



FREQUENT UTILIZERS OF SERVICES IN ALLEGHENY COUNTY: Emergency Shelter Facilities

This series of reports explores the group of people who use crisis services frequently. By looking more closely at this population of frequent utilizers, the Allegheny County Department of Human Services hopes to gain insight into their needs, identify key intervention points, and find ways to encourage long-term wellness while reducing the need for repeat intense service usage.

Frequent utilizer: For the purposes of this report series, frequent utilizers are defined as those clients of a particular service system who accounted for roughly the top five percent of individuals using that service in the 2016–2017 period of analysis.

INTRODUCTION

In Allegheny County, emergency shelter facilities are available to anyone experiencing homelessness, meaning that the individual does not have a safe place to sleep that night. These facilities are intended to provide shelter for a brief duration until more stable and permanent housing is secured.

Since shelter facilities are for the purpose of housing emergencies, most people who use them utilize them infrequently. A small percentage of people use crisis services frequently, however. Allegheny County Department of Human Services (DHS) wanted to learn more about this frequent utilizer population so that we might help reduce their use of emergency shelter and sustain permanent, stable housing. Responding as a system to better address the emergency shelter needs of Allegheny County's residents, and hopefully avoiding frequent returns to shelter, will improve long-term outcomes through more appropriate support services—and may also realize a cost savings for the County's service system.

BACKGROUND

Emergency shelters provide a safe place to stay for individuals and families who have no other option. Their first and most immediate purpose is simply to provide shelter in crisis situations. Once clients are enrolled and no longer have to worry about where they and their families are going to sleep each night, the primary goal of the homeless system is to enable people to move from shelter into stable, permanent housing. Frequent utilizers—those who come back to shelter repeatedly after their first stay—are the group whom the homeless system has been least able to help in that way.

METHODOLOGY

The cohort analyzed in this brief includes all individuals who enrolled in emergency shelters that report data to the Allegheny County Homeless Management Information System (HMIS), with enrollment start dates from January 1, 2016 through December 31, 2017. Emergency shelters included in the study fall into three categories: shelters for adult-only households; family shelters; and Severe Weather Emergency Shelters (SWES or Winter Shelter). The Winter Shelter in downtown Pittsburgh is open every night during the winter season, from November 15 through March 30. The Severe Weather Emergency Shelter in McKeesport is open on nights on which the temperature is predicted to fall below 25 degrees Fahrenheit or when other severe winter weather is predicted.

We limited our count of shelter stays to those with start dates in 2016 or 2017 and aimed to capture about five percent of the cohort in the frequent utilizer category. Those with three or more shelter stays made up 7.0% of the cohort; those with four or more stays made up 2.7% of the cohort. We ultimately chose four shelter stays as the threshold for defining frequent utilizers.

Adult clients were considered to be those who were over the age of 18 on the date of their earliest shelter enrollment in the study period. Children were defined as clients who were under age 18 at the time of their earliest enrollment in shelter during the study period. Adults in households with children are clients who were enrolled in shelter as adult members of households with children for any of their shelter stays. As the frequent utilizer group includes no children, some of our comparisons between frequent and non-frequent utilizers include adults only. Cases where the comparison group is made up of adults only are noted.

Because data collection varies for year-round adult/family shelters versus shelters open in the winter only, some metrics varied by shelter type:

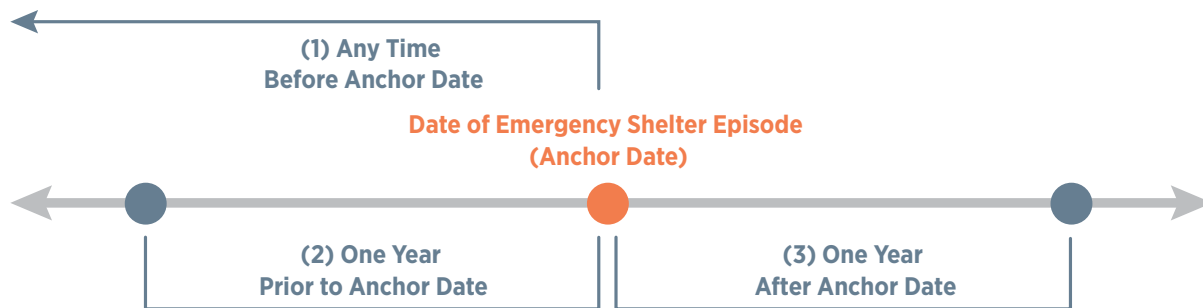
- **Adult and family shelters.** For these year-round shelters, an episode was defined as the period from an individual or family's enrollment start date to their exit date. To calculate length of stay (LOS), we looked at the length of the episodes, in other words the number of days a client stayed, from their start date to exit date. We calculated total days in shelter as the sum of LOS over all episodes in shelters other than the SWES or Winter Shelter.
- **Severe Weather Shelter/Winter Shelter.** Stays in the SWES and Winter Shelter are typically intermittent during the season. Most clients stay only one or two nights, but some stay over a hundred nights in total, almost always with breaks between their stays when they are staying at other locations. We counted each winter season as a single episode for each location, no matter how many individual nights a client stayed in the shelter. There are two Winter Shelter/SWES locations, so a client might have two episodes in a season. We did not calculate length of stay or total days in shelter for winter shelters due to poor data quality.

