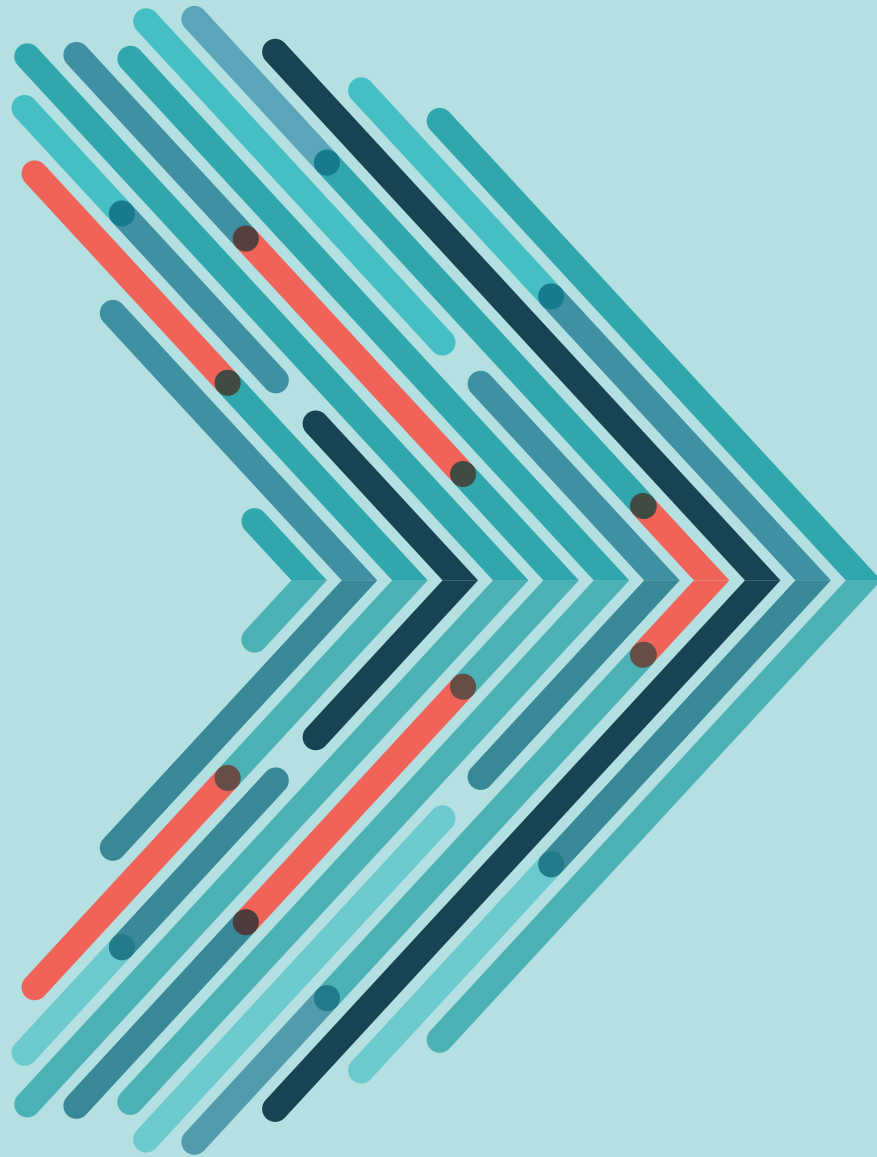


A TYPOLOGY of Transition-Age Youth

July 2018



The City of New York
Mayor Bill de Blasio

NYC[®]
Center for Innovation
through Data Intelligence



About the Center for Innovation through Data Intelligence (CIDI)

CIDI is a research and policy center located in the Office of the Mayor of the City of New York under the auspice of the Deputy Mayor for Health and Human Services. CIDI conducts citywide interagency research to identify areas of service need in the City. The vision of CIDI is to make data come alive to inspire change. To learn more about CIDI, please visit www.nyc.gov/cidi.









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We would like to thank the Corporation for Supportive Housing (CSH) for their partnership and support of this project. CSH has been the national leader in supportive housing for 25 years. CSH has worked in over 40 states and 300 communities to create homes for individuals and families – housing that has transformed the lives of 200,000 people who once lived in abject poverty, on our streets or in institutions. A nonprofit Community Development Financial Institution (CDFI), CSH has earned a reputation as a highly effective, financially stable organization, with strong partnerships across government, community organizations, foundations, and financial institutions. Through financing resources and knowledge, CSH is advancing innovative solutions that use supportive housing as a platform for services to improve lives, maximize public resources, build healthy communities and break the cycle of intergenerational poverty. Visit CSH at www.csh.org to learn more.

Finally, we would like to thank the generous funding from the New York Community Trust for this project and for their commitment to improving the well-being and vitality of New York City. The New York Community Trust is the community foundation for New York City, Westchester, and Long Island. Thanks to generous donors, the New York Community Trust distributes income from charitable funds to improve the quality of life in New York City and beyond. It is one of the oldest and largest community foundations in the United States. The Trust is one of the largest private funders of New York City's nonprofits. Its competitive grantmaking focuses on improving the lives of all New Yorkers, with an emphasis on promoting healthy lives, promising futures, and thriving communities. Visit NYCT at www.nycommunitytrust.org to learn more.

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Executive Summary

Background

Young adulthood is known to be a challenging time of transition for youth. Success in the 21st century demands that youth have the skills as well as social and emotional supports to negotiate the increasing complexity of modern society. Luckily, most youth are nestled within an intricate support system including family, school, and social networks, which is crucial to successfully overcoming typical adolescent challenges. Others lack the familial, economic, and societal supports needed to help them gain access to the very institutions in place to foster their development, and may experience housing instability or homelessness.

Youth experience homelessness due to a variety of reasons, including family conflict and maltreatment, economic instability and poverty; family tensions related to youths' sexual orientation and/or gender identity; aging out of institutional care, including foster care; and emerging mental health issues. Appropriate service provision, including shelter and housing options, can help mitigate the risk of poor outcomes. However, youth have to navigate through multiple systems and institutions that are not always designed with the flexibility or resources to meet their specific needs. This may be compounded by their homelessness experiences, causing them to face additional challenges on their pathway to adulthood.

This study focuses on those youth who have exited homelessness or foster care, and develops a typology of six groups of youth based on their service use and housing outcomes for the three years after they exit homeless services or foster care. It combines data from a number of systems to identify comprehensive service use profiles for discrete groups of youth. Utilizing this approach allows the analysis to be multi-dimensional and represent multiple service needs of youth in each group, while also recognizing overarching differences among groups.

In order to be actionable and to further demonstrate the distinction among groups, this study aims to help inform which groups of youth may need more services

or interventions. It also helps to describe the relative size of different outcome pathways for youth to better understand the needed capacity of different resources across a spectrum.

Methodology

The sample consists of 8,795 individuals who were 18 to 21 years old when they exited from foster care or homeless shelters. All individuals exited between July 2011 and 2013. The outcome period for the study is three years from the individual's exit from foster care or a homeless shelter.

Sequence analysis was used to visualize, describe, and group patterns of service use among individuals during the outcome period. The youth were grouped into outcome categories using a hierarchical clustering algorithm. In other words, the groups were not predefined; they arose from the data. This type of unsupervised machine learning has the potential to uncover groups that are otherwise hidden in the data. Once the outcome groups were determined, descriptive profiles of each were developed. Predictive models were created using characteristics and experiences of the youth from prior to their exit from foster care or homeless shelters. These models help illuminate which factors contribute most to the probability of a youth ending up in an outcome group.

Findings

Based on the service use patterns of youth who exited foster care and homeless shelters, six outcome groups were developed: (1) Minimal Service Use, (2) Later Homeless Experience, (3) Earlier Homeless Experience, (4) Consistent Subsidized Housing, (5) Consistent Supportive Housing, and (6) Frequent Jail Stays. The vast majority of youth (68%) were in the Minimal Service Use group. Each group had a dominant system that was used, but they also had distinctive patterns of service use in other domains. Among these groups, Minimal Service Use, Consistent Supportive Housing, and Consistent Subsidized Housing were the most stable with four to six system transitions over the

course of three years, while the other groups had eight to nine transitions on average. These three groups also had less homeless shelter and jail stays than the other groups.

These groups were not only distinctive based on their descriptive profiles, but also based on factors that predicted which youth would be in which group. Notable predictors for most groups included gender, race, age at exit, and exit system. Previous service use in different domains that varied by group was also predictive for all groups.

Conclusion

These groups are helpful for several purposes. First, they identify pathways that youth are likely to encounter upon exiting foster care or homeless shelters in early adulthood. By not limiting the analyses to dichotomous outcomes (e.g., did a youth have a homeless shelter stay or not?), a more comprehensive picture of service needs is described. For example, these groups differentiate between a youth who may have one brief stay in a homeless shelter, a youth who has multiple or long stays in a homeless shelter, and a youth who has a stay in a homeless shelter, but also frequently interacts with the criminal justice system. These nuances are often lost in analyses, yet they may warrant a very different set of services. By understanding the interactions among different services and levels of service use, services can be better matched to a youth's needs.

The typology comprising the six groups also shows that there are universal service needs across all groups of youth. Rates of hospital use, for example, were high across all groups, potentially indicating a need for better engagement and access to primary care services.

Understanding the factors that are predictive of membership in each of these groups can allow services to be better targeted to youth who may need them. It is particularly notable that one of the most prominent factors in determining a youth's pathway is which system they exited from. It clearly shows that youth

who exited from foster care during this time accessed permanent housing options at much higher rates and had stays in homeless shelters and jail at lower rates than youth exiting from homeless shelters through DYCD and DHS. Efforts to move toward a coordinated entry system should ensure youth can access all resources regardless of which system they enter through.

Limitations & Future Directions

The study begins to illuminate trajectories for young adults. The limitation of relying on administrative data precludes the benefits of including other factors that may be important in predicting membership into these groups, such as the resiliency, strengths, and resources of the youth. A mixed-methods approach could incorporate personal narratives from transition-age youth. This approach could help elucidate how these pathways are experienced and provide more feedback on interventions and resources that are needed to improve outcomes.

This study provides a first look into the use of a complex set of methodologies that helps to understand the phenomenon of youth homelessness. It aims to develop a comprehensive understanding of the different trajectories of youth experiencing homelessness that can be used to inform practice, policy, and future research, as part of NYC's effort to prevent and end youth homelessness.

The findings included in this report will help inform ongoing City initiatives, including the Interagency Homelessness Accountability Council (IHAC) and the Youth Homelessness Taskforce, as well as the Coordinated Assessment and Placement System (CAPS) planning process being undertaken by the NYC Human Resources Administration (HRA) and the NYC Coalition on the Continuum of Care (CCoC). This study supports the goals of preventing and ending youth homelessness and ensuring New York City is a place where all youth can prosper and thrive, regardless of their demographics or life experiences.



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INTRODUCTION

BACKGROUND

Young adulthood is known to be a challenging time of transition for youth. Success in the 21st century demands that youth have the skills as well as social and emotional supports to negotiate the increasing complexity of modern society. Luckily, most youth are nestled within an intricate support system including family, school, and social networks, which is crucial to successfully overcoming typical adolescent challenges. Others lack the familial, economic, and societal supports needed to help them gain access to the very institutions in place to foster their development, and may experience housing instability or homelessness (Wald & Martinez, 2003).

Youth experience homelessness due to a variety of reasons, including family conflict and maltreatment, economic instability and poverty (Heinze, Hernandez Jozefowicz, Toro, & Blue, 2012; Dworsky, Dillman, Dion, Coffee-Borden, & Rosenau, 2012; Edidin, Ganim, Hunter, & Karnik, 2012); family tensions related to youths' sexual orientation and/or gender identity (Hunter, 2008; Cochran, Stewart, Ginzler, & Cauce, 2002); aging out of institutional care, including foster care (Kimberlin & Lemley, 2010; Brown & Wilderson, 2010; Berzin, Rhodes & Curtis, 2011); and emerging mental health issues (Hawkins & Abrams, 2007). These traumatic experiences can then be compounded by experiences of homelessness, resulting in further challenges including continued housing instability (Chamberlain & Johnson, 2013), involvement with the justice system (Gaetz & O'Grady, 2002; Levin, Bax, McKean, & Schoogen, 2005), mental and physical health issues (Cauce, Paradise, Ginzler, Embry, Morgan, Lohr, & Theofelis, 2000; Rosenthal, Moore, & Buzwell, 1994; Gomez, Thompson, & Barczyk, 2010; Whitbeck, Hoyt, Yoder, Cauce, & Paradise, 2001), and educational and employment instability (Cauce, et al., 2000; Ferguson, Xie, & Glynn, 2012).

Appropriate service provision, including shelter and housing options, can help mitigate the risk of poor outcomes. However, youth have to navigate through multiple systems and institutions that are not always designed with the flexibility or resources to meet their specific needs. This may be compounded by their homelessness experiences, causing them to face additional challenges on their path to adulthood.

In New York City, youth can access runaway and homeless youth shelter services through the Department of Youth and Community Development (DYCD) through age 20 (at the time of the study) and/or youth can access adult shelter services, including some shelters specifically for young adults, starting at age 18 through the Department of Homeless Services (DHS). Through these systems, as well as the foster care system overseen by the Administration for Children's Services (ACS), youth can access permanent housing, including subsidized independent housing, such as public housing or Section 8 vouchers, and supportive housing, which combines housing with intensive services. Youth may also access a variety of other formal and informal support programs, including family support services, health and mental health services, educational and employment programs, independent living skills training, and food assistance programs. Some youth may not need or access any of these programs, while others need some combination of these programs.

Across the U.S., homeless systems are looking to prioritize individuals, including youth, into appropriate housing by matching their needs with available housing resources. Therefore, it is important to understand who is currently getting housing services, and who would benefit most from housing services, but are not currently being placed into housing. Additionally, housing and community-based models vary in the services that they provide. Some complementary services within housing or in the community may be more appropriate for some youth than others.

This study focuses on those youth who have exited homelessness or foster care, and develops a typology of six groups of youth based on their service use and housing outcomes for the three years after they exit homeless services or foster care. It combines data from a number of systems to identify comprehensive service use profiles for discrete groups of youth. Utilizing this approach allows the analysis to be multi-dimensional and represent multiple service needs of youth in each group, while also recognizing overarching differences among groups.

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PRIOR TYPOLOGIES OF HOMELESSNESS

Typologies serve as a way to organize conceptual groupings of processes, systems, programs, and individuals. They serve as a way to express complex information by taking into account multiple dimensions of each conceptual group. Most often, they serve as descriptive categories that can then be used to measure differences across groups. In the development of typologies of runaway and homeless youth specifically, they can be used to describe differences in experiences. They are more nuanced than identifying groups based on a single characteristic and can be representative of the types of experiences that youth may have. While typologies are not able to perfectly represent every youth's experience, they can be helpful in identifying the broad needs of groups with different experiences.

Research attempting to categorize groups of runaway and homeless youth has a long history dating back to the 1960s and 1970s (see Shellow, Schamp, Liebow, & Unger, 1967; Dunford & Brennan, 1976). Data to develop these groups has primarily been collected directly from youth through questionnaires and interviews. A variety of categorization methods have been used including cluster analysis (both hierarchical and k-means), discriminant analysis, latent class analysis, and logistic regression. Types of variables and information used to create the groups have also varied among studies.

Some of the most prominent typologies describe groups of runaway youth based on their reason for homelessness (Zide & Cherry, 1992; Cherry, 1993; Farrow, Deisher, Brown, Kulig, & Kipke, 1992; Ringwalt, Greene, & Robertson, 1998; Martijn, & Sharpe, 2006). Zide and Cherry (1992), for example, describe four groups: (1) youth who are "running to", who leave home not because of family issues, but because they are seeking excitement and adventure, (2) youth who are "running from", who leave home due to troubled family and home dynamics, (3) youth who are "thrown out", who are kicked out of their homes and have few ties with their family, and (4) youth who are "forsaken" because their families can

no longer financially support them. A variation of this identifies: (1) "situational runaways" who leave home for only a few days after disagreements with family and then return, (2) "runaways" who leave home for long periods of time and may never return because of serious conflict with their families, such as abuse, neglect, or conflicts over youths' sexual orientation, (3) "throwaways" who are kicked out of their homes or have been abandoned, and (4) "systems youth" who are exiting from institutional care or foster care (Farrow, Deisher, Brown, Kulig, & Kipke, 1992).

A second set of research identifying groups of runaway and homeless youth focuses on behavioral differences among youth (Kipke, Unger, O'Connor, Palmer, & LaFrance, 1997; Adlaf & Zdanowicz, 1999; Milburn, Liang, Lee, Rotheram-Borus, Rosenthal, Mallett, Lightfoot, & Lester, 2009; Mallett, Rosenthal, Myers, Milburn, & Rotheram-Borus, 2004; Kort-Butler, & Tyler, 2012; Toro, Lesperance, & Braciszewski, 2011). Using variables related to resiliency, as well as negative outcomes, Toro, Lesperance, and Braciszewski (2011) identified three groups: (1) the transient but connected group who did not have high levels of mental health and substance abuse issues, but were unstable in terms of housing and education and had long histories of homelessness; (2) the high-risk group who had high levels of mental health issues, school drop-out rates, and sexual abuse, as well as significant housing instability and homelessness; and (3) the low-risk group – the largest group of the three – who had the lowest levels of poor outcomes. Another typology categorized youth based on their service utilization and identified four groups (Kort-Butler, & Tyler, 2012). The basic survival service use group had relatively high shelter, food, and outreach service use, but low use of counseling, substance abuse/mental health services, and incarceration. The multiple service use group had high use of all six of the studied services. The incarceration experience group had high levels of incarceration experience, but low use of other services and the minimal service use group had slightly above average use of counseling but lower use of other services.

Bucher (2008) built on this idea to develop a "needs-

based” typology of homeless youth that categorized youth based on their treatment needs. The “minimal treatment group” had low rates of abuse, low suicidal ideation/attempts, and low drug usage; the “therapeutic housing with an emphasis on addiction” group had high rates of emotional and physical abuse, high drug abuse, and high rates of suicidal ideation/attempts; the “therapeutic housing with an emphasis on behavior management” group had high rates of abuse and criminal activity and low rates of drug use; and the “comprehensive treatment” group had high rates of involvement across categories (abuse, suicide, survival sex, drug use).

Other typologies have categorized homeless youth based on if they were newly homeless or not (Milburn, Rotheram-Borus, Rice, Mallet, & Rosenthal, 2006), based on youth’s history of abuse (Whitbeck, Hoyt, & Yoder, 1999; Rew, 2002), and based on the youth’s living situation and family relationship (Tierney, Gupton, & Hallett, 2008).

A typology has also been developed for youth exiting foster care based on their housing security, educational attainment, and employment attainment in the two years after exiting foster care (Fowler, Toro, & Miles, 2010). The “Stable-Engaged” group had stable housing and increasing connections to education and employment, while the “Stable-Disengaged” group had stable housing, small increases in connections to employment, but decreasing educational connections, and the “Instable-Disengaged” group had high housing instability and lacked educational and employment connections.

ADMINISTRATIVE DATA TO DEVELOP TYPOLOGIES

While interviews and surveys have allowed researchers to develop typologies based on potentially important variables found in the literature or hypothesized to be important by the researchers, these methods of data collection are intensive and subject to respondent biases. For example, youth may not recall certain events accurately or may purposely omit information during interviews or on surveys.

Administrative data, i.e., data that are collected for administrative purposes, such as transaction and record keeping during service delivery, offer an alternative source of information to develop typologies. Although administrative data do not offer the same specific details that can be collected during interviews or surveys, they do provide reliable details of service use.

Administrative data have been used to develop typologies of homeless service use for homeless single adults and homeless families. Kuhn and Culhane (1998) used information on the number of days in homeless shelters and number of shelter episodes to develop three groups of homeless single adults: transitionally, episodically, and chronically homeless. Similar groups were found using shelter utilization data for homeless families (Culhane, Metraux, Park, Schretzman, & Valente, 2007).

SEQUENCE ANALYSIS TO DEVELOP TYPOLOGIES

Building on the typology developed for homeless single adults from administrative data described above, McAllister, Kuang, and Lennon (2010) presented a relatively new methodology in human service research that provided a more nuanced analysis of patterns of shelter utilization. Instead of clustering individuals based on aggregated shelter days and stays, the study used a time-patterned approach which took into account the timing, duration, and sequence of shelter stays. Using this approach, ten groups were identified and grouped into four conceptual categories: temporary, which includes individuals who have just one brief shelter stay; structured-continuous, which includes individuals with one continuous shelter stay of varying duration and some re-entrance to shelter, but not frequently; structured-intermittent, which includes individuals who alternate between shelter and nonshelter use; and unstructured-intermittent, which includes individuals with highly varying sequences of shelter and nonshelter use.

This type of methodology, referred to as “sequence analysis” (discussed in more detail in the Methodology section), has been used to measure differences in

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employment and housing tenure (rent versus own) trajectories; childbirth, marital status, and family life events; and other sociological phenomena that benefit from life course approaches (see for example, Pollock, 2007; Simonson, Gordo, & Titova, 2011; Gabadinho & Ritschard, 2013; Bürgin, Schumacher, & Ritschard, 2017). It has not been used as widely to identify patterns of social service use, although there are some examples of its use to identify patterns of foster care movements (Havlicek, 2010) and mental health services utilization among homeless individuals with chronic mental illness (Wuerker, 1996).

More recently, several studies have combined multiple sources of administrative data on service use to develop trajectories associated with different outcomes. Lim, Harris, Nash, Lennon, & Thorpe (2015) identified four trajectories of service use among people living with HIV/AIDS experiencing both homelessness and jail incarceration: the temporary group who had brief jail incarceration and shelter stays; the continuous incarceration group who had extensive continuous time in jail; the continuous shelter use group who had extensive time in shelter; and the decreasing shelter use group who had continuous shelter stays followed by more sporadic jail and shelter stays. A second study identified patterns of housing stability using administrative data on homelessness, incarceration, hospitalization, and residence in supportive housing and assessed the relationship between these patterns and supportive housing residence and diagnosed sexually transmitted infection (STI) rates (Lim, Singh, & Gwynn, 2016). It found three patterns of housing stability: unstable housing, stable housing, and rare institutional dwelling; supportive housing residency was found to be positively associated with stable housing and negatively associated with STI rates.

