Investigating Predictors of Successful Exits from Permanent Supportive Housing

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Permanent supportive housing (PSH), an evidence-based intervention that combines housing assistance and supportive services, is a critical resource for unhoused individuals. PSH has been shown to improve housing stability and health service use outcomes for high-need populations.[1] Yet, demand for PSH far outstrips supply.[2] As a result, many individuals are left waiting for safe and secure permanent housing, which can have life-threatening consequences.

PSH supply is driven, not only by the construction, development, and funding of new PSH units, but also by unit turnover when stable participants exit these programs. Once stable, PSH

[1] National Academies of Sciences, Engineering, and Medicine. *Permanent supportive housing: evaluating the evidence for improving health outcomes among people experiencing chronic homelessness*. Washington (DC): National Academies Press; 2018.

[2] Culhane D, Fowle M, Moses J. How Much Would It Cost to Provide Housing First to All Households Staying in Homeless Shelters? National Alliance to End Homelessness. 11 Mar 2025: https://endhomelessness.org/resources/research-and-analysis/how-much-would-it-cost-to-provide-housing-first-to-all-households-staying-in-homeless-shelters/

participants may wish to exit the housing program to have more privacy, live with family/friends, move closer to work/school, or reside in a larger unit or different neighborhood. Helping participants to achieve individualized goals for recovery and independent living, such as these, is a primary purpose of PSH. Thus, the homeless service system is increasingly interested in identifying PSH participants most likely to maintain stable housing and avoid adverse events following exit from the PSH program.[3] This report summarizes findings from a research study funded by the *National Alliance to End Homelessness* that examines exits from PSH and predictors of "successful" PSH exits.

This research was guided by a compensated study steering committee made up of diverse stakeholders knowledgeable of PSH exits through professional and lived expertise. The five-person committee was comprised of a current PSH participant, a PSH alum, a PSH provider, a former administrator of a "Moving On" initiative that facilitated PSH exits, and a PSH policy expert from the Corporation for Supportive Housing. This committee advised the study team on selection of relevant variables for the analyses and the interpretation of findings. Committee members were also invited to contribute to the development of dissemination products and the dissemination strategy.

A two-state, population-level dataset of matched Homelessness Management Information System (HMIS) data, Medicaid claims, and affordable housing data from New Jersey and Pennsylvania[4] was used to examine the following research questions:

1. What are the characteristics of people who exit PSH?

2. What factors are associated with exiting PSH to "successful" and "unsuccessful" destinations?

3. What are the housing and healthcare utilization outcomes of people who exit PSH?

Key findings from this analysis are presented in brief below and described in detail in the body of the report. Interpretation of these findings is included in the *Conclusions and Recommendations* section at the end of the report.

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[3] Tiderington E, Goodwin J, Noonan E. Leaving permanent supportive housing: a scoping review of Moving On Initiative participant outcomes. Housing Studies. 2024 Jan 2;39(1):203-26.

[4] The data used for this analysis were developed under a grant from the National Institute for Minority Health and Health Disparities (award no. R01MD015261). State partners included the New Jersey Division of Medical Assistance and Health Services, the New Jersey Housing and Mortgage Finance Agency, and the Commonwealth of Pennsylvania's Department of Human Services.

Key Findings

Successful Exit from PSH is Possible. For people who exited PSH to a "successful" destination (i.e., a lower level of care, defined as permanent housing with or without rental subsidy, without paired support services), returns to homeless services were rare - only about 1 in 10 people who exited PSH to a successful destination used homeless services within 24 months of exit. Healthcare utilization outcomes after PSH exit were also generally favorable. For those exiting PSH to a successful destination, use of primary care *after PSH* was not measurably different from use *during PSH*. The likelihood of inpatient hospitalization, all-cause and with mental illness as the primary diagnosis, was greater *before PSH* than *after PSH*. Those exiting to successful destinations did have fewer behavioral health visits *after PSH* than *during PSH*. However, this decline was statistically significant only in Pennsylvania and not in New Jersey.

But Exit from PSH is Also Rare. In both states, roughly 60% of those in a PSH program from 2017-2021 did not exit the program. During this time, only ~12.5% of those in PSH in the two states exited to successful destinations and ~8% exited to unsuccessful destinations. The remainder exited to destinations that could include paired support services similar to supports in PSH, or their destination was missing in the data.

Different Outcomes by Race and Ethnicity. While Hispanic and Black, non-Hispanic PSH participants were more likely to exit PSH to a successful destination than white, non-Hispanic participants, they also returned to homelessness more frequently after exit.

Affordable Housing Availability May Impact Exits. People who exited PSH to a successful destination were more likely to be enrolled in a PSH program in an area with a more affordable rental market. Exits to unsuccessful destinations were more common in counties with a less affordable rental market.

Factors at the Individual, Program, and Community-Level Predict Exits to a Successful Destination. In addition to *being enrolled in a PSH program in an area with a more affordable rental market* and *being Black, non-Hispanic and Hispanic/Latine,* those who exited PSH to successful destinations were also more likely to be *younger*, *female*, *not have a substance use disorder*, and *reside in a PSH program with low rates of participant turnover*.

Housing Outcomes May Depend Upon Where One Exits PSH. Homeless service use within 24 months of PSH exit was more likely among participants exiting PSH programs:

- Located in urban locations (compared to suburban locations)
- Funded by non-HUD sources (compared to HUD-funded programs)
- Categorized in HMIS as site-based programs with clustered/multiple-site arrangements (compared to site-based programs in a single site or tenant-based scattered site programs)

Guidance for Responsible Use of These Findings

The findings in this report are based on transitions that occurred in the context of the current design of PSH as *permanent* supportive housing. They cannot be validly extrapolated to non-permanent housing models.

Any citation or reference to this report in future works should interpret these findings using the following assumptions:

- **Even though successful exits from PSH are possible, people experiencing homelessness still need access to *permanent* supportive housing.** While these analyses find that some PSH participants can and do move on successfully from PSH, this **does not** imply that the PSH model should be time-limited or that all PSH participants ought to exit after a fixed period. People exiting PSH in this study were likely able to do so *because* they received PSH services for as long as they as needed, on their own timeline. Decades of research show that PSH yields far better housing stability outcomes than time-limited transitional housing (Peng et al., 2020). As such, non-time-limited PSH remains a critical component of the homelessness response system even as some PSH participants are able to successfully exit these programs.

- **These findings only reflect outcomes for participants in *permanent* supportive housing. They are not evidence in support of time-limited models of supportive housing.** These analyses included only participants in PSH programs that did not impose time limits; participants had the option to stay in the PSH program permanently if desired and were able to use PSH services for as long as needed. In supportive housing programs where participants are expected to leave after a fixed period, outcomes are likely to be different. Therefore, the findings reported here should not be conflated with exit outcomes from time-limited transitional housing or used to justify expansion of time-limited models.

- **Correlation ≠ causation. Predictors of successful PSH exit are not definitive indicators of who can move on successfully. As such, they should not be used to target individuals for forced exit.** Predictors of PSH exit, including demographic predictors, identified in this study are associations only. They should not be interpreted as causal rules, definitive eligibility criteria, or characteristics of groups that can be targeted for forced exits. These findings are best used to inform

supportive, voluntary planning with PSH participants who wish to move on—not to label individuals as "ready/not ready" or to justify pressure to exit PSH.

In short, these findings can be used to support efforts to **expand PSH participants' choices and supports.** They cannot be validly extrapolated to justify policies that target individuals for forced exit. Likewise, they cannot be validly used to predict outcomes of policies that restrict access to PSH or exit opportunities. Making such extrapolations would be scientifically invalid and a misuse of the findings of this research.

Defining and Categorizing Permanent Supportive Housing Exits

The goal of this project was to identify PSH participants most likely to maintain stable housing and avoid adverse events following exit from PSH to a lower level of care. To do this, we examined characteristics of people leaving PSH, factors associated with their exit, and their housing and healthcare service use outcomes. The first step in the project then was to define and categorize PSH exits in partnership with the study steering committee.

Examples of exit destinations in the HMIS include owning a home, residing with friends/family on a permanent basis, and renting without a subsidy. Such exits suggest a lower level of care than what is typically provided in PSH, and presumably a lower level of need for supportive services. However, PSH participants may also exit to a higher level of care above what is provided in PSH. This could include being placed in a residential psychiatric treatment or nursing facility. Individuals might also exit to homeless services destinations (e.g. emergency shelter), jails/prisons, or be removed from the PSH program, indicating need for a higher level of care.

Exit destinations recorded in the HMIS were reviewed and categorized into one of the following four categories according to "level of care provided/needed":

Category 1: Institutional settings, homeless-indicative services, non-permanent housing, or removal from PSH due to violation of policy or failure to meet requirements, indicating a higher level of care or need
Category 2: Destinations that could include paired support services similar to supports received in PSH
Category 3: Permanent housing without paired support services, with or without rental subsidy, indicating a lower level of care or need
Category 4: Missing Information

To properly characterize categories 1-3, we consulted the steering committee and reviewed commonly used terminology for PSH exits in the homeless services literature. A framework developed by Perales et al. (2024) describes PSH exit outcomes as either "successful" (e.g. exits that are tenant-initiated, without issues, and not to homelessness) or "unsuccessful" (e.g. exits that are to homelessness or provider-initiated). [5] So, we describe category 1 destinations as unsuccessful and category 3 destinations as successful.[6]

The analyses in this report focus on Categories 1 ("Unsuccessful Destinations") and 3 ("Successful Destinations"), while Categories 2 and 4 were grouped as "Other or Missing Information." Exits in Category 2 suggested a lateral move to PSH-like services and for exits in Category 4, the destination could not be determined.

Table 1 details the HMIS destination categories included in the analysis. Figure 1 describes the frequency of each category in The State of New Jersey (NJ) and the Commonwealth of Pennsylvania (PA).

Table 1. Homeless Management Information System (HMIS) exit destinations defined categorized by level of care provided or needed as indicated by the destination.

Category	Unsuccessful Destinations	Successful Destinations
Definition	Institutional settings, homeless-indicative services, non-permanent housing, or removal from PSH due to violation of policy or failure to meet requirements, indicating a higher level of care or need.	Permanent housing without paired support services, with or without rental subsidy, indicating a lower level of care or need.
Destination	• Emergency shelter, including hotel or motel paid for with emergency shelter voucher • Transitional housing for homeless persons (including homeless youth) • Psychiatric hospital or other psychiatric facility • Substance abuse treatment facility or detox center • Hospital or other residential non-psychiatric medical facility • Jail, prison or juvenile detention facility • Staying or living with family, temporary	• Rental by client, no ongoing housing subsidy • Owned by a client, no ongoing housing subsidy • Owned by client, with ongoing housing subsidy • Staying or living with family, permanent tenure • Staying or living with friends, permanent tenure • Rental by client, in a public housing unit

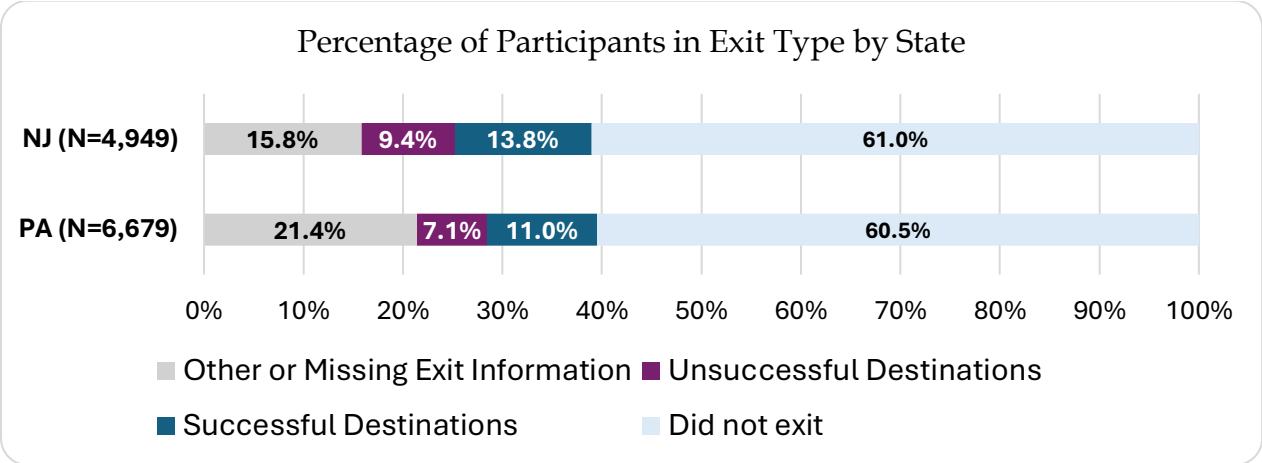
[5] Perales F, Parsell C, Ablaza C, Kuskoff E, Plage S, Stambe R. Re (de) fining success: tenancy issues, provider supports, and tenancy outcomes in an Australian Permanent Supportive Housing programme. Housing studies. 2025 May 4;40(5):1132-56.

