



RESEARCH BRIEF

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Utilization Profiles of VA Homeless Programs

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Background

The Department of Veterans Affairs (VA) has invested in developing and operating a continuum of various specialized homeless assistance programs, including domiciliary care, transitional housing, permanent supported housing, rapid rehousing, and others. Prior research has examined the characteristics, service use, and housing outcomes of Veterans participating in individual VA homeless programs (Tsai, Kaspro, & Rosenheck, 2013; Tsai, O'Toole, & Kearney, 2017). However, examining participation in these programs in isolation ignores the fact that Veterans are likely to be eligible for (and may access) multiple programs over time. Thus, it is important to analyze longitudinal data on use of all VA homeless programs together to understand how Veterans may use programs in combination, the sequence in which these programs are used, and for what periods of time.

In this study, we profiled how Veterans use multiple VA homeless programs over time. Further, we examined how their profiles are related to sociodemographic characteristics and other VA health service use. The results may inform continued development and program planning of VA homeless programs.

The specific aims of the project were: 1) to identify temporal typologies and pathways to Veterans' use of various VA homeless programs; and 2) to examine Veteran characteristics associated with different patterns of VA homeless services utilization.

Methods

This project used administrative data from three VA data sources: the Homeless Operations Management and Evaluation System (HOMES), the Supportive Services for Veteran Families (SSVF) program, and VA electronic medical records available through the VA's Corporate Data Warehouse (CDW). We used the SSVF and HOMES data to select the sample for this study, which included all 61,040 Veterans who entered any of the above described VA homeless programs at some time during the first three quarters of Federal Fiscal Year (FY) 2015 (i.e., between October 1, 2014 and June 30, 2015), and who also had no record of VA homeless service use at any point in the prior 12 months. SSVF and HOMES data were available through June 30, 2017, thus allowing for a uniform two-year follow up period for all Veterans in the study cohort.

Using an analytic approach known as sequence analysis, we examined patterns of VA homeless program use over time among members of the study cohort. To do so, we separated the two-year period following each Veteran's initial entry into a VA homeless program into 24 discrete one month periods. We then assessed whether Veterans participated in any of the following seven VA homeless programs during each month: 1) Contract Residential or Safe Haven; 2) Domiciliary Care for Homeless Veterans

Program (DCHV) or Compensated Work Therapy/Transitional-Residence (CWTR); 3) Grant and Per Diem (GPD); 4) Health Care for Homeless Veterans Case Management (HCHVCM); 5) U.S. Department of Housing and Urban Development-VA Supportive Housing (HUD-VASH); 6) SSVF Prevention (SSVFPV); 7) SSVF Rapid Re-housing (SSVFRR). We also assessed whether Veterans participated in multiple programs during the same month (i.e., any combination of two or more of the seven programs in the same month).

This approach resulted in a unique sequence of VA homeless program use for each Veteran in the study cohort over the 24-month period following their initial entry into a VA homeless program. After creating sequences for Veterans in the study cohort, we used optimal matching (OM) to compare the VA homeless program sequences of each Veteran in the study cohort to all other Veterans in the cohort. OM provides a single summary measure of how similar/different each Veteran's sequence of homeless program use is to all other Veterans in the cohort. We then used this summary to conduct a cluster analysis classifying Veterans into several different profiles whose members had similar sequences of VA homeless program use over the two-year observation period. Specifically, we employed hierarchical clustering using Ward's method. Because of the computational challenges associated with executing this clustering procedure on our full study cohort, we selected a random subsample comprised of 25% of the full cohort (or 15,260 Veterans) to serve as the primary analytic sample in conducting cluster analysis. To assess the stability and replicability of the identified profiles, we replicated the cluster analysis on a separate, randomly selected 25% subsample of the full study cohort.

After conducting cluster analyses, we compared the identified profiles in terms of a set of background variables (age, sex, race, ethnicity), and a series of measures of VA inpatient and outpatient health services over the two-year study period. In addition, we compared profiles with respect to their last known housing outcome.