PREVIOUS STUDY BY CENTER FOR INNOVATION THROUGH DATA INTELLIGENCE (CIDI)

A previous study by the Center for Innovation through Data Intelligence (CIDI; 2016) identified a cohort of 19,963 young adults who were homeless or at risk of homelessness, analyzed their service use

trajectories in young adulthood, and identified risk factors for future service use. That study found that among youth who were exiting residential homeless services or foster care in 2008 through 2013 between the ages of 18 and 21, 42% had previous foster care histories, and 28% had homeless shelter histories as a child (with their parents). Additionally, 8% had a stay in juvenile detention and an additional 13% had a stay in jail prior to the analytic outcome period.

In the two years after exiting homeless services or foster care in young adulthood, 63% of youth in the sample did not return to homeless shelters or have a jail stay. Of those who did have service use, 20% had a stay in a runaway and homeless youth (RHY) crisis shelter, 7% had a stay in a transitional independent living program, 12% had a stay in a families with children shelter, 14% had a stay in a single adult shelter, and 13% had a jail stay. Additionally, 2% moved into supportive housing in the two years after exit.

The previous study also examined risk and protective factors for future service use and future high service use. Generally, youth who exited from residential homeless services were more at risk for future homelessness and justice involvement than youth who exited from foster care. Youth who had multi-system use prior to exit and youth who had more and longer stays in homeless shelters and jail previously were also more at risk. Subsidized exits (i.e., leaving homeless services or foster care with a rental voucher that assists with housing payments or with a placement in a housing program that includes subsidized rent) reduced the risk of future homeless and jail stays.

CURRENT STUDY

This study builds on the previous study by CIDI by developing a typology of youths' service use outcomes in the three years after they exit homeless services or foster care. It identifies groups of youth with similar service use trajectories and then uses data on previous service use and youth characteristics to predict which youth are likely to experience which trajectory.

Much of the work that has been done to develop typologies for homeless youth and other populations,

regardless of method or data source, has aimed to be primarily descriptive in nature, i.e., to describe distinct groups of homeless youth by outlining differences in their characteristics. This information can be extremely important in differentiating services for youth with different needs or different pathways into homelessness. This study does provide descriptions of distinct groups of youth, but it also incorporates predictive analysis to understand which youth have the highest probability of being in each group.

In order to be actionable and to further demonstrate the distinction among groups, this study aims to help inform which groups of youth may need more services or interventions. It also helps to describe the relative size of different outcome pathways for youth to better understand the needed capacity of different resources across a spectrum.

Efforts are underway in New York City and across the U.S. to help prioritize youth for housing resources based on their presenting needs and histories, but little research has been done to understand the housing outcomes of youth that were placed. Research by Chan, Rice, Vayanos, Tambe, and Morton (2017) has begun to quantify this work by attempting to use prioritization scores to predict the success of youth placed into different housing types. The current study seeks to identify some of the factors that may be useful to include in prioritization scores and/or may already be predictive of which youth receive and maintain certain housing resources. This knowledge can help identify gaps in eligibility and prioritization for certain resources.

This study also seeks to incorporate the use of multiple sources of administrative data into the sequence analysis methodology. By integrating multiple data on service use, the study offers a more robust understanding of youth outcomes than just understanding their interactions with the homelessness system. Utilizing sequence analysis allows the development of a comprehensive view of service use over three years, including overlaps in service use for particular groups of youth which may indicate multiple service needs. Sequence analysis also takes into account the timing of service use which

may indicate particular points for further intervention.

Finally, this study advances the idea that multi-system analyses are particularly important for the age cohort of transition-age youth. By examining youth in the age range who are involved with the adult homeless system, the runaway and homeless youth system, and the foster care system, the study is better able to identify a more comprehensive picture of what the strengths and gaps are across systems for this population, instead of focusing on issues specific to one system.

RESEARCH QUESTIONS

- 1 What are the primary patterns of service use for youth once they exit homeless shelters or foster care (e.g., no system involvement, multiple system involvement, long-term involvement in one system, decreasing/increasing system involvement, etc.)?
- 2 What early service use and demographic factors predict these patterns?
- 3 Which housing intervention (i.e., subsidized housing or supportive housing) leads to more stable patterns of service use?
- 4 Do these patterns differ based on exit system (e.g., foster care or different types of homeless shelters)?

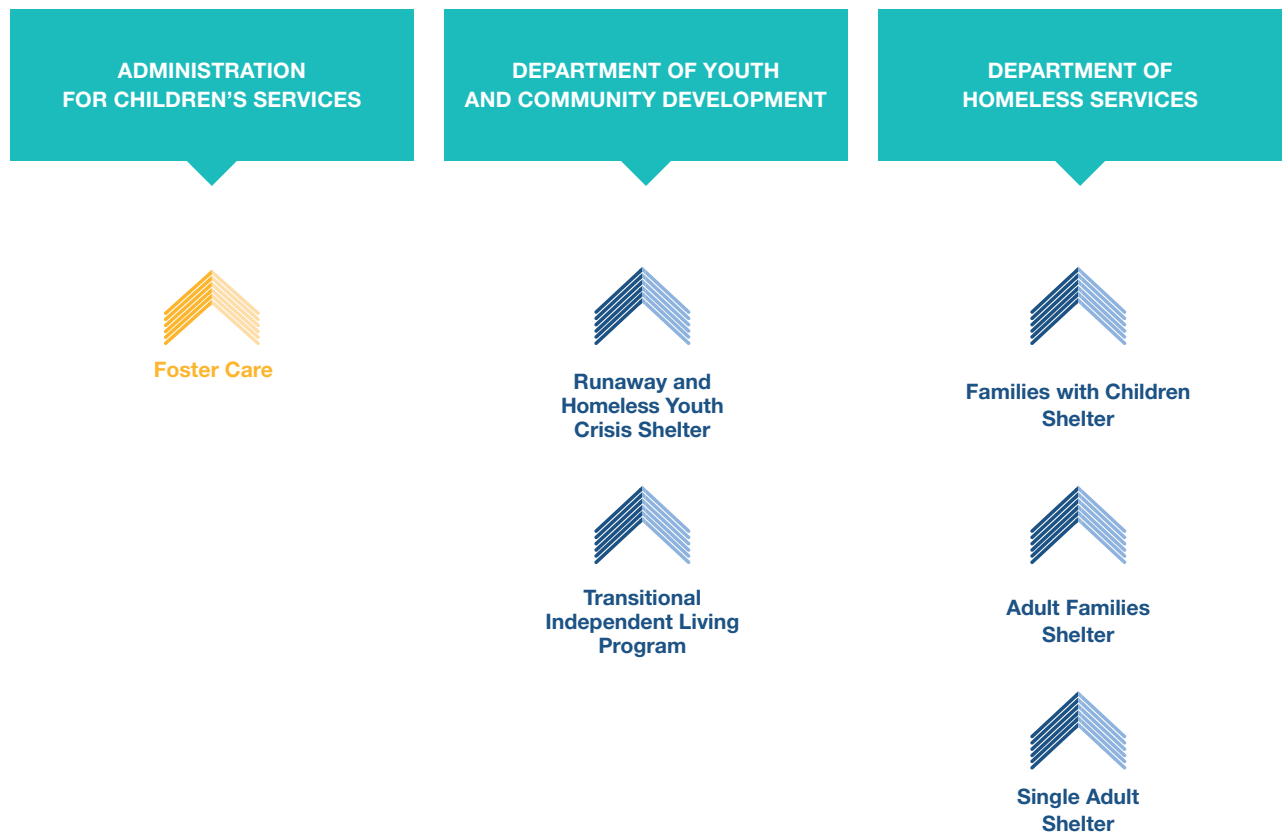


02

METHODOLOGY

SAMPLE

The sample consists of 8,795 individuals who were 18 to 21 years old when they exited from one of the systems listed below. All individuals exited between July 2011 and 2013. These systems were chosen to represent transition-age youth who are homeless (i.e., utilizing DYCD or DHS residential services) or at risk of homelessness (i.e., exiting foster care) during young adulthood.



METHODOLOGY

ADMINISTRATION FOR CHILDREN'S SERVICES (ACS)



Foster care:

Individuals were included in the sample if they exited a foster care stay between the ages of 18 and 21, regardless of discharge reason. This includes young adults who aged out of foster care, as well young adults who were adopted, reunited, or discharged to other locations.

DEPARTMENT OF YOUTH AND COMMUNITY DEVELOPMENT (DYCD)



Runaway and Homeless Youth (RHY) crisis shelter:

Individuals were included in the sample if they exited a stay in a RHY crisis shelter between the ages 18 and 21. Individuals aged out of the Runaway and Homeless Youth system at age 21 during the study time period. Stays in RHY crisis shelters were limited to 30 continuous days at a time, with a possible extension of an additional 30 days, during the study time period.



RHY transitional independent living (TIL) program:

Individuals were included in the sample if they exited a stay in a TIL program between the ages of 18 and 21. Individuals aged out of the Runaway and Homeless Youth system at age 21 during the study time period. Stays in TIL programs were limited to 18 continuous months at a time during the study time period.

DEPARTMENT OF HOMELESS SERVICES (DHS)



Families with children (FWC) shelter:

Individuals were included in the sample if they were a head-of-household or other adult family member (e.g., sibling or partner of the head-of-household) and exited an eligible stay in a FWC shelter between the ages of 18 and 21. Children of the head-of-household who were over the age of 18 years were not included in the sample. The status of an “adult” versus a “child” is based on the individual’s relationship to the head of household and not the age of the individual.



Adult families (AF) shelter:

Individuals were included in the sample if they were a head-of-household or other adult family member (e.g., sibling or partner of the head-of-household) and exited an eligible stay in an AF shelter between the ages of 18 and 21. Children of the head-of-household who were over the age of 18 years were not included in the sample. The status of an “adult” versus a “child” is based on the individual’s relationship to the head of household and not the age of the individual.



Single adult (SA) shelter:

Individuals were included in the sample if they exited a stay in an SA shelter between the ages of 18 and 21.

OUTCOME DATA DEFINITIONS

The outcome period for the study is the three years following the individual's first exit from foster care; an FWC, SA, or AF shelter; or an RHY crisis shelter or TIL program between July 2011 through 2013. If an individual exited from multiple systems or exited a system more than once during that time frame, the earliest exit was used. Stays after the exit were included as outcomes. System use during the three-year outcome period was measured for eight domains:

Homelessness

Includes any DYCD and DHS homeless shelter stay as either an adult or child.

Foster Care

Includes all returns to foster care. However, only youth who have been in foster care previously are able to re-enter foster care after age 18.

Hospitalizations for serious mental illness, substance use disorders, and post-traumatic stress disorder (PTSD)

Includes inpatient hospitalizations and visits to the emergency department where the primary diagnosis is for a serious mental illness (including schizophrenic disorders, episodic mood disorders, delusional disorders, psychosis, and anxiety, dissociative and somatoform disorders), substance use disorder (including alcohol/drug withdrawal, alcohol/drug dependence, and alcohol/drug abuse) and post-traumatic stress disorder (PTSD).

Preventable hospitalizations

Includes inpatient hospitalizations and visits to the emergency department where the primary diagnosis is for an "ambulatory care-sensitive" condition, which is a condition for which good clinical preventive services could reduce the need for hospitalization, such as diabetes complications, hypertension, adult asthma, and urinary tract infections.

Other hospitalizations

Includes inpatient hospitalizations and visits to the emergency department where the primary diagnosis is not included in the above definitions (i.e., is not a serious mental illness, substance use disorder, or PTSD, or an ambulatory care-sensitive condition). This includes, for example, hospitalizations for birth and hospital visits to the emergency department for injuries.

Subsidized housing as a head-of-household

Includes stays in public housing (i.e., housing in New York City Housing Authority (NYCHA) developments) and tenant- and project-based vouchers (e.g., Housing Choice vouchers, also known as Section 8 vouchers) as a head-of-household.

Supportive housing as a head-of-household

Includes stays in subsidized housing with supportive services available through the New York/New York I, II, and III Agreements as a head-of-household. These programs provide supportive housing to specific populations of individuals with service needs, such as youth aging out of foster care who are at risk of homelessness, youth with a serious mental illness being treated at a New York State psychiatric or residential treatment facility, and chronically homeless individuals with a serious mental illness or substance use disorder.

Jail Stays

Includes all stays in NYC jails, which comprises stays of individuals who are accused of crimes and waiting for their trial, as well as individuals who are convicted and sentenced to one year or less of jail time.

DEFINITIONS OF STAYS

All stays were defined based on guidance from each agency. Stays within each DHS shelter system were collapsed into one stay if the breaks between stays were less than 30 days. Durations of stays were calculated based on the actual days per shelter stay, not the collapsed stay duration. Stays that were less than one day in duration were not included in the study. Additionally, for both DHS family shelter systems (FWC and AF), only eligible stays were included. Families may be found ineligible due to the availability of alternative living accommodations or lack of required documents. Families can stay in a shelter while the eligibility process takes place; however, these stays are limited in duration. Stays within the foster care system, RHY crisis shelters and TIL programs, jail, juvenile detention, subsidized housing, and supportive housing were collapsed with previous stays in the same system if they were continuous (i.e., one stay started on the same day or the day after the previous stay ended). Stays in foster care were not included if they were less than seven days long.

DATA LINKAGE

Datasets were matched using SAS Link King software (Campbell, 2005). This software uses a series of probabilistic and deterministic matching algorithms to identify whether multiple records are likely to be the same person. This allows the matching process to account for data entry errors and spelling variations. Data for the sample were de-duplicated and matched, and then matched to outcome datasets.

STATISTICAL METHODS

Sequence Analysis

Sequence analysis was used to visualize, describe, and group patterns of service use among individuals during the outcome period. Sequence analysis is a statistical method that allows for the analysis of an individual's service use over time by enabling the grouping of individuals based not only on what types of services they use but also on when the use occurs within the outcome period. This analysis was conducted using the TraMineR package in the R statistical computing environment (Gabadinho, Ritschard, Studer, & Müller, 2010).

Sequence analysis provides a more nuanced understanding of a youth's service use over time than time-aggregated measures (such as the number of days

or stays of service use within a discrete time period). It incorporates three dimensions of a youth's service use in order to distinguish patterns: the order, the duration, and the timing relative to the outcome period (Studer & Ritschard, 2016). It takes into account the order of service use, for example, by considering a movement from homelessness to subsidized housing as a different sequence than a movement from subsidized housing to homelessness. It measures the total duration in each service use over the entire outcome period as well, summing all stays in each service. Finally, it measures when service use occurs during the three-year outcome period and can differentiate early service usage (such as in months 1 through 6) from late service usage (such as months 30 to 36).

In order to use sequence analysis, each youth's outcome data was transformed into a "sequence" of service use, i.e., a pattern of their service use for each month over three years. Based on each youth's service use, every month during the three-year outcome period (36 months) was labeled as one of the eight outcome domains (homelessness; foster care; jail stays; subsidized housing as a head of household; supportive housing as a head of household; hospital visits for serious mental illness, substance use disorders, and PTSD; preventable hospital visits; and other hospital visits) or as having no service use. If a youth had any service use of a system, regardless of the length of stay in that system, the entire month was labeled as the relevant service use domain. This resulted in each individual having 36 ordered labels corresponding with months 1 to 36 after exit. For example, if someone exited in September and had a jail stay in October, month two would be labeled as "jail stay" for that individual. This was chosen to be computationally feasible (versus examining the data at the day level, resulting in 1,095 ordered labels), while still allowing for enough detail to examine distinct patterns of service use (versus examining data at the quarter or year level). If an individual used more than one service over the course of a month, the month was labeled with the more acute service according to the order (most acute to least acute): hospital visits for serious mental illness, substance use disorders, and PTSD; preventable hospital visits; other hospital visits; jail stays; homelessness; foster care; supportive housing; and subsidized housing.

In order to group youth according to their service use trajectories, the differences between service use patterns among youth were calculated via a distance metric. Therefore, youth who had similar trajectories in the

three-year outcome period (e.g. in subsidized housing for the majority of the outcome period) were considered “closer” than they would be to youth who had vastly different trajectories (e.g., youth who had almost no service use for the majority of the outcome period). This distance was used to group youth together based on what systems they used and in what order, the duration they were in the systems, and when stays occurred within the outcome period. The distance metric chosen for this study was Dynamic Hamming distance, which emphasizes differences in timing of service use a bit more than the sequence or overall duration of different services (Studer & Ritschard, 2016). In exploratory analyses, multiple distance metrics were assessed and did not vary widely in their groupings; Dynamic Hamming distance was chosen as it made distinctions based on the timing of homeless service use, which other distance metrics did not distinguish. This distinction may have implications for practice and policy.

Cluster Analysis and Descriptive Profiles

The distance metric was used in a clustering algorithm to create groups of outcome trajectories. Hierarchical clustering was used in this analysis; this method does not require the number of groups to be specified in advance. In other words, the groups were not predefined; they arose from the data. Groups were visualized and the number and specificity of the groups was chosen based on what is relevant for practice and policy. There could have been as few as a single group where all subjects are together or as many groups as there were youth, with each person belonging to their own group. The fewer the number of groups, the less homogeneous the groups would be; the greater the number of groups, the less groups would be distinct from each other. The appropriate number of groups was chosen based on where youths’ service use started to distinguish potentially useful groups (i.e., different types of service used) and where the groups started to demonstrate interesting variation that could be an entry point for a change in policy (i.e., the timing of service use). Cluster cutoff criteria were also used to recommend the optimal number of groups by examining the ratio of within-cluster and between-cluster distances (Aisenbrey & Fasang, 2010). The relative improvement of this ratio was assessed among two through ten groups and the number of groups chosen was confirmed. Literature suggests that although algorithms may help guide the choice of the optimal number of groups, the best practice for choosing groups that are meaningful and relevant for policy and programming also includes

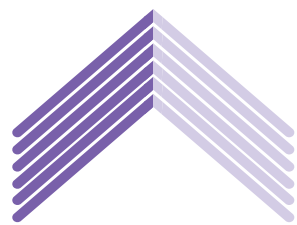
determining if the groups have “construct validity,” meaning that the groups are interpretable and plausible (Aisenbrey & Fasang, 2010). This type of unsupervised machine learning has the potential to uncover groups that are otherwise hidden in the data.

Once the outcome groups were determined, descriptive profiles of each group were developed. These included visualizations and statistics about the groups, such as the aggregated sequences of service use, the distribution over time of the service use, and the number of movements between services. The characteristics of service use within the three year outcome period, including the percentage of youth in each group who used a particular service and additional descriptive statistics for those youth, were also calculated, as well as demographic characteristics of the youth.

Predictive Analysis

Predictive models were created using characteristics and experiences of the youth from prior to their exit from foster care or homeless shelters. These models help illuminate which factors contribute most to the probability of a youth ending up in an outcome group. It is important to note that predictive analysis focuses solely on improving the predictive power of a model and therefore it is less interpretable than inferential modeling. However, it does indicate which factors contribute most to the predictions; these are discussed for each group. It also provides an indication for how well outcomes can be predicted, given the information available from administrative data. To do this, data is separated into two parts: (1) the training dataset, which is used to develop the predictive model parameters and (2) the test dataset, to which the predictive model is applied to see how well it performs.

For each group that emerged from the cluster analysis, a model was developed to understand which factors best predict membership in that group compared to the other groups. In order to better distinguish the smaller groups from the largest group that comprised the vast majority of the sample, downsampling was used in the training data (i.e., a random sample of youth in the largest group were used to make that group as large as the next largest group). The proportions of the groups were kept at their real levels in the testing dataset. Penalized logistic regressions (elastic net regressions) with standardized coefficients were used for variable selection and ranking. These models handle highly correlated data better than normal logistic regression and provide a simpler model than including all possible predictors.



03

FINDINGS

OVERVIEW OF OUTCOME GROUPS

Six groups of outcome trajectories were established based on the cluster analysis. These translated into the following groups:

1. Minimal Service Use (n=5,987)

This was by far the largest group, comprising 68% of the sample. Youth in this group spent most of their three-year outcome period with “no service use” meaning that they were not in homeless services, foster care, jail, hospitals, subsidized housing, or supportive housing for the majority of the time. Since they did not appear in any of the systems measured, it is difficult to know their living situation over this time period; it is assumed that, for the most part, they are living independently. However, they may be in other situations not measured in this study, such as utilizing temporary rental vouchers, privately operated shelters or other programs, living on the street or other unsheltered situation, couch surfing, prison, or other residential programs for health or mental health issues. They may have also moved out of NYC or be living in a college dorm environment.

2. Later Homeless Experience (n=675)

This group comprised 8% of the sample. Youth in this group began the three-year outcome period with minimal service use, but by two years after exit, the majority of them had a homeless shelter stay.

3. Earlier Homeless Experience (n=723)

This group also comprised about 8% of the sample.

Youth in this group generally entered a homeless shelter within six months of exit, with some of them entering almost immediately after they exit. Most of them exited by the beginning of the third year of the outcome period.

4. Consistent Subsidized Housing (n=764)

This was the second largest group, comprising about 9% of the sample. Youth in this group spent the vast majority of the three-year outcome period in subsidized housing, such as public housing through the New York City Housing Authority (NYCHA) or tenant- or project-based vouchers, as a head-of-household. Many of them enter subsidized housing upon exit and remain there throughout the three years. This group did not include youth who are living with their parents or guardians in subsidized housing.

5. Consistent Supportive Housing (n=187)

This was the smallest group, comprising 2% of the sample. Youth in this group entered supportive housing at some point during their three-year outcome period and spent most of this period in supportive housing as a head-of-household.

6. Frequent Jail Stays (n=459)

This was one of the smaller groups, comprising 5% of the sample. Youth in this group had multiple and frequent stays in jail over the three-year outcome period. Cumulatively, these stays made up the majority of the three years for many youth in this group.

ABOUT THIS OUTCOME GROUP

MINIMAL SERVICE USE

Youth who used minimal services during the three-year outcome period, including homeless services, foster care, jail, hospitals, subsidized housing or supportive housing.

LATER HOMELESS EXPERIENCE

Youth who experienced homelessness in a DYCD or DHS shelter later in the three-year outcome period.

