collect and report data also served smaller proportions of eligible youth, then we could see an inflated estimate of high-serving states and deflated estimates of low-serving states. A finding from the current analysis is that 62% of states serve at least half of eligible youth (as defined in this study), while 38% serve less than half of eligible youth.

### 5.5. Reexamination of racial/ethnic differences in service receipt

The findings above indicate that a smaller proportion of African American youth receive services than other racial/ethnic groups, and youth in large metropolitan areas are less likely to receive services than in less urban areas. Furthermore, a larger percentage of African American youth reside in large metropolitan areas (70.9%) than youth from the other racial/ethnic groups (42.9%). A reasonable contention might be that regional differences account for some of the racial disparity in service receipt observed between Black youth and youth from other races. To examine this supposition, two logistic regression models were run. In the naïve model, the likelihood of receiving a Chafee service was regressed on race (Black youth vs. all other youth), and in the second model the four category measure of county urbanicity was added as a covariate. Taking the exponent of the regression coefficient for race in the naïve model indicates that the odds of receiving a Chafee service is 19.1% lower for African American youth than other youth ($p < .001$). Controlling for metropolitan region slightly narrows the disparity; the odds of being served is 17.1% lower for African American youth than other youth ($p < .001$). Thus, adjusting for urbanicity accounts for

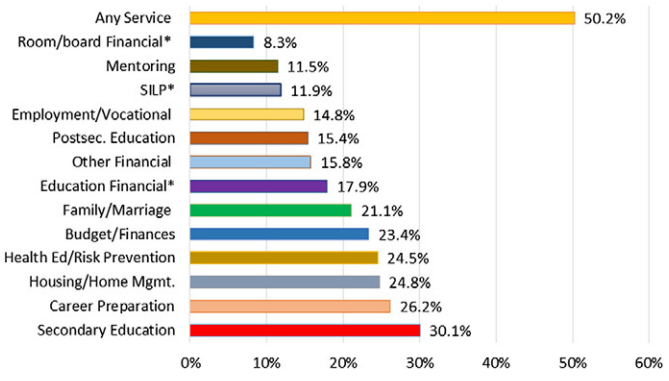


**Fig. 1.** Proportion of Youth Receiving Each Chafee Service. *Includes only youth 18 and older.

[27] Thus, if state A has 10,000 eligible youth and 2000 of these youth received services (20%), then state A would fall into the first category (0–25%).

**Table 5**
Differences in receipt of specific Chafee services by race/ethnicity.[a].

| | All | White | Black/AA | Asian /HI/PI | AK/ AI | Multi–racial | His–panic |
|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % |
| Academic | 30.1 | 31.3 | 26.3 | 34.8 | 35.3 | 35.6 | 32.4 |
| Postsecondary | 15.4 | 16.7 | 12.1 | 20.2 | 19.2 | 19.9 | 16.7 |
| Career | 26.2 | 28.3 | 21.1 | 25.8 | 31.2 | 30.7 | 29.2 |
| Employment | 14.8 | 15.2 | 12.7 | 17.0 | 23.7 | 17.6 | 16.3 |
| Budget | 23.4 | 26.5 | 20.2 | 20.2 | 27.9 | 28.4 | 20.8 |
| Housing ed | 24.8 | 26.1 | 21.0 | 25.6 | 31.2 | 28.8 | 27.1 |
| Health ed | 24.5 | 26.9 | 20.9 | 21.7 | 27.6 | 28.9 | 24.6 |
| Family | 21.0 | 22.7 | 16.2 | 20.9 | 27.0 | 25.5 | 24.4 |
| Mentor | 11.8 | 12.3 | 10.4 | 14.1 | 17.2 | 15.5 | 11.7 |
| SILP* | 11.9 | 11.4 | 11.3 | 11.3 | 6.1 | 16.8 | 13.4 |
| Housing funds* | 8.3 | 8.9 | 8.9 | 4.7 | 11.6 | 12.8 | 5.3 |
| Ed funds* | 17.9 | 17.5 | 14.1 | 25.0 | 20.5 | 28.6 | 24.7 |
| Other funds | 15.8 | 15.2 | 14.2 | 16.7 | 21.6 | 22.0 | 18.1 |

Fewer than all youth ($p < .01$) Similar to all youth More than all youth $p < .01$)
*Includes only youth ages 18–21

[a]The following changes in statistical significance occurred when exposure time was controlled: White youth have a greater likelihood of receiving housing funds; Black youth have a decreased likelihood of being placed in a SILP; Asian youth have a decreased likelihood of receiving health education.

