Young Adult Outcomes of **Foster Care**, **Justice**, and **Dually Involved Youth** in New York City

Supported by the Conrad N. Hilton Foundation

Center for Innovation through Data Intelligence (CIDI)

New York City Office of the Mayor

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About the Center for Innovation through Data Intelligence (CIDI)

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Executive Summary

I. Introduction

Background

The transition period to adulthood is a particularly difficult time for most adolescents. This difficulty is magnified for young adults in foster care, which includes foster boarding homes, kinship care, and residential placements. These youth often must navigate this transition with minimal family support and stability. In New York City, youth may legally choose to be discharged from foster care at the age of 18 years. Although youth can stay in care until the age of 21 years, many choose to leave earlier and are then confronted with the adaptation to independent living. Although increasing attention is being paid to the importance of continued transitional support for youth who age out of foster care, resources for this group are limited. Additionally, many youth in foster care have experienced numerous hardships throughout their lives, including maltreatment and family trauma, poverty, and multiple movements in placements, leading to disruptions in relationships and schooling.

It is no surprise, then, that numerous studies have found that foster care children are at risk of poor adult outcomes, including elevated rates of juvenile delinquency and criminal justice involvement, homelessness, teenage pregnancies, and health issues, as well poor educational and employment outcomes.[1,2,3]

Another at-risk group during this time of adolescence includes those who become involved in the juvenile and/or criminal justice systems. Similar to foster care children, histories of early maltreatment and hardship often intensify problematic behaviors, leading to arrest and placement in detention (up to the age of 15 years in New York City) or jail (after the age of 15 years).[4] These adolescents are at particular risk of recidivism and continued involvement in the justice systems. This, in turn, can impact housing, educational, and employment stability.

Youth who interact with both the foster care system and the justice system — either detention or jail — therefore, face even greater challenges and are particularly at risk for poor outcomes in adulthood. However, to date, few studies have examined this population (i.e., "dually involved youth") in detail.[5,6,7]

Study Design

The current study aims to replicate the study conducted by Culhane et al. (2011) in Los Angeles County by examining the adult outcomes of adolescents who exit the foster care system, juvenile detention and adult correction system, and those who are dually involved in New York City via administrative data analysis. These groups are termed 'exiters' of the foster care and justice systems. Although the public systems and data sources vary by location, this study adapts the methodology of Culhane et al. (2011) to the greatest extent possible.

Therefore, this study seeks to answer a similar set of questions to those proposed in Culhane et al. (2011):

1. After youth exit from the foster care system and/or the juvenile detention and adult correction system, how do they interact with health and human service systems (e.g., homeless shelters, jail, public benefits, hospitals) over the next six years? What are the costs associated with this service utilization?
2. What differences exist in adult outcomes of youth who exit from foster care, youth who exit from a justice system (i.e., juvenile detention or adult corrections), and youth who exit from both?
3. What are the patterns of multi-system involvement within the three groups?
4. What are the risk factors for high-cost service use?
5. What differences exist in service utilization between New York City and Los Angeles County for these groups?

2. Methods

Sample

The sample consists of three groups of youth:

1. Youth who are discharged from a foster care stay between 2004 and 2006 ("foster care group").
2. Youth who are discharged from juvenile detention and/or jail between 2004 and 2006 ("justice group").
3. Youth who are discharged from foster care AND at least one justice system (juvenile detention and/or jail) between 2004 and 2006, regardless of the order of their system involvement ("dually involved group").

For youth who had multiple discharges from these systems during 2004 and 2006, the last discharge during this time period was used ("last discharge"). All youth included in the sample were between

[1] Maxfield, M. G. (1996). The cycle of violence: Revisited 6 years later. Archives of Pediatrics & Adolescent Medicine, 150(4), 390+.
[2] Courtney, M. E., & Dworsky, A. (2006). Early outcomes for young adults transitioning from out of home care in the USA. Child & family social work, 11(3), 209-219.
[3] Pecora, P. J., Kessler, R. C., O'Brien, K., White, C. R., Williams, J., Hiripi, E., ... & Herrick, M. A. (2006). Educational and employment outcomes of adults formerly placed in foster care: Results from the Northwest Foster Care Alumni Study. Children and youth services review, 28(12), 1459-1481.
[4] Ryan, J. P., & Testa, M. F. (2005). Child maltreatment and juvenile delinquency: Investigating the role of placement and placement instability. Children and Youth Services Review, 27(3), 227-249.
[5] Herz, D. C., & Ryan, J. P. (2008). Exploring the characteristics and outcomes of 241.1 youths in Los Angeles County. San Francisco, CA: California Courts, The Administrative Office of the Courts.
[6] Herz, D. C., Ryan, J. P., & Bilchik, S. (2010). Challenges facing crossover youth: An examination of juvenile justice decision making and recidivism. Family court review, 48(2), 305-321.
[7] Halemba, G., Siegel, G., Lord, R. D., & Zawacki, S. (2004). Arizona dual jurisdiction study: Final report. National Center for Juvenile Justice.

13 and 18 years of age at discharge. Notably, basing the sample on adolescents who were still in foster care at some point between the ages of 13 and 18 has implications for the generalizability of the findings of this study. A significant portion of children in foster care are adopted or reunified with their families prior to adolescence (i.e., age 13); these individuals are not included in the sample and may have different outcomes than those who are still in care as adolescents, which includes individuals who have been in care continuously since early childhood, individuals who have had several foster care spells, one of which was in adolescence, and those who came in as adolescents.

Outcomes

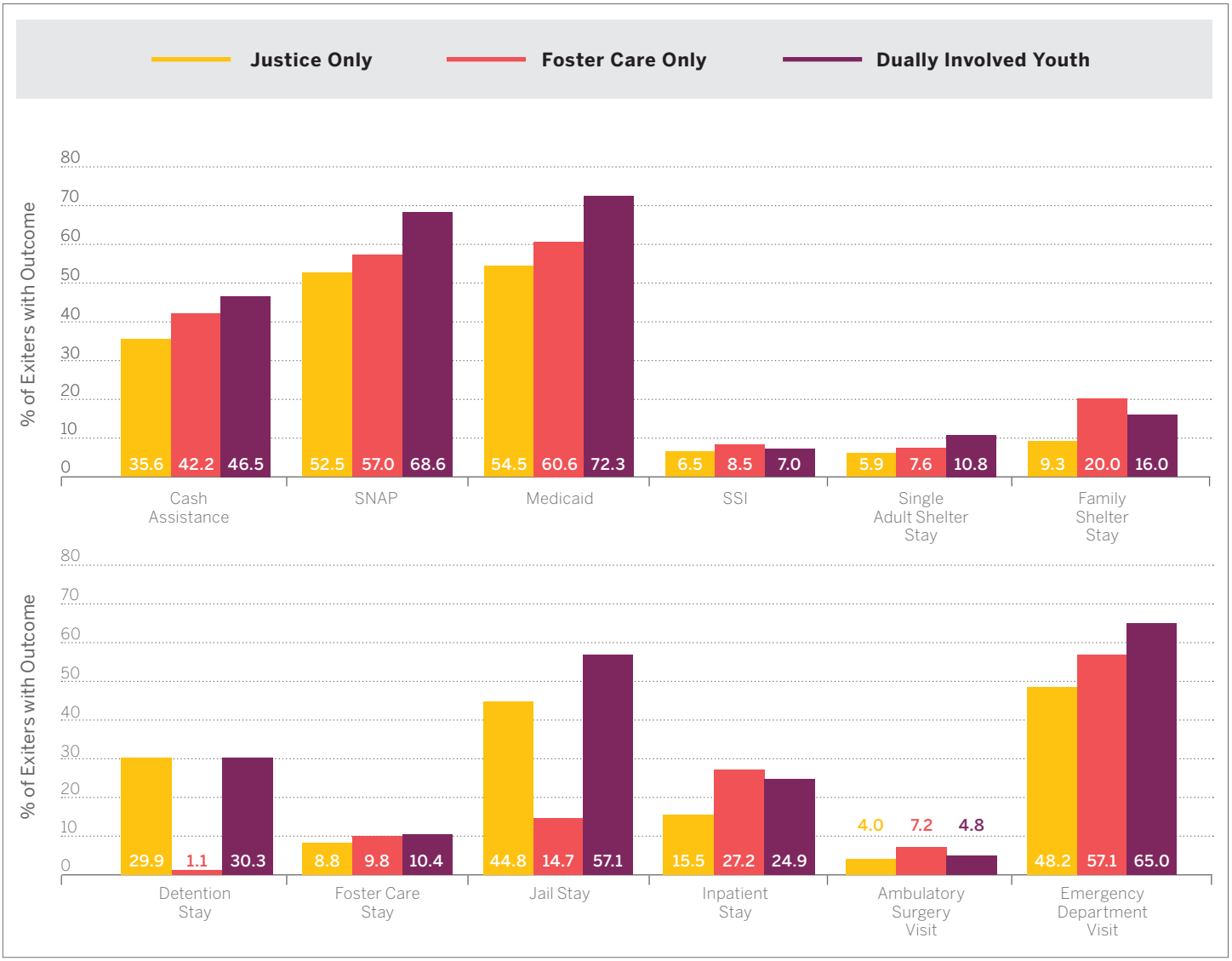
Outcomes are reported for the six years after the last discharge for each individual (with several exceptions). Outcome data consist of the degree of involvement in five domains: foster care, justice, homeless shelters, health services, and benefits. The degree of involvement with each of these systems is computed from administrative data from NYC Health and Human Service (HHS) agencies, as well as administrative data from the New York Department of Health Statewide Planning and Research Cooperative System (SPARCS). For each outcome measure, dates of admissions and discharges from the system were received to calculate the length of each stay, number of stays, and total duration over the six years for each individual. The total duration was then multiplied by the average cost per day in each system (unless otherwise noted) during Fiscal Year 2011.

3. Findings

Outcomes by system

The dually involved group had the highest system involvement both overall and in the majority of the specific systems examined (eight of twelve).

Summary of Outcomes in Individual Domains in Years 1-6



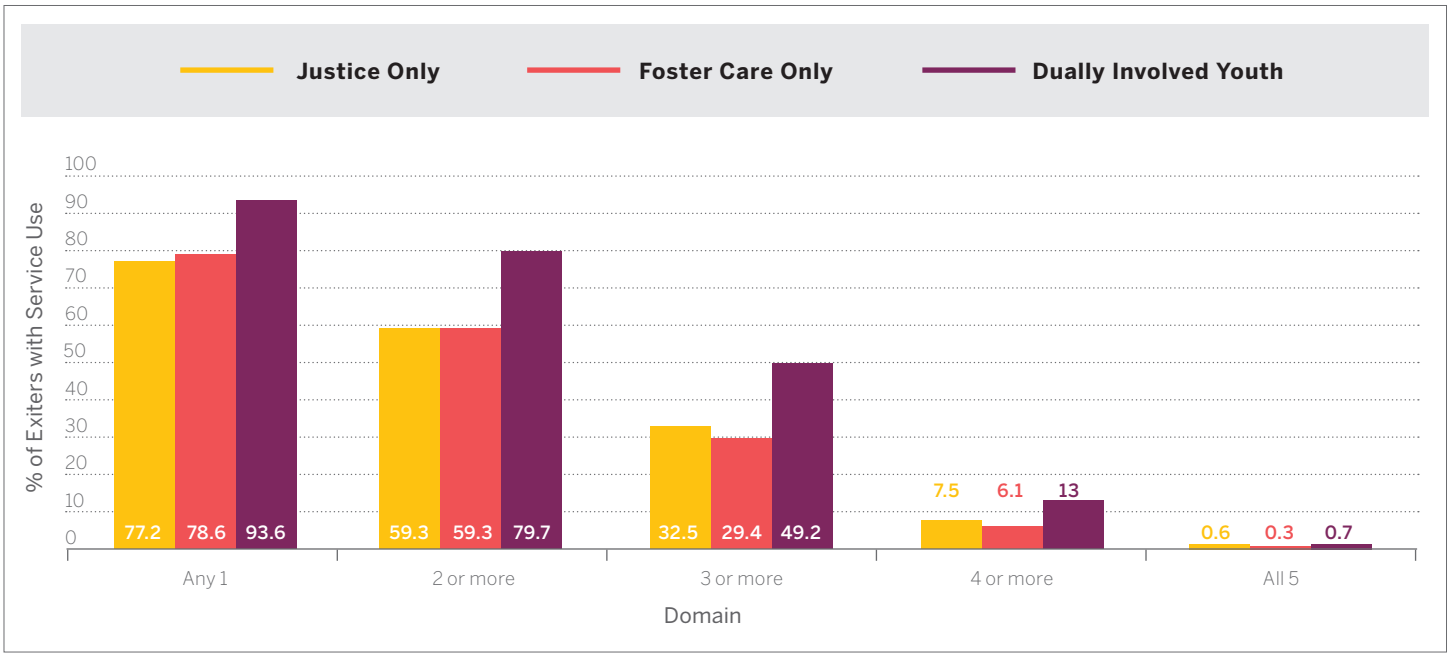
Note: Detention stays are only reported for Year 1 and 2. Inpatient stays, ambulatory visits, and emergency department visits are only reported for Years 1 through 5.

Multi-system Outcomes

Over 90% of the dually involved group was involved in at least one domain in the six years after discharge. Almost 80% were involved in two or more service domains, almost 50% were involved in three or more domains, and 13% were involved in four or more domains. This signifies the overlap in the foster care and justice outcomes that the dually involved group continues to experience, as they have high rates of utilization in both the systems that the foster care group utilizes the most and the systems that the justice group utilizes the most, resulting in very high overall utilization and multi-domain utilization.

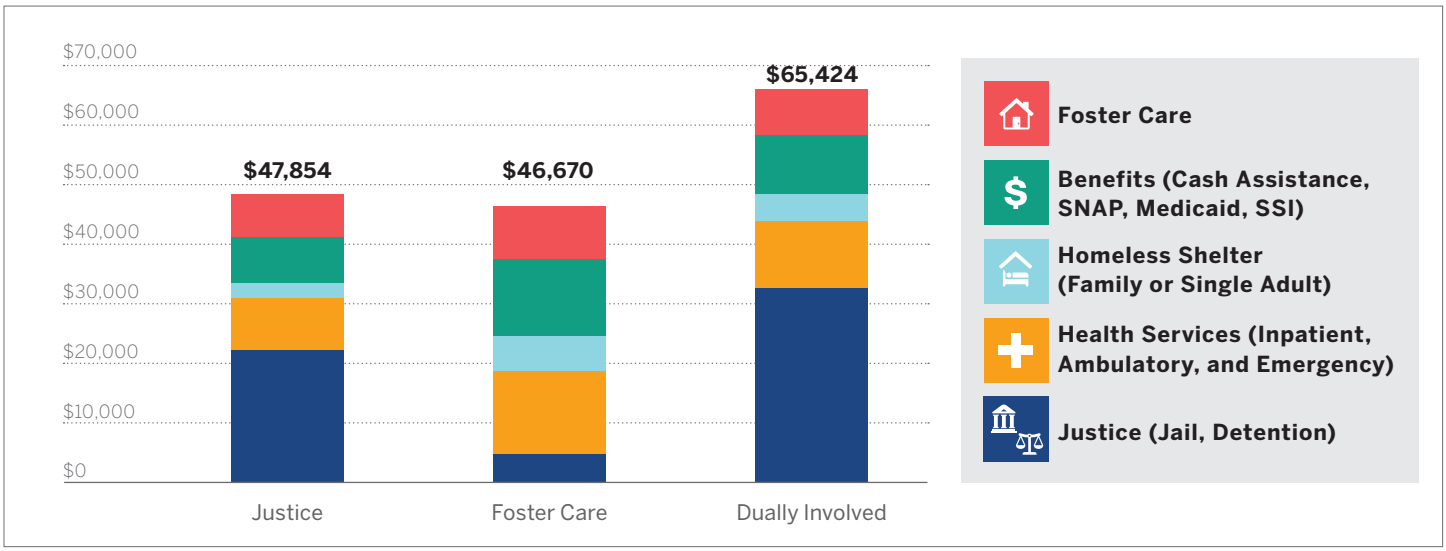
Although the dually involved group has the most service usage, the justice and foster care groups also have high service involvement. Comparatively, almost 80% of the foster care and justice groups were involved in at least one domain, almost 60% were involved in two or more domains, about 30% were involved in three or more domains, and 6-8% were involved in four or more domains.

Summary of Service Use Across Multiple Domains in Years 1-6



All three groups also continue to incur costs after discharge. However, the average cost for the dually involved group was approximately 40% higher than the other two groups (approximately $65,000 for the dually involved, compared to $46,000-$48,000 for the other two groups).

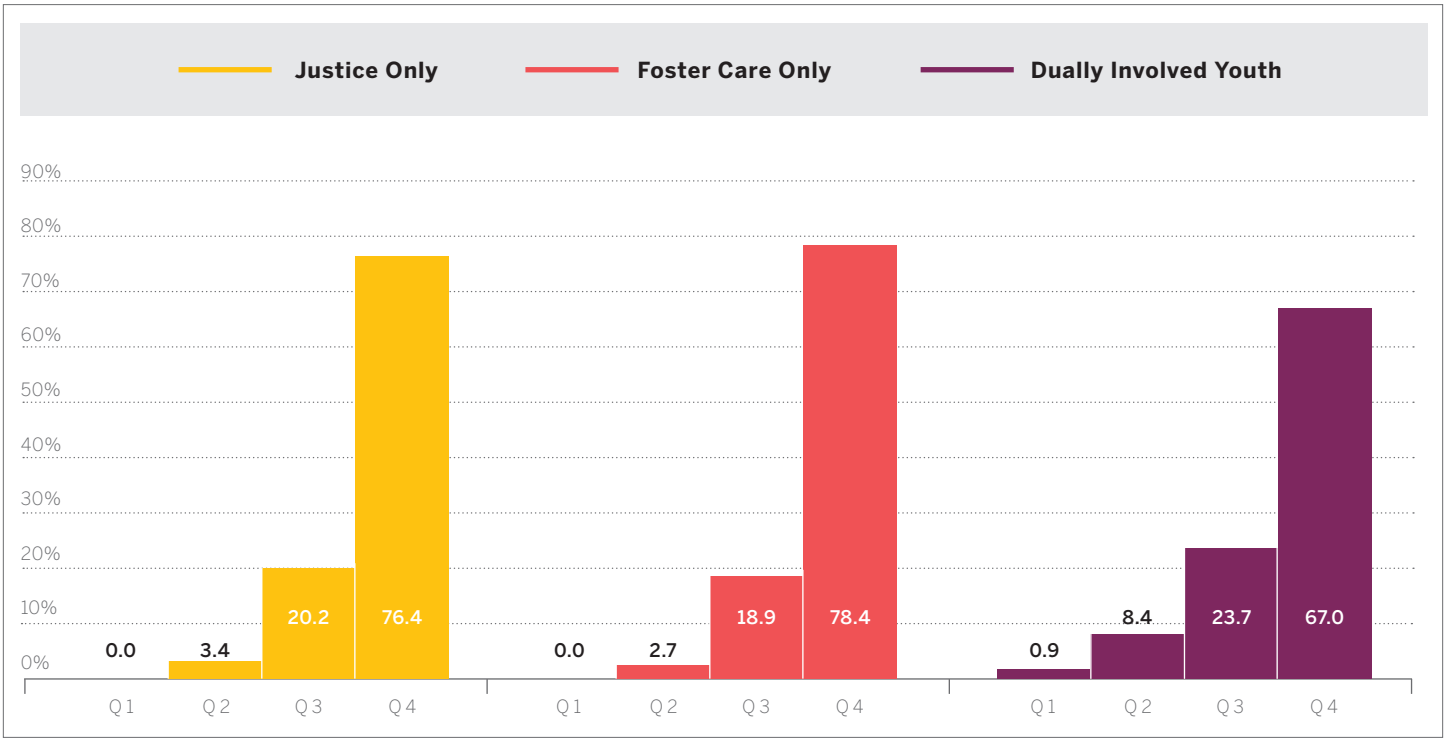
Average Cumulative Cost of Services Used in Years 1-6



The quartiles of highest users for the foster care and justice groups comprise over three-quarters of the cumulative cost, the next highest quartile (Quartile 3) comprises about 20% of the cost, while Quartile 2 comprises the rest of the cost, and the final quartile does not utilize any services (and therefore, does not contribute to the cost). The dually involved group is slightly more spread out in utilization. About two-thirds of the cost can be attributed to the top quartile, about a quarter to the next highest quartile, about 8% to Quartile 2, and about 1% to Quartile 1. This pattern reflects that the dually involved group overall has more individuals who utilize services and therefore, the cost is shared slightly more over the four quartiles, although the large majority is still attributable the top quartile.