EARLIER HOMELESS EXPERIENCE

Youth who experienced homelessness in a DYCD or DHS shelter earlier in the three-year outcome period.

CONSISTENT SUBSIDIZED HOUSING

Youth who resided in subsidized housing, such as public housing or tenant- or project-based vouchers, as a head-of-household during their three-year outcome period.

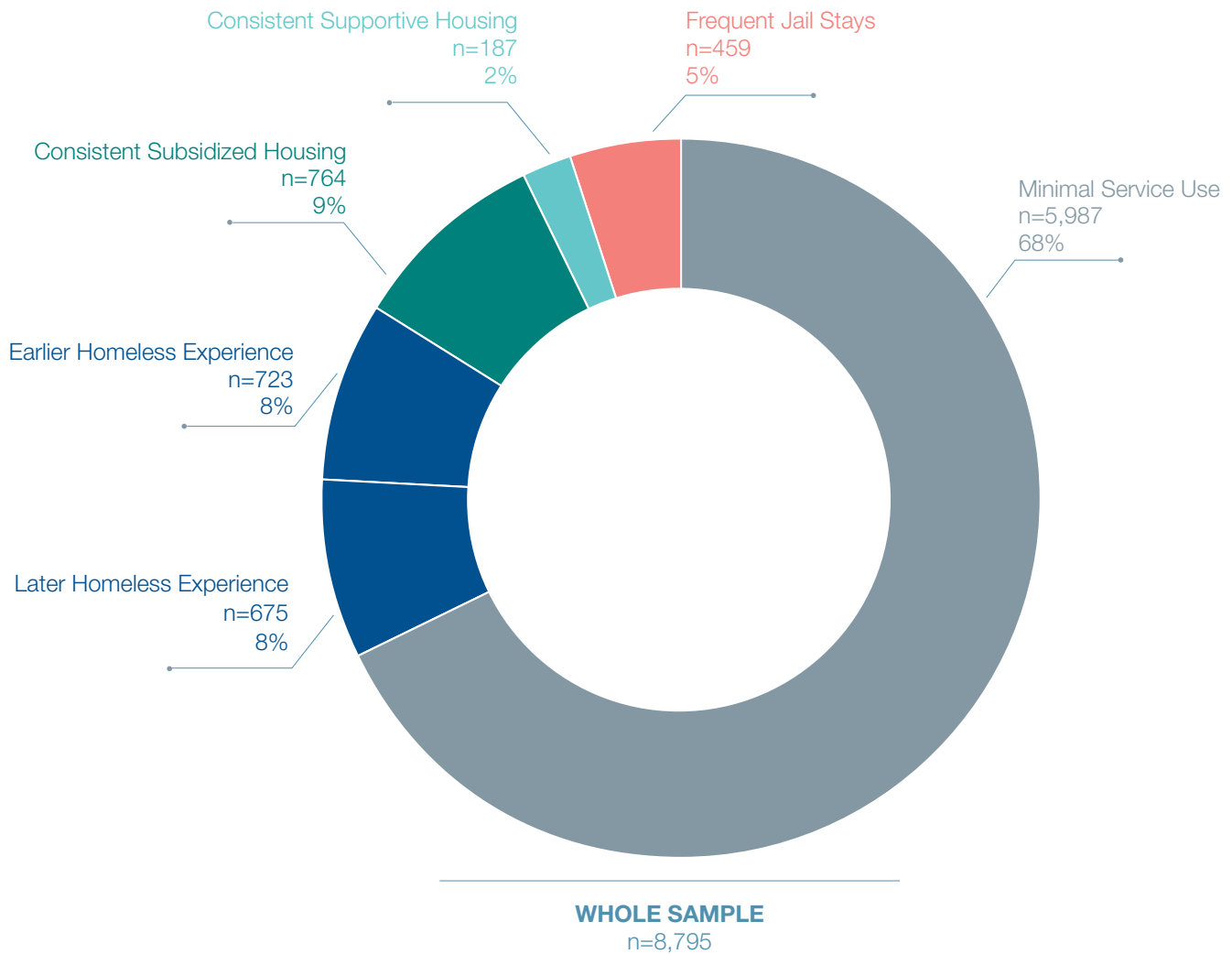
CONSISTENT SUPPORTIVE HOUSING

Youth who resided in supportive housing as a head-of-household during their three-year outcome period.

FREQUENT JAIL STAYS

Youth who had multiple and frequent jail stays over the three-year outcome period.

FINDINGS



It is important to note that although youth were categorized into these groups based on which they were most similar to, the groups do not describe all youth in them perfectly. Therefore, for example, although many youth in the Later Homeless Experience group did not enter a homeless shelter until about two years after exit, some entered earlier or later in their trajectories depending on the individual. In other words, because these groups are aggregated pathways, every youth in them will not be perfectly represented by them.

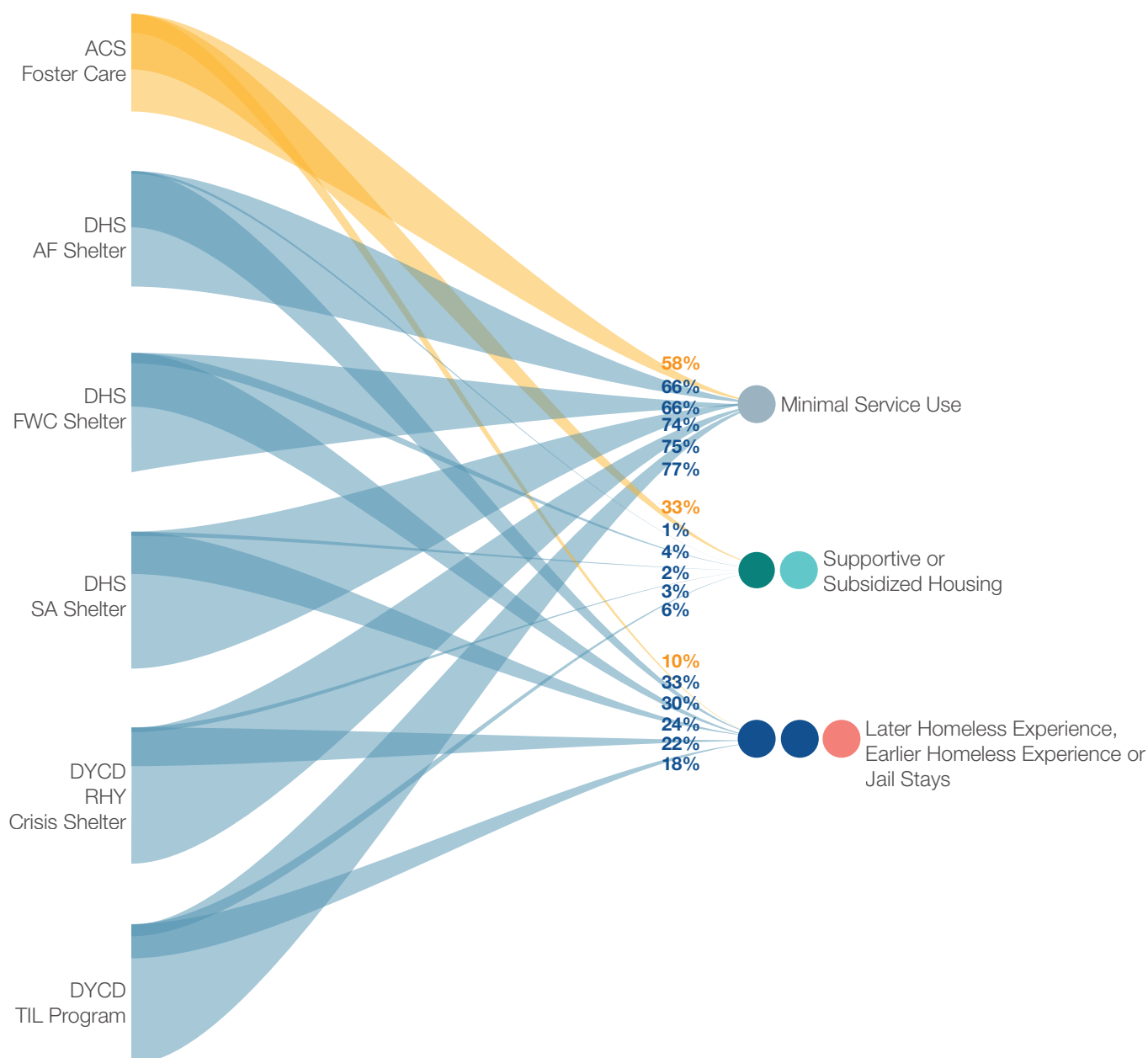
Additionally, although there was a dominant system that each group uses, that does not mean they did not use other systems as well. In fact, one of the advantages of this typology is that the overlap between the utilization of different systems can be captured and described so that policy and programmatic interventions can account for the multiple service needs of each group. Often, youth had a dominant system use pattern where they spent the majority of their time over the three-year outcome period, but other system use was interspersed throughout the three years as well, but in shorter duration or fewer stays. More comprehensive information about each group is described in the Descriptive Profiles of Groups section.

EXIT SYSTEMS BY GROUP

Of youth who exited from ACS foster care, 33% were in a housing group, either Consistent Subsidized Housing or Consistent Supportive Housing, while 58% were in the Minimal Service Use group, and 10% were involved in other systems (the Later Homeless Experience, Earlier Homeless Experience, or Frequent Jail Stays groups).

In contrast, much smaller proportions of youth from DYCD or DHS shelter systems were in the Consistent Subsidized Housing or Consistent Supportive Housing groups (between 1% and 6%).

The DYCD and DHS exit systems also had higher proportions of youth in the Later Homeless Experience, Earlier Homeless Experience, or Frequent Jail Stays groups, with the highest proportion for youth who exited from DHS AF shelters at 33%, followed by DHS FWC shelters at 30%, DHS SA shelters at 24%, DYCD RHY crisis shelters at 22%, and DYCD TIL programs at 18%.



PREDICTING MEMBERSHIP OF GROUPS

Classification Results

A different model was used to predict which youth belong to each of the six groups. This approach produced a predicted probability of a youth's membership in each group. In order to make predictions, a cut-off was chosen where youth with a probability greater than the cut-off were predicted to be in the group (thus the model did not attempt to predict membership for those whose probability was lower than the cut-off). The higher the cut-off, the more confident the model is in its predictions. However, increasing the cut-off comes at the cost of making predictions about fewer people and so leaves more people in a given group unclassified.

This trade-off is quantified using two measures of a model's ability to predict group membership: precision and recall. Precision equals the ratio of youth correctly predicted to the number of youth the model made predictions about. Recall equals the ratio of youth correctly predicted to all youth who actually belong to the group. To improve precision, the probability cut-off can be increased, but more youth who actually do belong to the group will be missed (i.e., lower recall). Conversely, to improve recall, the probability cut-off can be decreased, but there will be an increase in youth who are incorrectly predicted to belong to that group (i.e., lower precision). The trade-off between putting resources towards people who are incorrectly predicted to belong to a group and not giving resources to those who actually belong to a given group is a difficult choice to make, but an important consideration in how to use the results of these analyses.

To give an overview of each model's predictive ability, the precision for each model is presented at 10% recall. This is then compared to the precision that would occur without the use of any model—i.e., if predictions of group membership were made at random. These precision scores are then translated into the number of youth that an intervention would need to contact in order to correctly identify 10% of youth who belong to the group. This number is compared to the number of youth who would need to be contacted if predictions of group membership were made at random.

For example, the Later Homeless Experience

group makes up 8% of the sample in this study, so randomly guessing which youth belong to this group would be correct 8% of the time. To the degree that a model's precision is greater than 8%, it has some predictive value. All of the models examined showed improvement over random chance even if most models have precision lower than 50%. It is important to keep this comparison in mind for gauging the success of a model because as the number of people in a particular category shrinks, the task of predicting membership in that category becomes more difficult. Predicting these groups is even more challenging when the groups are similar either in nature (Later Homeless Experience versus Earlier Homeless Experience, for example) or eligibility process (Consistent Subsidized Housing versus Consistent Supportive Housing).

For the Minimal Service Use group, the precision (at 10% recall) was 89%, compared to 68% precision based on random chance (a 1.3-fold increase). Given the 5,987 youth in the Minimal Service Use group, an intervention to reach 10% of them (599 youth) would have to outreach to 673 youth (599/0.89). In other words, the model needs to predict 673 youth as belonging to the Minimal Service Use group in order to correctly identify 599 youth. If the intervention was assigned based on random chance, it would have to outreach to 881 youth (599/0.68).

For the Later Homeless Experience group, the precision (at 10% recall) was 23%, compared to 8% precision based on random chance (an almost three-fold increase). Given the 675 youth in the Later Homeless Experience group, an intervention to reach 10% of them (68 youth) would have to outreach to 296 youth (68/0.23). In other words, the model needs to predict 296 youth as belonging to the Later Homeless Experience group in order to correctly identify 68 youth. If the intervention was assigned based on random chance, it would have to outreach to 850 youth (68/0.08).

For the Earlier Homeless Experience group, the precision (at 10% recall) was 17%, compared to 8% precision based on random chance (over a two-fold increase). Given the 723 youth in the Earlier Homeless Experience group, an intervention to reach 10% of them (72 youth) would have to outreach to 424 youth (72/0.17). In other words, the model needs to predict 424 youth as belonging to the Earlier Homeless Experience

group in order to correctly identify 72 youth. If the intervention was assigned based on random chance, it would have to outreach to 900 youth (72/0.08).

For the Frequent Jail Stays group, the precision (at 10% recall) was 63%, compared to 5% precision based on random chance (a thirteen-fold increase). Given the 459 youth in the Frequent Jail Stays group, an intervention to reach 10% of them (46 youth) would have to outreach to 73 youth (46/0.63). In other words, the model needs to predict 73 youth as belonging to the Frequent Jail Stays group in order to correctly identify 46 youth. If the intervention was assigned based on random chance, it would have to outreach to 920 youth (46/0.05).

For the Consistent Subsidized Housing group, the precision (at 10% recall) was 40%, compared to 9% precision based on random chance (over a four-fold increase). Given the 764 youth in the Consistent Subsidized Housing group, to correctly identify 10% of them (76 youth), the model needs to predict 190 youth (76/0.40) as belonging to the Consistent Subsidized Housing group. If the model categorized youth based on random chance, it would have to predict 844 youth (76/0.09) as belonging to the Consistent Subsidized Housing group.

For the Consistent Supportive Housing group, the precision (at 10% recall) was 15%, compared to 2% precision based on random chance (over a seven-fold increase). Given the 187 youth in the Consistent Supportive Housing group, to correctly identify 10% of them (19 youth), the model needs to predict 127 youth (19/0.15) as belonging to the Consistent Supportive Housing group. If the model categorized youth based on random chance, it would have to predict 950 youth (19/0.02) as belonging to the Consistent Supportive Housing group.

Top Predictive Factors

It is important to note that all predictive factors were measured with penalized logistic regression, which means that all factors are measured holding the other factors constant. Therefore, factors may be impacted by other information included in the models.

Gender, race, and/or exit system were in the top predictors for all outcome groups. Being female (compared to being male) was predictive of being in the Later Homeless Experience and Consistent Subsidized Housing groups. Being female lowered the probability of being in the Minimal Service Use, Consistent Supportive Housing, and Frequent Jail Stays groups (compared to being male). Being transgender also decreased the probability of being in the Minimal Service Use group (compared to being male) and increased the probability of being in the Frequent Jail Stays group; however, data collection on gender identity is inconsistent across systems and these data likely represent an undercount of individuals who identify as transgender. Being Black/African American (compared to being White) was a top predictor for the Consistent Supportive Housing group and Frequent Jail Stays group, while being Black/African American (compared to being White) lowered a youth's probability of being in the Minimal Service Use group. Being older at age of exit lowered the probability of being in the Minimal Service Use, Earlier Homeless Experience, and Frequent Jail Use groups, while it increased the probability of being in the Consistent Supportive Housing and Consistent Subsidized Housing groups.

Exiting DHS SA shelters, DHS FWC shelters, and DYCD RHY crisis shelters increased the probability of being in the Minimal Service Use group (compared to exiting foster care). Compared to exiting foster care, exiting all other systems increased the probability of being in the Later Homeless Experience and Earlier Homeless Experience groups, while exiting all other systems decreased the probability of being in the Consistent Subsidized Housing group. Exiting from any of the DHS shelter systems (FWC, SA, or AF) decreased the probability of being in the Consistent Supportive Housing group (compared to exiting from foster care). Exiting from a DHS SA shelter was a top predictor for the Frequent Jail Stays group (compared to exiting from foster care).

FINDINGS

Other top predictors included:

- 1 Minimal Service Use: Having multiple service use across domains decreased the probability of being in the Minimal Service Use group, as did having a hospital visit for a reason other than a preventable hospital visit or a visit for an SMI, SUD, or PTSD. Ever having a jail or detention stay for a misdemeanor or felony decreased the probability of being in this group, as did having more homeless shelter stays as an adult.
- 2 Later Homeless Experience: Multi-system use was a top predictor for the Later Homeless Experience group. Having a longer cumulative length of stay in foster care and having more foster care spells decreased the probability of being in the Later Homeless Experience group, as did ever having a jail or detention stay for a misdemeanor or felony. Being older at first system use (either in foster care, a homeless shelter, or the justice system) also decreased the probability of being in the Later Homeless Experience group.
- 3 Earlier Homeless Experience: Having more stays in a homeless shelter as an adult increased the probability of being in the Earlier Homeless Experience group; however, receiving a temporary subsidy upon exit from a DHS shelter decreased the probability of being in this group. Having a longer length of stay in foster care decreased the probability of being in this group, as did having a hospital visit for an SMI, SUD, or PTSD. Having a longer length of stay in the justice system and ever having a stay for a felony charge also decreased the probability.
- 4 Consistent Subsidized Housing: Having more stays in a homeless shelter as an adult, longer length of stay in a homeless shelter as a child, having more stays in the justice system, and having a hospital visit for an SMI, SUD, or PTSD all decreased the probability of being in the Consistent Subsidized Housing group. However, having multiple system use increased the probability of being in this group.
- 5 Consistent Supportive Housing: Longer length of stay and more stays in foster care and having a hospital visit for an SMI, SUD, or PTSD were top predictors for the Consistent Supportive Housing group. Longer length of stay in subsidized housing as a non head-of-household and having a longer length of stay and more stays in the justice system decreased the probability of being in the Consistent Supportive Housing group.
- 6 Frequent Jail Stays: Ever having a stay in jail or detention for a misdemeanor or felony and having more justice stays increased the probability of being in the Frequent Jail Stays group. Having a hospital visit for an SMI, SUD, or PTSD and having multiple system use also increased the probability of being in this group, as did having more movements in foster care.

TOP PREDICTIVE FACTORS BY GROUP

	Minimal Service Use	Later Homeless Experience	Earlier Homeless Experience	Consistent Subsidized Housing	Consistent Supportive Housing	Frequent Jail Stays
DEMOGRAPHICS AND EXIT SYSTEM						
Gender: Female (compared to Male)	↓	↑		↑	↓	↓
Gender: Transgender (compared to Male)	↓					↑
Race: Black/African American (compared to White)	↓				↑	↑
Race: Other (compared to White)						↓
Exit Age (older)	↓		↓	↑	↑	↓
Exit System: DHS AF Shelter (compared to ACS Foster Care)		↑	↑	↓	↓	
Exit System: DHS FWC Shelter (compared to ACS Foster Care)	↑	↑	↑	↓	↓	
Exit System: DHS SA Shelter (compared to ACS Foster Care)	↑	↑	↑	↓	↓	↑
Exit System: DYCD RHY Crisis Shelter (compared to ACS Foster Care)	↑	↑	↑	↓		
Exit System: DYCD TIL Program (compared to ACS Foster Care)		↑	↑	↓		
PREVIOUS SYSTEM USE						
Multi-system use	↓	↑		↑		↑
Age (older) at first system use (of foster care, homeless shelter, justice system)		↓				
Number of months in ACS Foster Care		↓	↓		↑	
Number of spells in ACS Foster Care		↓			↑	
Number of movements in ACS Foster Care						↑
Number of months in a homeless shelter as a child				↓		
Number of stays in a homeless shelter as an adult	↓		↑	↓		
Receiving temporary rental assistance upon exit from a DHS shelter			↓			
Number of months in the justice system			↓		↓	
Number of stays in the justice system				↓	↓	↑
Ever having a jail or detention stay for a felony	↓	↓	↓			↑
Ever having a jail or detention stay for a misdemeanor	↓	↓				↑
Having a hospital visit for an SMI, SUD, or PTSD			↓	↓	↑	↑
Having a hospital visit for a reason other than an SMI, SUD, or PTSD or a preventable hospital visit	↓					
Number of months in subsidized housing as a non head-of-household					↓	



= increases the probability of being in a group



= decreases the probability of being a group

Example: The more justice stays prior to the three-year outcome period a youth has, the greater the probability that they would be in the Frequent Jail Stays group, but the lower the probability that they would be in the Consistent Subsidized Housing or Consistent Supportive Housing groups.



04

DESCRIPTIVE PROFILES OF
GROUPS

DESCRIPTION OF SAMPLE

What are the characteristics of youth in the sample?

The sample consists of 8,795 young adults. Of the youth in the sample, 2,291 (26%) exited from ACS foster care, 2,461 (28%) exited from DHS SA shelters, 1,699 (19%) exited from DHS FWC shelters, 1,986 (23%) exited from DYCD RHY crisis shelters, 148 (2%) exited from DHS AF shelters, and 210 (2%) exited from DYCD TIL programs. Overall sample demographics are therefore more representative of the programs with more exits (ACS foster care, DYCD RHY crisis shelters, and DHS SA/FWC shelters) than programs with fewer exits in this age range (DHS AF shelters and DYCD TIL programs).

Women constituted a greater share of the overall sample than men (59% were women). A small portion of the sample (<1%) identified as transgender. However, data for this category is collected inconsistently across data sources and therefore is an underestimate of individuals who identify as transgender. Because of this small percentage, the percentages of youth who identify as transgender are not reported by group. Overall, the sample was predominantly Black/African American (57%) or Hispanic/Latino (32%). Within the sample age range of 18 to 21, the sample skewed slightly older: 60% of individuals in the sample were between the ages of 20-21, while 40% were between the ages of 18-19. A lower percentage of the sample exited in 2011; only July-December were included for 2011 because that is when DYCD data was available. Forty percent of the sample exited in 2012, while 35% exited in 2013.