Numbers in the body of this report refer to 2016 through 2017 unless otherwise noted. To provide context, we also looked at the number of shelter stays for clients in the emergency shelter cohort going back to October 2013 (the date of the earliest available data), and going forward through December 2019. Fifty-five (55%) of the 119 frequent utilizers in this study would also be categorized as frequent utilizers for the longer period October 2013 through December 2019. This does not necessarily mean that the other 64 will not have similar patterns over the long term; most of them only began their involvement with the shelter system in 2016 or 2017. Only eleven had earlier stays in shelter—five beginning in 2014 and six in 2015.

In addition to analyzing clients' emergency shelter usage, we completed an analysis of the overlap of frequent utilizers' service usage in four service domains: behavioral health services, housing services, family-related services, and criminal justice system involvement (criminal filings and jail bookings). Using the emergency shelter episode as an anchor date, we explored clients' use of services during three timeframes: (1) at any time before the anchor date, (2) in the year prior to the anchor date and (3) in the year after the anchor date.

Data for this part of the analysis came from the Allegheny County Data Warehouse,¹ which brings together and integrates client and service data from a wide variety of sources internal and external to the County.

FIGURE 1: Involvement windows for people utilizing emergency shelter services



¹ For more information, see <https://www.alleghenycountyanalytics.us/index.php/2018/08/13/allegheny-county-data-warehouse/>

DATA LIMITATIONS

Domestic violence shelters are not included in this analysis. These shelters protect the identity of their clients and keep all data about individuals completely private. This skews our data, as domestic shelter clients are predominantly female, and most adults in other emergency shelters are male.

The frequency metric is the total number of shelter episodes in the two-year period 2016 through 2017. This definition skews our results in one respect: for individuals whose first episode ever is in 2016 or 2017, the frequency metric counts the number of times they return to the system for a period of anywhere from zero days to two years following their first episode, depending on when their first episode is. For example, those whose first episode is January 1, 2016, are followed for two years. Those whose first episode is December 31, 2017, are followed for one day.

As a result of the two-year cohort methodology, the differences between the frequent and non-frequent utilizer groups are somewhat compressed: The non-frequent utilizer group as we define it is likely to contain some individuals who (1) would qualify as frequent utilizers if we followed them for two years, and (2) are demographically similar to the frequent utilizer group, so any demographic differences between the groups appear to be smaller than they actually are.

Our analysis of Winter Shelter/SWES has some important limitations to note. Winter shelters are low-barrier shelters that accept anyone as long as there is room. Due to the large number of clients arriving all at once when the doors open, it is difficult to record exactly who is there each night and our data for nightly occupancy is of mixed quality. In addition to the problem of data quality, episodes in the SWES cannot be easily compared to episodes in regular emergency shelters. In a SWES shelter, each night is treated as a separate stay. These stays are not equivalent to episodes in regular shelter, which can last anywhere from one night to many months. To address this discrepancy, we consider all stays during a single winter season (November 15–March 30), in either the McKeesport SWES or the Pittsburgh Winter Shelter, to be a single stay. As it turns out, one quarter of the clients who stayed only in adult-only shelters stayed exclusively in the SWES. These clients were all classified as non-frequent utilizers, regardless of how many nights they stayed in the SWES. This likely has the result of compressing the differences we find between frequent and non-frequent utilizers somewhat: frequent utilizers are older on average and more likely to be male than non-frequent utilizers, and adults who stay in the SWES are also older and more likely to be male than adults who stay in regular emergency shelters. This should be borne in mind in interpreting our results.

