

11

Alcohol Use Disorders

A Rural Veterans Health Care Atlas Series
1st edition FY-2014

A L A S K A

Norton
Sound

Anchorage



TABLE OF CONTENTS

OVERVIEW	1
Process of Data Compilation	1
Diagnostic Codes Used to Define Cohort (Alcohol Use Disorders).....	4
Organization of Data Tables and Maps	5
Section I Highlights: VHA Patients with Alcohol Use Disorders	
National Overview	9
VISN Overview	9
State Overview	10
County Overview	10
Table 1	12
Maps 1 - 7	13
Section II Highlights: Rural and Highly Rural VHA Patients with Alcohol Use Disorders	20
National Overview	21
VISN Overview	21
State Overview	22
County Overview	22
Table 2	24
Maps 8 - 21	25

Section III Highlights: Rural and Highly Rural VHA Subgroups of Patients with Alcohol Use Disorders

Gender	39
Table 3	40
Maps 22 - 25	41
Age Group	45
Table 4	46
Maps 26 - 31	47
Service Connection and Low Income Enrollment Priority Groups	53
Table 5	54
Maps 32 - 43	55

Section IV Highlights: VHA Patients with Alcohol Use Disorders (Outpatient Utilization)67

Tables 6 - 7	68
Tables 8 - 9	71
Maps 44 - 49	73

References.....79

Project Team.....79

OVERVIEW

The staff at the GeoSpatial Outcomes Division accessed data repositories available through the VHA Support Service Center (VSSC) <http://vssc.med.va.gov/> to query and extract the data used to generate this chapter's tables, charts, and maps. The Diagnosis Cube, in particular, is a single repository cube with tools for diagnosis monitoring of the Veteran patient population.¹

According to a canned report available in the Diagnosis Cube, Alcohol Use Disorders - specifically ICD-9-CM code 303.9 (representing only one of 23 Alcohol Use Disorders ICD-9-CM codes) - is listed as #14 of the Top 20 Diagnoses by Frequency (with 2,115,818 occurrences of that particular ICD-9-CM code) among all VHA facilities during FY-2014. When rural areas are queried from this selection, Alcohol Use Disorder diagnostic code 303.9 is still ranked high at #18 (with 570,627 occurrences), and when highly rural areas are queried from the selection, code 303.9 is ranked high at #17 (with 20,767 occurrences). This represents a need for analysis of health care access and delivery for the Alcohol Use Disorder cohort living in rural and highly rural areas. The GSOD team utilized scholarly and reliable web resources to confirm the 23 Diagnosis ICD-9-CM codes used to identify patients with Alcohol Use Disorders (see *Diagnostic Codes Used to Define Cohort* section below).*** The team then extracted the appropriate data.

Process of Data Compilation

Using the VSSC and Proclarity Desktop Professional Version 6.3.129.200, data were extracted from the Diagnosis Cube. **Prevalence and demographic data** were queried on a broad level and then drilled down to specific ruralities. The following parameters were entered in different combinations to present various scenarios:

- **Measures:** Unique Patients
- **DXDate Date:** FY-2014
- **Diagnosis ICD9 Desc:** All, 291.0, 291.0, 291.1, 291.2, 291.3, 291.4, 291.5, 291.81, 291.89, 291.9, 303.0, 303.00, 303.01, 303.02, 303.03, 303.90, 303.91, 303.92, 303.93, 305, 305.00, 305.01, 305.02, 305.03
- **Home County VISN:** V01, V02, V03, V04, V05, V06, V07, V08, V09, V10, V11, V12, V15, V16, V17, V18, V19, V20, V21, V22, V23
- **DiagnosisPosition:** Primary Diagnosis, Secondary Diagnosis

Alcohol Use Disorders



- **Priority:** 1 Svc Con 50% +, 2 Svc Con 30%-40%, 3 Svc Con 20%/POW/Special, 5 Non Service Con Below Income
- **Rurality:** Highly Rural, Rural, Urban, Unknown
- **Gender:** Female, Male, Unknown
- **Age:** <25, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, 85+, Unknown

Then the following parameters were entered to extract **outpatient encounters** and were used in different combinations to present various scenarios:

- **Measures:** Frequency
- **DXDate Date:** FY 14
- **Diagnosis ICD9 Desc:** All, 291.0, 291.0, 291.1, 291.2, 291.3, 291.4, 291.5, 291.81, 291.89, 291.9, 303.0, 303.00, 303.01, 303.02, 303.03, 303.90, 303.91, 303.92, 303.93, 305, 305.00, 305.01, 305.02, 305.03
- **Home County VISN:** V01, V02, V03, V04, V05, V06, V07, V08, V09, V10, V11, V12, V15, V16, V17, V18, V19, V20, V21, V22, V23
- **DiagnosisPosition:** Primary Diagnosis, Secondary Diagnosis
- **Rurality:** Highly Rural, Rural, Urban, Unknown
- **Source:** Outpatient Encounters

ESRI ArcGIS Desktop was used to import the tabular data and create custom maps at National and VISN scales. The tabular data is broken down by rows of FIPS codes (county level geographic units), State, VISN, and then by columns of the following:

- Count of total number of patients with Alcohol Use Disorders in the VHA.
- Counts and percentages of patients with Alcohol Use Disorders versus all patients (uniques) broken down by rurality (HR/R/U/total), with HR/R combined into RHR for the purposes of patient confidentiality
- Counts and percentages of patients with Alcohol Use Disorders versus all patients (uniques) *by gender* broken down by rurality (HR/R/U/total), with HR/R combined into RHR for the purposes of patient confidentiality
- Counts and percentages of patients with Alcohol Use Disorders versus all patients (uniques) *by age group* (<65, 65+) broken down by rurality (HR/R/U/total), with HR/R combined into RHR for the purposes of patient confidentiality

- Counts and percentages of patients with Alcohol Use Disorders versus all patients (uniques) *by enrollment priority (groups 1, 2 and 3)* broken down by rurality (HR/R/U/total), with HR/R combined into RHR for the purposes of patient confidentiality
- Counts and percentages of patients with Alcohol Use Disorders versus all patients (uniques) *by enrollment priority (group 5)* broken down by rurality (HR/R/U/total), with HR/R combined into RHR for the purposes of patient confidentiality
- Counts and percentages of outpatient encounters of patients with Alcohol Use Disorders in rural and highly rural areas versus outpatient encounters of patients with Alcohol Use Disorders in all rural categories, with HR/R combined into RHR for the purposes of patient confidentiality.

***GSOD would like to acknowledge NARBHA (Northern Arizona Regional Behavioral Health Authority) for providing a web-based Medicare coverage database that lists the ICD-9 codes for Substance Use Disorders, and in particular, those disorders which are related to Alcohol Use/Abuse. The qualifying diagnosis codes are available here: <http://www.narbha.org/includes/media/docs/7.5.4-Attach-Substance-Abuse-Disorders-Qualifying-Diagnoses-Table.pdf>

Alcohol Use Disorders

Diagnostic Codes Used to Define Cohort (Alcohol Use Disorders)

ICD-9 CM code	Description
291.0	ALCOHOL WITHDRAWAL DELIRIUM
291.1	ALCOHOL AMNESTIC SYNDROME
291.2	OTHER ALCOHOLIC DEMENTIA
291.3	ALCOHOL WITHDRAWAL HALLUCINOSIS
291.4	IDIOSYNCRATIC ALCOHOL INTOXICATION
291.5	ALCOHOLIC JEALOUSY
291.81	ALCOHOL WITHDRAWAL PSYCHOSIS
291.89	OTHER SPECIFIED ALCOHOL PSYCHOSIS, NOT ELSEWHERE CLASSIFIED
291.9	UNSPECIFIED ALCOHOLIC PSYCHOSIS
303.0	ACUTE ALCOHOLIC INTOXICATION
303.00	ACUTE ALCOHOLIC INTOXICATION IN ALCOHOLISM, UNSPECIFIED USE
303.01	ACUTE ALCOHOLIC INTOXICATION IN ALCOHOLISM, CONTINUOUS USE
303.02	ACUTE ALCOHOLIC INTOXICATION IN ALCOHOLISM, EPISODIC USE
303.03	ACUTE ALCOHOLIC INTOXICATION IN ALCOHOLISM, IN REMISSION
303.90	OTHER AND UNSPECIFIED ALCOHOL DEPENDENCE, UNSPECIFIED USE
303.91	OTHER AND UNSPECIFIED ALCOHOL DEPENDENCE, CONTINUOUS USE
303.92	OTHER AND UNSPECIFIED ALCOHOL DEPENDENCE, EPISODIC USE
303.93	OTHER AND UNSPECIFIED ALCOHOL DEPENDENCE, IN REMISSION
305	ALCOHOL ABUSE
305.00	ALCOHOL ABUSE, UNSPECIFIED DRINKING BEHAVIOR
305.01	ALCOHOL ABUSE, CONTINUOUS DRINKING BEHAVIOR
305.02	ALCOHOL ABUSE, EPISODIC DRINKING BEHAVIOR
305.03	ALCOHOL ABUSE, IN REMISSION

Organization of Data Tables and Maps

The data tables and maps for Veterans with Alcohol Use Disorders are organized into four sections. The first section (Section I) focuses on the total numbers of VHA patients with Alcohol Use Disorders. We first present an overview of the data at the National, Veterans Integrated Service Network (VISN), State, and county levels. In addition to the overall number of patients with Alcohol Use Disorders, data are presented by gender, age group, and enrollment status. Table 1 contains the data used in the narrative summary. Following the table, there are a series of maps that visually illustrate the data.

- Map 1: Number of Patients with Alcohol Use Disorders by VISN, FY-2014
- Map 2: Number of Patients with Alcohol Use Disorders by State, FY-2014
- Map 3: Number of Patients with Alcohol Use Disorders by County, FY-2014
- Map 4 - 7: Number of Patients with Alcohol Use Disorders by County, FY-2014 – Zoomed VISN views

Section II of the chapter focuses on the overall prevalence of Alcohol Use Disorders by the following rurality categories: *highly rural, rural, urban, and unknown*. Since the *rural and highly rural* categories are of particular interest in this volume, numbers and percentages are distinctively highlighted in shades of blue in Table 2. National, VISN, State, and county overview are presented focusing on the rural and highly rural Veterans with Alcohol Use Disorders. Because the numbers of highly rural Veterans is so small, we combined the data for mapping purposes. For the maps, urban areas are shaded and urban patients are removed from the numerator and denominator. The following maps illustrate graphically the data on rural and highly rural VHA patients with Alcohol Use Disorders:

- Map 8: Number of Rural and Highly Rural Patients with Alcohol Use Disorders by VISN, FY-2014
- Map 9: Percent of Rural and Highly Rural Patients with Alcohol Use Disorders of Total Rural and Highly Rural Patients by VISN, FY-2014
- Map 10: Number of Rural and Highly Rural Patients with Alcohol Use Disorders by State, FY-2014
- Map 11: Percent of Rural and Highly Rural Patients with Alcohol Use Disorders of Total Rural and Highly Rural Patients by State, FY-2014
- Map 12: Number of Rural and Highly Rural Patients with Alcohol Use Disorders by County, FY-2014
- Map 13: Percent of Rural and Highly Rural Patients with Alcohol Use Disorders of Total Rural and Highly Rural Patients by County, FY-2014

- Maps 14, 16, 18, 20: Number of Rural and Highly Rural Patients with Alcohol Use Disorders by County, FY-2014 – Zoomed VISN views
- Map 15, 17, 19, 21: Percent of Rural and Highly Rural Patients with Alcohol Use Disorders by County, FY-2014 – Zoomed VISN views

Section III provides more detail on subgroups of rural and highly rural patients. Table 3 contains data broken down by gender and rurality, with accompanying maps of rural and highly rural female VHA patients:

- Map 22: Number of Rural and Highly Rural Female Patients with Alcohol Use Disorders by VISN, FY-2014
- Map 23: Percent of Rural and Highly Rural Female Patients with Alcohol Use Disorders of Total Rural and Highly Rural Female Patients by VISN, FY-2014
- Map 24: Number of Rural and Highly Rural Female Patients with Alcohol Use Disorders by State, FY-2014
- Map 25: Percent of Rural and Highly Rural Female Patients with Alcohol Use Disorders of Total Rural and Highly Rural Female Patients by State, FY-2014 *** **Note:** County level maps are not presented for this disease condition, as the number of female patients with Alcohol Use Disorders is very small.

Table 4 contains data broken down by age group and rurality, with accompanying maps of rural and highly rural VHA patients by 65 years of age and older:

- Map 26: Number of Rural and Highly Rural Patients Aged 65+ with Alcohol Use Disorders by VISN, FY-2014
- Map 27: Percent of Rural and Highly Rural Patients with Alcohol Use Disorders Aged 65+ of Total Rural and Highly Rural Patients Aged 65+ by VISN, FY-2014
- Map 28: Number of Rural and Highly Rural Patients Aged 65+ with Alcohol Use Disorders by State, FY-2014
- Map 29: Percent of Rural and Highly Rural Patients Aged 65+ with Alcohol Use Disorders of Total Rural and Highly Rural Patients Aged 65+ by State, FY-2014
- Map 30: Number of Rural and Highly Rural Patients Aged 65+ with Alcohol Use Disorders by County, FY-2014
- Map 31: Percent of Rural and Highly Rural Patients Aged 65+ with Alcohol Use Disorders of Total Rural and Highly Rural Patients Aged 65+ by County, FY-2014

Table 5 contains data broken down by enrollment priority and rurality, with accompanying maps of rural and highly rural

VHA patients by Service Connection (Enrollment Priority Groups 1-3) and Low Income (Enrollment Priority Group 5):

- Map 32: Number of Rural and Highly Rural Patients in Priority Group 1-3 with Alcohol Use Disorders by VISN, FY-2014
- Map 33: Percent of Rural and Highly Rural Patients with Alcohol Use Disorders in Priority Group 1-3 of Total Rural and Highly Rural Patients in Priority Group 1-3 by VISN, FY-2014
- Map 34: Number of Rural and Highly Rural Patients in Priority Group 1-3 with Alcohol Use Disorders by State, FY-2014
- Map 35: Percent of Rural and Highly Rural Patients in Priority Group 1-3 with Alcohol Use Disorders of Total Rural and Highly Rural Patients in Priority Group 1-3 by State, FY-2014
- Map 36: Number of Rural and Highly Rural Patients in Priority Group 1-3 with Alcohol Use Disorders by County, FY-2014
- Map 37: Percent of Rural and Highly Rural Patients in Priority Group 1-3 with Alcohol Use Disorders of Total Rural and Highly Rural Patients in Priority Group 1-3 by County, FY-2014
- Map 38: Number of Rural and Highly Rural Patients in Priority Group 5 with Alcohol Use Disorders by VISN, FY-2014
- Map 39: Percent of Rural and Highly Rural Patients with Alcohol Use Disorders Priority Group 5 of Total Rural and Highly Rural Patients in Priority Group 5 by VISN, FY-2014
- Map 40: Number of Rural and Highly Rural Patients Priority in Group 5 with Alcohol Use Disorders by State, FY-2014
- Map 41: Percent of Rural and Highly Rural Patients in Priority Group 5 with Alcohol Use Disorders of Total Rural and Highly Rural Patients in Priority Group 5 by State, FY-2014
- Map 42: Number of Rural and Highly Rural Patients in Priority Group 5 with Alcohol Use Disorders by County, FY-2014
- Map 43: Percent of Rural and Highly Rural Patients in Priority Group 5 with Alcohol Use Disorders of Total Rural and Highly Rural Patients in Priority Group 5 by County, FY-2014

The final section of the chapter (Section IV) provides information on the outpatient encounters of VHA patients with Alcohol Use Disorders. Table 6 examines the outpatient encounters of patients with a **primary** diagnosis of Alcohol Use Disorders and breaks the encounter information by rurality and Table 8 provides information on the number of outpatient

encounters of patients with a **secondary** diagnosis of Alcohol Use Disorders, also categorized by rurality. Table 7 and Table 9 provide information on the numbers and percentage of rural and highly rural Alcohol Use Disorders encounters of total Alcohol Use Disorders encounters for patients with a primary diagnosis of Alcohol Use Disorders (Table 7) and secondary diagnosis of Alcohol Use Disorders (Table 9). The accompanying maps display the total numbers and percentages of rural and highly rural patients with **either** a primary or secondary diagnosis of Alcohol Use Disorders to capture the total workload (outpatient encounters) of this disease in rural and highly rural areas:

- Map 44: Number of Rural and Highly Rural Alcohol Use Disorders Patient Encounters by VISN, FY-2014
- Map 45: Percent of Rural and Highly Rural Alcohol Use Disorders Patient Encounters of VHA Alcohol Use Disorders Patient Encounters by VISN, FY-2014
- Map 46: Number of Rural and Highly Rural Alcohol Use Disorders Patient Encounters by State, FY-2014
- Map 47: Percent of Rural and Highly Rural Alcohol Use Disorders Patient Encounters of VHA Alcohol Use Disorders Patient Encounters by State, FY-2014
- Map 48: Number of Rural and Highly Rural Alcohol Use Disorders Patient Encounters by County, FY-2014
- Map 49: Percent of Rural and Highly Rural Alcohol Use Disorders Patient Encounters of VHA Alcohol Use Disorders Patient Encounters by County, FY-2014

Note: An asterisk (*) that appears in the tables signifies a low number or proportion of unique patients.

Section I Highlights: VHA Patients with Alcohol Use Disorders

National Overview

In Fiscal Year 2014, the Veterans Health Administration had 417,630 patients with the diagnosis code indicating a primary or secondary diagnosis of an Alcohol Use Disorder (Table 1). This number represents approximately seven percent (6.72%) of the total patient population during the fiscal year. As with most patients seen in the VHA, the majority of patients with Alcohol Use Disorders were male (95.17%); however, females represented almost five percent (4.79%). The age distribution of patients with Alcohol Use Disorders shows that 20.87% were under the age of 45, 18.14% were ages 45-54, 32.58% were ages 55-64, 24.11% were ages 65-74, and 4.27% were ages 75 or older.

We examined two groups of Veterans by their Enrollment Priority. Enrollment Priority Groups 1-3 were combined into one group, which includes Service-Connected Veterans rated by the VA from 10-100%. A second group, Enrollment Priority Group 5, was selected to represent non Service-Connected and noncompensable Service-Connected Veterans rated 0% disabled by VA with annual income and/or net worth below the VA National income threshold and geographically-adjusted income threshold for their resident location.² The table shows that about half of patients with Alcohol Use Disorders (48.85%) were Service-Connected injured Veterans enrolled in Priority Groups 1 – 3 and almost one-third (31.21%) were Priority 5 (low income).

VISN Overview

At the time of this edition, the Veterans Health Administration consisted of 21 Networks. Examining data at the network level, the volume of patients with Alcohol Use Disorders ranged from a high of 39,684 individuals in the Sunshine Network (VISN 8, which serves Veterans in most of Florida, Puerto Rico, U.S. Virgin Islands, and a portion of Georgia) to a low of 8,784 individuals in the Capitol Network (VISN 5, which includes all of Washington D.C. and portions of Pennsylvania, Maryland, Virginia, and West Virginia). When examining the number of patients with Alcohol Use Disorders proportionally to all patients, the New England Network (VISN 1) had the highest proportion at 8.07% and the Capitol Network (VISN 5) had the lowest proportion at 5.47%. The VISN with the highest ratio of females to males was in the Mid-Atlantic Network (VISN 6), where 12.47% of the patients with Alcohol Use Disorders were female. Nationally, the 55-64 age group had the highest prevalence of patients with Alcohol Use Disorders to all VHA patients (32.58%); however, three networks

Alcohol Use Disorders



including the Capitol Network (VISN 5), Ohio Network (VISN 10), and Mid-Atlantic Network (VISN 6) had more than 35% of the VHA patient population diagnosed with Alcohol Use Disorders. Seven of the 21 VISNs had more than 50% of patients with Alcohol Use Disorders in the VHA were enrolled as Service-Connected (Priority Groups 1-3), the Midwest Network (VISN 23) leading at 56.94%. Map 1 shows the number of Veterans with Alcohol Use Disorders by quartile across the 21 VISNs.

State Overview

Map 2 shows the number of VHA patients with Alcohol Use Disorders by State (by quartile). The top 10 States with the highest number of patients with Alcohol Use Disorders by rank order were Florida (N=36,528), California (N=33,289), Texas (N=32,571), Ohio (N=19,185), New York (N=17,345), Pennsylvania (N=17,298), Georgia (N=13,985), North Carolina (N=13,519), Illinois (N=12,564), and Michigan (N=11,011). The State/territory with the highest percentages of patients with Alcohol Use Disorders was District of Columbia (14.27%), followed by (in rank order): Northern Mariana Islands (10.96%), Massachusetts (10.52%), Guam (9.7%), Rhode Island (9.46%), Vermont (9.4%), Ohio (8.48%), Wisconsin (8.47%), Oregon (8.12%) and Minnesota (8.05%).

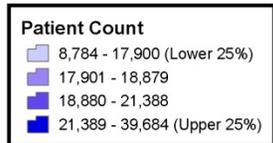
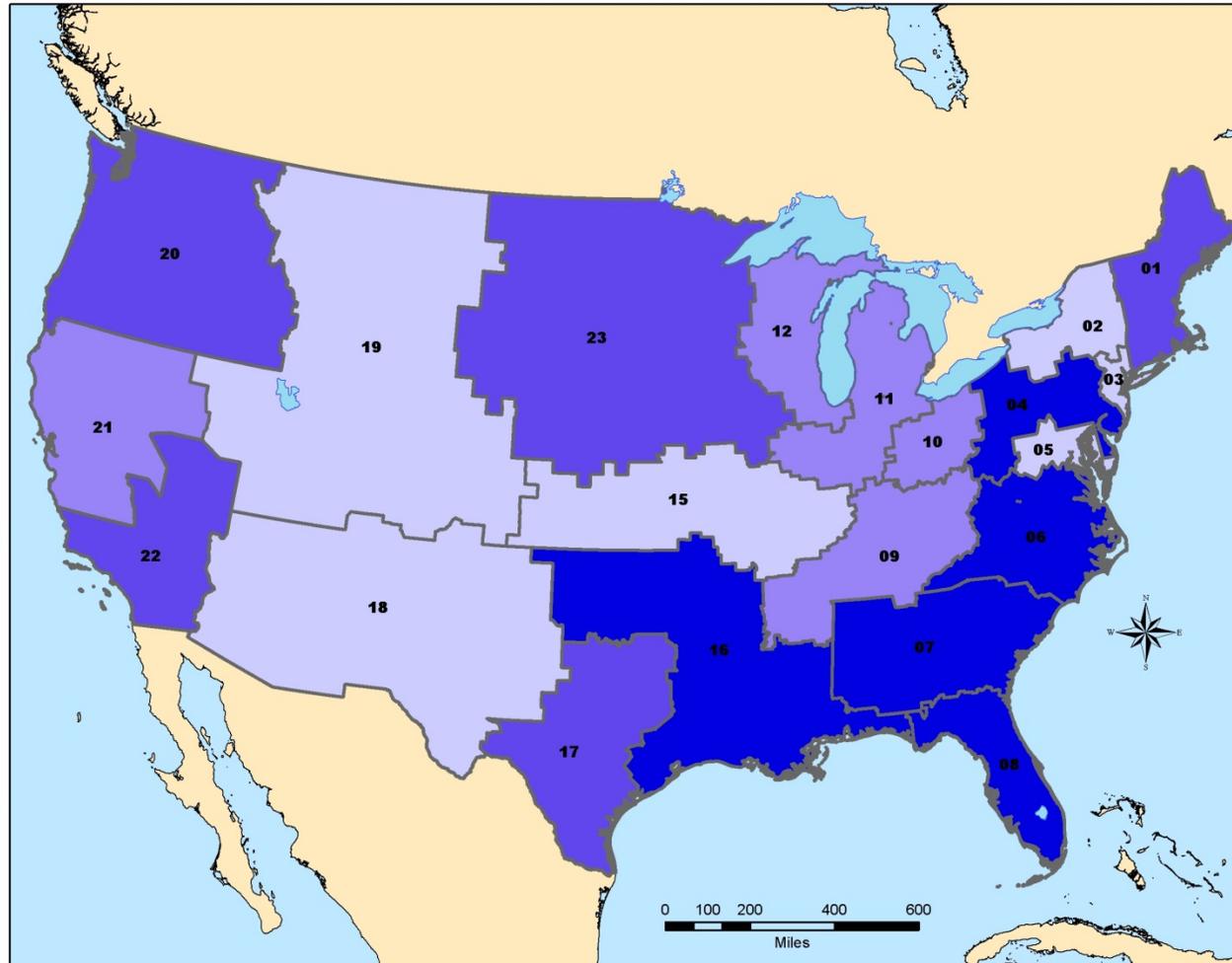
County Overview

The number of patients with Alcohol Use Disorders by county is displayed by quartiles in Map 3. The highest 25% in terms of volume is designated by the darkest color. In addition to the National map, four additional maps are provided that zoom to the VISN level (Maps 4-7) to give a clearer picture of the number of patients with Alcohol Use Disorders and the geographic patterns within each VISN. The top 10 counties with the largest number of VHA patients with Alcohol Use Disorders across the US were in the States of California (2 counties), Illinois (1 county), Texas (3 counties), Arizona (1 county), Florida (1 county), Ohio (1 county), and Pennsylvania (1 county). Los Angeles County, California had the largest number of patients with Alcohol Use Disorders (N=6,752), followed by, in rank order: Cook County, Illinois (N=4,793), Harris County, Texas (N=4,712), San Diego County, California (N=4,675), Bexar County, Texas (N=4,155), Maricopa County, Arizona (N=4,118), Pinellas County, Florida (N=3,458), Cuyahoga County, Ohio (N=3,359), Philadelphia County, Pennsylvania (N=3,077), and Dallas County, Texas (N=2,771).

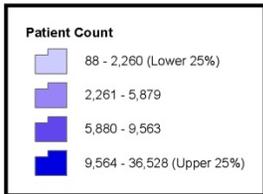
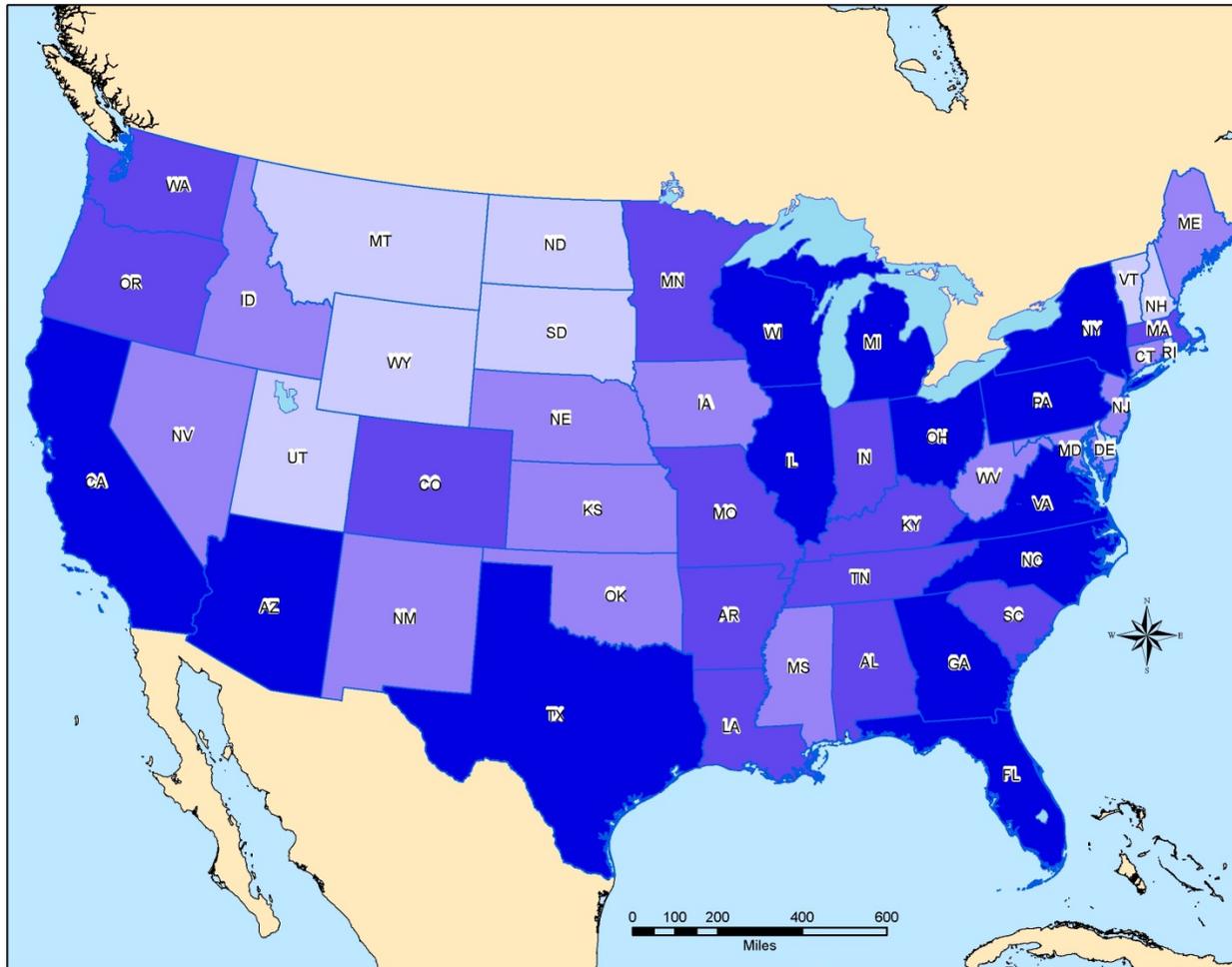
Table 1: National and VISN Numbers and Percentages of VHA Patients with Alcohol Use Disorders, FY-2014

Overall Prevalence Statistics- Alcohol Use Disorders, FY-2014												
Veterans Integrated Service Network	Total Number of Patients	Patients with Alcohol Use Disorders		Gender (%)		Age Group (%)					Enrollment Priority Groups (%)	
		N	(%)	F	M	<45	45-54	55-64	65-74	75+	Service Connected (Priority 1-3)	Low Income (Priority 5)
New England (01)	253,326	20,438	8.07	4.19	95.79	19.70	16.67	29.78	27.27	6.58	51.38	24.92
Upstate NY (02)	136,497	10,258	7.52	4.64	95.33	20.24	18.52	31.65	24.38	5.23	45.96	31.94
NY/NJ (03)	174,457	9,543	5.47	3.90	96.00	18.80	18.38	32.65	24.64	5.43	44.07	34.81
Stars and Stripes (04)	310,940	21,968	7.07	4.23	95.76	19.44	18.24	31.54	25.83	4.93	45.68	32.12
Capitol (05)	150,012	8,784	5.86	5.58	94.39	17.58	21.10	35.42	21.45	4.45	41.32	36.56
Mid-Atlantic (06)	359,692	22,697	6.31	6.07	93.87	20.16	20.05	35.22	21.54	3.00	51.77	31.00
Southeast (07)	408,164	27,644	6.77	6.05	93.89	20.28	21.69	34.81	20.66	2.51	54.33	30.18
Sunshine (08)	576,411	39,684	6.88	5.04	94.87	16.69	18.11	33.14	26.01	5.98	45.53	33.53
Mid South (09)	298,396	18,633	6.24	4.39	95.58	20.58	19.01	33.83	23.40	3.18	49.91	30.54
Ohio (10)	231,319	18,649	8.06	4.13	95.78	18.05	18.82	35.32	23.70	4.04	39.35	39.14
Vets in Partnership (11)	282,135	18,879	6.69	4.01	96.11	20.84	19.75	33.21	23.33	3.00	44.63	35.27
Great Lakes (12)	266,879	18,847	7.06	4.59	95.38	20.44	18.00	32.47	24.68	4.39	43.29	31.14
Heartland (15)	245,357	16,138	6.58	4.02	95.95	20.20	18.19	34.16	23.76	3.66	45.83	33.81
South Central (16)	502,681	34,392	6.84	4.75	95.18	21.82	17.74	34.64	22.57	3.18	50.45	30.04
Heart of Texas (17)	306,581	20,027	6.53	5.92	94.02	28.84	17.56	30.68	20.30	2.58	56.55	27.27
Southwest (18)	271,557	17,900	6.59	5.02	94.92	22.98	17.26	29.91	25.02	4.79	49.93	31.29
Rocky Mtn. (19)	202,350	12,586	6.22	4.87	95.11	24.40	17.39	31.16	22.85	4.21	50.52	29.83
Northwest (20)	288,322	20,181	7.00	4.86	95.14	21.17	17.47	31.51	25.62	4.24	50.32	30.21
Sierra Pacific (21)	293,645	18,048	6.15	4.13	95.84	20.23	14.60	30.56	29.19	5.40	48.60	32.04
Desert Pacific (22)	328,951	21,388	6.50	4.75	95.18	26.19	15.80	29.36	24.13	4.46	49.74	30.97
Midwest (23)	324,728	20,946	6.45	4.32	95.64	21.10	17.09	31.13	25.38	5.26	56.94	24.25
Grand Total	6,212,400	417,630	6.72	4.79	95.17	20.87	18.14	32.58	24.11	4.27	48.85	31.21