**Table 6**
Differences in receipt of specific Chafee services by disability/condition.[a].

| | None | Visual /hearing impair. | Physical disability | Emotional disturb. | Other medical condition |
|---|---|---|---|---|---|
| | % | % | % | % | % |
| Academic | 28.2 | 41.6 | 33.2 | 32.7 | 36.5 |
| Postsecondary | 14.9 | 21.2 | 12.5 | 15.9 | 17.7 |
| Career | 25.0 | 33.0 | 24.6 | 29.0 | 27.9 |
| Employment | 14.2 | 21.0 | 15.8 | 15.9 | 16.8 |
| Budget | 23.1 | 26.6 | 20.2 | 25.5 | 21.8 |
| Housing ed | 23.0 | 34.9 | 24.7 | 27.6 | 30.2 |
| Health ed | 23.4 | 31.5 | 27.1 | 27.5 | 25.5 |
| Family | 20.2 | 28.9 | 19.7 | 22.8 | 23.8 |
| Mentor | 10.9 | 18.2 | 12.4 | 13.3 | 13.1 |
| SILP* | 11.8 | 17.2 | 12.0 | 11.7 | 12.9 |
| Housing funds* | 10.2 | 6.0 | 6.9 | 6.0 | 4.7 |
| Ed funds* | 17.8 | 24.4 | 13.8 | 16.3 | 21.8 |
| Other funds | 13.5 | 22.7 | 18.1 | 19.0 | 23.5 |

Fewer than all youth ($p < .01$) Similar to all youth More than all youth $p < .01$)
*Includes only youth ages 18–21

[a]The following change in statistical significance occurred when exposure time was controlled: youth with a physical disability do not differ in their likelihood of receiving health education; youth with an emotional disturbance have a greater likelihood of receiving employment services; youth with other medical conditions do not differ in their likelihood of receiving career or health education services.

about one-tenth of the racial disparity between Black youth and other youth (2.0%/19.1% = 10.5%).[28]

A related but distinct question is whether living in a large metropolitan area has a greater negative impact on the likelihood of receiving services for African American youth than for other youth. Whereas controlling for region tests whether differences exist between African American youth and other youth living in similar metropolitan areas, interacting race with region examines whether living in certain areas affects Black youth more than other youth in the likelihood that they will receive services. The interaction effect between race/ethnicity and living in highly urban areas is depicted in Fig. 3. The top part of the figure displays the difference in the average proportion of youth receiving services in large metropolitan regions versus the three smaller regions combined. The black dotted line is the proportion of youth who receive services in the three smaller regions, the black solid line is the proportion of served youth in large metropolitan regions, and the colored boxes are the 99% confidence intervals for both point estimates. The circles on the bottom part of the figure depict the proportion of youth of each race/ethnicity that live in a large metropolitan area. The first thing to note is that for all but one racial/ethnic group (multiracial youth), the percentage of youth receiving services in the three less densely populated regions (dotted lines) are fairly similar. The proportions of Black (51.1%), White (51.4%), Asian/Hawaiian/Pacific Islander (50.4%), and American Indian/Alaskan Native (51.7%) youth who are served are all within 1.5% of one another, and the percentage of Hispanic (53.8%) youth is slightly higher but still statistically indistinguishable. However, when comparing the difference in percentage of youth served in the large metropolitan versus other regions, large disparities exist between the racial and ethnic groups. For all groups except for Black and White youth, there is no statistically significant difference in the likelihood of receiving services if these youth live in a large metropolitan region or in a less urban region. However, White and Black youth are significantly less likely to receive a Chafee service if they live in a large metropolitan area than if they live in a less urban area. The difference is particularly pronounced for African American youth. The difference for Black youth (−6.0%) is nearly twice as the difference for White youth (−3.2%). Moreover, as depicted by the circles at the bottom of the figure, Black youth are more than twice as likely to reside in large metropolitan areas as White youth. Taken together, Black youth are more likely to live in urban regions than youth from other racial/ethnic groups, and in those regions, they are disproportionately less likely to receive Chafee services than if they lived somewhere else.