What systems do youth in the sample use during the three-year outcome period?

During the 36 month outcome period, the median number of transitions between different systems (such as from no service use to homelessness or from jail to supportive housing) was five, meaning they had a transition about once every seven months.

Very few youth in the sample (about 1%) had a foster care stay during the outcome period. Because of this small percentage, foster care outcomes are not reported by group.

About 42% of the sample had a homeless shelter stay (in either DHS or DYCD programs) within the three years after exit; of those who had a stay in a homeless shelter, the median length of stay was 129 days. About half of those who had a homeless shelter stay had only one stay, while almost a quarter had two stays, about 18% had three or four stays, and 8% had five or more stays.

About 16% of the sample had a jail stay within the three years after exit; of those with a jail stay, 50% had just one stay, 20% had two stays, 12% had three stays, 8% had four stays, and 10% had five or more stays. The median length of stay for those who had a jail stay was 36 days.

Three types of hospital visits were measured: hospital visits for a serious mental illness (SMI), substance use disorder (SUD), or post-traumatic stress disorder (PTSD); preventable hospital visits; and other hospital visits that did not meet the definitions for the other two types of hospital visits (for more information about the definitions of these categories, see the Methodology section). Youth can have hospital visits in multiple categories depending on their primary diagnosis at each hospital visit. About 14% of the sample had a hospital visit (either in the emergency department or as an inpatient hospitalization) for an SMI, SUD, or PTSD. Of those, the median length of stay was one day. Forty-nine percent of those who had a SMI, SUD, or PTSD hospital visit had only one visit, while 31% had between two and four visits and 21% had five or more visits.

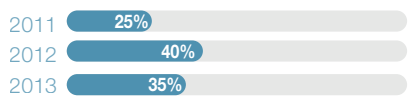
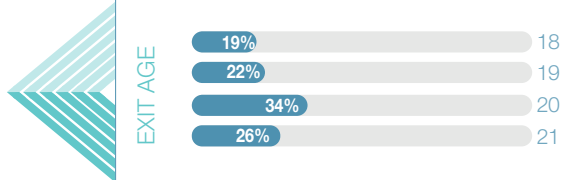
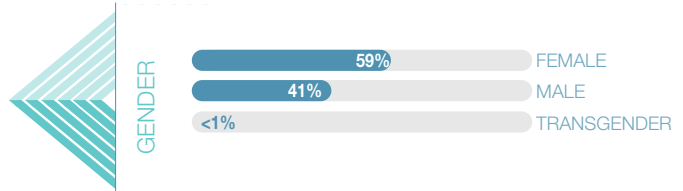
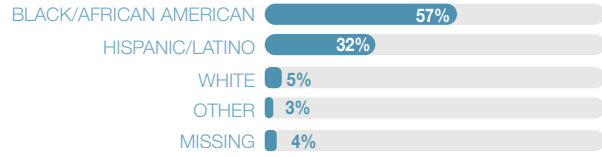
About 30% of the sample had a preventable hospital visit; the median length of stay for those who had a preventable hospital visit was zero days (meaning most youth were visiting the emergency department and did not stay overnight). Most of the youth who had a preventable hospital visit had only one (53%), 38% had between two and four visits, and 9% had five or more visits.

About 65% of the sample had a hospital visit (either in the emergency department or an inpatient hospitalization) for some other reason, including accidents and pregnancy/birth, among other reasons. For those who had a hospital visit, the median length of stay was one day. The majority of youth who had a hospital visit for some other reason had five or more visits (39%), while 22% had just one visit, and the remainder had two to four visits.

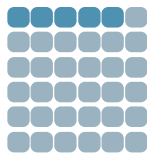
Only about 4% of the sample had a stay in supportive housing as a head-of-household during the outcome period and for those that had a stay, the median length of stay was 548 days. The vast majority of them had just one stay (97%).

About 12% of the sample had a stay in subsidized housing as a head-of-household during the outcome period and they had a long median length of stay of 981 days. Almost all of them had just one stay (98%).

WHAT ARE THE CHARACTERISTICS OF YOUTH IN THE SAMPLE?



5 OUT OF 36 MONTHS



WHAT SYSTEMS DO YOUTH IN THE SAMPLE USE DURING THE THREE-YEAR OUTCOME PERIOD?

n=8,795

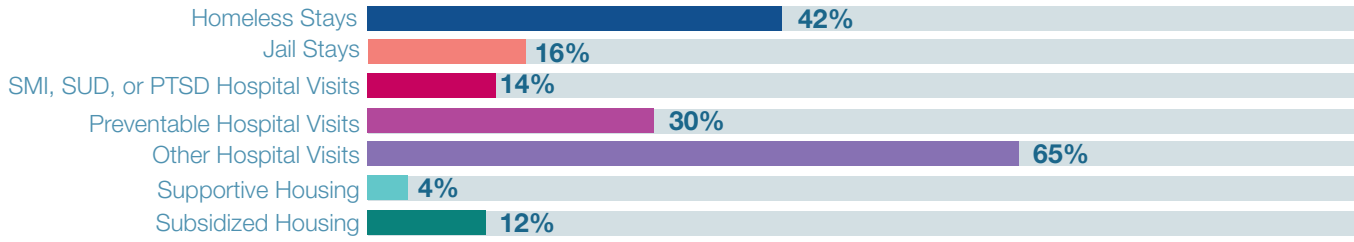


Chart Key

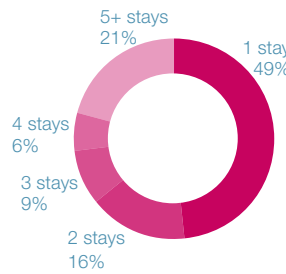
Of the whole sample (n=8,795), 42% had a homeless stay.

Of that 42% (n=3,694), the median length of stay was 129 days, and 50% had 1 stay.

14%

SMI, SUD, or PTSD Hospital Visits

Number of Stays

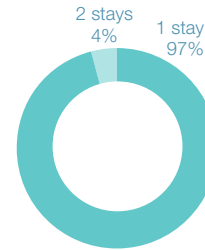


Median LOS: 1 day

4%

Supportive Housing

Number of Stays

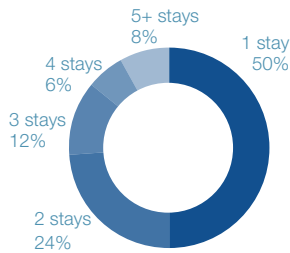


Median LOS: 548 days

42%

Homeless Stays

Number of Stays

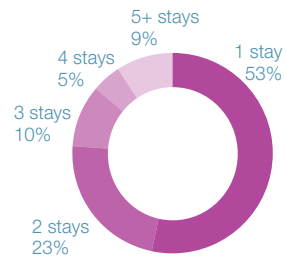


Median LOS: 129 days

30%

Preventable Hospital Visits

Number of Stays

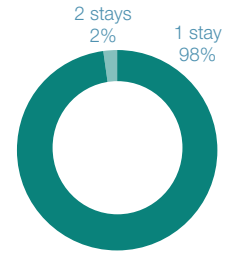


Median LOS: 0 days

12%

Subsidized Housing

Number of Stays

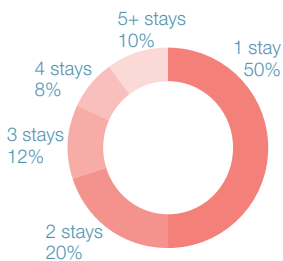


Median LOS: 981 days

16%

Jail Stays

Number of Stays

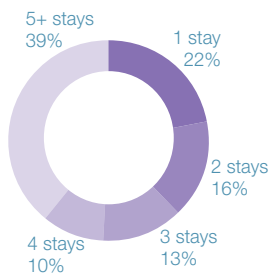


Median LOS: 36 days

65%

Other Hospital Visits

Number of Stays



Median LOS: 1 day

What are the characteristics of youth in the Minimal Service Use group?

The demographic characteristics (gender, race, age, and exit year) of youth in the Minimal Service Use group were very similar to the overall sample: about 57% were female, about 53% were Black/African American, 34% were Hispanic/Latino, 42% were 18 or 19 years old at exit and 58% were 20 or 21, and 25% exited in 2011, 40% exited in 2012, and 35% exited in 2013.

Slightly less of the youth in the Minimal Service Use group exited from ACS foster care compared to the overall sample (22% versus 26%), while slightly more exited from a DHS SA shelter or a DYCD RHY crisis shelter (30% versus 28% and 25% versus 23%, respectively); the composition of other exit systems was about the same as the overall sample (2% for DHS AF shelter, 19% for DHS FWC shelter, and 3% for DYCD TIL programs).

What systems do youth in the Minimal Service Use group use during the three-year outcome period?

Overall, fewer youth in this group had system use compared to the overall sample and other groups, and for those who did, the median length of stay was short and the number of stays was smaller. Youth in this group had a median of four transitions among systems, meaning they had a transition about once every nine months on average.

Visualization 1a displays the patterns of service use for the youth in this group. Each row of colors represents one youth and each column represents one month of the outcome period. For most youth, the majority of months had no service use, although there was some intermittent hospital use, homeless shelter stays, and jail stays throughout. Visualization 1b displays the proportion of youth using each service in any given month. The horizontal axis again represents the months of the outcome period, while the vertical axis is the proportion of youth in each service. Overall, the proportion of youth not using services remained high over the entire period, from about 80% at the beginning of the outcome period to 90% of youth at the end of the outcome period.

About 32% of youth in the Minimal Service Use group had a stay in homeless shelter, with a median length of stay of 52 days or just under two months (compared to about four months, or 129 days, for the overall sample).

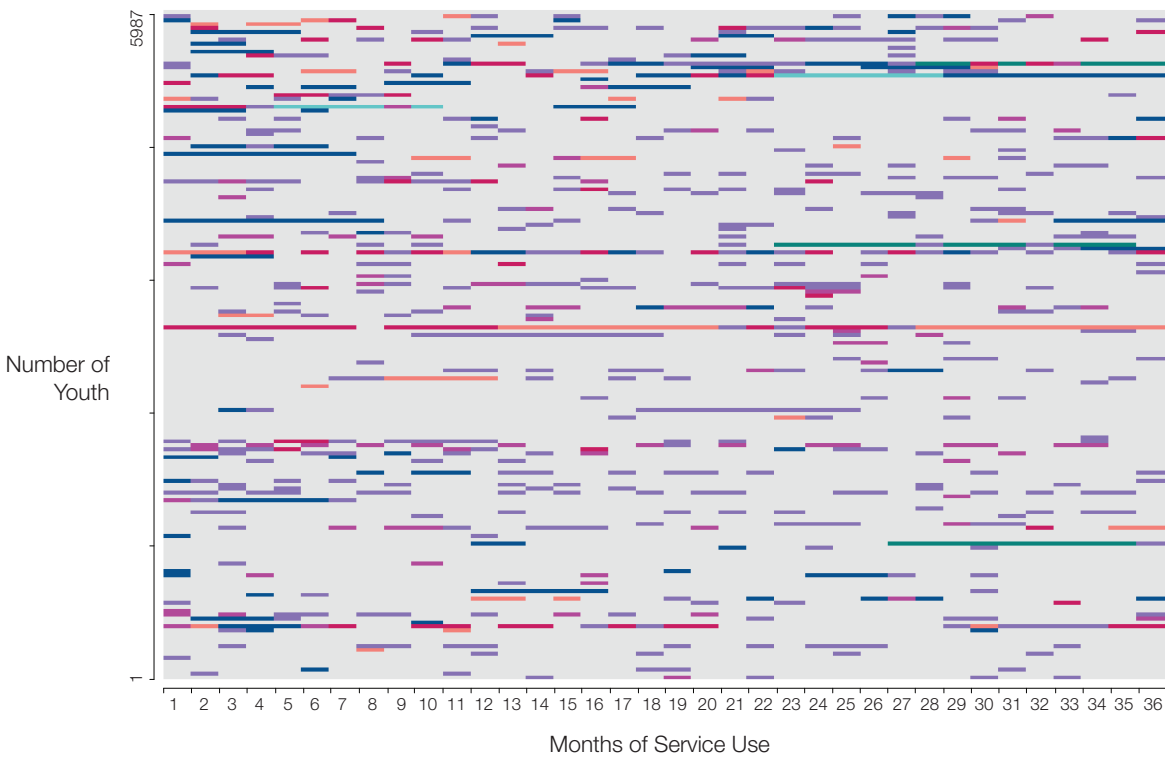
Over half (57%) of those with a homeless shelter stay had just one stay, while 39% had two to four stays, and 5% had five or more stays.

About 12% of youth in this group had a jail stay and of those with a jail stay, the median length of stay was 13 days. Fifty-seven percent of youth with a jail stay had just one stay, while 38% had between two and four stays and 5% had five or more stays.

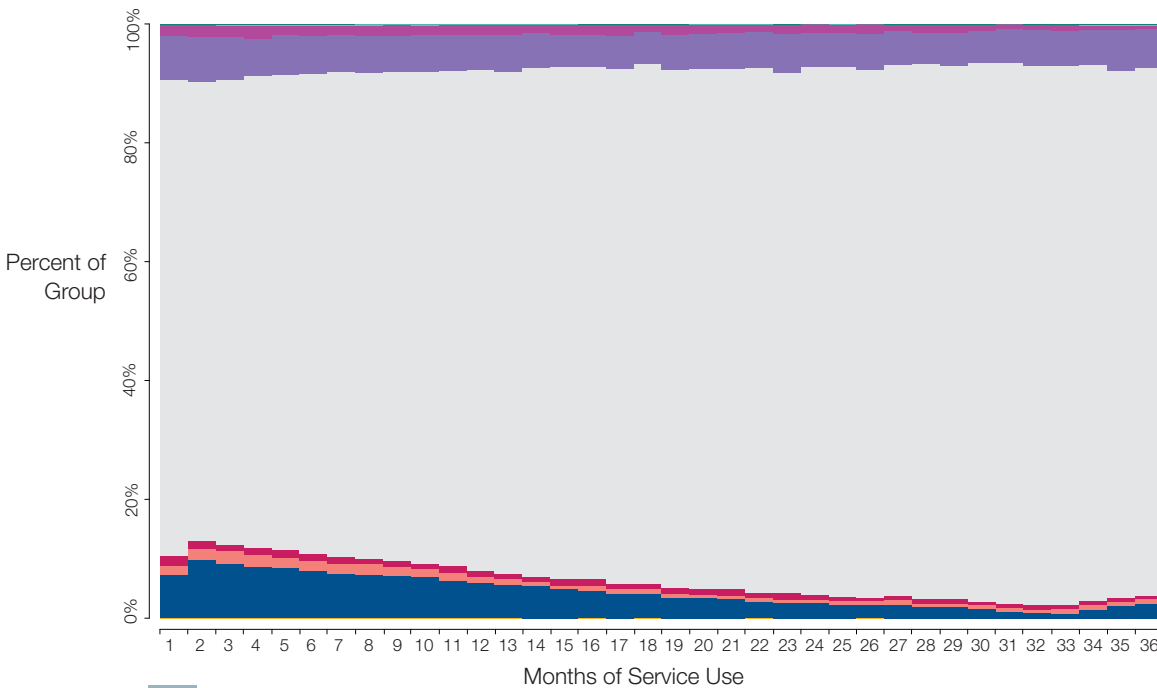
Slightly fewer youth in the Minimal Service Use group had a hospital visit for an SMI, SUD, or PTSD or a preventable hospital visit compared to the overall sample (13% versus 14% and 27% versus 30%, respectively). Of those youth who did have these hospital visits, the distributions of their length of stay and number of visits was about the same as the overall sample. Slightly fewer youth in this group had a hospital visit for another reason compared to the overall sample (about 59% compared to 65%) and of those who did have a hospital visit, the median length of stay was zero days and almost a quarter had just one visit, about 39% had two to four visits, and 37% had five or more visits.

Very few youth in this group had a stay in supportive housing (about 1%) or subsidized housing (about 2%).

Visualization 1a: Patterns of Service Use for Minimal Service Use



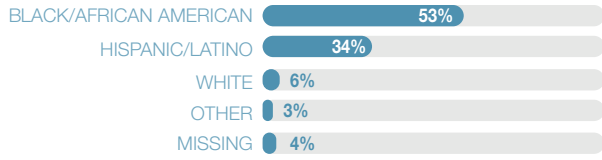
Visualization 1b: Distributions of Service Use for Minimal Service Use



Types of Service Use

- Homeless Shelter Stays
- Supportive Housing
- Jail Stays
- Subsidized Housing
- SMI, SUD, or PTSD Hospital Visits
- Foster Care
- Preventable Hospital Visits
- No System
- Other Hospital Visits

WHAT ARE THE CHARACTERISTICS OF YOUTH IN THE MINIMAL SERVICE USE GROUP?



RACE/ETHNICITY

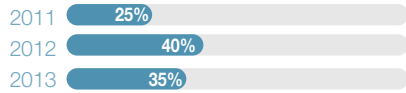
GENDER



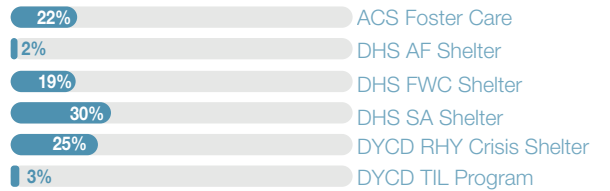
EXIT AGE



EXIT YEAR

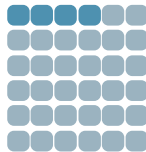


EXIT SYSTEM



NUMBER OF TRANSITIONS

4 OUT OF 36 MONTHS



*Data not disclosed due to small cell size.
Note: Totals may not add up to 100% due to rounding.

WHAT SYSTEMS DO YOUTH IN THE MINIMAL SERVICE USE GROUP USE DURING THE THREE-YEAR OUTCOME PERIOD?

n=5,987

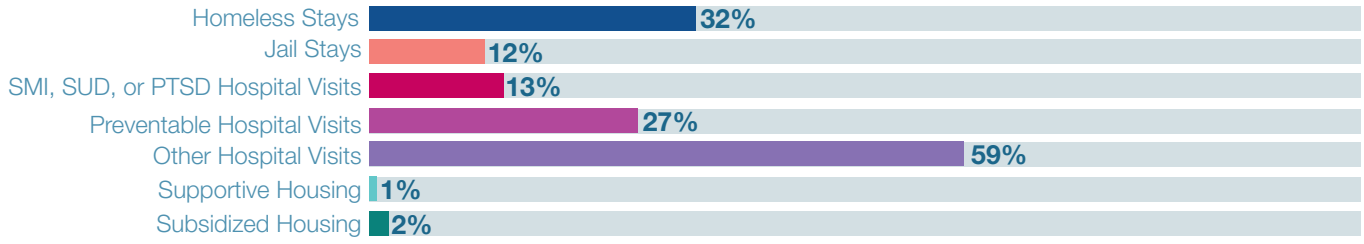


Chart Key

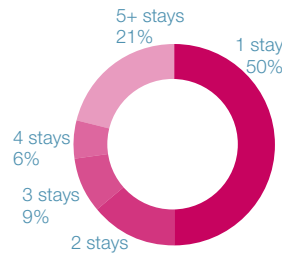
Of the Minimal Service Use group (n=5,987), 32% had a homeless stay.

Of that 32% (n=1,916), the median length of stay was 52 days, and 57% had 1 stay.

13%

SMI, SUD, or PTSD Hospital Visits

Number of Stays

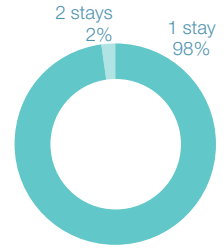


Median LOS: 1 day

1%

Supportive Housing

Number of Stays

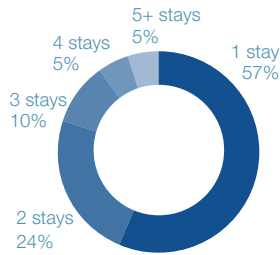


Median LOS: 207 days

32%

Homeless Stays

Number of Stays

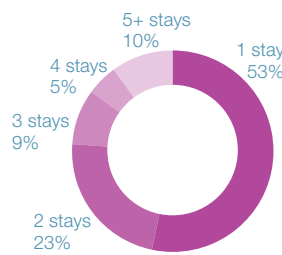


Median LOS: 52 days

27%

Preventable Hospital Visits

Number of Stays

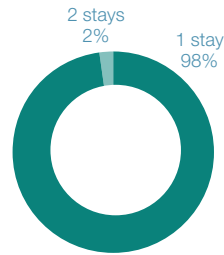


Median LOS: 0 days

2%

Subsidized Housing

Number of Stays

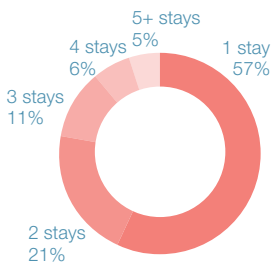


Median LOS: 298 days

12%

Jail Stays

Number of Stays

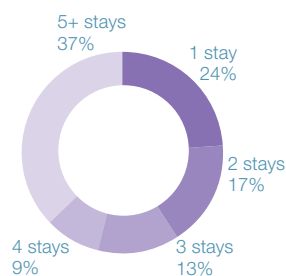


Median LOS: 13 days

59%

Other Hospital Visits

Number of Stays



Median LOS: 0 days

What are the characteristics of youth in the Later Homeless Experience group?

Three-quarters of the youth in the Later Homeless Experience group were female, which was markedly higher than the proportion in the overall sample (76% versus 59%). There was also a higher proportion of youth who were Black/African American in this group compared to the overall sample, while the percentages of youth who were Hispanic/Latino, White, or other races were lower than the overall sample. A larger proportion of youth were also older at the time of exit; 63% were 20 or 21 years old. The distribution of exit years was not significantly different from the overall sample.

A larger percentage of youth in the Later Homeless Experience group exited from a DHS FWC shelter compared to the overall sample (41% versus 19%). A lower proportion exited from all other systems, particularly from ACS foster care (10% versus 26%).