[6] The "unsuccessful/successful" descriptor is not meant to describe the relative success of the individual. For example, admission to a psychiatric hospital may be the appropriate level-of-care for a person who needs such care. In that way, the individual is successful in gaining access to an appropriate level-of-care, even if it is a higher level of care. Rather, this descriptor is meant to describe the exit destination relative to PSH levels of support.

	tenure (e.g. room, apartment or house) • Staying or living with friends, temporary tenure (e.g. room, apartment or house) • Hotel or motel paid for without emergency shelter voucher • Foster care home or foster care group home • Place not meant for habitation (e.g., a vehicle, an abandoned building, bus/train/subway station/airport or anywhere outside) • Safe Haven • Long-term care facility or nursing home • Residential project or halfway house with no homeless criteria	

Notes: Permanent Supportive Housing Exit categories based on values of the "Destination" variable as defined in US Housing and Urban Development (2022), HMIS Data Standards, Data Dictionary. Individuals identified as deceased were removed from the study. Categories informed by the study steering committee and framework developed by Perales et al. (2024). See Appendix for additional details on methods and variable definitions.

Figure 1. Roughly 60% of those participating in a PSH program from 2017-2021 did not exit. Exits to successful destinations were more common than exits to unsuccessful destinations.



Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021); authors' analysis. Note: Unadjusted descriptive estimates. See Appendix for additional details on methods and variable definitions.

Predicting Successful Permanent Supportive Housing Exits

The findings reported below summarize statistical models of the likelihood of each of the four exit types. For individual level predictors, we relied on measures generated from housing services and healthcare utilization claims (see Appendix 1 for additional detail). For these, we report a subset of predictors that were statistically significant in *both* states. In addition to individual-level measures, we included an area-level measure of "housing affordability in the program county" derived from the Comprehensive Housing Affordability Strategy (2016-2020).[7] Program-level measures were not available for Pennsylvania. But we were able to generate program-level measures for New Jersey, and we include findings on the program characteristics that were statistically significant for that state. Additional tables, including measures that are not statistically significant, are available in Appendix 3. For details on the methods used the generate the following findings, please consult Appendix 2.

Participant Characteristics Associated with PSH Exit Type

Characteristics of Medicaid-enrolled PSH participants were collected from their healthcare and housing services use and were examined based on when they entered PSH (i.e., a "pooled cross-sectional analysis").[8] Key findings are:

(1) The average age of those who exited successfully was younger at exit than those that did not exit and those who exited unsuccessfully.
(2) Those in the successful destination group were mostly females and less commonly had a history of a substance use disorder diagnosis.
(3) In both states, those who were Black, non-Hispanic or Hispanic exited to successful destinations at higher rates than white, non-Hispanic participants.
(4) Those in the unsuccessful destination group were mostly males, were less likely to be a member of a household unit in HMIS (i.e., entered in HMIS as "individuals"), and more commonly had a history of a substance use disorder diagnosis.

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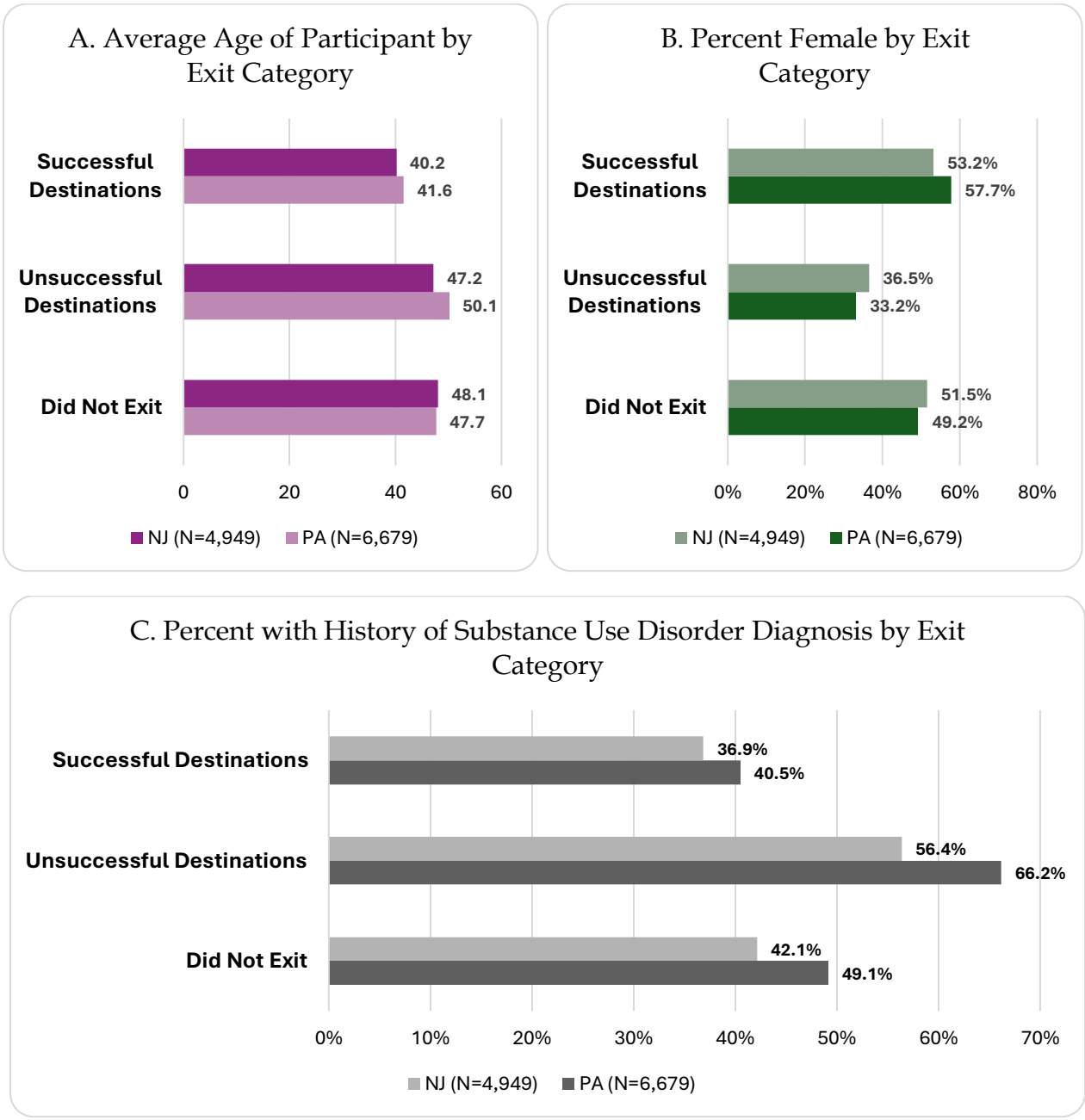
[7] Consolidated Planning/CHAS data [Internet]. US Housing and Urbanc Development. Available from: https://www.huduser.gov/portal/datasets/cp.html

[8] *Cross-sectional analysis* is an observational quantitative method that examines a population at a single point in time. It allows for descriptive analyses of a population, such as determining what characteristics that are most prominent within the population at that time point. *Pooled cross-sectional analysis* is the method of grouping multiple cross-sectional time points together. See "Appendix" for additional detail.

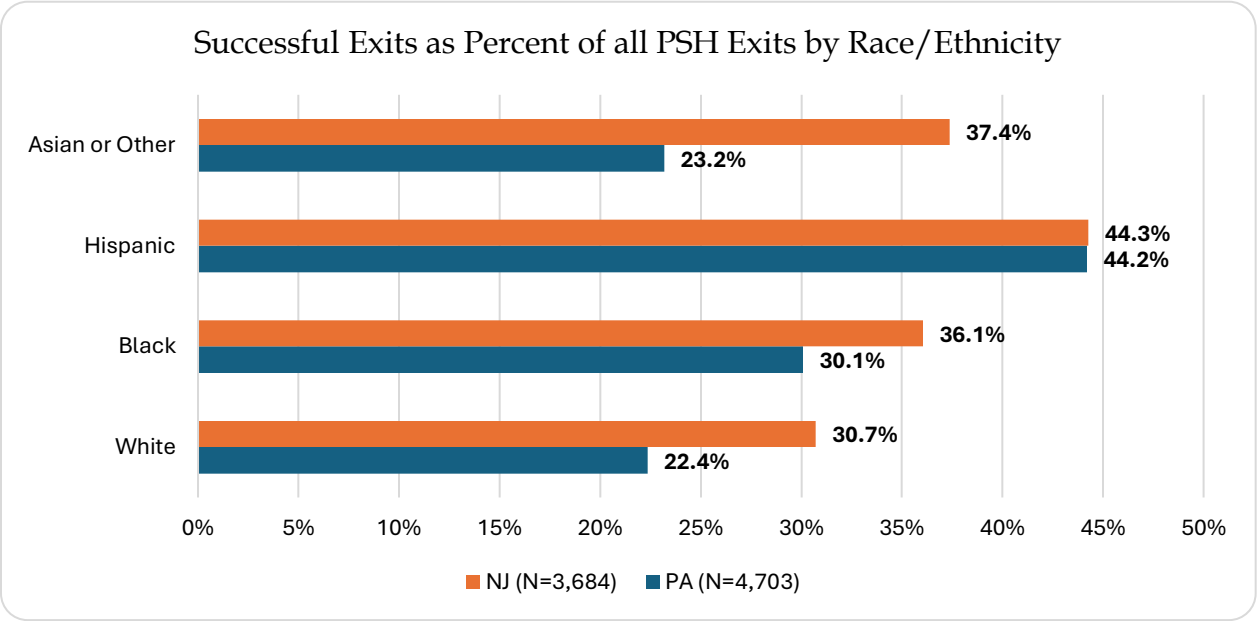
(5) Participant characteristics that were evaluated but were not found to be statistically significant as predictors of successful exit in both New Jersey *and* Pennsylvania included history of mood disorder, number of chronic health conditions, veteran status, HIV/AIDS diagnosis, living situation prior to PSH enrollment, and household type (individuals/families).

Figure 2. Compared to PSH participants who either did not exit or exited unsuccessfully, those with exits to successful destinations were *more likely* to be *younger, female,* and *less likely* to *have a history of substance use disorder.*



Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021); authors' analysis. Note: Unadjusted descriptive estimates. See Appendix for additional details on methods and variable definitions.

Figure 3. Among those who exited PSH, Hispanic PSH participants (and to a lesser extent, Black, non-Hispanic PSH participants) were *more likely* to exit successfully than white, non-Hispanic PSH participants.

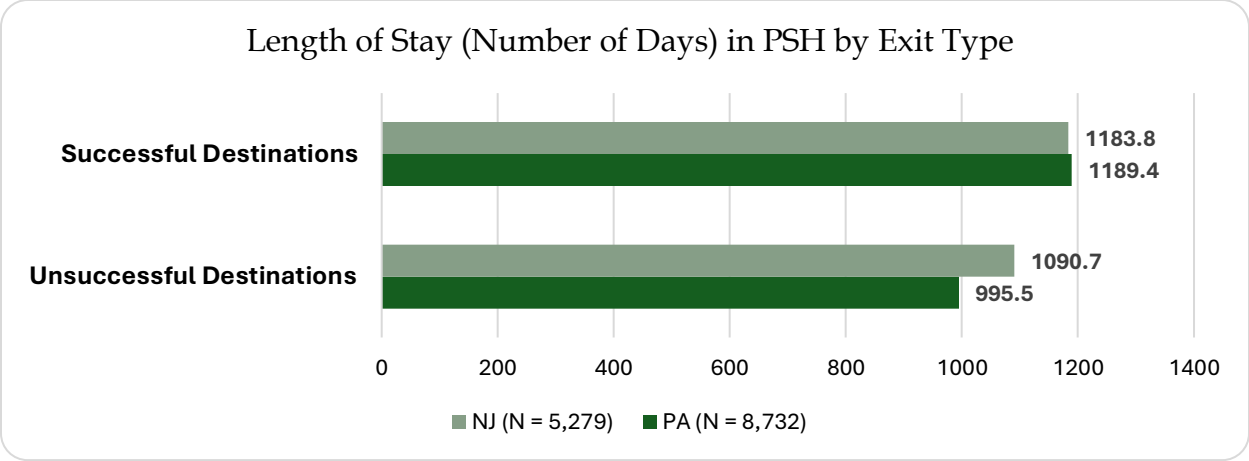


Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021); authors' analysis. Note: As above. Unadjusted descriptive estimates. See Appendix for additional details on methods and variable definitions.

