RESEARCH BRIEF

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Migration By Veterans Who Receive VA Homeless Services
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ABSTRACT

This policy brief contains initial findings from a study on migration among 113,400 Veterans who initiated use of Department of Veterans Affairs (VA) homeless services in 2011 or 2012, and follows them using VA administrative records for up to two years after this initial contact. The findings review the "how many" and the "where" of this phenomenon. Specifically, it shows the extent to which homeless Veterans migrate across the VA's 21 , Veterans Intergrated Service Networks (VISNs). This permits an assessment of the effect of migration on the homeless populations served by specific VISNs, VA Medical Centers (VA MCs) and their catchment areas.
Major findings include, on the individual level:

- 15.3 percent migrated across large geographic areas while they were homeless.
- Migration occurred more often among those Veterans with longer-term, chronic patterns of homelessness (over 20 percent).
- Migration also occurred more often earlier on in Veterans' homelessness episodes.

Looking at migration in a geographical context:

- On VISN and medical center catchment areas, in-migration roughly balanced out-migration.
- For most VISNs, there was a small net impact of migration on homeless population size.
- In VAMCs with larger numbers of homeless, the net impact of migration attenuated towards zero.
- There was no evidence of a generalizable net migration direction from less populated to urban settings. The West Los Angeles VAMC even ran counter to this, with five percent of the sample leaving the metropolitan area during the study period.
- There was a modest seasonal migration effect from colder climates to warmer regions.

Directions for further research:

- Considering the impact of regional employment and housing market on migration patterns.
- How these migration patterns, particularly among more chronic and needy homeless Veterans, impact clinical care.

WAYS BY WHICH VAMCS CAN INCORPORATE MIGRATION PROJECTIONS IN PLANNING SERVICES NEEDS.INTRODUCTION

Homelessness and transience have been closely associated through U.S. history. Whether it be accounts of war-weary Veterans who took to the road after the Civil War or contemporary homeless persons who travel in search of economic opportunity and better services, there is a general perception that the homeless population is highly mobile. This perception of mobility as a
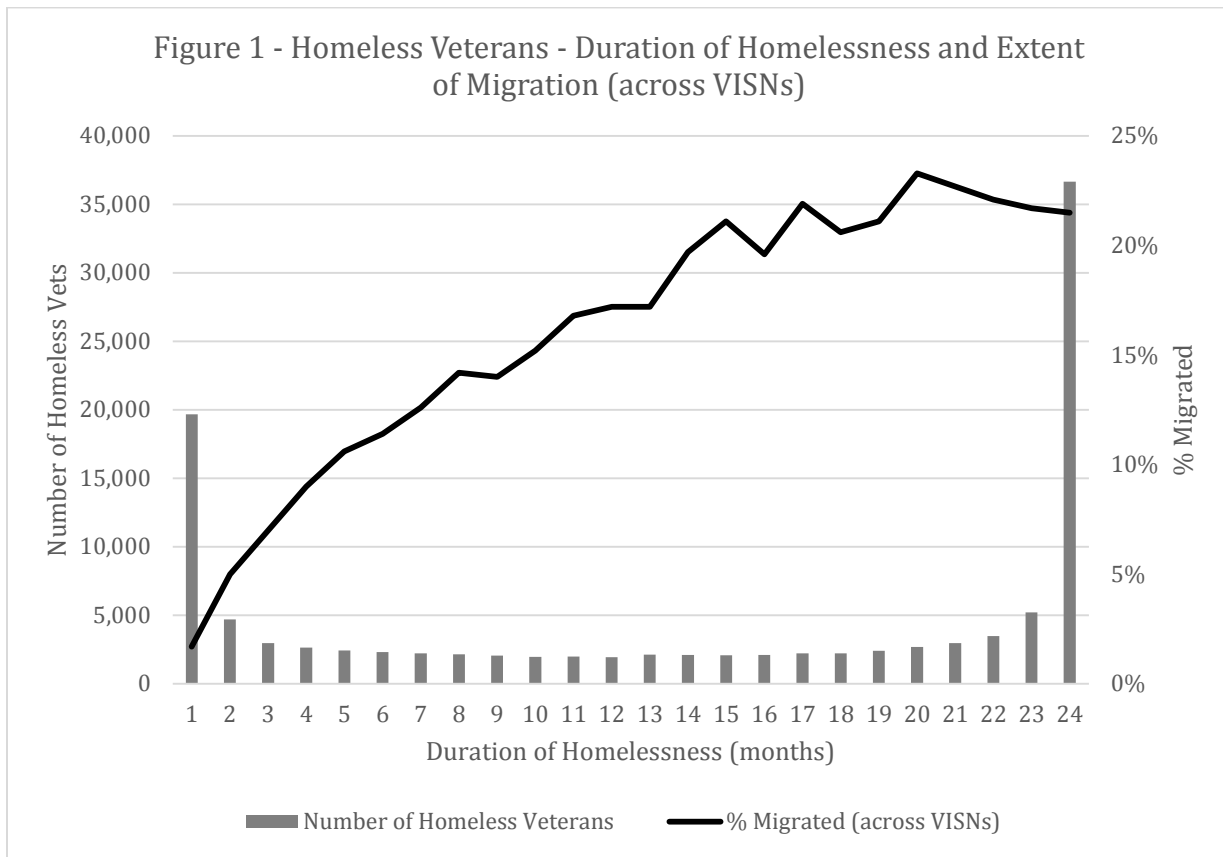
characteristic of the homeless has seeped into policy, where proposals to upgrade or expand homeless services regularly lead to concerns about unwittingly attracting homeless persons from other, more underserved areas.[1]