The average cost for a high-cost user in the dually involved group is $173,440 over the outcome period, compared to $2,359 for a low-cost user (bottom 25%). The average cost for a high-cost user in the foster care group is $145,770 over the outcome period, compared to $0 for a low-cost user (bottom 25%). The average cost for a high-cost user in the justice group is $144,602 over the outcome period, compared to $4 for a low-cost user (bottom 25%). In sum, a minority — 25% — of young adults in each group account for the majority — up to roughly 80% — of the cost incurred by each group.

Total Cumulative Cost of Services Used in Years 1-6



Risk Factors for High-Cost Service Use

Risk factors for being a high-cost service user (i.e., in the top quartile of service use cost) were identified for the foster care and dually involved groups using information about their foster care history, as well as demographic information. Risk factors were not identified for the justice group due to the lack of information beyond demographics that could potentially be explored as risk factors. Logistic regression was used in order to assess which characteristics were significant risk factors for high-service use, while controlling for other factors.

Among those in the foster care group, a number of factors predicted high-cost users. Being female increased the odds of becoming a high-cost user. This is likely due to in part to the high rates of childbirth (and thus hospital costs) in the high-cost user group. Of the females in the high-cost user group, 55% had an inpatient hospital stay resulting in childbirth, compared to only 17% of the other females in the high-cost group. Additionally, being discharged to any situation other than adoption increased the odds of being a high-cost user relative to adoption. Being discharged to a mental health facility had a particularly large increase in odds; however, it should be noted that this was a very small proportion of the sample. Psychiatric inpatient stays and emergency department visits were more prevalent during the outcome period for the high-cost group: 17% of the high-cost group had a psychiatric inpatient stay during the outcome period, compared to 2% of the rest of the foster care group; similarly, 26% of the high-cost users had a psychiatric emergency department visit compared to only 6% of the rest of the group.

For the dually involved group, the number of foster care spells increased the odds of being a high-cost user. Entering care for the first time between the ages of 13 and 15 years increased the odds of becoming a high-cost user compared to children who enter at age one or younger. Finally, exiting from jail and exiting from detention and jail between 2004 and 2006 increased the odds compared to exiting from detention only.

Comparison of Results between New York City and Los Angeles County

The current study aimed to replicate the methodology of the study in Los Angeles County to be able to compare outcomes and better understand the policies and programs that best support a healthy and stable transition to adulthood for these populations. The findings of the current study validate those of the study in LA. Across all systems, the dually involved group had the highest utilization or close to it. Across cities, almost the entire dually involved group was involved in at least one system post discharge (88% in LA County and 94% in NYC) and the dually involved group had almost the exact same percentage involved in two or more domains (78% in LA County and 80% in NYC) and three or more systems (49% in both places).

Findings regarding average cumulative costs across the three groups were also similar and both found that while the foster care and justice exiters had about the same average cumulative cost, the dually involved group had the highest average cumulative cost by far.

Both studies had very similar findings regarding the distribution of costs within each group, with the top quartile in both places accounting for around three-quarters of the cumulative cost in each group, while the lowest quartile accounted for almost none of the cost.

Therefore, the findings in NYC largely confirmed the original findings in LA County, even with a slightly different set of outcomes and in a different service environment.

4. Implications for Policy and Research

Policy and Programmatic Implications

The overarching finding in the current study is that dually involved youth exiters utilize more services and in more domains than youth who exit only foster care or only the justice system in their adolescence. However, all three groups continue to be involved with various systems into young adulthood and therefore, policies should aim to prevent entry into the foster care and justice systems and/or support any youth who interact with them in adolescence.

The administration of Mayor de Blasio is expanding and strengthening its alternatives to detention, court involvement, and placement of young people in the justice system. The best way to reduce to the number of young people leaving the justice system is to prevent them from entering in the first place. Over the last five years, New York City has reduced the number of children entering detention by 42 percent. Meanwhile the number of teens under age 15 whose cases have been diverted from court has increased by more than 50 percent.

Similarly, New York City continues to reduce the number of young people entering foster care, so that fewer ever have to leave foster care. Since FY12, New York City Administration for Children's Services (ACS) has reduced the number of teens placed in foster care by 21 percent by implementing new, evidence-based, intensive preventive family support services designed specifically for families struggling with behavioral health issues related to their teen children. These research-based programs currently have the capacity to serve currently serve more than 3,000 families per year and should continue to expand.

The administration is developing data-driven, predictive analytic tools to determine which young people exiting foster care or the justice system are most likely to return. These tools make it possible to provide targeted, specialized support services to address family needs early, reinforce family stability and prevent the crises that lead to young people returning to care.

New York City is planning to reinvest savings from the shrinking foster care system into supportive services for post-reunification, post-adoption, post-kinship guardianship placement. and post-justice system involvement.

Research Implications

The administration and its partner foundations and research organizations continue to evaluate the impact of programs developed for these populations, and further develop best practices for serving and supporting dually involved youth.

New York City ACS is an international leader in the implementation of evidence-based programs and is evaluating their effectiveness in the foster care, preventive family support and family justice systems. The lessons learned from this work will guide further development of programs for young adults across city and state government.

Conclusion

Adolescents who are involved in the foster care and justice systems, and in particular those youth who are dually involved, are at risk for continued involvement in various systems throughout their young adulthood. This system involvement, particularly continued justice involvement, homeless shelter stays, and hospital visits, is likely disruptive to their overall stability and well-being. Policies and programs that prevent entry into foster care and justice systems and specifically address the needs of adolescents are required to improve their adult outcomes and reduce the cost associated with their high service utilization.

1 Introduction

BACKGROUND

The transition period to adulthood is a particularly difficult time for most adolescents. This difficulty is magnified for young adults in foster care, which includes foster boarding homes, kinship care, and residential placements. These youth often must navigate this transition with minimal family support and stability.

In New York City, youth may legally choose to be discharged from foster care at the age of 18 years. Although youth can stay in care until the age of 21 years, many choose to leave earlier and are then confronted with the adaptation to independent living. Although increasing attention is being paid to the importance of continued transitional support for youth who age out of foster care, resources for this group are limited. Additionally, many youth in foster care have experienced numerous hardships throughout their lives, including maltreatment and family trauma, poverty, and multiple movements in placements, leading to disruptions in relationships and schooling.

It is no surprise, then, that numerous studies have found that foster care children are at risk of poor adult outcomes, including elevated rates of juvenile delinquency and criminal justice involvement, homelessness, teenage pregnancies, and health issues, as well poor educational and employment outcomes.[1,2,3]

Another at-risk group during this time of adolescence includes those who become involved in the juvenile and/or criminal justice systems. Similar to foster care children, histories of early maltreatment and hardship often intensify problematic behaviors, leading to arrest and placement in detention (up to the age of 15 years in New York City) or jail (after the age of 15 years).[4] These adolescents are at particular risk of recidivism and continued involvement in the justice systems. This, in turn, can impact housing, educational, and employment stability.

Youth who interact with both the foster care system and the justice system — either detention or jail — therefore, face even greater challenges and are particularly at risk for poor outcomes in adulthood. However, to date, few studies have examined this population (i.e., "dually involved youth") in detail.[5,6,7]

The most comprehensive examination of the adult outcomes of these dually involved youth is found in Culhane et al. (2011).[8]

This study explores the adult outcomes of exit cohorts of foster care youth, youth in the juvenile justice system, and those who are dually involved in a variety of domains including health and mental health, public assistance and welfare, education, employment, and criminal justice. In most domains, dually involved youth were found to have the greatest service utilization of the three groups, as well as greater costs associated with this service utilization.

Additionally, dually involved youth had higher multi-system involvement than the foster care only and justice only groups. Within each group, the top quartile of service users accounted for roughly 75% of the public service costs for that group, while those in the lowest quartile accounted for only about 1% of the costs. Given the important implications stemming from this landmark report, expansion of this study and methodology to other large cities, such as New York City, is key to developing policies and programs that best support a healthy and stable transition to adulthood for these populations.

[1] Maxfield, M. G. (1996). The cycle of violence: Revisited 6 years later. Archives of Pediatrics & Adolescent Medicine, 150(4), 390+.
[2] Courtney, M. E., & Dworsky, A. (2006). Early outcomes for young adults transitioning from out-of-home care in the USA. Child & family social work, 11(3), 209-219.
[3] Pecora, P. J., Kessler, R. C., O'Brien, K., White, C. R., Williams, J., Hiripi, E., ... & Herrick, M. A. (2006).
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[6] Herz, D. C., Ryan, J. P., & Bilchik, S. (2010). Challenges facing crossover youth: An examination of juvenile justice decision making and recidivism. Family court review, 48(2), 305-321.
[7] Halemba, G., Siegel, G., Lord, R. D., & Zawacki, S. (2004). Arizona dual jurisdiction study: Final report. National Center for Juvenile Justice.
[8] Culhane, D. P., Byrne, T., Metraux, S., Moreno, M., Toros, H., & Stevens, M. (2011). Young adult outcomes of youth exiting dependent or delinquent care in Los Angeles County. Referred to throughout this report as Culhane et al. (2011) without additional footnotes.

STUDY DESIGN

The current study aims to replicate the study conducted by **Culhane et al. (2011) in Los Angeles County** by examining the adult outcomes of 'exiters' of the foster care system, juvenile detention and adult correction system, and those 'exiters' who were dually involved in New York City via administrative data analysis. Although the public systems and data sources vary by location, this study adapts the methodology of Culhane et al. (2011) to the greatest extent possible.

This study seeks to answer a similar set of questions to those proposed in **Culhane et al. (2011):**

1. After youth exit from the foster care system and/or the juvenile detention and adult correction system, how do they interact with health and human service systems (e.g., homeless shelters, jail, public benefits, hospitals) over the next six years? What are the costs associated with this service utilization?
2. What differences exist in adult outcomes of youth who exit from foster care, youth who exit from a justice system (i.e., juvenile detention or adult corrections), and youth who exit from both?
3. What are the patterns of multi-system involvement within the three groups?
4. What are the risk factors for high-cost service use?
5. What differences exist in service utilization between New York City and Los Angeles County for these groups?

To answer these questions,

the results of this study are presented in five sections:

1. Outcomes by System

2. Multi-system Outcomes

3. Risk factors for High-Cost Service Use

4. Comparison of Results between New York City and Los Angeles County

5. Implications for Policy and Research

THE FIRST SECTION addresses Questions 1 and 2 by examining adult outcomes for each of the three groups (youth who exit from foster care, youth who exit from a justice system, and youth who exit from both) during the six years after they exit. It measures involvement in the following domains:

- Foster care
- Benefits, including cash assistance, SNAP, Medicaid, and SSI use
- Homeless shelters, including the family and single adult shelter systems
- Health services, including inpatient, ambulatory, and emergency services
- Justice, including jail and detention

Involvement in these systems is then monetized to capture the costs associated with service use in each group.

THE SECOND SECTION addresses Question 3 by examining the extent of involvement in multiple systems over the six years post-exit and the total cost associated with each group when costs from each domain are summed.

THE THIRD SECTION addresses Question 4 by assessing which demographic characteristics and factors in the foster care history elevate the risk for later high-cost service use in the foster care and dually involved groups.

THE FOURTH SECTION addresses Question 5 by comparing the adult outcomes found in New York City and those found in Los Angeles County for these three groups. Although specific systems and data may differ between the studies, a general comparison of findings is useful in determining what trends are present in both cities, and where differences may arise.

THE LAST SECTION details the implications of the study findings for NYC's child welfare, juvenile justice, and criminal justice systems, including policy and programmatic recommendations. Additionally, this section describes opportunities for further research on this population.

2 Methods

SAMPLE

The sample consists of three groups of youth:

For youth who had multiple discharges from these systems during 2004 and 2006, the last discharge during this time period was used **("last discharge")**. All youth included in the sample were between 13 and 18 years of age at discharge. These ages were used to more fully capture the dually involved group. Significant dual involvement occurs between the foster care and juvenile justice systems. However, the NYC detention system only serves youth arrested for crimes committed before the age of 16. Therefore, the sample is younger than that of Culhane et al. (2011) to include this overlap.

Youth over the age of 15 years are considered adults in the New York City criminal justice system and therefore, jail exiters were also included to capture the full potential spectrum of justice involvement for foster care youth until they age out of foster care.

Notably, examining adolescents who are still in foster care at some point between the ages of 13 and 18 has implications for the generalizability of the findings of this study. A significant portion of children in foster care are adopted or reunified with their families prior to age 13; these individuals are not included in the sample and may have different outcomes than those who are in care as adolescents, which includes individuals who have been in care continuously since early childhood, individuals who have had several foster care spells, one of which was in adolescence, and those who came in as adolescents.

One limitation of the definition of the dually involved group used for this study is that youth **must exit both systems during the three year time period (2004 to 2006)**. Therefore, for example, an individual could have been involved with both foster care and juvenile detention within those three years, but only exited detention by the end of 2006 and therefore, would belong to the justice only group. If the individual then exited foster care in 2007, this would be captured in the outcome analysis. Although this potentially misses some overlap among systems in the sample, it was necessarily to limit the sample to discharges within specific years to obtain a standardized outcome period for all youth.

Additionally, rates of detention and jail involvement for the foster care group and rates of foster care involvement for the justice group in year one of the outcome period were very low (0.5%, 1.2%, and 4.5%; see Outcomes by System section for more details), which confirms that the large majority of the overlap was captured in this sample design.

Additionally, this methodology will not include youth whose involvement in both systems concludes before the age of 13 years, and may mis-categorize some dually involved youth whose involvement with one system ends before the age of 13 years. However, this study captures the large majority of detention involvement.[9]

Additionally, older adolescents in foster care are more likely to be those who are discharged to independent living in some form (rather than being adopted or reunified with their birth parents) and therefore, this study describes the outcomes of this higher risk population of foster care children.

[9] According the ACS website (http://www.nyc.gov/html/acs/downloads/pdf/City%20Council%20Demographic%20Data%20for%20Fiscal%20Year%202011.pdf) ,in FY 2011, 96.7% of admissions to detention were 13 years of age and older.

DATA DESCRIPTIONS

FOSTER CARE DATA for the sample was received from the **NYC Administration for Children's Services (ACS)** and included demographic information and information about their foster care placement prior to their last discharge between 2004 and 2006, such as placement type (foster boarding home, kinship care, or residential facility) and discharge reason.

DETENTION DATA for the sample was also received from **NYC ACS** and contained demographic information for those who were discharged between 2004 and 2006. Notably, in 2004, the database for juvenile detention placements transitioned to a new system and therefore, some information may be incomplete.

JAIL DATA for the sample was received from the **NYC Department of Corrections (DOC**) and also included demographic information and information about their discharges between 2004 and 2006, including their criminal charges and where they were discharged to. Data was not available for the probation system for the years 2004 through 2006 and so, was not included in the sample. Therefore, this represents a portion of justice involvement that was not captured in the sample group.

DEMOGRAPHICS OF SAMPLE (TABLE 2.1)

The sample consisted of 28,703 youth total: (1) 21,194 in the justice group, comprising 12,293 who exited only jail, 7,798 who exited only detention, and 1,103 who exited both detention and jail; (2) 5,337 in the foster care group; and (3) 2,172 in the dually involved group, comprising 510 who exited both foster care and jail, 1,375 who exited foster care and detention, and 287 who exited foster care, detention, and jail. Not surprisingly, both the justice group and dually involved group were primarily male (86.8% and 81.3% respectively) as it is well-documented that males are more likely to be involved in the juvenile and criminal justice systems than females. The foster care group, however, is a little under half male. The age at entry reported is the age at which the foster care and justice groups entered their last stay in each respective system during 2004-2006. Similarly, the age at exit is the age of the last discharge in this period. For the dually involved group, the age at entry is the age at which they entered their first system that was then exited in 2004 through 2006, while the age at exit is the age they exited the last system during this period. For example, if a dually involved youth exited foster care in 2004 and detention in 2005, the age at entry would be for the foster care stay, while the age at exit would be for the detention stay. The foster care and dually involved groups were, on average, a bit younger at the time of entry; this is primarily due to the fact that the majority of the justice group exited jail, which has a minimum entry age of 16 years (with a few exceptions). The groups, on average, were about the same age at time of exit. The racial composition of the groups was about the same, with the large majority of youth categorized as Non-Hispanic Black or Hispanic across all groups.

Table 2.1
Demographic Characteristics of Youth Exiters

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
GENDER (%)			
Female	13.2	54.4	81.3
Male	86.8	45.6	81.3
Age at Entry (mean)	16.3	12	14.1
Age at Entry (median)	17	13	15
Age at Exit (mean)	16.4	15.9	16.4
Age at Exit (median)	17	16	16
RACE/ETHNICITY (%)			
White	5.1	5.1	4.8
Black	58.7	49.7	51.1
Hispanic	31.1	30.8	33.6
Asian	1.4	2.7	1.8
Other	1.3	4.9	3.1
Missing	2.4	9.8	5.5
FOSTER CARE DISCHARGE REASON (%)			
Reunification	N/A	60.9	61.0
Aged out/APPLA	N/A	15.7	10.4
Adoption	N/A	18.5	1.6
Exit to Justice System	N/A	1.6	23.4
Exit to Mental Health Facility	N/A	0.7	0.2
Other	N/A	2.7	3.4
PLACEMENT TYPE AT EXIT (%)			
Foster Boarding Home	N/A	36.0	6.6
Kinship Care	N/A	20.1	4.9
Residential	N/A	43.3	89.3
Other	N/A	0.2	0.1
Missing	N/A	0.4	0.1

Foster care discharge reasons and placement types at exit are also reported for the foster care and dually involved groups. The majority of both groups were reunified with their biological parents or relatives; however, the foster care group had a slightly higher rate of youth aging out of care and, those with another planned permanent living arrangement and a much higher rate of adoption. The dually involved group understandably had a higher rate of exits to a justice system.

Large differences were found between the placement types at exit between the two groups. The large majority of the dually involved group **(89.3%)** was in a residential placement at the time of discharge, while only **43.3%** of the foster care group was in a residential placement. Conversely, the foster care group had much higher rates of foster boarding home and kinship placements at the time of discharge.

OUTCOMES

Outcomes are reported for the six years after the last discharge for each individual, with several exceptions noted below. This means that the outcome period for each individual differs based on the date of the last discharge during 2004 to 2006, so that every individual has an equal outcome period (i.e., for a youth with a discharge date of January 1, 2004, the outcome period would be through January 1, 2010, while for a youth with a discharge date of June 6, 2006, the outcome period would be through June 6, 2012).

Outcome data consists of degree of involvement in 5 domains: foster care system, justice system, homeless shelters, health services system, and benefits system. See Table 2.2 for an overview of these domains and the systems that comprise each domain. The degree of involvement with each of these systems is computed from administrative data from **NYC Health and Human Service (HHS)** agencies, as well as administrative data from the **New York Department of Health Statewide Planning** and **Research Cooperative System (SPARCS)**. For each outcome, dates of admissions and discharges from a given system were received to calculate the length of each stay, number of stays, and total duration of all stays in a given system over the six years for each individual. The total duration was then multiplied by the average cost per day per person in each system (unless otherwise noted) during Fiscal Year 2011.

In some cases, stays in the outcome data overlap with the sample period and the outcome period (i.e., the outcome admission date occurs prior to the last discharge in the sample period). In these cases, the stay was counted toward the outcome period, but only days occurring after the last discharge were included in the duration and cost calculations. For example, a child in foster care may leave his/her foster care placement to go to a homeless shelter, then is formally discharged from foster care because of this absence, and remains in the homeless shelter. For this study, only the days after the formal discharge date would count toward the outcome duration, so that every individual has an equal outcome period of six years. See Figure 2.2 for an illustration of the outcome period.