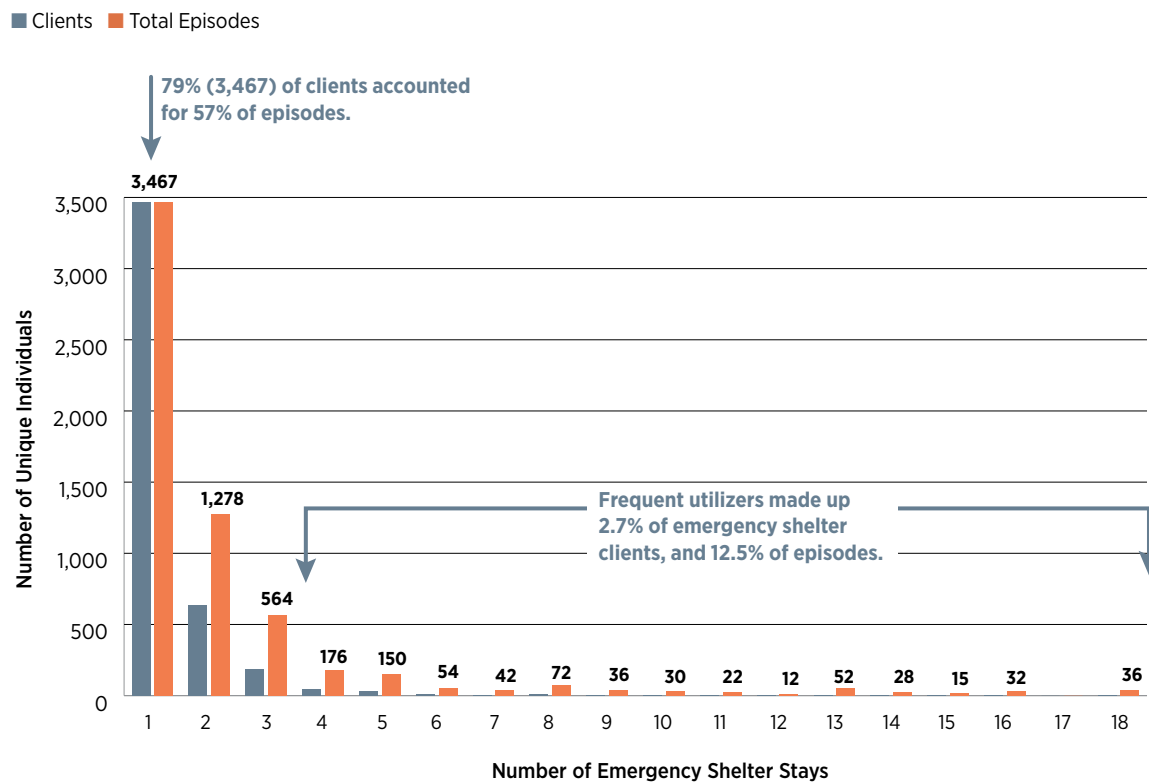
FINDINGS

Service Usage

In the two-year period from 2016 through 2017, 4,412 individuals had at least one episode in an emergency shelter in Allegheny County’s Continuum of Care (CoC)—the collection of shelters and housing supports for the homeless and formerly homeless funded by the U.S. Department of Housing and Urban Development (HUD).

Figure 2 highlights the total number of episodes of emergency shelter stays in conjunction with the number of clients who utilized the shelters. The graph shows that 79% (n=3,467) of clients had only one emergency shelter episode during the two years; these one-time users accounted for just over half (57%) of all emergency shelter stays. Nineteen percent of clients (n=827) had two or three shelter episodes, which accounted for 30% of all shelter episodes. Individuals categorized as frequent utilizers comprise the rest of the graph, ranging from four shelter stays to 18. Frequent utilizers represent 2.7% of clients and 12.5% of emergency shelter episodes.

FIGURE 2: Number of people who utilized emergency shelter one or more times by number of shelter episodes, 2016–2017 (n=6,066)



DEMOGRAPHICS

Gender, Race and Age

Compared to non-frequent utilizers of emergency shelters, frequent utilizers are older and more likely to be male (Table 1). No families with children were frequent utilizers of shelter during the two-year study period—98% of adults with children had only one or two shelter stays.

The fact that the group of frequent utilizers contained no households with children partly explains the disparities in age and gender between frequent and non-frequent utilizers: a third of the non-frequent utilizer group are children or women with children in their household.