Mobility across wide geographic areas in the context of homelessness has been referred to as migration.[2] While a greater propensity for migration is assumed to exist among homeless persons, what little research exists on this topic has not supported such assumptions. Some studies have even found homeless persons as being more rooted to place than comparable housed populations.[3] The evidence on this, however, is far from conclusive, as available data on homeless persons are almost always geographically bounded to specific localities and are thus unable to engage in any systematic examination of this issue.
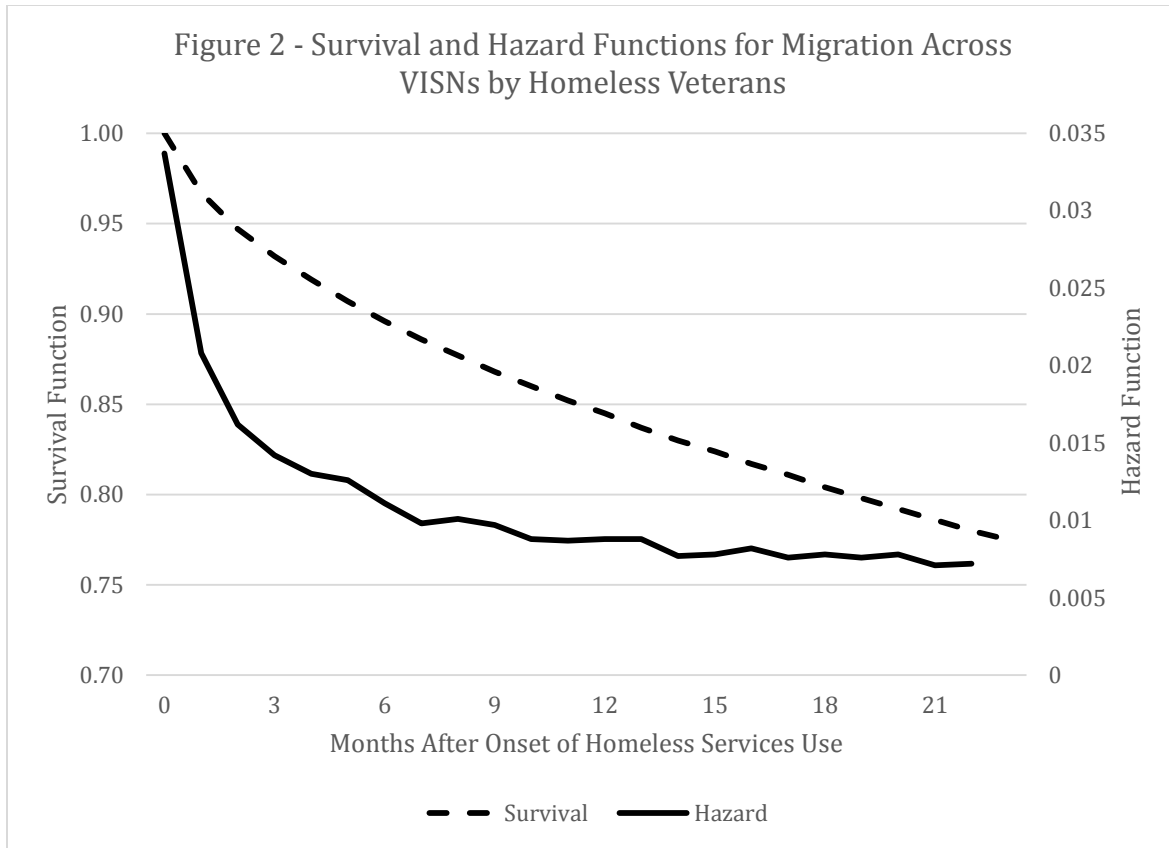
Veterans are unique among homeless subpopulations in that their use of health care and homeless services provided by the VA permits the tracking of their migration patterns across the U.S. The VA, which is the largest direct provider of both healthcare services and homeless assistance in the U.S., has also been a pioneer in the use of electronic records to track medical and social services. By virtue of these records, which are compiled in a single repository, researchers can follow large numbers of homeless Veterans anywhere in the U.S. Additionally, these data can serve as a basis for examining variation of aggregated homeless migration patterns across VA services facilities. This is the most expansive study of migration to date among any homeless population.[4] This policy brief contains initial findings from a study on migration among 113,400 Veterans who initiated use of VA homeless services in 2011 or 2012, and follows them using VA administrative records for up to two years following this initial contact.[5] This provides a means to assess the extent to which homeless Veterans migrate across the VA's 21 administrative regions, known as Veterans Integrated Services Networks or, more commonly, by their acronym, VISN (see appendix). Changes in VA services use from one VISN to another entails significant changes in both geography and services configurations, and thereby provides a practical measure for migration.