Alcohol Use Disorders



Map 1:
Number of VHA Patients with Alcohol Use Disorders
By VISN FY - 2014

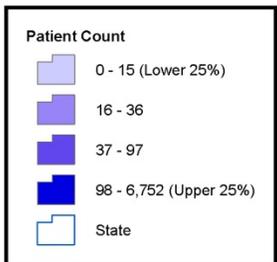
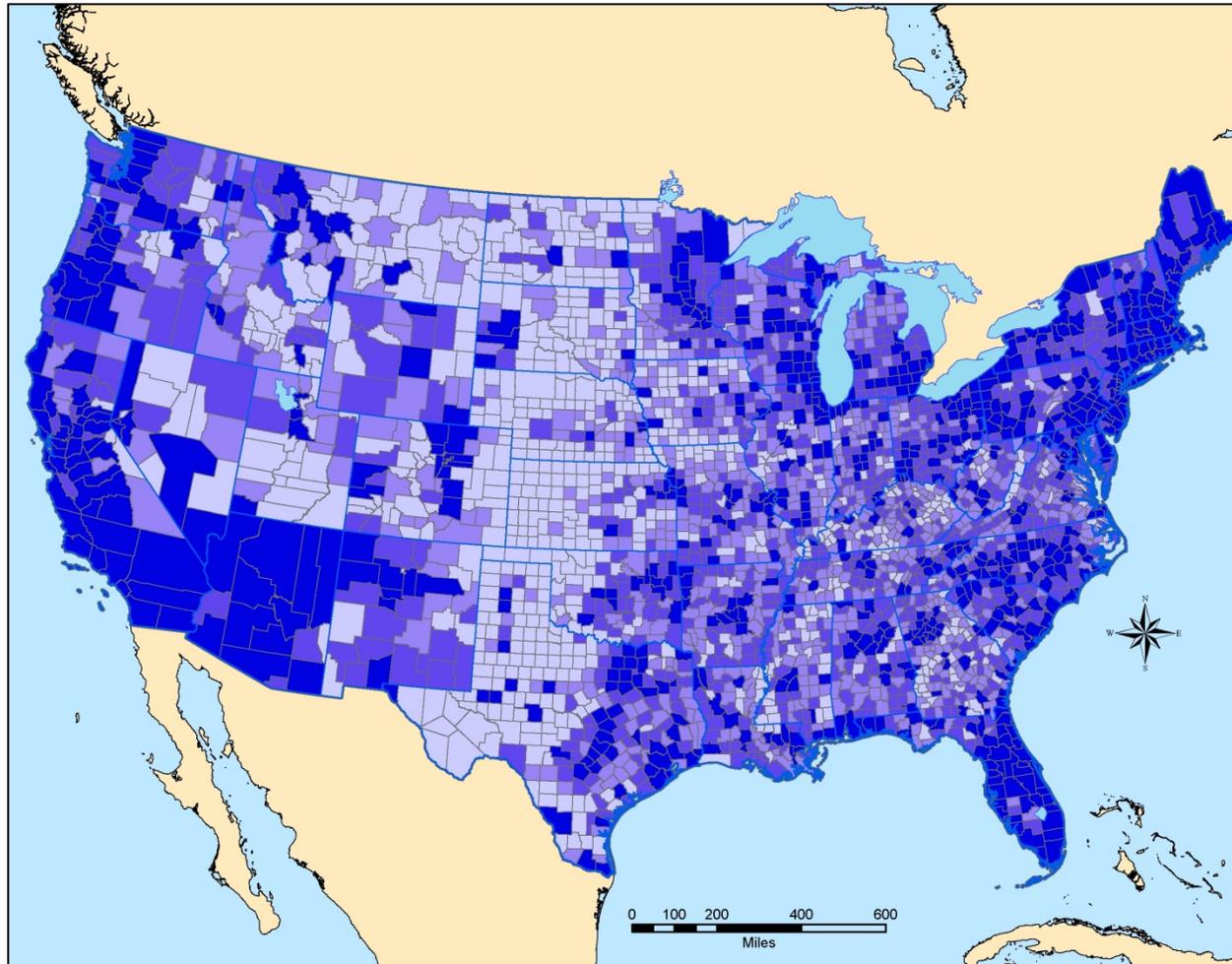
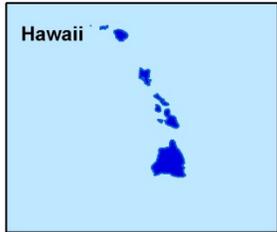


Map 2:
Number of VHA Patients with Alcohol Use Disorders
By State FY - 2014

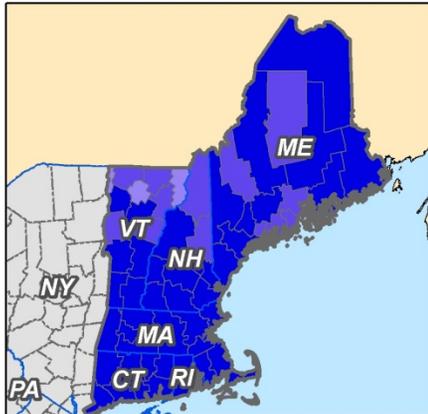


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

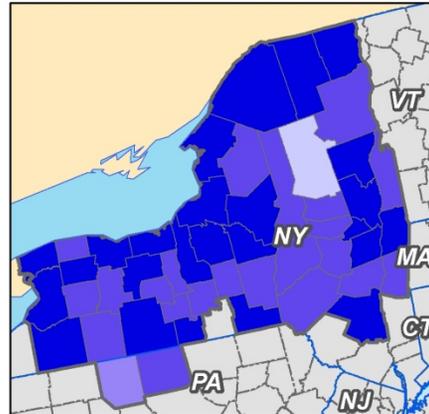
Alcohol Use Disorders



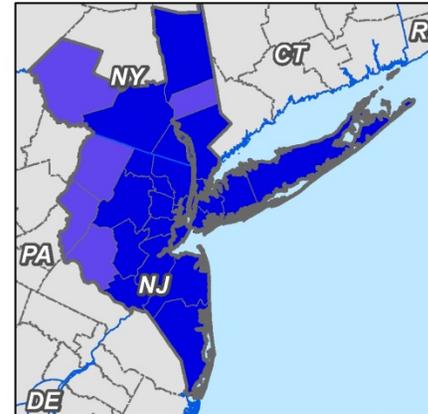
Map 3:
Number of VHA Patients with Alcohol Use Disorders
By County FY - 2014



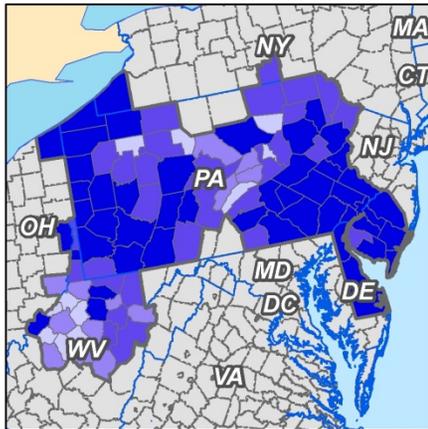
VISN 1



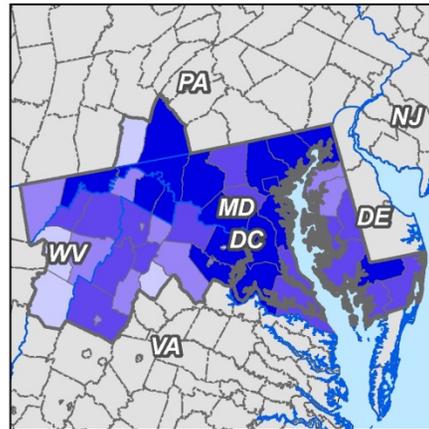
VISN 2



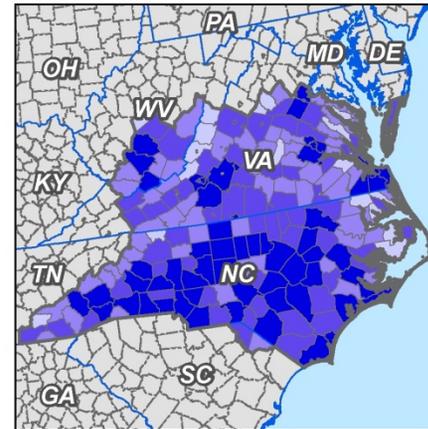
VISN 3



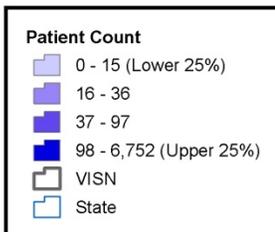
VISN 4



VISN 5



VISN 6

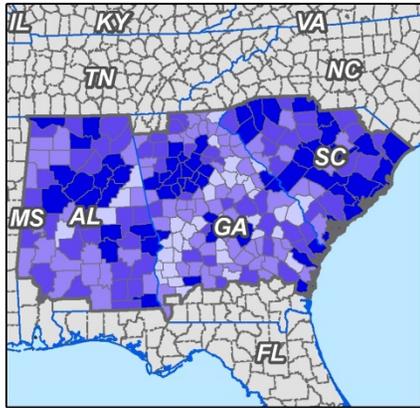


Map 4:
Number of VHA Patients
with Alcohol Use Disorders
by County, FY - 2014

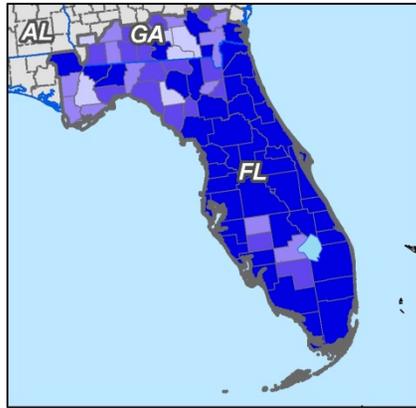


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 8/3/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

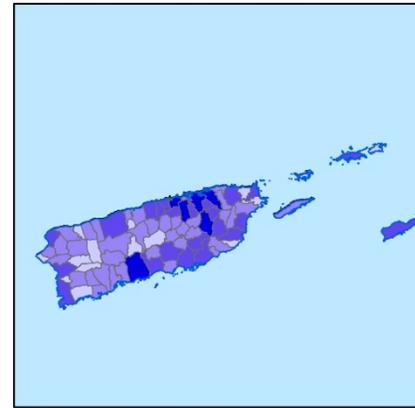
Alcohol Use Disorders



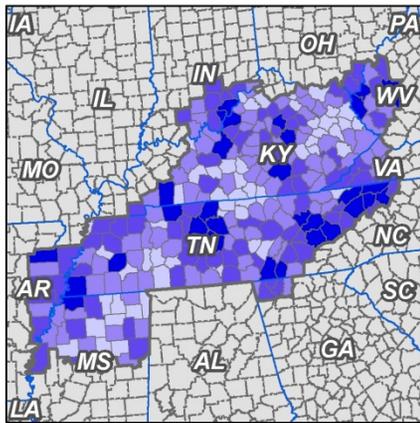
VISN 7



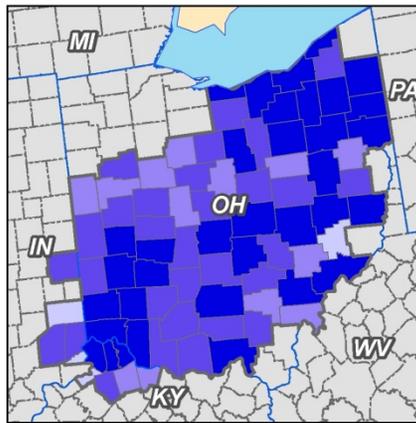
VISN 8



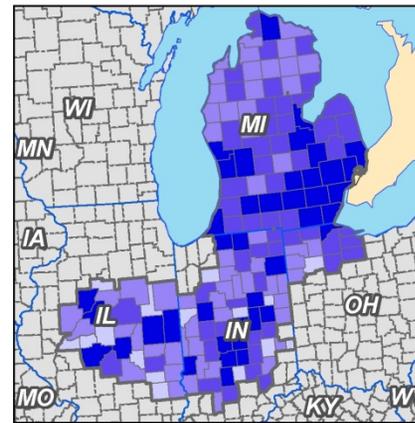
VISN 8 Puerto Rico & Virgin Islands



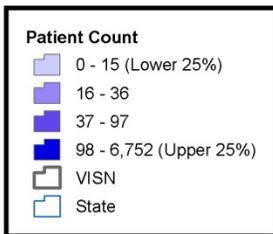
VISN 9



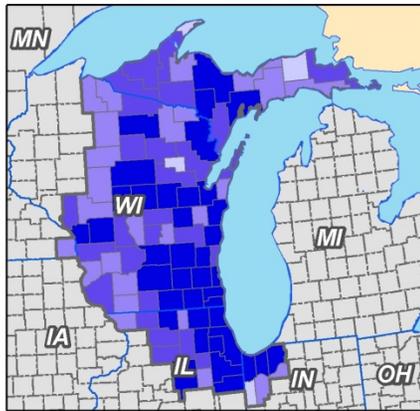
VISN 10



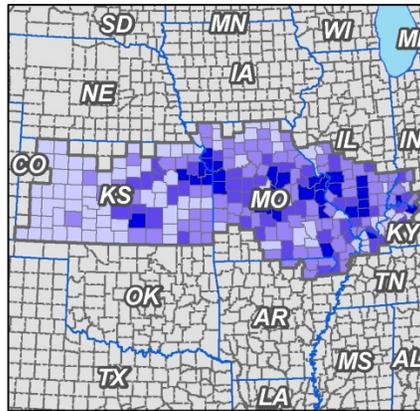
VISN 11



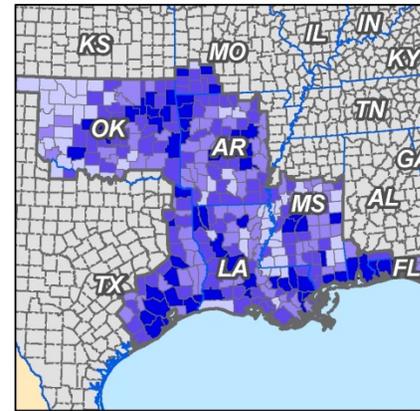
Map 5:
Number of VHA Patients
with Alcohol Use Disorders
By County FY - 2014



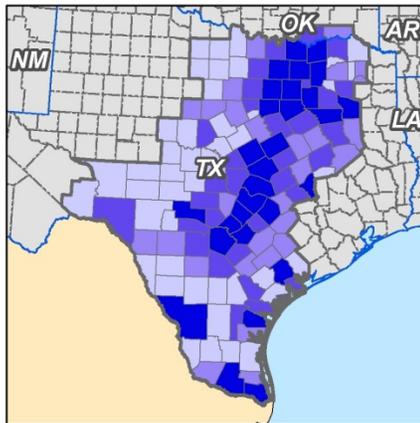
VISN 12



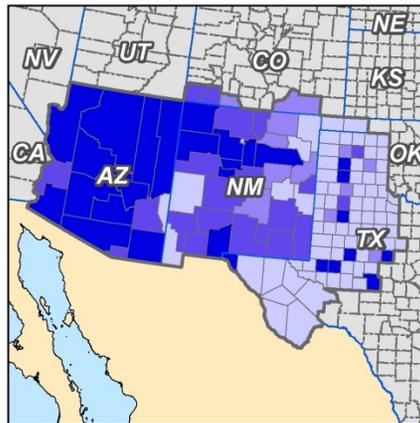
VISN 15



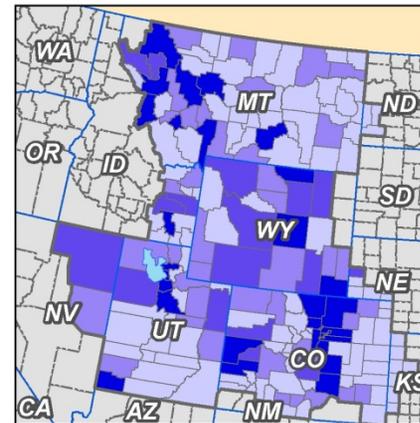
VISN 16



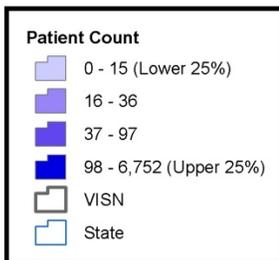
VISN 17



VISN 18



VISN 19

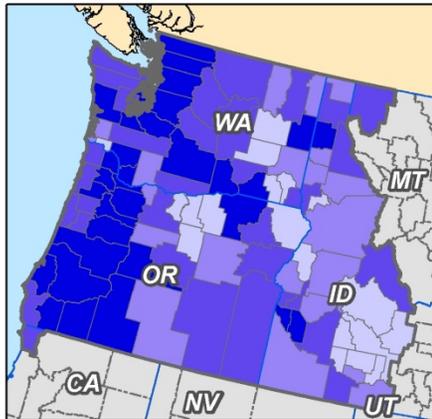


Map 6:
Number of VHA Patients
with Alcohol Use Disorders
By County, FY - 2014

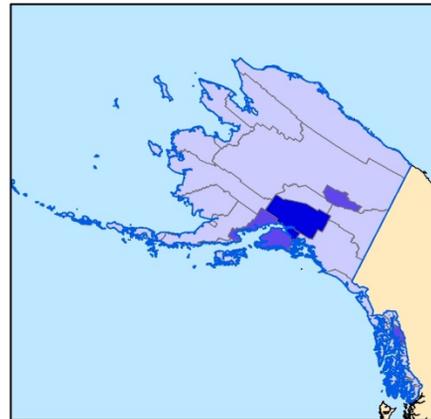


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 8/3/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

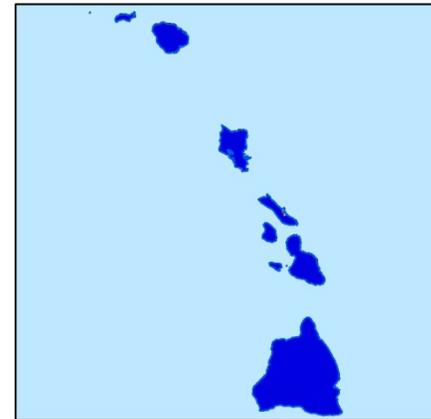
Alcohol Use Disorders



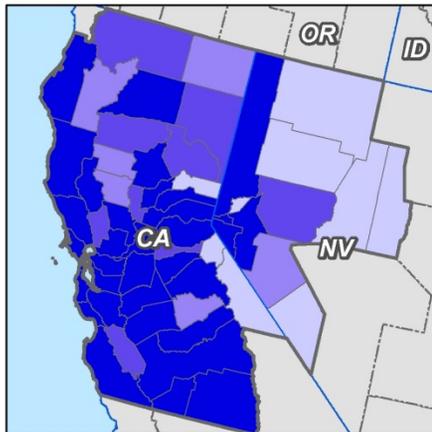
VISN 20



VISN 20- Alaska



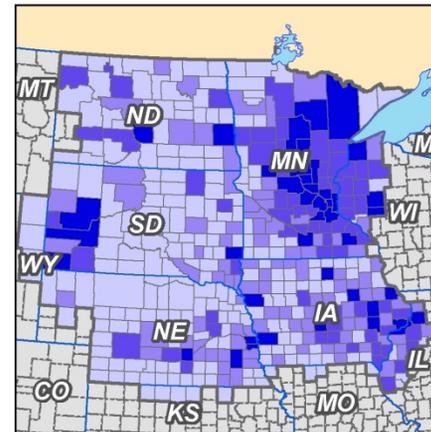
VISN 21- Hawaii



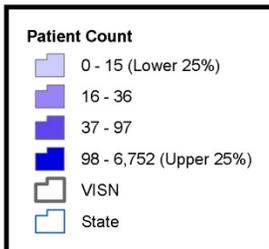
VISN 21



VISN 22



VISN 23



Map 7:
Number of VHA Patients
with Alcohol Use Disorders
By County, FY - 2014

Section II Highlights: Rural and Highly Rural VHA Patients with Alcohol Use Disorders

This section focuses on the overall prevalence of Alcohol Use Disorders in each Veterans Integrated Service Network, broken down by the following rurality categories: *highly rural*, *rural*, *urban*, and *unknown*. Beginning with Fiscal Year 2011, the repository from where these data were extracted obtained the rural designation data from the most recent geocoded rurality table provided by VHA's Planning System Support Group (PSSG). If not available from this source, the repository's algorithm then looks to the Office of Rural Health's (ORH) ZIP-based file located on the ORH website.¹ In FY-2014*, the VHA's definition of rurality was based on the U.S. Census definition for rural and urban, with an added category of Highly Rural. The definition of these categories is as follows:

- ❖ *urban* - areas defined by U.S. Census as an urbanized area.
- ❖ *rural* - all other areas excluded in U.S. Census defined urbanized areas
- ❖ *highly rural* - any rural area within a county with less than 7.0 civilians per square mile

Since the *rural* and *highly rural* categories are of particular interest in this volume, numbers and percentages are distinctively highlighted in shades of blue in Table 2. For the maps, urban areas are shaded and urban patients are removed from the numerator and denominator. The maps in this section illustrate graphically the data on rural and highly rural patients with Alcohol Use Disorders. For this section, both the number and the percentages of rural and highly rural patients with Alcohol Use Disorders at the VISN, State, and county levels are mapped.

*Note: Starting at the beginning of FY-2015, the VA changed its definitions based on Rural-Urban Commuting Area (RUCA) Codes. Future editions of the Rural Veterans Health Care Atlas will use the new definition of rurality: Urban Area: Census tracts with at least 30 percent of the population residing in an urbanized area as defined by the Census Bureau; Rural Area: Land areas not designed as urban or highly rural. Highly Rural Area: Sparsely populated areas — less than 10 percent of the working population commutes to any community larger than an urbanized cluster, which is typically a town of no more than 2,500 people.

National Overview

In FY-2014, 417,630 VHA patients had a primary or secondary diagnosis of Alcohol Use Disorders. The majority of patients with Alcohol Use Disorders lived in urban areas (68.24%). However, almost one-third resided in either rural (N=127,781) or highly rural (N=4,372) areas (31.64% combined).

VISN Overview

The Rocky Mountain Network (VISN 19) had the highest number of patients with Alcohol Use Disorders residing in a defined *highly rural* area at 1,231, which represents 9.78% of the total number of patients with Alcohol Use Disorders in that network (Table 2). The South Central Network (VISN 16) had the highest number of patients with Alcohol Use Disorders residing in a defined *rural* area at 14,017, which represented 40.76% of the total number of patients with Alcohol Use Disorders in that network. While this health condition appeared to be more prevalent with *urban* patients in all 21 VISNs, four VISNs had a nearly equal proportion of *rural* patients to *urban* patients with Alcohol Use Disorders: Upstate New York Network (VISN 2), Mid-South Network (VISN 9), Heartland Network (VISN 15), and Midwest Network (VISN 23).

Map 8 and Map 9 show the number and percentages of rural and highly rural patient with Alcohol Use Disorders by VISN. VISN 20 was the only network that showed both a high volume of rural and highly rural patients with Alcohol Use Disorders and a large proportion of their rural and highly rural patient population who had this disorder. VISNs 4, 9, 11, and 23 had a relatively large number of patients with Alcohol Use Disorders, but the proportion of rural and highly rural patients with Alcohol Use Disorders represented low to moderate percentages of the total rural and highly rural patient population. Conversely, VISNs 2, 21, and 22 had low to moderate numbers of combined rural and highly rural patients with Alcohol Use Disorders, but this disorder was quite prevalent in the rural and highly rural patient population (upper 25% quartile).

State Overview

Map 10 shows the number of VHA rural and highly rural patients with Alcohol Use Disorders by State (by quartile). The top 10 States with the highest number of rural and highly rural patients with Alcohol Use Disorders by rank order were: Texas (N=8,887), Florida (N=6,190), North Carolina (N=5,800), Ohio (N=5,572), New York (N=5,189), California (N=5,091), Pennsylvania (N=4,689), Georgia (N=4,623), Minnesota (N=4,437) and Michigan (N=4,236). The proportion of rural and highly rural patients with Alcohol Use Disorders to the total rural and highly rural patient population is displayed in Map 11. The States with the highest percentage of their rural and highly rural patients (and more than 10 patients classified as rural or highly rural) having Alcohol Use Disorders were: Vermont (9.37%), Massachusetts (9.16%), Hawaii (8.63%), Rhode Island (7.86%), Florida (7.51%), New Hampshire (7.49%), New Mexico (7.46%), New York (7.13%), California (6.97%), and Minnesota (6.92%).

County Overview

The number of rural and highly rural patients with Alcohol Use Disorders by county is displayed by quartiles in Map 12. The highest 25% in terms of volume is designated by the darkest shade. The proportion of rural and highly rural patients with Alcohol Use Disorders of the total rural and highly rural patient population is portrayed in Map 13. In addition to the National map, eight additional maps are provided that zoom to the VISN level (Maps 14-21) to give a clearer picture of the number and percentages of rural and highly rural patients with Alcohol Use Disorders and the geographic patterns by county within each VISN. The top 10 counties with the largest number of VHA rural and highly rural patients with Alcohol Use Disorders across the US were in the States of Oregon (1 county), Arizona (2 counties), California (1 county), Florida (2 counties), New York (1 county), Kansas (1 county), Pennsylvania (1 county), and Maine (1 county). Douglas County, Oregon had the largest number of rural and highly rural patients with Alcohol Use Disorder (N=504) followed by, in rank order: Yavapai County, Arizona (N=455), San Bernardino County, California (N=440), Pima County, Arizona (N=432), Marion County, Florida (N=420), Steuben County, New York (N=404), Columbia County, Florida (N=392), Leavenworth County, Kansas (N=379), Butler County, Pennsylvania (N=378), and Kennebec County, Maine (N=367). The top 10 counties with the largest proportion of their rural and highly rural patients (and there were at least 10 rural and highly rural patients) with a Alcohol Use Disorders diagnostic code were St. Louis city, Missouri (33.33%), Baltimore city, Maryland

Alcohol Use Disorders

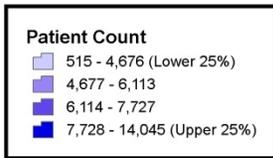
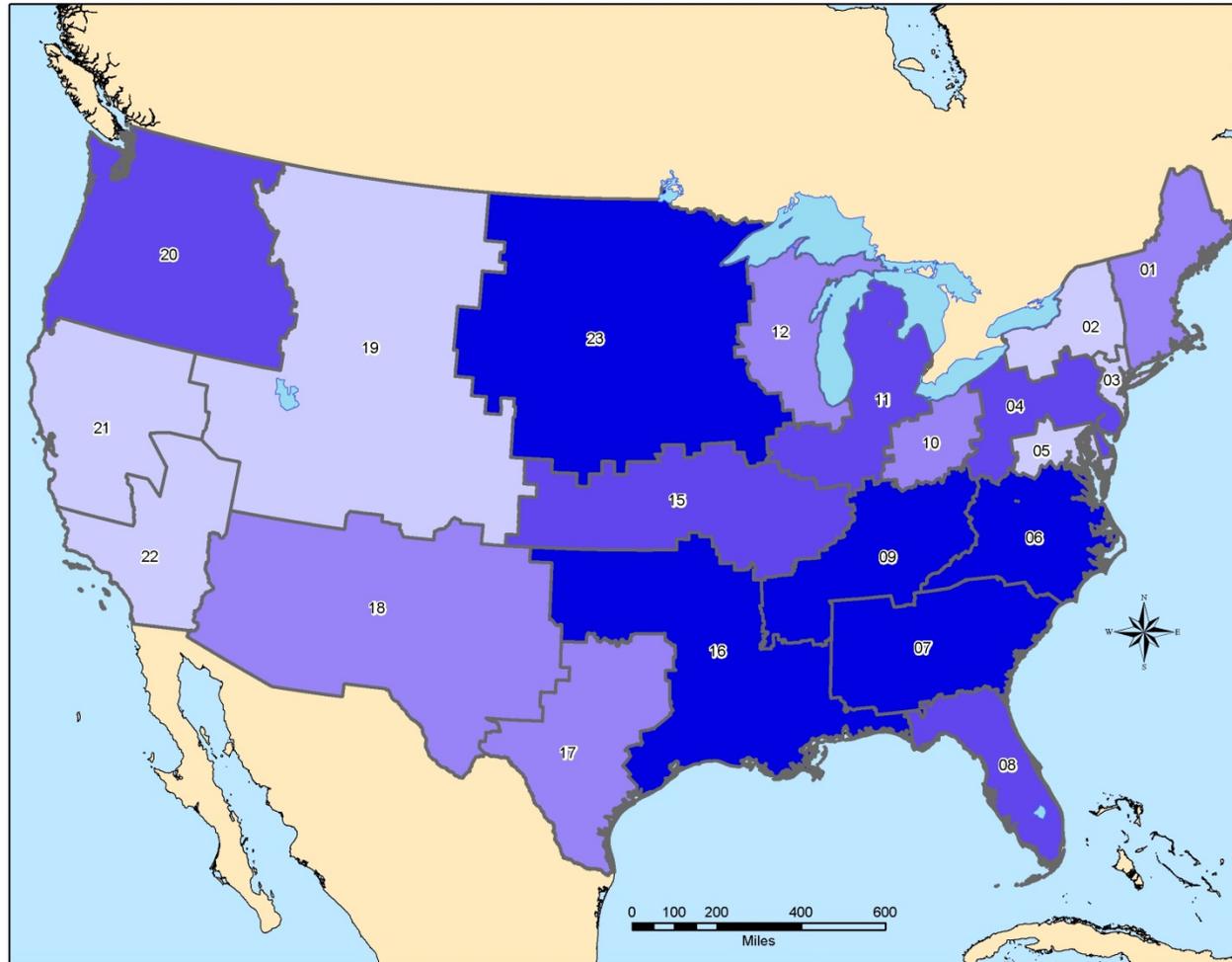


(26.42%), Hampton city, Virginia (25.86%), Camden County, New Jersey (25.38%), San Francisco County, California (25.0%), Fredericksburg city, Virginia (25.0%), Essex County, New Jersey (25.0%), Dan Juan Municipio, Puerto Rico (23.53%), Philadelphia, County, Pennsylvania (23.0%), and Milwaukee County, Wisconsin (21.43%).