- Eighty-eight percent of frequent utilizers are male (n=105), compared with 59% of adult non-frequent utilizers (n=2,518).
- No women had more than five episodes in emergency shelter, whereas 45 of the male frequent utilizers (43%) had six or more episodes in shelter.
- There are no frequent utilizers under the age of 18 years, compared with 22% of non-frequent utilizers who are younger than 18 years old (n=961.)

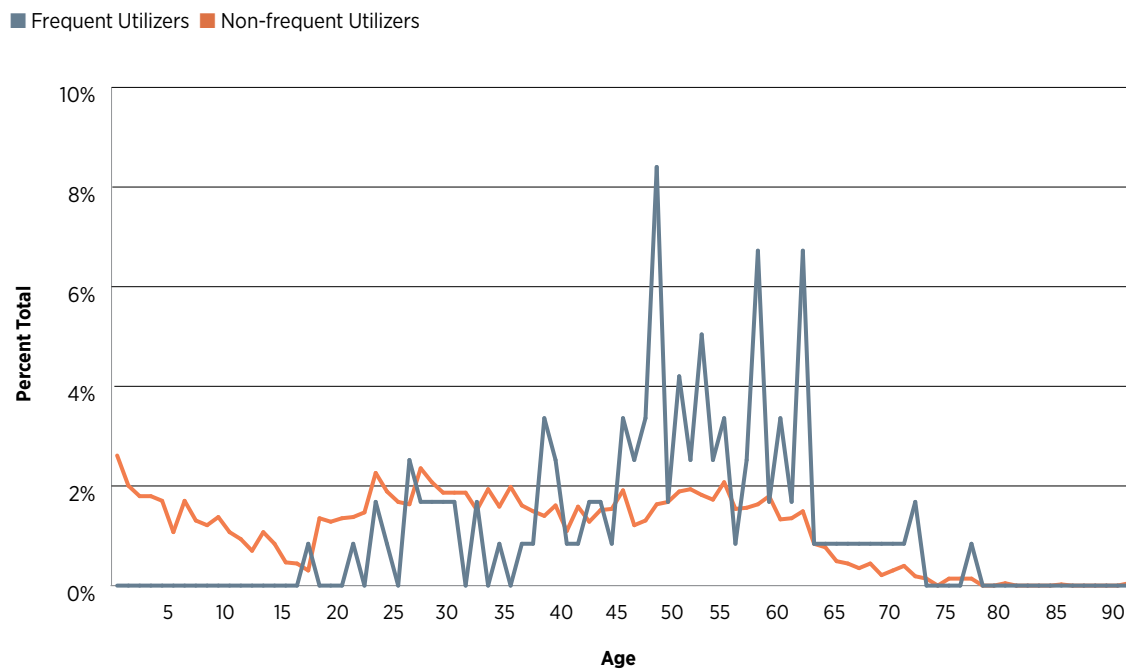
TABLE 1: Gender, race and age of clients who used emergency shelter services, frequent vs. non-frequent utilizers, 2016–2017

	FREQUENT UTILIZERS (N = 119)	NON-FREQUENT UTILIZERS (N = 4,294)
Gender		
Female	12%	41%
Male	88%	59%
Unknown	—	<0%
Race		
Black	56%	59%
White	40%	38%
Other	3%	1%
Unknown	1%	2%
Age Range		
Under 18	1%	22%
18–24	3%	11%
25–34	12%	18%
35–44	13%	15%
45–54	37%	17%
55–64	26%	13%
Over 64	8%	3%
Unknown	—	<0%

There is not a large racial difference between the frequent utilizer cohort and the non-frequent utilizer cohort. Fifty-six percent of frequent utilizers are Black and 59% of non-frequent utilizers are Black. While this comparison between utilization groups is not notable, the context of these rates within the population of the overall County is remarkable. According to the 2018 American Community Survey, 13% of Allegheny County’s population identifies as Black.

The median age of frequent utilizers is higher than the median age of adult non-frequent utilizers, both with and without children, for both females and males. Frequent utilizers of all genders have a median age of 50, about 20 years older than the median age of all non-frequent utilizers (Figure 3). Adult non-frequent utilizers without children who enrolled in shelter were also younger than frequent utilizers, with a median age of 47 for males and 41 for females.

