

Community Services to Vermont Veterans

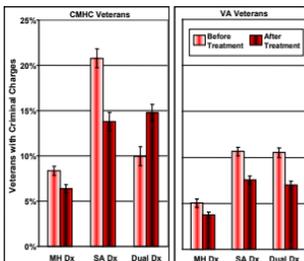
Trouble with the Law

CY2007

Data: Three data sets were used in this analysis. Basic demographic and clinical information for CMHC and VA veteran recipients of MHSA were provided by each program's management information system. Basic demographic information for all Vermont criminal charges was obtained from the Vermont Center for Justice Research.

Method: Probabilistic Population Estimation* was used to determine the number of people in each data set and number shared by data sets.

Findings: Among veterans with dual diagnoses (Dual Dx), veterans served by the CMHC service sector experienced increased criminal charging while veterans served by the VA service sector experienced decreased criminal charging.



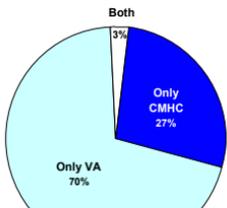
CMHC and VA Caseload Overlap

CY2008

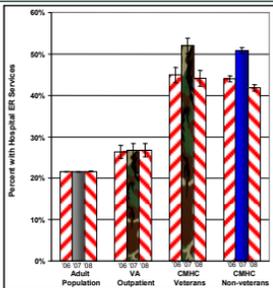
Data: CMHC and VA databases.

Method: Probabilistic Population Estimation* of Caseload Overlap.

Findings: Very few individuals (3% of all Vets served) received services from both systems of care. 70% received services from the VA only and 27% received services from a CMHC only.



Hospital Emergency Room



Utilization Rates for Four Groups

Veterans with VA MH/SA services in 2007
Veterans with CMHC services in 2007
Non-veterans with CMHC services in 2007
Members of the general population of Vermont

Data: Anonymous extracts from Uniform Hospital Discharge Data Set and CMHC and VA databases.

Method: Probabilistic Population Estimation* was used to determine number of people shared across data sets. US Census estimates were used to determine general population rates.

Findings: CMHC service recipients were substantially more likely than VA service recipients or members of the general population to use ER services during the base service year or during the years before or after the base service year.

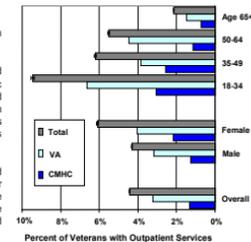
Per Capita Utilization

CY2008

Data: Based on analysis of anonymous extracts from CMHC and VA client and service databases.

Method: Unpublished counts of people represented in each service sector are based on dataset-specific identifiers. Unpublished counts of veterans served statewide are based on Probabilistic Population Estimation.* Estimates of the number of armed forces veterans in Vermont are from the United States Department of Veterans Affairs' web site.

Findings: 4.4% of all Vermont veterans were served by a VA or CMHC community mental health or substance abuse program during CY2008. Female veterans were somewhat more likely than male veterans to be served and service utilization decreased with increasing age.



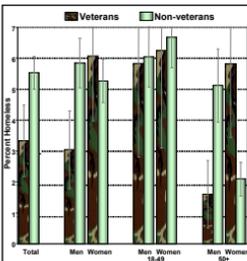
Homelessness

CY2008

Data: Anonymous extracts from CMHC and VA client databases provided the date of birth and gender of all individuals with MHSA services. A third data set includes the date of birth and gender of adults represented in an integrated Vermont homeless database that includes all individuals represented in Vermont's Homeless Management Information System, Point-in-Time Homeless Survey, and Agency of Human Services Emergency Shelter database.

Method: Unpublished counts of individuals served in any of these service sectors during 2008 are based on Probabilistic Population Estimation.*

Findings: Veterans with CMHC and VA services were significantly less likely than non-veterans to be homeless during the study period. There were, however, significant differences among age and gender groups.