PSH Program Length of Stay by Exit Type

We also examined the role of PSH program length of stay in relation to exit type and found that people who exited to unsuccessful destinations had PSH stays that were 89 (New Jersey) to 181 days (Pennsylvania) shorter on average than those who exited to successful destinations. Conversely, PSH participants with exits to successful destinations had longer stays in PSH relative to those who exited to unsuccessful destinations.

Figure 4. PSH participants with exits to successful destinations typically had longer stays in PSH than those with exits to unsuccessful destinations (~3-6 months longer).



Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021); authors' analysis. Note: Adjusted estimates based on analysis of pooled cross-section. See Appendix for additional detail on methods and variable definitions.

Association of Program and Area Characteristics with Exit Type

In addition to individual characteristics, analyses were conducted to assess the relationship between program and area characteristics on exit type, adjusted for changes in the PSH population over time.[9] These findings are reflected in Figures 4 and 5 to demonstrate patterns related to geography, funding type and housing type.

Adjusted estimates[10] of program and area characteristics associated with program exit category demonstrated that:

(1) Exits to unsuccessful destinations were more common than exits to successful destinations if there was a lower availability of affordable rental units in the county of PSH program operation *(measured as the share of renter households with very low incomes, i.e. making 50% or less of the typical income in the area, who are spending more than half their income on rent and utilities).*

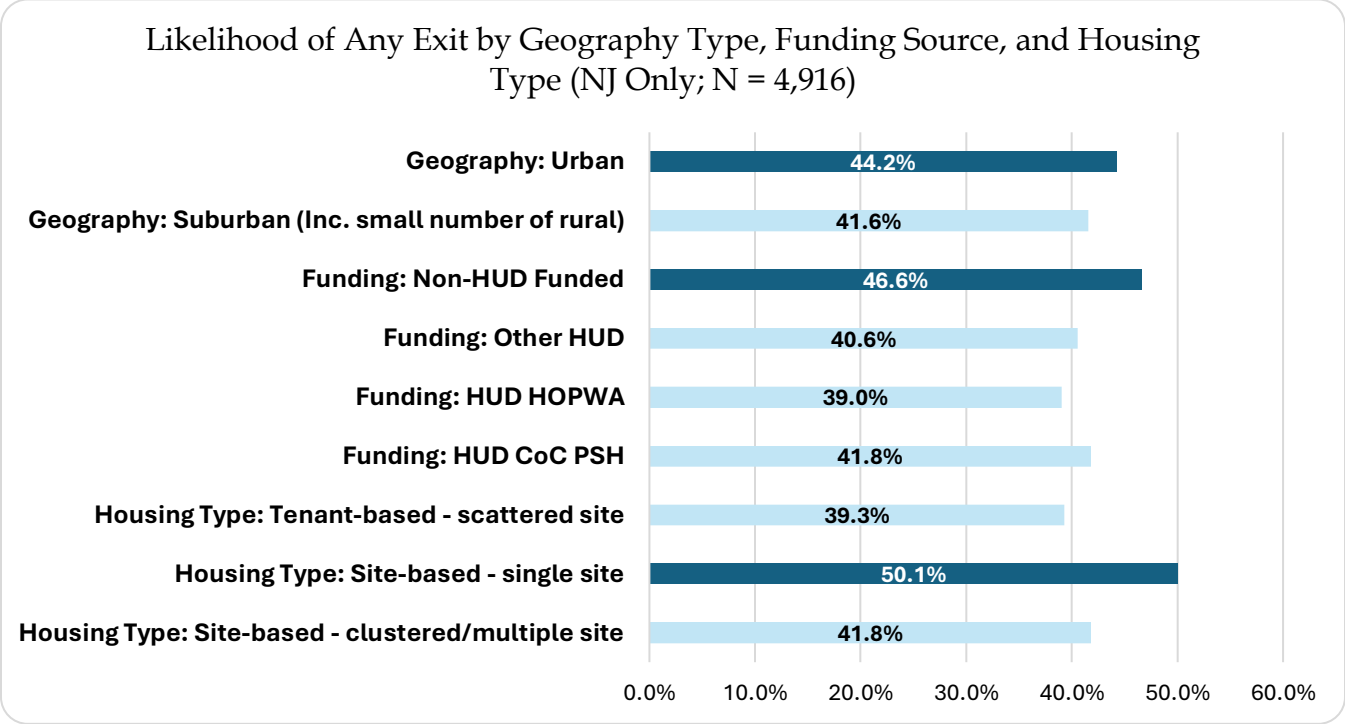
(2) Exits to successful destinations were more common than exits to unsuccessful destinations if the program had low rates of PSH participant turnover within a program (*defined as the program's total number of exits divided by its total number of admissions*).

(3) Program size (number of participants enrolled in the PSH program) was also evaluated but was not found to be statistically significant.

Figure 5. PSH participants in single site programs, urban locations, and non-HUD funded projects (i.e., state and local mechanisms coded in the housing services data as distinct from

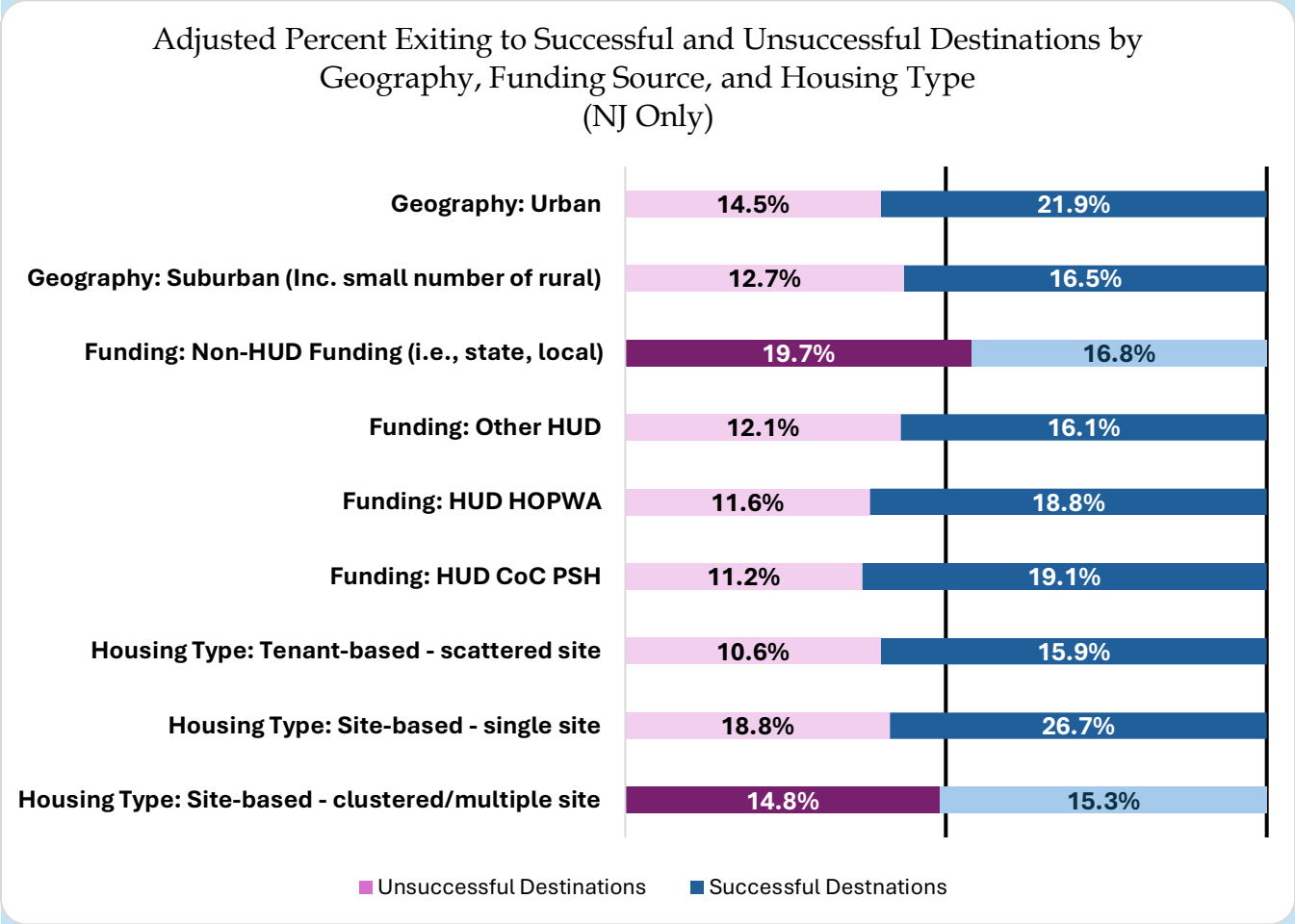
[9] Program information was only available for New Jersey.
[10] See Appendix for additional information on statistical models used to generate these findings.

U.S. Department of Housing and Urban Development- and Veteran Affairs-funded programs) were more likely to exit PSH during the study period.



Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021), New Jersey data only; authors' analysis. Note: Adjusted estimates based on analysis of pooled cross-section. See Appendix for additional details on methods and variable definitions.

Figure 6. Across nearly all geographic area types, funding sources, and housing types, exits to successful destinations were more likely than exits to unsuccessful destinations. Two exceptions were *non-HUD funded projects* where exits to unsuccessful destinations were more likely, and *cluster/multiple site programs* where there was an almost equal split between exits to successful and unsuccessful destinations.



Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021), New Jersey data only; authors' analysis. Note: Adjusted estimates based on analysis of pooled cross-section. See Appendix for additional details on methods and variable definitions.

Housing and Healthcare Utilization by Exit Type

Returns to Homeless Services after PSH Exit

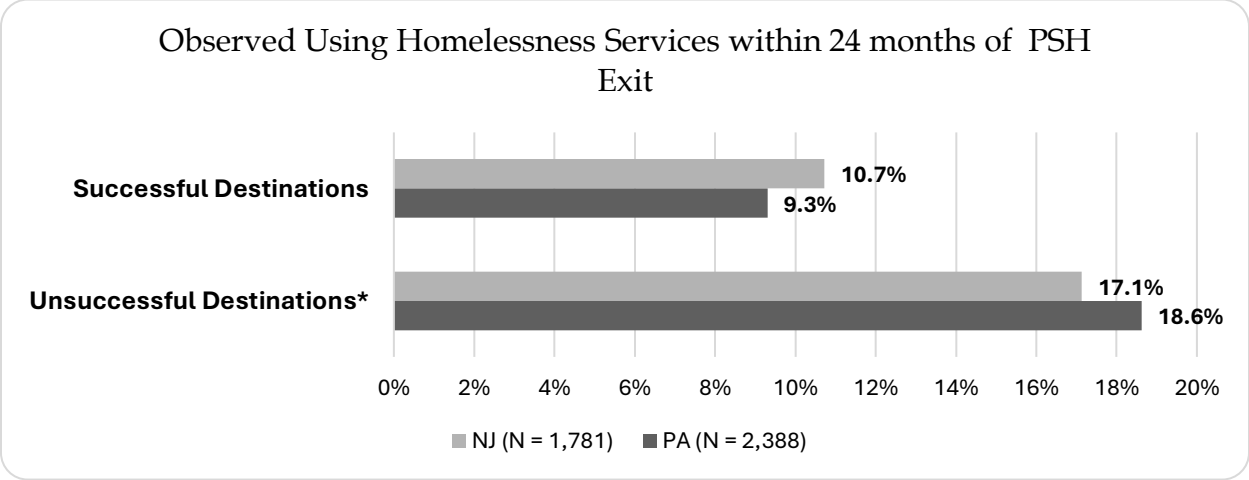
In this section, we examined observed homeless services utilization within 24 months of exit from PSH after a 30-day waiting period before measuring "returns to homeless services."

Homeless services were defined as HMIS recorded emergency shelter, day shelter, transitional housing, street outreach, and "Safe Haven" utilization. These services suggest that the participant was actively experiencing homelessness during the service date. In rare cases, individuals enrolled in PSH exited PSH to unhoused living situations or homeless-indicative services, such as emergency shelters or living situations not captured in HMIS. These individuals are excluded from this section but are analyzed above in the analysis of predictors of exit type.