FIGURE 3: Age distribution of frequent and non-frequent utilizers of emergency shelter in Allegheny County, 2016–2017



Household Type

No frequent utilizers were adult members of households with children, compared with 18% of non-frequent utilizers who had children (Table 2).

- Thirty-eight percent (n=499) of adult female non-frequent utilizers were part of households with children.
- Six percent (n=113) of adult male non-frequent utilizers were part of households with children.

TABLE 2: Number of frequent and non-frequent utilizers by age, gender, and household type

	COUNT OF FREQUENT UTILIZERS	COUNT OF NON-FREQUENT UTILIZERS
Children and youth younger than 18 years	0	964
Males 18 years or older	105	2,032
Females 18 years or older	14	1,298
Males (age 18+) in households with children	0	113
Females (age 18+) in households with children	0	499

Length of Stay

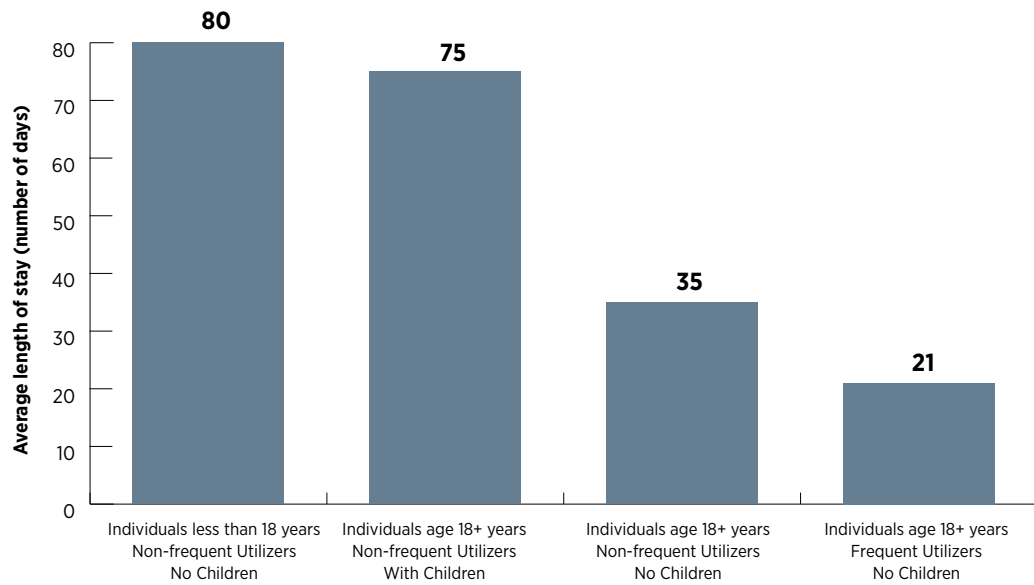
The U.S. Department of Housing and Urban Development (HUD), the primary funder of homeless services in Allegheny County, uses average length of stay (LOS) per episode in emergency shelter as a system performance metric, with shorter average LOS considered to be better performance. This is motivated by the belief that it is better to move from shelter to stable, permanent housing as quickly as possible. There is a difference of opinion about whether it is better to support clients by helping them address the issues that led to homelessness before they move to permanent housing of their own or to find housing first while offering continuing support to address other issues. Though opinions on LOS as a metric differ, we calculated LOS for frequent and non-frequent utilizers to explore whether there was a difference between these two populations (Figure 4).² In calculating average LOS, stays in the Winter Shelter and SWES were excluded as described in the Data Limitations section, above.

Individuals with the highest average LOS were non-frequent utilizers who were under 18 years of age and had no children. Their average length of stay in emergency shelter was 80 days. On the low end of the spectrum were individuals who were frequent utilizers, older than 18 and with no children (average of 21 days in shelter per episode).

² HUD does not require homeless systems to report on the relationship between length of stay and likelihood of return to the homeless system. A deeper analysis would make use of additional information about where clients go when they exit shelter. In addition, deeper analysis could explore the length of time

between shelter stays—in some cases, two or more distinct stays might reasonably be regarded as part of a single homeless episode if the client leaves one shelter and goes to another within a few days.

FIGURE 4: Average length of stay per episode (excluding SWES/Winter Shelter episodes)



Other System Involvement Before and After Emergency Shelter Stay

In addition to the analysis of emergency shelter usage, we explored frequent and non-frequent utilizers’ contact with other human services. Key findings from this analysis may suggest intervention points for prevention or reduction of housing emergencies that necessitate the use of emergency shelter facilities.