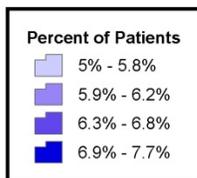
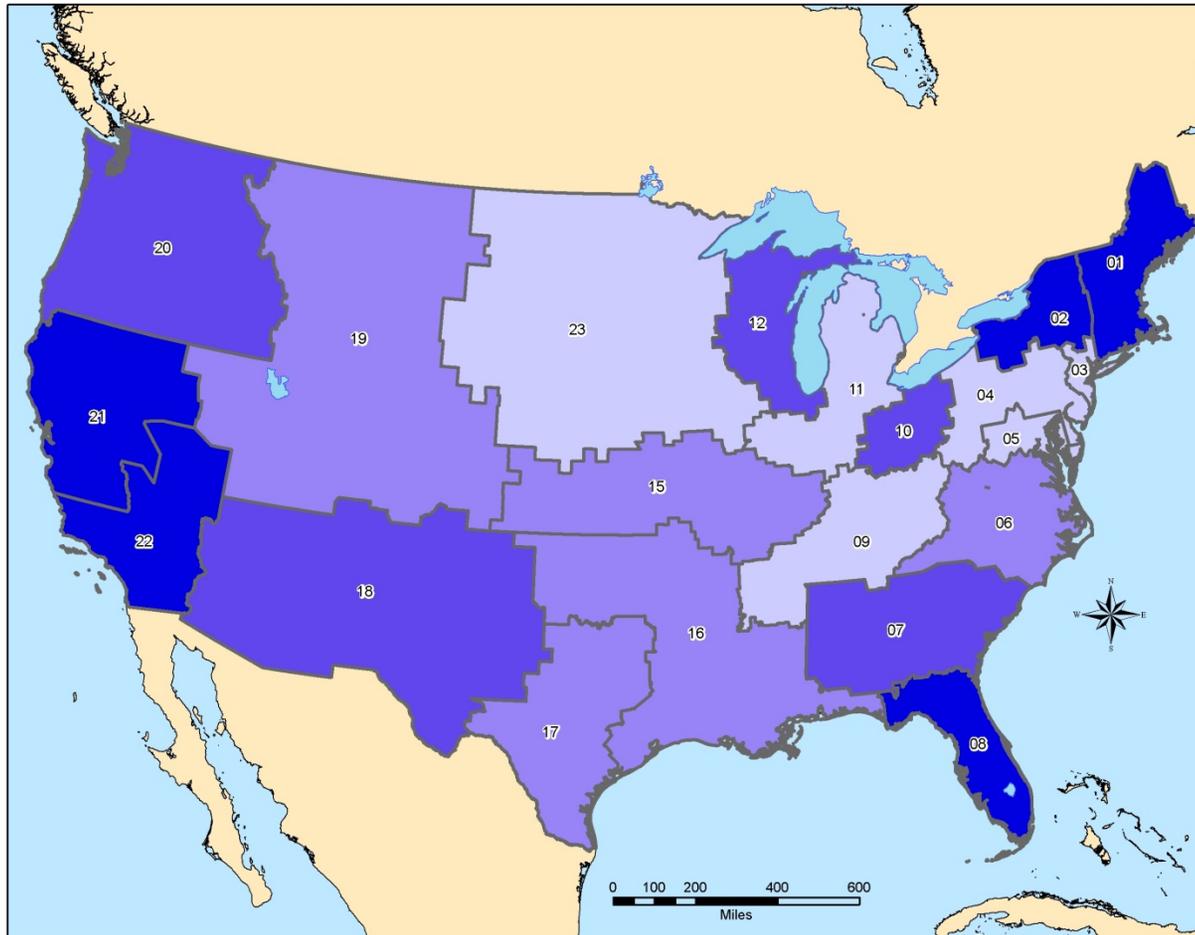
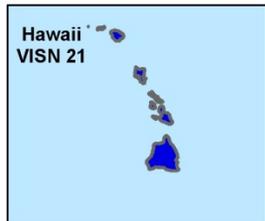
Table 2: National and VISN Numbers and Percentages of VHA Patients with Alcohol Use Disorders by Rurality, FY-2014

Prevalence Statistics by Rurality- Alcohol Use Disorders, FY-2014									
Veterans Integrated Service Network	Total Number of Patients with Alcohol Use Disorders	Highly Rural		Rural		Urban		Unknown	
		N	(%)	N	(%)	N	(%)	N	(%)
New England (01)	20,438	62	0.30	6,051	29.61	14,323	70.08	*	*
Upstate NY (02)	10,258	5	0.05	4,635	45.18	5,622	54.81	*	*
NY/NJ (03)	9,543	*	*	513	5.38	9,017	94.49	*	*
Stars and Stripes (04)	21,968	4	0.02	6,592	30.01	15,366	69.95	5	0.02
Capitol (05)	8,784	*	*	1,584	18.03	7,197	81.93	*	*
Mid-Atlantic (06)	22,697	10	0.04	9,062	39.93	13,611	59.97	7	0.03
Southeast (07)	27,644	*	*	10,006	36.20	17,621	63.74	5	0.02
Sunshine (08)	39,684	3	0.01	6,993	17.62	32,649	82.27	9	0.02
Mid South (09)	18,633	4	0.02	8,681	46.59	9,950	53.40	3	0.02
Ohio (10)	18,649	*	*	5,081	27.25	13,551	72.66	*	*
Vets in Partnership (11)	18,879	6	0.03	6,453	34.18	12,439	65.89	6	0.03
Great Lakes (12)	18,847	47	0.25	5,215	27.67	13,574	72.02	10	0.05
Heartland (15)	16,138	91	0.56	7,636	47.32	8,403	52.07	3	0.02
South Central (16)	34,392	28	0.08	14,017	40.76	20,317	59.07	10	0.03
Heart of Texas (17)	20,027	110	0.55	5,474	27.33	14,426	72.03	6	0.03
Southwest (18)	17,900	781	4.36	4,589	25.64	12,498	69.82	22	0.12
Rocky Mtn. (19)	12,586	1,231	9.78	3,097	24.61	8,251	65.56	6	0.05
Northwest (20)	20,181	849	4.21	5,984	29.65	13,344	66.12	9	0.04
Sierra Pacific (21)	18,048	185	1.03	4,491	24.88	13,096	72.56	270	1.50
Desert Pacific (22)	21,388	182	0.85	1,594	7.45	19,594	91.61	3	0.01
Midwest (23)	20,946	770	3.68	10,033	47.90	10,141	48.41	*	*
Grand Total	417,630	4,372	1.05	127,781	30.60	284,990	68.24	382	0.09

Alcohol Use Disorders



Map 8:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
By VISN FY - 2014

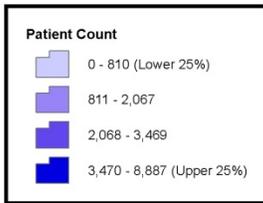
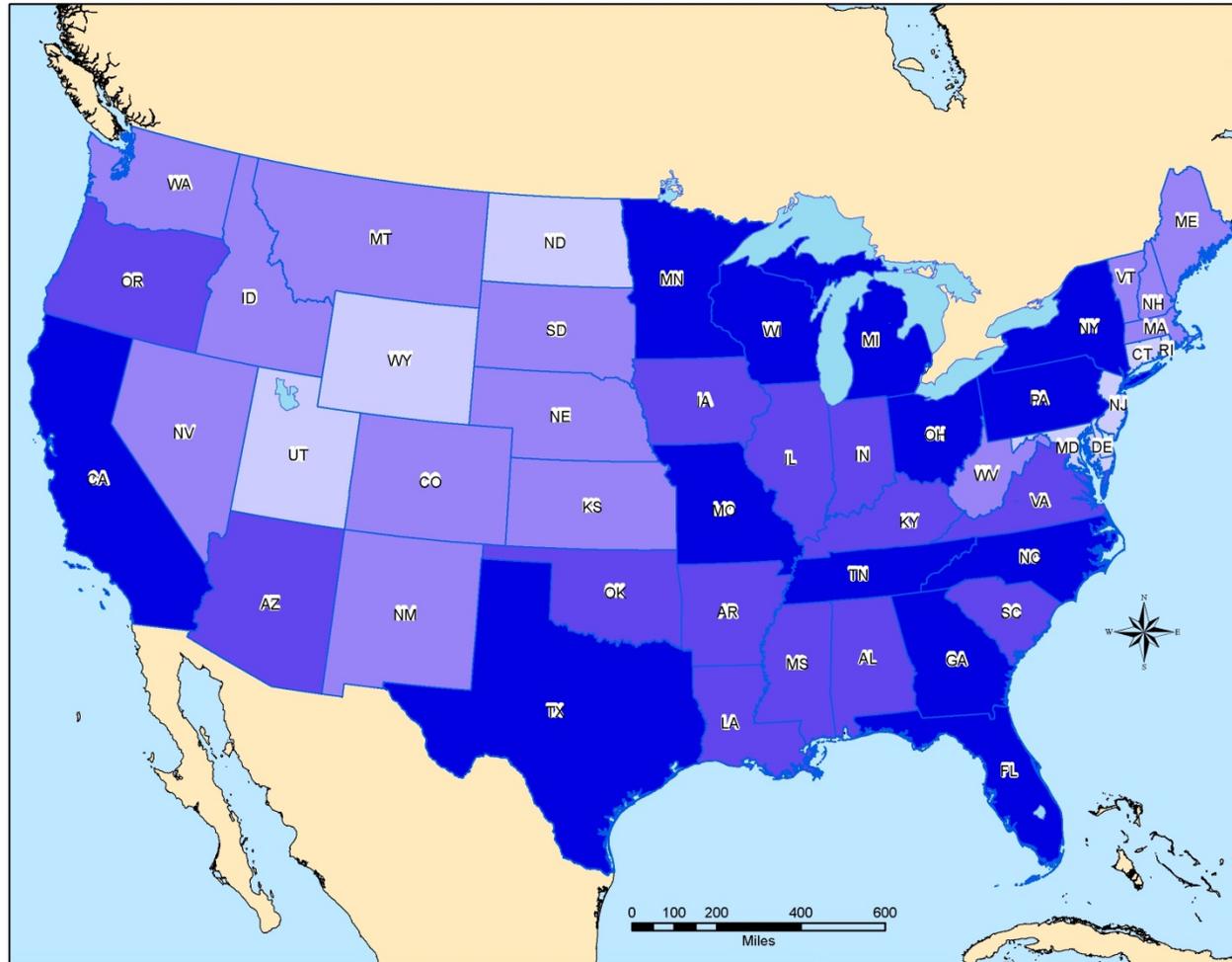


Map 9:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Of All Rural and Highly Rural VHA Patients
By VISN FY - 2014

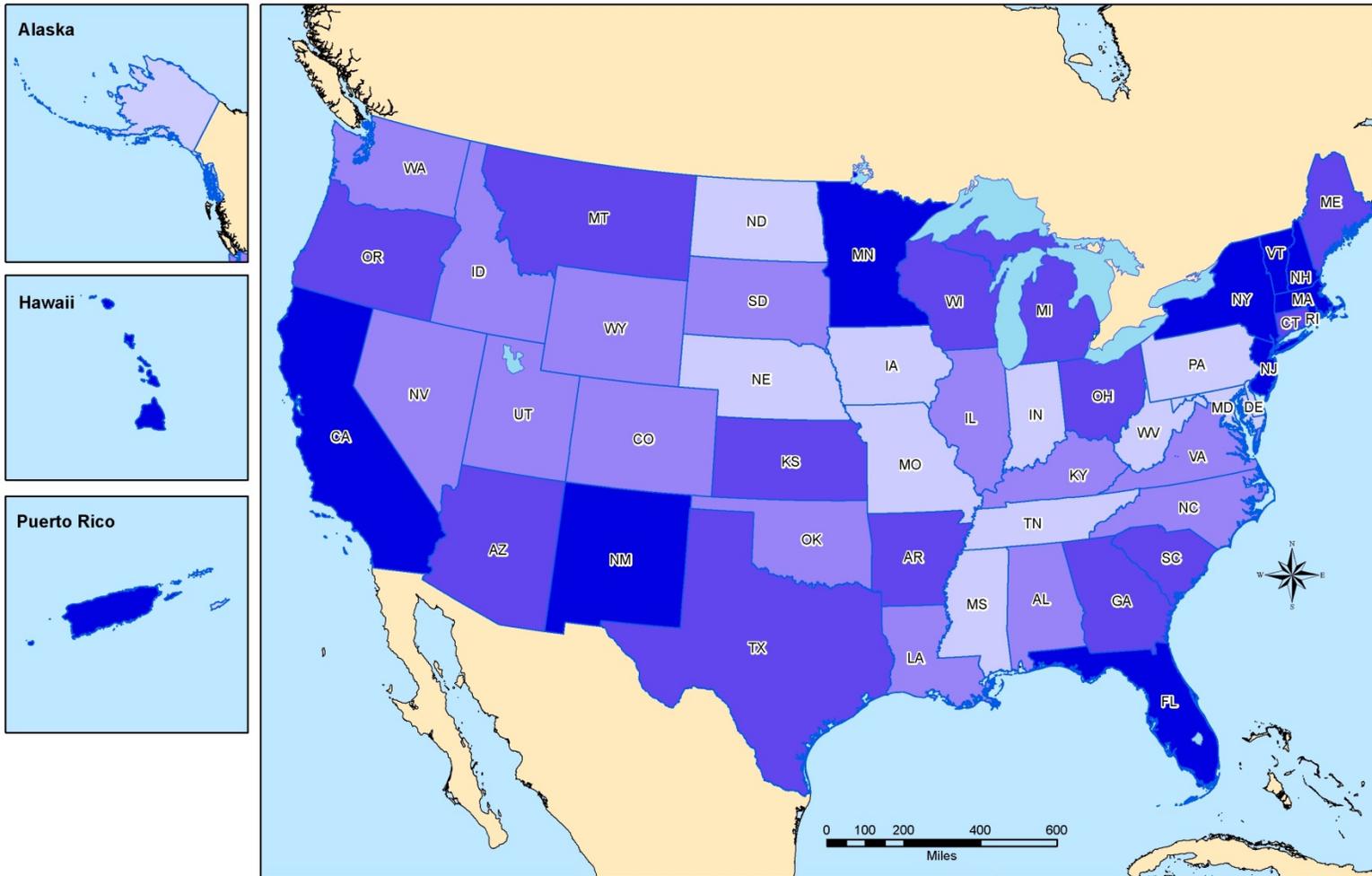


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 10:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
By State FY - 2014

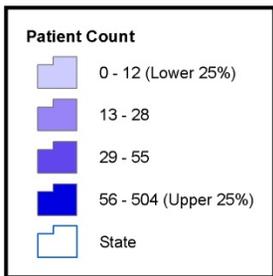
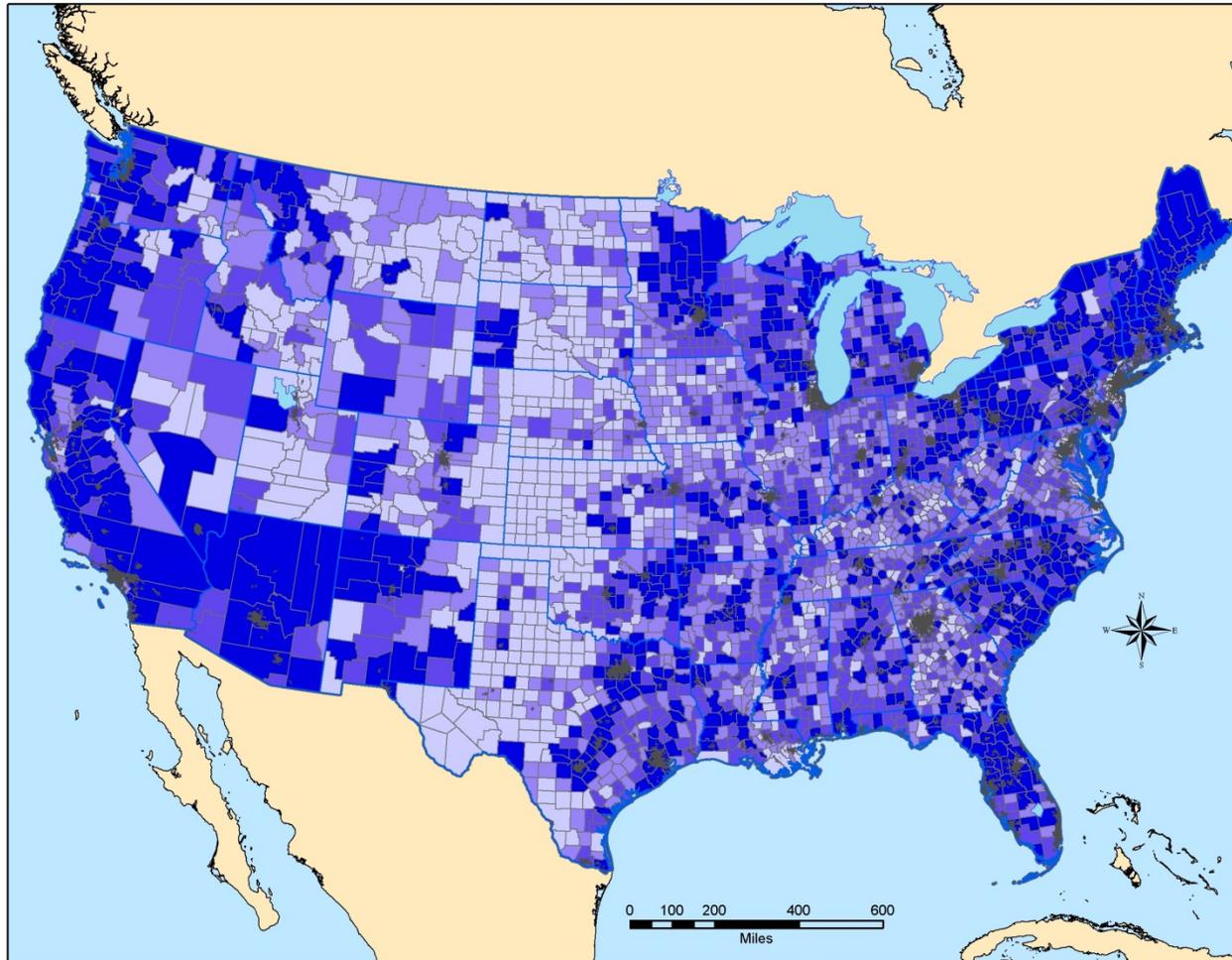


Map 11:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Of All Rural and Highly Rural Patients
By State FY - 2014

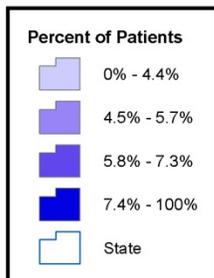
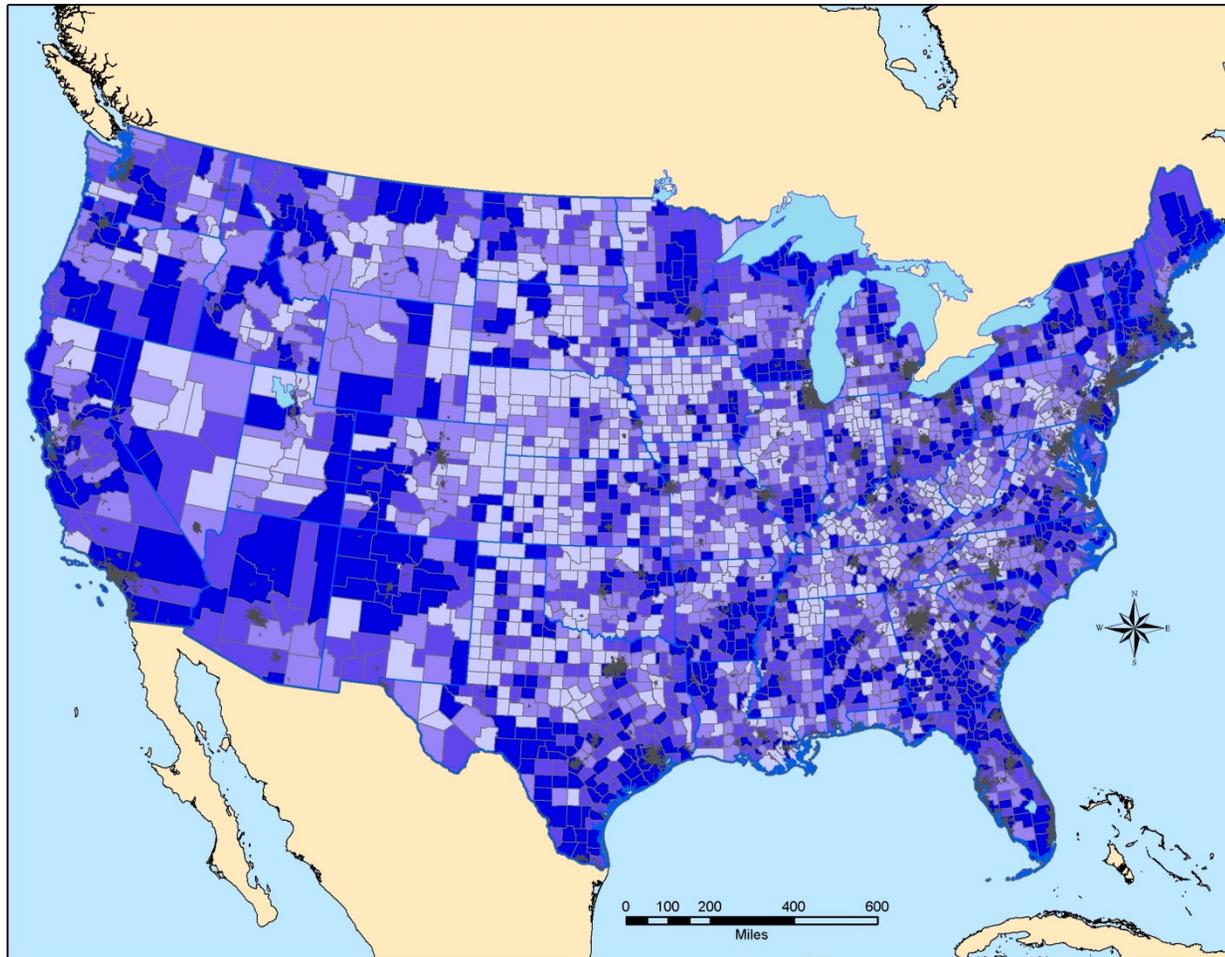


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 12:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
By County FY - 2014
Urban Areas "Shaded"

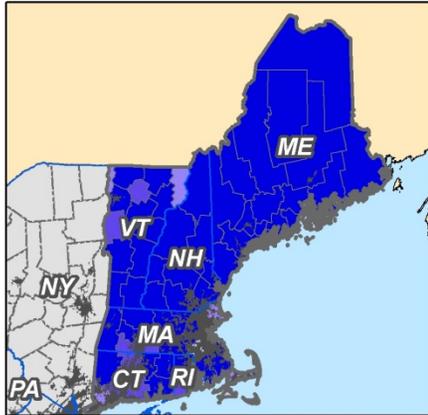


Map 13:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Of All Rural and Highly Rural Patients
By County FY - 2014
Urban Areas "Shaded"

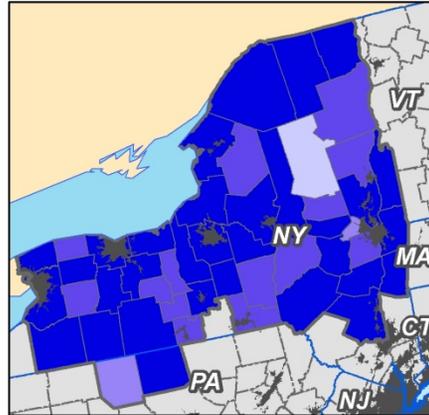


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 8/3/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

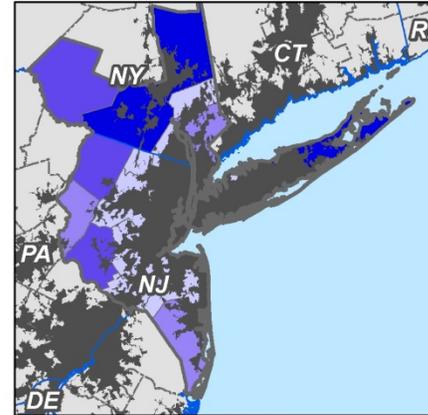
Alcohol Use Disorders



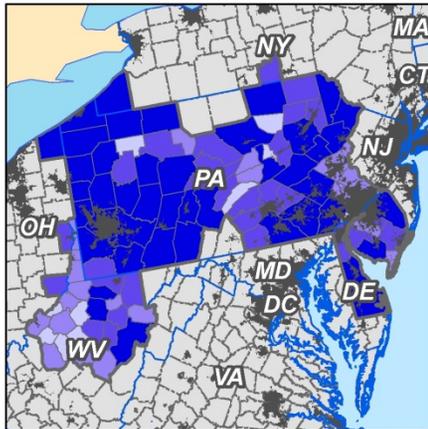
VISN 1



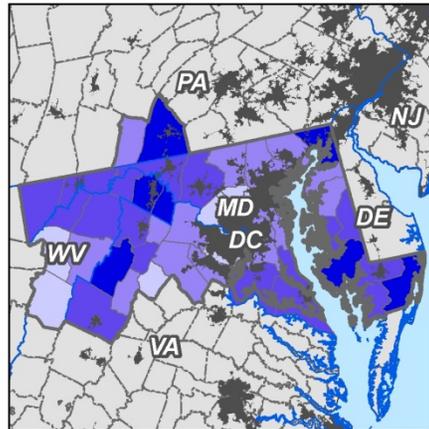
VISN 2



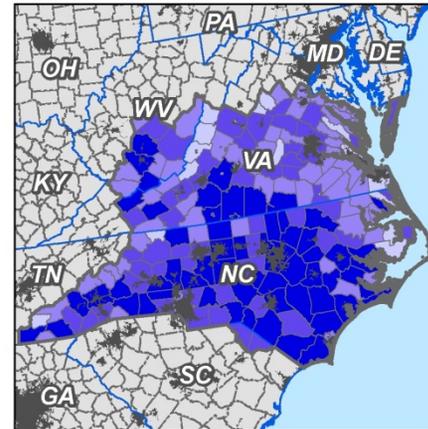
VISN 3



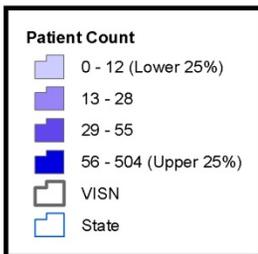
VISN 4



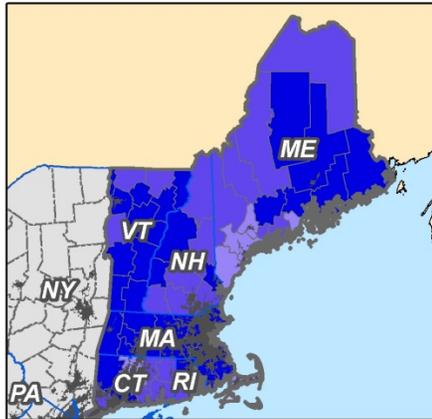
VISN 5



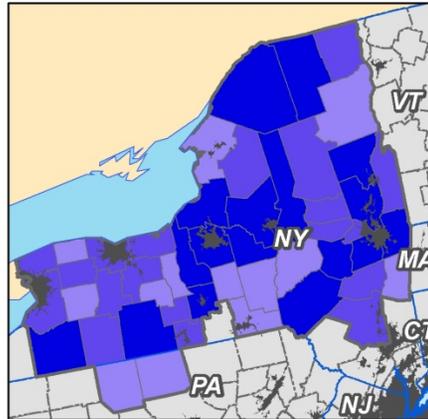
VISN 6



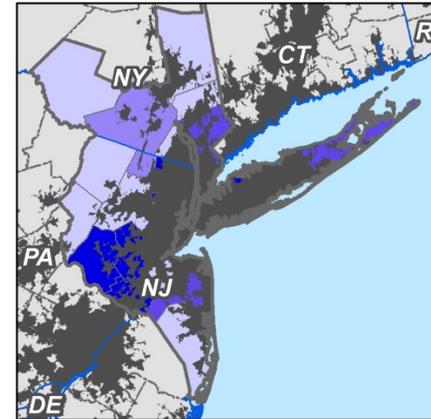
Map 14:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
By County FY - 2014
Urban Areas "Shaded"



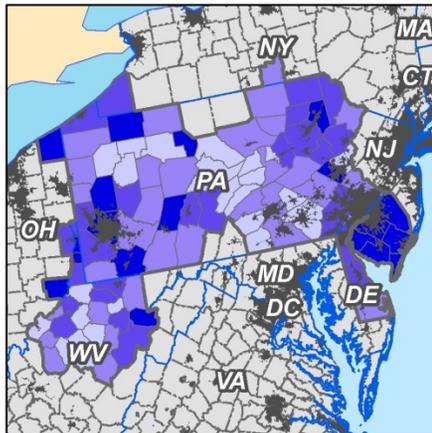
VISN 1



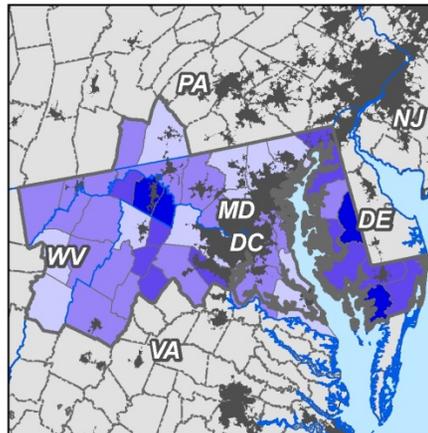
VISN 2



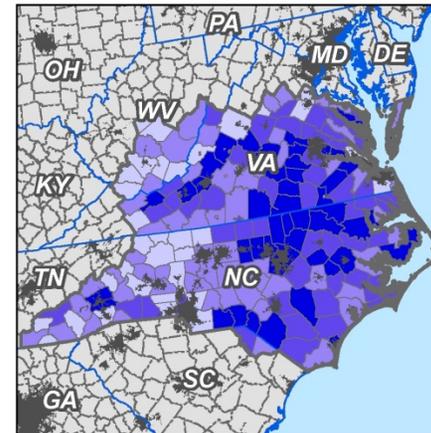
VISN 3



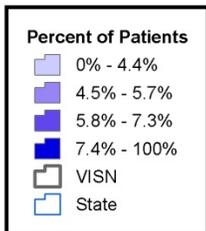
VISN 4



VISN 5



VISN 6



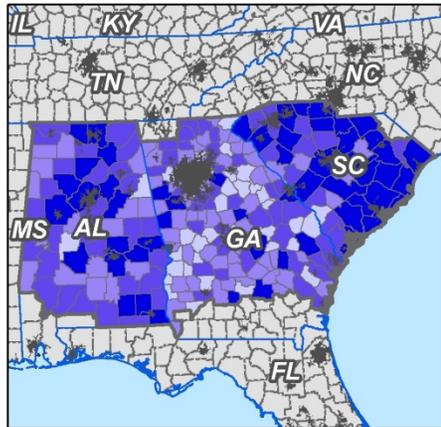
Map 15:

Percent of Rural and Highly Rural VHA Patients with Alcohol Use Disorders of All Rural and Highly Rural Patients By County FY - 2014
Urban Areas "Shaded"

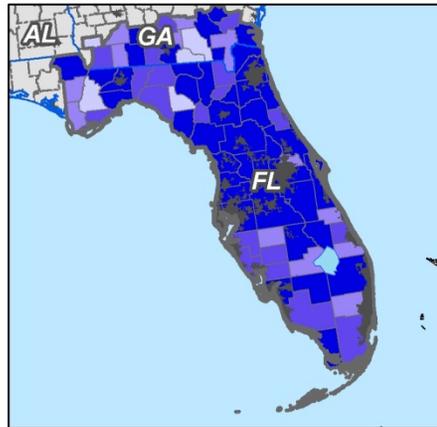


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 8/3/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