To examine housing services utilization, we conducted analyses that adjust for changes in the PSH population characteristics over time, differences among geographic regions within each state, and relevant personal and program characteristics. This allows for analyses that "hold other factors constant" when making comparisons. We did not test how combinations of characteristics interact, so each result should be interpreted separately. Key findings are:

(1) Those who exited to unsuccessful destinations were nearly twice as likely to be observed using homeless services (i.e., emergency shelter, day shelter, street outreach, Safe Haven, or coordinated entry) within 24 months of exit than those who exited to successful destinations.
(2) Roughly 1 in 10 people exiting PSH to successful destinations were observed using homeless services within 24 months of exiting the PSH program.

Figure 7. Those with exits to unsuccessful destinations were more likely to be observed using homeless services within 24 months of PSH Exit.



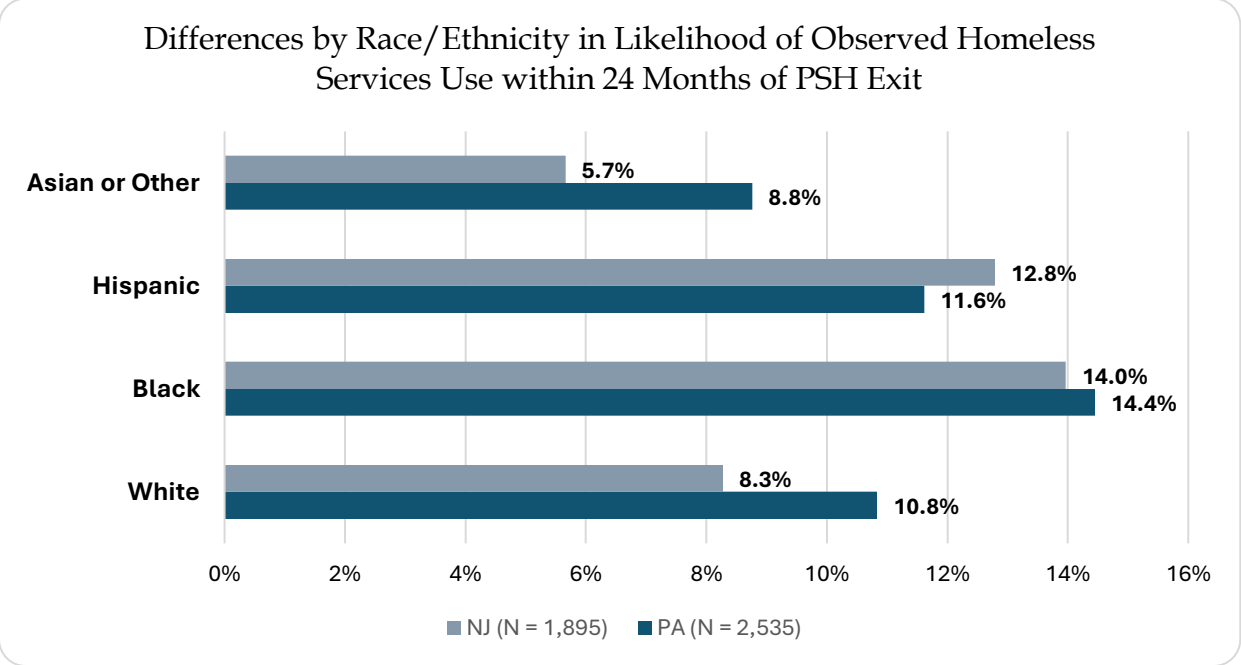
Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021); authors' analysis. Note: Adjusted estimates based on analysis of pooled cross-section. See Appendix for additional detail on methods and variable definitions.

*"*Unsuccessful Destinations" *in this analysis excludes those exiting PSH to unhoused living situations or homelessness indicative services (see Table 1).*

Differences in Returns to Homelessness by Individual and Program Characteristic

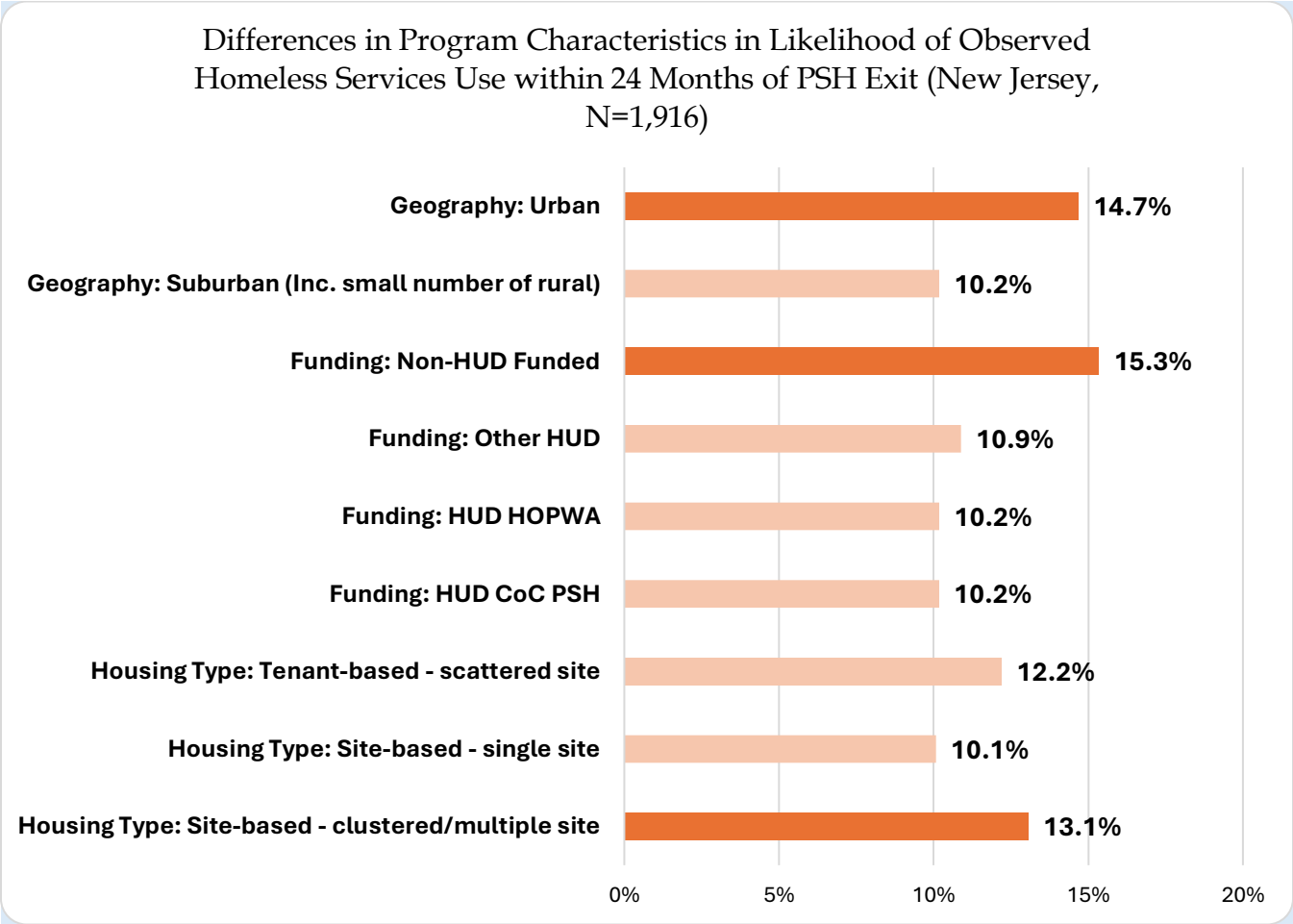
Black, non-Hispanic and Hispanic PSH participants had the highest likelihood of returns to homelessness compared to other race/ethnicity categories.

Figure 8. Black, non-Hispanic, and to a lesser extent, Hispanic PSH participants were more likely to be observed using homeless services after PSH exit than white, non-Hispanic or Asian, non-Hispanic participants.



Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021); authors' analysis. Note: Adjusted estimates based on analysis of pooled cross-section. See Appendix for additional detail on methods and variable definitions.

Figure 9. PSH participants in clustered/multi-site site-based programs, non-HUD funded programs, and those in urban locations were generally more likely to be observed using homeless services within 24 months of PSH exit.



Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021); authors' analysis. Note: Adjusted estimates based on analysis of pooled cross-section. See Appendix for additional detail on methods and variable definitions.

Healthcare Use Before, During, and After PSH

To assess changes in healthcare use, groups of PSH participants were examined based on exit destination type and followed over time (i.e., a "cohort analysis").[11] Researchers developed analytic models that adjust for differences in individual, program, and area characteristics within these groups as well as for changes in healthcare use between time points and

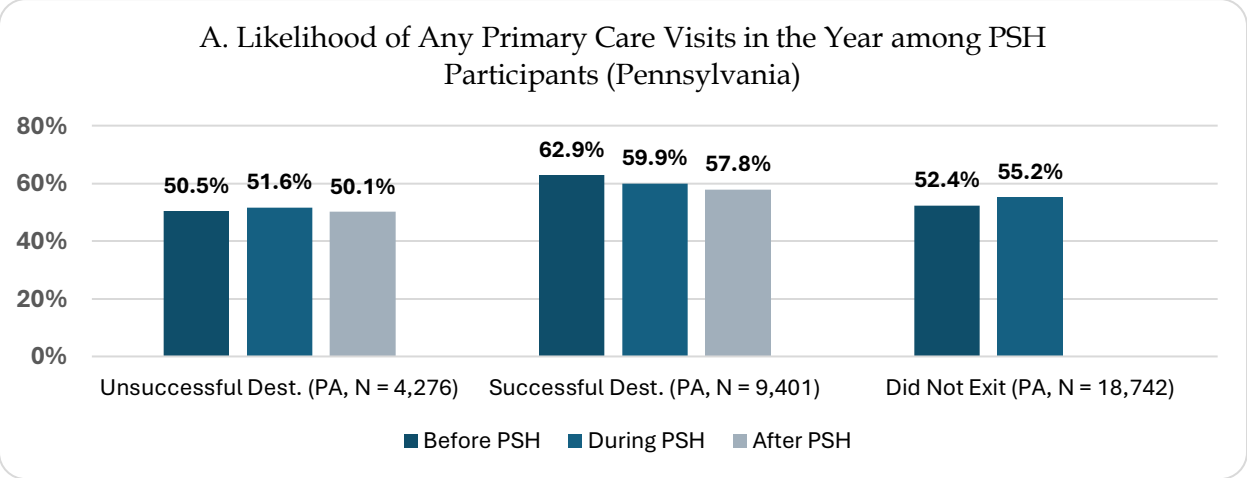
[11] *Cohort analysis* is an observational quantitative method where people are grouped by a shared characteristic, and the group's service use, health outcomes, or other indicators are tracked over time. See "Appendix" for additional detail.

geographic regions. Two types of community-based healthcare use (any primary care visits in the year, and total outpatient behavioral healthcare visits in the year for those with behavioral health diagnoses) and any inpatient hospitalization in the year (for any cause and when mental illness was the primary diagnosis) for the periods before entering PSH, during PSH, and after PSH exit.

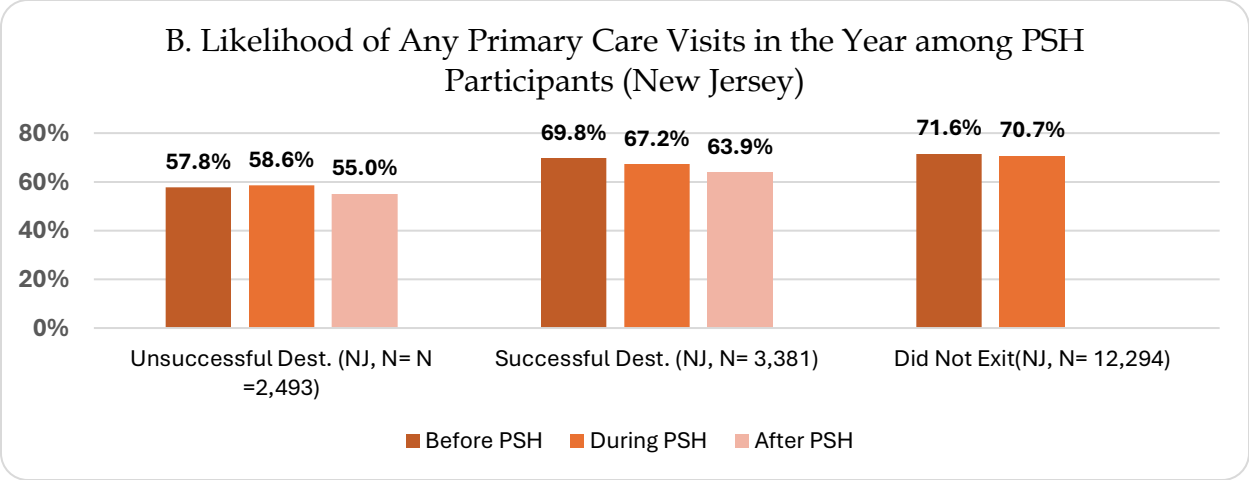
Any Outpatient Primary Care Visits in Year

Most participants in both states had at least one visit to a primary care provider while they lived in PSH. The likelihood of having at least one primary care visit *during PSH* was greater in the successful destination group (59.9% in PA; 67.2% in NJ) than in the unsuccessful destination group (51.6% in PA; 58.6% in NJ). However, the likelihood of having at least one primary care visit was also greater for this group *before* PSH which could suggest that the successful group was already more inclined to use health services prior to entering PSH. While small magnitude decreases in use (1-3 percentage points) were detected in use of primary care *after exit* among both groups, these decreases were not statistically significant.[12]

Figure 10. In both states, primary care use *after PSH* in both the successful and unsuccessful destination groups was not measurably different[12] from use *in PSH*.