Overall, in the year following the anchor date (first emergency shelter stay in the analysis period), 100% of frequent utilizers had some type of human services involvement, and 84% of non-frequent utilizers had involvement with human services. This may be evidence that a housing crisis that drives use of an emergency shelter is a milestone event which signals broader human services needs, and that a large majority of individuals do subsequently connect with services. However, the finding that all frequent utilizers are connecting to other services and continue to utilize the crisis shelters suggests that the services may not be the most appropriate or effective. More targeted analysis is necessary to understand patterns of service usage and identify areas for possible intervention.

Housing Services

Frequent utilizers of emergency shelter were more likely than non-frequent utilizers to have accessed other types of non-emergency housing supports; 48% of frequent utilizers accessed housing supports in the year after their anchor date. Forty-two percent of non-frequent utilizers accessed housing supports during that same time period.

We also looked at emergency shelter usage of frequent and non-frequent utilizers before and after their anchor date. Ninety-nine percent of frequent utilizers used emergency shelter during the year after their anchor date, while only 36% of non-frequent utilizers did.

TABLE 3: Emergency shelter utilizers’ usage of housing services, one year before and one year after anchor date

INVOLVEMENT	PROGRAM AREA	FREQUENT UTILIZER SERVICE RATE (N=119)	NON-FREQUENT UTILIZER SERVICE RATE (N=4,294)
One Year Before Anchor Date	General Housing Supports	20%	11%
	Emergency Shelter	22%	6%
One Year After Anchor Date	General Housing Supports	48%	42%
	Emergency Shelter	99%	36%

Physical and Mental Health Services

The most significant overlap of service utilization is between emergency shelter and non-crisis mental health interventions (Table 4).

- In the one year *prior* to an individual’s first shelter stay, frequent utilizers accessed mental health treatment (51%) and mental health crisis services (30%) at a higher rate than non-frequent utilizers (32% and 18%, respectively).
- During the year *after* the first shelter stay, emergency shelter frequent utilizers’ involvement with mental health treatment and crisis services (71% and 39%, respectively) was much higher than non-frequent shelter utilizers (mental health treatment: 39%, mental health crisis: 16%).
- Emergency department usage showed a similar pattern, with shelter frequent utilizers visiting more often than non-frequent shelter utilizers (66% versus 49%).

TABLE 4: Emergency shelter utilizers’ usage of health services — ever before, one year before and one year after anchor date

INVOLVEMENT	PROGRAM AREA	FREQUENT UTILIZERS (N=119)		NON-FREQUENT UTILIZERS (N=4,294)	
		SERVICE RATE	AGE-ELIGIBLE POPULATION	SERVICE RATE	AGE-ELIGIBLE POPULATION
Ever Before Anchor Date	Drug and Alcohol Treatment	45%	119 (100%)	35%	3,418 (80%)
	Emergency Department	52%	—	51%	—
	Mental Health	71%	—	50%	—
	Mental Health Crisis	45%	—	31%	—
One Year Before Anchor Date	Drug and Alcohol Treatment	20%	119 (100%)	15%	3,418 (80%)
	Emergency Department	47%	—	44%	—
	Mental Health	51%	—	32%	—
	Mental Health Crisis	30%	—	18%	—
One Year After Anchor Date	Drug and Alcohol Treatment	27%	119 (100%)	19%	3,468 (81%)
	Emergency Department	66%	—	49%	—
	Mental Health	71%	—	39%	—
	Mental Health Crisis	39%	—	16%	—

Family-Related Services

As discussed above, the frequent utilizer cohort is comprised largely of adult men, with no individuals younger than 18 years old. This particular pattern of demographics influences what other systems individuals might be using. For example, the rates of frequent utilizers involved with child welfare as a child are virtually non-existent, with 17 individuals ever before the emergency shelter anchor date. While there is a reasonable opportunity for any of the frequent utilizer cohort to be a parent with a child welfare case, this rate is also very low. Since child welfare cases are mostly built around a mother-child dynamic, males are less often reflected in the records of those family units. Additionally, as noted above, women and children are missing from the cohort because they may be utilizing the shelters for victims of domestic violence instead of traditional emergency shelters. These circumstances create small counts of either eligible or utilizing individuals, and thus a comparison with the non-frequent utilizer cohort is not meaningful.