## 6. Discussion

Drawing on the first two waves of NYTD data, this analysis presents national estimates of Chafee service receipt among youth in foster care. Compared to prior studies that investigated receipt of independent living services (Courtney et al., 2014; Courtney, Piliavin, Grogan-Kaylor, & Nesmith, 2001; Courtney et al., 2004), the estimates reported in this analysis were much lower. For example, in past studies large percentages of youth stated that they received education planning and support services, ranging from 59% (Courtney et al., 2004) to 82% (Courtney et al., 2001) and 95% (Courtney et al., 2014). In the present analysis, receipt of academic support is about half of the lowest estimate (30.7%). There are at least three possible reasons for these differences. First, the present analysis is limited to just services that are covered under the

**Table 7**
Overall service receipt by type of region of responsible child welfare agency.

| County size | Proportion served | | Avg. number of service types | | Avg. number of service types (served only) | |
|---|---|---|---|---|---|---|
| | % | 99% CI | Mean | 99% CI | Mean | 99% CI |
| Large metro | 48.7 | (48.2, 49.2) | 2.11 | (2.08, 2.14) | 4.33 | (4.28, 4.37) |
| Metro | 51.5 | (50.8, 52.1) | 2.46 | (2.41, 2.50) | 4.77 | (4.72, 4.83) |
| Nonmetro | 53.1 | (52.1, 54.0) | 2.66 | (2.59, 2.72) | 5.01 | (4.93, 5.01) |
| Rural | 52.8 | (50.3, 55.3) | 2.72 | (2.55, 2.89) | 5.15 | (4.93, 5.37) |

[28] Note that when exposure time is also added to the second regression model, the disparity widens so that the odds of service receipt is 22.6% lower for Black youth than other youth ($p < .001$).

**Table 8**
Differences in receipt of specific service type by county urbanicity.[a].

| | All | Large metro | Metro | Non–metro | Rural |
|---|---|---|---|---|---|
| | % | % | % | % | % |
| Academic | 30.1 | 28.2 | 31.6 | 33.1 | 35.4 |
| Postsecondary | 15.4 | 14.6 | 15.2 | 17.9 | 21.5 |
| Career | 26.2 | 23.7 | 27.6 | 31.8 | 30.6 |
| Employment | 14.8 | 13.9 | 15.6 | 16.5 | 15.4 |
| Budget | 23.4 | 19.6 | 25.9 | 30.4 | 32.6 |
| Housing ed | 24.8 | 22.8 | 25.8 | 29.3 | 29.6 |
| Health ed | 24.5 | 20.6 | 27.7 | 30.7 | 31.0 |
| Family | 21.0 | 18.3 | 23.4 | 25.2 | 6.0 |
| Mentor | 11.8 | 10.3 | 13.4 | 13.0 | 13.1 |
| SILP* | 11.9 | 12.6 | 12.0 | 8.6 | 7. |
| Housing funds* | 8.3 | 7.0 | 10.2 | 10.2 | 10.6 |
| Ed funds* | 17.9 | 18.5 | 17.3 | 16.3 | 17.8 |
| Other funds | 15.8 | 16.2 | 14.8 | 16.0 | 17.4 |

Fewer than all youth (p <. 01) Similar to all youth More than all youth p<.01)
*Includes only youth ages 18–21

[a]The following change in statistical significance occurred when exposure time was controlled: youth in Nonmetropolitan counties are more likely to receive other funding; youth in rural counties are more likely to receive other funding and mentoring.