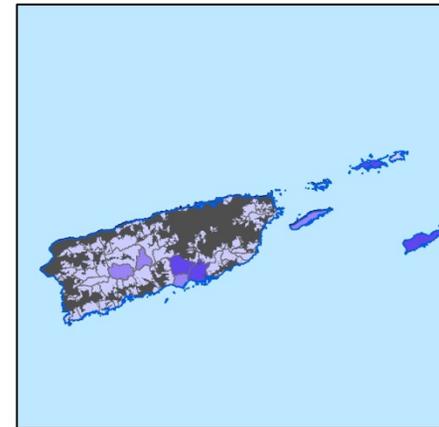
Alcohol Use Disorders



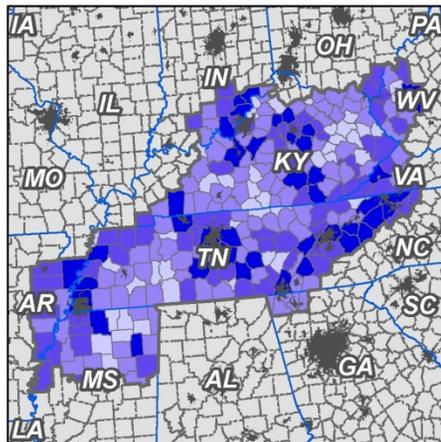
VISN 7



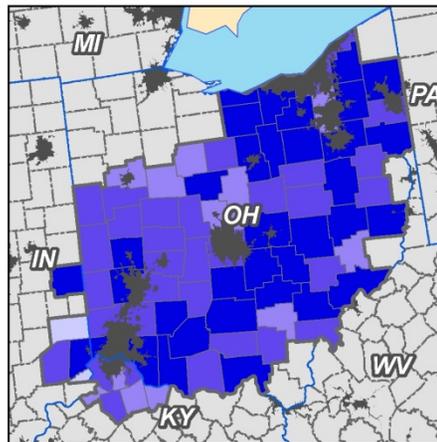
VISN 8



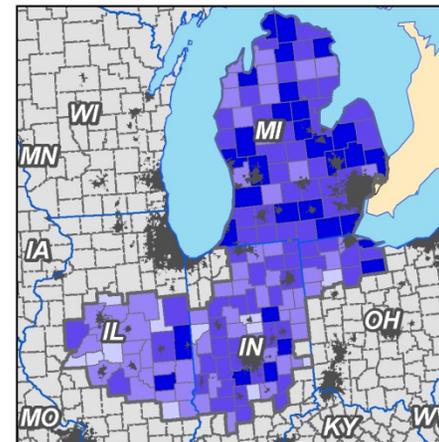
VISN 8 Puerto Rico & Virgin Islands



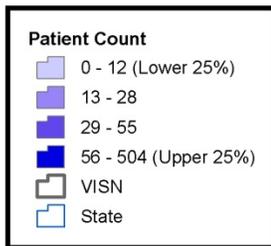
VISN 9



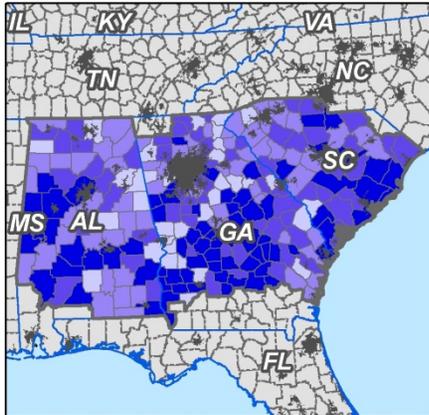
VISN 10



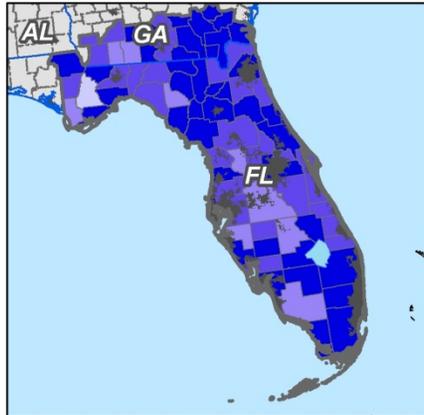
VISN 11



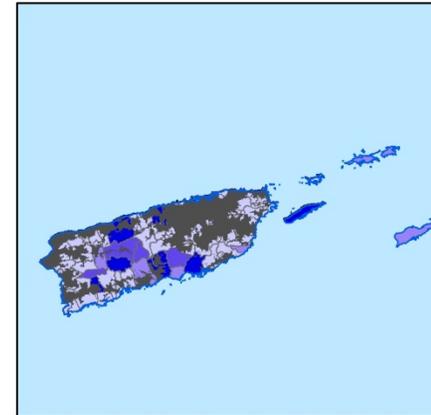
Map 16:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
By County FY - 2014
Urban Areas "Shaded"



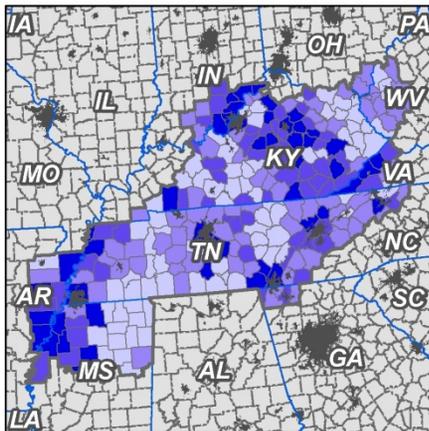
VISN 7



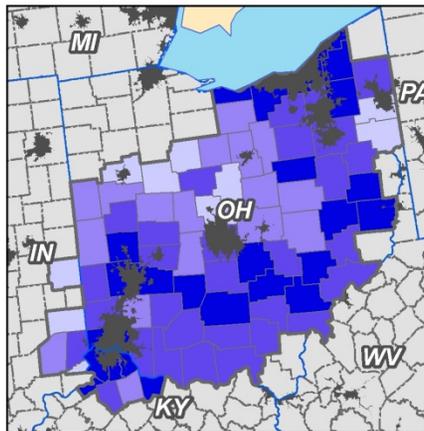
VISN 8



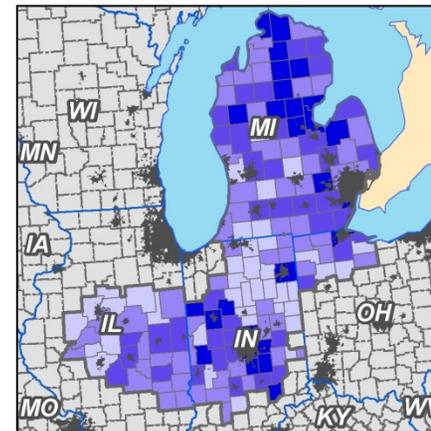
VISN 8 Puerto Rico & Virgin Islands



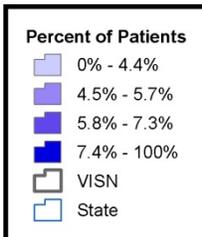
VISN 9



VISN 10



VISN 11



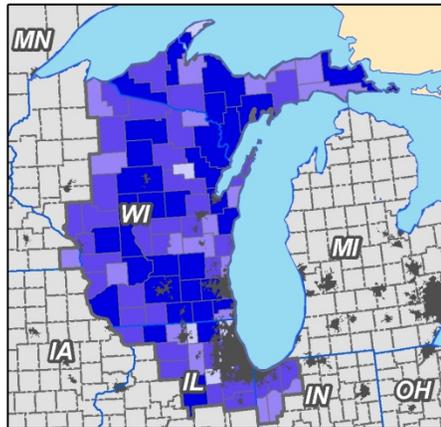
Map 17:

Percent of Rural and Highly Rural VHA Patients with Alcohol Use Disorders of All Rural and Highly Rural Patients By County FY - 2014
Urban Areas "Shaded"

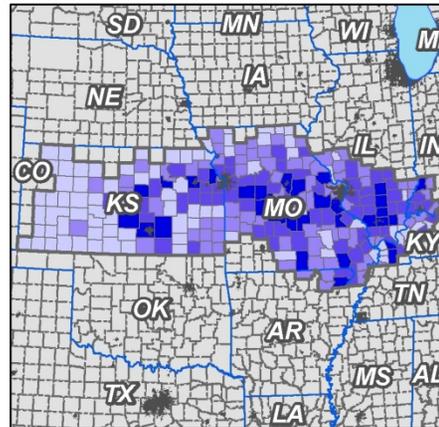


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 8/3/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

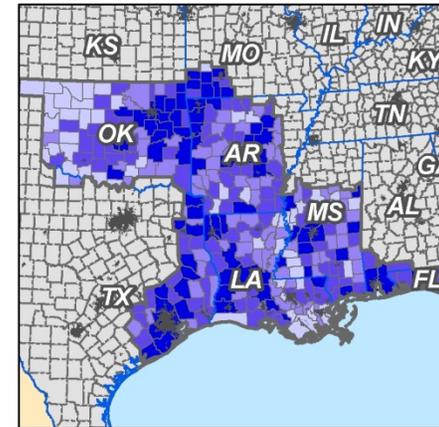
Alcohol Use Disorders



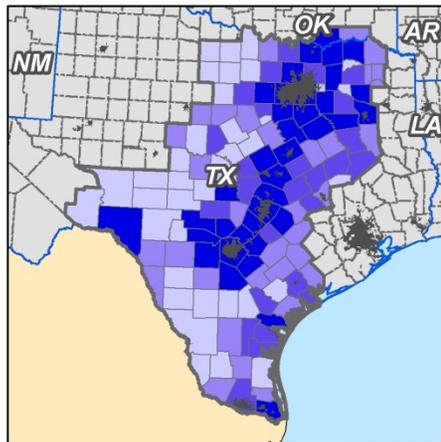
VISN 12



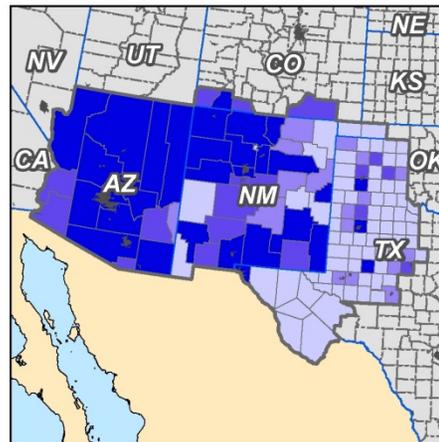
VISN 15



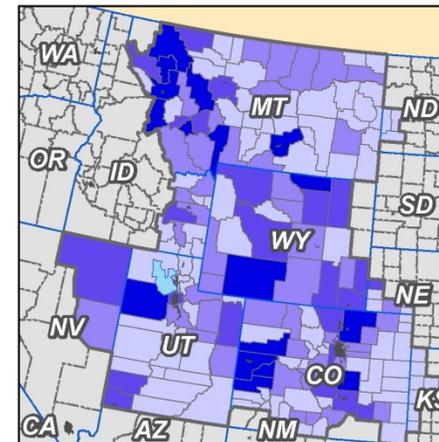
VISN 16



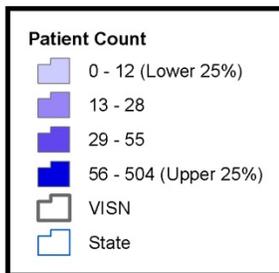
VISN 17



VISN 18

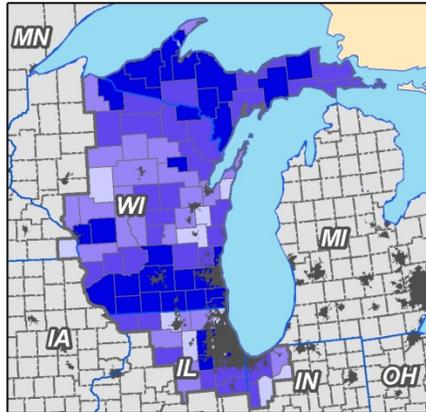


VISN 19

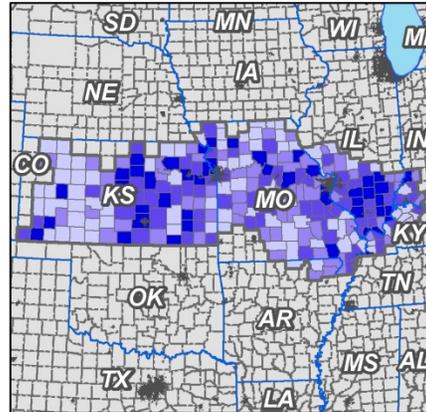


Map 18:

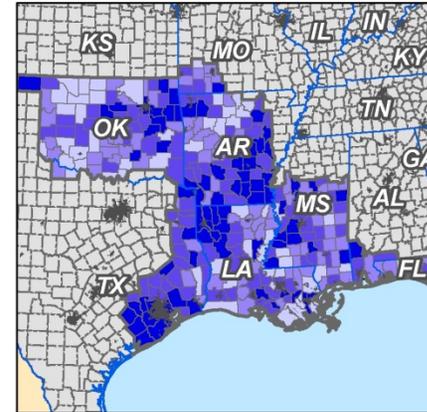
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
By County FY - 2014
Urban Areas "Shaded"



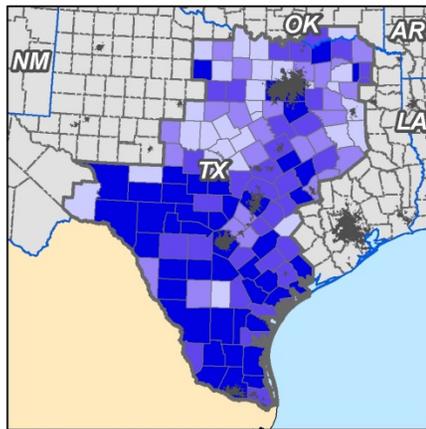
VISN 12



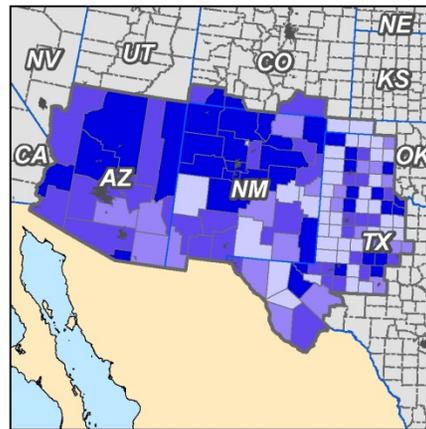
VISN 15



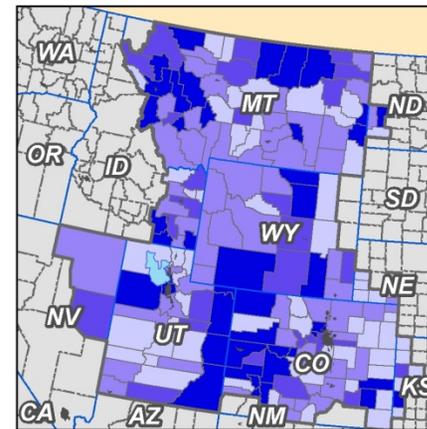
VISN 16



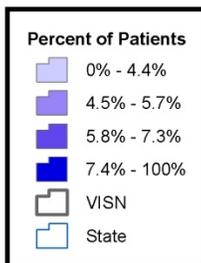
VISN 17



VISN 18



VISN 19



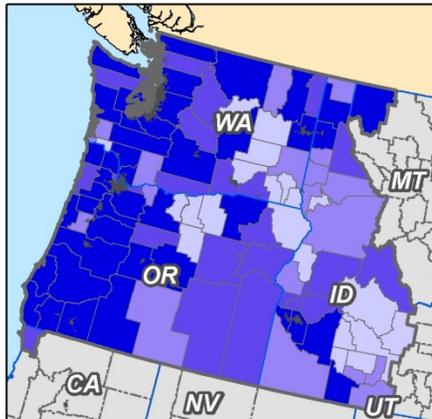
Map 19:

Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Of All Rural and Highly Rural Patients
By County FY - 2014
Urban Areas "Shaded"

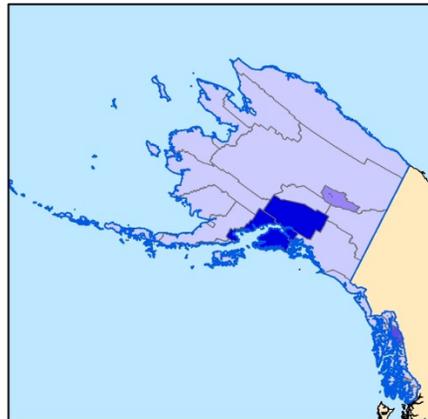


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 8/3/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

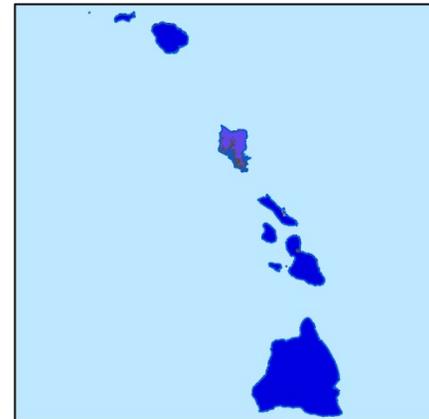
Alcohol Use Disorders



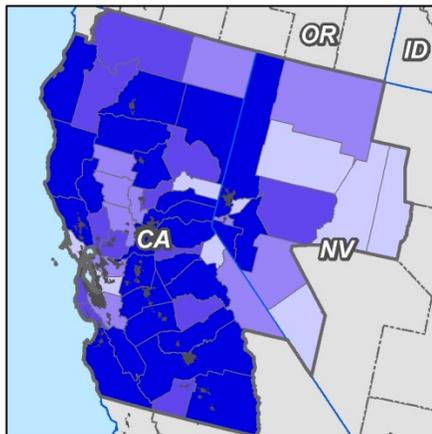
VISN 20



VISN 20- Alaska



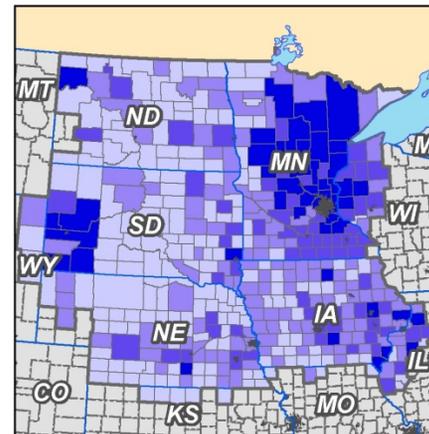
VISN 21- Hawaii



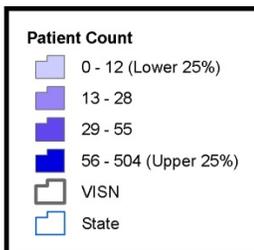
VISN 21



VISN 22

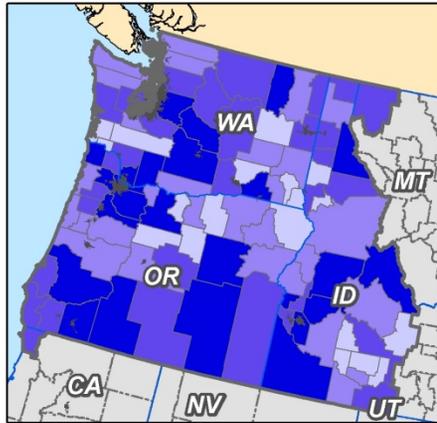


VISN 23

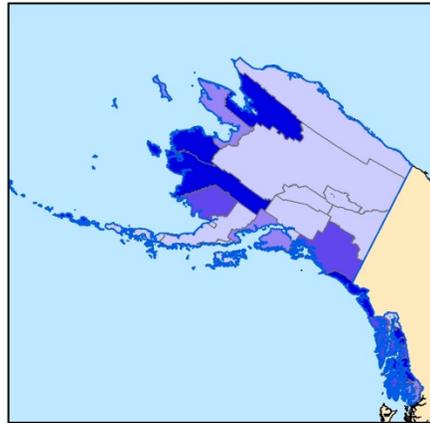


Map 20:

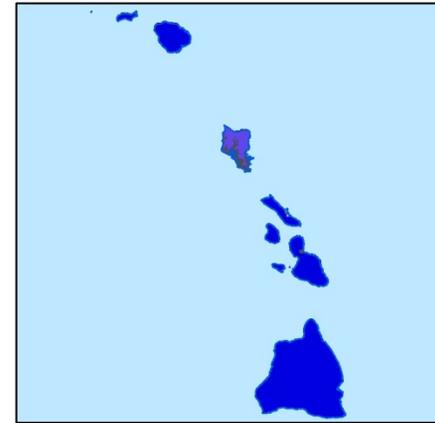
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
By County FY - 2014
Urban Areas "Shaded"



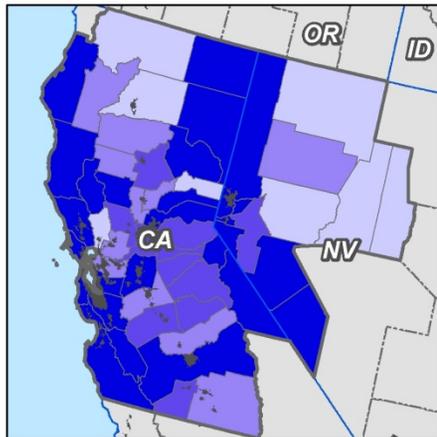
VISN 20



VISN 20- Alaska



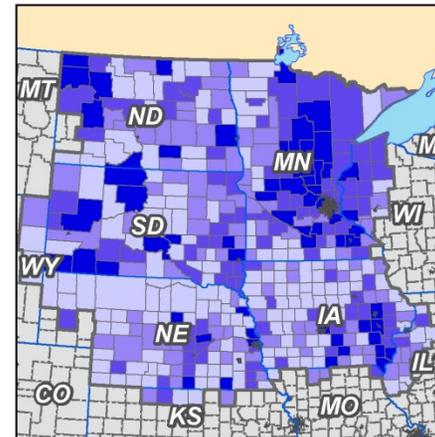
VISN 21- Hawaii



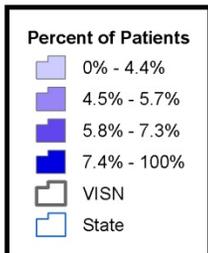
VISN 21



VISN 22



VISN 23



Map 21:

Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Of All Rural and Highly Rural Patients
By County FY - 2014
Urban Areas "Shaded"



Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 8/3/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Section III Highlights: Rural and Highly Rural VHA Subgroups of Patients with Alcohol Use

Disorders

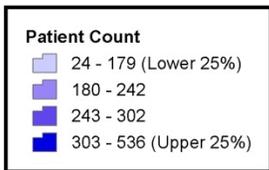
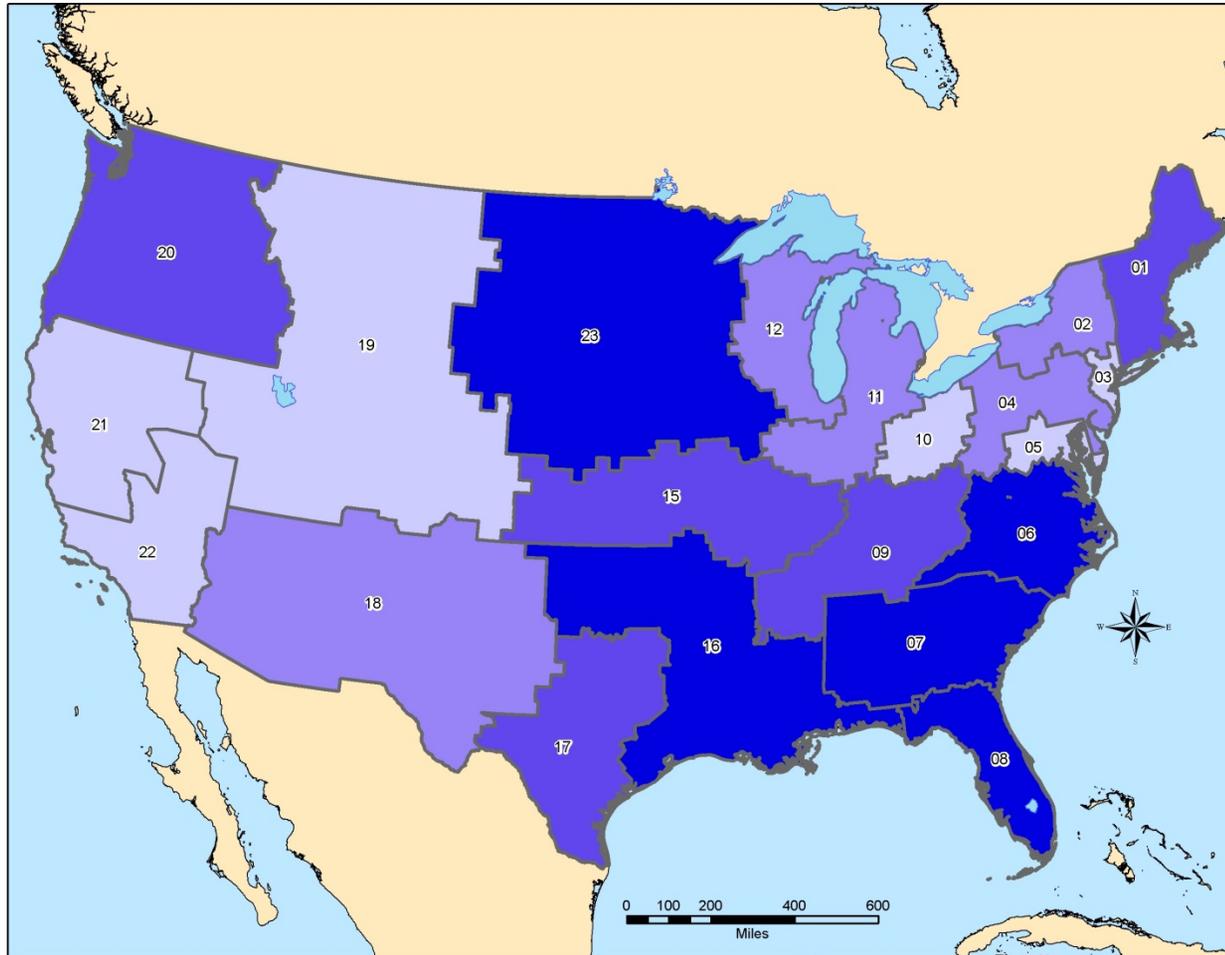
GENDER

Table 3 further illustrates overall prevalence of Alcohol Use Disorders in each network, broken down by gender of patient and the same rurality categories as in Table 2. For the purposes of simplicity, the percent-column adjacent to the rurality columns are a combined percentage of rural and highly rural patients, indicated in red text. Female patients in rural and highly rural areas comprised around 2% or less of the total number of patients with Alcohol Use Disorders in each network. VISN 23 (Midwest) represented the highest prevalence of female rural and highly rural patients with Alcohol Use Disorders at 2.05%. Male patients, as expected, represented a much higher percentage of total patients with Alcohol Use Disorders in each network. In four networks, more than 40% of male patients with Alcohol Use Disorders lived in rural and highly rural areas. Male patients with Alcohol Use Disorders in Midwest Network (VISN 23) comprised the highest prevalence of 49.55% of total patients with Alcohol Use Disorders in that network. New York/New Jersey Network (VISN 3) had the lowest prevalence of rural and highly rural patients with Alcohol Use Disorders – both for males (5.15%) and females (0.25%).

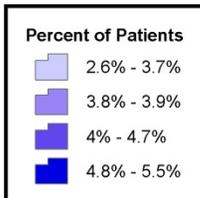
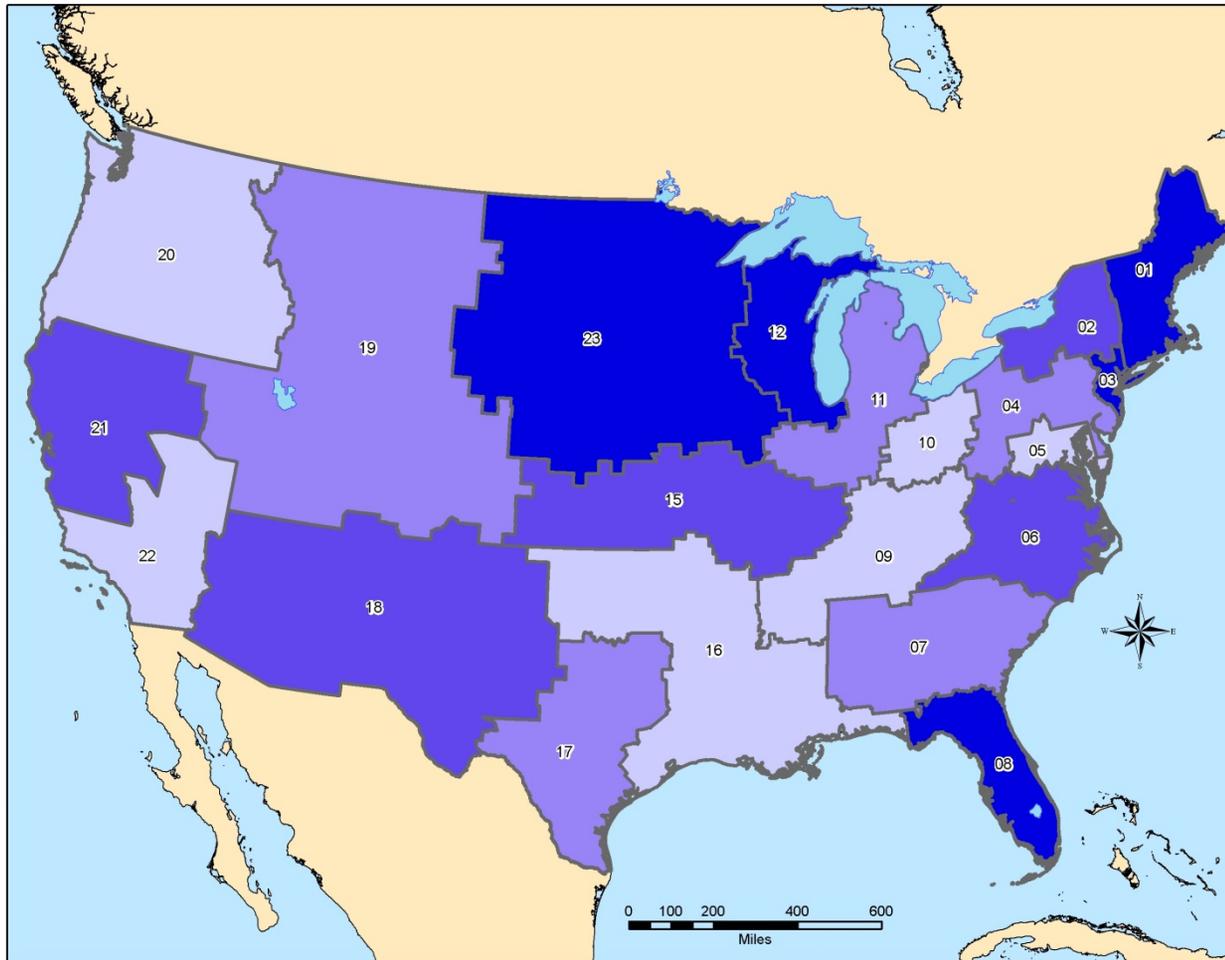
Table 3: National and VISN Numbers and Percentages of VHA Patients with Alcohol Use Disorders, by Rurality and Gender, FY-2014