TABLE 5: Emergency shelter utilizers' usage of family-related services — ever before, one year before and one year after anchor date

INVOLVEMENT	PROGRAM AREA	FREQUENT UTILIZERS (N=119)		NON-FREQUENT UTILIZERS (N=4,294)	
		SERVICE RATE	AGE-ELIGIBLE POPULATION	SERVICE RATE	AGE-ELIGIBLE POPULATION
Ever Before Anchor Date	Child Welfare as a Child	6%	17 (14%)	23%	2,045 (48%)
	Child Welfare as a Parent	5%	119 (100%)	12%	3,418 (80%)
	Juvenile Probation	*	*	17%	972 (23%)
One Year Before Anchor Date	Child Welfare as a Child	*	*	27%	1,017 (24%)
	Child Welfare as a Parent	2%	119 (100%)	7%	3,418 (80%)
	Juvenile Probation	100%	1 (1%)	9%	302 (7%)
One Year After Anchor Date	Child Welfare as a Child	-	0 (0%)	45%	960 (22%)
	Child Welfare as a Parent	2%	119 (100%)	11%	3,468 (81%)
	Juvenile Probation	-	0 (0%)	7%	311 (7%)

* Denotes a category in which counts are too low to allow for meaningful data analysis.

Criminal Justice System Involvement

Frequent utilizers of emergency shelter services are involved with the criminal justice system more often than non-frequent utilizers (Table 6).

- The largest disparity between frequent utilizers and non-frequent utilizers is in the period ever before the anchor date. Twenty percent more frequent utilizer individuals have received a criminal filing (59%) than non-frequent utilizers (39%).
- In both twelve-month periods (one year before anchor date and one year after anchor date), frequent utilizers are consistently more often involved with criminal justice than non-frequent utilizers. For example, in the year prior to the first emergency shelter usage in the analysis timeframe, approximately one of every four frequent utilizers received a criminal filing, while only one of every six non-frequent utilizers was arrested.

TABLE 6: Emergency shelter utilizers’ involvement in the criminal justice system — ever before, one year before and one year after anchor date

INVOLVEMENT	PROGRAM AREA	FREQUENT UTILIZERS (N=119)		NON-FREQUENT UTILIZERS (N=4,294)	
		SERVICE RATE	AGE-ELIGIBLE POPULATION	SERVICE RATE	AGE-ELIGIBLE POPULATION
Ever Before Anchor Date	Jail Booking	54%	118 (99%)	41%	3,331 (78%)
	Criminal Filing	59%	—	39%	—
One Year Before Anchor Date	Jail Booking	20%	118 (99%)	16%	3,331 (78%)
	Criminal Filing	23%	—	15%	—
One Year After Anchor Date	Jail Booking	26%	119 (100%)	16%	3,346 (78%)
	Criminal Filing	29%	—	16%	—

DISCUSSION

The intent of this analysis was to know more about individuals who frequently utilize emergency shelters. It is important to describe and acknowledge the population of interest and respect the history and experiences that resulted in their frequent use of services. However, real intervention efforts to improve outcomes for service recipients comes from deeper analyses of those who are experiencing adverse outcomes and appropriately targeting the needs that are driving repeated intense service interactions.

- Frequent utilizers of emergency shelter are connecting with non-crisis mental health services but continue to appear at emergency shelters because of housing instability. These individuals also have a high rate of emergency department visits. Both of these data points suggest that while clients are connecting to traditional supportive services, the emergency situations still occur, necessitating use of intense crisis services.

One goal should be to prepare and train emergency shelter staff on the mental health needs of clients, and vice versa, to prepare mental health treatment staff on the housing needs of clients. A secondary goal should be to make the client experience more seamless through convenient, co-located services and shared case management to support clients who have a range of needs.

- Both frequent utilizers and non-frequent utilizers of emergency shelter utilize other human services at high rates in the year following their first shelter usage in the analysis time period.

All frequent utilizers are using at least one human service support in the year after their first emergency shelter use in the analysis window. In addition, 84% of non-frequent utilizers are also using at least one type of human service in addition to their shelter stay. This finding suggests that a housing crisis is the “last stop” — an ultimate crisis moment that has been building over time across multiple domains of need. There is evidence, then, that the shelter staff and systems are indeed connecting individuals to services to address the broad needs, but for those frequent utilizers who continue to need emergency shelter, those services are not adequate.

This analysis has policy implications for how, when and where services are offered. Further in-depth exploration is necessary to understand the mechanisms and timing of service usage, which would inform the structures and staff necessary to address client needs appropriately.