[12] *Statistical significance* in this context means that the two estimates of an indicator are far enough apart to detect a difference. Each estimate has a "95% confidence interval" which roughly tells how spread-out the real values of the indicator are. In the case of any primary care use in the year, if the 95% confidence interval between two estimates overlap, we write that the differences in the estimates are "not statistically significant."



Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021); authors' analysis. Note: Adjusted estimates based on analysis of cohorts. See Appendix for additional detail on methods and variable definitions.

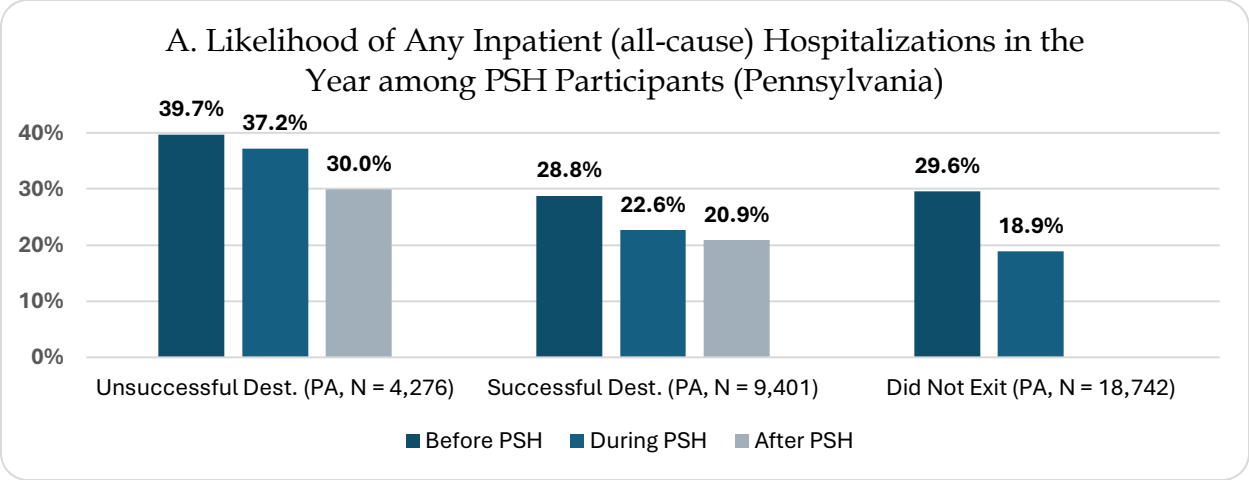
Any Inpatient Hospitalizations in Year

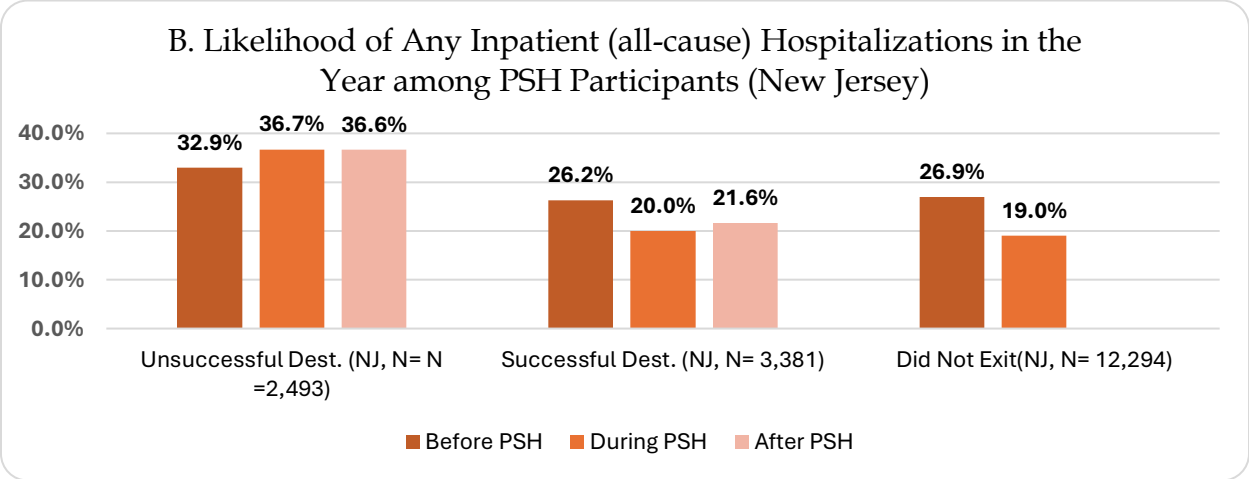
There was a downward trend in the likelihood of all-cause inpatient hospitalizations over the course of PSH participation (i.e., *before*, *during*, and *after PSH*) among the successful destination group and the group of participants that did not exit PSH. In both states, the likelihood of having at least one all-cause inpatient hospitalization in the year *during PSH* and *after PSH* was lower for the successful destination group compared to the unsuccessful group (from 9.1 to 16.7 percentage points lower).[13]

Nearly 1 in 5 participants who did not exit PSH had at least one inpatient stay per year *during PSH* (18.9% in Pennsylvania and 19.0% in New Jersey). When observed in the period *after PSH,* about 1 in 5 of those who exited to successful destinations had at least one all-cause inpatient hospitalization per year (20.9% in Pennsylvania and 21.6% in New Jersey). In contrast, ~1 in 3 of those who exited to an unsuccessful destination had at least one inpatient stay per year *after PSH* (29.9% in Pennsylvania and 36.6% in New Jersey).

Figure 11. Inpatient hospitalization (all-cause) was most common among the unsuccessful destination group spanning their time *before, during, and after PSH*. Likelihood of hospitalization in the successful destination group was lower *after PSH* than *during PSH* in Pennsylvania only. It was slightly higher in New Jersey. In both states, the likelihood of inpatient hospitalization for the successful group was greater *before PSH* than *during* or *after PSH*.

[13] While the estimate of likelihood of any inpatient use *before PSH* was also lower in the successful destination group compared to the unsuccessful destination group, this was not statistically significant.





Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021); authors' analysis. Note: Adjusted estimates based on analysis of cohorts. See Appendix for additional detail on methods and variable definitions.

Number of Outpatient Behavioral Health Visits in Year among PSH Participants with Behavioral Health Diagnoses[14]

In Pennsylvania, on average, participants had ~5.5 visits per year *during PSH* regardless of exit destination. In New Jersey, rates of outpatient behavioral healthcare use *during PSH* varied by group, with the highest use seen among those in the unsuccessful exit group (11.3 visits per year).

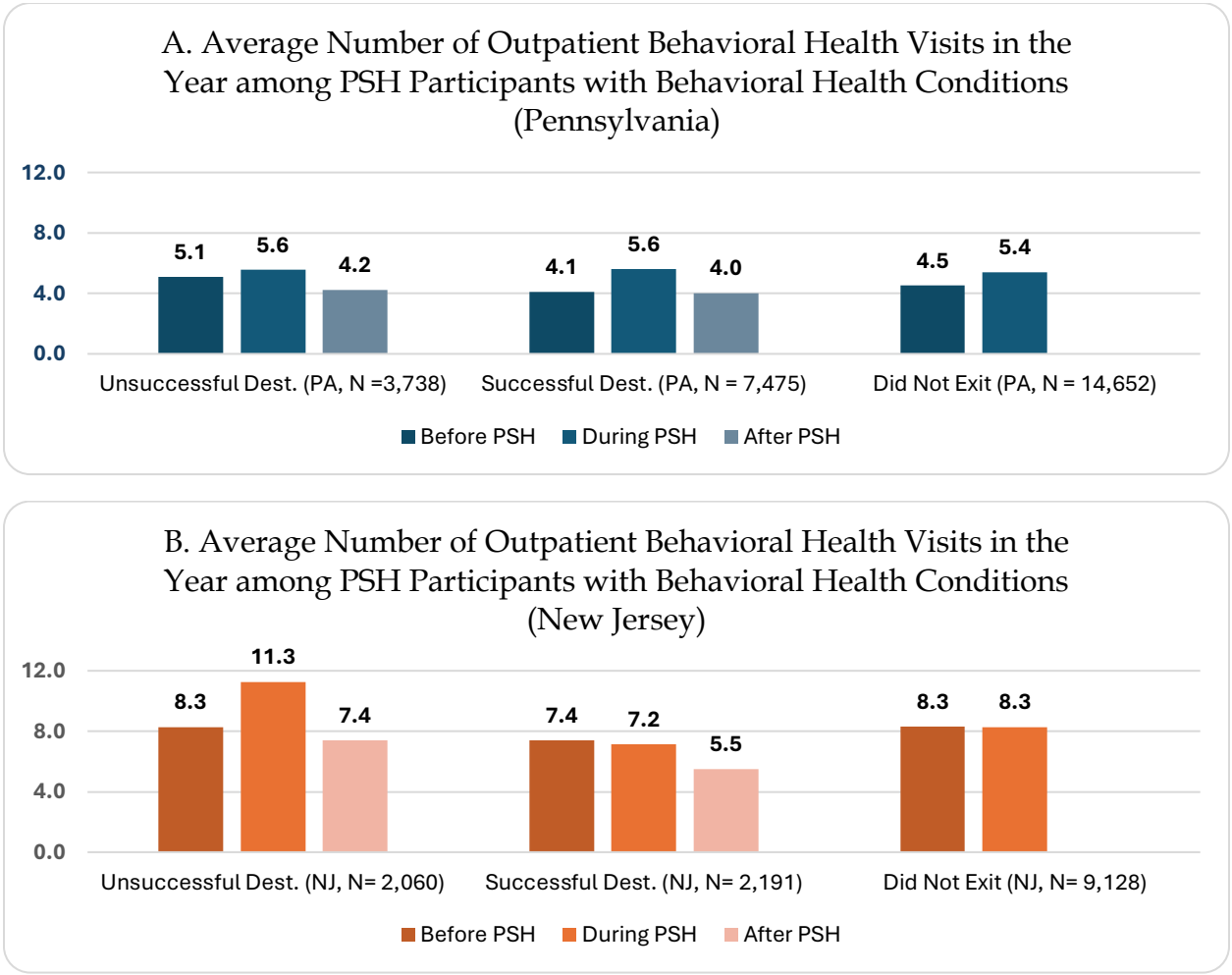
On average, people with behavioral health diagnoses in the successful destination group had fewer outpatient behavioral health visits per year *after PSH* than *during PSH* (1.6 fewer visits

[14] Rates of outpatient behavioral visits were calculated as the number of outpatient behavioral health visits that an individual received in the year.

per year in Pennsylvania and 1.7 fewer visits per year in New Jersey). This decline was statistically significant in Pennsylvania but not in New Jersey.

While these rates of outpatient behavioral health service use may seem low for this population, readers should consider that these analyses include all PSH participants with behavioral health diagnoses, even those with zero outpatient behavioral health visits, which lowers overall use averages.

Figure 12. Those exiting to successful and unsuccessful destinations had fewer behavioral health visits *after PSH* than *during PSH*.



Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021); authors' analysis. Note: Adjusted estimates based on analysis of cohorts. See Appendix for additional detail on methods and variable definitions.