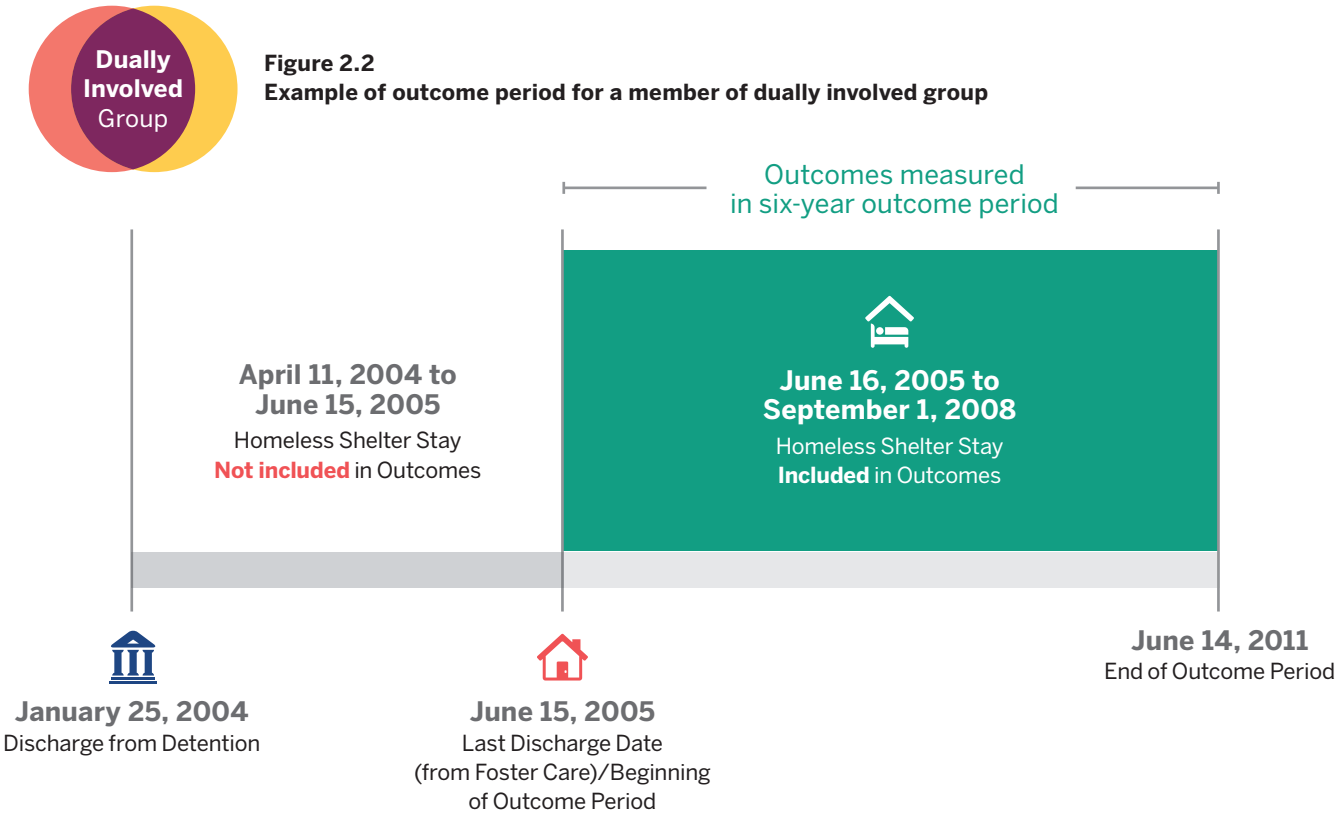


Figure 2.2
Example of outcome period for a member of dually involved group

Table 2.2
Outcome Data

DOMAIN	DATASET	ELIGIBILITY AGE	COST PER DAY PER PERSON	OUTCOME YEARS REPORTED	DATA SOURCE
FOSTER CARE	Foster Care	<=21 years	$252.76 (residential placement); $63.69 (foster boarding home and kinship placement)	1-6	NYC Administration for Children's Services (ACS)
BENEFITS	SNAP	N/A	$200.00 (per month)	1-6	NYC Human Resources Administration (HRA)
	Cash Assistance	N/A	$753.00 (per month)	1-6	
	Medicaid	N/A	N/A	1-6	
	SSI	N/A	$761.00 (per month)	1-6	
HOMELESS SHELTER	Single Adult Homeless Shelter	>=18 years	$73.58	1-6	NYC Department of Homeless Services (DHS)
	Family Homeless Shelter	N/A	$100.12	1-6	
HEALTH SERVICES	Inpatient	N/A	Varies, based on actual charges	1-5	NYS DOH Statewide Planning and Research Cooperative System (SPARCS)
	Ambulatory Surgery	N/A	Varies, based on actual charges	1-5	
	Emergency Department	N/A	Varies, based on actual charges	1-5	
JUSTICE	Jail Stay	>=16 years	$200.00	1-6	NYC Department of Correction (DOC)
	Detention	<16 years	$753.00	1-2	NYC Administration for Children's Services (ACS)

Rates of involvement in each system by year and rates over the entire six-year period were also calculated. Because of the transitional age of the sample, the outcome period spans eligible ages for both the juvenile and adult systems and therefore, for several systems (i.e., foster care, detention, jail, and single adult homeless shelters), only a portion of the sample are actually eligible to enter these systems for the entire six years. In the case of foster care and detention, the sample ages out of eligibility as they grow older, while for jail and single adult homeless shelters, the sample ages into eligibility as they grow older. Eligibility ages for each system are listed in the data descriptions in the next section and in Table 2.2.

ADJUSTMENTS FOR ELIGIBILITY

To account for potential differences in the ages of the sample groups and therefore, differences in eligibility for admission for these systems, rates for each year were calculated by:

$$\frac{\text{Number of individuals involved with system during that year (per group)}}{\text{Number of individuals involved with system during that year (per group)}}$$

To obtain a rate for the entire six-year period for these systems, each individual involvement's over the six years was measured as a 1 or 0 and their eligibility was calculated as:

$$\frac{\text{Number of years eligible}}{\text{6 years}}$$

The involvement and eligibility were summed per group and an overall rate was obtained by:

$$\frac{\text{Sum of individual involvement (per group)}}{\text{Sum of eligibility (per group)}}$$

Thus this controls for differences in ages among the groups by extrapolating a rate that assumes each individual was eligible the entire six years.

DATA DESCRIPTIONS

FOSTER CARE STAYS

As with the sample data, foster care data was received from the **NYC Administration for Children's Services** for the years 2004 to 2012. Foster care data includes out-of-home placements, such as foster boarding homes, kinship care, and residential facilities. Twenty-one is the oldest eligible age. The average cost of residential placement per day per case for FY2011 was **$252.76**, while the average cost of foster boarding home or kinship placement was **$63.69**.[10] If placement information was missing in the data for specific durations, an average of those two costs was used.

DETENTION STAYS

Similarly, detention data was also received from **NYC ACS** for the years 2004 to 2012. In NYC, youth are eligible to enter detention for alleged crimes committed up to the age of 15 years, although they can remain in detention once admitted past the age of 15. Because our sample subjects are between the ages of 13 and 18 years at the time of discharge, almost the entire sample has aged out of the eligible range of admission by the end of Year 2 of the outcome period. Therefore, only these first two years are reported here. The average cost of detention per day per person was **$705.00** in FY2011.[11]

JAIL STAYS

Jail data was received from the **NYC Department of Correction** for the years 2004 to 2012. Information about discharges to state prison was also derived from this data to better understand additional costs incurred, which may not be captured here. Additionally, information about the top criminal charges was also reported. In NYC, youth are eligible to enter DOC at the age of 16. The average cost of jail per day per person was **$220.00** in FY2011.[12]

FAMILY HOMELESS SHELTER STAYS

Data about family homeless shelters was received from the **NYC Department of Homeless Services (DHS)** for the years 2004 to 2012. It includes all shelter stays for adult families and families with children regardless of whether they were found eligible (based on the availability of alternative living situations) to remain in shelter. All ages of individuals were eligible to be included during all six years of the outcome period because individuals under the age of 18 years can enter as a child with their family, while individuals over the age of 18 years can enter as parents of a child or as an adult family. The average cost per day per person was **$100.12** in FY2011.[13]

SINGLE ADULT HOMELESS SHELTER STAYS

Single adult homeless shelter data was also received from **DHS** for the years 2004 to 2012. It includes all stays for individuals entering the single adult shelter system, which serves individuals over the age of 18 years who are entering shelter independently (without other adults or children). Therefore, the age of eligibility is 18 years and older. The average cost per day was **$73.58** per day per person for FY2011.[14]

[10] City of New York. (September 2011). Mayor's Management Report. Retrieved from: http://www.nyc.gov/html/ops/downloads/pdf/mmr/0911_mmr.pdf
[11] Ibid.
[12] Ibid.
[13] Ibid.
[14] Ibid.

CASH ASSISTANCE RECEIPT

Cash assistance data was received from the **NYC Human Resources Administration (HRA**). Cash assistance includes recurring payments (for 60 months) to families through the federally funded **Temporary Aid to Needy Families (TANF) Program**, as well as recurring payments to individuals and families who have received cash assistance for over 60 months through the **New York State Safety Net Program**.

Additionally, individuals and families may receive one-time cash grants to help pay for shelter, energy assistance, and other needs. Because children are eligible to be on cash assistance cases based on their family needs, there are no age restrictions. Individuals were counted as receiving cash assistance if they were active on a case (either their family's or their own). Because payments for cash assistance are made at the household level and household composition and payments can vary greatly, cash assistance was monetized by multiplying the total duration active on cash assistance by **$753.00** per month, which is the maximum allotment for a 3-person family household.[15,16]

SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) RECEIPT

SNAP data was also received from HRA. SNAP, formerly known as **Food Stamps**, provides food assistance. Similar to cash assistance, all individuals, regardless of age, are eligible as they can receive SNAP as an individual or through their family. The maximum allotment for a 1-person household, **$200.00** per month, was used to quantify the cost of SNAP receipt.[17,18]

MEDICAID RECEIPT

Medicaid data was provided through **HRA**. Medicaid is a public health insurance program. Foster care children are automatically enrolled in Medicaid while in a foster care placement, but must re-apply once they leave foster care. All ages are eligible to receive Medicaid. Because Medicaid costs are captured in the hospital costs (discussed below), they were not included in cost calculations to avoid duplication.

SUPPLEMENTAL SECURITY INCOME (SSI)

SSI data was provided through HRA. SSI is a federal program that provides monthly cash payments to individuals who are disabled (or over the age of 65 years, which is not applicable to the current study). The maximum allotment for a 1-person household, **$761.00** per month, was used to quantify the cost of SSI receipt.[19]

INPATIENT HOSPITAL STAYS

Inpatient hospital data was received from the **New York Department of Health Statewide Planning** and **Research Cooperative System (SPARCS)**, which includes data on all hospital stays in New York State. In addition to the stay duration, information about the type of stay and diagnosis were also reported. The inpatient data also encompasses emergency department visits that result in inpatient stays (rather than including these separately in the emergency department data). There are no age restrictions in this data and the cost is derived from the actual charges incurred by each individual based on the services received. SPARCS data was only available through 2011 at the time of the study so only years 1 through 5 of the outcome period were assessed.

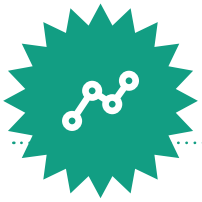
[15] Replicates methodology of Culhane et al. (2011).
[16] Congressional Research Service. (October 2013). The Temporary Assistance for Needy Families (TANF) Block Grant: Responses to Frequently Asked Questions. Retrieved from: http://fas.org/sgp/crs/misc/RL32760.pdf.
[17] Replicates methodology of Culhane et al. (2011).
[18] Center for Employment and Economic Supports. (August 2011). Memo to NYC Commissioners; TA & FS Directors; WMS Coordinators; MA Directors. https://otda.ny.gov/policy/gis/2011/11DC015NYC.pdf.
[19] Social Security Administration. (2014). Supplemental Security Income (SSI) In New York. Retrieved from: http://www.ssa.gov/pubs/EN-05-11146.pdf.

AMBULATORY SURGERY HOSPITAL VISITS

Ambulatory surgery visits were also received from **SPARCS** and include hospital visits, as well as ambulatory surgery visits to a hospital extension clinic and diagnostic and treatment centers licensed to provide ambulatory surgery services in New York State. This category of outpatient services includes: operating room services, cardiology, ambulatory surgery, gastro-intestinal services, and lithotripsy. In addition to the stay duration, information about diagnoses was also reported. There are no age restrictions in this data and the cost is derived from the actual charges incurred by each individual based on the services received. SPARCS data was only available through 2011 at the time of the study so only years 1 through 5 of the outcome period were assessed.

EMERGENCY DEPARTMENT HOSPITAL VISITS

Emergency department visits were received from **SPARCS** and data includes all hospital visits to the emergency department and urgent care. In addition to the stay duration, information about diagnoses was also reported. There are no age restrictions in this data and the cost is derived from the actual charges incurred by each individual based on the services received. SPARCS data was only available through 2011 at the time of the study so only Years 1 through 5 of the outcome period were assessed. Outpatient service data other than ambulatory care and emergency department services was not reported to SPARCS prior to 2011 and therefore, these data are not reported in the current study.



DATA LINKAGE

Datasets were matched by first and last name, date of birth, and social security number (when available) using **SAS Link King software**[20] (with the exception of data obtained from SPARCS), which uses a series of deterministic and probabilistic matching algorithms to assess whether multiple data entries are the same person.

Using these algorithms allows for matching across data systems by accounting for data entry errors and multiple spellings of names. Foster care, detention, and jail data for exiters between 2004 and 2006 were matched first to obtain the sample, and then the outcome datasets were all matched to the de-duplicated sample dataset.

The software categorizes matches based on match certainty; only exact matches and matches in the top three out of six certainty levels were used to limit false positive matches and employ a more conservative match. Because SPARCS data only contains a limited identifier, our sample was matched to this data using an exact match of this identifier and the date of birth.

[20] More information about SAS Link King can be found at: http://www.the-link-king.com/

3 Outcomes by System

Results are presented as rates of service involvement per group out of the entire sample (adjusted for eligibility where necessary). A summary of these overall rates is presented in Figure 3.13. The other information regarding the length of one stay, number of stays, and total duration include only those individuals within the group who have service involvement.

FOSTER CARE STAY

Table and Figure 3.1 show the overall rates of foster care involvement over the full six years after discharge, as well as a year-by-year summary.[21] A relatively small number of our sample across all three have a foster stay spell during the six years after discharge and across all three groups, the majority of those that do have a foster care stay have only one.

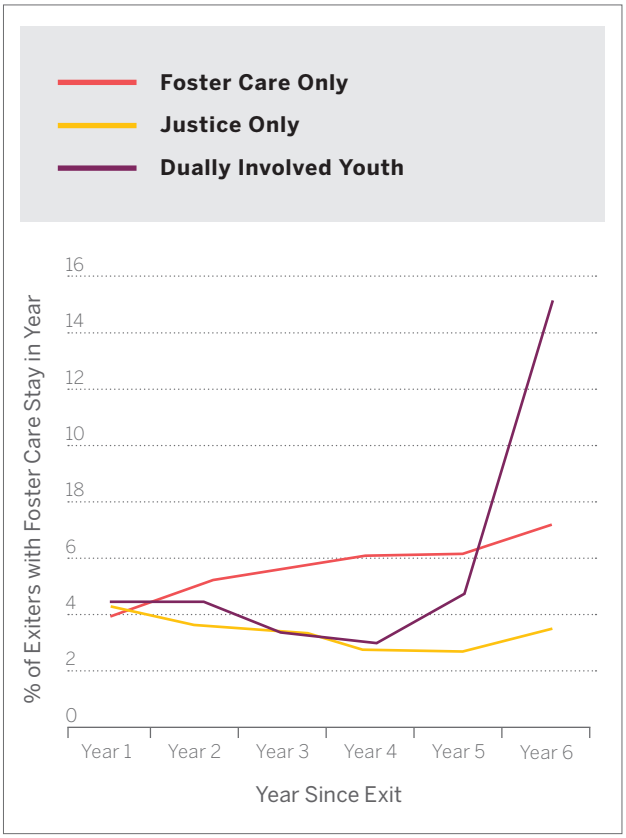
The foster care group has slightly more individuals with a foster care stay in the outcome period and has the longest length of an individual stay and cumulative duration in care, and therefore the highest cost of the three groups. Many of the dually involved group were discharged to a justice system and have higher rates of justice involvement during the outcome period (see justice sections), which may explain these differences in duration between the two groups.

Rates of foster care involvement over the six years after exit were fairly stable in years one through six for the justice and foster care groups, while the dually involved group had higher involvement in year six when fewer people are eligible.

Table 3.1
Foster Care Spells in Six Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Had Foster Care Spell (%)	8.8	9.8	10.4
Mean Length of Foster Care Spell (days)	644.7	850.7	556.9
Median Length of Foster Care Spell (days)	459.5	788	355.5
Mean Number of Foster Care Spells	1.0	1.0	1.1
Median Number of Foster Care Spells	1	1	1
Number of Foster Care Spells (%)			
1 Spell	96.4	96.1	92.7
2 Spells	3.5	3.7	6.6
3 Spells	0.0	0.3	0.7
4 or more Spells	0.1	0.0	0.0
Mean Total Number of Foster Care Days	669.0	886.6	601.6
Median Total Number of Foster Care Days	479	835	400
Mean Total Cost of Foster Care	$116,730	$135,851	$114,845
Median Total Cost of Foster Care	$90,741	$96,302	$91,752

Figure 3.1
Foster Care Stays by Exiter Type



[21] Overall rates and rates by year were adjusted to control for age eligibility. See Methods section for more details.

DETENTION STAYS

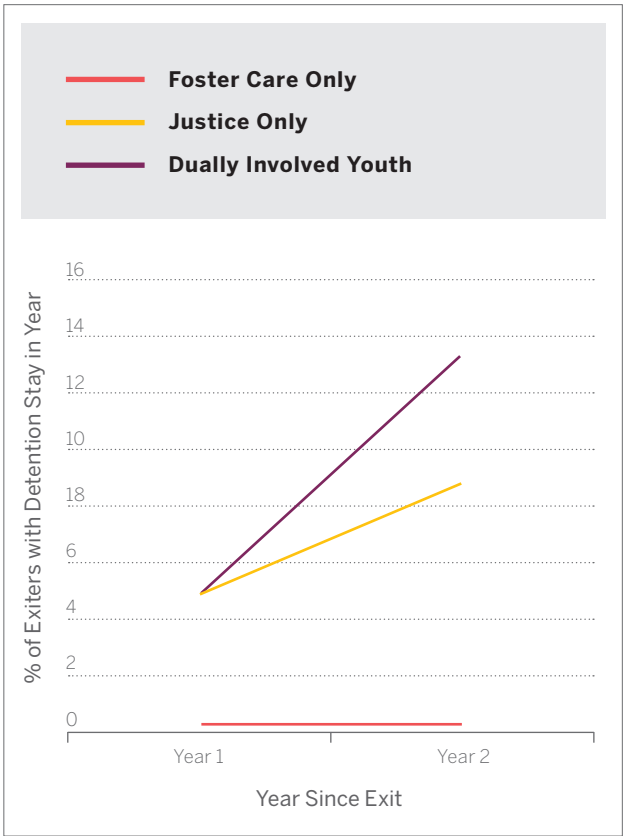
Table and Figure 3.2 show the overall rates of detention involvement during the first two years after discharge, as well as a year-by-year summary.[22] The justice and dually involved groups both had much higher rates of detention involvement relative to the foster care group. Of those who had detention involvement, the foster care group appears to have a larger percentage of individuals with two or more stays. However, it should be noted that all of the youth in the justice and dually involved groups had at least one jail or detention stay during the sample period and therefore, their first stay in the outcome period is at least their second stay in a justice system over their lifetime. Because of this earlier involvement, individuals in the justice and dually involved group are also more likely to go to jail, rather than detention (as seen in the next section). This probably also accounts for the slightly higher cumulative detention duration and therefore, costs associated with those in the foster care group who entered detention.

For the two-year comparison of rates, both the justice and dually involved groups seem to have an increase in involvement during the second year. However, some of this increase is due to the fact that, although they are only eligible to enter detention for crimes committed under the age of 16 years, youth can remain in detention past this age and therefore, some older youth may remain past the technical eligibility age.