This initial brief is limited to a broad overview of the "how many" and the "where" of this phenomenon. To determine the extent of migration (i.e., the "how many"), basic survival analysis techniques are used to determine the rates of migration over the study period and to provide uniformity in the findings across the differing lengths of time that the Veterans are homeless (i.e., censoring). Descriptive findings then show net in-migration and out-migration for all 21 VISNs and for selected VA medical center (VAMC) catchment areas.

PERSON-LEVEL ANALYSES: EXTENT AND DYNAMICS OF MIGRATION

Figure 1 - Homeless Veterans - Duration of Homelessness and Extent of Migration (across VISNs)

Of the 113,400 homeless Veterans tracked in this study, the proportion who migrated across VISNs (while homeless) in the two-year period following initial VA services use was 15.3 percent. Figure 1 shows, however, that the level of migration varies depending on how long a Veteran remains homeless.[6] The duration of homelessness for Veterans in this study was bimodal: almost one quarter (24.1 percent) were homeless for three months or less while 47.1 percent had homeless episodes that lasted for more than 18 months. For the short stayers, only 2.8 percent had a record of migration. This compares to 21.7 percent of the longest stayers. Figure 1 shows how migration became more common among homeless Veterans who stayed homeless longer, with rates that leveled off at just over 20 percent for those whose homeless episodes lasted 14 months or longer. Figure 2 shows two measures that indicate when migration among these homeless Veterans was most likely. The survivor function is a curve that describes the likelihood that a Veteran will remain stationary (i.e., not move across VISNs) at a certain point in time. This likelihood, shown by the solid line in Figure 2, dropped more steeply in the early months and flattened out in the latter months. This means that most migration occurred in the earlier months of a Veteran's homelessness. The hazard function, shown by the dashed line in Figure 2, describes the relative likelihood of a move across VISNs occurring at a particular month (conditional on the subject's survival up to that month). This shows, more starkly, how the "hazard" of a Veteran moving was highest in the early months of homelessness and reached a more or less stable rate by month 9 of homelessness (for those who remained homeless for that long).