Results

FIVE PROFILES OF VA HOMELESS PROGRAM USE IDENTIFIED

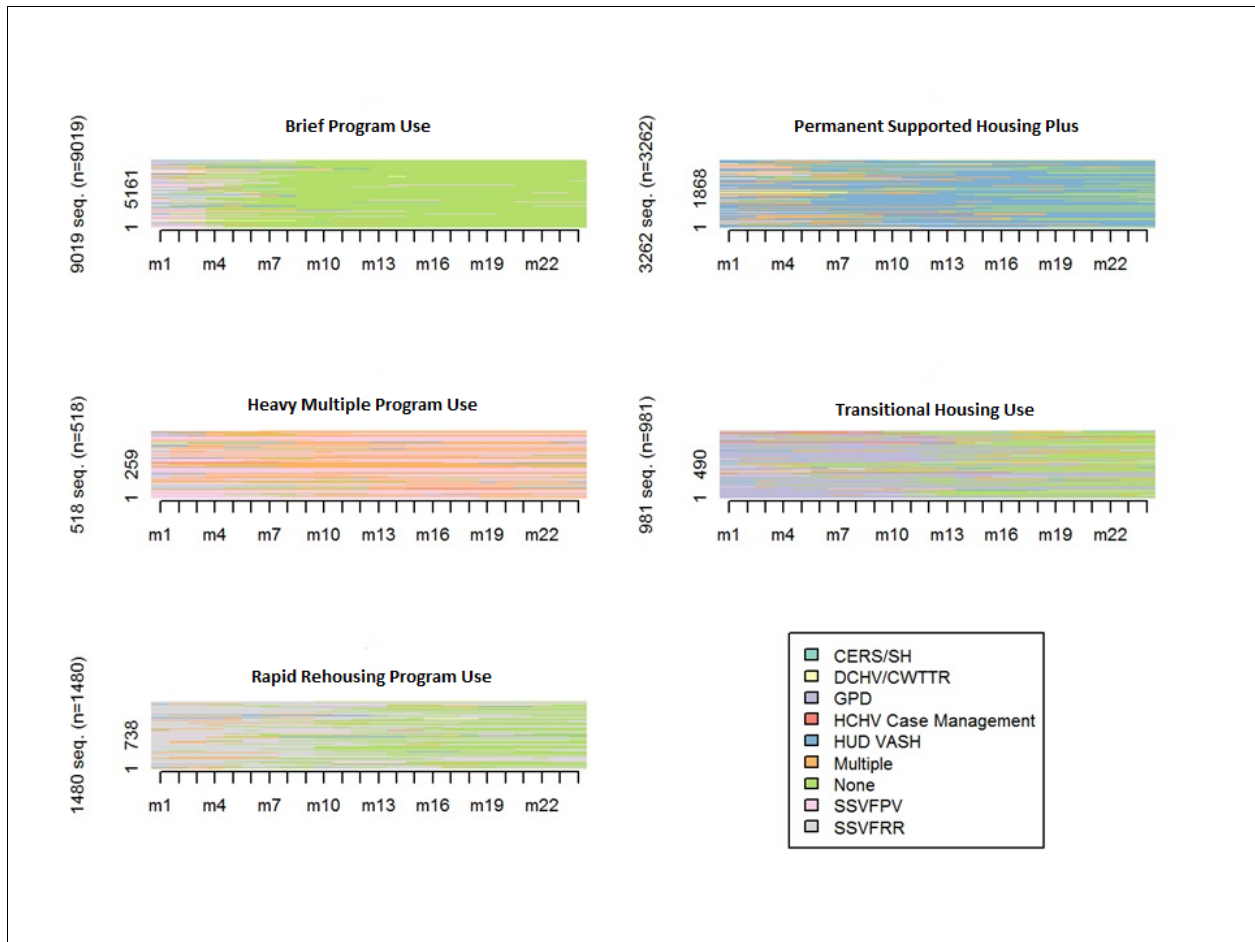
Our analysis identified five distinct profiles of VA homeless program use over time: Brief Program Use, Permanent Supported Housing Plus, Heavy Multiple Program Use, Transitional Housing Use, and Rapid Rehousing Program Use. Figures 1 and 2 provide different types of summary information about the VA homeless program use among Veterans in each profile. Figure 1 (page 3) simultaneously plots the sequences for all Veterans in each profile. The x-axis of the figure shows the number of months since each Veteran's initial entry into a VA homeless program, and each Veteran's sequence is represented by one line on the y-axis. Months that are green in color indicate months during which a Veteran did not have any record of using a VA homeless program. Figure 2 (page 4) plots the number of months during the 24-month study period that, on average, Veterans in each profile participated in each VA homeless program (or did not participate in any program).