Table 3.2
Detention Stays in Two Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Had Detention Stay (%)	29.9	1.1	30.3
Mean Length of Detention Stay (days)	41.3	48.7	38.4
Median Length of Detention Stay (days)	17	26	10
Mean Number of Detention Stays	1.9	1.8	1.6
Median Number of Detention Stays	1	2	1
Number of Detention Stays (%)			
1 Stay	52.6	48.4	59.1
2 Stays	27.0	38.7	28.3
3 Stays	9.3	0.0	6.3
4 or more Stays	11.1	12.9	6.3
Mean Total Number of Detention Days	77.9	88.0	62.8
Median Total Number of Detention Days	45	55	15
Mean Total Cost of Detention	$54,953	$62,063	$44,264
Median Total Cost of Detention	$31,725	$38,775	$10,575

Figure 3.2
Detention Stays by Exiter Type



[22] Overall rates and rates by year were adjusted to control for age eligibility. Because individuals are only eligible to enter detention up to the age of 16 years, only years one and two are presented. See Methods section for more details.

JAIL STAYS

Table 3.3.1 and Figure 3.3 show the overall rates of jail involvement over the full six years after discharge, as well as a year-by-year summary.[23]

Overall, the dually involved group had the highest jail utilization in the six years after exit, followed by the justice group. Of those who went to jail in each group, the dually involved also had the highest percentage of individuals who went to state prison following their jail stay.

The justice group also had high rates of discharge to prison. Again for the justice and dually involved groups, this is actually at least their second involvement in the justice system and for many of them, it is their second jail stay. Therefore, as expected, their durations, both per stay and total, are much higher than the foster care group because their prior involvement and charges may be considered during subsequent arrests and charges.

Additionally, for all three groups, but especially the justice and dually involved groups, the percentage of individuals who have involvement with multiple stays is very high, with almost a third of those involved in the justice and dually involved groups having four or more stays over the six years. This is consistent with literature on the overwhelming amount recidivism that occurs once an individual becomes involved in the criminal justice system.

Jail involvement increases in the first three years after exit, but then decreases slightly over the later years of the outcome period for all three groups. This peak occurs when the sample is between 16 and 21 years. The top charges for the three groups (shown in Table 3.3.2) are consistent with these ages of late adolescence and are the same for all groups, although in different orders.

All three groups include: Sale of a Controlled Substance, Robbery 1, Robbery 2, and Assault 3.

Table 3.3.1
Jail Stays in Six Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Had Jail Stay (%)	44.8	14.7	57.1
Had Discharge to State Prison (%)	20.0	3.5	25.2
Mean Length of Jail Stay (days)	72.3	61.4	76.2
Median Length of Jail Stay (days)	14	9	15
Mean Number of Jail Stays	2.7	2.2	3.1
Median Number of Jail Stays	2	2	2
Number of Jail Stays (%)			
1 Stay	36.7	47.7	30.7
2 Stays	22.6	23.2	20.6
3 Stays	15.3	11.5	16.5
4 or more Stays	25.4	17.6	32.2
Mean Total Number of Jail Days	196.2	138.1	237.3
Median Total Number of Jail Days	120	36	157
Mean Total Cost of Jail *	$43,163	$30,390	$52,196
Median Total Cost of Jail *	$26,400	$7,920	$34,540

* Cost estimates do not include cost of prison stay

[23] Overall rates and rates by year were adjusted to control for age eligibility. See Methods section for more details.

Figure 3.3
Jail Stays by Exiter Type

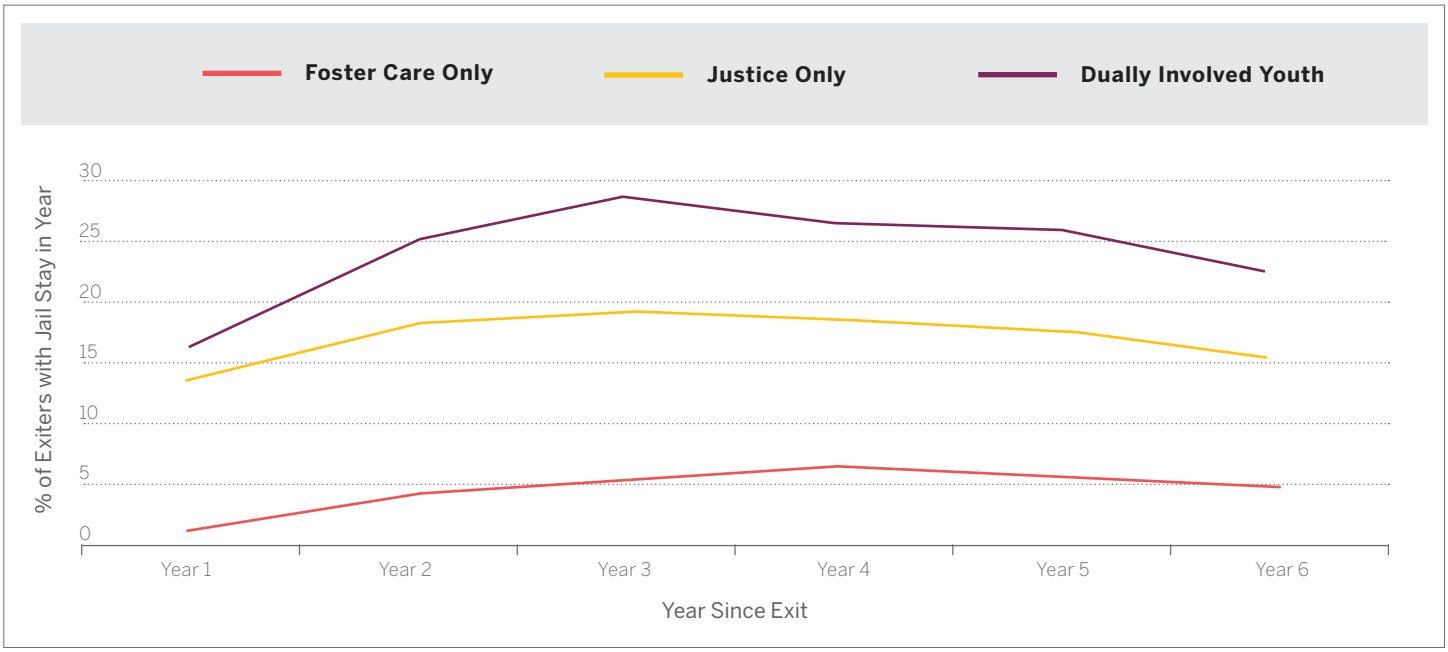


Table 3.3.2
Top 5 Admission Charges for each Exiter Type

JUSTICE		FOSTER CARE		DUALLY INVOLVED	
Charge	% of Stays	Charge	% of Stays	Charge	% of Stays
Robbery 2	6.3	Assault 3	7.5	Sale of Controlled Substance 3	6.4
Sale of Controlled Substance 3	5.8	Robbery 2	6.7	Robbery 1	5.9
Robbery 1	5.6	Sale of Controlled Substance 3	6.1	Assault 3	5.7
Assault 3	5.1	Robbery 1	4.7	Robbery 2	5.6
Possession of Controlled Substance	4.8	Possession of Controlled Substance	4.4	Court Order	4.3

FAMILY HOMELESS SHELTER STAYS

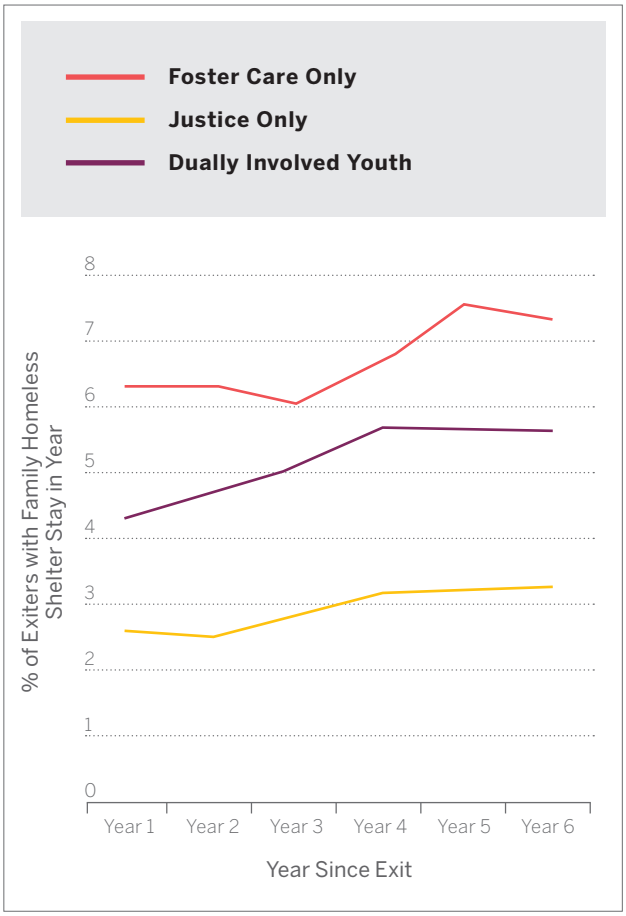
Table and Figure 3.4 show the overall rates of involvement in the family homeless shelter system over the full six years after discharge, as well as a year-by-year summary. The foster care group has the highest utilization of family shelter. Most families in the shelter system are single mothers with children and therefore, because the foster care group is almost half female, while the justice and dually involved groups are less than twenty percent female this would be expected. What is more surprising is that even though the dually involved group has a much lower percentage of females, the percent who have a stay in family shelter is not much lower than the foster care group. These rates are also related to the high birth rate that is discussed in the section on inpatient hospital stays. This also explains the increase in family shelter involvement throughout years one to six of the outcome period as the increase in age likely also corresponds to an increase in childbirth.

All three groups have a high rate of individuals with multiple stays in family shelter. Only 30-40% of all three groups have just one stay within the six years and in the foster care and dually involved groups, over a quarter of individuals have four or more stays over the six years. This speaks to the high rate of re-entry among homeless families and of the difficulty of achieving housing stability once a family becomes homeless. Although the dually involved group has the same average number of stays for those who enter family shelter as the other groups, their stays are, on average, shorter leading to slightly lower cumulative durations and therefore, average costs.

Table 3.4
Family Shelter Stays in Six Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Had Family Shelter Stay (%)	9.3	20	16.0
Mean Length of Family Shelter Stay (days)	101.4	98.8	85.1
Median Length of Family Shelter Stay (days)	17	17	15
Mean Number of Family Shelter Stays	2.6	2.9	3.1
Median Number of Family Shelter Stays	2	2	2
Number of Family Shelter Stays (%)			
1 Stay	41.9	39.4	33.9
2 Stays	22.0	21.0	26.1
3 Stays	14.4	14.2	14.7
4 or more Stays	21.7	25.4	25.3
Mean Total Number of Family Shelter Days	252.8	279.0	247.8
Median Total Number of Family Shelter Days	148	203	145
Mean Total Cost of Family Shelter	$25,306	$27,932	$24,812
Median Total Cost of Family Shelter	$14,818	$20,324	$14,517

Figure 3.4
Family Homeless Shelter Stays by Exiter Type



SINGLE ADULT HOMELESS SHELTER STAYS

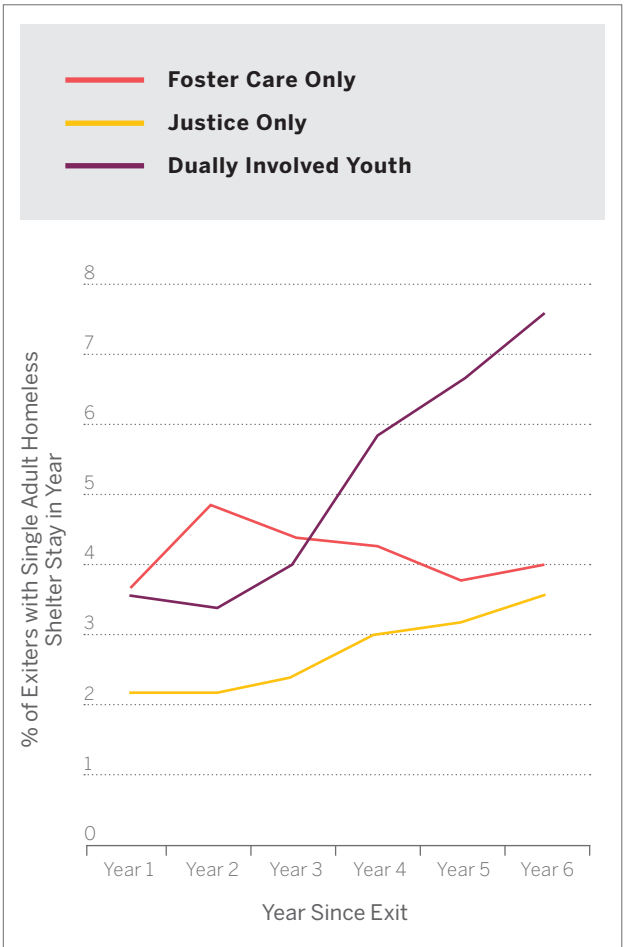
Table and Figure 3.5 show the overall rates of single adult shelter involvement over the full six years after discharge, as well as a year-by-year summary.[24] The dually involved group has the highest utilization of the single adult shelter system during the six years, followed by the foster care group. This is often a more transient population than those who enter the family shelter system, and this is reflected by the shorter shelter stays on average and shorter overall duration. Additionally, all three groups have a higher percentage of individuals who only have one stay in this system, compared to those who enter the family shelter system. However, about 20% of the foster care group, 12% of the dually involved group, and 10% of the justice group have four or more stays in the single adult shelter system over the six-year period. Of those who have a single adult homeless shelter stay, the foster group has the highest cumulative cost as they have the longest duration per stay on average, as well as the most stays.

Although the foster care and justice groups have a fairly steady involvement rate over the six years, the rate for the dually involved group increases over the six years.

Table 3.5
Single Adult Shelter Stays in Six Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Had Single Adult Shelter Stay (%)	5.9	7.6	10.8
Mean Length of Single Adult Shelter Stay (days)	48.8	66	46.1
Median Length of Single Adult Shelter Stay (days)	6	16	8
Mean Number of Single Adult Shelter Stays	1.8	2.7	2.1
Median Number of Single Adult Shelter Stays	1	1	1
Number of Single Adult Shelter Stays (%)			
1 Stay	68.1	55.1	61.6
2 Stays	15.2	17.4	19.7
3 Stays	6.2	7.9	6.9
4 or more Stays	10.4	19.6	11.8
Mean Total Number of Single Adult Shelter Days	57.1	80.2	54.7
Median Total Number of Single Adult Shelter Days	8	20	12
Mean Total Cost of Single Adult Shelter	$4,201	$5,900	$4,026
Median Total Cost of Single Adult Shelter	$589	$1,473	$883

Figure 3.5
Single Adult Homeless Shelter Stays by Exiter Type



[24] Overall rates and rates by year were adjusted to control for age eligibility. See Methods section for more details.

$ CASH ASSISTANCE RECEIPT

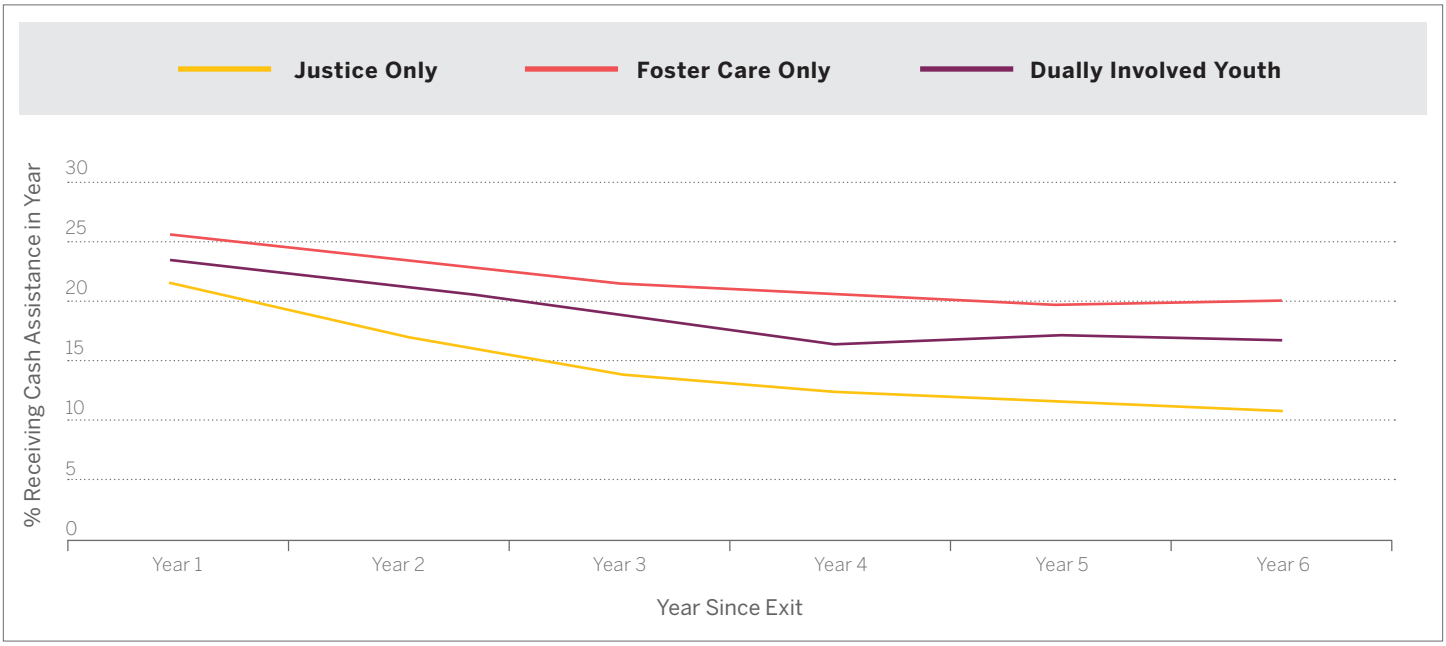
Table and Figure 3.6 show the overall rates of cash assistance receipt over the full six years after discharge, as well as a year-by-year summary. Almost half of the dually involved group utilized cash assistance at some point during the six-year outcome period, while slightly lower proportions of the justice and foster care groups utilized cash assistance. Of those who received cash assistance, however, the foster care group had the longest duration of utilization and therefore, the highest cost on average.

For all three groups, utilization decreased over the six-year outcome period. The justice group went from 14.6% to 10.9% over the six years, the dually involved went from 23.4% to 16.8%, and the foster care group went from 25.4% to 20%.