What systems do youth in the Later Homeless Experience group use during the three-year outcome period?

Overall, this group had a much larger percentage of youth with a homeless stay than the overall sample and, of those with a homeless stay, they had a longer median length of stay. There was also much more hospital usage in this group compared to the overall sample. The Later Homeless Experience group had a median of nine transitions between systems, or about one every four months.

Visualization 2a shows most youth began the outcome period with no service use, but by the end of the outcome period almost all of the youth had a stay in a homeless shelter. Again, there was intermittent hospital use through the outcome period. Visualization 2b shows that at the beginning of the outcome period about 10% of the group had a homeless shelter stay, but during the last year of the outcome period, about 50-70% were in a homeless shelter at any given point.

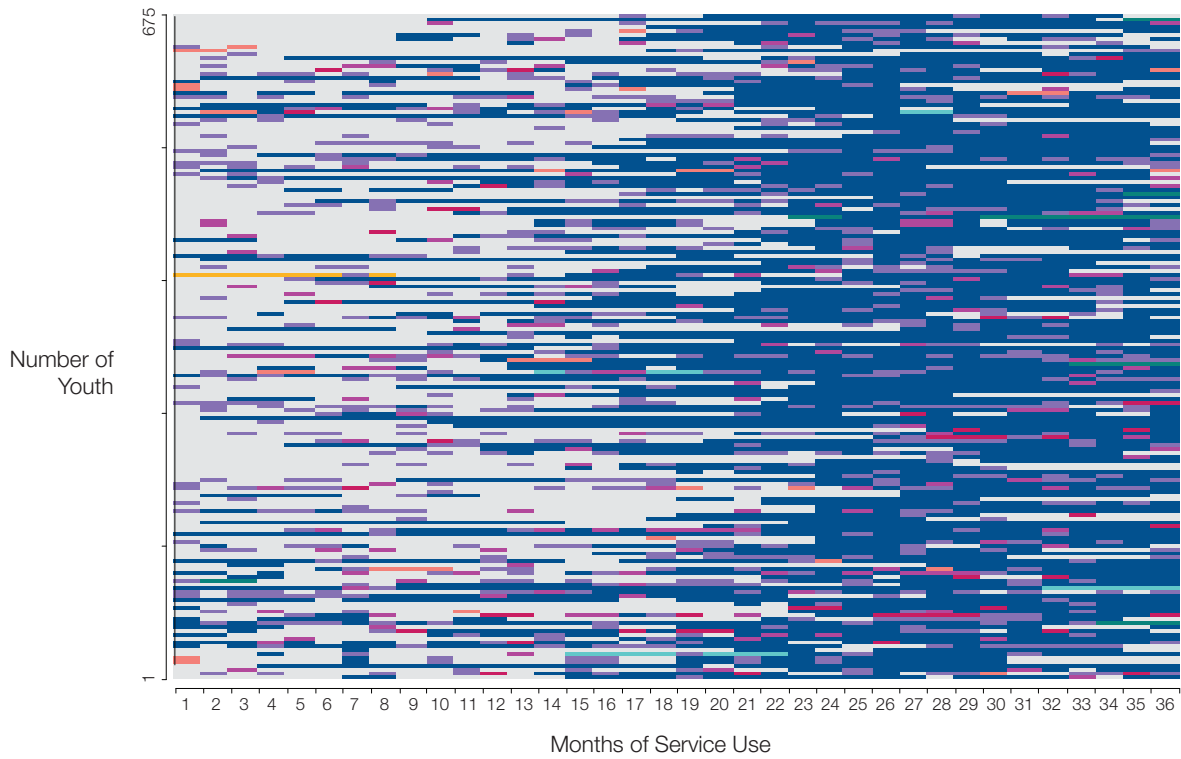
All of the youth in the Later Homeless Experience group had a stay in a homeless shelter and the median length of stay was about 16 months (487 days), or a little over one-third of the outcome period - the longest median length of stay of all of the groups. About 43% of those who had a homeless stay had only one stay, while 47% had two to four stays, and 11% had five or more stays.

Slightly less youth in this group had a jail stay compared to the overall sample (14%) and the median length of stay for those with a jail stay was shorter at 19 days. Most of the youth with a jail stay (62%) had only one.

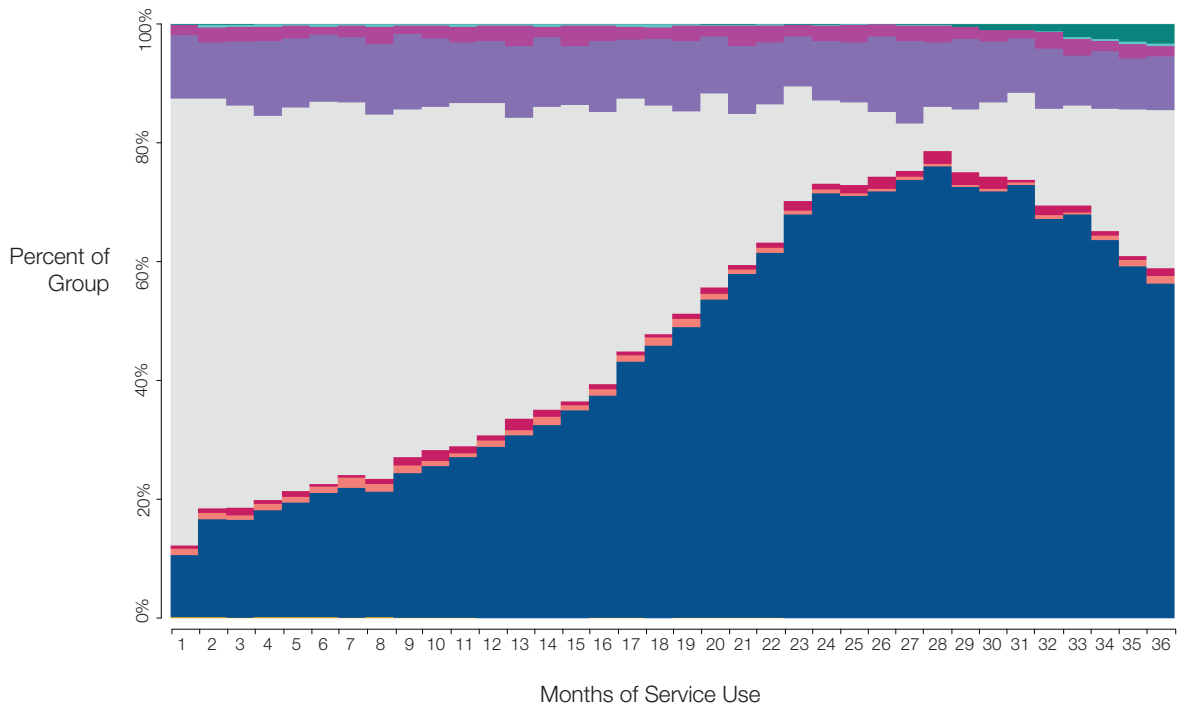
About 17% of youth had an SMI, SUD, or PTSD hospital visit and of those, the median length of stay was 1 day. Most of the youth who had an SMI, SUD, or PTSD hospital visit had only one (50%). A higher percentage of youth in the Later Homeless Experience group had a preventable hospital visit compared to the overall sample (44% versus 30%), but for those who had a preventable hospital visit, the distributions of the length of stay and number of visits was about the same as the overall sample (although slightly less youth had two preventable hospital visits and slightly more youth had three preventable hospital visits compared to the overall sample). This group had the highest proportion of youth who had a hospital visit for some other reason (86%) and of those with these hospital visits, the median length of stay was two days. About 54% of youth with a hospital visit for some other reason had five or more visits, while just 16% had just one visit and 30% had two to four visits.

About 2% of youth in this group had a stay in supportive housing, with a median length of stay of 150 days, and about 10% had a stay in subsidized housing with a median length of stay of 209 days; both of these median lengths of stay are shorter than the medians for the overall sample.

Visualization 2a: Patterns of Service Use for Later Homeless Experience



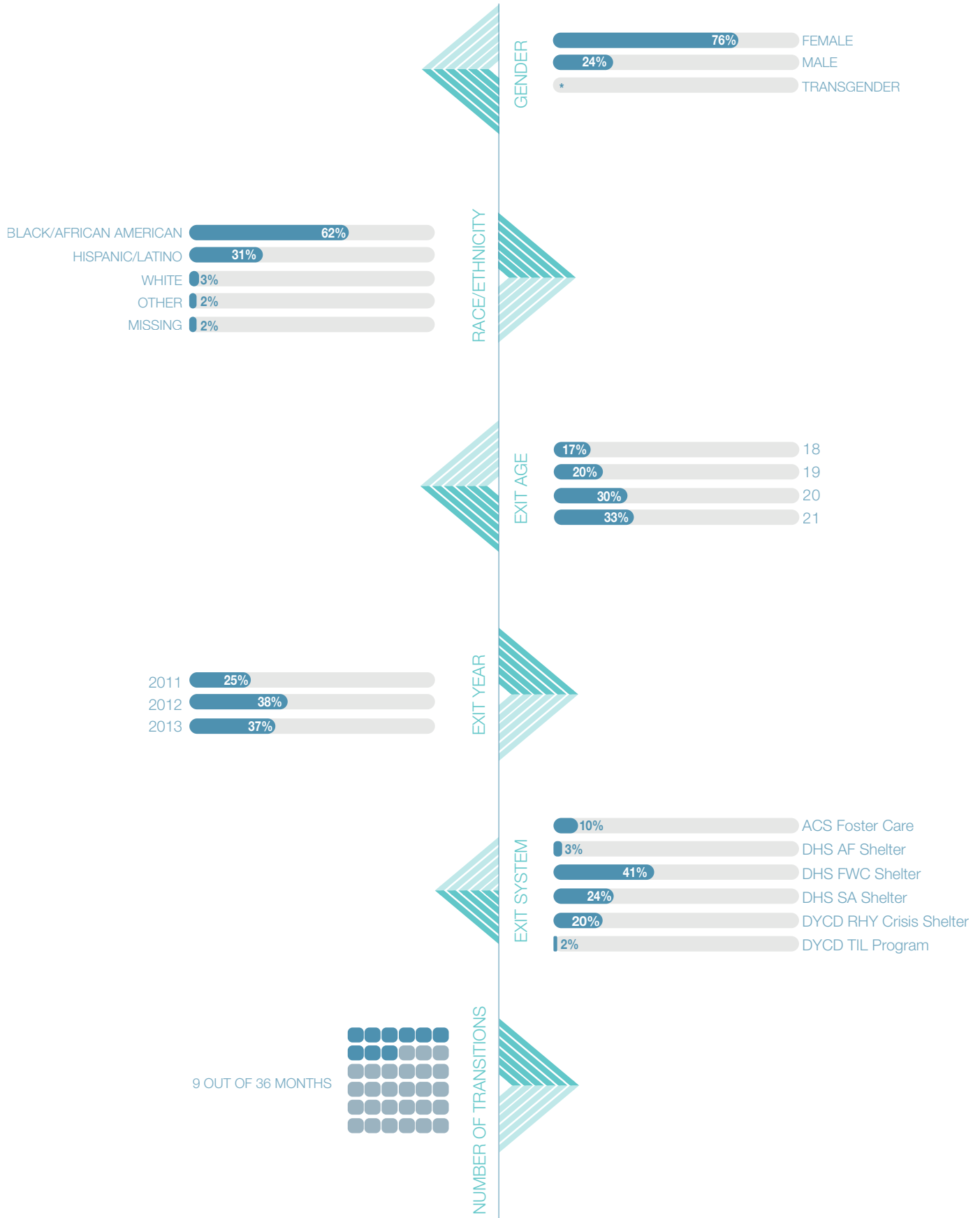
Visualization 2b: Distributions of Service Use for Later Homeless Experience



Types of Service Use

- Homeless Shelter Stays
- Jail Stays
- SMI, SUD, or PTSD Hospital Visits
- Preventable Hospital Visits
- Other Hospital Visits
- Supportive Housing
- Subsidized Housing
- Foster Care
- No System

WHAT ARE THE CHARACTERISTICS OF YOUTH IN THE LATER HOMELESS EXPERIENCE GROUP?



*Data not disclosed due to small cell size.
Note: Totals may not add up to 100% due to rounding.

WHAT SYSTEMS DO YOUTH IN THE LATER HOMELESS EXPERIENCE GROUP USE DURING THE THREE-YEAR OUTCOME PERIOD?

n=675

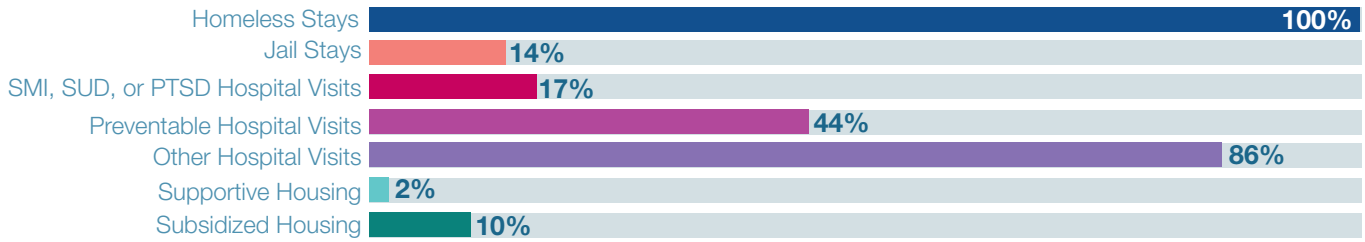


Chart Key

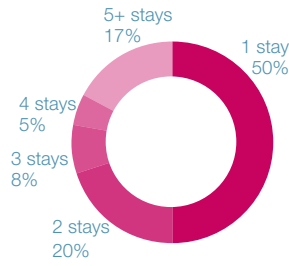
Of the Later Homeless Experience group (n=675), 100% had a homeless stay.

Of that 100% (n=675), the median length of stay was 487 days, and 43% had 1 stay.

17%

SMI, SUD, or PTSD Hospital Visits

Number of Stays



Median LOS: 1 day

2%

Supportive Housing

Number of Stays

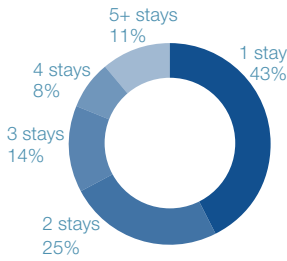


Median LOS: 150 days

100%

Homeless Stays

Number of Stays

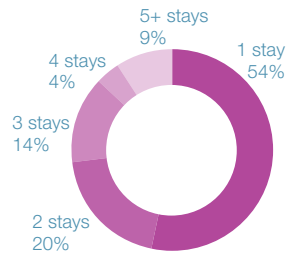


Median LOS: 487 days

44%

Preventable Hospital Visits

Number of Stays



Median LOS: 0 days

10%

Subsidized Housing

Number of Stays

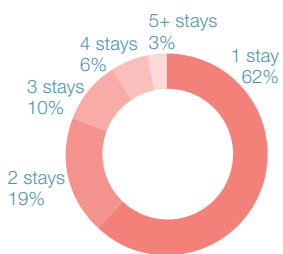


Median LOS: 209 days

14%

Jail Stays

Number of Stays

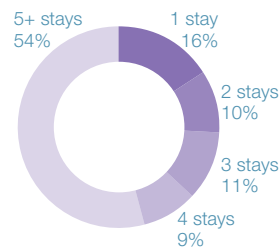


Median LOS: 19 days

86%

Other Hospital Visits

Number of Stays



Median LOS: 2 days

What are the characteristics of youth in the Earlier Homeless Experience group?

The Earlier Homeless Experience group was very similar to the overall sample in terms of gender (about 61% female). However, this group was disproportionately Black/African American and slightly younger at age of exit (about 44% were 18 or 19 years old). Slightly more of the youth in this group exited in 2011 compared to the overall sample and the Later Homeless Experience group.

A much higher proportion of youth exited from a DHS FWC shelter and DYCD RHY crisis shelter compared to the overall sample (27% versus 19% and 31% versus 23% respectively), while about the same proportion exited from a DHS AF shelter compared to the overall sample (3% versus 2%), a DYCD TIL program (3% versus 2%) or a DHS SA shelter (30% versus 28%). A much lower percentage exited from ACS foster care (7% versus 26%).

What systems do youth in the Earlier Homeless Experience group use during the three-year outcome period?

The service use pattern for the Earlier Homeless Experience group looked similar to that of the Later Homeless Experience group, with several major differences: a shorter median length of stay in homeless shelters, and a lower percentage of youth with preventable and other hospital visits. Youth in this group had a median of eight transitions among systems, or about one every four and a half months.

Visualization 3a shows that youth in this group began to have homeless shelter stays very early in the outcome period and almost all of them had a homeless shelter stay during the first year of the outcome period. During the last year of the outcome period, most youth transitioned back to no service use or and a small portion transitioned to subsidized housing; this pattern also reflects the fact that youth who had later homeless shelter stays were categorized into a separate group (i.e., the Later Homeless Experience group). There was also intermittent hospital use. Visualization 3b shows that about 20% of youth in this group had a homeless shelter stay almost immediately after exit, and in the first year of the outcome period, about 50-60% of them had a homeless stay at any given point. By the last year of the outcome period, only about 10% of the group had a homeless shelter stay at any given point.

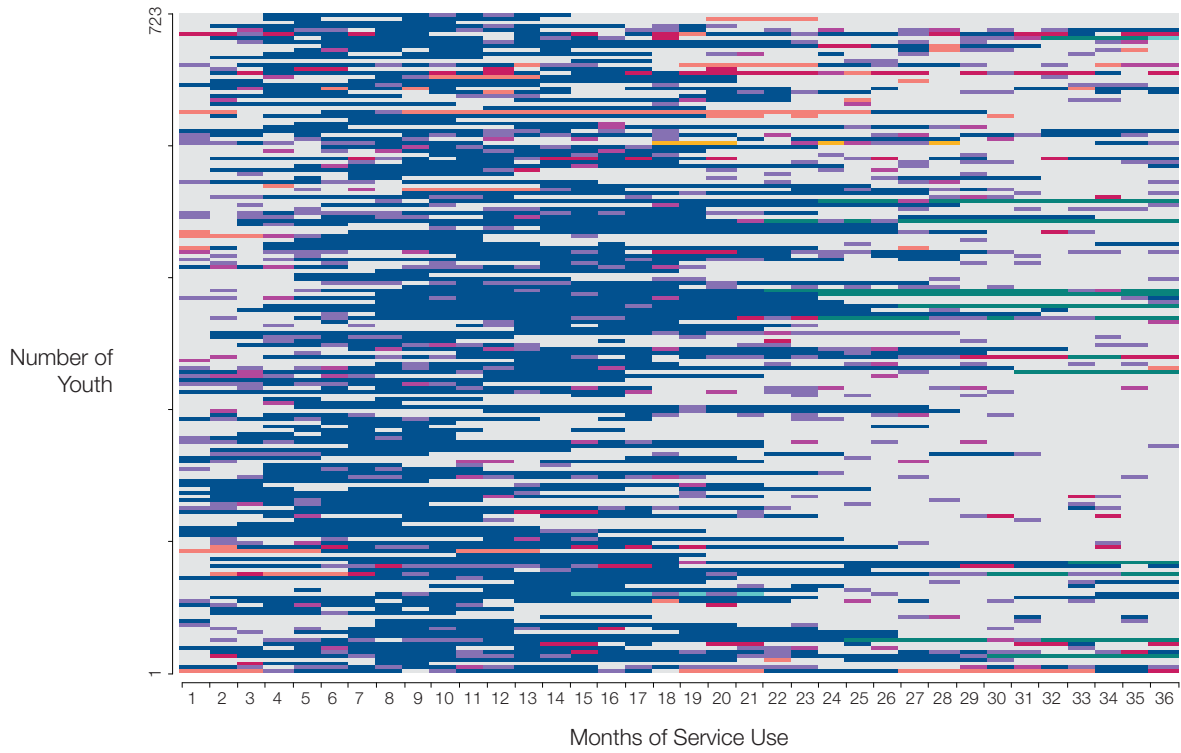
All of the youth in the Earlier Homeless Experience group had a homeless shelter stay and most of them had more than one: 37% had one stay, 26% had two stays, 15% had three stays, 9% had four stays, and 14% had five or more stays. The median length of stay was almost a year.

About 16% of this group had a jail stay and of those who had a jail stay, the median length of stay was short at 15 days. About half of those who had a jail stay had only one, while only 9% had five or more jail stays.

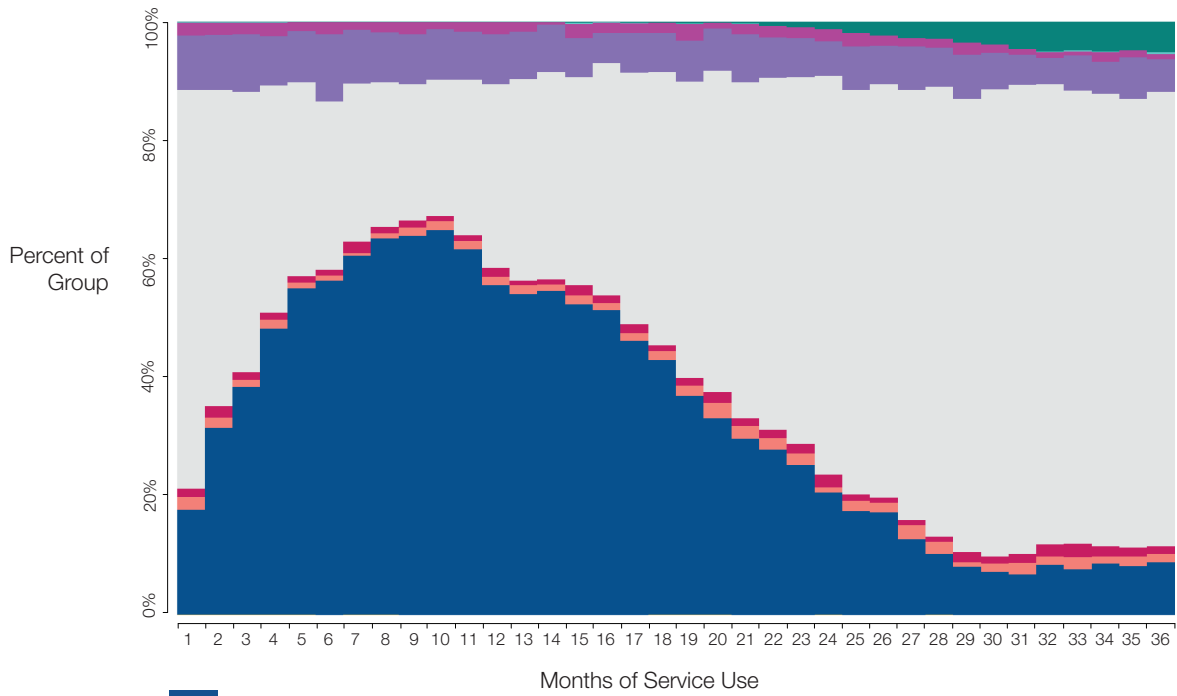
About 16% of youth in the Earlier Homeless Experience group had a hospital visit for an SMI, SUD, or PTSD and the median length of stay was one day. Of those with an SMI, SUD, or PTSD hospital visit, a little under half (48%) had multiple visits. About 34% had a preventable hospital visit and of those who had a preventable hospital visit, the median length of stay and distribution of visits were similar to the overall sample. The proportion of youth with a hospital visit for some other reason (75%) was high compared to the overall sample (65%), with a median length of stay of one day. About 40% of youth in this group had five or more visits.