Chafee program (described earlier), while the previous studies capture broader sets of services and training. For example, about 91% of youth in the CalYOUTH study reported receiving training in sexual health, and respondents may have been thinking about sexual education classes provided through their school. Second, youth self-reporting may capture more activities that qualify as Chafee services than state data collection systems. Many of the services and activities likely occur informally in the daily flow of life. For instance, a young person asks a group home staff member about college, which leads to an hour-long conversation in which they search college websites and talk about the application process. This interaction may be salient to youth answering questions about postsecondary education preparation but fall through the net of state reporting systems. Third, the present analysis examines service receipt during an observation period of at most two years, and in some cases as little as 90 days. The other studies ask about receipt anytime the youth was in care. Despite differences in service receipt

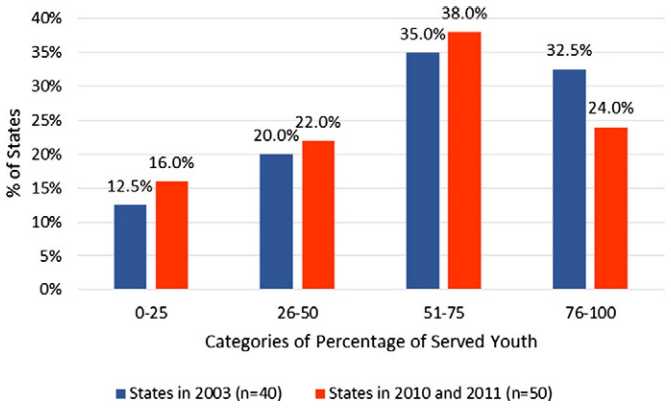


**Fig. 2.** Proportion of states falling into categories of the percentage of served youth.

estimates between previous studies and the current analysis, findings were consistent in that relatively more youth receive services aimed at secondary education, career preparation, daily living and housing skills, and health education, but fewer youth receive services that involve securing specific housing placements, funding for housing, mentoring, and hands-on job training.

Overall, results of this analysis indicate that about half of the youth in care for 90 days to two years receive at least one Chafee service. However, differences appeared across service types. Services aimed at secondary education, health education, home management, and financial literacy were more commonly received than services such as mentoring, financial assistance for housing, and placement in SILPs. In addition to state preferences, some of these differences could be due to a combination of applicability, resource limitations, and availability. While the 13 Chafee service types are hypothetically available to all youth meeting the eligibility requirements, not every service is equally applicable to all youth. For example, only a portion of youth will pursue postsecondary education or will be ready and interested in living in a SILP. Furthermore, resource limitations can also influence receipt. For instance, authors have documented insufficient funding for education and training vouchers, leading to some eligible youth not receiving the vouchers (Cochrane & Szabo-Kubitz, 2009; Fernandes, 2008; Kelly, 2013). Receipt may also be affected by the extent to which services are locally available.[29] The services with relatively high receipt tend to be those that are also available to youth without foster care involvement (e.g., secondary education support, career preparation, health education and risk prevention, family and marriage education). It may be that the infrastructure and funding is well established for certain services, making them more widely available. One thing to note is that even the most commonly received service is used by less than one-third of youth in care. This may signal the need to increase foundational services that are applicable to nearly all foster youth, such as secondary education, career preparation, financial management, and home and housing skills.

Another key finding is that gender differences emerged in nearly every type of service. About 6% more females than males receive at least one Chafee service. Some of the differences may be related to tendencies for young women in foster care to complete more education, enter college at higher rates, and avoid incarceration (e.g., Courtney et al., 2007). These trends can take more males out of contention for certain types of services (e.g., college funding, SILPs reluctant to rent to tenants with criminal justice involvement). In addition to gender differences, youth with any one of the four classes of disabilities or conditions are more likely to receive Chafee services than youth with no conditions. Youth with visual and hearing impairments, emotional disturbances, and other medical conditions are particularly likely to receive a variety of services compared to youth without disabilities or conditions, perhaps signaling greater need. One exception is receipt of funding for room and board, and this may be due to these youth being less likely to be living on their own. Some of these youth may also qualify for other sources of funding (e.g., SSI, state programs) that supplement housing costs. However, youth with a disability or condition were significantly more likely to receive other funding, and these proportional differences were generally substantial. For example, almost twice as many youth with another medical condition (23.5%) received this funding than youth with no conditions (13.5%). It could be that this broad category of funding is used for expenses that do not fall in other Chafee funding categories and are not covered by funding from outside sources. Of the four classes of conditions and disabilities, youth with physical disabilities were most like youth without conditions in the proportion

[29] This is true even at a level of detail that we did not capture in the present analysis. For example, two counties that fall within the same urbanicity group may be starkly different in terms of service availability.