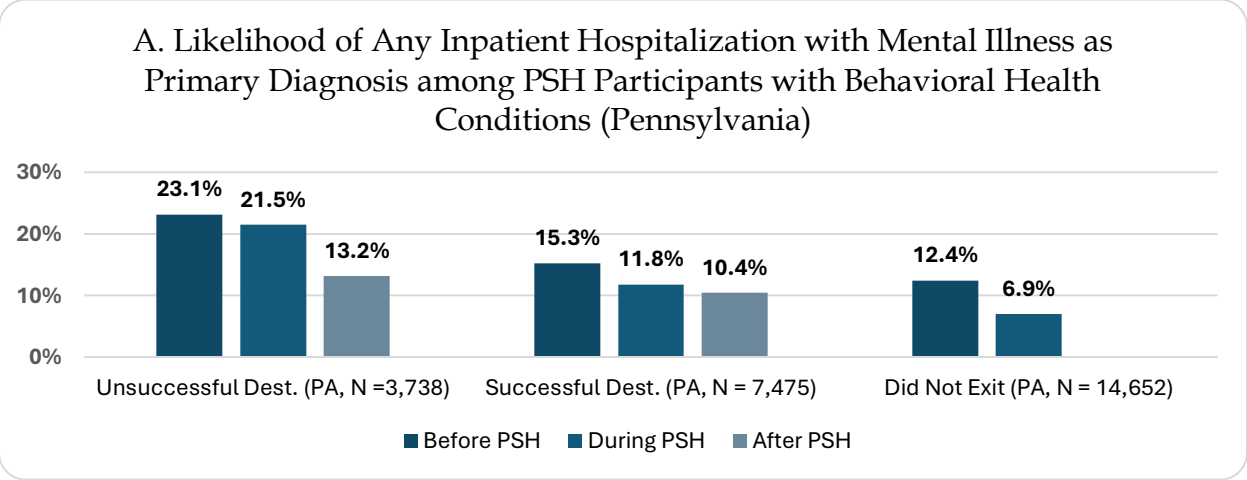
Any Inpatient Hospitalization for Mental Illness in the Year among People with Behavioral Health Diagnoses

Inpatient use, where the primary diagnosis was for mental illness, was also tracked across the destination groups. In both states, those in the successful destination group were less likely to experience inpatient hospitalization for mental illness *during* and *after PSH* compared to the unsuccessful destination group (from 2.8 to 9.7 percentage points lower).[15]

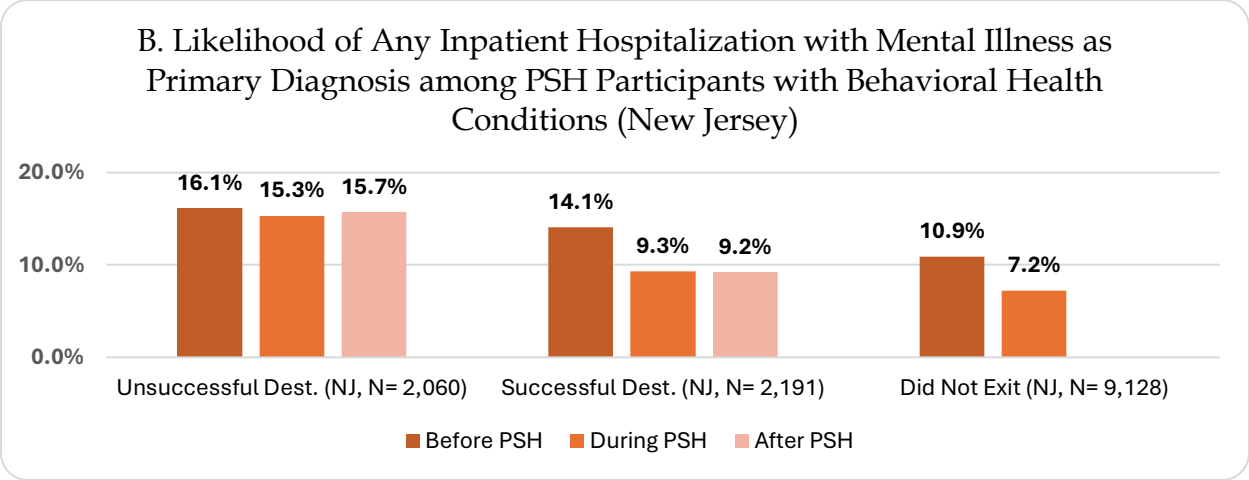
About 1 in 14 people with a behavioral health diagnosis in the group of participants that did not exit PSH had an at least one inpatient stay per year *during PSH* (6.9% in Pennsylvania and 7.2% in New Jersey).

Among the successful group, about 1 in 10 PSH participants with a behavioral health diagnosis had at least one inpatient hospitalization per year for mental illness *after PSH* (10.4% in Pennsylvania and 9.2% in New Jersey). In comparison, roughly 1 in 7 people with behavioral health diagnoses in the unsuccessful destination group had at least one inpatient stay per year *after PSH* (13.2% in Pennsylvania and 15.7% in New Jersey).

Figure 13. For most groups, hospitalizations for mental illness declined when they lived in PSH, a pattern that was largely sustained after exit.



[15] While the estimate of likelihood of any inpatient use when mental illness was the primary diagnosis was also lower in the successful destination group compared to the unsuccessful destination group in the period before PSH participation, this was not statistically significant.



Source: Linked Homelessness Management Information System (HMIS) & Medicaid Management Information System data (2016-2021); authors' analysis. Note: Adjusted estimates based on analysis of cohorts. See Appendix for additional detail on methods and variable definitions.

Conclusions & Recommendations

Several conclusions can be drawn from these analyses with implications for homeless services practice and policy:

- **Homeless service systems can responsibly promote exits from PSH to a lower level of care.** Findings from this study show that successful exit from PSH is possible. Those who exited to a lower level of care did not frequently return to homelessness in the 24 months following exit and their patterns of healthcare use were not substantially worse during this period when compared to use in PSH. To establish whether these positive housing and healthcare exit outcomes hold over time, further research is needed. But these initial findings are encouraging. As such, homeless service systems should continue to explore strategies that promote successful exits from PSH for individuals who express an interest in leaving PSH (i.e. Moving On initiatives) and the U.S. Department of Housing and Urban Development should consider funding additional resources for these efforts.[16]

- **Additional affordable housing and targeted supports are needed to increase PSH turnover and successful exits.** Only ~12.5% of those in PSH during the study period exited to a lower level of care and exit rates were similar in both states. This finding is consistent with previous research estimating comparably low annual exit rates from PSH (12.8% for adult and veteran households and 13.2% for family households),[4] and findings from a

[16] Moving On [Internet]. HUD Exchange. US Housing and Urban Development. Available: https://www.hudexchange.info/programs/coc/moving-on/

survey of PSH providers regarding the share of participants they believed were capable of successful exit from PSH (5-25%).[17] But research also shows that this rate of turnover is meeting only a fraction of the total demand for PSH units, leaving thousands of households in need of these critical supports. [4] On average, PSH participants with exits to successful destinations had longer stays in PSH relative to those who exited to unsuccessful destinations. More time in PSH (i.e., a higher "dose" of PSH services) may be associated with likelihood of successful exit. But further, more detailed analyses are needed to determine whether this is the case. If systems want to promote a higher rate of successful exit while mitigating unsuccessful exits, our findings suggest that targeted preparatory, transitional, and aftercare services for PSH participants, as well as greater access to affordable housing and housing navigation supports, may be needed.

- **To appropriately target PSH exit supports and resources, homeless services systems should consider individual-, program-, and community-level factors.** Compared to those who exited to unsuccessful destinations and those who did not exit, those who exited to successful destinations were more likely to be ***younger, female, Black non-Hispanic and Hispanic/Latine, and not have a substance use disorder***. Interventions then should be tailored to the unique needs and strengths of different groups to promote successful exits.

  Those who exited to successful destinations were also more likely to ***reside in a PSH program with low rates of participant turnover*** (defined as the program's total number of exits divided by its total number of admissions). Low rates of participant turnover in the PSH program as a predictor of successful exit could indicate that providers working in these programs with more established, and presumably more stable participants, have more available time to prepare and support participants interested in exiting. Thus, provider caseload should be a consideration in strategies to promote successful exits. With smaller caseloads, providers may be able to spend more time helping individuals prepare for exit.

  Notably, this study also identified affordability as a potential predictor of successful exits, as those who exited to successful destinations were more likely to ***reside in a PSH program in an area with a more affordable rental market.*** To encourage successful exits, individuals exiting in communities with less affordable rental markets will likely need greater resources (e.g. enhanced housing subsidies) and significant service provider supports (e.g. housing navigation) to locate and secure affordable units.

[17] National Alliance to End Homelessness. Moving On: Facilitating Tenants' Ability to Move from Permanent Supportive Housing to Other Housing Opportunities. N.D.

- **Greater attention to PSH housing type, location, and funding sources is warranted, as these factors may also be impacting exit outcomes.** PSH participants in single site programs, urban locations, and non-HUD funded projects were more likely to exit PSH during the study period. Those exiting in urban areas may have more options for places to go, notwithstanding affordability issues. Across almost all geographic area types, funding sources, and housing types, exits to successful destinations were more likely than exits to unsuccessful destinations. But there were two exceptions: In non-HUD funded projects, unsuccessful exits were more common, and in cluster/multiple site programs, exits were split about evenly between successful and unsuccessful destinations. In single site programs, exits to successful destinations were more common. Single site programs provide on-site supportive services which may be a more effective approach for promoting successful exits. Non-HUD funded projects could have fewer resources and less infrastructure to support successful exits and prevent unsuccessful exits. Or perhaps, because these programs are not subject to HUD program standards and less likely to receive technical assistance associated with HUD funding, they struggle to assist participants in exiting successfully. Future studies could assess how housing type, location, and funding source interact with participant characteristics and local housing market conditions to shape both successful exits and returns to homelessness after exit.

- **Additional research on successful exits is needed.** This research project is an important contribution to the homeless services literature, as PSH remains in short supply, yet few studies have examined how to promote successful exits. Strengths of this research include the use of a large population-based dataset including diverse populations and service areas and diverse perspectives from a study steering committee. However, this study is not without limitations. Limitations include use of data from only two states and use of data from Medicaid-enrolled PSH participants only. Findings could look different in different states and in the non-Medicaid population. This study was also only able to identify factors associated with successful exits, not factors that *cause* successful exits. To identify causal factors that can be modified to promote successful exits, additional research will be needed. Given the novelty of the finding on area affordability as a predictor of successful exit, additional research should be undertaken to articulate the impact of this critical community-level factor. Likewise, differential findings on outcomes by race and ethnicity deserve further exploration to ensure equitable access to the supports and opportunities that make successful exits possible. Future studies would also benefit from in-depth exploration of PSH provider and participant perspectives on the predictors of successful exit since these are the groups with first-hand knowledge of these factors.

Acknowledgements

Research reported in this publication was supported by the National Alliance to End Homelessness and the National Institute on Minority Health and Health Disparities of the National Institutes of Health (NIH) under award number R01MD015261. The study team is grateful for the assistance of Medicaid and homelessness services agencies in the study states for authorizing and facilitating access to study data. We also thank the study steering committee and Margaret Koller of the Rutgers Center for State Health Policy for their contributions to the study. The content of this report is solely the responsibility of the authors and does not necessarily represent the official views of state agencies contributing data, the National Alliance to End Homelessness, or the NIH.

Appendix 1: Analytic Measures Calculated from Administrative Records and Governmental Sources

HUD Homelessness Management Information System Measures

The following were derived from HMIS encounter and program files, as available and defined in HUD HMIS manual.[18]

1. Living Situation Prior to PSH Placement Categories – Summarized available "prior living situation," with values described in Appendix A of the HUD HMIS manual, based on input from steering committee: (a) Unhoused (1, 2, 16, 18), (b) Institutional setting (15, 6, 7, 25, 4, 5), (c) Living with family or friends (13, 36, 12, 22, 35, 23), and (d) Independent Housing (29, 14, 32, 26, 27, 28, 19, 3, 31, 33, 34, 10, 20, 21, 11)
2. Veteran Status – Indication of Veteran status during admission to PSH program.
3. Program Turnover (i.e. Exit Volume) – Highest annual program exits divided by highest annual program admissions
4. Program Enrollment Timeline – (a) Before PSH indicated if study date is before admission date, (b) Current or during PSH indicated when study date is between and including PSH admission and exit dates, (c) After PSH indicated when study date is after exit date.[19]
5. Program Veteran Exit Rate – Average number of exits with Veteran Status indicated per program per year
6. Individual – Single HMIS Person ID per HMIS Household ID
7. Program Chronic Health Exit Rate - Average number of exits with Chronic Health Need indicated per program per year
8. Program Developmental Disability Exit Rate - Average number of exits with Developmental Disability indicated per program per year
9. Program Size– Number of participants "currently" enrolled in year
10. Housing Type (NJ Only) – This is a categorical variable as defined in the HUD HMIS Manual: (0) "Site-based - single site - All clients are housed in a single project facility." (1) "Site-based -clustered/multiple sites - Clients are housed in more than one project facility in multiple locations, but more than one client is housed in each project facility. The facility locations are owned, operated, or sponsored by the project." (2) "Tenant-based - scattered site - Clients have leases or other occupancy agreements and are housed in residences that are not owned or managed by the project."
11. Geography Type (NJ Only) – This is a dummy variable based on definitions in the

[18] U.S. Department of Housing and Urban Development. FY 2022 HMIS Data Standards (Manual), v. 1.3. U.S. Department of Housing and Urban Development; 2021

[19] For annual healthcare use measure, when PSH enrollment begins or ends in the middle of a calendar year, the "before PSH" period ends January 1st in the year of PSH admission and "after PSH" begins January 1st in the year immediately following PSH exit.