A very small percentage of this group had a supportive housing stay. About 6% had a stay in subsidized housing with a median length of stay of a little more than a year.

Visualization 3a: Patterns of Service Use for Earlier Homeless Experience



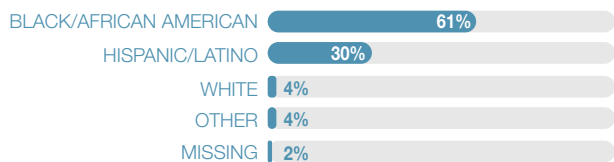
Visualization 3b: Distributions of Service Use for Earlier Homeless Experience



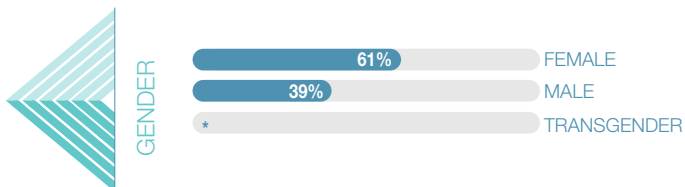
Types of Service Use

- Homeless Shelter Stays
- Jail Stays
- SMI, SUD, or PTSD Hospital Visits
- Preventable Hospital Visits
- Other Hospital Visits
- Supportive Housing
- Subsidized Housing
- Foster Care
- No System

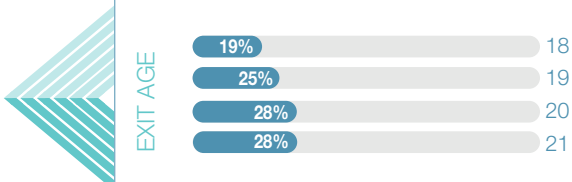
WHAT ARE THE CHARACTERISTICS OF YOUTH IN THE EARLIER HOMELESS EXPERIENCE GROUP?



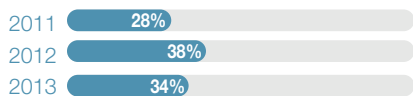
RACE/ETHNICITY



GENDER



EXIT AGE

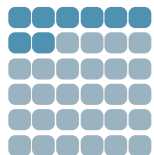


EXIT YEAR



EXIT SYSTEM

8 OUT OF 36 MONTHS



NUMBER OF TRANSITIONS

*Data not disclosed due to small cell size.
Note: Totals may not add up to 100% due to rounding.

WHAT SYSTEMS DO YOUTH IN THE EARLIER HOMELESS EXPERIENCE GROUP USE DURING THE THREE-YEAR OUTCOME PERIOD?

n=723

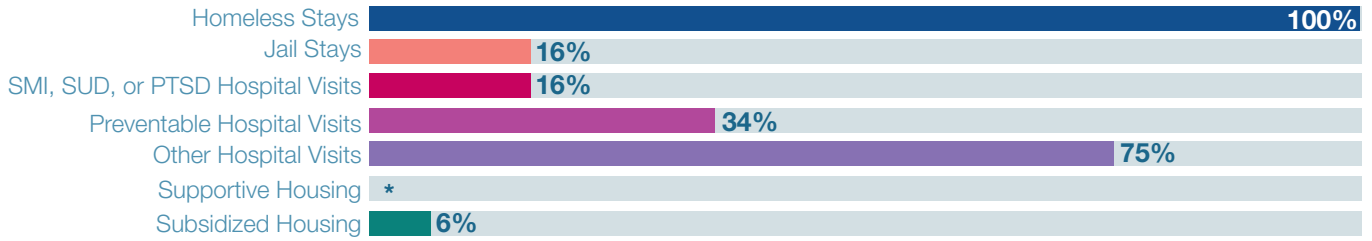


Chart Key

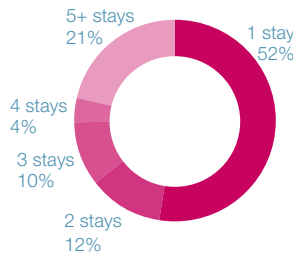
Of the Earlier Homeless Experience group (n=723), 100% had a homeless stay.

Of that 100% (n=723), the median length of stay was 332 days, and 37% had 1 stay.

16%

SMI, SUD, or PTSD Hospital Visits

Number of Stays

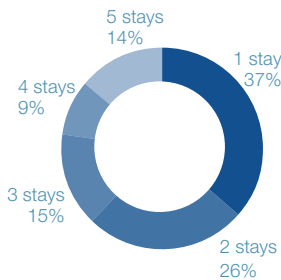


Median LOS: 1 day

100%

Homeless Stays

Number of Stays

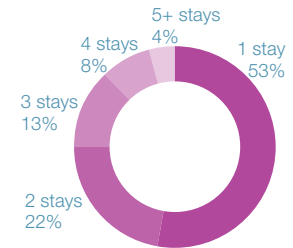


Median LOS: 332 days

34%

Preventable Hospital Visits

Number of Stays



Median LOS: 0 days

6%

Subsidized Housing

Number of Stays

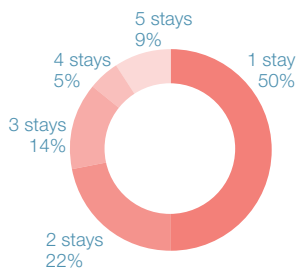


Median LOS: 441 days

16%

Jail Stays

Number of Stays

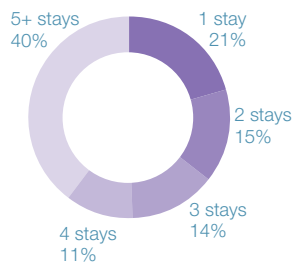


Median LOS: 15 days

75%

Other Hospital Visits

Number of Stays



Median LOS: 1 day

*Data not disclosed due to small cell size.

What are the characteristics of youth in the Consistent Subsidized Housing group?

The Consistent Subsidized Housing group had the highest percentage of females of all of the groups at 79%. This group was also the oldest at the time of exit of all the groups; 78% of the group was 20 or 21 years old at the time of exit. The race distribution was similar to the Later Homeless Experience and Earlier Homeless Experience groups with an overrepresentation of Black/African American youth. A higher proportion of youth exited in 2012 (46%) than any other group.

Almost all of the youth (85%) in the Consistent Subsidized Housing group exited from ACS foster care. About 9% of this group exited from a DHS FWC shelter and very few exited from a DHS AF shelter, a DHS SA shelter, a DYCD RHY crisis shelter, or a DYCD TIL program.

What systems do youth in the Consistent Subsidized Housing group use during the three-year outcome period?

Overall, the Consistent Subsidized Housing group was characterized by long-term use of subsidized housing and the lowest utilization rates of many other systems. The Consistent Subsidized Housing group was fairly stable in terms of transitions with only six over the course of three years or about one every six months.

Visualization 4a shows that most youth in this group entered subsidized housing almost immediately upon exit and stayed for the entire outcome period. There was very little other service use throughout the period, except for intermittent hospital use. In fact, Visualization 4b shows that about 60% of youth in this group entered subsidized housing immediately and by the end of the outcome period, about 80% of the group was in subsidized housing.

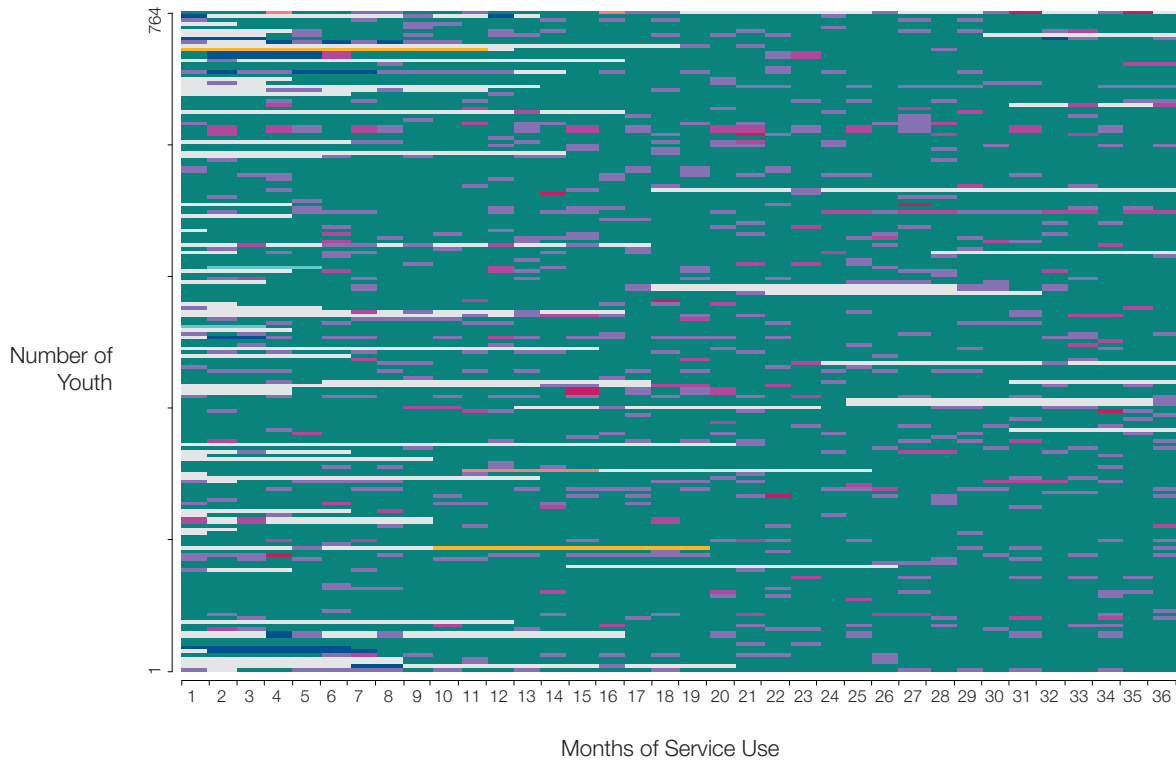
About 7% of this group had a homeless shelter stay, the lowest rate of any group. Of those who had a homeless shelter stay, 82% had only one stay and the median length of stay was a little over two months at 80 days.

This group also had the lowest rate of jail stays of any of the groups at 4% and the median length of stay was also the lowest among groups at 5 days. Of those who had a jail stay, 79% had only one stay, while none of this group had five or more jail stays.

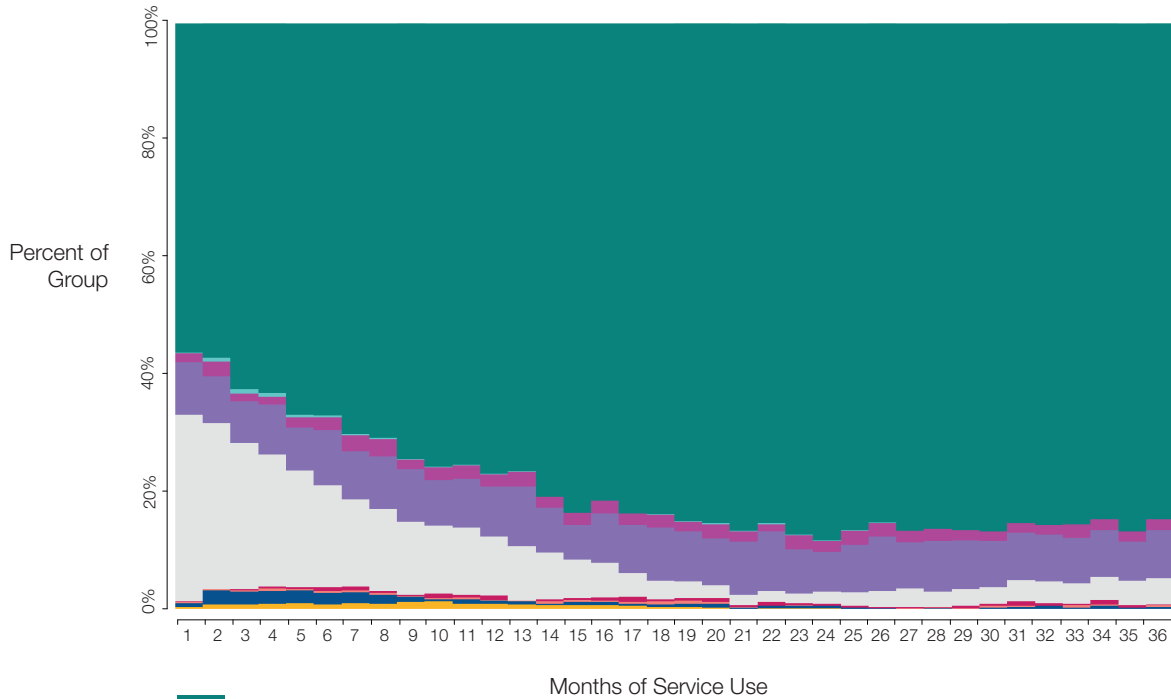
The Consistent Subsidized Housing group also had the lowest proportion of youth who had a hospital visit for an SMI, SUD, or PTSD at 8%, and 81% of those youth had just one or two visits. The median length of stay was zero days. About 39% of this group had a preventable hospital visit, which was higher than the overall sample. The median length of stay for these visits was zero days. Of those who had a visit, 53% had just one, 40% had two to four, and 7% had five or more. About 80% of this group had a hospital visit for some other reason, which was higher than the overall sample. Of those who had a hospital visit, about 21% had just one, about 39% had two to four, and about 40% had five or more visits. The median length of stay was one day.

A very small percentage of youth in this group had a stay in supportive housing. However, everyone in this group had a stay in subsidized housing and the median length of stay was 1095 days, which was the entire length of the outcome period. The vast majority (97%) had just one stay over the period.

Visualization 4a: Patterns of Service Use for Consistent Subsidized Housing



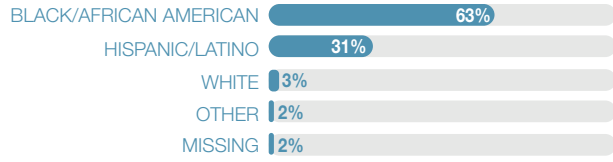
Visualization 4b: Distributions of Service Use for Consistent Subsidized Housing



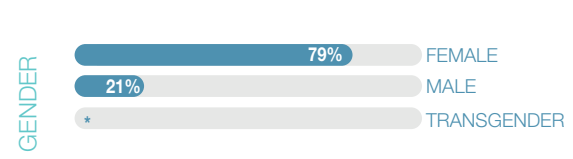
Types of Service Use

- Homeless Shelter Stays
- Jail Stays
- SMI, SUD, or PTSD Hospital Visits
- Preventable Hospital Visits
- Other Hospital Visits
- Supportive Housing
- Subsidized Housing
- Foster Care
- No System

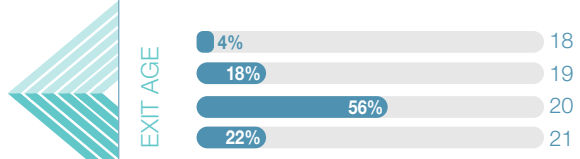
WHAT ARE THE CHARACTERISTICS OF YOUTH IN THE CONSISTENT SUBSIDIZED HOUSING GROUP?



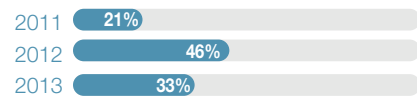
RACE/ETHNICITY



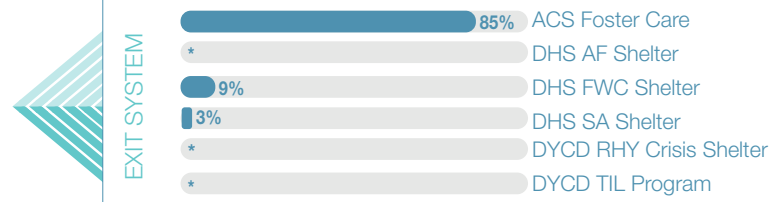
GENDER



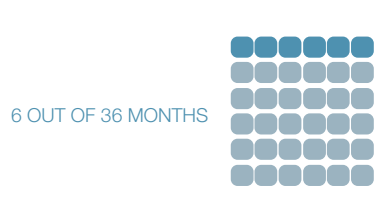
EXIT AGE



EXIT YEAR



EXIT SYSTEM



NUMBER OF TRANSITIONS

*Data not disclosed due to small cell size.
Note: Totals may not add up to 100% due to rounding.

WHAT SYSTEMS DO YOUTH IN THE CONSISTENT SUBSIDIZED HOUSING GROUP USE DURING THE THREE-YEAR OUTCOME PERIOD?

n=764

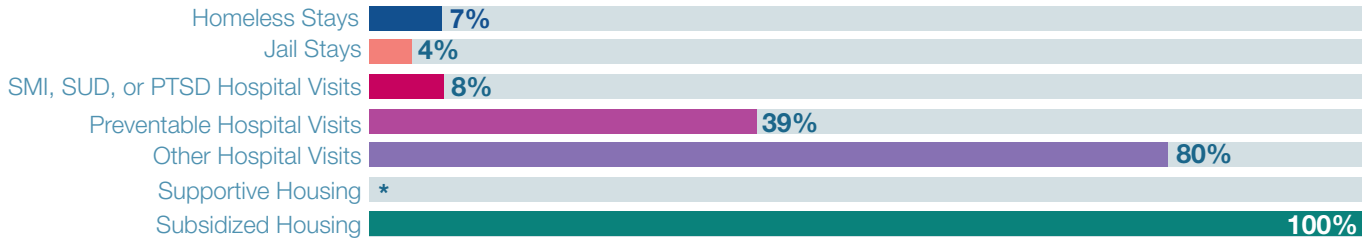


Chart Key

Of the Consistent Subsidized Housing group (n=764), 7% had a homeless stay.

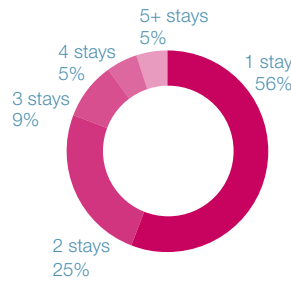
Of that 7% (n=53), the median length of stay was 80 days, and 82% had 1 stay.

8%



SMI, SUD, or PTSD Hospital Visits

Number of Stays



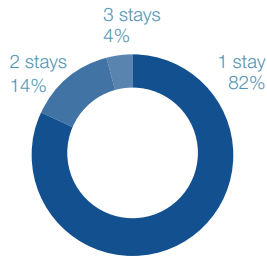
Median LOS: 0 days

7%



Homeless Stays

Number of Stays



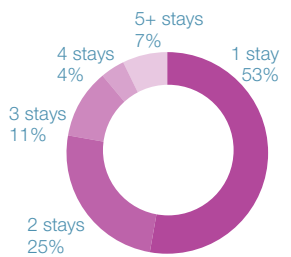
Median LOS: 80 days

39%



Preventable Hospital Visits

Number of Stays



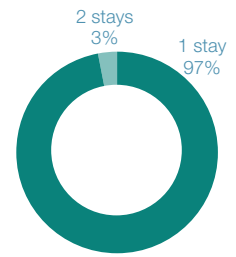
Median LOS: 0 days

100%



Subsidized Housing

Number of Stays



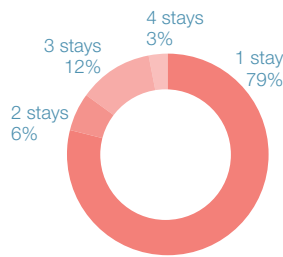
Median LOS: 1095 days

4%



Jail Stays

Number of Stays



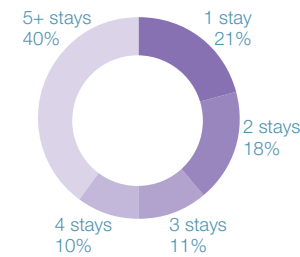
Median LOS: 5 days

80%



Other Hospital Visits

Number of Stays



Median LOS: 1 day

*Data not disclosed due to small cell size.

What are the characteristics of youth in the Consistent Supportive Housing group?

The Consistent Supportive Housing group was approximately half females and half males, although there were slightly more males (52% versus 48%) and a larger percentage of males compared to the overall sample. This group had the highest percentage of Black/African American youth of all of the groups at 71% and, similar to the Consistent Subsidized Housing group, most of the youth were older at exit: 72% were 20 or 21 years old. The distribution of exit years did not differ substantially from the distribution in the overall sample: 28% exited in 2011, 35% exited in 2012, and 36% exited in 2013.

Over half (54%) of the youth in the Consistent Supportive Housing group exited from ACS foster care. The percentage of youth who exited from DYCD RHY crisis shelters (23%) was approximately proportional to the overall sample. Very few youth exited from the other systems (DHS SA shelters, DHS AF shelters, DHS FWC shelters, and DYCD TIL programs).

What systems do youth in the Consistent Supportive Housing group use during the three-year outcome period?