Table 3.6
Cash Assistance Utilization in Six Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Received Cash Assistance (%)	35.6	42.2	46.5
Mean Months of Cash Assistance receipt	14.7	20.3	13.0
Median Months of Cash Assistance receipt	9.3	15.9	8.4
Mean Total Cost of Cash Assistance	$11,046	$15,317	$9,790
Median Total Cost of Cash Assistance	$7,003	$11,973	$6,325

Figure 3.6
Cash Assistance Receipt by Exiter Type



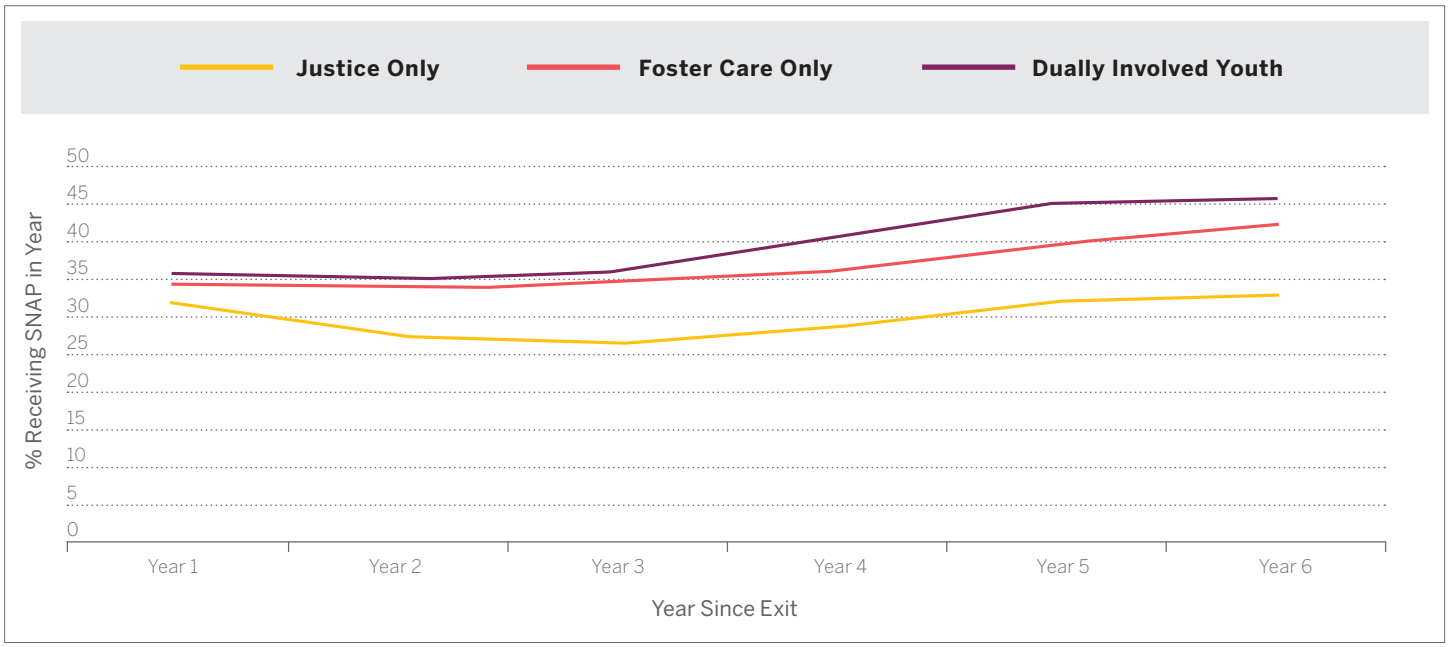
SNAP RECEIPT

Table and Figure 3.7 show the overall rates of SNAP receipt over the full six years after discharge, as well as a year-by-year summary. All three groups had high rates of SNAP utilization; the dually involved group had the highest rate at 68.6%, followed by the foster care group at 57.0%, and the justice group at 52.5%. Additionally, all three groups received SNAP benefits for over two years on average, but the foster care group had a slightly longer duration at 31.3 months and therefore, had the highest costs. Unlike for cash assistance, SNAP utilization increased over the six-year period for the foster care and dually involved groups. For the justice group, utilization decreased initially, but then increased in the later years of the outcome period.

Table 3.7
SNAP Utilization in Six Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Received SNAP (%)	52.5	57.0	68.6
Mean Months of SNAP receipt	25.0	31.3	24.8
Median Months of SNAP receipt	21.4	29.9	21.2
Mean Total Cost of SNAP	$5,159	$6,262	$4,951
Median Total Cost of SNAP	$4,280	$5,980	$4,240

Figure 3.7
SNAP Receipt by Exiter Type



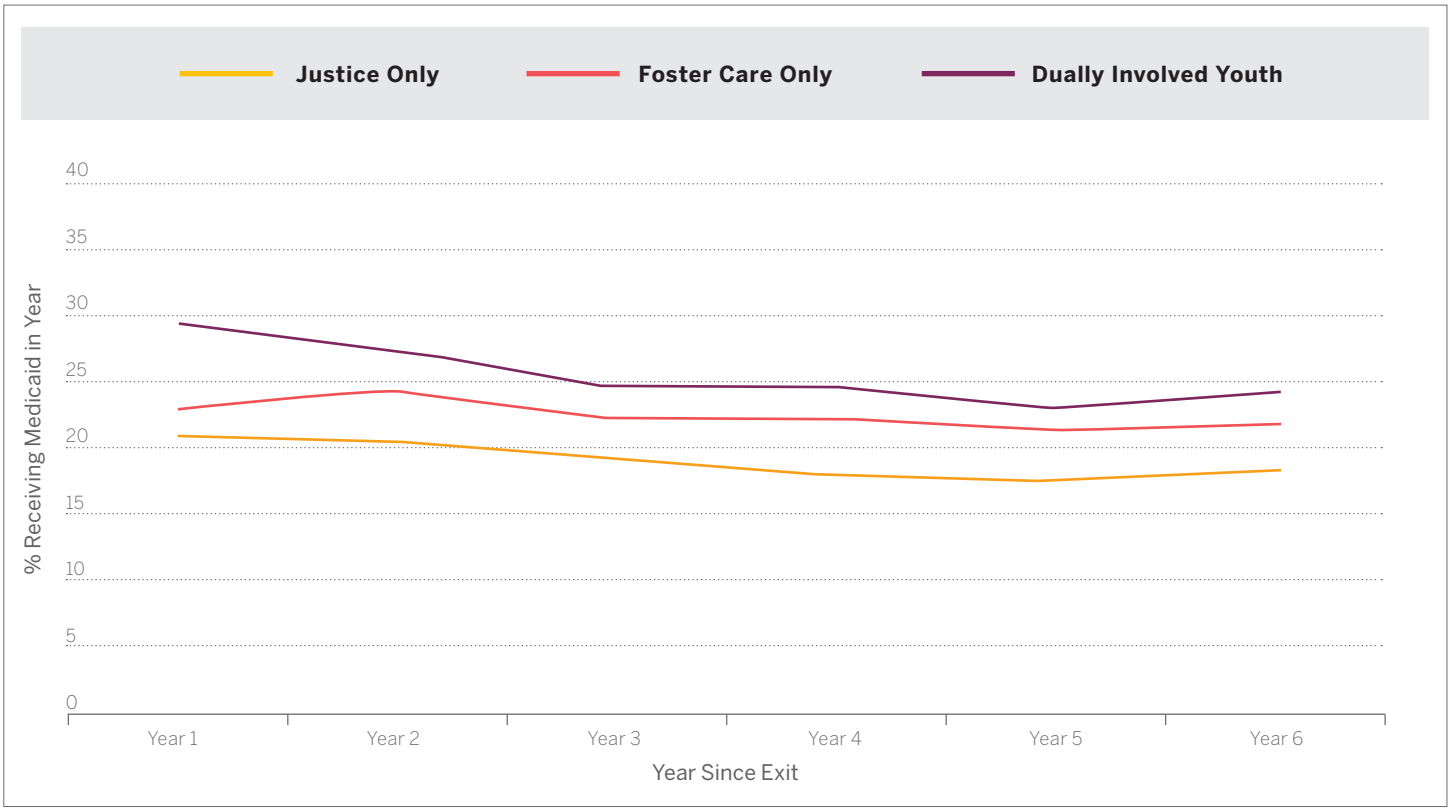
MEDICAID RECEIPT

Table and Figure 3.8 show the overall rates of Medicaid receipt over the full six years after discharge, as well as a year-by-year summary. Rates of Medicaid receipt are also high for these three groups, with 72.3% of the dually involved receiving Medicaid at some point during the six years, 60.6% of the foster care group receiving it, and 54.5% of the justice group. Those who received Medicaid had similar durations of use among the three groups, with all three groups receiving Medicaid for around a year on average. Rates of Medicaid receipt decrease slightly over the six-year period.

Table 3.8
Medicaid Utilization in Six Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Received Medicaid (%)	54.5	60.6	72.3
Mean Months of Medicaid receipt	14.4	15.8	14.0
Median Months of Medicaid receipt	11.6	12.1	11.7

Figure 3.8
Medicaid Receipt by Exiter Type



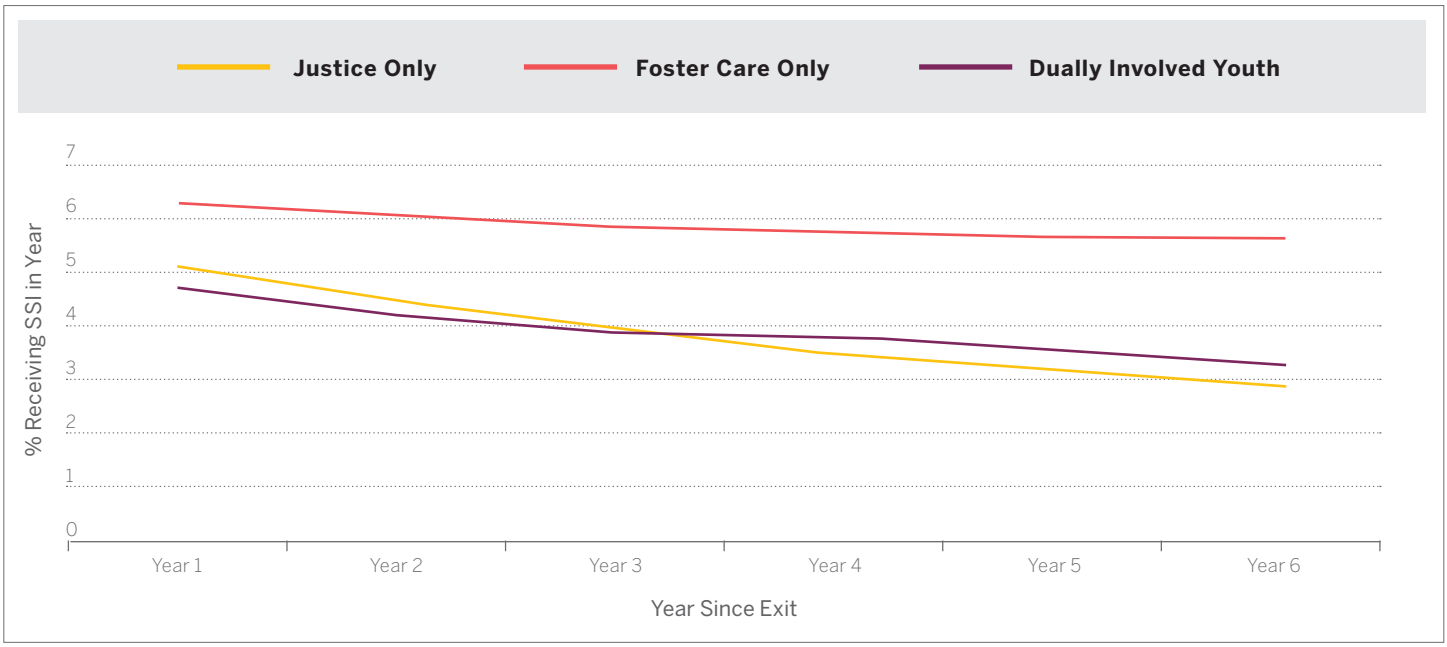
SUPPLEMENTAL SECURITY INCOME (SSI)

Table and Figure 3.9 show the overall rates of SSI receipt over the full six years after discharge, as well as a year-by-year summary. Utilization of SSI was relatively low in all three groups; since only disabled and elderly populations are eligible for SSI and the majority of recipients qualify based on age, it is expected that this rate will be low. Additionally, because individuals who qualify for SSI based on a disability are likely to have a lifelong condition, the rates of SSI utilization over the six years are fairly steady. The average total duration of SSI receipt is also relatively high as individuals do not often stop receiving SSI once they have become eligible.

Table 3.9
SSI Utilization in Six Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Received SSI (%)	6.5	8.5	7.0
Mean Months of SSI receipt	35.1	43.2	31.8
Median Months of SSI receipt	32.2	46	28.5
Mean Cost of SSI (per user)	$26,727	$32,863	$24,217
Median Cost of SSI (per user)	$24,504	$35,006	$21,689

Figure 3.9
SSI Receipt by Exiter Type



INPATIENT HOSPITAL STAYS

Table 3.10.1 and Figure 3.10 show the overall rates of inpatient hospital stays over the full six years after discharge, as well as a year-by-year summary. Additionally, Tables 3.10.2 and 3.10.3 report information about the top primary diagnostic group for each group by gender. The foster care group had the highest utilization of the three groups, followed closely by the dually involved group with almost a quarter with an inpatient stay during the six-year outcome period. The groups also had high rates of emergency department use that led to inpatient stays, with both the foster care and dually involved groups at approximately 19%.

High rates of inpatient stays for childbirth were seen in all three groups, particularly for the dually involved group, in which over 40% of the females had an inpatient stay for childbirth. Rates of psychiatric inpatient stays were also notable with approximately 5-6% of the foster care and dually involved groups experiencing an inpatient stay for psychiatric reasons. These rates are also reflected in the lists of top diagnostic categories; almost all of the top diagnostic categories for all three groups were related to pregnancy and childbirth (for females) and mood disorders, psychotic disorders, and other psychiatric disorders (for males). On average, the inpatient stays were relatively short, with an average of about a week for all three groups.

Although there were a small number of individuals who died during an inpatient stay, these rates were very low across all three groups, with the highest rate for the dually involved group at 0.3%.

Table 3.10.1
Inpatient Stays in Five Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Had Inpatient Stay (%)	15.5	27.2	24.9
Emergency Department Visit Resulting in Inpatient Services (%)	11.7	19.0	18.5
Inpatient Stay for Childbirth (%) [Females only]	24.7	28.5	40.9
Psychiatric Inpatient Stay (%)	3.7	5.6	5.4
Inpatient Stay Resulting in Death (%)	0.2	0.1	0.3
Mean Length of Inpatient Stay (days)	7.1	7.1	6.6
Median Length of Inpatient Stay (days)	3	3	3
Mean Number of Inpatient Stays	1.9	2.1	1.8
Median Number of Inpatient Stays	1	1	1
Number of Inpatient Stays (%)			
1 Stay	65.2	54.3	60.6
2 Stays	18.1	23.5	23.0
3 Stays	7.5	10.5	7.8
4 or more Stays	9.2	11.7	8.6
Mean Total Number of Inpatient Days	13.3	14.9	11.9
Median Total Number of Inpatient Days	11	4	4
Mean Total Inpatient Cost	$38,123	$40,800	$33,993
Median Total Inpatient Cost	$14,703	$15,015	$15,960

Figure 3.10
Inpatient Stays by Exiter Type

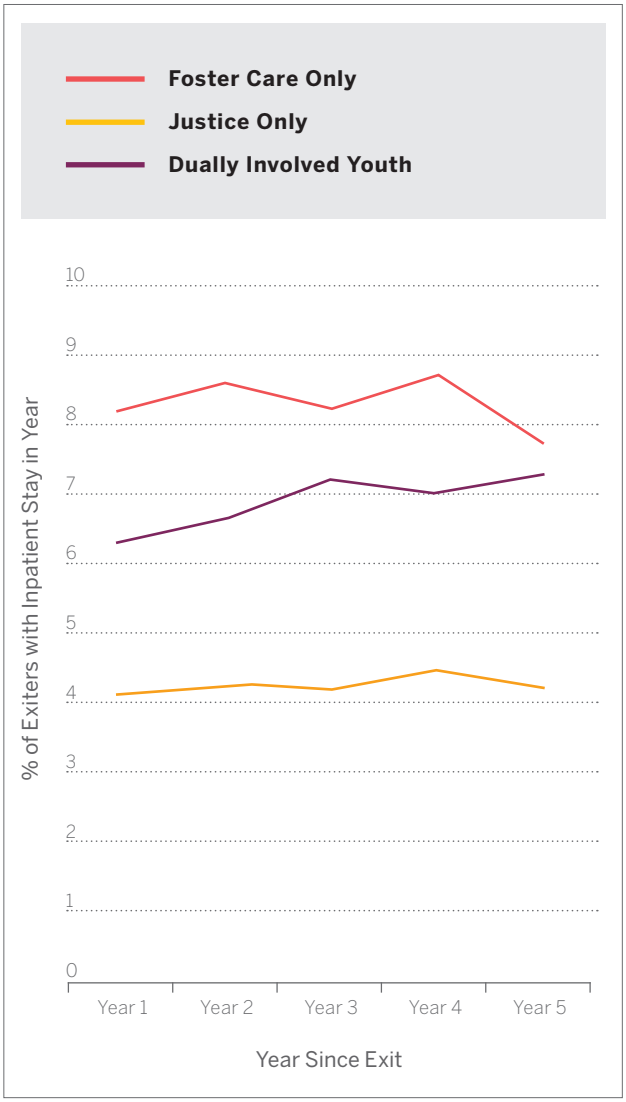


Table 3.10.2
Top 5 Diagnostic Categories* for Inpatient Stays by Exiter Type for Males

JUSTICE		FOSTER CARE		DUALLY INVOLVED	
Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis
1. Schizophrenia and other psychotic disorders	11.5	1. Mood disorders	15.9	1. Mood Disorders	14.0
2.Mood disorders	10.3	2. Schizophrenia and other psychotic disorders	11.3	2. Schizophrenia and other psychotic disorders	9.9
3. Substance-related disorders	5.8	3. Substance-related disorders	6.0	3. Attention-deficit/ conduct/disruptive behavior disorders	6.3
4. Crushing injury or internal injury	5.5	4. Asthma	4.8	4. Skull and face fractures	5.7
5. Skull and face fractures	5.1	5. Attention-deficit/ conduct/disruptive behavior disorders	4.7	5. Crushing injury or internal injury	4.9

* Defined by Clinical Classifications software for ICD-9, developed by the Agency for Healthcare Research and Quality

Table 3.10.3
Top 5 Diagnostic Categories* for Inpatient Stays by Exiter Type for Females

JUSTICE		FOSTER CARE		DUALLY INVOLVED	
Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis
1. Other complications of pregnancy	10.4	1. Other complications of pregnancy	9.4	1. Other complications of birth; puerperium affecting management of mother	10.7
2.Mood disorders	8.6	2. Mood Disorders	8.9	2. Other complications of pregnancy	10.1
3. Other complications of birth; puerperium affecting management of mother	7.7	3. Other complications of birth; puerperium affecting management of mother	8.0	3. Mood Disorders,	7.3
4. OB-related trauma to perineum and vulva	7.1	4. OB-related trauma to perineum and vulva	7.7	3. Diabetes mellitus with complications	
5. Prolonged pregnancy	4.4	5. Early or threatened labor	4.5	5. OB-related trauma to perineum and vulva	6.8

* Defined by Clinical Classifications software for ICD-9, developed by the Agency for Healthcare Research and Quality

AMBULATORY SURGERY HOSPITAL VISITS

Table 3.11.1 and Figure 3.11 show the overall rates of ambulatory surgery visits over the full six years after discharge, as well as a year-by-year summary. Additionally, Tables 3.11.2 and 3.11.3 report information about the top primary diagnoses for each group. As expected, rates of ambulatory surgery visits were relatively low in all three groups, with the highest rate in the foster care group at 7.2%. Additionally, the large majority of all three groups had just one ambulatory surgery visit over the six years.

For all three groups for females, almost all of the top diagnostic categories were related to pregnancy and childbirth. The top diagnostic categories for the males were similar across all three groups and included several categories related to injuries.