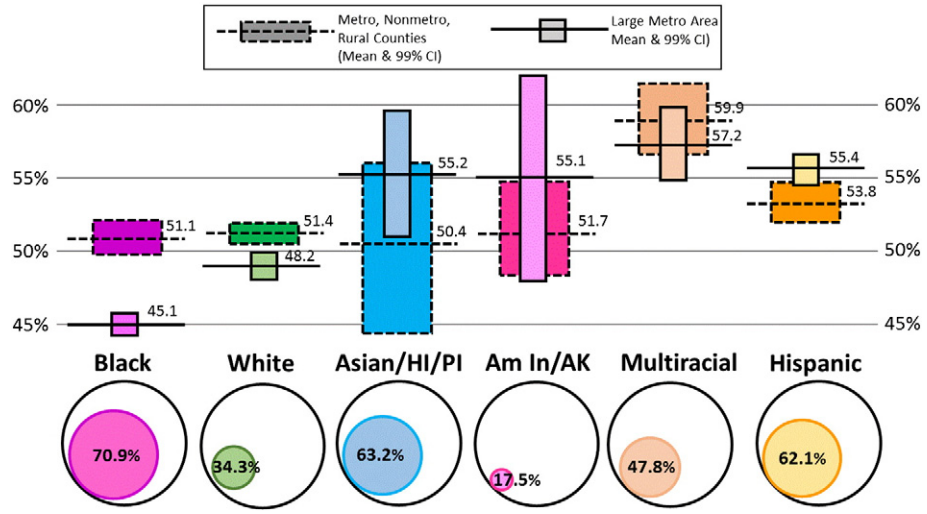


**Fig. 3.** Proportion of youth receiving services in large metropolitan areas, by race/ethnicity (top). Percentage of youth residing in large metropolitan areas (bottom).

of services they received. This may be due to the fact that conditions that are highly prevalent and would classify a youth in this category (e.g., asthma, diabetes) do not increase the need for specific training or accommodations. More research on specific disabilities and conditions and levels of functional impairment will need to be investigated to shed more light on patterns of receipt reported here.

Racial and ethnic differences in service receipt were some of the most striking findings. Multiracial youth made up just 4.2% of the sample and they were more likely to receive all of the 13 service types than the overall average. It is unlikely that this is simply due to state and regional differences in the places where multiracial youth are likely to live,[30] and this leaves open an interesting question for future research. Among service recipients, Alaskan Native/American Indian youth received the most kinds of services. Black youth were less likely to receive Chafee services than youth from other racial/ethnic groups, both in overall receipt and on most of the specific service types. The racial gap was still prevalent even after controlling for metropolitan region, which accounted for about 10% of the disparity. However, it was found that an interaction effect was at play. Although Black youth served in less urban regions were about as likely as most other youth to receive services, Black youth living in large urban areas were less likely than other youth in large urban areas to receive services. Combined with the fact that nearly three-quarters of Black youth reside in large urban areas creates a recipe for large racial disparities in Chafee service receipt. An important implication of this finding is that to narrow racial disparities in Chafee service receipt, a good target would be directing efforts toward Black youth in large metropolitan areas. More research is needed to determine why these youth in particular receive fewer services than other youth who also live in highly urban areas.

In terms of urbanicity, findings indicate that youth served in large metropolitan areas were less likely to receive services overall and less likely to receive specific types of Chafee services than youth living in less densely populated regions. For example, the differences in proportions of youth receiving training on budgeting and financial management between urban areas and each of the three other regions range from about 6% (vs. metropolitan) to 13% (vs. rural). These services may be particularly exigent for youth living in urban areas where housing and daily living costs are high, yet urban youth are the least likely to receive financial training. Youth in nonmetropolitan and rural areas less likely to be placed in SILPs, which may be a function of housing availability. There is nearly a linear relationship between regional density and placement in SILPs, which probably reflects the tendency that fewer apartments and other rental properties are available as one moves away from urban population centers.

The service gaps across counties that differed in degree of urbanicity that were observed in the present analysis are consistent with the findings by Courtney et al. (2001), in which foster care youth residing in a large urban county in a Midwestern state were less likely to receive training and services than youth residing in counties in the rest of the state. This finding was somewhat surprising because one would expect there to be more service providers and services available in urban counties. It may be that large urban counties have more services, but also a much greater number of eligible youth. The ratio of youth per service slot may actually be larger in urban counties than in counties that are less densely populated. It may also be that there are differences in youths' motivation or ability utilize available services across county types. Further research is needed to investigate the reasons for these gaps.