In addition to having long-term supportive housing use, the Consistent Supportive Housing group generally had homeless and jail system use on par with the Minimal Service Use group, but higher hospital use than the overall sample. Similar to the Consistent Subsidized Housing group, youth in this group exhibited more stability as shown through their low median number of transitions (six, translating to one every six months).

Visualization 5a shows that while some youth in this group entered supportive housing immediately upon exit, others had homeless shelter stays and hospital visits for an SMI, SUD, or PTSD at the beginning of the outcome period and then transitioned to supportive housing later in the outcome period. Once in supportive housing, most youth in this group stayed in supportive housing and had some intermittent hospital use, but often less than prior to being in supportive housing. Some youth in this group also transitioned to subsidized housing later in the outcome period. Visualization 5b shows that about 25% of this group immediately entered supportive housing upon exit, but by the last year of the outcome period, 60-80% of youth were in supportive housing at any given time.

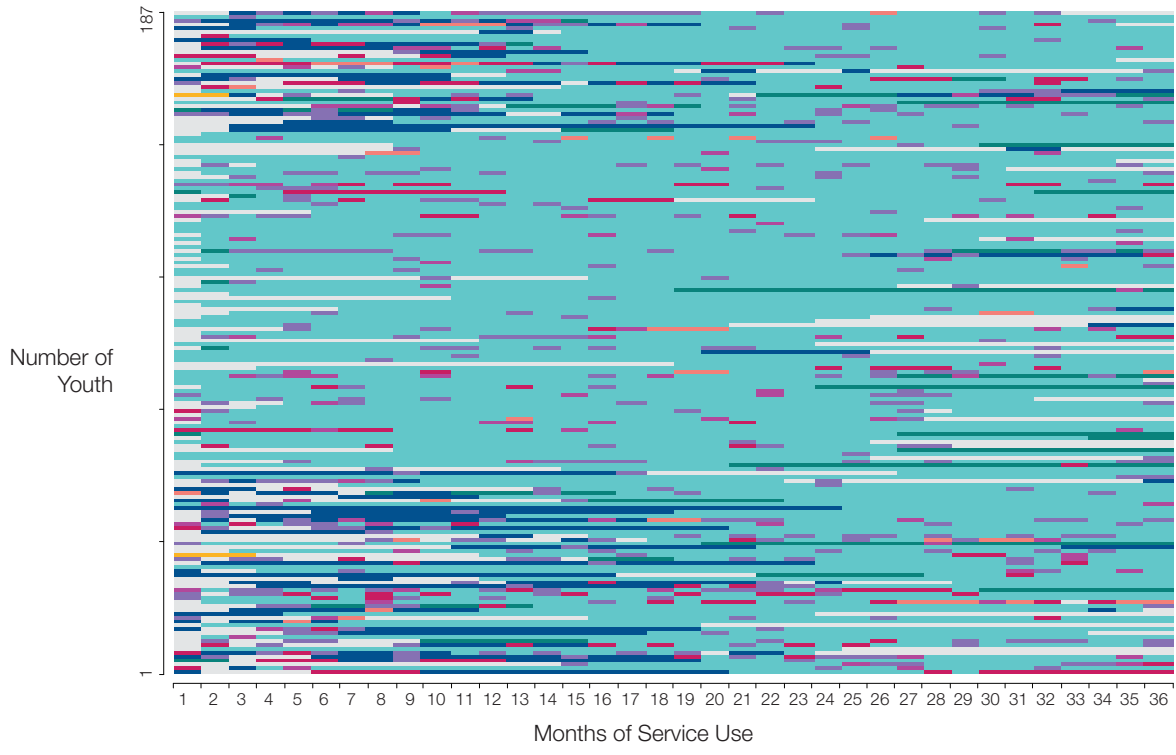
About 37% of youth in this group had a homeless shelter stay, which was slightly lower than the overall sample (42%), but slightly higher than the Minimal Service Use group (32%). These homeless stays generally preceded entry to supportive housing. Of those, 47% had just one stay, 46% had two to four stays, and 7% had five or more stays. The median length of stay was 162 days, or just over five months.

About 13% of youth had a jail stay; this was lower than the overall sample (16%) and about the same as the Minimal Service Use group (12%). The median length of stay was 14 days and 96% of youth had just one or two stays.

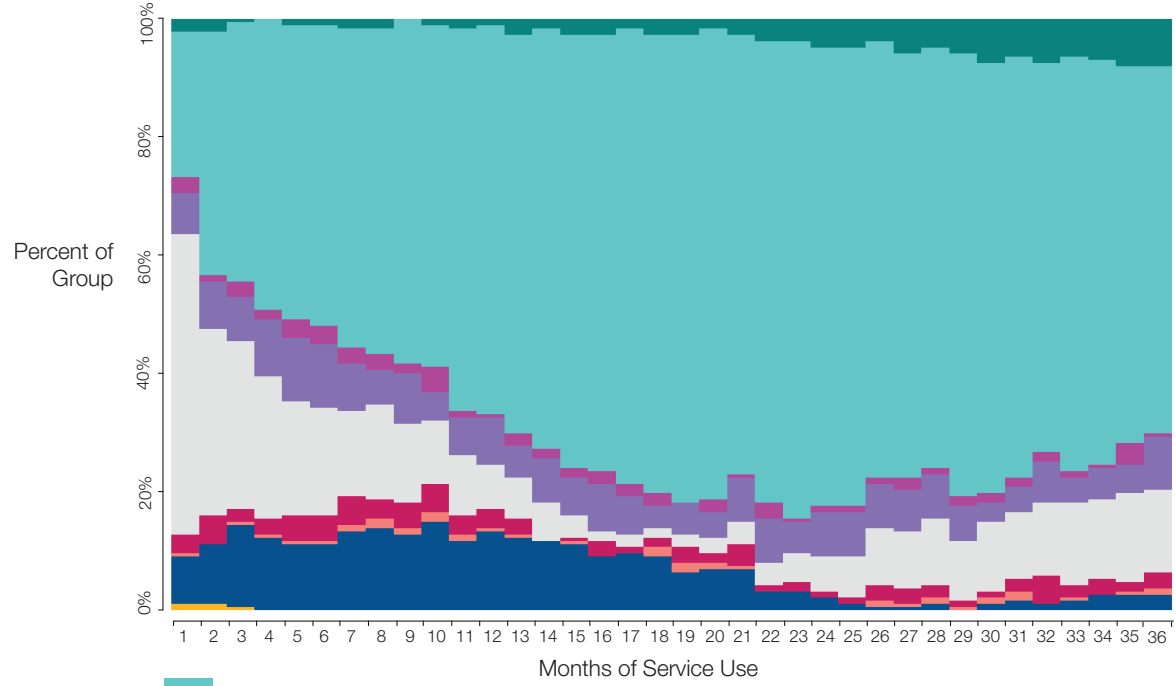
The Consistent Supportive Housing had the highest proportion of youth with a hospital visit for an SMI, SUD, or PTSD at 30%. These hospital visits generally preceded entry to supportive housing; about 34% of these visits were in the month prior to supportive housing entry (data not shown). The median length of stay of those visits was also a bit longer than the overall sample (two days versus one day). Of those who had a visit, over a quarter (27%) had five or more visits which was the highest proportion among all the groups, while 45% had just one visit and 28% had two to four visits. This group also had a slightly elevated percentage of youth who had preventable hospital visits (34% compared to 30% for the overall sample). As with all of the other groups, the median length of stay was zero days. Just under half of those with a preventable hospital visit had just one visit (48%), while 10% had five or more visits. The remaining youth had two to four visits. About 74% of this group had a hospital visit for some other reason, which was higher than the overall sample and the Minimal Service Use group, but lower or about the same as other groups. The median length of stay was zero days, and the distribution of visits was about the same as the overall sample (22% had one visit, 17% had two visits, 12% had three visits, 13% had four visits, and 37% had five or more visits).

All of the youth in the Consistent Supportive Housing group had a stay in supportive housing. The median length of stay was 825 days or about three-quarters of the outcome period. Almost all of the youth (96%) had just one supportive housing stay. About 34% of the youth in this group also had a stay in subsidized housing during the outcome period with a median length of stay of about 842 days.

Visualization 5a: Patterns of Service Use for Consistent Supportive Housing

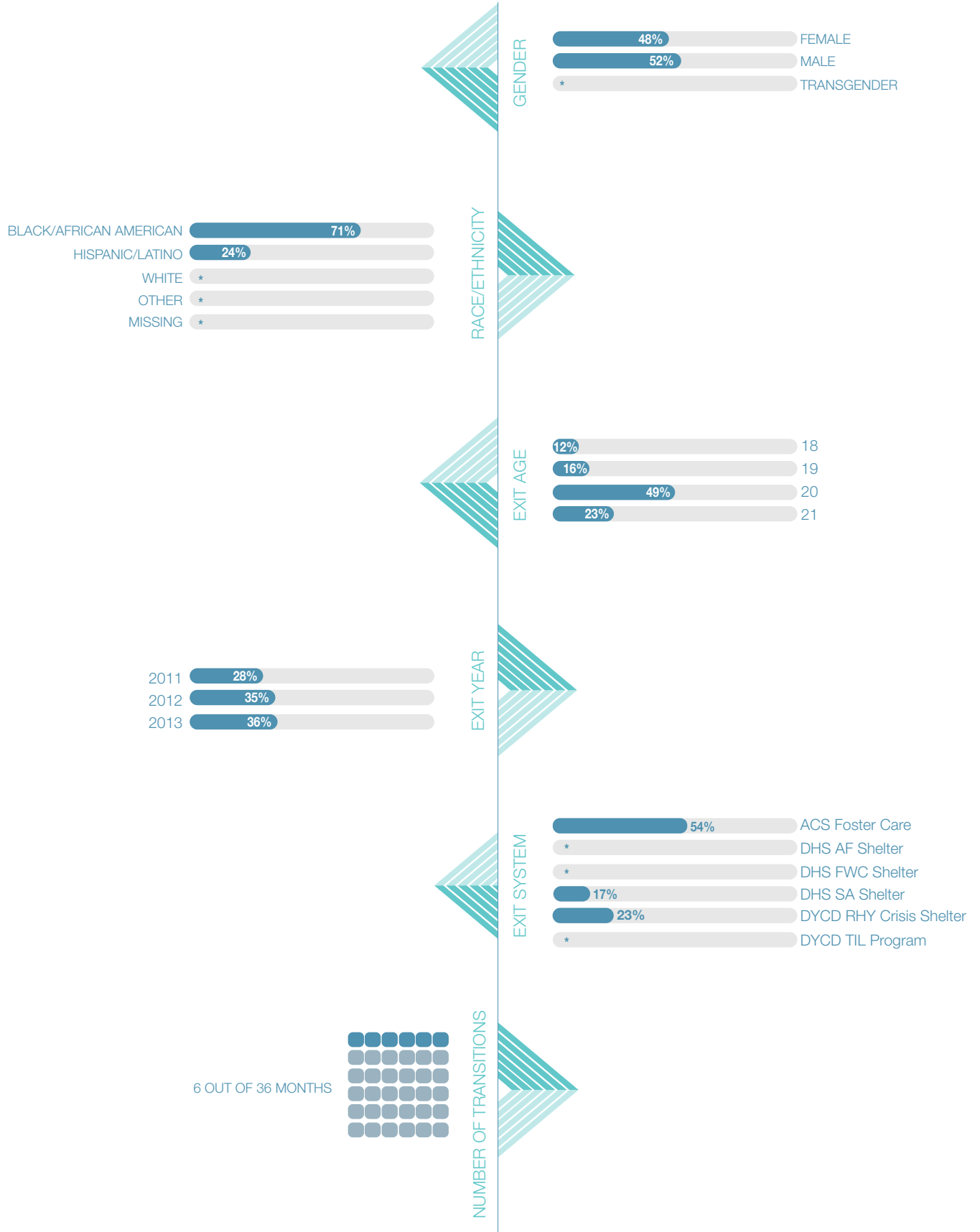


Visualization 5b: Distribution of Service Use for Consistent Supportive Housing



- Types of Service Use
- Homeless Shelter Stays
 - Supportive Housing
 - Jail Stays
 - Subsidized Housing
 - SMI, SUD, or PTSD Hospital Visits
 - Foster Care
 - Preventable Hospital Visits
 - No System
 - Other Hospital Visits

WHAT ARE THE CHARACTERISTICS OF YOUTH IN THE CONSISTENT SUPPORTIVE HOUSING GROUP?



*Data not disclosed due to small cell size.
Note: Totals may not add up to 100% due to rounding.

WHAT SYSTEMS DO YOUTH IN THE CONSISTENT SUPPORTIVE HOUSING GROUP USE DURING THE THREE-YEAR OUTCOME PERIOD?

n=187

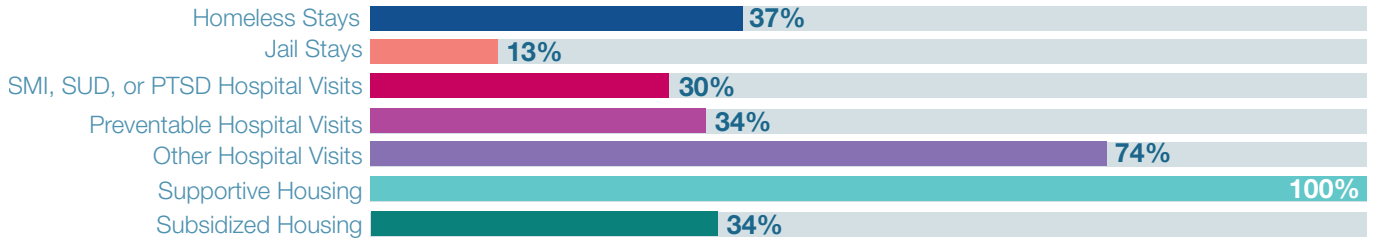


Chart Key

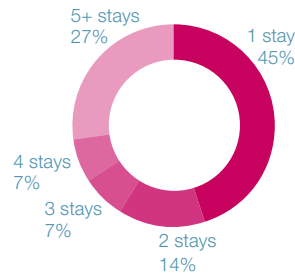
Of the Consistent Supportive Housing group (n=187), 37% had a homeless stay.

Of that 37% (n=69), the median length of stay was 162 days, and 47% had 1 stay.

30%

SMI, SUD, or PTSD Hospital Visits

Number of Stays

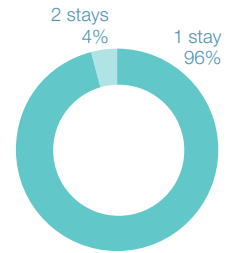


Median LOS: 2 days

100%

Supportive Housing

Number of Stays

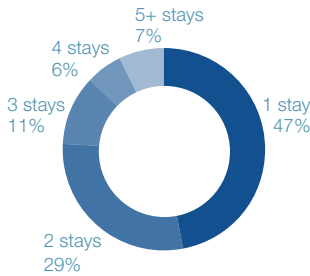


Median LOS: 825 days

37%

Homeless Stays

Number of Stays

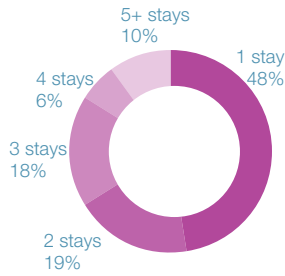


Median LOS: 162 days

34%

Preventable Hospital Visits

Number of Stays

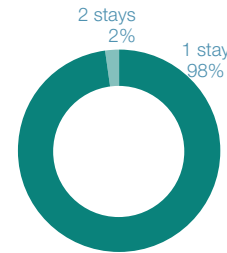


Median LOS: 0 days

34%

Subsidized Housing

Number of Stays

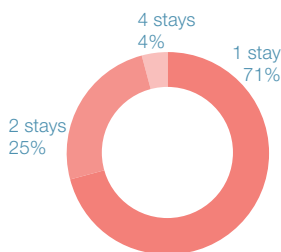


Median LOS: 842 days

13%

Jail Stays

Number of Stays

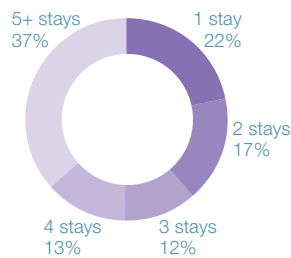


Median LOS: 14 days

74%

Other Hospital Visits

Number of Stays



Median LOS: 0 days

What are the characteristics of youth in the Frequent Jail Stays group?

The Frequent Jail Stays group had the highest percentage of males of any of the groups at 82%. This group had a similar proportion of Black/African American youth as the homelessness and housing groups, but a higher proportion than the Minimal Service Use group. This was the youngest group overall with 49% of youth in this group exiting at age 18 or 19 years old. About 28% exited in 2011, 39% exited in 2012, and 34% exited in 2013.

Youth who exited from the DHS SA shelter system were overrepresented in this group compared to the overall sample (47% versus 28%). Most other exit systems were underrepresented compared to the overall sample.

What systems do youth in the Frequent Jail Stays group use during the three-year outcome period?

The Frequent Jail Stays group was characterized by system use in multiple areas, most prominently in jail, but also in the homeless system and hospitals, and low system use in supportive and subsidized housing resources. This group had a high number of transitions at eight over the course of three years, or about one every four and a half months.

Visualization 6a shows that youth in this group had jail stays throughout the outcome period, interspersed with homeless shelter stays, and hospital visits, particularly ones for an SMI, SUD, or PTSD. It also shows a small portion of youth with foster care spells; this is an artifact of the groupings being imperfect. Although these youth may not have jail stays, there were so few of them that they were grouped into the Frequent Jail Stays group. Visualization 6b shows that at any given time during the second year of the outcome period, about 30% of the group was in jail, while about 5% was in a homeless shelter.

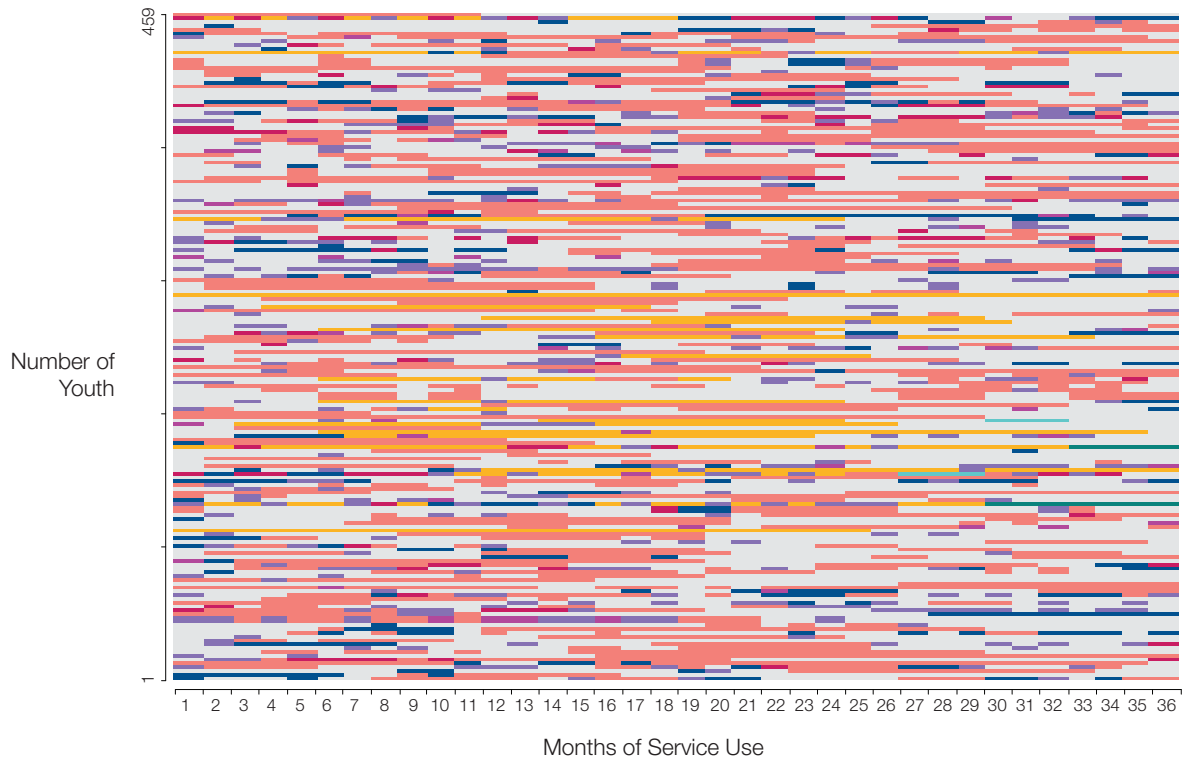
About 51% of youth in the Frequent Jail Stays group also had a homeless shelter stay; this was higher than all other groups other than the Later Homeless Experience and Earlier Homeless Experience groups. The median length of stay was shorter than for all other groups at 44 days, but a higher proportion of youth in this group had multiple stays (other than the Later Homeless Experience and Earlier Homeless Experience groups); only 44% had one stay, 48% had two to four stays, and 8% had five or more stays.

The most prominent system use for this group was jail: almost all of them (90%) had a jail stay and the median length of stay was by far the highest of all the groups at 258 days. Almost a quarter of youth in this group (21%) had five or more jail stays, while 32% had just one stay and 47% had two to four stays.