Table 3.11.1
Ambulatory Surgery Visits in Five Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Had Ambulatory Surgery Visit (%)	4.0	7.2	4.8
Mean Number of Ambulatory Surgery Visits	1.3	1.4	1.4
Median Number of Ambulatory Surgery Visits	1	1	1
Number of Ambulatory Surgery Visits (%)			
1 Visit	82.5	77.8	82.7
2 Visits	11.8	15.2	11.5
3 Visits	3.2	3.1	1.0
4 or more Visits	2.5	3.9	4.8
Mean Total Ambulatory Surgery Cost	$4,883	$3,767	$4,668
Median Total Ambulatory Surgery Cost	$3,240	$1,780	$3,577

Figure 3.11
Ambulatory Surgery Visits by Exiter Type

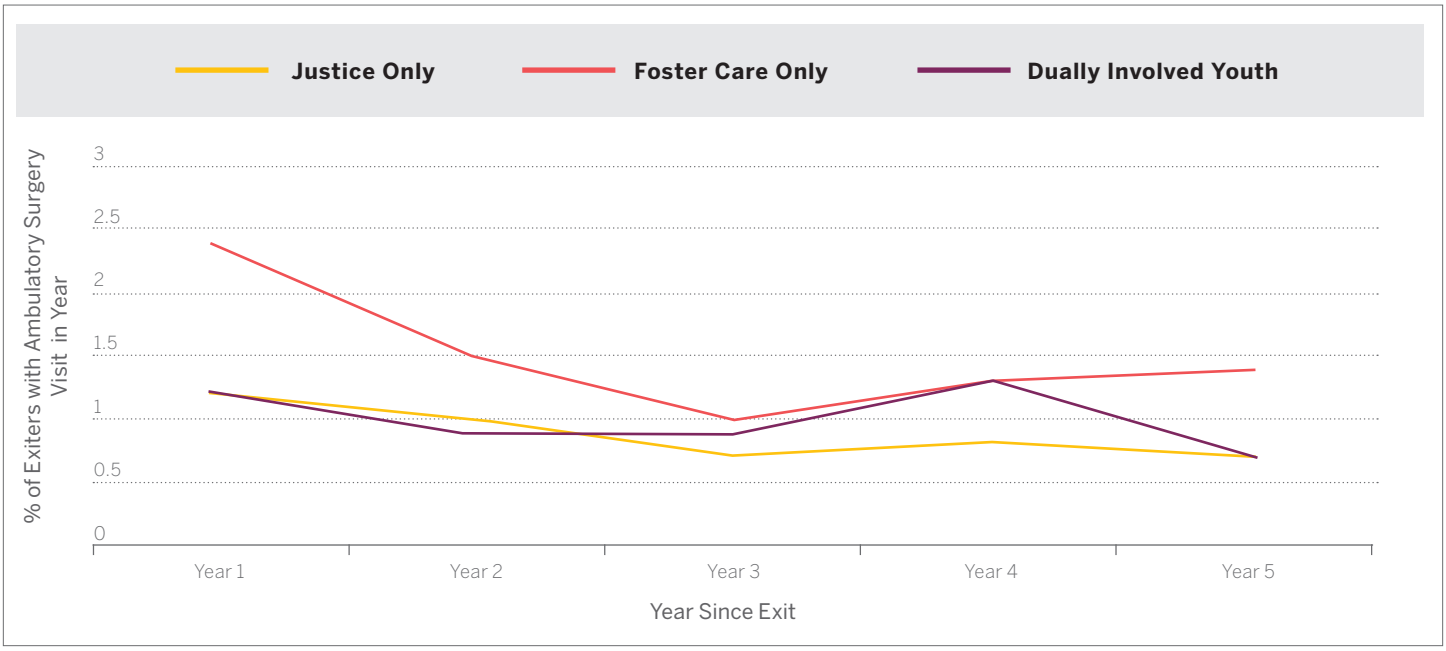


Table 3.11.3
Top 5 Diagnostic Categories* for Ambulatory Surgery Visits by Exiter Type for Males

JUSTICE		FOSTER CARE		DUALLY INVOLVED	
Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis
1. Fracture of upper limb	6.1	1. Sprains and strains	4.9	1. Disorders of teeth and jaw	7.7
2. Open wounds of extremities	5.2	2. Disorders of teeth and jaw	4.4	2. Joint disorders and dislocations; trauma-related 2. Sprains and strains 2. Open wounds of head; neck; and trunk 2. Open wounds of extremities	4.9
3. Sprains and strains	4.7	3. Open wounds of extremities	4.4		
4. Joint disorders and dislocations; trauma-related	4.3	4. Other skin disorders	4.0		
5. Superficial injury; contusion	4.1	5. Other connective tissue disease 5. Superficial injury; contusion 5. Other aftercare	3.5		

* Defined by Clinical Classifications software for ICD-9, developed by the Agency for Healthcare Research and Quality

Table 3.11.3
Top 5 Diagnostic Categories* for Ambulatory Surgery Visits by Exiter Type for Females

JUSTICE		FOSTER CARE		DUALLY INVOLVED	
Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis
1. Other complications of pregnancy	8.4	1. Early or threatened labor	10.7	1. Early or threatened labor	18.6
2.Early or threatened labor	6.8	2. Other complications of pregnancy	7.3	2. Spontaneous abortion 2. Other complications of pregnancy	4.8
3. Normal pregnancy and/or delivery	6.3	3. Normal pregnancy and/or delivery	6.1	3. Normal pregnancy and/or delivery, 3. Abdominal pain	4.0
4. Other female genital disorders	4.7	4. Disorders of teeth and jaw	3.8		
5. Spontaneous abortion	3.8	5. Abdominal pain 5. Spontaneous abortions	2.9		

* Defined by Clinical Classifications software for ICD-9, developed by the Agency for Healthcare Research and Quality

ER EMERGENCY DEPARTMENT HOSPITAL VISITS

Table 3.12.1 and Figure 3.12 show the overall rates of emergency department visits over the full six years after discharge, as well as a year-by-year summary. Additionally, Tables 3.12.2 and 3.12.3 report information about the top primary diagnoses for each group. A very large percentage of all three groups had an emergency department visit over the six years of the outcome period. The dually involved group had the highest utilization at 65%, followed by the foster care group at 57.1%, and the justice group at 48.2%. Additionally, of those who had emergency room visits, almost half of the foster care group, 40.4% of the dually involved group, and 35.0% of the justice group had four or more emergency department visits.

The dually involved group also had the highest rate of emergency department use for psychiatric issues at 13.2%, followed by the foster care group at 11.5%, and 7.7% for the justice group. Similar diagnostic categories appeared in the top five for all three groups, including complications related to pregnancy and abdominal pain (for females) and injuries (for males and females).

Table 3.12.1
Emergency Department Visits in Five Years after Exit for each Exiter Type

	JUSTICE	FOSTER CARE	DUALLY INVOLVED
N	21,194	5,337	2,172
Had Emergency Department Visit (%)	48.2	57.1	65.0
Psychiatric Emergency Department Visit (%)	7.7	11.5	13.2
Emergency Department Visit Resulting in Death (%)	0.2	0.1	0.2
Mean number of Emergency Department Visits	3.8	5.5	4.4
Median number of Emergency Department Visits	2	3	3
Number of Emergency Department Visits (%)			
1 Visit	31.2	22.8	27.6
2 Visits	20.4	15.9	17.9
3 Visits	13.4	12.5	14.2
4+ Visits	35.0	48.8	40.4
Mean Total Emergency Department Cost	$3,644	$5,102	$4,332
Median Total Emergency Department Cost	$2,199	$2,918	$2,504

Figure 3.12
Emergency Department Visits by Exiter Type

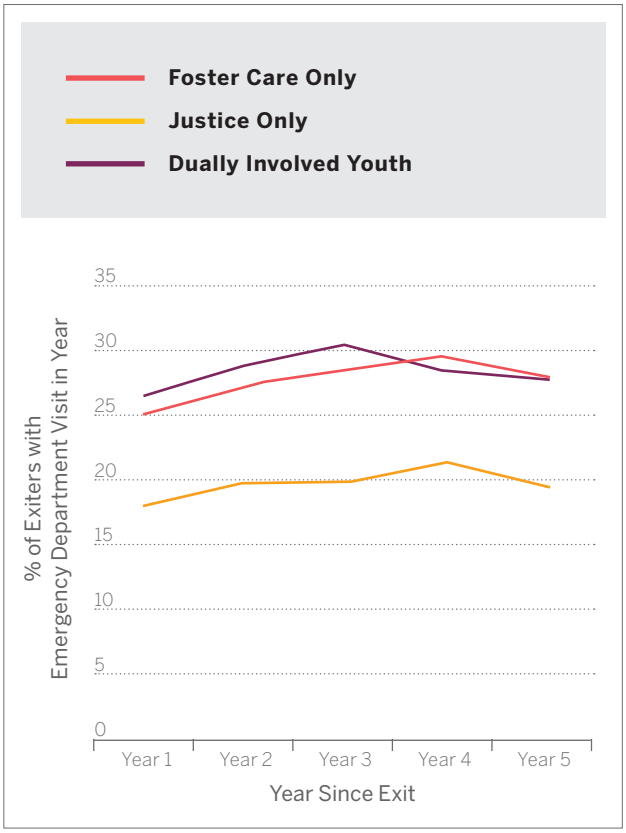


Table 3.12.2
Top 5 Diagnostic Categories* for Emergency Department Visits by Exiter Type for Males

JUSTICE		FOSTER CARE		DUALLY INVOLVED	
Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis
1. Superficial injury; contusion	7.4	1. Superficial injury; contusion	6.2	1. Superficial injury; contusion	7.2
2.Open wounds of head; neck; and trunk	6.0	2. Other upper respiratory infections	4.9	2. Open wounds of head; neck; and trunk	5.8
3. Open wounds of extremities	5.5	3. Asthma	4.7	3. Open wounds of extremities	5.4
4. Crushing injury or internal injury	4.6	4. Sprains and strains	4.3	4. Other upper respiratory infections	4.7
5. Other upper respiratory infections	4.4	5. Open wounds of head; neck; and trunk	4.2	5. Other injuries and conditions due to external causes	4.5

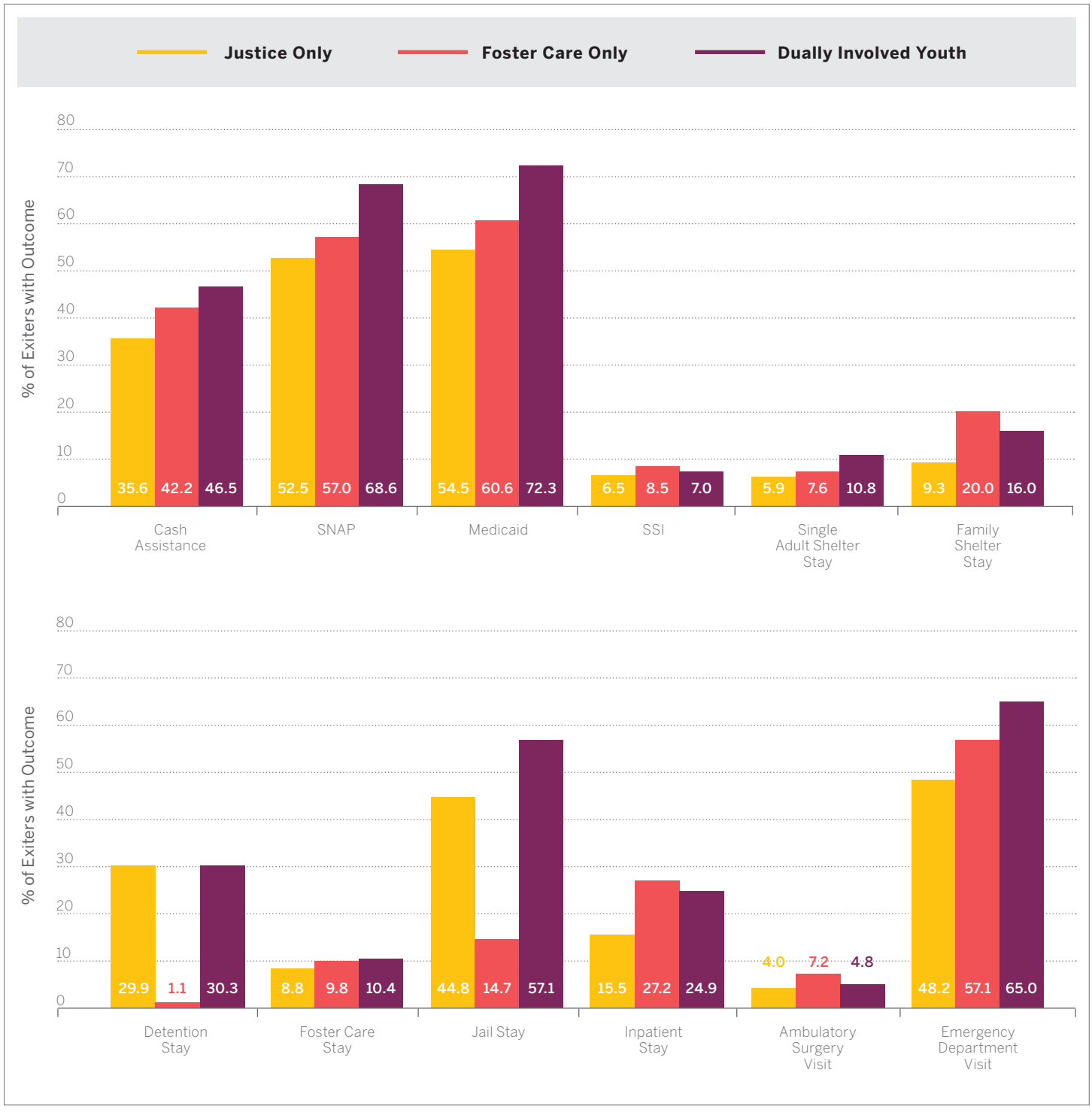
* Defined by Clinical Classifications software for ICD-9, developed by the Agency for Healthcare Research and Quality

Table 3.12.3
Top 5 Diagnostic Categories* for Emergency Department Visits by Exiter Type for Females

JUSTICE		FOSTER CARE		DUALLY INVOLVED	
Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis	Diagnostic Category	% stays with primary diagnosis
1. Other complications of pregnancy	9.9	1. Other complications of pregnancy	10.5	1. Other complications of pregnancy	11.0
2.Abdominal pain	6.3	2. Abdominal pain	6.7	2. Abdominal pain	5.6
3. Other upper respiratory infections	4.6	3. Other upper respiratory infections	4.8	3. Superficial injury; contusion	4.9
4. Superficial injury; contusion	4.2	4. Superficial injury; contusion	3.4	4. Other upper respiratory infections	4.4
5. Asthma	3.5	5. Other female genital disorders	3.3	5. Inflammatory diseases of female pelvic organs	3.6

* Defined by Clinical Classifications software for ICD-9, developed by the Agency for Healthcare Research and Quality

Figure 3.3
Summary of Outcomes in Individual Domains in Years 1-6



Note: Detention stays are only reported for Year 1 and 2. Inpatient stays, ambulatory visits, and emergency department visits are only reported for Years 1 through 5.

4 Multi-system Outcomes

Figure 4.1 details system involvement in five domains across the three groups. The five domains aggregate the multiple systems to gauge the number of different types of services each group is accessing after discharge, as well as to account for the transition within domains between juvenile and adult systems.

THE DOMAINS ARE CATEGORIZED AS FOLLOWS:

The foster care and justice groups had strikingly similar rates of involvement with one or more domains, two or more domains, three or more domains, four or more domains, and all five domains. Over three-quarters of both groups were involved in at least one domain during the six-year outcome period, almost 60% were involved in two or more domains, almost a third were involved with three or more domains, less than ten percent were involved in four or more domains, and less than one percent were involved in all five domains.

The dually involved group had even higher rates of service use, both overall and across multiple domains. Almost 94% of the dually involved group were involved with at least one domain over the six-year outcome period, almost 80% were involved with two or more domains, almost 50% were involved in three or more domain, 13% were involved in four or more domains, and 0.6% were involved in all five domains. This signifies the overlap in the foster care and justice outcomes that the dually involved group continues to experience, as they have high rates of utilization in both the systems that the foster care group utilizes the most and the systems that the justice group utilizes the most, resulting in very high overall utilization and multi-domain utilization.

Figure 4.1
Summary of Service Use Across Multiple Domains in Years 1-6

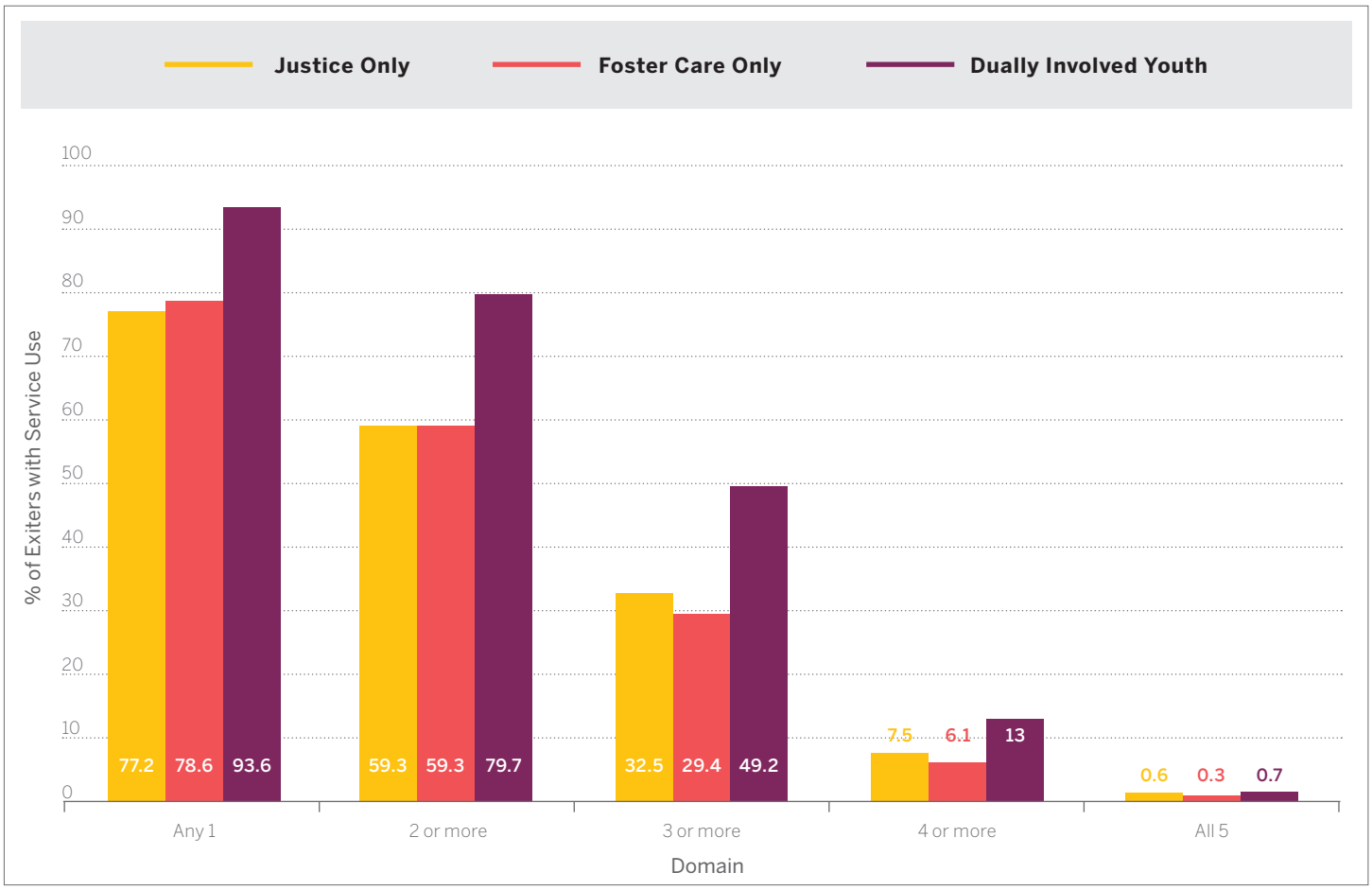


Figure 4.2 reports the cumulative cost for the three groups for all systems. It includes all individuals in every group, even those without service use so that it can account for the differences in rates of service utilization among the groups. Again, because the dually involved group overlaps in its utilization patterns with both the foster care and justice groups, it has high service use in multiple systems, resulting in the highest average cumulative cost over the outcome period. In fact, the average cumulative cost for the dually involved group was 40% higher than both the foster care and justice groups which both had similar average cumulative costs.