Figure 2 - Survival and Hazard Functions for Migration Across VISNs by Homeless Veterans

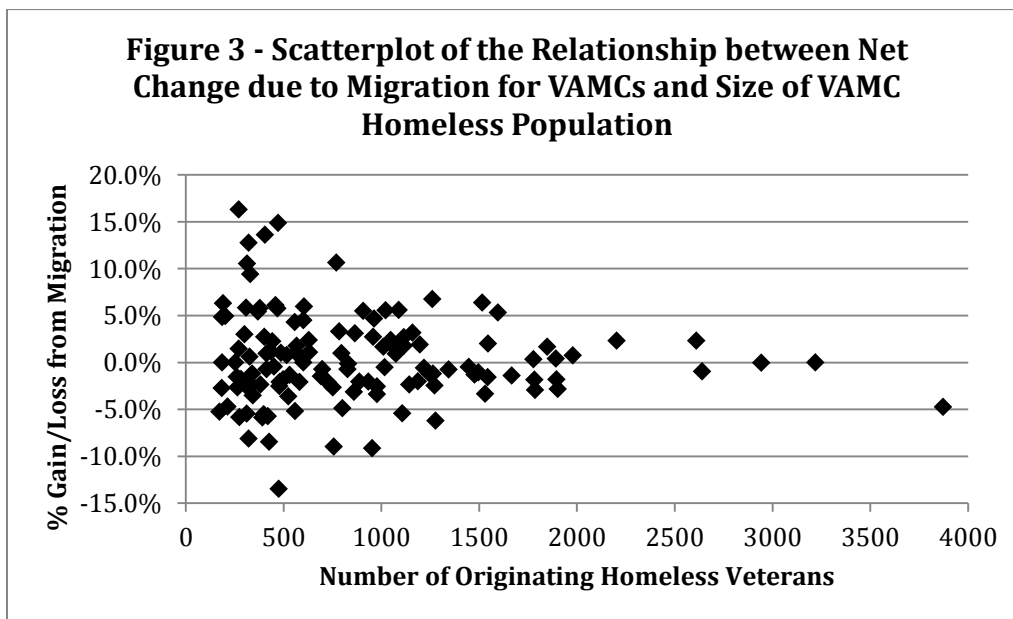## AREA-LEVEL ANALYSES: DEPARTURES AND DESTINATIONS

Table 1 summarizes how many homeless veterans originate, out-migrate from, and in-migrate to each VISN.[7] The numbers of originating homeless Veterans varied from 2,480 in VISN #5 (Washington DC metropolitan area) to just over 9,179 in VISN #8 (Florida, the Caribbean, and southern Georgia). The proportions (based on number of originating homeless Veterans) of out-migration ranged from 11.8 percent (VISN 10; Ohio) to 20 percent (VISN 5), and levels of in-migration ranged from 11.1 percent (VISN 1; New England) to 25.3 percent (VISN 5). VISN 5 also had the greatest proportional net gain of homeless Veterans, with 130 more homeless Veterans coming into the VISN than leaving it – a 5.2 percent increase. On the other extreme, VISN 19 (containing parts of five western states), lost a net 103 Veterans, a 2.6 percent decline. These two VISNs represented the extremes; eleven of the 21 VISNs saw net gains or losses from migration that were 1.2 percent or less.

Additional migration dynamics became apparent in the smaller unit of VAMC catchment area. There was substantially greater variation among the 128 VAMCs in the numbers of originating homeless Veterans, ranging from 172 (Iron Mountain, MI and Grand Junction, CO) to 3,873 (West Los Angeles, CA). Those VAMCs proportinally gaining the most homeless Veterans were Chillicothe OH (16 percent), White River OR (15 percent), and Martinsburg WV (14 percent). Conversely, those with greatest proportional net losses were Iron Mountain MI VAMC (39 percent) and Fort Harrison MT (14 percent). Overall, and only 8 of 128 VAMCs had net gains or losses due to migration that exceeded 10 percent.