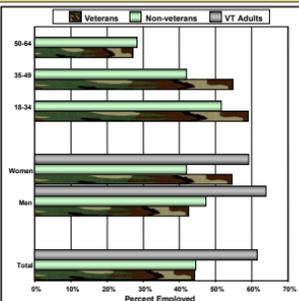
Employment

Veterans and Non-veterans with CMHC Services and Members of the General Population FY2009

Data: CMHC and Department of Labor employment databases.

Method: Direct record linkage based on social security numbers.

Findings: Overall, there was no difference in Veterans' and non-Veterans' employment rates. The general population had higher rates of employment.



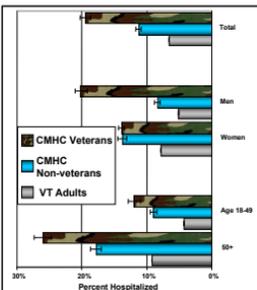
Inpatient Medical

Utilization Rates CMHC Veterans, Non-veterans, and other Vermont Residents CY2007

Data: Anonymous extracts from Uniform Hospital Discharge Data Set and CMHC databases.

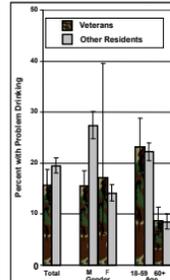
Method: Probabilistic Population Estimation* was used to determine number of people shared across data sets. US Census estimates were used to determine general population rates.

Findings: CMHC veterans were substantially more likely than others to use inpatient medical services overall, in every age group and among men but not among women. Female CMHC veterans' hospitalization rates were no different than other CMHC women, but were significantly higher than for women in the general population.



Problem Drinking & Depression

Problem Drinking

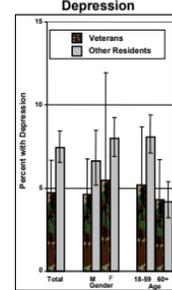


CY2006

Data: Based on analysis of 2006 Vermont Behavioral Risk Factor Surveillance System survey.

Method: General population sample survey.

Findings: Vermont veterans were significantly less likely than other Vermont residents to report indications of problem drinking and were substantially less likely to report indications of depression/anxiety.



*Probabilistic Population Estimation

Population Estimates for Specified Numbers of Birth Dates within a Year

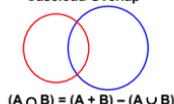
Probabilistic Population Estimation is a statistical procedure that determines the number of people (with known confidence intervals) who are represented in data sets that do not contain unique person identifiers. Probabilistic Population Estimation uses information on the distribution of birth dates in a data set to determine the number of people represented in the data set. The number of people necessary to produce the number of birthdays observed in a single birth year cohort, for instance, would be calculated using the following formula:

$$P(Y) = \frac{Y^2}{2T} \approx \frac{Y^2}{2T}$$

where "Y" is the number of people and "T" is the number of birth dates observed. Similar logic is used to determine the number of people who appear in more than one data set. The table below provides illustrative results of Probabilistic Population Estimation for populations of specified size.

Birth Dates	Numbers of People
1	1,000 ± 0.103
10	10,10 ± 0.776
20	20.14 ± 1.54
50	54 ± 4
100	117 ± 9
180	249 ± 20
250	423 ± 38
300	632 ± 64
360	882 ± 101
360	1,600 ± 325

Caseload Overlap



Population Overlap

In order to probabilistically determine the number of people shared across data sets that do not include a common person identifier, the sizes of three populations are determined and the results are compared. The number of people in each of the original data sets are the first two populations. The number of people in a data set that is formed by combining the two original data sets is the third data set. The number of people who are shared by the two data sets is the difference between the sum of the numbers of people represented in the two original data sets and the number of people represented in the combined data set. This occurs because the sum of the number of people represented in the two original data sets includes a double count of every person who is represented in both data sets. The number of people represented in the combined data set does not include this duplication. The difference between these two numbers is the size of the duplication between the two original data sets, the size of the caseload overlap. In terms of mathematical set theory, the intersection of two sets is the difference between the sum of the sizes of the sets plus (A+B) and the union of the two sets (A ∪ B):

$$(A \cap B) = (A + B) - (A \cup B)$$

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USE THE DATA