Prevalence Statistics by Gender and Rurality- Alcohol Use Disorders, FY-2014											
Veterans Integrated Service Network	Total Number of Patients with Alcohol Use Disorders	Female					Male				
		HR	R	%	U	Unk	HR	R	%	U	Unk
New England (01)	20,438	*	260	1.28	595	*	61	5,792	28.64	13,732	*
Upstate NY (02)	10,258	*	198	1.93	278	*	5	4,441	43.34	5,343	*
NY/NJ (03)	9,543	*	24	0.25	349	*	*	489	5.15	8,678	*
VISN 04 (04)	21,968	*	232	1.06	697	*	4	6,361	28.97	14,671	4
Capitol (05)	8,784	*	51	0.58	440	*	*	1,535	17.47	6,758	*
Mid-Atlantic (06)	22,697	*	400	1.77	977	*	9	8,665	38.22	12,645	6
Southeast (07)	27,644	*	415	1.50	1,258	*	*	9,599	34.72	16,371	5
Sunshine (08)	39,684	*	346	0.87	1,657	*	3	6,651	16.77	31,020	7
Mid South (09)	18,633	*	301	1.62	517	*	3	8,386	45.02	9,432	*
Ohio (10)	18,649	*	131	0.70	639	*	*	4,956	26.58	12,923	*
Vets in Partnership (11)	18,879	*	212	1.12	544	*	6	6,236	33.06	11,877	5
Great Lakes (12)	18,847	*	200	1.07	663	*	45	5,015	26.85	12,917	10
Heartland (15)	16,138	*	287	1.79	359	*	89	7,353	46.11	8,046	3
South Central (16)	34,392	*	534	1.56	1,098	*	26	13,494	39.31	19,235	9
Heart of Texas (17)	20,027	6	244	1.25	937	*	104	5,232	26.64	13,498	6
Southwest (18)	17,900	27	215	1.35	654	*	754	4,375	28.65	11,854	20
Rocky Mtn. (19)	12,586	51	128	1.42	433	*	1,181	2,969	32.97	7,819	5
Northwest (20)	20,181	29	227	1.27	724	*	820	5,756	32.59	12,621	5
Sierra Pacific (21)	18,048	4	159	0.90	577	5	181	4,335	25.02	12,521	266
Desert Pacific (22)	21,388	3	70	0.34	943	*	179	1,526	7.97	18,665	3
Midwest (23)	20,946	41	389	2.05	474	*	729	9,649	49.55	9,672	*
Grand Total	417,630	171	5,023	1.24	14,813	12	4,202	122,815	30.41	270,298	364

Alcohol Use Disorders



Map 22:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Female
By VISN FY - 2014

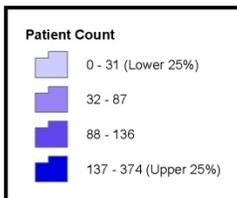
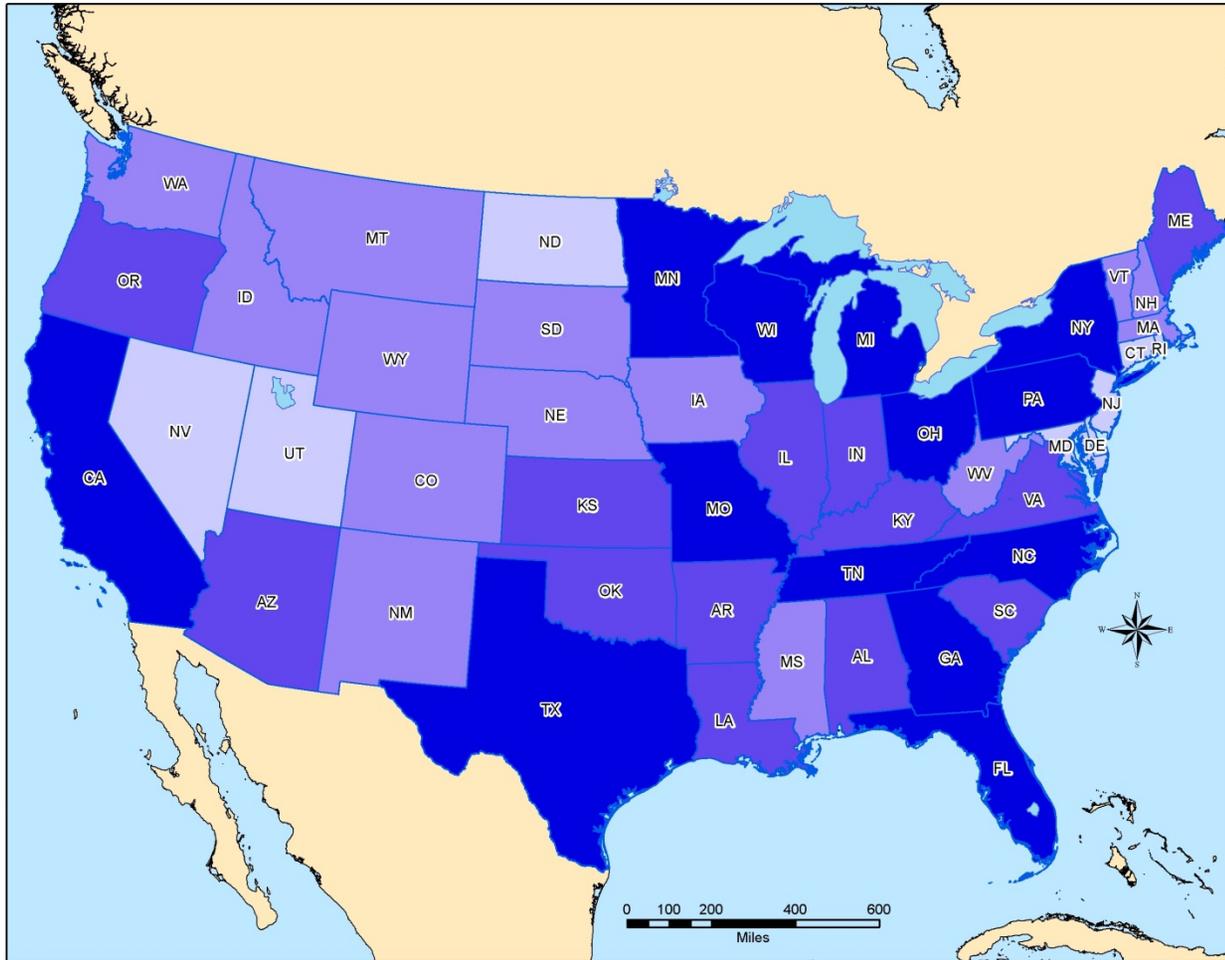


Map 23:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Female
Of All Rural and Highly Rural VHA Patients
Female
By VISN FY - 2014

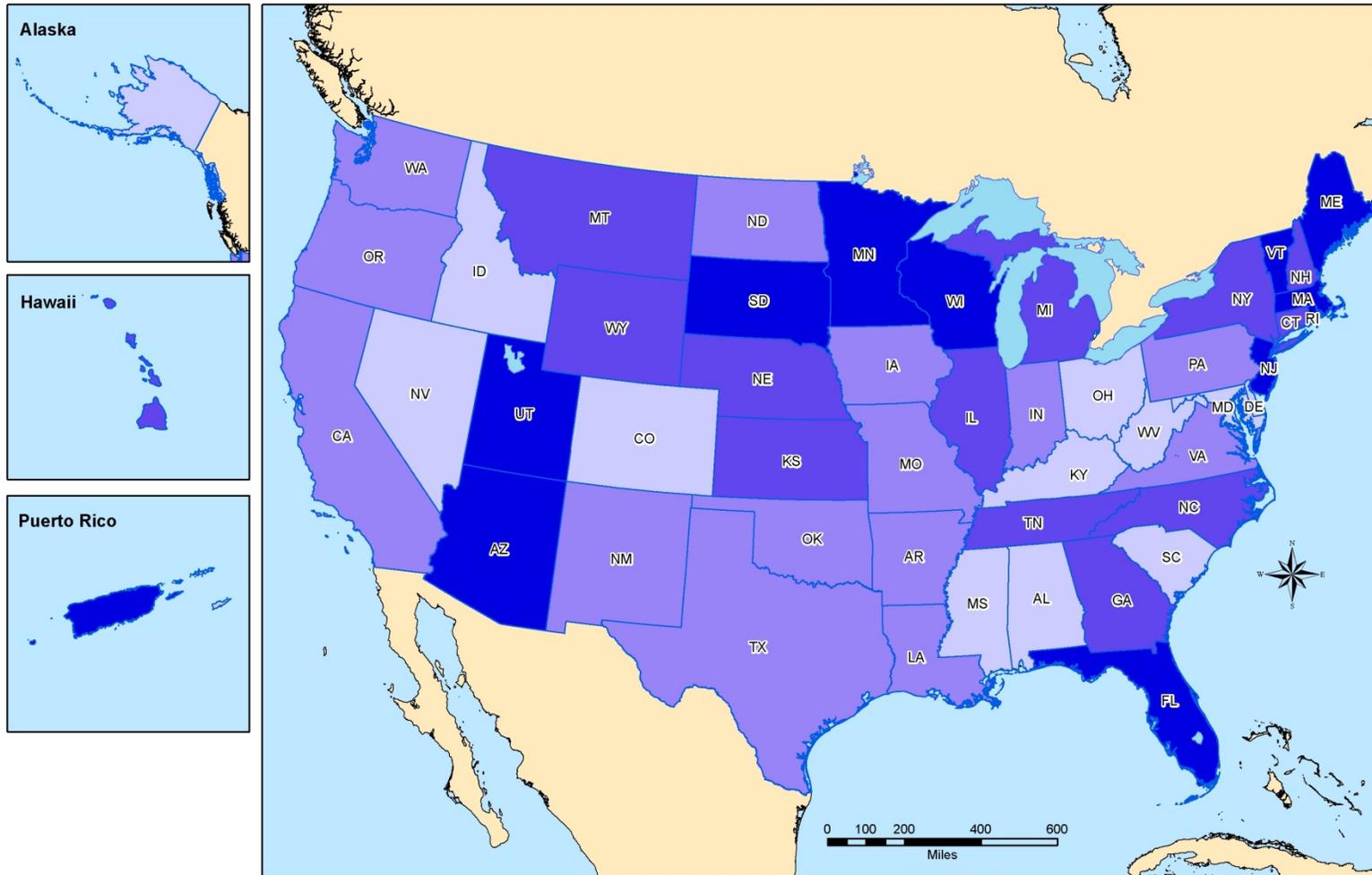


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 24:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Female
By State FY - 2014



Map 25:

Percent of Rural and Highly Rural VHA Patients with Alcohol Use Disorders, Female
Of All Rural and Highly Rural Patients Female
By State FY - 2014



Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

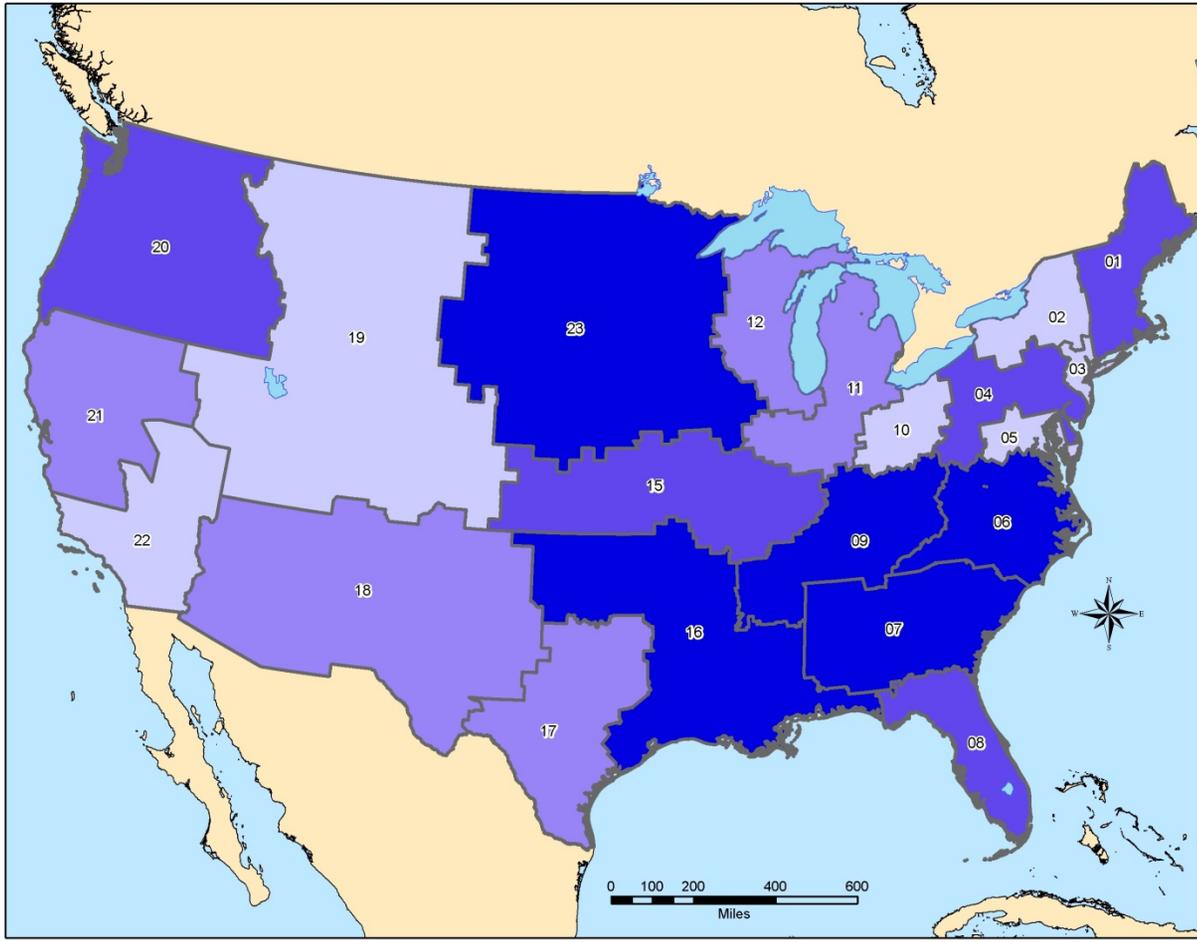
AGE GROUP

Examining the age groups of rural and highly rural patients is also of particular interest to the policy and planning community within the VHA. In Table 4, only rural and highly rural categories were included, since that is the focus, and urban and unknown categories were omitted. For simplicity's sake, the percent-column adjacent to the rurality columns are a combined percentage of rural and highly rural patients, indicated in red text. The 55-64 age group, at the National level, had the highest prevalence of patients with Alcohol Use Disorders in rural and highly rural areas at 9.88%. The 65-74 age group of this same cohort ranked closely behind Nationally at 9.18%. Both age groups showed significant prevalence in rural and highly rural areas at the network level. The Midwest Network (VISN 23), for example, ranked highest in both age groups: 3,054 patients aged 55-64 (15.79% of the total number of patients with Alcohol Use Disorders in that network), and 3,008 patients aged 65-74 (15.44% of the total number of patients with Alcohol Use Disorders in that network). Ten of the 21 networks had rural and highly rural patients in the 55-64 age bracket representing more than 10% of their total patients with Alcohol Use Disorders, and similarly, seven of the 21 networks for patients in the 65-74 age bracket.

Table 4: National and VISN Numbers and Percentages of VHA Patients with Alcohol Use Disorders, by Rurality and Age Group, FY-2014

Prevalence Statistics by Age Group and Rurality- Alcohol Use Disorders, FY-2014																
Veterans Integrated Service Network	Total Number of Patients with Alcohol Use Disorders	<45			45-54			55-64			65-74			75+		
		HR	R	%	HR	R	%	HR	R	%	HR	R	%	HR	R	%
New England (01)	20,438	7	1,154	5.68	8	970	4.79	21	1,680	8.32	20	1,874	9.27	6	374	1.86
Upstate NY (02)	10,258	*	940	9.17	*	795	7.75	*	1,409	13.76	*	1,253	12.22	*	240	2.35
NY/NJ (03)	9,543	*	107	1.13	*	80	0.85	*	138	1.45	*	162	1.70	*	26	0.27
Stars and Stripes (04)	21,968	*	1,356	6.17	*	1,092	4.98	*	1,837	8.36	*	1,942	8.84	*	365	1.67
Capitol (05)	8,784	*	282	3.21	*	272	3.10	*	481	5.48	*	445	5.07	*	104	1.18
Mid-Atlantic (06)	22,697	*	1,638	7.23	*	1,577	6.96	*	3,095	13.64	3	2,438	10.75	*	316	1.40
Southeast (07)	27,644	*	1,905	6.89	*	1,914	6.93	*	3,396	12.28	*	2,502	9.05	*	289	1.05
Sunshine (08)	39,684	*	972	2.45	*	1,128	2.84	*	2,330	5.87	*	2,142	5.40	*	421	1.06
Mid South (09)	18,633	*	1,793	9.63	*	1,528	8.20	*	2,706	14.53	*	2,344	12.59	*	311	1.67
Ohio (10)	18,649	*	948	5.08	*	845	4.53	*	1,645	8.83	*	1,443	7.74	*	201	1.08
Vets in Partnership (11)	18,879	*	1,359	7.20	*	1,071	5.68	*	1,903	10.08	3	1,870	9.92	*	250	1.32
Great Lakes (12)	18,847	7	1,045	5.58	8	790	4.23	13	1,547	8.28	19	1,538	8.26	*	297	1.58
Heartland (15)	16,138	14	1,544	9.65	9	1,242	7.75	30	2,369	14.87	32	2,167	13.63	6	316	2.00
South Central (16)	34,392	5	2,857	8.32	4	2,211	6.44	7	4,685	13.64	12	3,739	10.91	*	526	1.53
Heart of Texas (17)	20,027	21	1,155	5.87	20	778	3.98	31	1,748	8.88	31	1,593	8.11	7	203	1.05
Southwest (18)	17,900	119	898	5.68	143	659	4.48	229	1,362	8.89	243	1,410	9.23	47	261	1.72
Rocky Mtn. (19)	12,586	206	673	6.98	162	470	5.02	373	969	10.66	410	840	9.93	80	145	1.79
Northwest (20)	20,181	127	1,028	5.72	116	855	4.81	265	1,815	10.31	293	1,978	11.25	48	308	1.76
Sierra Pacific (21)	18,048	34	714	4.14	19	522	3.00	54	1,299	7.50	67	1,689	9.73	11	267	1.54
Desert Pacific (22)	21,388	16	314	1.54	21	195	1.01	48	481	2.47	81	512	2.77	16	92	0.50
Midwest (23)	20,946	128	1,889	9.63	123	1,485	7.68	253	3,054	15.79	226	3,008	15.44	40	597	3.04
Grand Total	417,630	690	24,571	6.05	642	20,479	5.06	1,332	39,949	9.88	1,443	36,889	9.18	265	5,909	1.48

Alcohol Use Disorders

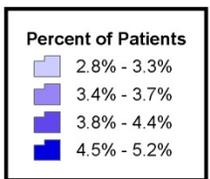
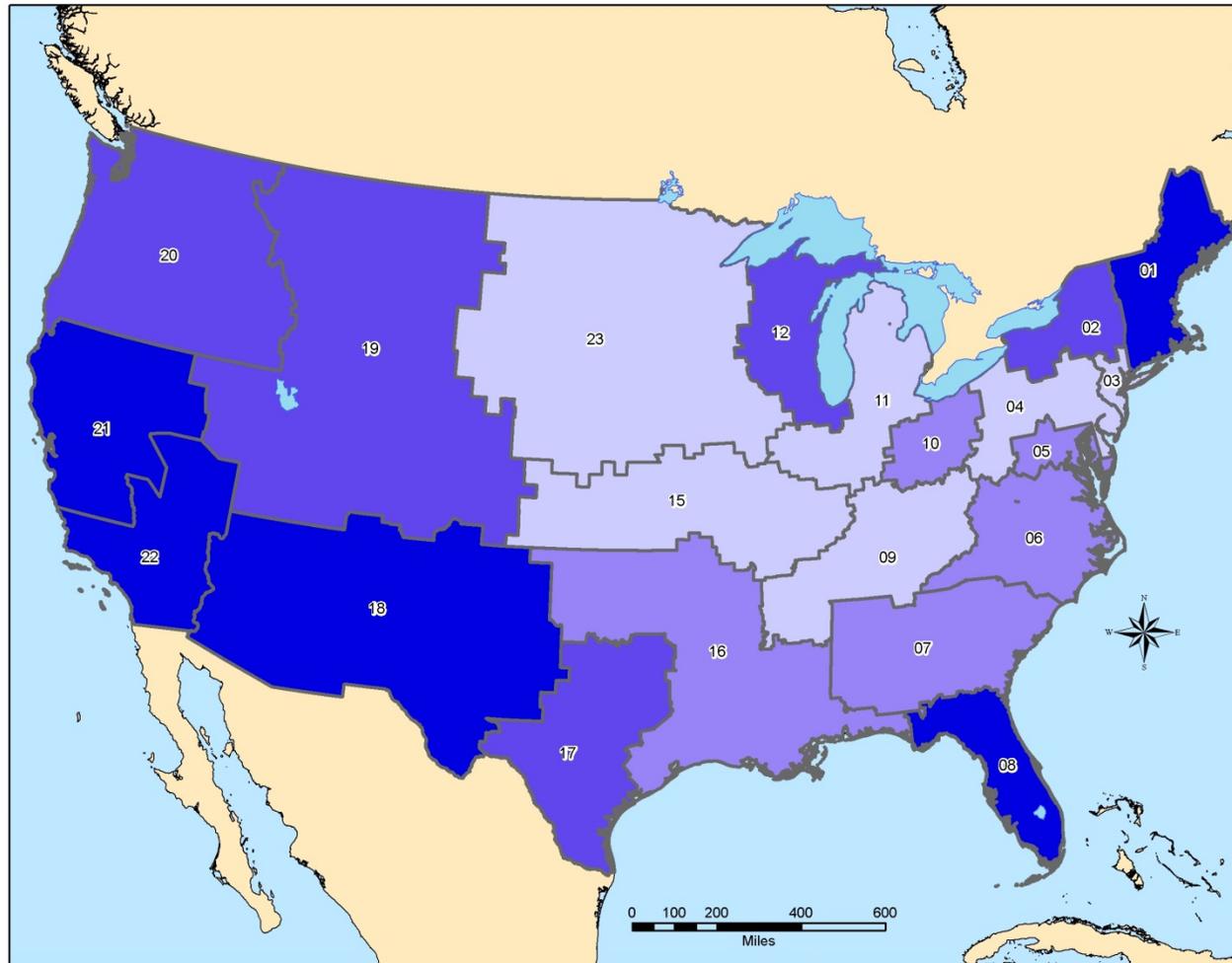


Map 26:

Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Age 65 and Over
By VISN FY - 2014

Patient Count

188 - 1,644 (Lower 25%)
1,645 - 2,123
2,124 - 2,627
2,628 - 4,277 (Upper 25%)

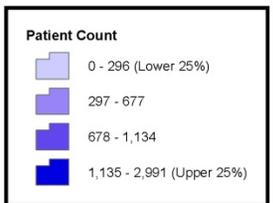
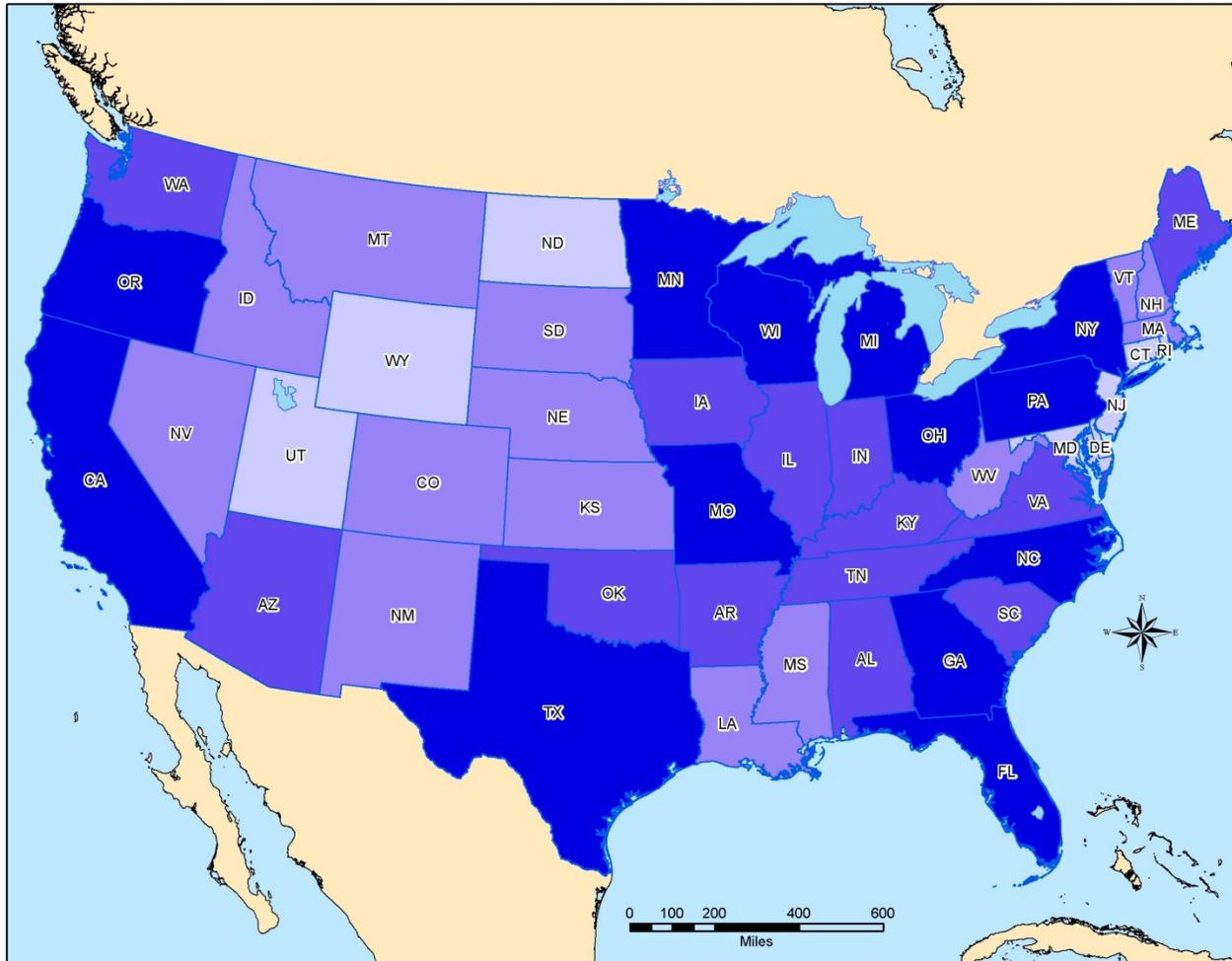


Map 27:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Age 65 and Over
Of All Rural and Highly Rural VHA Patients Age 65 and Over
By VISN FY - 2014

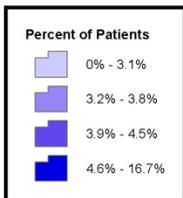
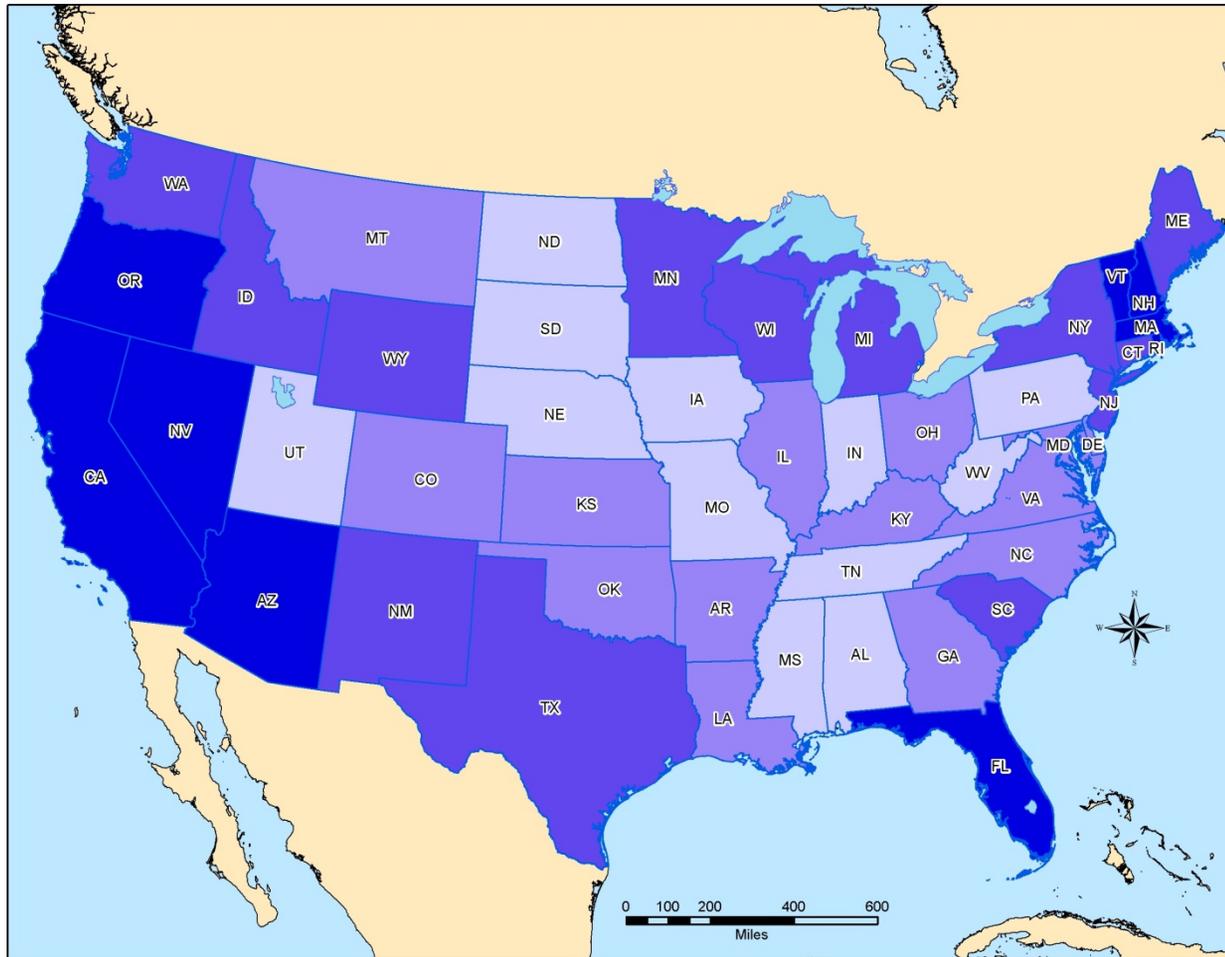
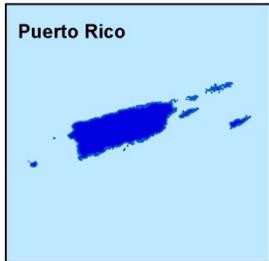
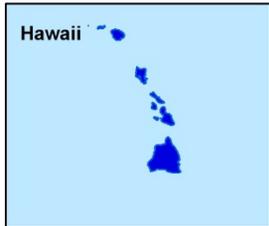


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 28:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Age 65 and Over
By State FY - 2014