Profile sizes

The Brief Program Use profile was the largest profile comprising 59.1% of Veterans in the total analytic cohort. This profile group is comprised of Veterans who typically made one-time and relatively brief use of VA homeless programs. The Permanent Supported Housing Plus profile was the second largest profile, accounting for 21.4% of the total analytic cohort. Veterans in this profile group were characterized primarily by their long-term use of HUD-VASH, often in conjunction with a second VA homeless program during the same month. The proportion of Veterans participating in multiple programs decreased over time, suggesting that Veterans ceased their involvement in other programs as

they transitioned into and stabilized in HUD-VASH. The Heavy Multiple Program Use profile was the smallest profile, accounting for only 3.4% of the analytic cohort. Veterans in this profile group were characterized by their heavy involvement in multiple VA homeless programs over the entire course of the study period. The Transitional Housing Use profile comprised 6.4% of the overall analytic cohort. Veterans in this profile group were characterized by their heavy use of the GPD program. The proportion of Veterans participating in GPD decreased steadily over the study period suggesting a pattern of Veterans transitioning out of GPD over time. The Rapid Rehousing Program Use profile accounted for 9.7% of Veterans in the overall analytic cohort. This group was comprised primarily of Veterans who participated in the SSVF rapid re-housing program for an extended period of time, particularly in the first half of the 24-month observation period.

Figure 1- VA Homeless Program Sequences by the Profile



Background characteristics

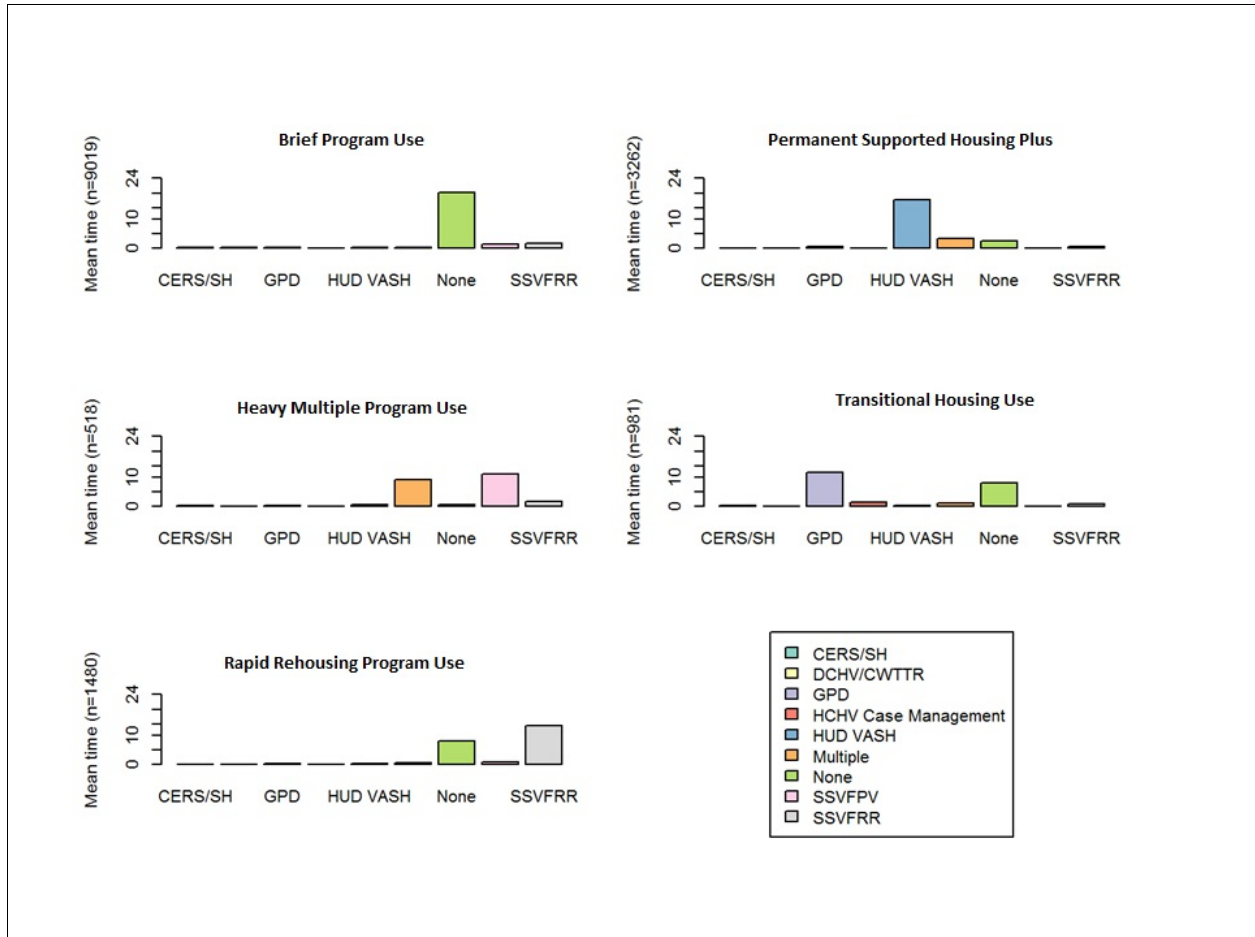
Figure 1 shows a comparison of background characteristics between the five profiles described above. There were significant differences between profiles with respect to age and sex. Veterans in all profiles were, on average, roughly 50 years old, although the Permanent Supported Housing Plus and Transitional Housing Use profiles were slightly older than the other profiles. At about 18%, the Heavy Multiple Program Use profile had the highest proportion of females, while the Transitional Housing Use profile had the lowest at about 7%. There were notable profile differences with respect to race, with