Between-state differences also emerged in the proportion of youth who received at least one service, but these estimates should be read with caution for at least four reasons. First, states may differ in which activities are counted and documented as Chafee services. Second, data collection protocols and procedures (e.g., caseworkers logging services versus providers logging services) that differ between states may also influence the proportions of youth served. Third, in the initial years of NYTD, states may be at different stages of data management capacity, which can amplify variation in service receipt. Fourth, the first periods of NYTD data collection coincided with implementation of the Fostering Connections law, and this transition for participating states may have affected estimates of Chafee service receipt. For these reasons, between-state differences were not analyzed in more depth. It is advisable that future research collects information on state definitions of countable services, data collection procedures, developmental stage of the data management system, and status with respect to extended foster care legislation before state comparisons are carried out.

[30] We ran a logit regression model in which the log odds of being served was regressed on race/ethnicity (multiracial as the reference category), county type, dummy variables for state, and observation time. After controlling for state and county type, multiracial youth remained significantly more likely to receive services than all other racial/ethnic groups ($p < .01$ for all comparisons). It may be that multiracial youth are concentrated in specific counties with high service receipt, but we were not able to assess this hypothesis since we did not have data on the specific counties where youth reside.

As a first look at estimates of Chafee service receipt across the nation, this study has several important limitations that deserve consideration. Data do not exist from a state that makes up a sizable part of the foster care population meeting the sample criteria (NY, 8.3%) and data is missing from one year of another state with a large foster care population (PA). Thus, the national picture in the present analysis is necessarily incomplete. New York has submitted data for fiscal year 2013, and analyses in the forthcoming years should be able to provide a complete national assessment of Chafee service receipt.

A second limitation pertains to measurement error arising from a lack of specificity of when receipt of Chafee services actually occurred. For youth whose eligibility status changed within a six month NYTD reporting period (e.g., a foster care youth turned 16), it is impossible to tell whether (a) she only received services before she met the study eligibility criteria, (b) she only received services after she met the criteria, or (c) she received services both before and after meeting the criteria. Since it was assumed that the service receipt took place while youth were eligible (a or b), proportions of service receipt may be overestimated. Note that measurement error only occurs for youth who received a Chafee service during a reporting period when their eligibility status changed, and who did not receive a Chafee service during another reporting period in which they met the eligibility criteria for the entire 6-month period.[31] In addition to not being able to make a definite determination about the timing of service receipt in relation to eligibility status, it was also not possible to calculate the precise age that youth received services and whether some of the services were received while youth were still in care.[32] Both of these date-sensitive data are important for understanding when youth utilize Chafee services. This has implications for assessing the extent to which the various services are delivered at developmentally appropriate ages, the extent to which youth access services they are entitled to once they leave care, how long it takes for youth to receive services once they enter or reenter foster care as adolescents, and so forth.

A third limitation of the study pertains to measurement error due to differences in how activities are defined and counted across states. NYTD represents a significant improvement from previous data collection procedures (i.e., state annual reports) in ensuring that service data are reported using a common template. However, state and local variation in which types of activities are and are not being reported as Chafee services can undermine federal oversight and accountability efforts. Presently, youth participating in an intensive, evidence-informed individual development account (IDA) program are indistinguishable from youth having a conversation about checkbooks and credit cards with a mentor. This is problematic for at least two reasons. First, it is not possible to assess differences in the quality, duration, scope, and intensity of the services that youth are receiving. Thus, region A may report that 85% of eligible youth receive services while region B reports 40% of eligible youth are served. It would be important to know that most of the activities reported by region A are one-time coaching on general competencies while most of the activities reported by region B are intensive curriculum-based programs intended to develop a substantive skill set. As a metaphor, knowing that youth have been given a piece of currency gives little indication of whether they are in possession of a nickel or a twenty dollar bill. Furthermore, it may be difficult to assess which states are counting nickels and which states only count denominations greater than $1 bills. A second and perhaps more worrisome problem pertains to the possibility of frivolous over-reporting to the point of meaninglessness. Most foster care youth have probably received some type of activity that would meet the current definition of many of the Chafee service categories. For example, youth enrolled in high school or GED classes probably receive help with school by a foster care agent (e.g., foster parent) at least once in a six-month period. The danger arises if, in response to increased oversight, states begin counting every minor activity as a service. We may observe superlatively high proportions of youth being served with no way to separate nickels from bills, with no way of knowing which regions are counting which denominations as currency, and with no movement on measured outcomes that these services are purported to address.