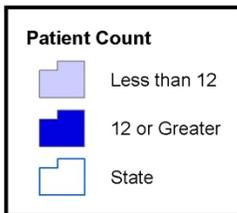
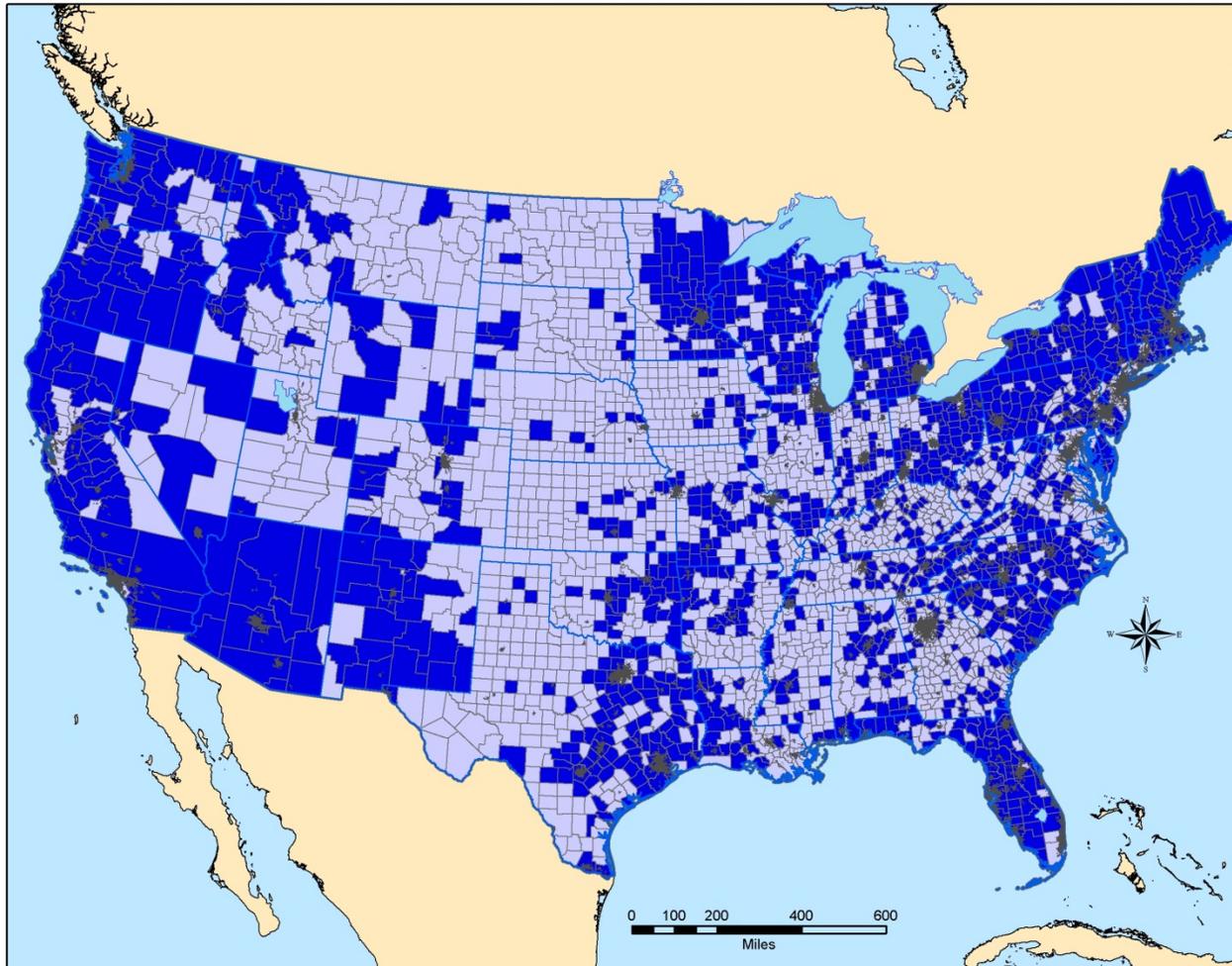


Map 29:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Age 65 and Over
Of All Rural and Highly Rural Patients Age 65 and Over
By State FY - 2014

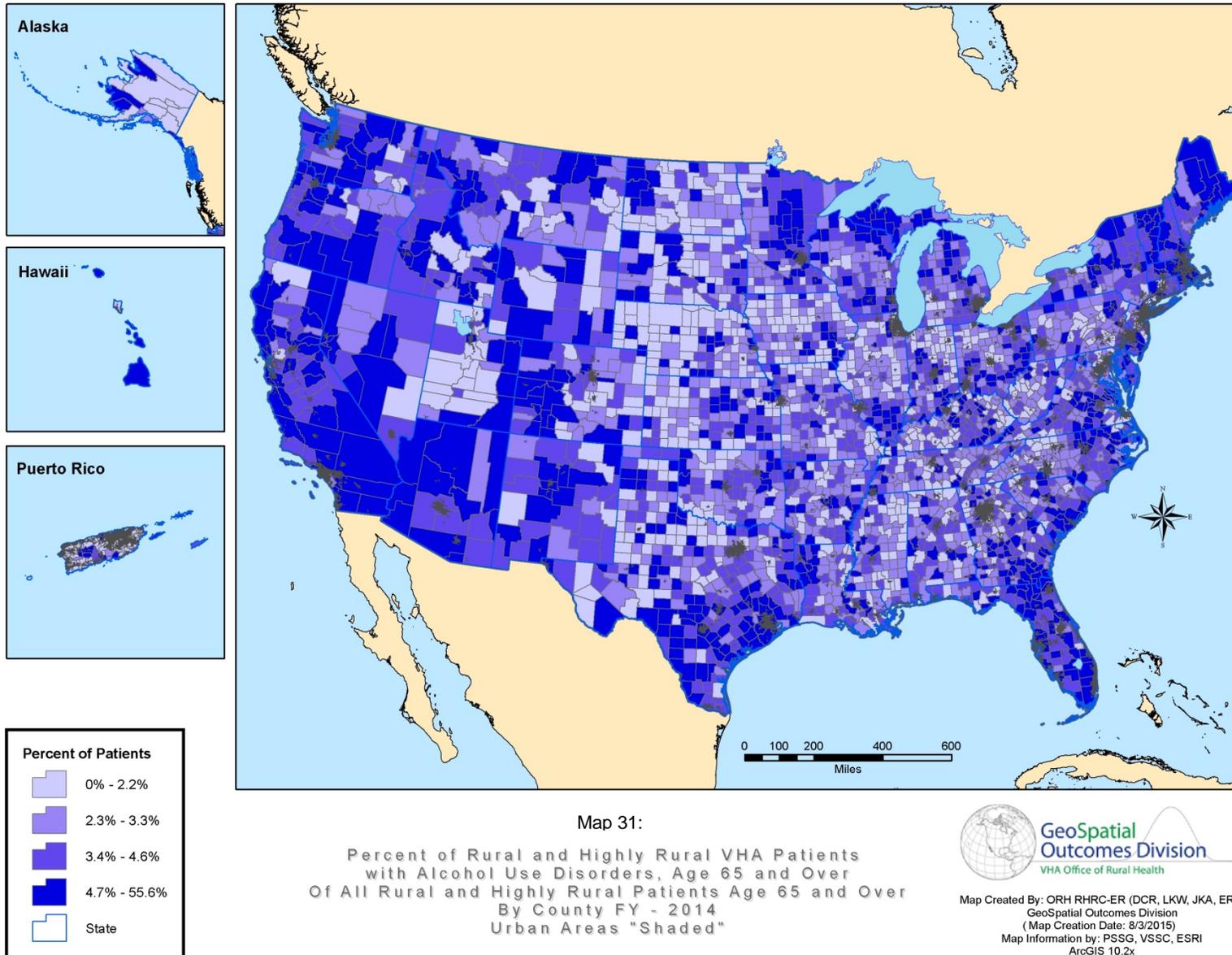
GeoSpatial Outcomes Division
VHA Office of Rural Health

Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 30:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Age 65 and Over
By County FY - 2014
Urban Areas "Shaded"



SERVICE CONNECTION AND LOW INCOME ENROLLMENT PRIORITY GROUPS

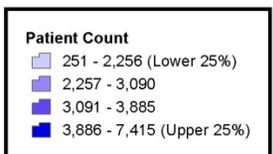
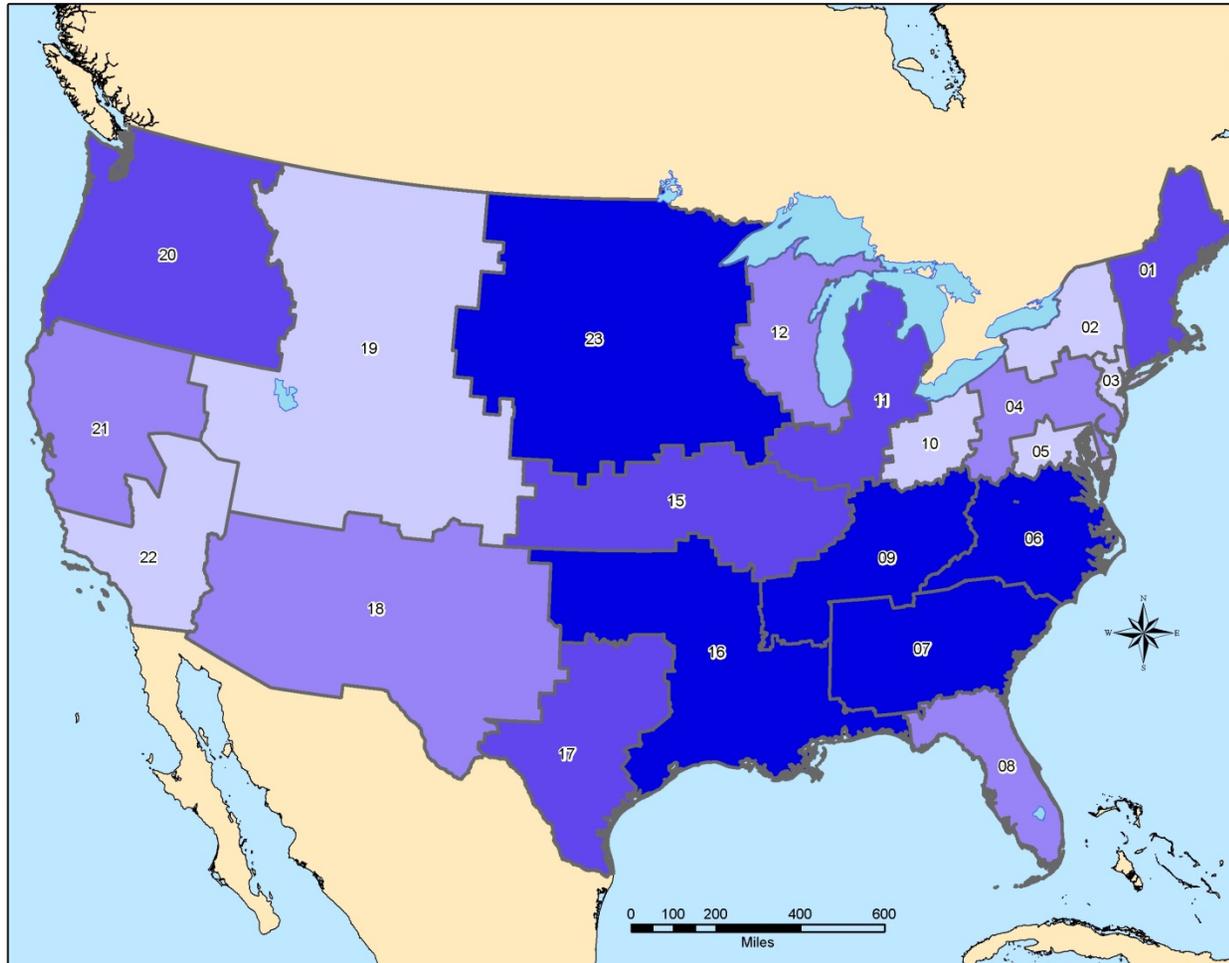
Table 5 examines selected enrollment priority groups and what percentage of those patients resided in rural and highly rural areas. At the National level, rural and highly rural patients with Alcohol Use Disorders with a service-connected disability represented 16.31% of the total number of Veteran patients with Alcohol Use Disorders in the VHA. At the VISN level, South Central Network (VISN 16) ranked the highest with 7,415 rural and highly rural service-connected patients with Alcohol Use Disorders . Proportionally speaking, however, Midwest Network (VISN 23) ranked the highest at 30.5%, in terms of percentage of rural and highly rural service-connected patients with Alcohol Use Disorders to all patients with Alcohol Use Disorders.

Patients with Alcohol Use Disorders residing in rural and highly rural areas who were Priority Group 5 represented 9.10% of the total patient population with Alcohol Use Disorders across the United States. The Heartland Network (VISN 15) had the highest proportion at 14.39%.

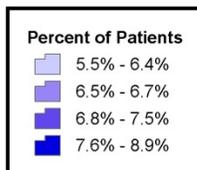
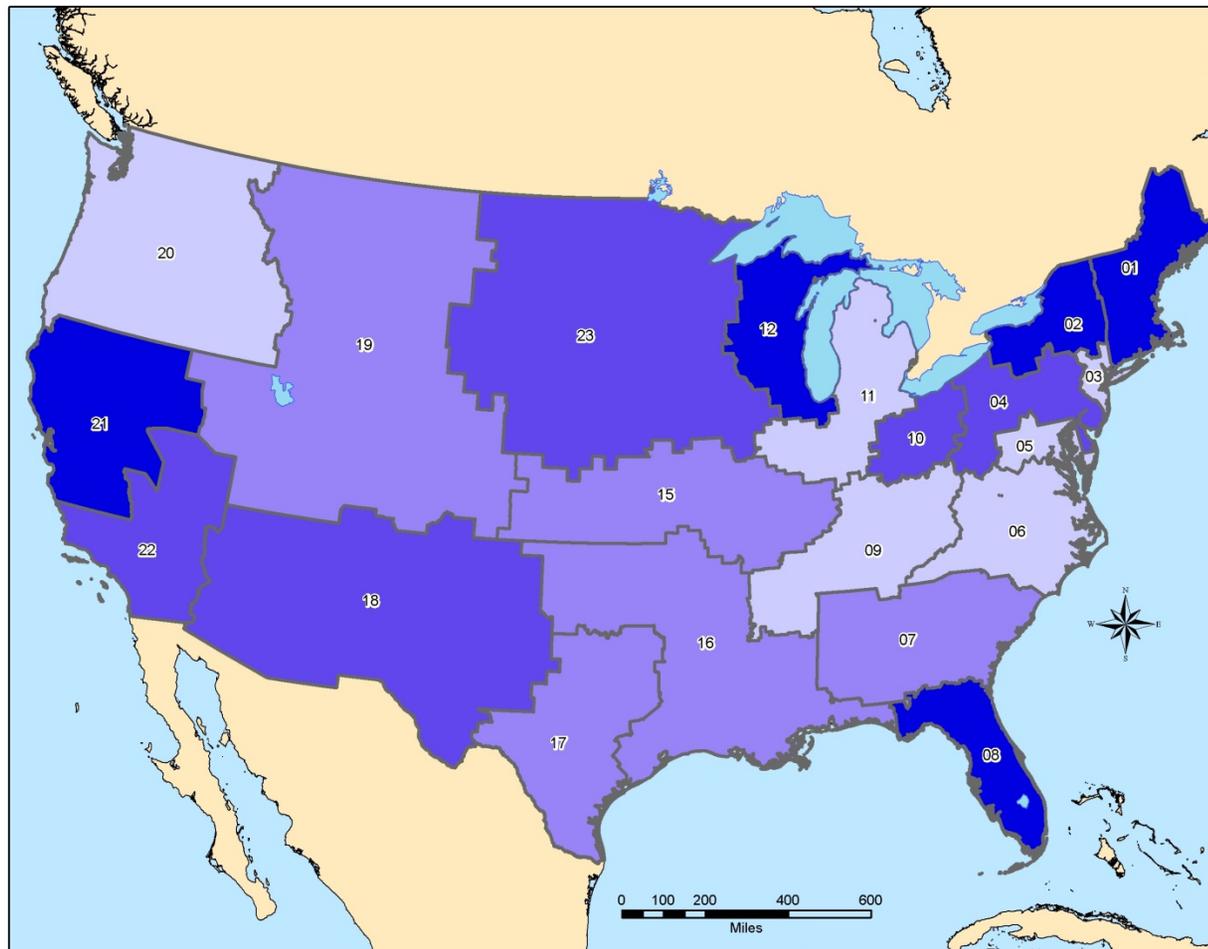
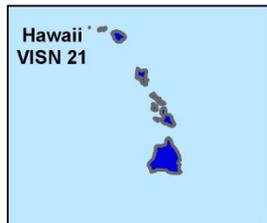
Table 5: National and VISN Numbers and Percentages of VHA Patients with Alcohol Use Disorders, by Rurality and Enrollment Priority Group, FY-2014

Prevalence Statistics by Service Connection Type and Low Income by Rurality- Alcohol Use Disorders, FY-2014											
Veterans Integrated Service Network	Total Number of Patients with Alcohol Use Disorders	Service Connected Priority 1-3					Low Income				
		HR	R	%	U	Unk	HR	R	%	U	Unk
New England (01)	20,438	40	3,246	16.08	7,214	*	15	1,404	6.94	3,673	*
Upstate NY (02)	10,258	*	2,254	21.97	2,462	*	*	1,377	13.44	1,898	*
NY/NJ (03)	9,543	*	250	2.63	3,950	*	*	155	1.63	3,162	*
Stars and Stripes (04)	21,968	*	3,088	14.07	6,946	*	*	1,937	8.82	5,118	*
Capitol (05)	8,784	*	686	7.81	2,944	*	*	529	6.02	2,681	*
Mid-Atlantic (06)	22,697	3	4,774	21.05	6,969	*	5	2,703	11.93	4,325	*
Southeast (07)	27,644	*	5,596	20.25	9,414	*	*	2,933	10.61	5,407	*
Sunshine (08)	39,684	*	3,056	7.71	14,996	*	*	2,446	6.17	10,849	*
Mid South (09)	18,633	*	4,576	24.56	4,725	*	*	2,516	13.51	3,176	*
Ohio (10)	18,649	*	2,195	11.78	5,137	*	*	1,798	9.64	5,495	*
Vets in Partnership (11)	18,879	4	3,150	16.71	5,284	*	*	2,006	10.64	4,659	*
Great Lakes (12)	18,847	26	2,523	13.52	5,610	*	13	1,383	7.41	4,472	*
Heartland (15)	16,138	31	3,854	24.07	3,509	*	31	2,291	14.39	3,133	*
South Central (16)	34,392	8	7,407	21.56	9,924	*	11	3,992	11.64	6,322	3
Heart of Texas (17)	20,027	67	3,052	15.57	8,201	*	24	1,491	7.56	3,940	4
Southwest (18)	17,900	440	2,297	15.29	6,191	4	211	1,405	9.03	3,974	7
Rocky Mtn. (19)	12,586	561	1,620	17.33	4,178	*	366	826	9.47	2,562	*
Northwest (20)	20,181	418	3,264	18.24	6,475	*	281	1,593	9.29	4,223	*
Sierra Pacific (21)	18,048	93	2,257	13.02	6,246	172	63	1,320	7.66	4,343	55
Desert Pacific (22)	21,388	88	785	4.08	9,758	*	52	496	2.56	6,071	*
Midwest (23)	20,946	367	6,022	30.50	5,537	*	245	2,096	11.18	2,739	*
Grand Total	417,630	2,156	65,952	16.31	135,670	178	1,325	36,697	9.10	92,222	71

Alcohol Use Disorders



Map 32:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Priority 1-3
By VISN FY - 2014

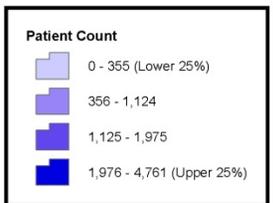
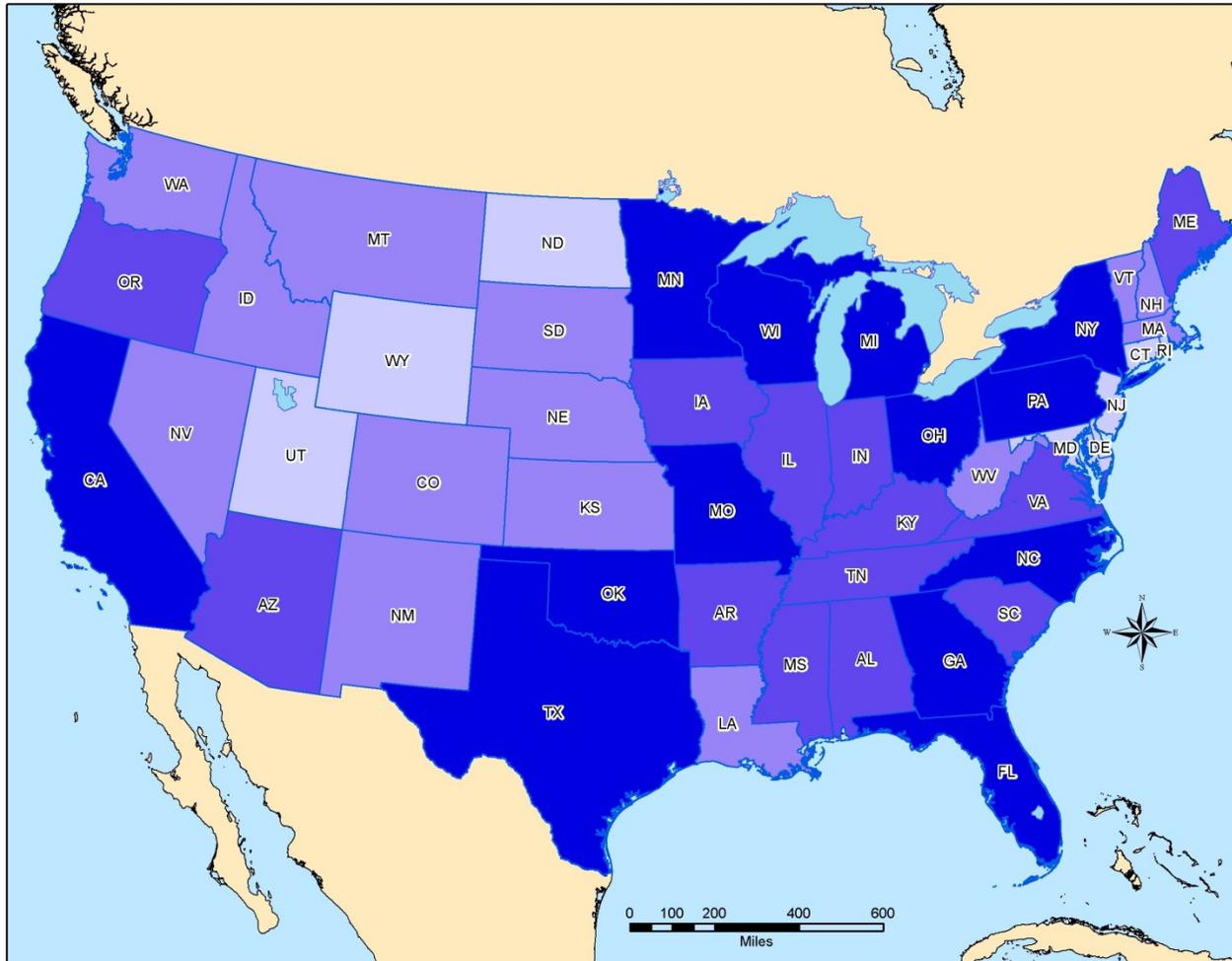


Map 33:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Priority 1-3
Of All Rural and Highly Rural VHA Patients Priority 1-3
By VISN FY - 2014

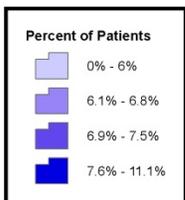
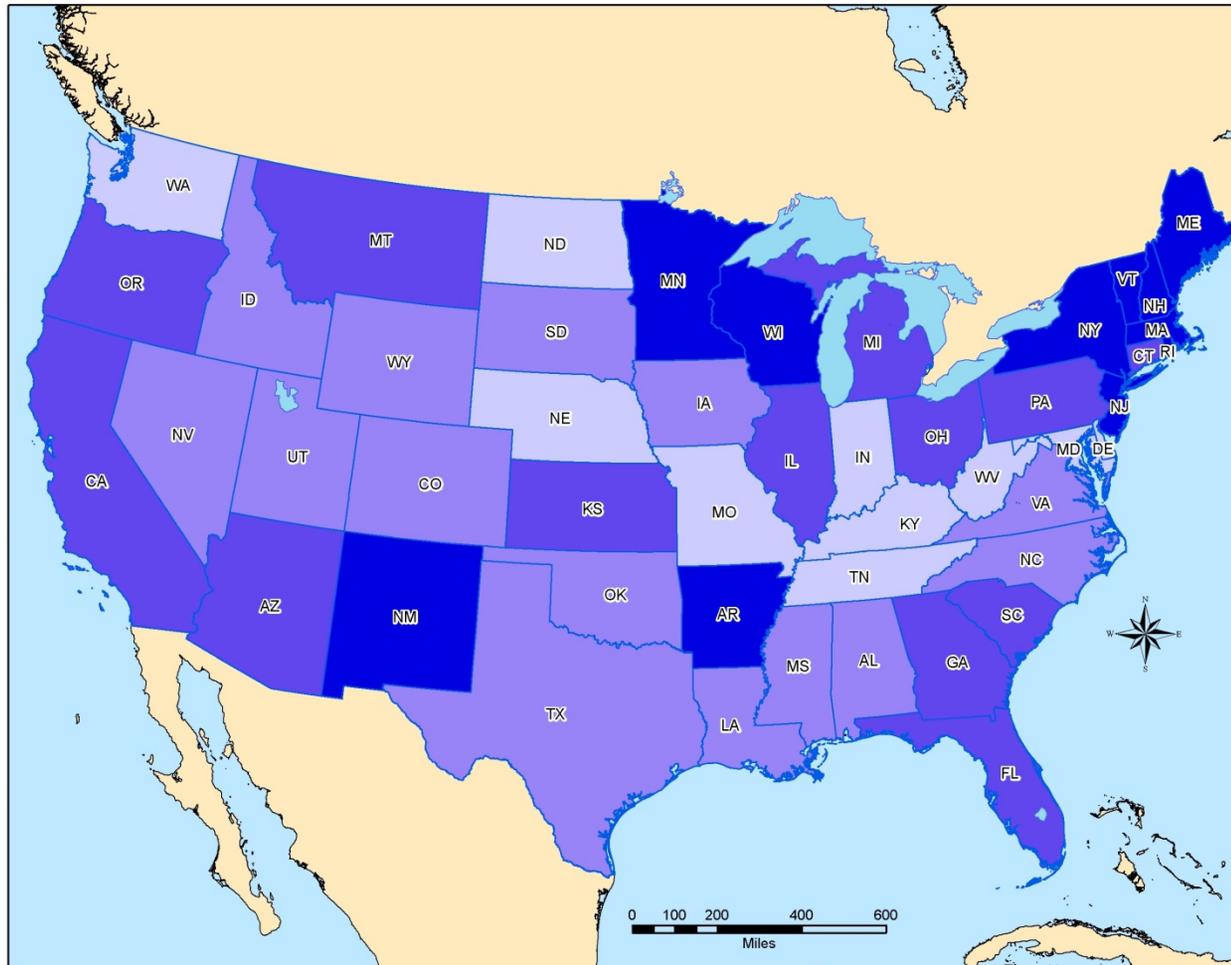
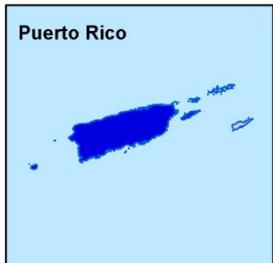


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 34:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Priority 1-3
By State FY - 2014

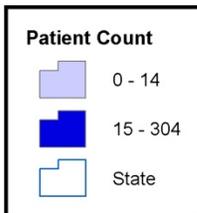
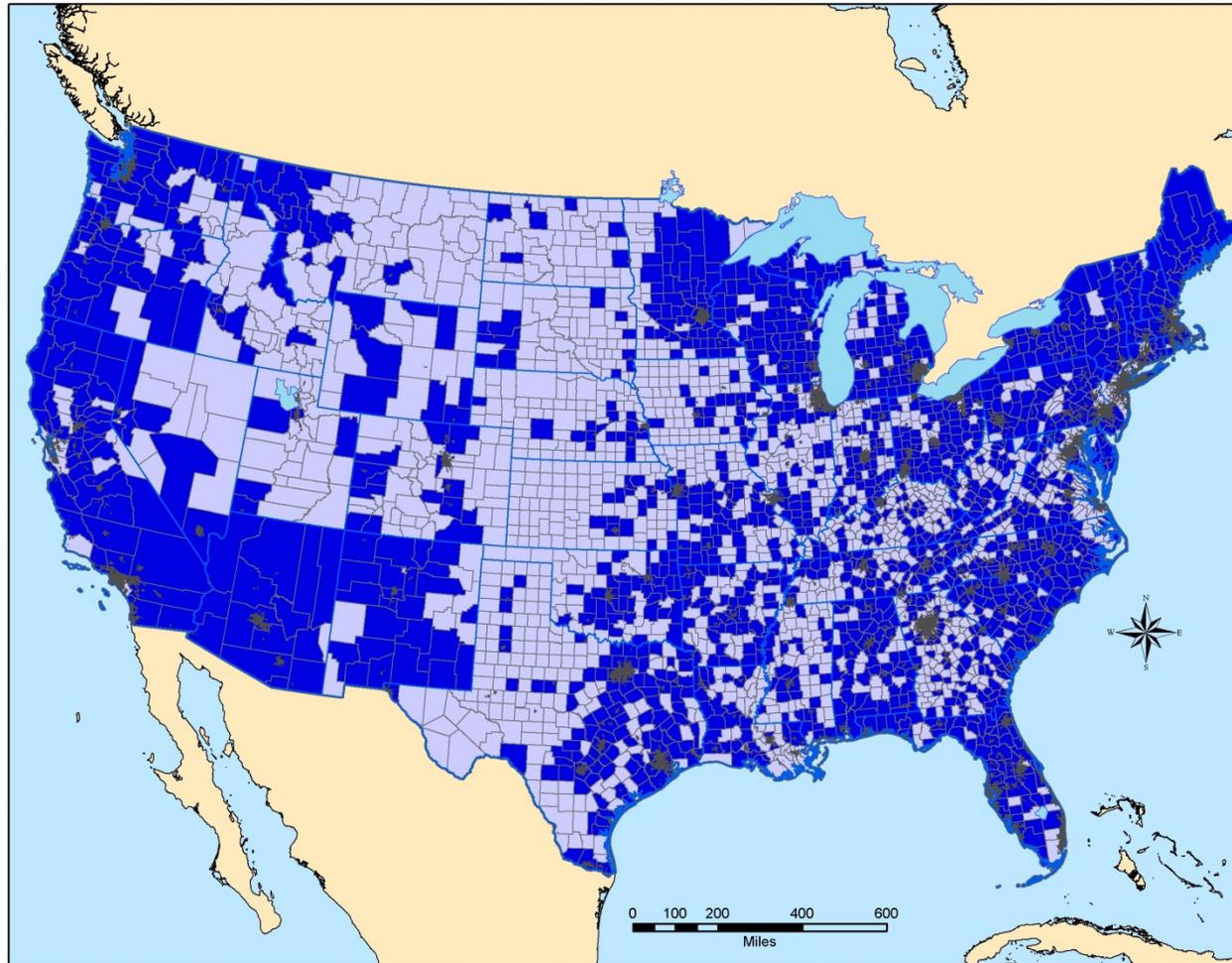
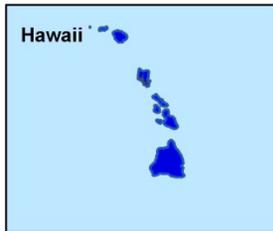


Map 35:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Priority 1-3
Of All Rural and Highly Rural Patients Priority 1-3
By State FY - 2014