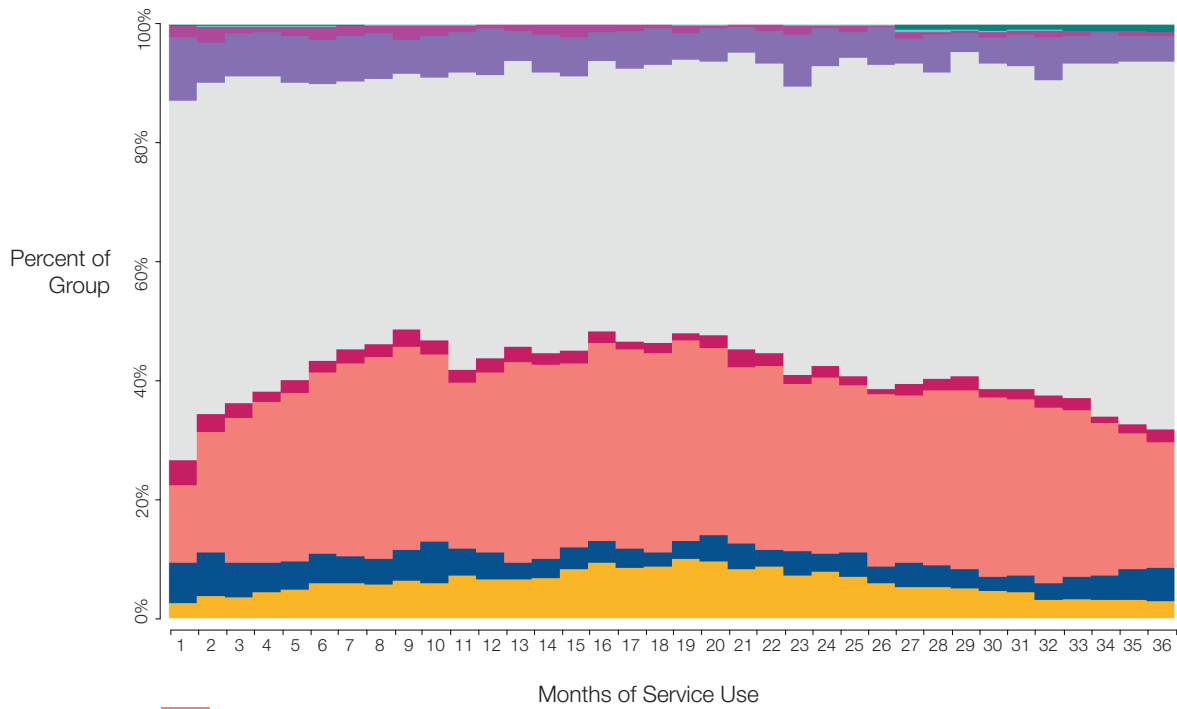
About a quarter of this group had a hospital visit for an SMI, SUD, or PTSD and the median length of stay for these visits was one day. Of those with a hospital visit for an SMI, SUD, or PTSD, about 22% had five or more visits. These hospital visits directly preceded (i.e., were in the month before) a jail stay about 20% of the time (data not shown). About 28% of the Frequent Jail Stay group had a preventable hospital visit, which was similar to the overall sample (28% versus 30%) and about 59% of those with a preventable hospital visit had only one visit - the highest proportion among groups. Similar to the Consistent Supportive Housing group, about 70% of this group had a hospital visit for some other reason, which was higher than the overall sample and the Minimal Service Use group, but lower or the same as other groups. The median length of stay was zero days, and about a quarter had just one visit, while about a third had five or more visits.

Very small percentages of youth in the Frequent Jail Stays group accessed supportive housing or subsidized housing. In fact, other than the Minimal Service Use group, this group had the lowest proportion of youth accessing subsidized housing.

Visualization 6a: Patterns of Service Use for Frequent Jail Stays

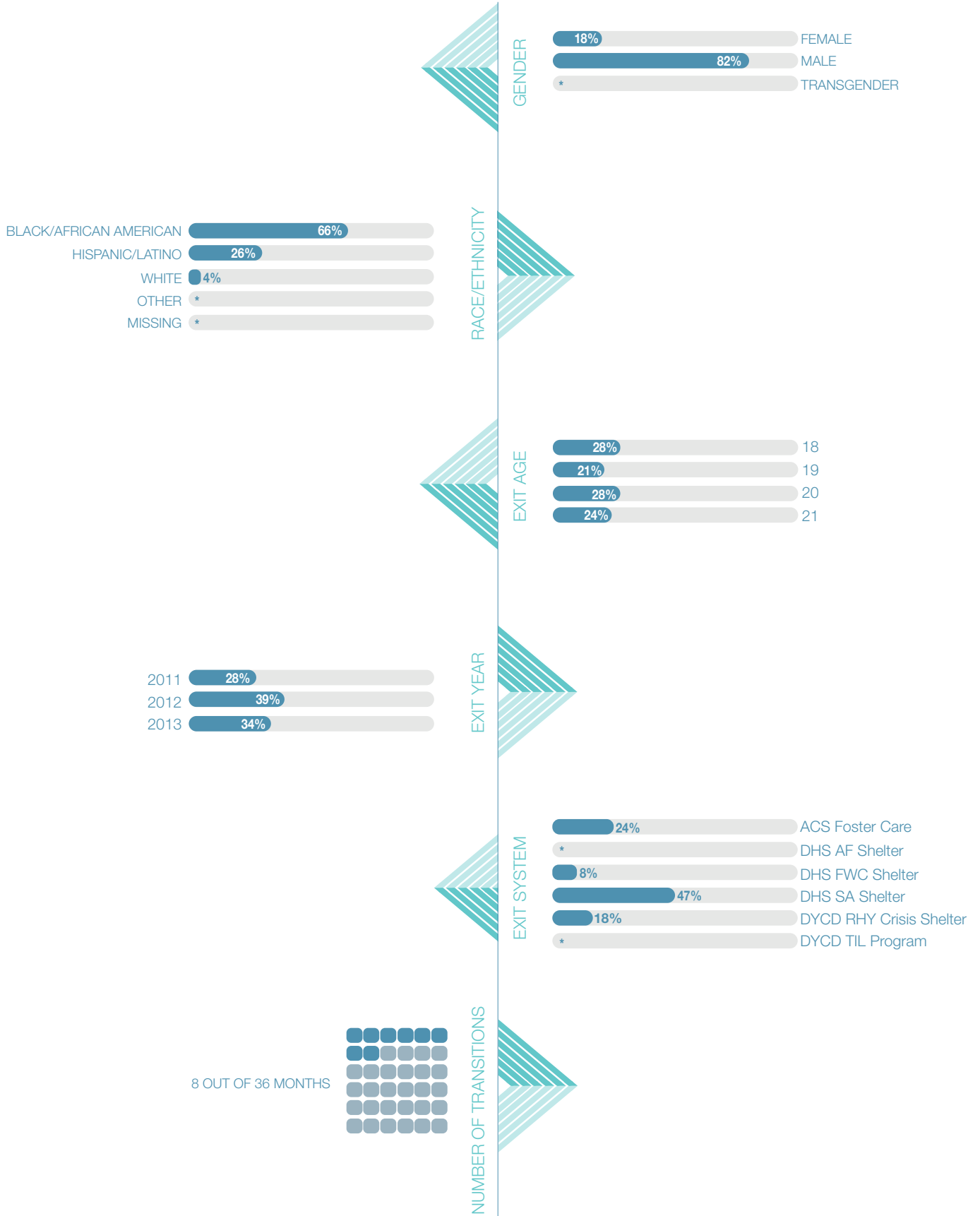


Visualization 6b: Distributions of Service Use for Frequent Jail Stays



- Types of Service Use
- Homeless Shelter Stays
 - Supportive Housing
 - Jail Stays
 - Subsidized Housing
 - SMI, SUD, or PTSD Hospital Visits
 - Foster Care
 - Preventable Hospital Visits
 - No System
 - Other Hospital Visits

WHAT ARE THE CHARACTERISTICS OF YOUTH IN THE FREQUENT JAIL STAYS GROUP?



*Data not disclosed due to small cell size.
Note: Totals may not add up to 100% due to rounding.

WHAT SYSTEMS DO YOUTH IN THE FREQUENT JAIL STAYS GROUP USE DURING THE THREE-YEAR OUTCOME PERIOD?

n=459

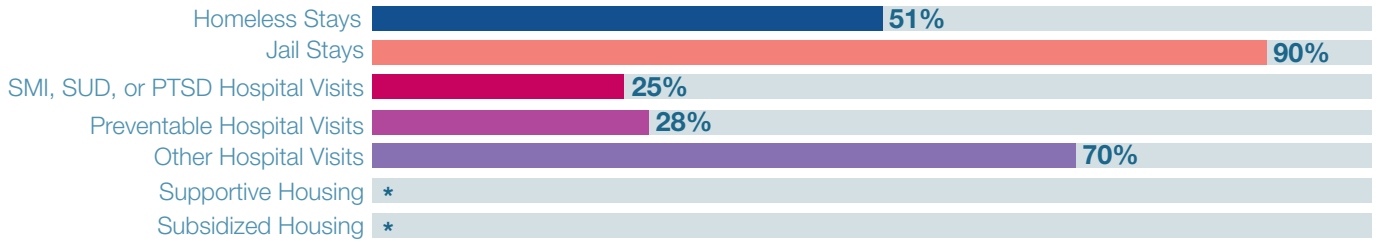


Chart Key

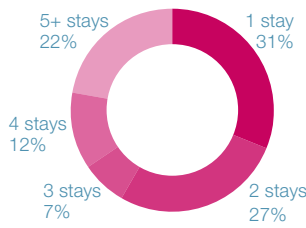
Of the Frequent Jail Stays group (n=459), 51% had a homeless stay.

Of that 51% (n=234), the median length of stay was 44 days, and 44% had 1 stay.

25%



Number of Stays



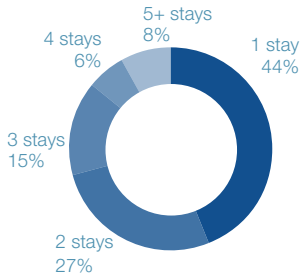
Median LOS: 1 day

51%



Homeless Stays

Number of Stays



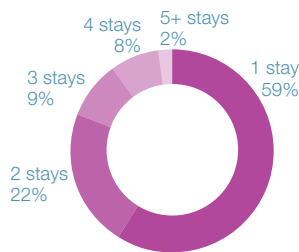
Median LOS: 44 days

28%



Preventable Hospital Visits

Number of Stays



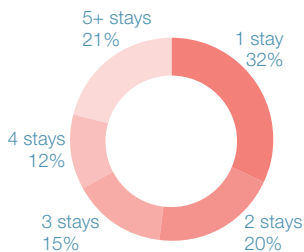
Median LOS: 0 days

90%



Jail Stays

Number of Stays



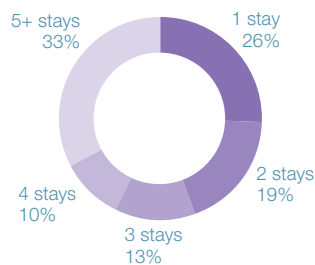
Median LOS: 258 days

70%



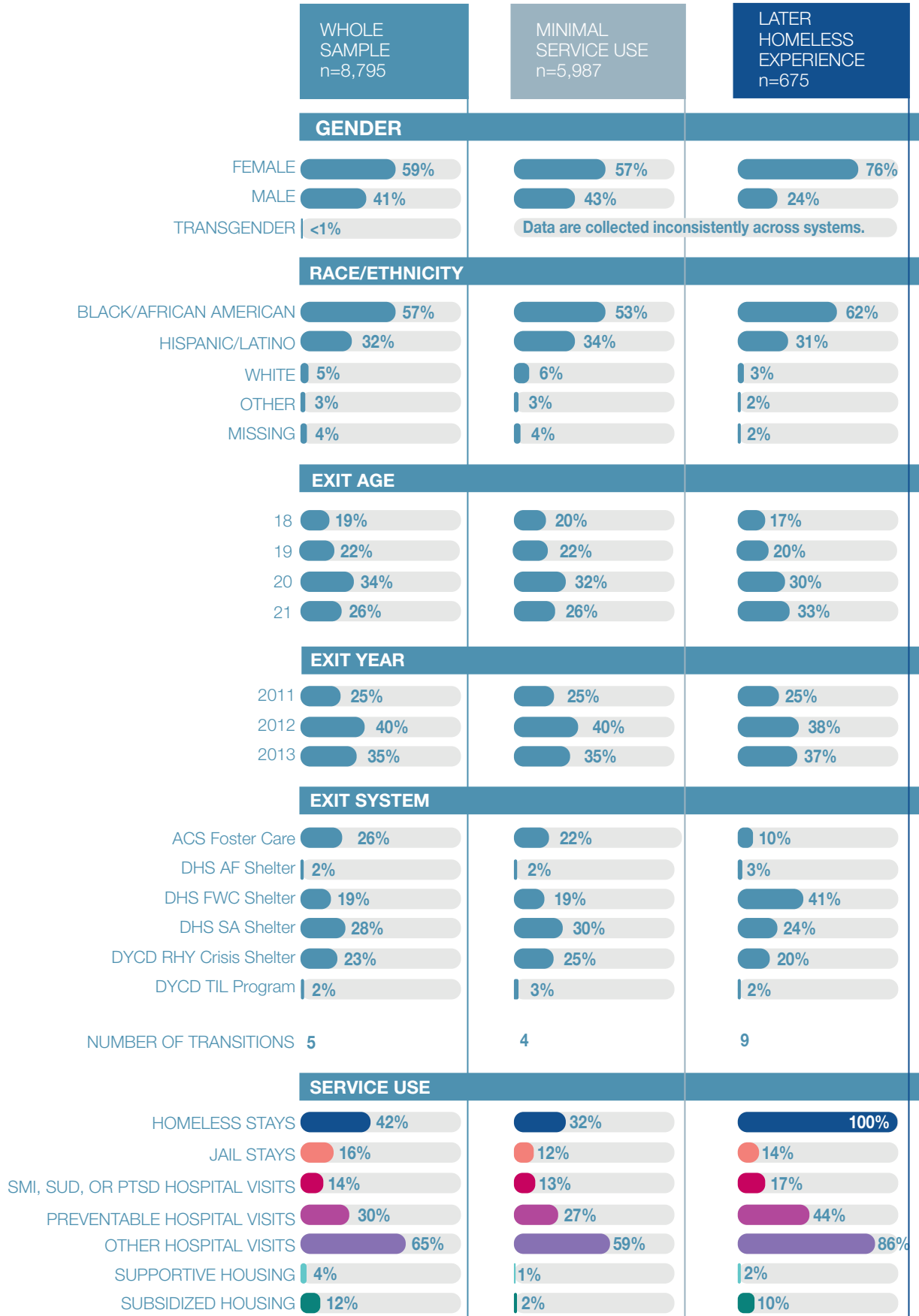
Other Hospital Visits

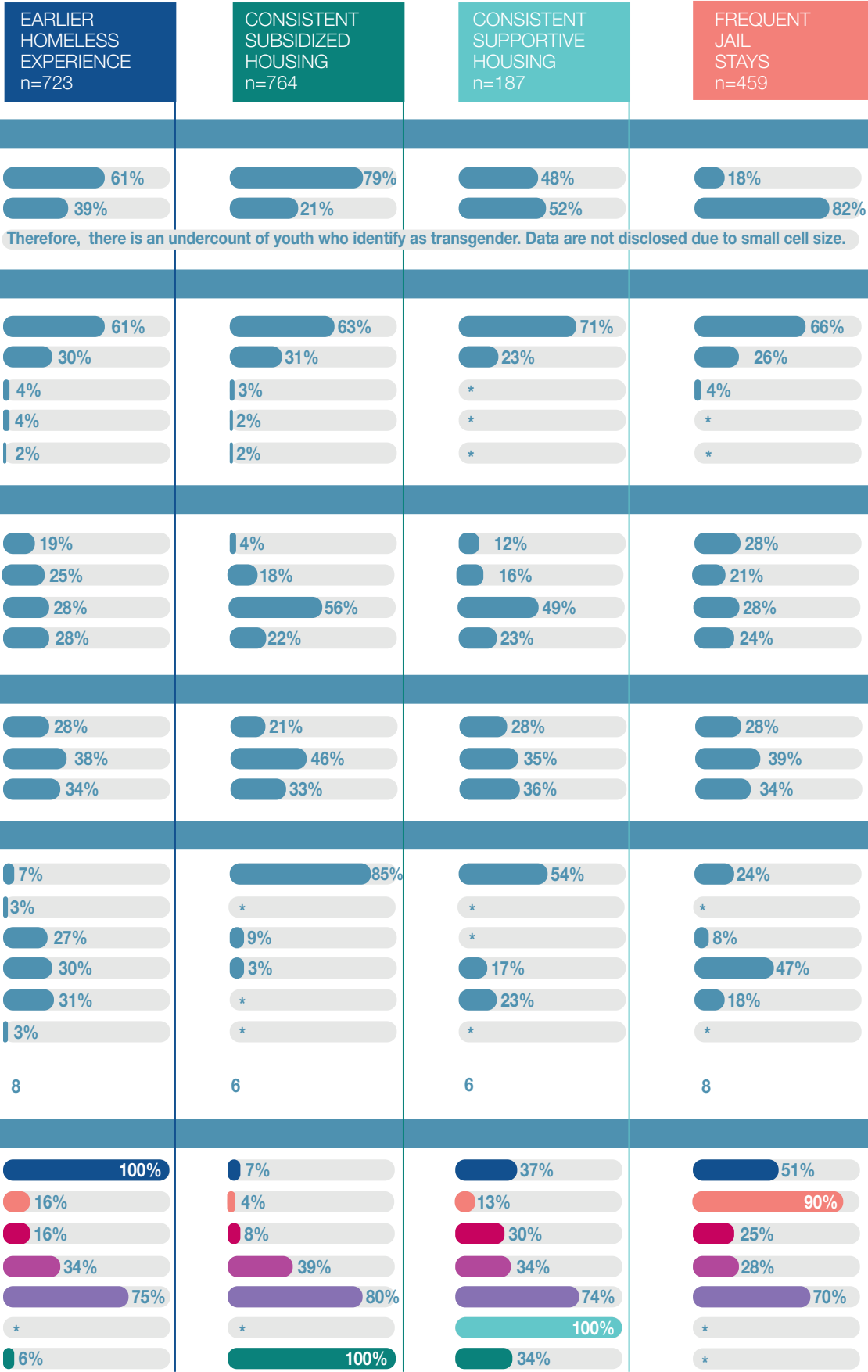
Number of Stays



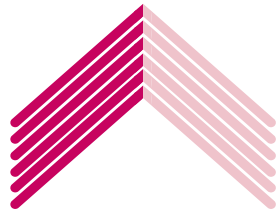
Median LOS: 0 days

*Data not disclosed due to small cell size.





*Data not disclosed due to small cell size.
Note: Totals may not add up to 100% due to rounding.



05

CONCLUSION

CONCLUSION

Based on the service use patterns of youth who exited foster care and homeless shelters, a typology of six outcome groups was developed: (1) Minimal Service Use, (2) Later Homeless Experience, (3) Earlier Homeless Experience, (4) Consistent Subsidized Housing, (5) Consistent Supportive Housing, and (6) Frequent Jail Stays. The vast majority of youth (68%) were in the Minimal Service Use group. Each group had a dominant system that was used, but they also had distinctive patterns of service use in other domains. Among these groups, Minimal Service Use, Consistent Supportive Housing, and Consistent Subsidized Housing were the most stable with four to six system transitions over the course of three years, while the other groups had eight to nine transitions on average. These three groups also had less homeless shelter and jail stays than the other groups.

These groups were not only distinctive based on their descriptive profiles, but also based on factors that predicted which youth would be in which group. Notable predictors for most groups included gender, race, age at exit, and exit system. Previous service use in different domains that varied by group was also predictive for all groups.

Implications

These groups are helpful for several purposes. First, they identify pathways that youth are likely to encounter upon exiting foster care or homeless shelters in early adulthood. By not limiting the analyses to dichotomous outcomes (e.g., did a youth have a homeless shelter stay or not?), a more comprehensive picture of service needs is described. For example, these groups differentiate between a youth who may have one brief stay in a homeless shelter, a youth who has multiple or long stays in a homeless shelter, and a youth who has a stay in a homeless shelter, but also frequently interacts with the criminal justice system. These nuances are often lost in analyses, yet they may warrant a very different set of services. By understanding the interactions among different services and levels of service use, services can be better matched to a youth's needs.

The typology comprising the six groups also shows that there are universal service needs across all groups of youth. Rates of hospital use, for example, were high across all groups, potentially indicating a need for better engagement and access to primary care services.

Understanding the factors that are predictive of membership in each of these groups can allow services to be better targeted to youth who may need them. It is particularly notable that one of the most prominent factors to determine a youth's pathway is which system they exited from. While a third of youth exiting from foster care are in the Consistent Subsidized or Supportive Housing groups, only 1% to 6% of the youth exiting from a DHS or DYCD

shelter are in these groups. It clearly shows that youth who exited from foster care during this time accessed permanent housing options at much higher rates and had stays in homeless shelters and jail at lower rates than youth exiting from homeless shelters through DYCD and DHS. Efforts to move toward a coordinated entry system should ensure youth can access all resources regardless of which system they enter through.

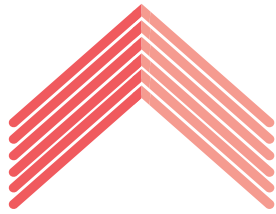
Limitations & Future Directions

The study begins to illuminate trajectories for young adults. The limitation of relying on administrative data precludes the benefits of including other factors that may be important in predicting membership into these groups, such as the resiliency, strengths, and resources of the youth. In fact, several of the groups were not able to be predicted very well which may reflect the lack of collection of measures relevant for those groups. A mixed-methods approach could incorporate personal narratives from transition-age youth. This approach could help elucidate how these pathways are experienced and provide more feedback on interventions and resources that are needed to improve outcomes.

Additionally, this study focuses on youth who are already involved in foster care or homeless services. Primary prevention efforts would also benefit from understanding the trajectories of youth prior to entry into these systems. The study does provide evidence that earlier service use is predictive of later service use, which indicates there are opportunities to intervene and provide additional supports earlier to impact later trajectories.

This study provides a first look into the use of a complex set of methodologies that helps to understand the phenomenon of youth homelessness. It aims to develop a comprehensive understanding of the different trajectories of youth experiencing homelessness that can be used to inform practice, policy, and future research, as part of NYC's effort to prevent and end youth homelessness.

The findings included in this report will help inform ongoing City initiatives, including the Interagency Homelessness Accountability Council (IHAC) and the Youth Homelessness Taskforce, as well as the Coordinated Assessment and Placement System (CAPS) planning process being undertaken by the NYC Human Resources Administration (HRA) and the NYC Coalition on the Continuum of Care (CCoC). This study supports the goals of preventing and ending youth homelessness and ensuring New York City is a place where all youth can prosper and thrive, regardless of their demographics or life experiences.



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