the Transitional Housing Use profile having the highest proportion of white Veterans (57%) and the Heavy Multiple Program Use profile having the lowest proportion (46%).

Service use

With respect to use of VA inpatient services use, there were no significant differences across profiles in terms of inpatient medical or substance abuse hospitalizations. However, there were significant differences with respect to inpatient mental health hospitalizations, with the Permanent Supported

Figure 2- Mean Number of Months in Each VA Homeless Program by Profile



Housing Plus and Transitional Housing Use profiles having relatively more inpatient mental health hospitalization days (an average of about three days over the two-year study period) than other profiles. A similar pattern was seen with respect to outpatient medical and mental health services use, with the Permanent Supported Housing Plus and Transitional Housing Use profiles having notably higher number of visits of each type than the other profiles.

Housing status

With respect to housing status of Veterans at the end of the two-year study period, there were clear differences between profiles. On one end, 63% of the Brief Program Use profile exited a homeless program for a permanent housing destination during the study period. On the other end, nearly all (96%) of the Heavy Multiple Program Use profile were still involved in a VA homeless program at the

end of the study period. Among the other profiles, 74% of the Permanent Supported Housing Plus program were still in the program at the end of the study period, 43% of the Transitional Housing Use profile were in permanent housing, and 48% of the Rapid Rehousing Program Use profile were in permanent supported housing at the end of the study period.

Discussion and Implications

This descriptive study characterizes utilization of VA homeless programs by over 60,000 Veterans nationally over a two-year period. The results shed light on how VA's continuum of homeless programs is used by Veterans and providers. Specifically, we identified five profiles of VA homeless program use: two profiles were of brief program use; a third profile was characterized by mostly use of VA's transitional housing program; a fourth profile involved use of VA's permanent supported housing program concurrently and briefly with some other VA homeless program; and finally, a fifth profile was characterized by heavy use of multiple VA homeless programs.

Different groups of Veterans tended to use VA homeless programs differently. Veterans with the Permanent Supported Housing Plus and Transitional Housing Use profiles were older and more likely to have received VA medical and mental health services than Veterans with other profiles. Veterans with the Heavy Multiple Program Use profile were more likely to be non-white and female than Veterans of other profiles, and Veterans with the Transitional Housing Program Use profile were least likely to be women. Together, results of this study support the continued development of VA's continuum of homeless programs and services for different subgroups of Veterans with varying levels of need.

References

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