Figure 4.2
Average Cumulative Cost of Services Used in Years 1-6

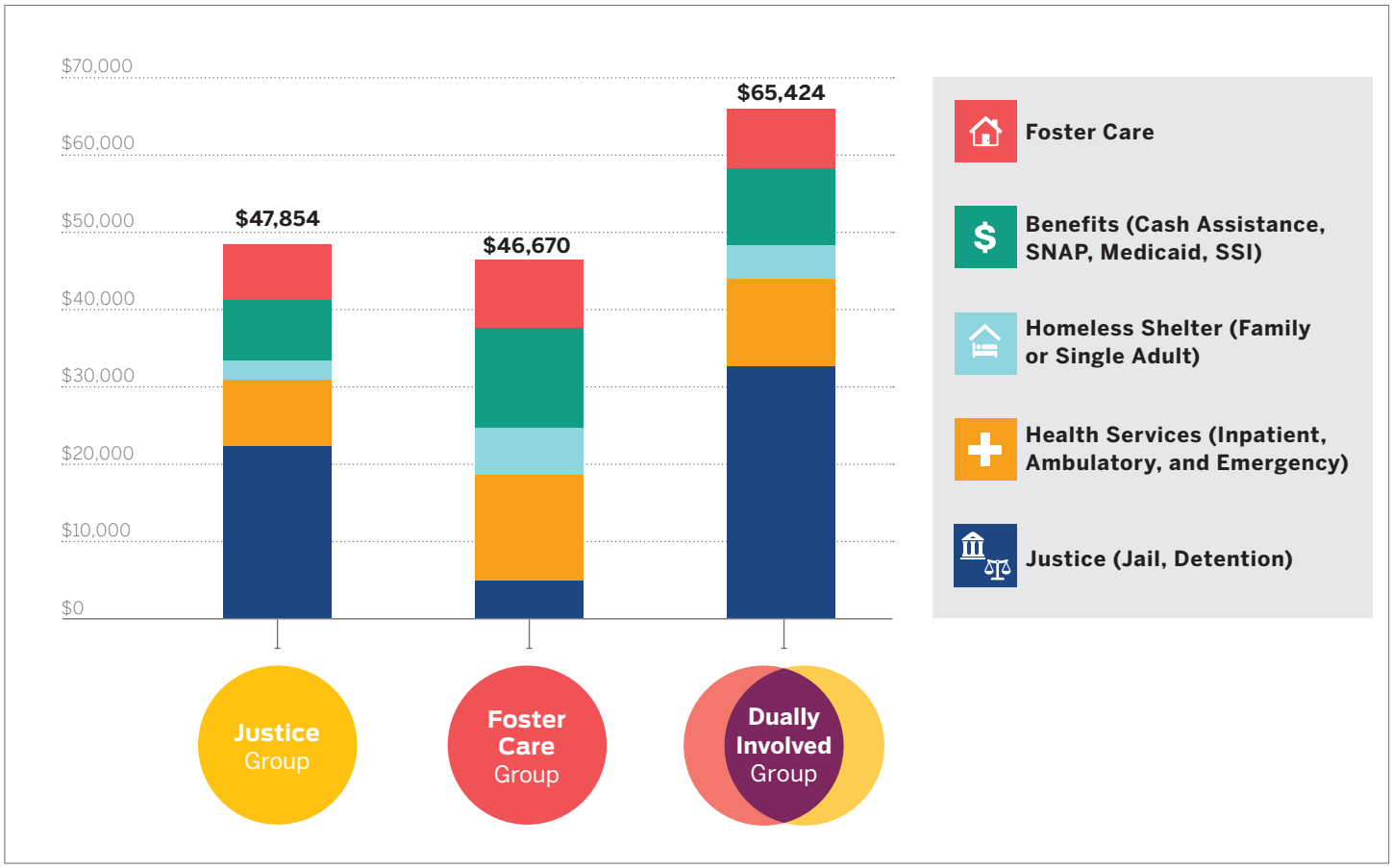


Figure 4.3 examines how much of the cumulative cost for each group is consumed by each quartile of users. The quartiles of highest users for the foster care and justice groups comprise over three-quarters of the cumulative cost, the next highest quartile (Quartile 3) comprises about 20% of the cost, while Quartile 2 comprises the rest of the cost, and the final quartile does not utilize any services (and therefore, does not contribute to the cost).

The dually involved group is slightly more spread out in utilization. About two-thirds of the cost can be attributed to the top quartile, about a quarter to the next highest quartile, about 8% to Quartile 2, and about 1% to Quartile 1. This pattern reflects that the dually involved group overall has more individuals who utilize services and therefore, the cost is shared slightly more over the four quartiles, although to the large majority is still attributable the top quartile.

Figure 4.3
Total Cumulative Cost of Services Used in Years 1-6

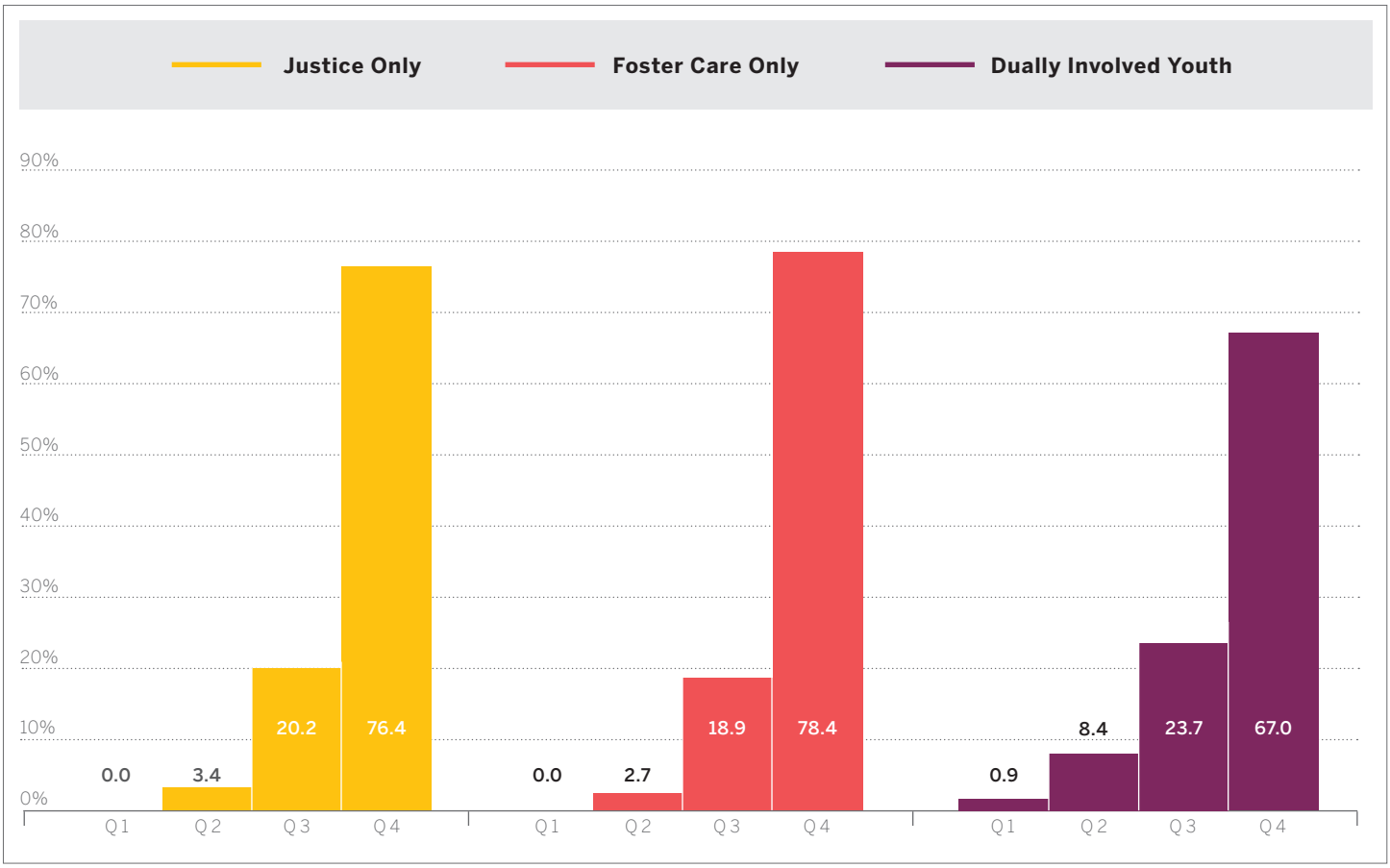
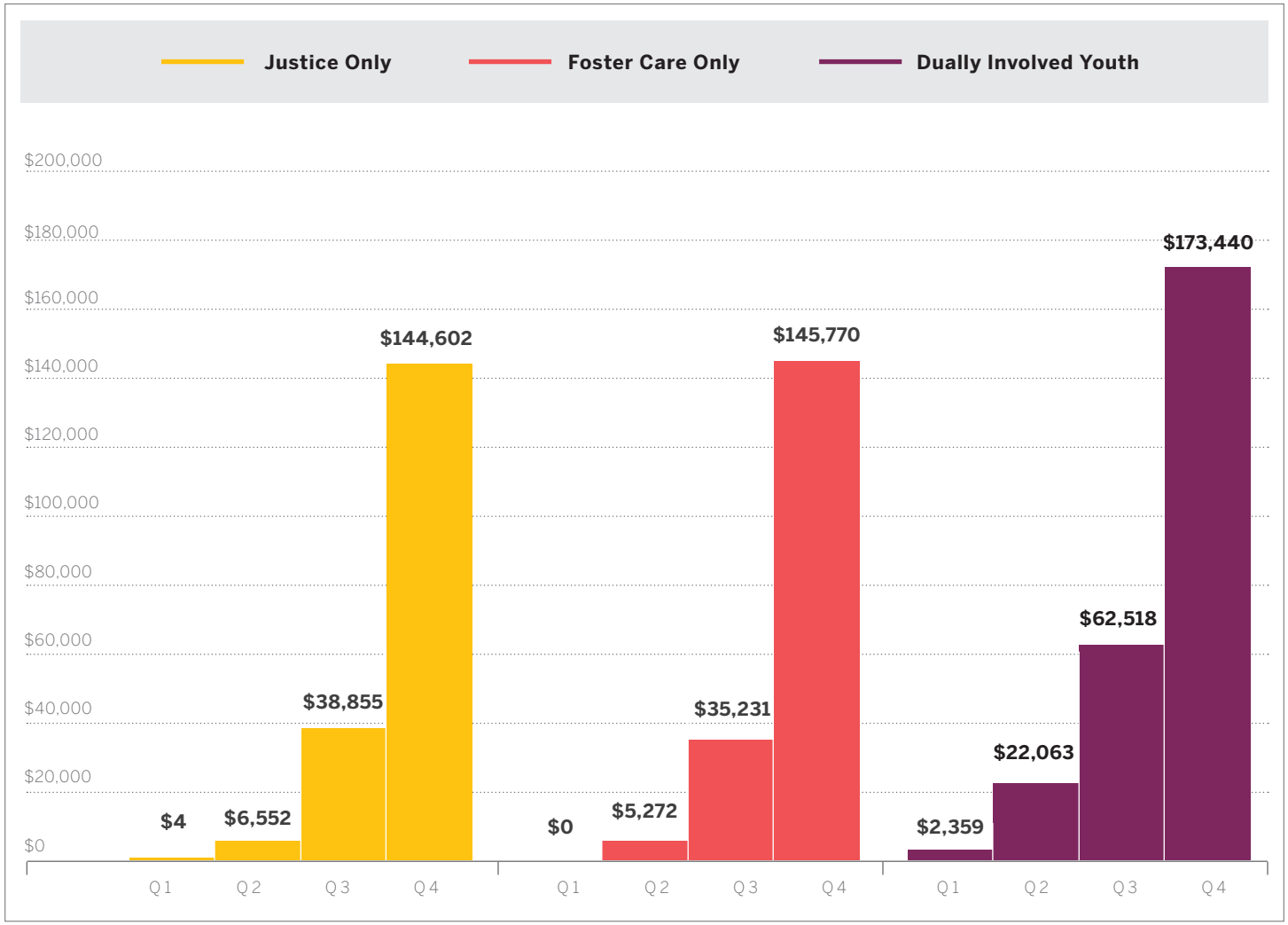


Figure 4.4. displays the differences in average cost among the quartiles for each group. The average cost for a high-cost user in the dually involved group is $173,440 over the outcome period, compared to $2,359 for a low-cost user (bottom 25%). The average cost for a high-cost user in the foster care group is $145,770 over the outcome period, compared to $0 for a low-cost user (bottom 25%). The average cost for a high-cost user in the justice group is $144,602 over the outcome period, compared to $4 for a low-cost user (bottom 25%). This confirms that the cost burden within each group is disproportionately skewed to the top quartile of users, while the lowest quartile of users have minimal to no service use cost.

Figure 4.4
Average Cost of Services Used in Years 1-6 by Quartile



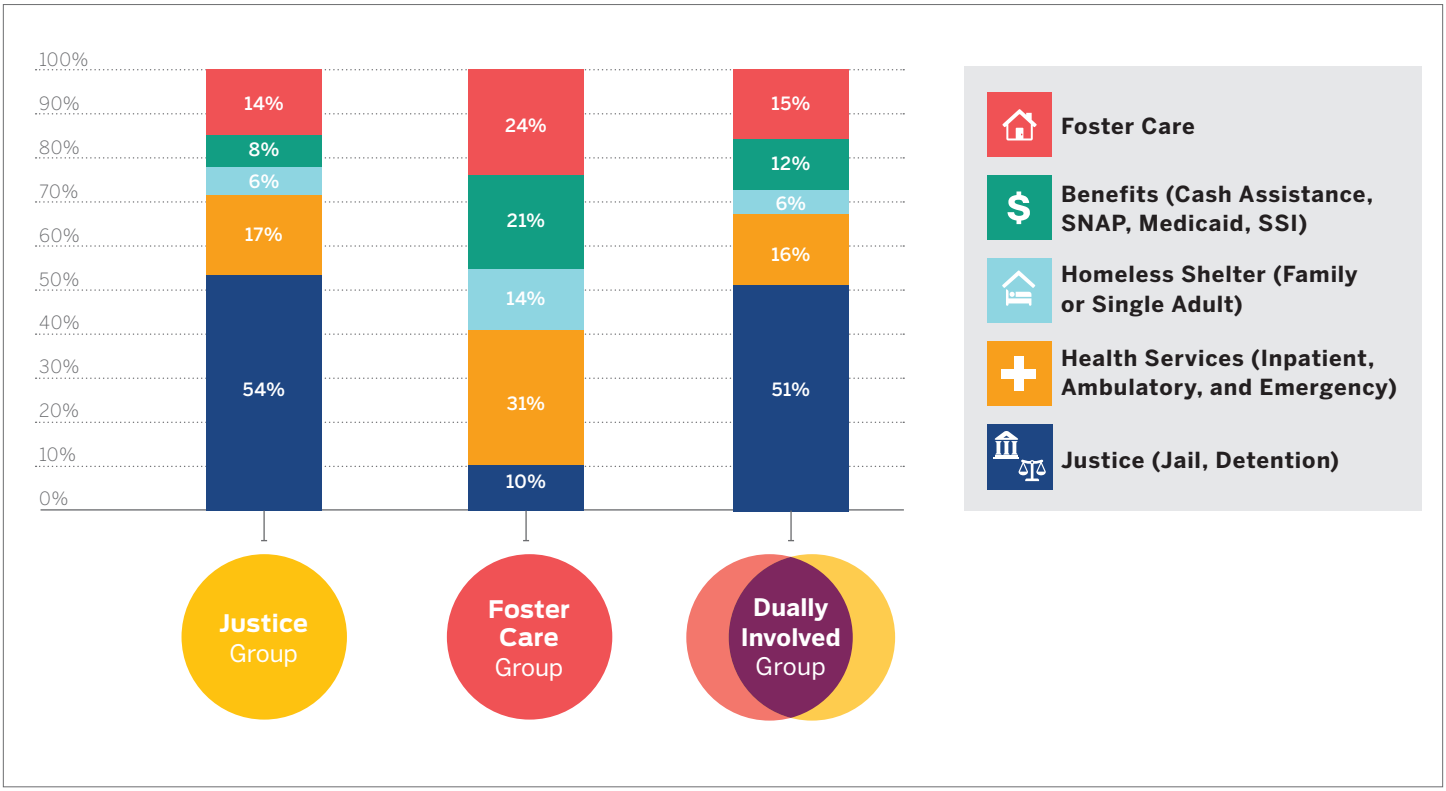
5 Risk Factors for High-Cost Service Use

As seen in the previous section, in every group (foster care, justice, and dually involved), the top 25% of service users accounted for roughly 75% of the costs within each group.

Given this skewed distribution of costs, it is useful to understand if the differences in the characteristics of high-cost users that would be helpful in service planning. Based on the data available, risk factors for being a high-cost service user (i.e., in the top quartile of service use cost) were identified for the foster care and dually involved groups using information about their foster care history, as well as demographic information. Risk factors were not identified for the justice group due to the lack of information beyond demographics that could potentially be explored as risk factors.

Figure 5.1 breaks down the cumulative costs of the high-cost users by domain. For both the dually involved and justice groups, the justice domain accounts for the largest proportion of the cumulative cost, followed by hospital use. For the foster care group, however, hospital use accounts for the largest proportion of the cumulative cost, followed closely by foster care and benefit use. These differences should be considered when interpreting the risk factors for high-cost service use below.

Figure 5.1
Percentage of Cumulative Cost by Domain for High-Cost Users



DESCRIPTION OF RISK FACTORS ASSESSED

Gender

This is the gender of the youth.

Race

This is the race/ethnicity of the youth.

Reason for Discharge from Foster Care

This is the reason for discharge for the last foster care spell that occurred during 2004 to 2006 (i.e., the spell that put the youth into the sample).

Age Entered Foster Care

This is the age at which a youth first entered the foster care system.

Age Discharged from Foster Care

This is the age at which the youth was discharged from the last foster care spell that occurred between 2004 and 2006. Based on the sample criteria, all youth had to be between the ages of 13 to 18 years old.

Type of Foster Care Placements

This variable was created from the foster care history of youth and describes which types of placements youth ever been placed at. It is presented as combinations of placements; for example, if a youth had only ever been placed in kinship care (even if there were multiple placements), she would have "kinship only" as her combination, but if someone had been placed in both kinship care and a residential placement, her combination would be kinship/residential. This variable does not take into account order of placement or length of placement.

Number of Foster Care Spells

This is the number of foster care spells that a youth has. A new foster care spell occurs based on a new allegation of abuse or neglect, or as a result of a voluntary placement or person in need of supervision (PINS) case.

Number of Movements in Foster Care

This is the number of movements that a youth has within placements. It does not count the initial placement, but instead captures transfers and other movements in care.

Length of Stay in Foster Care

This is the total number of months that a youth was in foster care for. It is the cumulative length of stay across all spells.

Type of justice involvement
(for dually involved group only)

This variable captures the justice involvement of youth in the dually involved group between 2004 and 2006. It signifies whether a youth, along with being discharged from foster care between 2004 and 2006, was also discharged from detention, jail, or detention and jail during that time.

ANALYSIS OF RISK FACTORS FOR HIGH-COST SERVICE USE

Tables 5.1 and 5.2 show the distribution of the risk factors for the high-cost users, as well as for the rest of the members of the foster care and dually involved groups.

For the foster care group, the proportion of females was higher in the high-cost users compared to the other group members. Additionally, the high-cost users had a higher proportion of youth who were discharged to reunification, aging out/another planned permanent living arrangement (APPLA), and to mental health facilities, while they had a much smaller proportion discharged to adoption.

The high-cost users also had a larger proportion of youth who had combinations of different placement types that included residential placements, and smaller proportions of placement combinations that included only foster boarding homes and kinship care.

Finally, the high-cost users had a smaller proportion of youth who had only one foster care placement, as well as a higher proportion of youth who had five or more movements in care.

Foster Care Group

Table 5.1
Descriptives of the Foster Care Group (n=5337)

		Quartiles 1-3 (n=3996)	Quartile 4 (n=1341)
Sex	Female	51.3	63.8
	Male	48.8	36.2
Race/ Ethnicity	Asian	1.2	0.8
	Black	43.2	45.7
	Hispanic	27.4	27.1
	White	4.7	4.2
	Other	5.0	4.3
	Missing	18.5	17.9
Discharge Reason	Adoption	23.3	4.0
	Aged out/APPLA	15.0	17.6
	Exit to Justice Facility	1.5	1.9
	Exit to Mental Health Facility	0.4	1.6
	Reunification	57.3	71.7
	Other	2.5	3.2
Age at Foster Care Entry	Age 1 year and under	13.6	13.7
	Age 2 to 12 years	40.8	39.2
	Age 13 to 15	33.0	36.1
	Age 16 and older	12.6	11.1
Age at Exit from Foster Care	13 to 14	23.2	23.4
	15 to 16	37.5	36.5
	17 to 18	39.3	40.1

		Quartiles 1-3 (n=3996)	Quartile 4 (n=1341)
Placement Type Combinations	Foster Boarding Home Only	22.1	15.2
	Kinship Only	10.1	5.2
	Foster Boarding Home and Kinship	19.6	14.3
	Residential Only	27.5	27.1
	Residential and Kinship	2.1	3.0
	Residential and Foster Boarding Home	11.5	21.3
	Residential, Foster Boarding Home, and Kinship	7.2	13.9
Foster Care Spells	1	71.3	63.3
	2	22.3	25.8
	3	5.2	7.8
	4	1.0	2.6
	5	0.3	0.5
Movements in Foster Care	0 movements	32.5	30.6
	1 movements	19.8	17.5
	2 movements	14.0	13.7
	3 movements	9.3	8.9
	4 movements	5.7	6.6
	5+ movements	18.8	22.8
Length of Stay in Foster Care	Less than 1 year	27.4	31.9
	1 to 3 years	23.1	25.2
	3 to 6 years	19.2	21.2
	Over 6 years	30.3	21.7

For the dually involved group, the proportion of youth who were discharged to adoption was slightly lower for the high-cost users, while exits to a justice facility were slightly higher. A larger proportion of the high-cost users exited between the ages of 13 and 14 years old. The high-cost users also had a higher proportion of youth who had had residential and foster boarding home placements, or kinship care, foster boarding home, and residential placements. They also had a smaller proportion of youth who had only one foster care placement and a smaller proportion of youth who had zero movements in care after an initial placement. Finally, the high-cost users had a higher proportion of youth who had been discharged from foster care, detention, and jail between 2004 and 2006.