Table 1 – Homeless Veterans and Migration Measures Broken Down by VISN

VISN	Geography (approx.)	Homeless Veterans at Origin	% Out-migration	% In-migration	loss/gain	% loss/gain
1	New England	4,931	12.2%	11.1%	-58	-1.2%
2	Upstate New York	3,220	16.2%	16.2%	0	0.0%
3	Metro New York City	3,453	19.6%	18.2%	-48	-1.4%
4	PA, DE, northern WV	4,892	16.9%	14.9%	-100	-2.0%
5	Metro Washington DC	2,480	20.0%	25.3%	130	5.2%
6	Mid-Atlantic (VA & NC)	5,960	16.1%	15.0%	-67	-1.1%
7	Southeast (AL, GA, SC)	7,347	14.2%	14.3%	7	0.1%
8	FL, south GA, PR, Caribbean	9,179	13.0%	14.9%	181	2.0%
9	Mid-South (KY & TN)	4,679	17.0%	18.7%	79	1.7%
10	Ohio	4,252	11.8%	15.5%	160	3.8%
11	MI, IN, IL	6,034	14.3%	12.0%	-139	-2.3%
12	Metro Chicago & east WI	5,172	13.3%	12.7%	-30	-0.6%
15	KS, MO, south IL	3,522	17.9%	17.7%	-9	-0.3%
16	OK, AR, MS, LA, east TX	6,275	18.8%	19.4%	41	0.7%
17	Central TX	7,497	13.1%	13.6%	35	0.5%
18	AZ, NM & west TX	4,952	18.5%	18.5%	2	0.0%
19	MT, WY, UT, CO & ne NV	3,971	19.2%	16.6%	-103	-2.6%
20	WA, OR, ID, AK	6,241	12.9%	13.4%	34	0.5%
21	North CA, NV, HI, Pacific	6,026	16.1%	14.9%	-76	-1.3%
22	South CA & south NV	9,370	14.3%	13.2%	-107	-1.1%
23	ND, SD, NE, IA, MN	3,947	15.9%	17.7%	68	1.7%
	Total	113,400	15.3%	15.3%	0	0

Numbers in bold black indicated highest levels, and numbers in bold gray indicate lowest levels in specific columns among VISNs

Figure 3 - Scatterplot of the Relationship between Net Change due to Migration for VAMCs and Size of VAMC Homeless Population

The scatterplot in Figure 3 shows, in a more systematic fashion, the relationship between the size of the originating Veteran homeless population for each VAMC and the percent gain or loss to this population due to subsequent migration. The greatest impacts of migration, in relative and absolute terms, occurred among the VAMCs with smaller numbers of originating homeless Veterans. As the size of originating homeless veterans in a VAMC increased, the net impact of migration approached zero. The most prominent outlier from this trend was West Los Angeles, where there was a net loss due to migration that amounted to 4.8% of its originating homeless Veteran population.

The final analysis we performed assessed the relationship between in and out-migration, each as proportions of the originating population, for each VAMC. The Pearson correlation between in and out-migration was 0.63 and statistically significant. This indicates that the level of out-migration for each VAMC tended to correspond to the level of in-migration. There were a limited number of outliers: 12 VAMCs had proportions of out-migrants exceed in-migrants by more than 50%, while seven VAMCs had in-migrants outnumber out-migrants by more than 50%.

A final analysis performed on VAMC level data assessed whether there was any relationship between climate and migration. In the popular imagination, climate conditions are one of the primary attractors for explaining why jurisdictions might attract a disproportionate share of homeless migrants. To test the potential impact of climate on migration, a very basic regression model was fitted estimating the impact of the average January temperature of a VAMC location on net change (loss or gain) of homeless Veterans due to migration, controlling for size of the originating population of homeless Veterans.[8] Results indicate a significant but modest impact of January temperature on migration, with an estimated 0.9% gain in homeless Veterans for every 10 degrees of average temperature gain.

CONCLUSION

This brief presents initial findings on migration patterns of homeless Veterans based on an extensive database of VA services use. Results include basic person-level findings on prevalence and timing, as well as impacts of migration on area-level VA geographies. As was stated in the Introduction section, this brief focuses on the "how many" and the "where" of migration of homeless Veterans. Summarizing the person-level findings, 15.3 percent of the 113,400 Veterans in this study migrated across VISNs while they were homeless. Those who stayed homeless for longer episodes had higher rates of migration (over 20%), and, for those Veterans who do migrate, they are more likely to do so in the earlier months of their homelessness.

Looking at migration from a geographic perspective, there was a fair amount of variation across both VISNs and VAMCs in the levels of both in and out-migration. However, for most VISNs the net impact of migration on the size of the homeless Veteran population was small. For VAMCs, as the number of homeless Veterans increased the net impact of migration attenuated towards zero. Another way to look at this is that, on both geographic levels, the levels of in-migration tended to approximate the levels of out-migration. Only on the VAMC level, and then only in the smaller VAMCs, did the magnitude of net gain or loss seem to substantially impact the size of the homeless Veteran population to any degree.