In consideration of study limitations two and three, the Children's Bureau may want to consider modifying or adding data elements that would address the issues of imprecision in the timing, content, and quality of received services. For example, a few items could be added that capture service receipt features such as start date, duration (e.g., one time, one month, 2–3 months, 4–6 months), provider type (e.g., foster parent, caseworker, mentor, contracted program), and service intensity/formality (e.g., impromptu activity, curriculum-based program). A concise and well-formulated set of items would yield a much richer and more useful account of service receipt without placing undue reporting burdens on states and foster care agents. Such changes would require effort to develop and pilot measures, train states and agents, and work out additional logistical matters. However, developing more precise measures would provide a more meaningful picture of exactly what services youth are receiving and allow the Bureau to assess the extent to which implementation of the Chafee program is aligned with the intent of the FICA law, account for whether taxpayer dollars are being put to good use, and use the data for strategic planning to improve the efficiency and effectiveness of the Chafee program.

A fourth study limitation pertains to the length of the observation period. Having just two years in which youth in foster care could be observed resulted in an analytic approach that was a hybrid of a cross-sectional analysis and a short-term longitudinal analysis. Ideally, to analyze service receipt across ages 16 to 21, it would be best to have data that stretched across at least five years. A fifth limitation is that the youth included in this analysis do not represent the entire population of youth who are eligible for Chafee services. Youth younger than 16 and older than 21 years of age, as well as youth who exited foster care but were still eligible for services, were not included due to data limitations. Service receipt will probably look very different for these groups, in part because older youth and youth who have left care may be more difficult to locate and serve. Moreover, the validity and reliability of assessments of aftercare services would depend on the extent to which service receipt is accurately tracked.

The identified limitations of the study qualify the interpretation of the findings but also point to areas where the measurement of services, data collection procedures, and research might be improved in the future. Whether a given youth receives a particular Chafee service or not is likely a complex question that can be analyzed on many levels. However, given the differences in service receipt that were observed by gender, race/ethnicity, and urbanicity, investigation of these disparities exist is an important line of research first and foremost as a matter of equity. We need to gain a better understanding of why different youth receive different amounts and kinds of services, identify which gaps will be targeted, and then develop strategies that will ensure that youth are receiving services they need most for their futures.

## Acknowledgment

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[31] These youth received a Chafee service during another reporting period in which they were eligible for the entire period. Thus, we know for certain that they received a service when they were eligible.

[32] For youth who exited foster care within one of the NYTD reporting periods and they received a service within that period, it is not possible to determine whether the service was received while they were in care, after they left care, or both.

## Appendix A

**Table A1**
Description of AFCARS disability/condition variables.

| Category | Description[a] |
|---|---|
| Physical disability | Physical disabilities include medical conditions that impair day-to-day motor functioning such as cerebral palsy, spina bifida, cerebral palsy, arthritis, among others. |
| Visual or hearing impairments | Visual or hearing impairments include medical conditions that may significantly affect or impede educational performance, such as blindness, cataracts, and deafness. |
| Emotional disturbance | Emotional disturbance includes conditions based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. These include Axis I disorders and an Axis II personality disorder or autism. |
| Mental retardation | Mental retardation includes conditions indicated by significantly below average cognitive and motor functioning, including Downs Syndrome, borderline intellectual functioning, hydrocephalus, microcephaly, and all degrees of mental retardation. |
| Other medical condition | Other medical condition includes a wide range of conditions that need special medical attention, such as HIV, asthma, cancer, diabetes, epilepsy, heart disease, and many others. |

[a] See pages 14–19 in the Foster Care Codebook for a full list of conditions meeting each of the five categories (National Data Archive for Child Abuse and Neglect, 2014).