HUD HMIS manual. Urban, Suburban, Rural correspond to HUD crosswalk of ZIP codes. Suburban and Rural were collapsed to one category for the NJ-only analysis due to sample size.

12. Funding Source (NJ Only) – This is a categorical variable as defined in the HUD HMIS Manual. When restricting to PSH records, the following funding sources remained: (1) HUD CoC PSH, (2) HUD HOPWA, (3) Other HUD Funding (e.g., CoC – Transitional Housing, HUD Veterans Affairs Supportive Housing (VASH) program), (4) Non-HUD Funded (local and other funding sources).
13. Exit Types: Summarized available "destination," with values described in Appendix A of the HUD HMIS manual, based on input from steering committee (a) Exits to successful destinations (10, 11, 21, 22, 23, 33, 34), (b) Exits to unsuccessful destinations (16, 1, 18, 15, 6, 7, 25, 4, 5, 2, 29, 14, 32, 12, 13).
14. Length of Stay – PSH program discharge date minus PSH admission date when available. When participant did not exit, imputed to the end of the study period.
15. Returns to Homelessness within 24 Months of Program Exit – HMIS ID observed using a homeless service "project type," with values described in Appendix A of the HUD HMIS manual (emergency shelter, day shelter, transitional housing, street outreach, and "Safe Haven"), within approximately 24 months (>730 days) after PSH exit.

HUD Comprehensive Housing Affordability Strategy

The following were derived from the Comprehensive Housing Affordability Strategy (2016-2020).[20]

16. Unaffordability in Program County – Share of renter households with very low incomes, i.e. making 50% or less of the typical income in the area, who are spending more than half their income on rent and utilities).

Medicaid Management Information System Measures

The following were derived from MMIS managed care and fee-for-service claims.[21]

17. Age – Study year minus year of birth provided in MMIS enrollment file.
18. Race and Ethnicity - White, Black, Hispanic, Asian or Other as provided on MMIS enrollment file.
19. Sex – As provided on MMIS enrollment file.
20. HIV/AIDS Diagnosis – Derived from Elixhauser Comorbidity Index Classification with algorithm available from the Agency for Healthcare Research and Quality,

[20] Consolidated Planning/CHAS data [Internet]. US Housing and Urbanc Development. Available from: https://www.huduser.gov/portal/datasets/cp.html

[21] Medicaid Management Information System [Internet]. Medicaid.gov. Available from: https://www.medicaid.gov/medicaid/data-systems/medicaid-management-information-system

coded for study as a binary response variable if condition ever indicated from 2016-2021.[22]

21. History of Alcohol Use Disorder – As above.
22. History of Depression (including bipolar disorder) - As above.
23. History of Substance Use Disorder (non-alcohol) - As above.
24. Number of Other Chronic Health Conditions - As above. With total non-HIV/AIDS or behavioral health chronic conditions.
25. Any Outpatient Primary Services in Year – Derived from provider and encounter information available in MMIS.
26. Any Inpatient Hospitalization in Year – Adapted from HEDIS® specification for measurement years 2020 and 2022.[23]
27. Any Inpatient Hospitalization for Mental Illness in Year - Adapted from HEDIS® specification for measurement years 2020 and 2022.[23]
28. Total Annual Outpatient Behavioral Health Visits in Year - Adapted from HEDIS® value set specifications for measurement years 2020 and 2022.[23] Excludes behavioral health services during inpatient admission.

Appendix 2: Methods for Determining Estimates

A research partnership (including Rutgers University, the New Jersey Division of Medical Assistance and Health Services, the New Jersey Housing and Mortgage Finance Agency, University of Pittsburgh School of Public Health, and the Commonwealth of Pennsylvania's Department of Human Services) allowed collection, linkage, and analysis of administrative data from the Homeless Management Information System and Medicaid Management Information System. Analyses included PSH enrollees with available Medicaid claims between 2016-2021 in 19 of 21 counties in New Jersey, as well as 45 of 67 counties of Pennsylvania.

Pooled Cross-Sectional Specification

Cross-sectional analysis is an observational quantitative method that examines a population at a single point in time. It allows for descriptive analyses of a population, such as determining what characteristics that are most prominent within the population at that time point. Pooled cross-sectional analysis is the method of grouping multiple cross-sectional time points together. This allows for increasing sample size and making more precise estimates of study statistics.

[22] Elixhauser Comorbidity Software Refined for ICD-10-CM [Internet]. Agency for Healthcare Research and Quality; Available from: https://hcup-us.ahrq.gov/toolssoftware/comorbidityicd10/comorbidity_icd10.jsp

[23]

For this analysis, cross-sections were taken of PSH participants during their final PSH stay. Their admission year was used as the time point of interest and characteristics of the individual, program, and geographic area were used as independent variables when developing statistical models of likelihood of exit destination, likelihood of homeless service use within twenty-four months of program exit, and number of days in PSH. The pooled sample in these analyses was restricted to adults (at least 18 years old) who were *ever enrolled in Medicaid* and whose final exit from PSH was 2017 or later.

Cohort Analysis and Inclusion Criteria

Cohort analysis is an observational quantitative method where people are grouped by a shared characteristic, and their service use, health outcomes, or other indicators are tracked over time. Researchers can limit the amount of variation within a cohort (by applying stringent inclusion criteria) and be able to make stronger claims about patterns among people who were similar to the cohort (a concept known as "internal validity"), or they may allow for more flexibility (by applying fewer restrictions) so that the patterns observed are most similar to what may be observed in real world settings (a concept known as "external validity").

In this study, cohorts were created for each PSH exit category (i.e., "no exit," "exits to unsuccessful destinations destination," "exits to successful destinations destination." Inclusion in a cohort was restricted to adults aged 18 by the beginning of 2017 with at least 10 months of Medicaid enrollment in the analysis year, 2017 to 2021. Remaining variation within the cohorts was adjusted for as described in the following Data Analyses section.

Data Analyses

Descriptive analyses of all analytic variables (see Appendix 1) were estimated by Permanent Supportive Housing Exit Category. Regression analysis was used to estimate adjusted measures of association for personal, program, and area characteristics. For outcomes that were binary (i.e., the outcome reported as a "yes" or "no"), *linear probability models* were used. Alternatively, models of outcomes with a count variable (i.e., Length of PSH stay and total behavioral health outpatient visits in year) were estimated with *generalized linear models with the canonical Poisson distribution regression (log link)*.

All models were adjusted for sociodemographic characteristics, physical and behavioral health conditions, program characteristics, and year and three-digit zip code unit fixed effects. Robust standard errors were calculated by clustering variance at the three-digit zip code level. For interpretation purposes, the "margins" set of commands in Stata 18

was used, which provides predicated probabilities following regression analysis.[24]

Limitations

This report reflects the experiences of PSH participants who were enrolled in Medicaid for at least some time during the study period. So, these findings do not reflect the experiences of those in PSH who never had Medicaid coverage (for the cross-sectional analysis), or utilization of those who lost coverage (for the cohort analysis). Additionally, the analyses presented in this report are built from administrative data sources not primarily intended for research purposes. As a result, characteristics of PSH participants and use of housing and healthcare services rely on accurate data entry by staff at housing agencies and medical facilities, and analysts were only able to observe what is recorded about an individual, program, or service.

Estimates of housing services and behavioral health and other comorbidities likely underestimate the true prevalence of these homelessness and conditions. For instance, the measure of "Returns to Homelessness within 24 Months of Program Exit" is measured by the types of services used as recorded in HMIS and should be interpreted as a "floor estimate" of returns to homelessness in general (which would include those who did not receive services).

Finally, limitations include the narrow geographic scope (two states, with key program data from only one), so patterns may differ elsewhere. Also, these findings reflect associations, not causation; identifying causal drivers of successful exits will require further study.

[24] Williams R. Using the margins command to estimate and interpret adjusted predictions and marginal effects. The Stata Journal. 2012 Jun;12(2):308-31.

Appendix 3: Estimates Tables from Descriptive and Regression Analyses

Appendix Table 3.1. Unadjusted Descriptive Summary by Exit Type among those that Exited from PSH (2017 or Later)

State	Pennsylvania			New Jersey		
Exit Type	No Exit	Exit to Unsuccessful Destination	Exit to Successful Destination	No Exit	Exit to Unsuccessful Destination	Exit to Successful Destination
Statistic	Mean (95% CI)	Mean (95% CI)	Mean (95% CI)	Mean (95% CI)	Mean (95% CI)	Mean (95% CI)
Age at Exit (or in last observed Year)	47.7(47.3-48.2)	50.1(48.9-51.4)	41.6(40.4-42.7)	48.1(47.5-48.6)	47.2(45.9-48.5)	40.2(38.9-41.4))
Race/Ethnicity						
White, non-Hispanic,%	28.9(27.5-30.3)	33(30-37.2)	28.9(25.7-32.2)	28.6(27-30.2)	35.4(31.1-39.8)	26.4(23.1-29.7)
Black, non-Hispanic,%	62.2(60.7-63.7)	57.7(50-62.2)	60.1(56.5-63.6)	57.1(55.3-58.8)	49.9(45.3-54.5)	55.7(51.9-59.4)
Hispanic,%	5.7(5-6.4)	5.9(0-8)	8.8(6.8-10.9)	10.3(9.2-11.4)	8.4(5.9-11)	12.5(10-15)
Asian, non-Hispanic,%	3.2(2.7-3.8)	3.4(0-5)	2.2(1.1-3.2)	4(3.3-4.7)	6.3(4.1-8.5)	5.4(3.7-7.1)
Male,%	50.8(49.2-52.3)	66.8(60-71.1)	42.3(38.7-45.8)	48.5(46.7-50.2)	63.5(59.1-67.9)	46.8(43.1-50.6)
Female,%	49.2(47.7-50.8)	33.2(30-37.4)	57.7(54.2-61.3)	51.5(49.8-53.3)	36.5(32.1-40.9)	53.2(49.4-56.9)
Household Member,%	35.1(33.6-36.5)	15.2(10-18.5)	53.7(50.1-57.3)	26.4(24.8-28)	10.6(7.8-13.4)	25.4(22.1-28.7)
Individual,%	64.9(63.5-66.4)	84.8(80-88)	46.3(42.7-49.9)	73.6(72-75.2)	89.4(86.6-92.2)	74.6(71.3-77.9)
Diagnoses						
HIV/AIDS,%	10.5(9.6-11.5)	11.8(10-14.8)	12.2(9.9-14.6)	23.8(22.3-25.4)	14.9(11.7-18.2)	14.5(11.9-17.2)
Alcohol Use Disorder,%	31.7(30.2-33.1)	44.2(40-48.7)	23.5(20.4-26.6)	25.7(24.1-27.2)	40.6(36.1-45.1)	21.4(18.4-24.5)
Depression (incl. Bipolar),%	57.5(56-59)	63(60-67.4)	55.6(52-59.2)	51.4(49.6-53.2)	56.2(51.6-60.7)	45.4(41.6-49.1)
Substance Use Disorder,%	49.1(47.6-50.7)	66.2(60-70.4)	40.5(36.9-44)	42.1(40.4-43.9)	56.4(51.8-60.9)	36.9(33.2-40.5)
Number of Other Chronic Health Conditions,#	1.2(1.1-1.2)	1.2(1.1-1.4)	0.9(0.8-1)	1.4(1.3-1.4)	1.3(1.2-1.5)	0.9(0.8-1)
Veteran,%	5.4(4.7-6.1)	7.6(10-10)	4.1(2.6-5.5)	4.6(3.8-5.3)	3.2(1.6-4.9)	2.1(1-3.1)
Prior Living Situation						
Unhoused,%	70.6(69.2-72)	75.5(70-79.4)	72.6(69.3-75.8)	64(62.3-65.7)	68.5(64.2-72.7)	63.7(60.1-67.3)
Institutional,%	2.6(2.1-3.1)	5.3(0-7.3)	4.6(3.1-6.1)	3.2(2.6-3.8)	11.2(8.4-14.1)	5.3(3.6-7)
With Friends/Family,%	3.7(3.2-4.3)	3.4(0-5)	5(3.4-6.6)	10(8.9-11.1)	8.2(5.7-10.7)	11.5(9.1-13.8)
Independently Housed,%	5.9(5.2-6.6)	4.9(0-6.8)	5.3(3.7-6.9)	19.2(17.8-20.6)	9.9(7.2-12.7)	14.4(11.8-17)