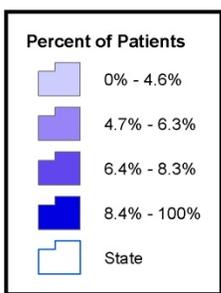
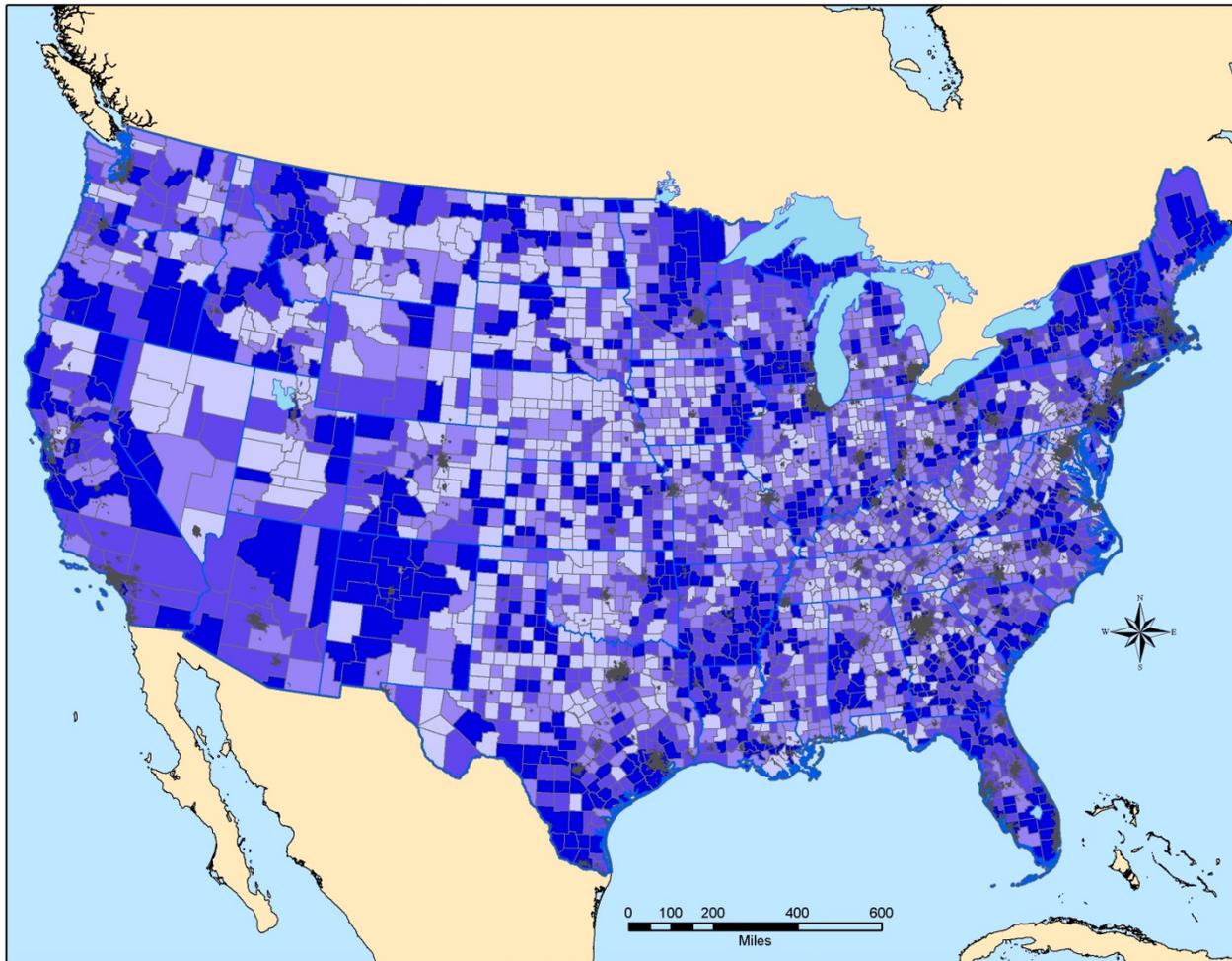


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 36:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Priority 1-3
By County FY - 2014
Urban Areas "Shaded"

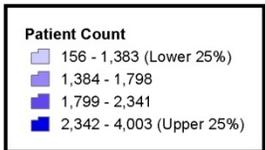
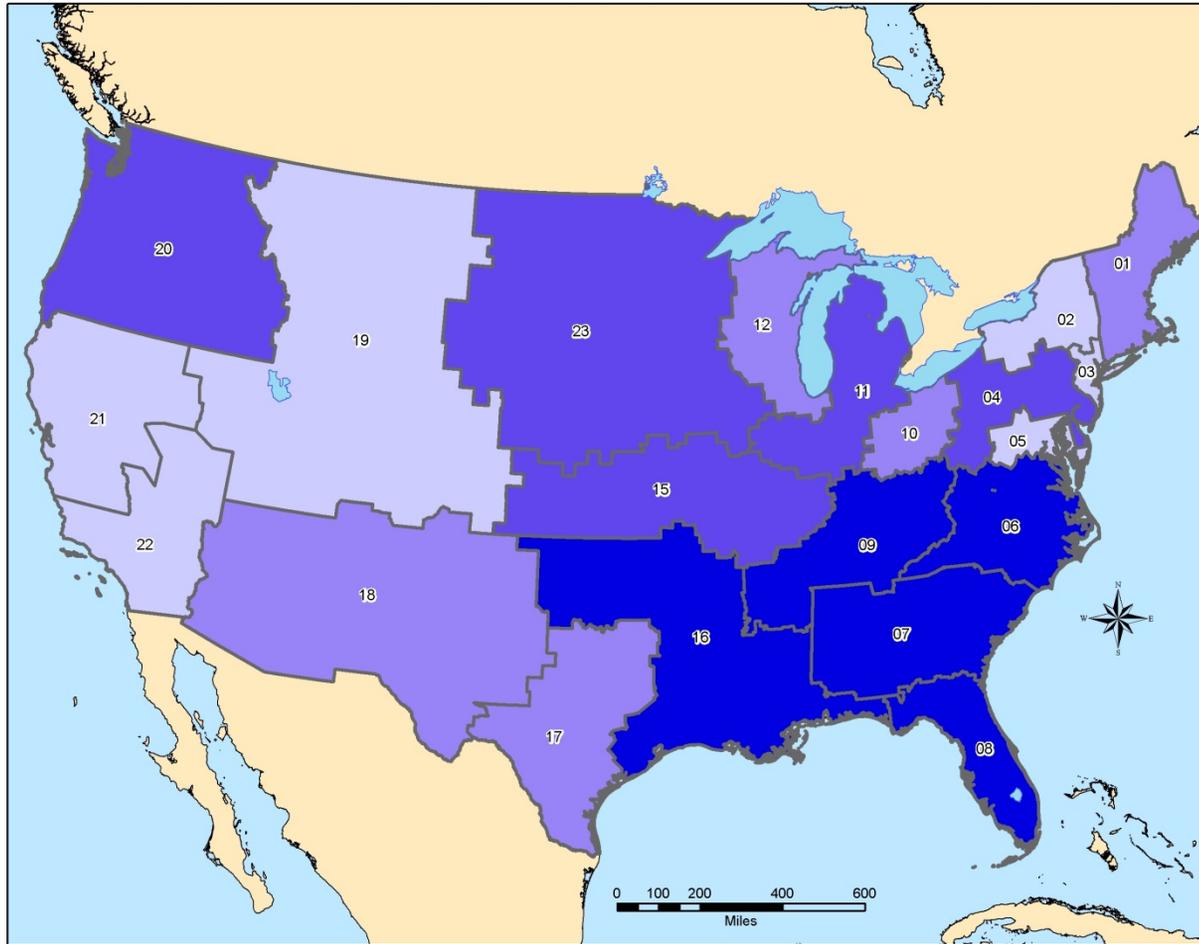


Map 37:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Priority 1-3
Of All Rural and Highly Rural Patients Priority 1-3
By County FY - 2014
Urban Areas "Shaded"

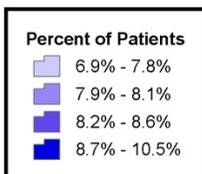
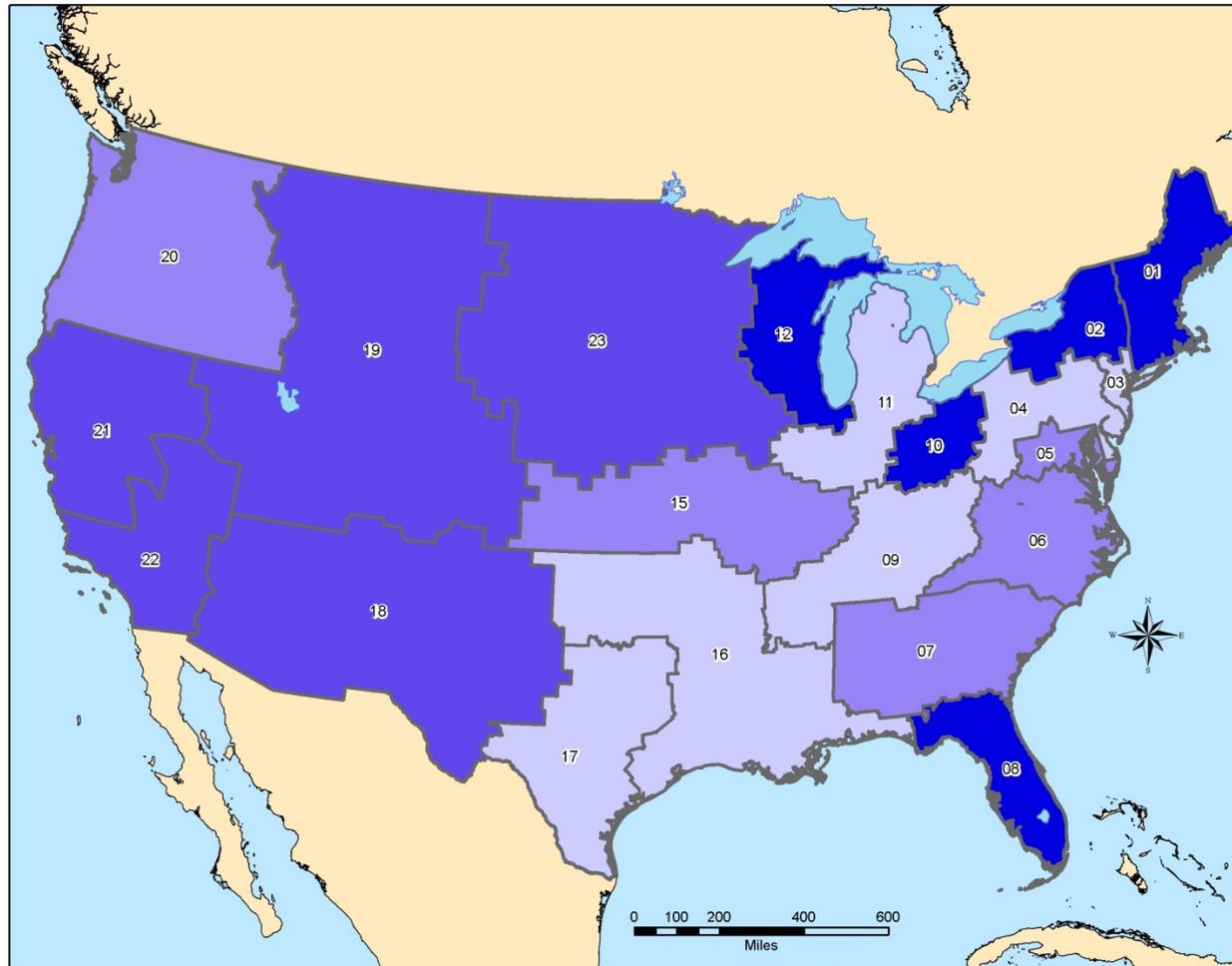


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 8/3/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 38:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Priority 5
By VISN FY - 2014

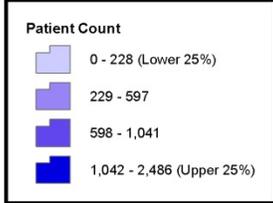
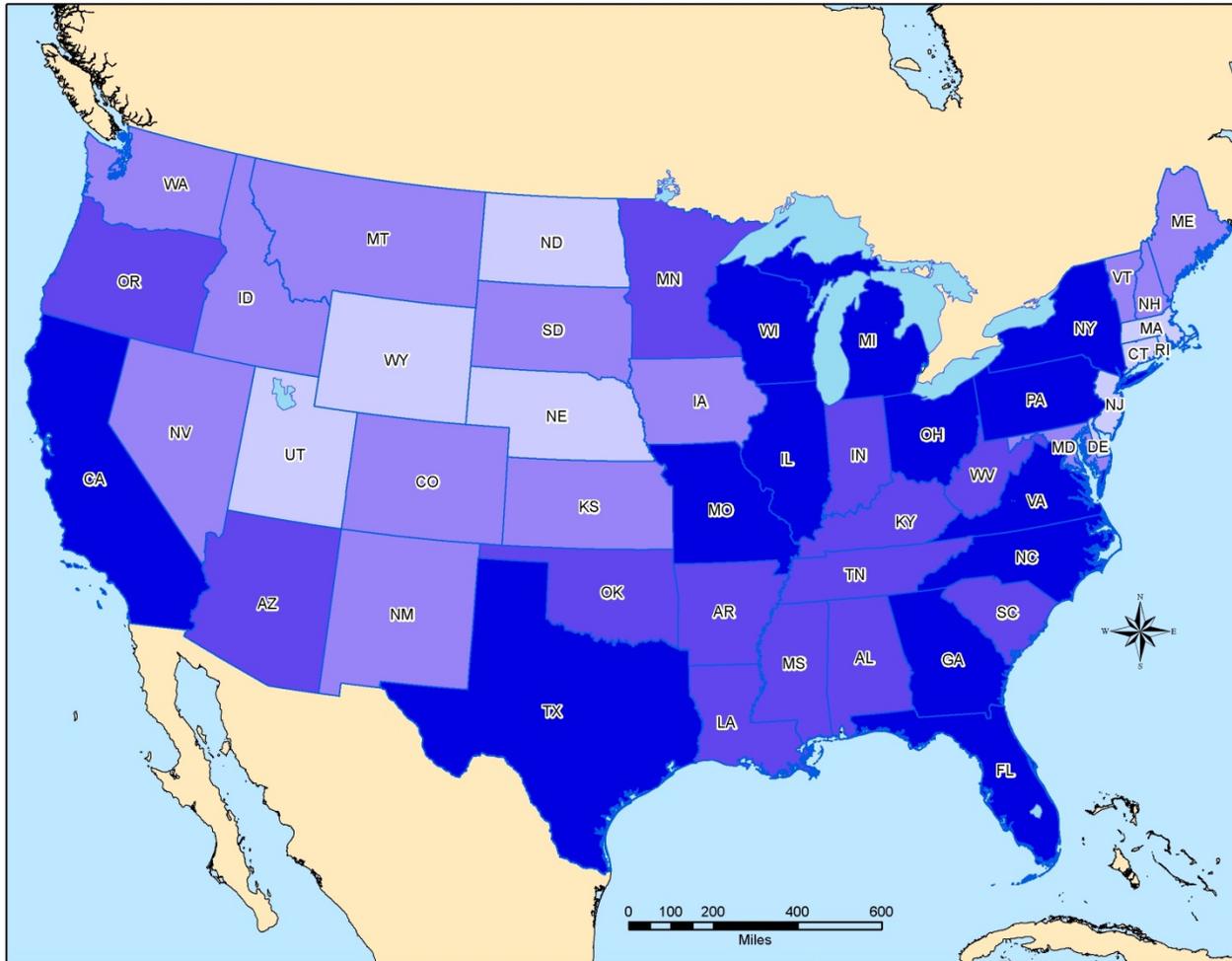
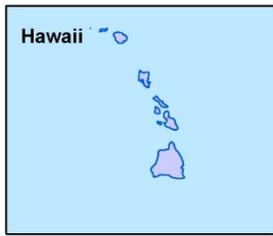


Map 39:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Priority 5
Of All Rural and Highly Rural VHA Patients Priority 5
By VISN FY - 2014

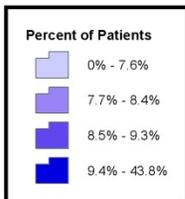
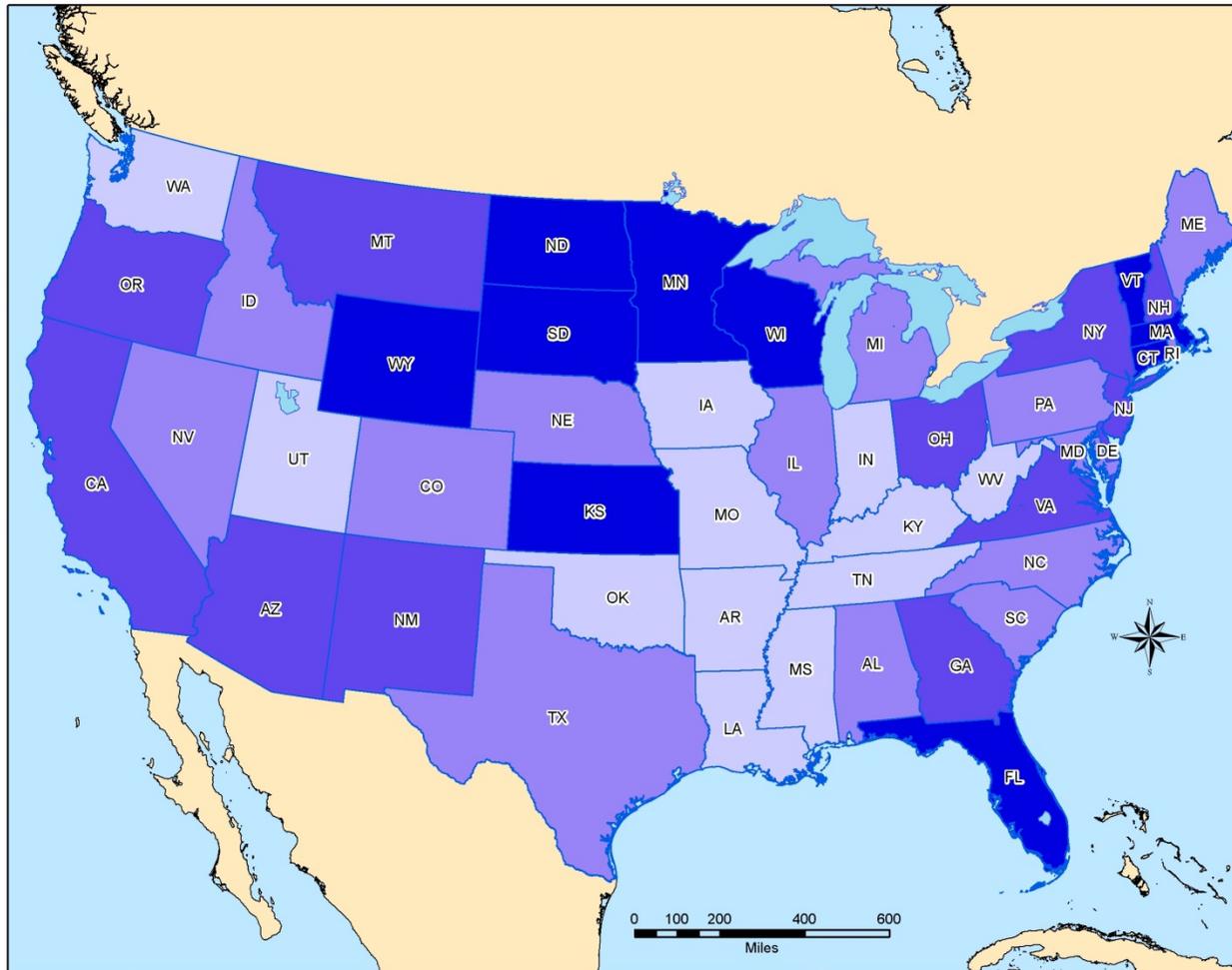


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 40:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Priority 5
By State FY - 2014



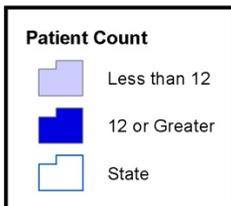
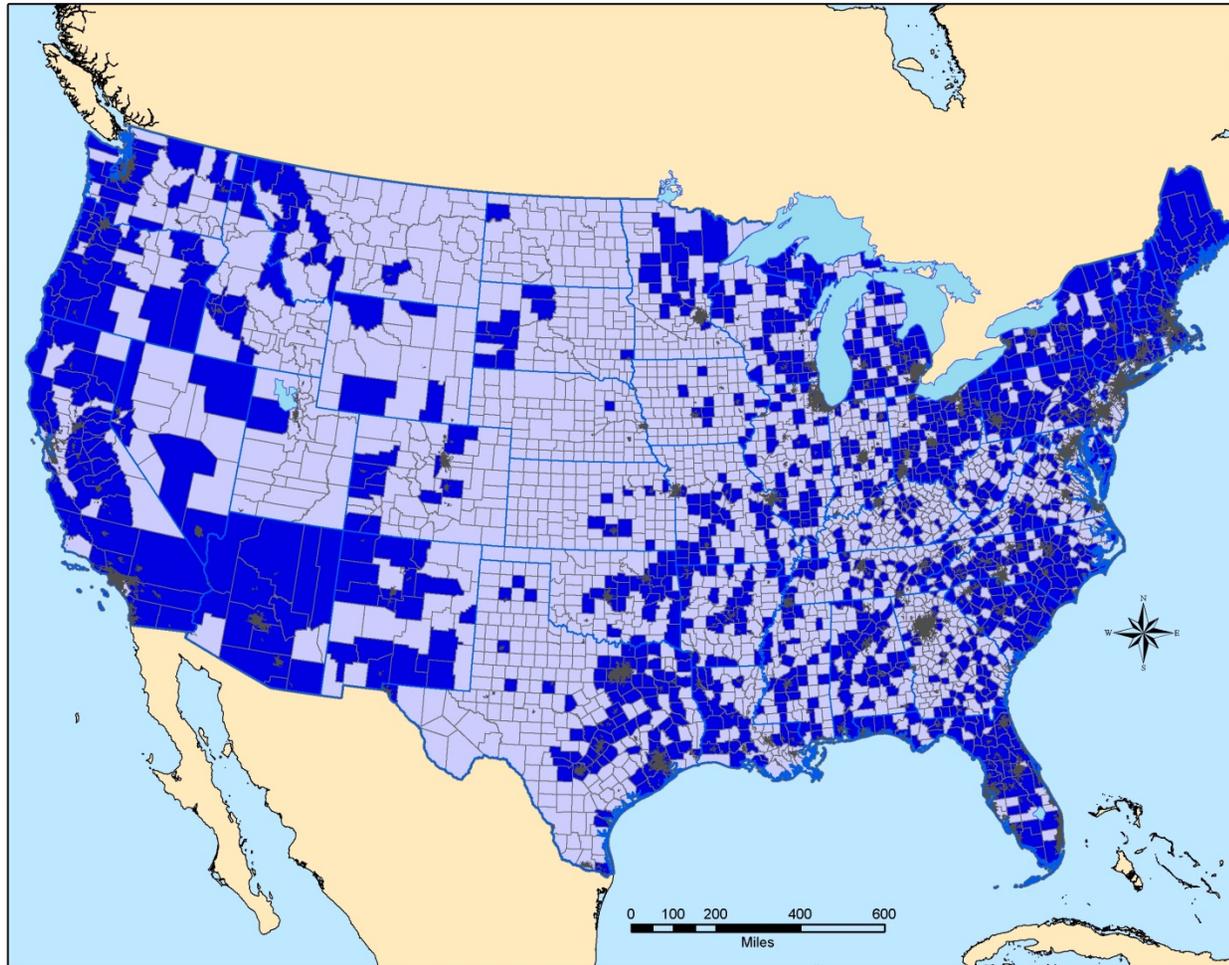
Map 41:

Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Priority 5
Of All Rural and Highly Rural Patients Priority 5
By State FY - 2014

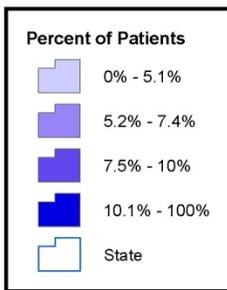
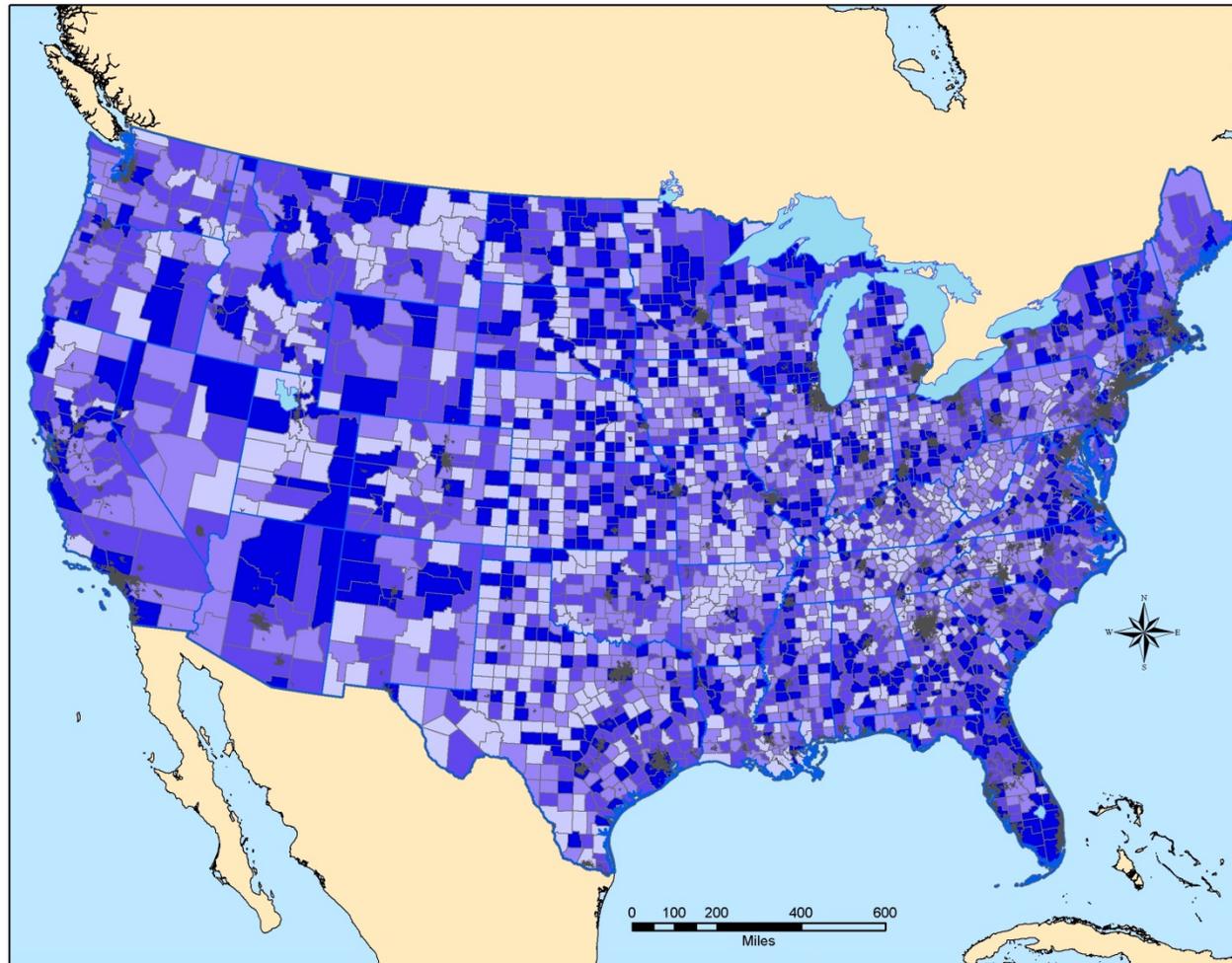


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 42:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Priority 5
By County FY - 2014
Urban Areas "Shaded"



Map 43:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Priority 5
Of All Rural and Highly Rural Patients Priority 5
By County FY - 2014
Urban Areas "Shaded"



Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 8/3/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Section IV Highlights: VHA Patients with Alcohol Use Disorders (Outpatient Utilization)

Table 6 examines overall utilization of VHA health care facilities by those VHA patients with a primary diagnosis of Alcohol Use Disorders. That is, patients who may have had an encounter with the diagnosis set as the primary diagnosis. At the National level, 2.71% (N=168,319) of all VHA patients had a primary diagnosis of Alcohol Use Disorders. At the network level, the range ran from a low of 3,997 individuals in Upstate New York Network (VISN 2), representing 2.93%, to a high of 15,575 individuals in the Sunshine Network (VISN 8), representing 2.7%.

Using the example of the Sunshine Network (VISN 8), a small percent (0.87%) of all 17,255,468 outpatient encounters were by those VHA patients with a primary diagnosis of Alcohol Use Disorders. A closer examination can be conducted for counts and percentages of outpatient encounters by those residing in rural and highly rural areas. For the purposes of simplicity, a combined percentage – indicated in red text – was calculated for both rural and highly rural numbers, both at the network and National levels. Again, looking at the Sunshine Network (VISN 8), combined rural patients with a primary diagnosis of Alcohol Use Disorders represented only 0.09% of all outpatient encounters in that network, compared to 0.87% when compared to overall rurality categories combined (highly rural, rural, urban, unknown).

Table 7 provides information on outpatient encounters for all patients with a primary diagnosis of Alcohol Use Disorders by rurality. In this table, some very interesting urban-rural comparisons across VISNs emerge. For example, VISN 15 (Heartland) had a total of 51,294 outpatient encounters for patients who had a primary diagnosis of Alcohol Use Disorders. Almost half (41.37%) of the encounters were from patients living in rural or highly rural areas of the VISN. Following VISN 15, four other networks (in rank order, VISNs 2, 23, 9, and 16) had more than one-third of encounters from patients living in rural and highly rural areas of the VISN.

Table 6: Outpatient Encounters of Patients with a Primary Diagnosis of Alcohol Use Disorders

Overall Resource Utilization- Alcohol Use Disorders (Primary Diagnosis Group) Compared to All Users, FY-2014										
Veterans Integrated Service Network	Total Number of Patients	Patients with Alcohol Use Disorders		Outpatient Encounters						
	N	N	%	Total	Alcohol Use Disorders					
				N	HR	R	%	U	Unk	%
New England (01)	253,326	8,453	3.34	7,306,431	25	19,893	0.27	85,549	1	1.44
Upstate NY (02)	136,497	3,997	2.93	4,189,442	59	13,574	0.33	19,858	0	0.80
NY/NJ (03)	174,457	4,658	2.67	5,308,815	89	3,116	0.06	59,853	3	1.19
Stars and Stripes (04)	310,940	8,897	2.86	8,188,223	13	26,714	0.33	75,580	1	1.25
Capitol (05)	150,012	4,429	2.95	3,919,003	0	8,716	0.22	54,581	2	1.62
Mid-Atlantic (06)	359,692	8,972	2.49	9,682,967	6	25,421	0.26	67,832	4	0.96
Southeast (07)	408,164	10,300	2.52	10,588,864	0	28,075	0.27	63,851	34	0.87
Sunshine (08)	576,411	15,575	2.70	17,255,468	1	15,402	0.09	134,950	13	0.87
Mid South (09)	298,396	6,881	2.31	8,424,188	7	25,304	0.30	45,090	1	0.84
Ohio (10)	231,319	7,555	3.27	7,511,566	0	23,497	0.31	77,503	1	1.34
Vets in Partnership (11)	282,135	7,566	2.68	7,691,758	3	17,879	0.23	55,820	3	0.96
Great Lakes (12)	266,879	8,819	3.30	7,705,668	150	20,452	0.27	92,454	8	1.47
Heartland (15)	245,357	5,764	2.35	7,009,124	130	21,089	0.30	30,062	13	0.73
South Central (16)	502,681	13,362	2.66	13,310,260	109	48,474	0.37	92,411	50	1.06
Heart of Texas (17)	306,581	8,130	2.65	7,950,682	585	19,930	0.26	65,942	11	1.09
Southwest (18)	271,557	6,754	2.49	6,738,226	1,566	20,300	0.32	62,996	13	1.26
Rocky Mtn. (19)	202,350	5,569	2.75	4,987,574	4,196	14,945	0.38	48,384	7	1.35
Northwest (20)	288,322	8,843	3.07	6,791,502	3,575	25,749	0.43	106,470	64	2.00
Sierra Pacific (21)	293,645	7,482	2.55	6,828,680	297	10,020	0.15	52,394	112	0.92
Desert Pacific (22)	328,951	8,494	2.58	8,520,022	209	2,718	0.03	62,934	3	0.77
Midwest (23)	324,728	7,819	2.41	8,146,785	7,054	43,044	0.61	82,813	5	1.63
Grand Total	6,212,400	168,319	2.71	168,055,248	18,074	434,312	0.27	1,437,327	349	1.12

Alcohol Use Disorders

Table 7: Outpatient Encounters of Patients with a Primary Diagnosis of Alcohol Use Disorders by Rurality

Veterans Integrated Service Network	Outpatient Encounters by Patients with Primary Alcohol Use Disorders DX					
	Total	Rurality				
	N	HR	R	%	U	Unk
New England (01)	105,468	25	19,893	18.89	85,549	1
Upstate NY (02)	33,491	59	13,574	40.71	19,858	0
NY/NJ (03)	63,061	89	3,116	5.08	59,853	3
VISN 04 (04)	102,308	13	26,714	26.12	75,580	1
Capitol (05)	63,299	0	8,716	13.77	54,581	2
Mid-Atlantic (06)	93,263	6	25,421	27.26	67,832	4
Southeast (07)	91,960	0	28,075	30.53	63,851	34
Sunshine (08)	150,366	1	15,402	10.24	134,950	13
Mid South (09)	70,402	7	25,304	35.95	45,090	1
Ohio (10)	101,001	0	23,497	23.26	77,503	1
Vets in Partnership (11)	73,705	3	17,879	24.26	55,820	3
Great Lakes (12)	113,064	150	20,452	18.22	92,454	8
Heartland (15)	51,294	130	21,089	41.37	30,062	13
South Central (16)	141,044	109	48,474	34.45	92,411	50
Heart of Texas (17)	86,468	585	19,930	23.73	65,942	11
Southwest (18)	84,875	1,566	20,300	25.76	62,996	13
Rocky Mtn. (19)	67,532	4,196	14,945	28.34	48,384	7
Northwest (20)	135,858	3,575	25,749	21.58	106,470	64
Sierra Pacific (21)	62,823	297	10,020	16.42	52,394	112
Desert Pacific (22)	65,864	209	2,718	4.44	62,934	3
Midwest (23)	132,916	7,054	43,044	37.69	82,813	5
TOTAL	1,890,062	18,074	434,312	23.93	1,437,327	349

Table 8 examines the overall outpatient encounters at VHA health care facilities by those VHA patients with a secondary diagnosis of an Alcohol Use Disorder. That is, patients who had an encounter with an Alcohol Use Disorder as the secondary diagnosis. At the National level, 6.05% (N=375,781) of all VHA patients had secondary diagnosis of Alcohol Use Disorders. At the network level, the range ran from a low of 7,554 individuals in Capitol Network (VISN 5), representing 5.04%, to a high of 36,209 individuals in the Sunshine Network (VISN 8), representing 6.28%.