Table 5.2
Descriptives of the Dually Involved Group (n=2172)

		Quartiles 1-3 (n=3996)	Quartile 4 (n=1341)
Sex	Female	17.9	20.4
	Male	82.1	79.6
Race/ Ethnicity	Asian	1.0	0.4
	Black	50.9	55.6
	Hispanic	30.6	29.3
	White	4.6	3.1
	Other	3.8	3.3
	Missing	9.1	8.4
Discharge Reason	Adoption	1.9	0.7
	Aged out/ APPLA	10.2	11.3
	Exit to Justice Facility	22.8	25.5
	Exit to Mental Health Facility	0.3	0.0
	Reunification	61.7	58.7
	Other	3.2	3.8
Age at Foster Care Entry	Age 1 year and under	8.0	9.6
	Age 2 to 12 years	20.2	26.0
	Age 13 to 15	52.3	53.5
	Age 16 and older	19.5	10.9
Age at Exit from Foster Care	13 to 14	11.3	20.2
	15 to 16	53.8	50.0
	17 to 18	35.0	29.8
Placement Type Combinations	Foster Boarding Home Only	4.0	1.1
	Kinship Only	1.5	1.5
	Foster Boarding Home and Kinship	3.0	1.6
	Residential Only	69.0	61.8
	Residential and Kinship	4.1	4.2
	Residential and Foster Boarding Home	12.0	18.7
	Residential, Foster Boarding Home, and Kinship	6.5	11.1
Foster Care Spells	1	71.3	59.6
	2	21.7	26.9
	3	5.5	9.5
	4	1.0	3.6
	5	0.5	0.4
Movements in Foster Care	0 movements	32.5	30.6
	1 movements	19.8	17.5
	2 movements	14.0	13.7
	3 movements	9.3	8.9
	4 movements	5.7	6.6
	5+ movements	18.8	22.8
Length of Stay in Foster Care	Less than 1 year	27.4	31.9
	1 to 3 years	23.1	25.2
	3 to 6 years	19.2	21.2
	Over 6 years	30.3	21.7
System Exits (2004-2006)	Foster Care and Detention	64.7	59.1
	Foster Care and Jail	23.1	24.7
	Foster Care, Detention, and Jail	12.2	16.2

Logistic regression was used in order to assess which of the characteristics described were significant risk factors for high-cost service use, while controlling for other factors. The models estimate the probability that a youth is a high-service user based on the above characteristics. Because these risks factors may differ for the foster care group versus the dually involved group, the groups were modeled separately.

Table 5.3 displays the odds ratios that resulted from the logistic regression for the foster care group. The odds ratios describe how many times greater the odds of being a high cost user are compared to the reference category for that category. An odds ratio is statistically significant when its confidence interval does not include one.

Based on these results, being female increased the odds of becoming a high-cost user for the foster care group. This is likely due to in part to the high rates of childbirth (and thus hospital costs) in the high-cost user group.

Of the females in the high-cost user group, 55% had an inpatient hospital stay resulting in childbirth, compared to only 17% of the other females in the foster care group. Additionally, being discharged to any situation other than adoption increased the odds of being a high-cost user relative to adoption. Being discharged to a mental health facility had a particularly large increase in odds; however, it should be noted that this was a very small proportion of the sample.

Psychiatric inpatient stays and emergency department visits were more prevalent during the outcome period for the high-cost group:

17% of the high-cost group had a psychiatric inpatient stay during the outcome period, compared to 2% of the rest of the foster care group; similarly, 26% of the high-cost users had a psychiatric emergency department visit compared to only 6% of the rest of the group.

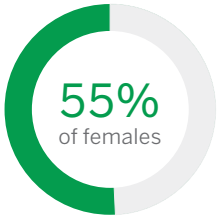
Several combinations of placement types also increased the odds of being a high-cost user.

Although there was no difference between foster boarding home only, kinship care only, residential only, and the combination of kinship care and foster boarding home, there was an increase in odds for the kinship care and residential combination, foster boarding home and residential combination, and kinship, foster boarding home, and residential combination relative to foster boarding home only. Notably, youth who are placed in residential settings are also more likely to be in residential placements in subsequent placements during the outcome periods. Since residential placement is more expensive than foster boarding home and kinship care placements, this would contribute to higher foster care costs during the outcome period.

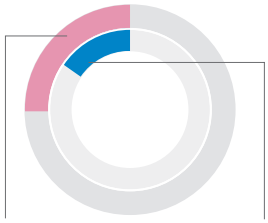
Finally, exiting foster care at both 15 to 16 and 17 to 18 years decreased odds of being a high-cost user relative to those who exit at age 13 to 14.

This, however, should be interpreted with caution as the second highest domain cost for the foster care group was subsequent foster care stays. Since individuals can only be in foster care until the age of 21 years, the 13 and 14 year olds have a longer period of time that they are eligible to stay in foster care, and thus, incur costs related to foster care.

High-Cost Users for the Foster Care Group



Inpatient Hospital Stay resulting in childbirth



26%
Psychiatric Emergency Department visit

17%
Psychiatric Inpatient Stay

Foster Care Group

Table 5.3
Logistic Regression for High Cost Service Use: Foster Care Group

Variable		Odds Ratio	95% Confidence Intervals	
Gender	Male	Ref		
	Female***	1.65	1.44	1.9
Race	White	Ref		
	Asian	0.77	0.35	1.57
	Black	1.26	0.92	1.76
	Hispanic	1.16	0.83	1.63
	Other	0.96	0.62	1.49
	Missing	1.19	0.85	1.70
Discharge Reason	Adoption	Ref		
	Reunification***	7.09	5.20	9.85
	Aged Out/APPLA***	6.03	4.24	8.70
	Exit to a Justice Facility***	7.21	4.00	12.79
	Exit to a Mental Health Facility***	29.89	14.28	64.58
	Other***	6.80	4.19	11.02
Age at Discharge from Foster Care	13 to 14	Ref		
	15 to 16**	0.77	0.64	0.92
	17 to 18***	0.67	0.55	0.83
Age Entered Foster Care	1 year and under	Ref		
	2 to 12 years	1.05	0.83	1.34
	13 to 15 years	0.90	0.65	1.24
	16 and older	0.84	0.57	1.25
Foster Care Placement Type	Foster Boarding Home Only	Ref		
	Kinship Care Only	0.79	0.57	1.07
	Residential/Other Only	1.22	0.98	1.51
	Foster Boarding Home & Kinship Care	1.18	0.93	1.50
	Foster Boarding Home & Residential***	2.12	1.68	2.67
	Kinship Care & Residential**	1.75	1.14	2.66
	Kinship Care, Foster Boarding Home, & Residential***	2.43	1.85	3.20
Number of Foster Care Spells		1.07	0.96	1.20
Number of Movements in Care		1.01	0.99	1.04
Length of Stay in Foster Care		1.00	1.00	1.00

*p<0.05 **p<0.01 ***p<0.001

Table 5.4 displays the odds ratios that resulted from the logistic regression for the dually involved group. For this group, the number of foster care spells increases the odds of being a high-cost user. Additionally, many placement type combinations increase the odds of becoming a high-cost user compared to foster boarding home only. These include: kinship care only, residential or other only, kinship care and residential combination, foster boarding home and residential combination, and the combination of all three placement types. Similar to the foster care group, staying in foster care until older ages was a protective factor with both exiting at 15 to 16 and 17 to 18 years having decreased odds of being a high-cost user relative to those who exit at age 13 to 14. Again, however, this should be interpreted with caution, as subsequent foster care stays during the outcome period account for 14% of the total cost for the dually involved group. Since individuals can only be in foster care until the age of 21 years, the 13 and 14 year olds have a longer period of time that they are eligible to stay in foster care, and thus, incur costs related to foster care. Entering care for the first time between the ages of 13 and 15 years increased the odds of becoming a high-cost user compared to children who enter at age one or younger. Finally, exiting from jail and exiting from detention and jail between 2004 and 2006 increased the odds compared to exiting from detention only.

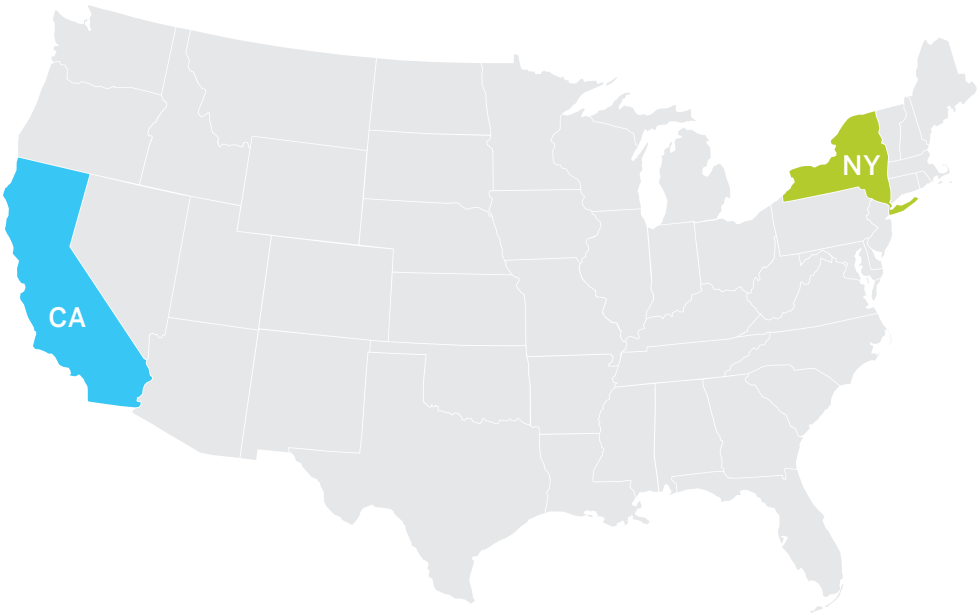
Although not directly related to the results of the regression model, it is also interesting to note that the disproportionality in hospital stays for childbirth and psychiatric hospital stays also exist in the dually involved group. Of the females in the high-cost group, 61% have an inpatient hospital stay for childbirth, compared to 33% of the other females in the dually involved group. Similarly, 14% of the high-cost users had a psychiatric inpatient stay compared to 3% of the rest of the group and 25% of the high-cost users had a psychiatric emergency department visit, compared to 9% of the rest of the dually involved group.

Table 5.4
Logistic Regression for High Cost Service Use: Dually Involved Group

Variable		Odds Ratio	95% Confidence Intervals	
Gender	Male	Ref		
	Female	1.10	0.84	1.44
Race	White	Ref		
	Asian	0.60	0.09	2.45
	Black	1.42	0.83	2.54
	Hispanic	1.36	0.79	2.47
	Other	1.40	0.65	3.03
	Missing	1.28	0.69	2.48
Discharge Reason	Adoption	Ref		
	Reunification	2.89	1.03	10.36
	Aged Out/ APPLA	2.77	0.95	10.18
	Exit to a Justice Facility	3.09	1.08	11.19
	Exit to a Mental Health Facility/ Other	3.07	0.97	11.90
Age at Discharge from Foster Care	13 to 14	Ref		
	15 to 16***	0.44	0.33	0.59
	17 to 18***	0.39	0.27	0.57
Age Entered Foster Care	1 year and under	Ref		
	2 to 12 years	1.39	0.92	2.12
	13 to 15 years**	1.94	1.12	3.40
	16 and older	1.29	0.67	2.51
Foster Care Placement Type	Foster Boarding Home Only	Ref		
	Kinship Care Only*	4.36	1.33	15.00
	Residential/ Other Only**	3.86	1.74	10.25
	Foster Boarding Home & Kinship Care	2.10	0.69	6.85
	Foster Boarding Home & Residential***	5.12	2.24	13.89
	Kinship Care & Residential**	3.86	1.51	11.30
	Kinship Care, Foster Boarding Home, & Residential***	5.21	2.18	14.60
Number of Foster Care Spells		1.32	1.11	1.55
Number of Movements in Care		1.03	0.99	1.08
Length of Stay in Foster Care		1.00	1.00	1.01
Justice System Involvement	Foster Care and Detention Exiter	Ref		
	Foster Care and Jail Exiter*	1.40	1.05	1.85
	Foster Care, Detention, and Jail Exiter***	1.73	1.28	2.34

*p<0.05 **p<0.01 ***p<0.001

6 Comparison of Results between **New York City** and **Los Angeles County**



This study built on the study and findings by **Culhane, et al. (2011)**. The current study aimed to replicate the methodology of the study in Los Angeles County to be able to compare outcomes and to develop policies and programs that best support a healthy and stable transition to adulthood for these populations.

Although the data and service systems in LA and NYC differ the current study was able to build on Culhane, et al. (2011) by including many of the same outcomes and adding additional outcome data, when available. **Specifically, both studies were able to measure outcomes in the domains of health, justice, and public benefits.** While the current study was not able to measure outcomes in the domains of education or employment at this point due to data availability, it was able to examine outcomes related to homeless shelter use and additional foster care outcomes past the sample period, both of which add a significant cost to the outcome period.

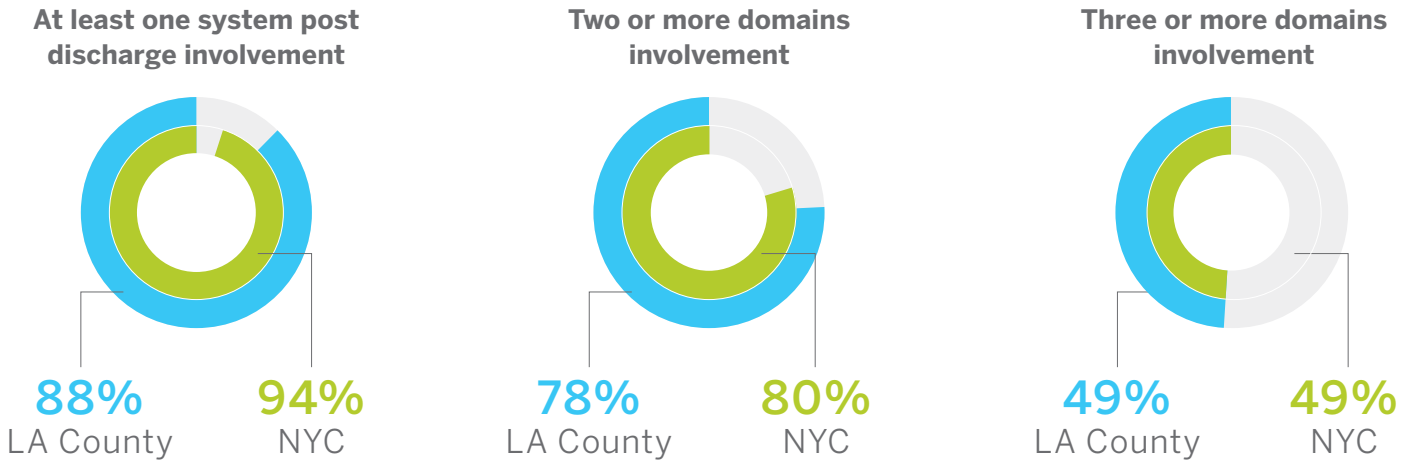
Additionally, the health service data obtainable in NYC through SPARCS adds a level of comprehensiveness to this domain, due to its far-reaching inclusion of all hospitals and certain clinics in New York State.

Finally, the current study was able to track the outcomes of one cohort longitudinally across six years, which builds on the idea put forth in Culhane, et al. (2011) to utilize two cohorts of exiters to obtain a total of eight years of outcome data.

The findings of the current study validate those of the study in LA.

Across all systems, the dually involved group had the highest utilization or close to it (see Figure 3.13 for a summary). Although their durations in each system were often less than the other groups, this speaks to the fact that they move between multiple systems. Thus, even though the domains were defined slightly differently in each study, in both studies, almost the entire dually involved group was involved in at least one system post discharge (88% in LA County and 94% in NYC) and the dually involved group had almost the exact same percentage involved in two or more domains (78% in LA County and 80% in NYC) and three or more systems (49% in both places). In LA County, slightly more individuals were involved in all five domains, but this may be because three of their defined domains were substance abuse, mental health, and health services, which may overlap more than the domains defined in NYC. Furthermore, across both cities, the dually involved had higher rates of involvement and multi-system involvement than both the foster care and justice groups.

DUALLY INVOLVED GROUP SERVICE USE



Findings regarding average cumulative costs across the three groups were also similar and both found that while the foster care and justice exiters had about the same average cumulative cost, the dually involved group had the highest average cumulative cost by far. In NYC, the costs for all three groups were much higher than those found in LA, but this may be due to a variety of factors, including the outcomes measured and the differing costs of services in both cities.

Finally, both studies had very similar findings regarding the distribution of costs within each group, with the top quartile in both places accounting for around three-quarters of the cumulative cost in each group, while the lowest quartile accounted for almost none of the cost. In NYC, the costs for the dually involved group were distributed slightly more to the third and second highest quartile, but the overall pattern was very similar.

Therefore, the findings in NYC largely confirmed the original findings in LA County, even with a slightly different set of outcomes and in a different service environment.

7 Implications for **Policy and Research**

POLICY AND PROGRAMMATIC IMPLICATIONS

The overarching finding in the current study is that dually involved youth exiters utilize more services and in more domains than youth who exit only foster care or only the justice system in their adolescence. However, all three groups continue to be involved with various systems into young adulthood and therefore, policies should aim to prevent entry into the foster care and justice systems and/or support any youth who interact with them in adolescence.

The administration of Mayor de Blasio is expanding and strengthening its alternatives to detention, court involvement, and placement of young people in the justice system. The best way to reduce the number of young people leaving the justice system is to prevent them from entering in the first place. Over the last five years, New York City has reduced the number of children entering detention by 42 percent. Meanwhile the number of teens under age 15 whose cases have been diverted from court has increased by more than 50 percent.

Similarly, New York City continues to reduce the number of young people entering foster care, so that fewer ever have to leave foster care. Since FY12, New York City ACS has reduced the number of teens placed in foster care by 21 percent, by implementing new, evidence-based, intensive preventive family support services designed specifically for families struggling with behavioral health issues related to their teen children. These research-based programs currently have the capacity to serve currently serve more than 3,000 families per year and should continue to expand.

The administration is developing data-driven, predictive analytic tools to determine which young people exiting foster care or the justice system are most likely to return. These tools make it possible to provide targeted, specialized support services to address family needs early, reinforce family stability and prevent the crises that lead to young people returning to care.

New York City is planning to reinvest savings from the shrinking foster care system into supportive services for post-reunification, post-adoption, post-kinship guardianship placement, and post-justice system involvement.

RESEARCH IMPLICATIONS

The administration and its partner foundations and research organizations continue to evaluate the impact of programs developed for these populations, and further develop best practices for serving and supporting dually-involved youth.

New York City ACS is an international leader in the implementation of evidence-based programs and is evaluating their effectiveness in the foster care, preventive family support and family justice systems. The lessons learned from this work will guide further development of programs for young adults across city and state government.

CONCLUSION

Adolescents who are involved in the foster care and justice systems, and in particular those youth who are dually involved, are at risk for continued involvement in various systems throughout their young adulthood.

This system involvement, particularly continued justice involvement, homeless shelter stays, and hospital visits, is likely disruptive to their overall stability and well-being.

Policies and programs that prevent entry into foster care and justice systems and specifically address the needs of adolescents are required to improve their adult outcomes and reduce the cost associated with their high service utilization.

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