Other/Missing,%	17.2(16-18.3)	11(10-13.8)	12.5(10.1-14.9)	3.6(3-4.3)	2.2(0.8-3.5)	5.1(3.5-6.8)
Program Characteristics						
Program Turnover (Exit Ratio - Exits/Admissions),%	42.1(40.8-43.4)	42.9(40-47.9)	71.8(66.4-77.1)	35.5(34.6-36.5)	46.9(43.3-50.5)	47.4(45.1-49.8)
Large Enrollment Program (25+ Participants Enrolled),%	87.6(86.6-88.6)	78.2(70-81.9)	83(80.3-85.7)	78.9(77.5-80.4)	79.3(75.6-83)	76.7(73.5-79.8)
Veterans/All Participants in Program,%	4.7(4.5-5)	5.7(10-6.3)	4.4(3.9-4.9)	3.9(3.6-4.2)	3.6(3.1-4.1)	3.2(2.9-3.6)
Participants with Chronic Health Conditions/All Participants in Program,%	38.2(37.7-38.8)	37.9(40-39.4)	34.2(32.8-35.5)	13.4(13-13.7)	17.4(16.1-18.6)	15.9(15-16.9)
Participants with Developmental Disabilities/All Participants in Program,%	5(4.9-5.1)	5.1(0-5.5)	6.3(5.9-6.8)	3.3(3.2-3.5)	5.4(4.9-5.9)	4.5(4.1-5)
Unaffordability in Program County, % (*see Appendix 1*)	46.6(46.5-46.8)	47.9(47.5-48.3)	45.2(44.6-45.7)	50.6(50.5-50.7)	51.4(51.1-51.7)	50.6(50.3-50.9)
N	4041	473	736	3021	463	681

Notes: CI = Confidence Interval; N = Number of Participants in Exit Type. Used to generate Figures 1 and 2.

Appendix Table 3.2. Unadjusted Exit Type Likelihood by Race/Ethnicity among those that Exited from PSH (2017-2021)

	Pennsylvania		New Jersey	
Race/Ethnicity	N	Percent (95% CI)	N	Percent (95% CI)
White, non-Hispanic	953		586	
Exit to Unsuccessful Destination		16.4(14-18.7)		28(24.3-31.6)
Exit to Successful Destination		22.4(19.7-25)		30.7(27-34.5)
Black, non-Hispanic	1,469		1,051	
Exit to Unsuccessful Destination		18.6(16.6-20.6)		22(19.5-24.5)
Exit to Successful Destination		30.1(27.7-32.4)		36.1(33.2-39)
Hispanic	147		192	
Exit to Unsuccessful Destination		19(12.7-25.4)		20.3(14.6-26)
Exit to Successful Destination		44.2(36.2-52.3)		44.3(37.2-51.3)
Asian or Other, non-Hispanic	69		99	
Exit to Unsuccessful Destination		23.2(13.2-33.2)		29.3(20.3-38.3)
Exit to Successful Destination		23.2(13.2-33.2)		37.4(27.8-47)
All Exits	2,638		1,928	
Exit to Unsuccessful Destination		17.9(16.5-19.4)		24(22.1-25.9)
Exit to Successful Destination		27.9(26.2-29.6)		35.3(33.2-37.5)

Notes: CI = Confidence Interval; N = Total in Race/Ethnicity Category among all with PSH Exits. Used to generate Figure 3.

Appendix Table 3.3. Adjusted Exit Type Likelihood in New Jersey by Program Characteristics Compared (2017 or Later)

Program Characteristics	Exit to Unsuccessful Destination	Exit to Successful Destination	Any Exit
	Adjusted Percent (95% CI)		
Housing Type: Site-based - clustered/multiple site	14.8(12.1-17.5)	15.3(12.4-18.3)	41.8(38.7-44.9)
Housing Type: Site-based - single site	18.8(15.9-21.7)	26.7(23.8-29.7)	50.1(47.2-53)
Housing Type: Tenant-based - scattered site	10.6(9.1-12)	15.9(14.3-17.5)	39.3(37.4-41.2)
Funding: HUD CoC PSH	11.2(9.6-12.7)	19.1(17.3-20.9)	41.8(39.8-43.7)
Funding: HUD HOPWA	11.6(8.2-14.9)	18.8(14.4-23.1)	39(34.2-43.8)
Funding: Other HUD	12.1(6.9-17.4)	16.1(10.1-22.1)	40.6(34.4-46.7)
Funding: Non-HUD Funded	19.7(16.8-22.6)	16.8(13.8-19.7)	46.6(43.6-49.7)
Geography: Suburban (Inc. small number of rural)	12.7(11.4-14)	16.5(15-18)	41.6(39.9-43.2)
Geography: Urban	14.5(12.5-16.5)	21.9(19.6-24.2)	44.2(41.8-46.7)
N	3,675	3,460	4,916

Note: Ordinary Least Squares Models of (1) Unsuccessful Destination and (2) Successful Destination compared to remaining in PSH. Adjusted for individual-level characteristics, program case mix, size, exit ratio, and entry year fixed effects. Table used to generate Figures 4 and 5.

Appendix Table 3.4. Adjusted PSH Length of Stay by Exit Type (2017 or Later)

Exit Type	Pennsylvania	New Jersey
	Mean Days (%90 CI)	Mean Days (90% CI)
No Exit	1884.1(1847.5-1920.7)	2615(2567.3-2662.7)
Unsuccessful Destinations	995.5(927.2-1063.8)	1090.7(997.3-1184.2)
Successful Destinations	1189.4(1116.9-1262)	1183.8(1088.7-1278.9)
N	8,732	5,279

Note: Poisson Regression Models of Length of PSH Stay. Adjusted for individual-level characteristics, program case mix, size, exit ratio, zip code fixed effects and entry year fixed effects. Table used to generate Figure 6A.

Appendix Table 3.5. Likelihood of Observed Homeless Service Use within 24 Months of PSH Exit by Exit Type (2017 or Later)

Exit Type	Pennsylvania	New Jersey
	Adjusted Percent (90% CI)	Adjusted Percent (90% CI)
Unsuccessful Destinations	18.6(15.4-21.8)	17.1(12.2-22.1)
Successful Destinations	9.3(4.2-14.4)	10.7(9.4-12.1)
N	2,388	1,781

Note: Ordinary Least Squares Models of Observed Homeless Service Use within 24 Months of PSH exit. Adjusted for individual-level characteristics, program case mix, size, exit ratio, zip code fixed effects and entry year fixed effects. Table used to generate Figure 6B.

Appendix Table 3.6. Likelihood of Observed Homeless Service Use within 24 Months of PSH Exit by Race/Ethnicity (Exits 2017 or Later)

Race/Ethnicity	Pennsylvania	New Jersey
	Adjusted Percent (90% CI)	Adjusted Percent (90% CI)
White	10.8(9.7-12)	8.3(6.8-9.8)
Black	14.4(13.9-15)	14(13-15)
Hispanic	11.6(9.4-13.8)	12.8(10.2-15.4)
Asian or Other	8.8(4-13.5)	5.7(0.3-11)
N	2,535	1,895

Note: Ordinary Least Squares Models of Observed Homeless Service Use within 24 Months of PSH exit. Adjusted for individual-level characteristics, program case mix, size, exit ratio, zip code fixed effects and entry year fixed effects. Table used to generate Figure 7.

Appendix Table 3.7. Likelihood of Returns to Homelessness within 24 Months of PSH Exit by Program Characteristics (Exits 2017 or Later)

Returns to Homelessness	
Housing Type	Adjusted Percent (90% CI)

Housing Type: Site-based - clustered/multiple site	13.1(9.4-16.2)
Housing Type: Site-based - single site	10.1(7.4-12.4)
Housing Type: Tenant-based - scattered site	12.2(10-14.1)
Funding: HUD CoC PSH	10.2(8.2-11.9)
Funding: HUD HOPWA	10.2(5.5-14.1)
Funding: Other HUD	10.9(5.2-15.7)
Funding: Non-HUD Funded	15.3(12-18.1)
Geography: Suburban (Inc. small number of rural)	10.2(8.5-11.6)
Geography: Urban	14.7(11.9-17)
N	13.1(9.4-16.2)

Note: Ordinary Least Squares Models of Observed Homeless Service Use within 24 Months of PSH exit. Adjusted for individual-level characteristics, program case mix, size, exit ratio, and entry year fixed effects. . Table used to generate Figure 8.

Appendix Table 3.8. Adjusted Annual Health Services Use Estimates by PSH Exit Type and PSH Period (2017 or Later)

		Pennsylvania			New Jersey		
Utilization Measure	PSH Period	No Exit	Unsuccessful Destination	Successful Destination	No Exit	Unsuccessful Destination	Successful Destination
		Adjusted Percent (95% CI)	Adjusted Percent (95% CI)	Adjusted Percent (95% CI)	Adjusted Percent (95% CI)	Adjusted Percent (95% CI)	Adjusted Percent (95% CI)
Any Primary Care Visits [Percent (95% CI)]	Before PSH	52.4(50.6-54.2)	50.5(45.5-55.5)	62.9(58.8-67)	71.6(70.2-72.9)	57.8(50-65.7)	69.8(64.3-75.3)
	During PSH	55.2(54.8-55.7)	51.6(49.6-53.6)	59.9(58-61.8)	70.7(70.4-71)	58.6(55.3-62)	67.2(65.2-69.2)
	After PSH	-	50.1(48.5-51.6)	57.8(56.8-58.8)	-	55(53.3-56.8)	63.9(63-64.9)
	N	18,742	4,276	9,401	12,294	2,493	3,381
Total Outpatient Behavioral Health Visits [Count of Visits (95% CI)])	Before PSH	4.5(4.1-5)	5.1(4.2-6)	4.1(3.5-4.7)	8.3(7.4-9.2)	8.3(4.8-11.7)	7.4(6-8.8)
	During PSH	5.4(5.2-5.5)	5.6(4.8-6.4)	5.6(5-6.2)	8.3(8.1-8.5)	11.3(10.1-12.4)	7.2(5.8-8.6)
	After PSH	-	4.2(3.8-4.7)	4(3.7-4.3)	-	7.4(6.6-8.2)	5.5(4.5-6.4)
	N	14,652	3,738	7,475	9,128	2,060	2,191
Inpatient Hospitalization in Year [Percent (95% CI)]	Before PSH	29.6(27.6-31.7)	39.7(35.9-43.4)	28.8(23.3-34.3)	26.9(25.3-28.5)	32.9(25-40.8)	26.2(21.4-31.1)
	During PSH	18.9(18.4-19.4)	37.2(34.9-39.5)	22.6(21-24.2)	19(18.6-19.3)	36.7(33.2-40.2)	20(17.8-22.1)
	After PSH		30(28.3-31.6)	20.9(19.8-21.9)	-	36.6(34.6-38.7)	21.6(20.2-23)
	N				12,294	2,493	3,381
Inpatient Hospitalization with Mental Illness as Primary Diagnosis in Year [Percent (95% CI)]	Before PSH	12.4(11.0-13.9)	23.1(18.7-27.6)	15.3(10.6-19.9)	10.9(9.4-12.3)	16.1(5.4-26.9)	14.1(9.1-19.1)
	During PSH	6.9(6.5-7.4)	21.5(19.2-23.7)	11.8(10.2-13.3)	7.2(6.9-7.5)	15.3(12.7-18)	9.3(7.8-10.9)
	After PSH		13.2(11.8-14.5)	10.4(9.4-11.5)	-	15.7(13.9-17.5)	9.2(7.9-10.6)
	N	14,652	3,738	7,475	9,128	2,060	2,191

Note: Ordinary Least Squares Models of (1) Any Outpatient Primary Care, Any All-Cause Inpatient Stay, and Any Inpatient Stay with Mental Illness as Primary Diagnosis and (2) Poisson regression of Outpatient Behavioral Health Visit Stays over PSH participation history, stratified by PSH Exit category. Adjusted for individual-level characteristics, program case mix, size, exit ratio, zip code fixed effects and entry year fixed effects. Table used to generate Figures 9A-12B.