This brief focused on the 15.3 percent of the homeless Veterans in this study that sought VA services (health care or homeless) across multiple VISNs. The converse of this is that over five-sixths of this study group were stationary or moved only in a local context. Even when looking only

at those Veterans who were homeless for extended episodes, migration is more the exception than the norm.

No clear patterns emerged here as to the dynamics of this migration other than migration appeared to have limited impact on demand for services in a particular area. No larger jurisdictions saw an influx or exodus of homeless Veterans to the point where this would have impacted services substantially. Among the smaller VAMCs, the greater volatility of migration might be due to the disproportionately greater impact that individual migrants would have on the overall population dynamics of homeless Veterans.

While the influence of other factors on these migration patterns are not immediately apparent, this does not mean that they fail to exist. The impact of climate is one example of this, as regression analysis indicates that when homeless Veterans did migrate, there was a modest tendency to go to more temperate areas. The extent to which Veterans migrate from more rural to more urban areas, for example, is not immediately apparent from these data and is a question that could be fruitfully pursued with further examination of these data. Other factors, such as the role of services availability (VA and otherwise), or the influence of regional economic opportunity, on the migration decisions among the homeless Veterans in this study group would be more challenging in terms of getting appropriate data, but would have clear implications to the VA for understanding homelessness among Veterans and for planning services to effectively address their housing, healthcare and other needs.

Finally, there are limitations to what these data can tell us about migration among homeless Veterans. Migration in this study is only apparent insofar as the Veteran uses VA services. While many homeless Veterans will use these services, an absence of such services use will be considered a resolution of homelessness in this study when it might instead reflect continued homelessness in a non-VA context. These data, while they are good at identifying long distance migration, are limited in their ability to identify more local moves. Thus rural to urban migration may be assessed in looking at movements across different (VISNs or VAMCs) with different population densities, but it cannot reliably identify moves that might occur from a suburb to an inner city location in the same VAMC catchment area.

These limitations notwithstanding, these data represent a powerful means to provide new insights into migration among homeless Veterans. This phenomenon, while poorly understood, is often raised in the course of formulating policies and implementing services seeking to end homelessness. The initial findings presented in this brief suggest that concerns about the extent of migration and its impact on localities are exaggerated, but also calls for more study of these data to gain a deeper and more expansive understanding of this phenomenon.

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ENDNOTES

1 Examples of this include Anna Griffin (2015). "The Magnet Myth." The Oregonian, February 14.

http://www.oregonlive.com/portland-homeless/magnet.html; City of Boulder Department of Human Services (2015). "Do homeless people come here for our services?" Issue brief, April. https://www-static.bouldercolorado.gov/docs/Homelessness_Issue_Brief_May_2015-1-201505041555.pdf; Marcus L. Godby, Byron Mukai & Gloria Martin (2013). "Do Olympia Resources Attract Homeless Immigration?" Unpublished paper, Evergreen State College. http://darkhorseadvocacy.com/library/. Seth Konig (2012), "Is Portland too attractive for homeless people?" Bangor Daily News, December 21. http://bangordailynews.com/2012/12/21/news/portland/ are-cities-like-portland-too-attractive-to-homeless-people/. All items accessed on June 19, 2015.

2 See Leona Bachrach (1987), "Geographic mobility and the homeless mentally ill." Hospital and Community Psychiatry 38(1): 27-28.

3 Literature here includes: R. David Parker & Shana Dykema (2013). "The reality of homeless mobility and implications for improving care." Journal of Community Health 38:685–689; Jon May (2000), "Of nomads and vagrants: single homelessness and narratives of home as place." Environment and Planning D: Society and Space 18: 737-759; David E. Pollio (1997). "The relationship between transience and current life situation in the homeless services-using population." Social Work 24(6), 541–552.

4 There have been three previous studies that have used VA data to examine mobility, all with a much more limited scope and only one which has looked at community-level characteristics and how they relate to migration. See Jack Tsai, Alvin S. Mares & Robert A. Rosenheck (2011). "A geographic analysis of chronically homeless adults before and after enrollment in a multi-site supported housing initiative: Community characteristics and migration." American Journal of Community Psychology 48:341–351. Also see John F. McCarthy, Marcia Valenstein & Frederic C. Blow (2007). "Residential mobility among patients in the VA health system: Associations with psychiatric morbidity, geographic accessibility, and continuity of care." Administration and Policy in Mental Health 34:448–455; and Loren Pankratz & James Jackson (1994). "Habitually wandering patients." New England Journal of Medicine 331(26): 1752-1755.