**Table A2**
Description of county categories.

| Category | Description |
|---|---|
| Large metropolitan | The large metropolitan category includes counties located in metropolitan areas with one million or more people. |
| Metropolitan | The metropolitan category includes two codes: counties located in metropolitan regions with 250,000 to one million people, and metropolitan regions with fewer than 250,000 people. |
| Nonmetropolitan | The nonmetropolitan category collapses four categories: counties with populations greater than 20,000 that are adjacent to a metropolitan center, counties with populations greater than 20,000 that are not adjacent to a metropolitan area, counties with populations less than 20,000 that are adjacent to a metropolitan area, and counties with populations less than 20,000 that are not adjacent to a metropolitan area. |
| Rural | Finally, the rural category includes two categories: counties that are rural or have less than 2500 people, and are adjacent to a metropolitan area; and counties that are rural or have less than 2500 people, and not adjacent to a metropolitan area. |

**Table A3**
Description of 13 Chafee service categories.

| Category | Description[a] |
|---|---|
| Academic support | Services intended to help youth to complete a high school credential such as academic counseling, GED prep, tutoring, assistance with homework, study skills training, literacy training, accessing educational resources |
| Postsecondary education support | Services intended to help youth enter and complete postsecondary education or training such as SAT/ACT test prep, college counseling, information about financial aid and scholarships, assistance with completing college and financial aid applications, college tutoring |
| Career preparation | Services intended to develop a youth's ability to apply for, obtain, and maintain employment such as vocational and career assessment, job search and job placement support, retention support, learning how to work with bosses and coworkers, workplace skills (e.g., punctuality and appearance), customer relations skills |
| Employment programs or vocational training | Intended to build skills for a specific trade, vocation, or career through classes or on-site training. Employment programs include activities such as apprenticeships, internships or summer employment programs. Vocational training includes activities such as vocational or trade programs and participation in occupational classes (e.g., auto mechanics, computer technology, cosmetology, nursing). |
| Budget and financial management | Intended to provide training and practice in living within a budget; opening and using checking and savings accounts; developing consumer awareness and smart shopping skills; accessing information about credit, loans, and taxes; completing tax forms. |
| Housing education and home management training | Housing education includes assistance and training in locating and maintaining housing, completing rental agreements, handling security deposits and utility expenses, understanding practices to keeping a safe and healthy living space, understanding tenant's rights and responsibilities, dealing with landlord complaints. Home management training includes instruction in daily tasks such as grocery shopping, meal preparation, laundry, housekeeping, maintenance and minor repairs, and living cooperatively. |
| Health education and risk prevention | Providing information about hygiene, nutrition, fitness and exercise, first aid; management of medical and dental care (e.g., maintaining personal records, insurance); sex education, abstinence education, and sexually-transmitted disease education; alcohol and substance abuse preventative information (e.g., understanding the consequences of substance abuse), and substance avoidance and intervention. Note: does not include receipt of direct medical care of substance abuse treatment. |
| Family support and healthy marriage education | Include information on safe and stable families, healthy marriages, spousal communication, parenting and childcare skills, and domestic and family violence prevention. |
| Mentoring | Youth has been matched with a screened and trained adult for a one-on-one relationship involving regular meetings. Mentorship could be short-term or long-term. This includes mentoring arrangements that are facilitated, paid for, or provided by the State agency or staff, and does not include connections to adult role models through school, work, or family. |
| Supervised independent living placements | Youth is living independently in a supervised arrangement that is paid for or provided by the State agency. Youth are provided with increased independence and responsibilities (e.g., signing leases, paying bills, and working with the landlord) under the supervision of an adult. |
| Room and board financial assistance | Includes financial assistance paid for or provided by the State agency for room and board, including rent deposits, utilities, and other household start-up expenses. |
| Education financial assistance | A payment that is paid for or provided by the State agency for education or training, such as allowances to purchase textbooks, uniforms, computers, or other educational supplies; tuition assistance; scholarships; payment for educational preparation and support services (e.g., tutoring); and payment for GED and other tests. This category includes receipt of education and training vouchers (ETVs). |
| Other financial assistance | Any other payments that are paid for or provided by the State agency to help the youth live independently. |

[a] Descriptions are summarized from the NYTD codebook (2013).

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