5 The records used for this study come from two databases. The Homeless Operations Management and Evaluation System, or HOMES, collects information from homeless Veterans in conjunction with their use of VA homeless services. The Computerized Patient Record System, or CPRS, is the VA's electronic medical record system and contains details of inpatient and outpatient VA healthcare contacts (and which also contains some data fields that indicate patient homelessness). For more information on HOMES, see Jack Tsai, Wesley J. Kasprow, Vincent Kane & Robert A. Rosenheck (2014). "Street Outreach and Other Forms of Engagement with Literally Homeless Veterans." Journal of Healthcare for the Poor and Underserved 25: 694–704. For more information on CPRS, see Office of Enterprise Development (2008). VistA – HealtheVet: VA's Current and Future Computerized Patient Record System. Washington DC: U.S. Department of Veterans Affairs.
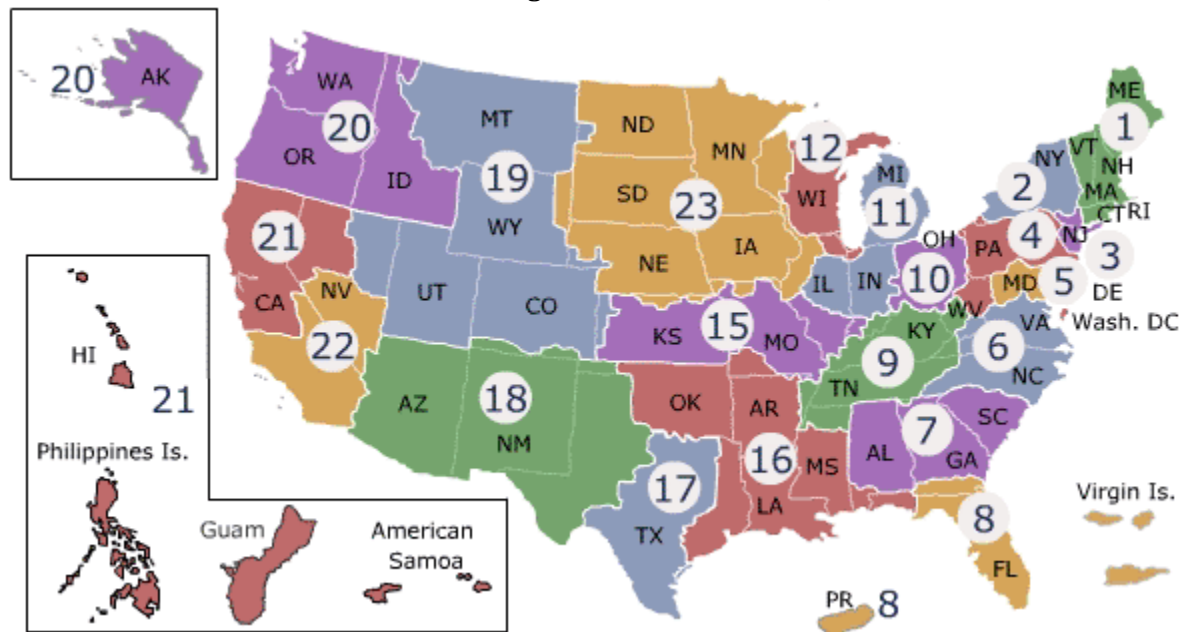
6 For all Veterans in the study group, homeless episodes were preceded by at least a year of no VA record of homelessness. Homeless episodes ended at the month where there was a VA service contact indicating homelessness and was followed by a three month period with no indicator of homelessness. For those Veterans who were homeless for 24 months (the maximum length of the study period), most of them had episodes of homelessness that continued past the study period (i.e., lasted longer than 24 months).

7 Veterans migrating in or out of each VISN is expressed as a percent of the number of Veterans originating in each VISN to facilitate comparisons across VISNs, where the numbers of originating homeless Veterans varied. Actual numbers of Veterans migrating in or out of a particular VISN can be derived through the appropriate arithmetic.

8 Temperature data was retrieved from http://www.weatherbase.com on July 7, 2015.

APPENDIX

Veterans Integrated Service Networks, 1-23

(source: US Department of Veterans Affairs)