In Table 9 (similar to Table 7 for patients with a primary diagnosis of Alcohol Use Disorders) information on outpatient encounters for all patients with a secondary diagnosis of Alcohol Use Disorders by rurality is reported. The percentage of encounters by rural and highly rural patients constituted a large share of the total Alcohol Use Disorder encounters in VISN 9 (60.27%). Following VISN 9, five other networks (in rank order, VISNs 15, 23, 2, 6, and 19) had more than half of the encounters from patients living in rural and highly rural areas of the VISN.

Alcohol Use Disorders



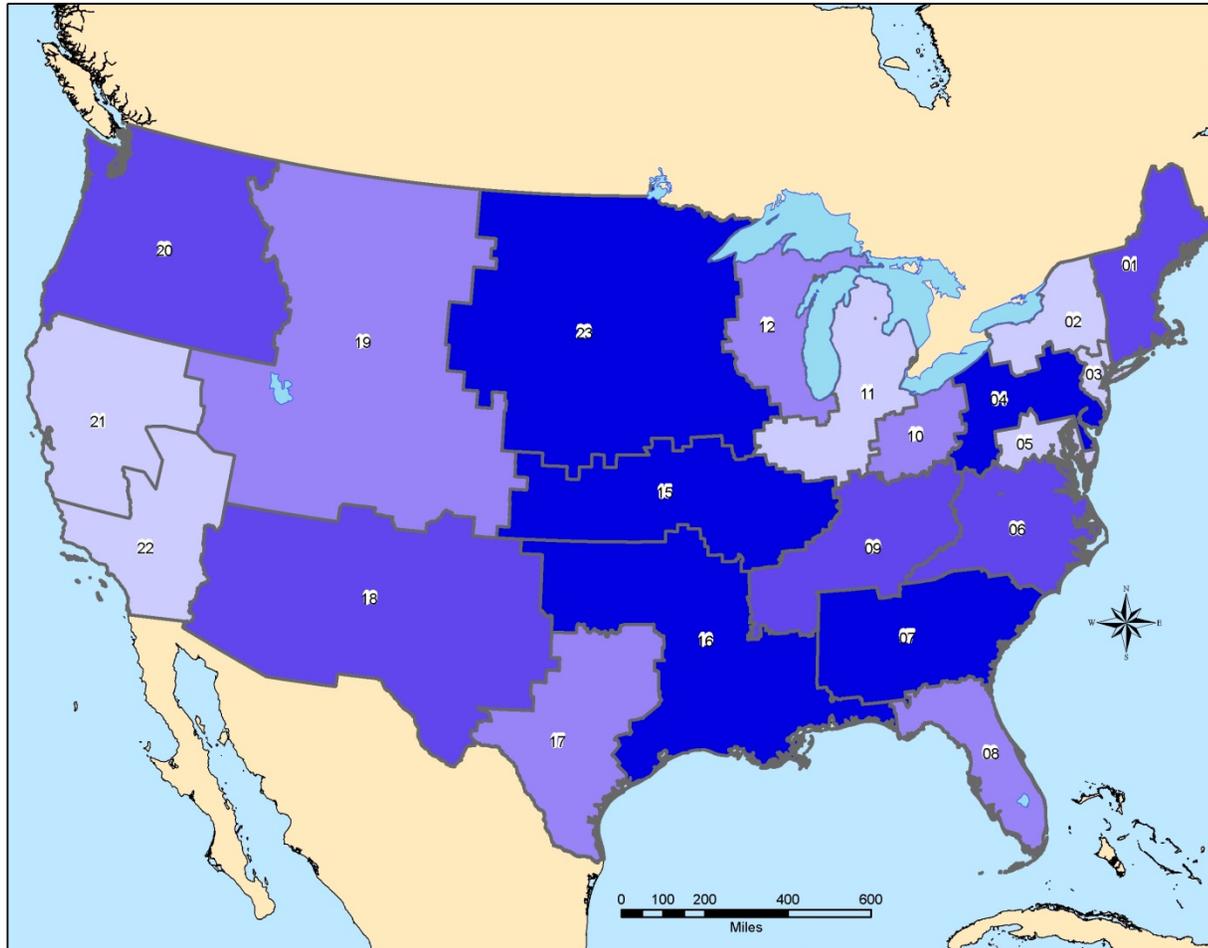
Table 8: Outpatient Encounters of Patients with a Secondary Diagnosis of Alcohol Use Disorders

Overall Resource Utilization- Alcohol Use Disorders (Secondary Diagnosis Group) Compared to All Users, FY-2014										
Veterans Integrated Service Network	Total Number of Patients	Patients with Alcohol Use Disorders		Outpatient Encounters						
		N	%	Total	Alcohol Use Disorders					
	N				HR	R	%	U	Unk	%
New England (01)	253,326	18,652	7.36	7,306,431	158	40,431	0.56	63,908	0	1.43
Upstate NY (02)	136,497	9,375	6.87	4,189,442	9	28,866	0.69	21,031	1	1.19
NY/NJ (03)	174,457	8,439	4.84	5,308,815	7	5,288	0.10	44,676	0	0.94
Stars and Stripes (04)	310,940	19,923	6.41	8,188,223	8	48,188	0.59	59,192	5	1.31
Capitol (05)	150,012	7,554	5.04	3,919,003	0	12,955	0.33	24,664	5	0.96
Mid-Atlantic (06)	359,692	20,438	5.68	9,682,967	27	46,941	0.49	41,102	6	0.91
Southeast (07)	408,164	25,338	6.21	10,588,864	1	54,119	0.51	64,867	5	1.12
Sunshine (08)	576,411	36,209	6.28	17,255,468	2	37,339	0.22	125,613	7	0.94
Mid South (09)	298,396	16,963	5.68	8,424,188	10	48,093	0.57	31,711	1	0.95
Ohio (10)	231,319	16,836	7.28	7,511,566	0	39,890	0.53	63,430	0	1.38
Vets in Partnership (11)	282,135	16,610	5.89	7,691,758	5	33,456	0.44	35,813	1	0.90
Great Lakes (12)	266,879	16,562	6.21	7,705,668	149	36,520	0.48	55,915	7	1.20
Heartland (15)	245,357	14,859	6.06	7,009,124	359	48,144	0.69	32,844	1	1.16
South Central (16)	502,681	31,325	6.23	13,310,260	84	96,347	0.72	92,122	142	1.42
Heart of Texas (17)	306,581	18,034	5.88	7,950,682	595	36,772	0.47	52,214	10	1.13
Southwest (18)	271,557	16,047	5.91	6,738,226	2,212	36,229	0.57	40,661	28	1.17
Rocky Mtn. (19)	202,350	10,895	5.38	4,987,574	3,461	26,130	0.59	28,226	4	1.16
Northwest (20)	288,322	17,602	6.10	6,791,502	2,096	40,170	0.62	48,249	3	1.33
Sierra Pacific (21)	293,645	16,106	5.48	6,828,680	507	20,601	0.31	43,086	720	0.95
Desert Pacific (22)	328,951	19,007	5.78	8,520,022	421	5,980	0.08	52,690	4	0.69
Midwest (23)	324,728	19,007	5.85	8,146,785	3,114	87,773	1.12	61,782	0	1.87
Grand Total	6,212,400	375,781	6.05	168,055,248	13,225	830,232	0.50	1,083,796	950	1.15

Table 9: Outpatient Encounters of Patients with a Secondary Diagnosis of Alcohol Use Disorders by Rurality

Veterans Integrated Service Network	Outpatient Encounters by Patients with Secondary Alcohol Use Disorders DX					
	Total	Rurality				
	N	HR	R	%	U	Unk
New England (01)	104,497	158	40,431	38.84	63,908	0
Upstate NY (02)	49,907	9	28,866	57.86	21,031	1
NY/NJ (03)	49,971	7	5,288	10.60	44,676	0
VISN 04 (04)	107,393	8	48,188	44.88	59,192	5
Capitol (05)	37,624	0	12,955	34.43	24,664	5
Mid-Atlantic (06)	88,076	27	46,941	53.33	41,102	6
Southeast (07)	118,992	1	54,119	45.48	64,867	5
Sunshine (08)	162,961	2	37,339	22.91	125,613	7
Mid South (09)	79,815	10	48,093	60.27	31,711	1
Ohio (10)	103,320	0	39,890	38.61	63,430	0
Vets in Partnership (11)	69,275	5	33,456	48.30	35,813	1
Great Lakes (12)	92,591	149	36,520	39.60	55,915	7
Heartland (15)	81,348	359	48,144	59.62	32,844	1
South Central (16)	188,695	84	96,347	51.10	92,122	142
Heart of Texas (17)	89,591	595	36,772	41.71	52,214	10
Southwest (18)	79,130	2,212	36,229	48.58	40,661	28
Rocky Mtn. (19)	57,821	3,461	26,130	51.18	28,226	4
Northwest (20)	90,518	2,096	40,170	46.69	48,249	3
Sierra Pacific (21)	64,914	507	20,601	32.52	43,086	720
Desert Pacific (22)	59,095	421	5,980	10.83	52,690	4
Midwest (23)	152,669	3,114	87,773	59.53	61,782	0
TOTAL	1,928,203	13,225	830,232	43.74	1,083,796	950

Alcohol Use Disorders

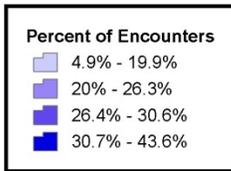
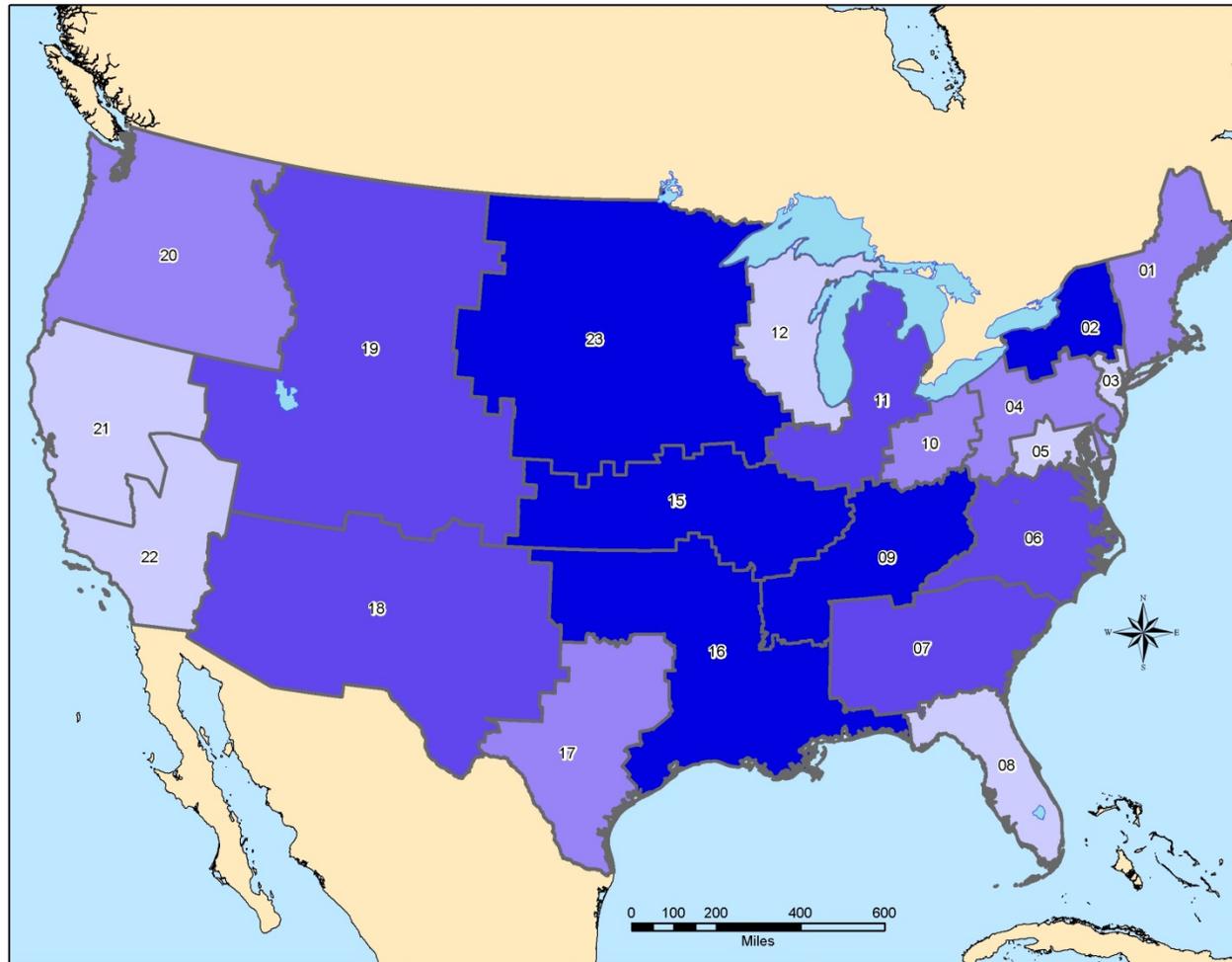


Map 44:

Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Encounters
By VISN FY - 2014

Patient Encounters

5,384 - 33,464 (Lower 25%)
33,465 - 39,890
39,891 - 48,110
48,111 - 97,941 (Upper 25%)

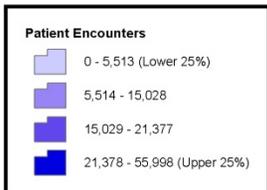
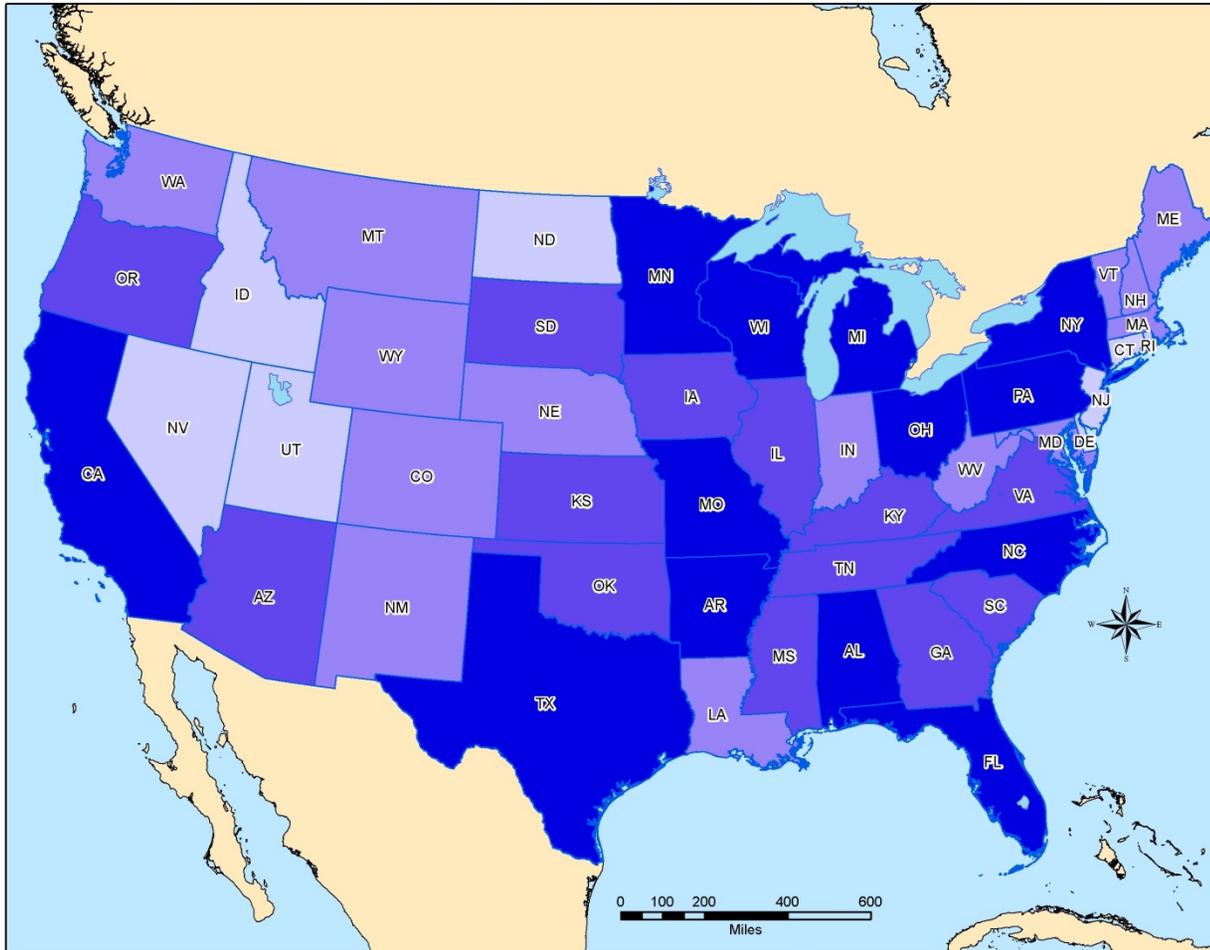


Map 45:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Encounters
Of All VHA Patient Alcohol Use Disorder Encounters
By VISN FY - 2014

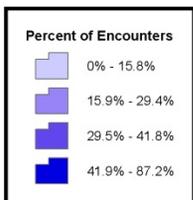
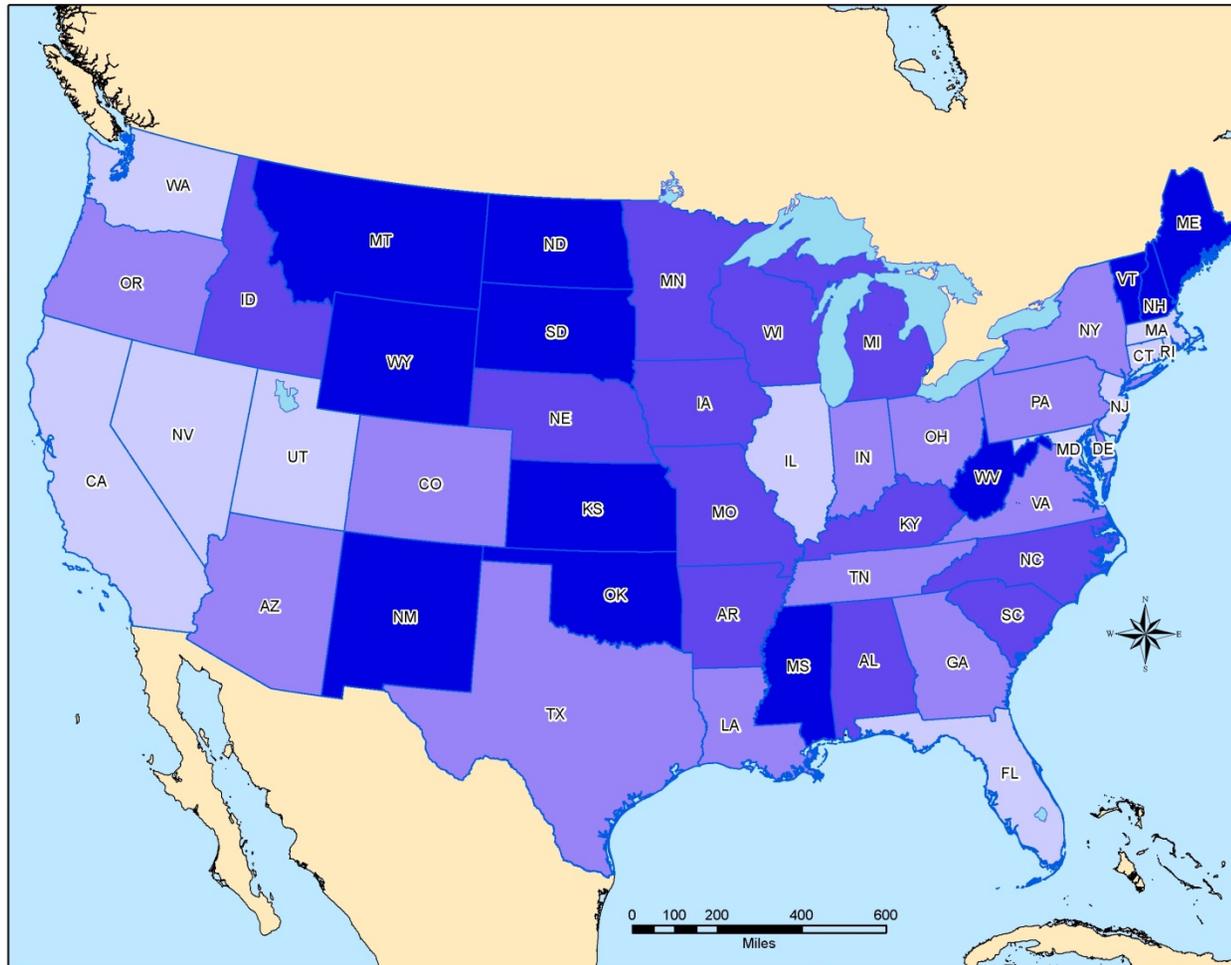


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 46:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders
Encounters
By State FY - 2014

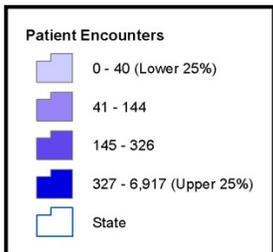
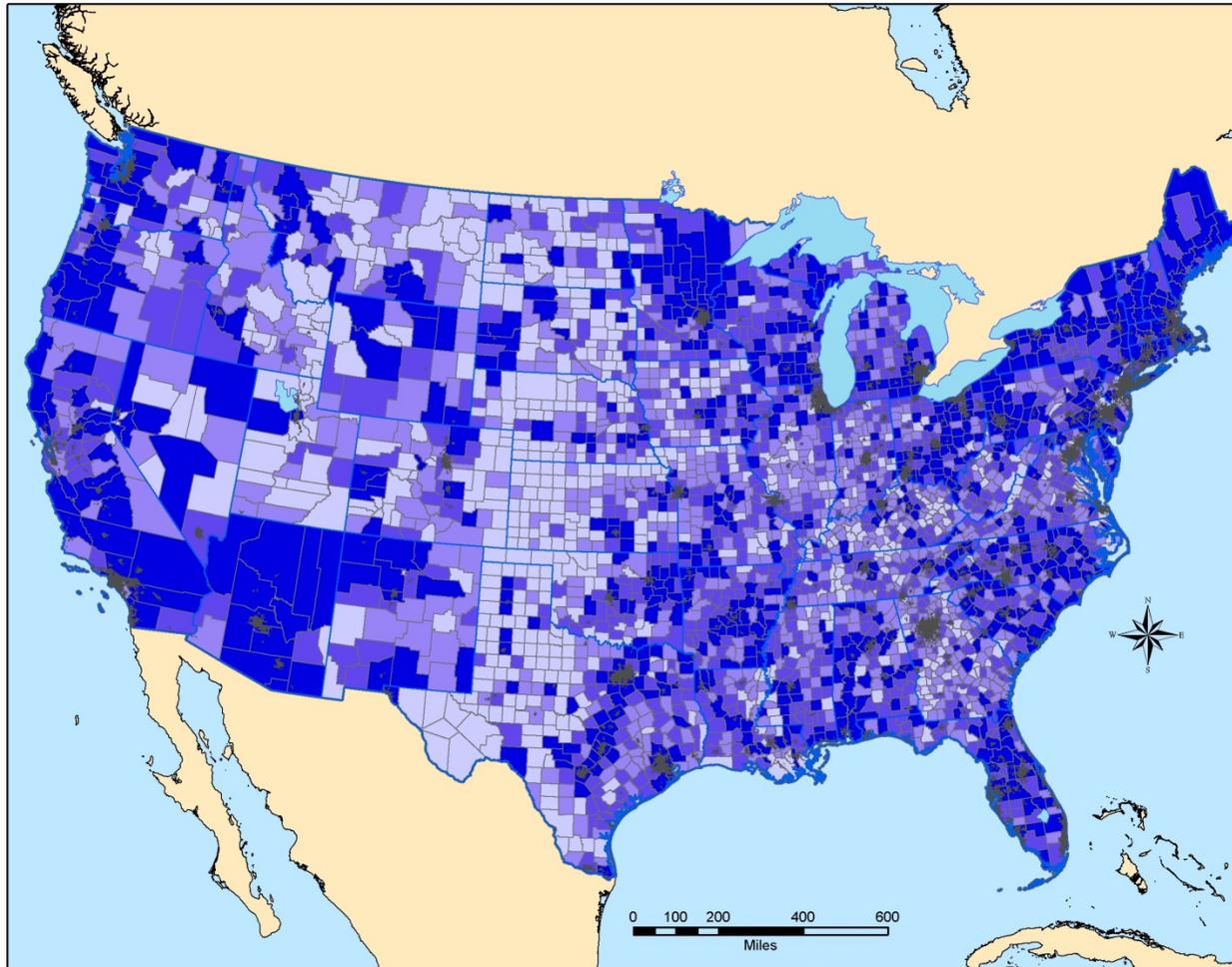


Map 47:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Encounters
Of All VHA Patient Alcohol Use Disorder Encounters
By State FY - 2014

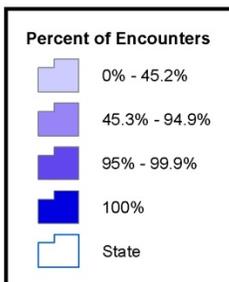
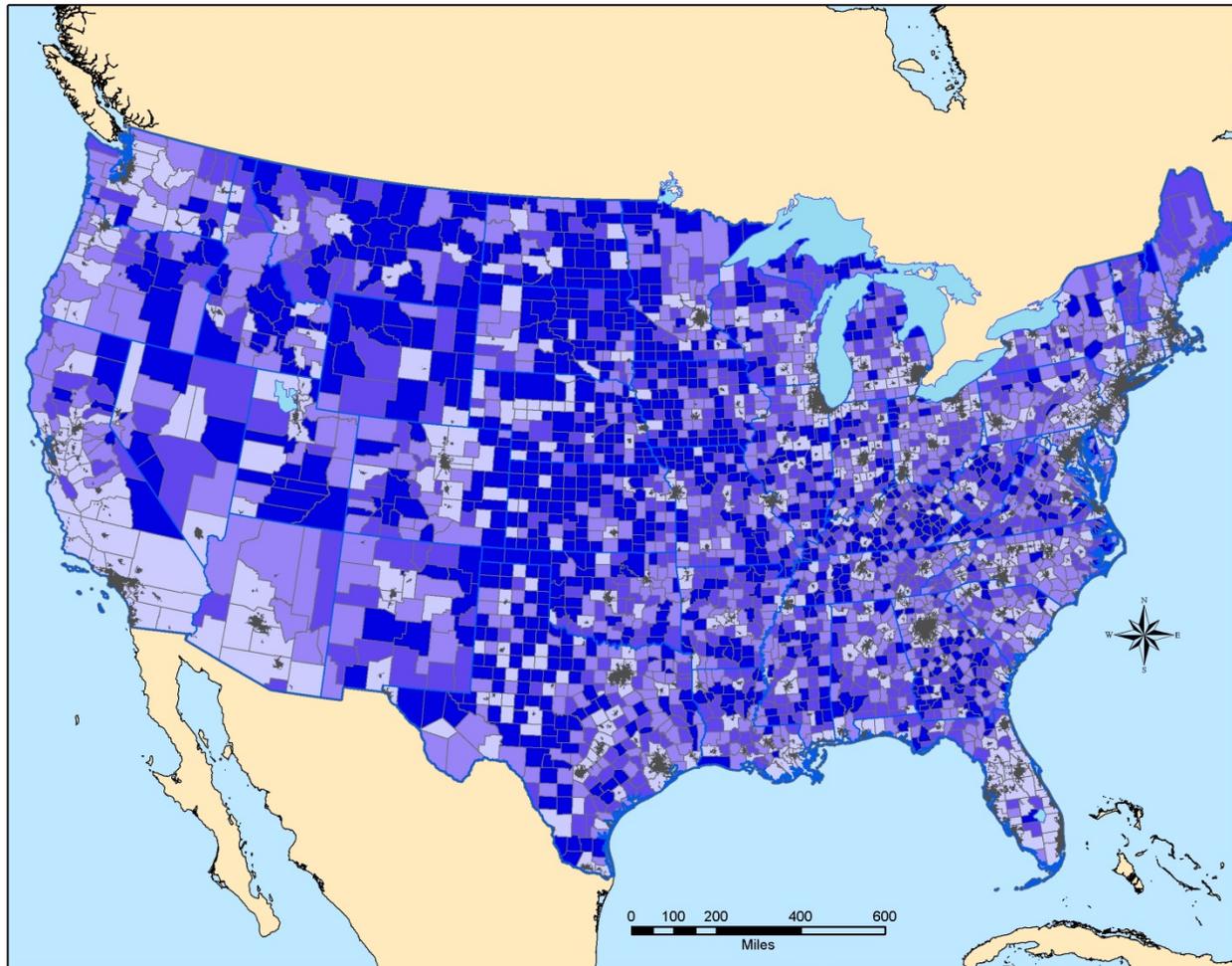


Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 7/16/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

Alcohol Use Disorders



Map 48:
Number of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Encounters
By County FY - 2014
Urban Areas "Shaded"



Map 49:
Percent of Rural and Highly Rural VHA Patients
with Alcohol Use Disorders, Encounters
Of All VHA Patient Alcohol Use Disorder Encounters
By County FY - 2014
Urban Areas "Shaded"



Map Created By: ORH RHRC-ER (DCR, LKW, JKA, ERL)
GeoSpatial Outcomes Division
(Map Creation Date: 8/5/2015)
Map Information by: PSSG, VSSC, ESRI
ArcGIS 10.2x

References

1) Diagnosis Cube Documentation, available at:

<http://vaww.vssc.med.va.gov/VSSCEnhancedProductManagement/DisplayDocument.aspx?DocumentID=16>

NOTE: This is an internal VA website and is not accessible to the public.

2) Enrollment Priority Groups, available at:

http://www.va.gov/healthbenefits/resources/publications/IB10-441_enrollment_priority_groups.pdf.

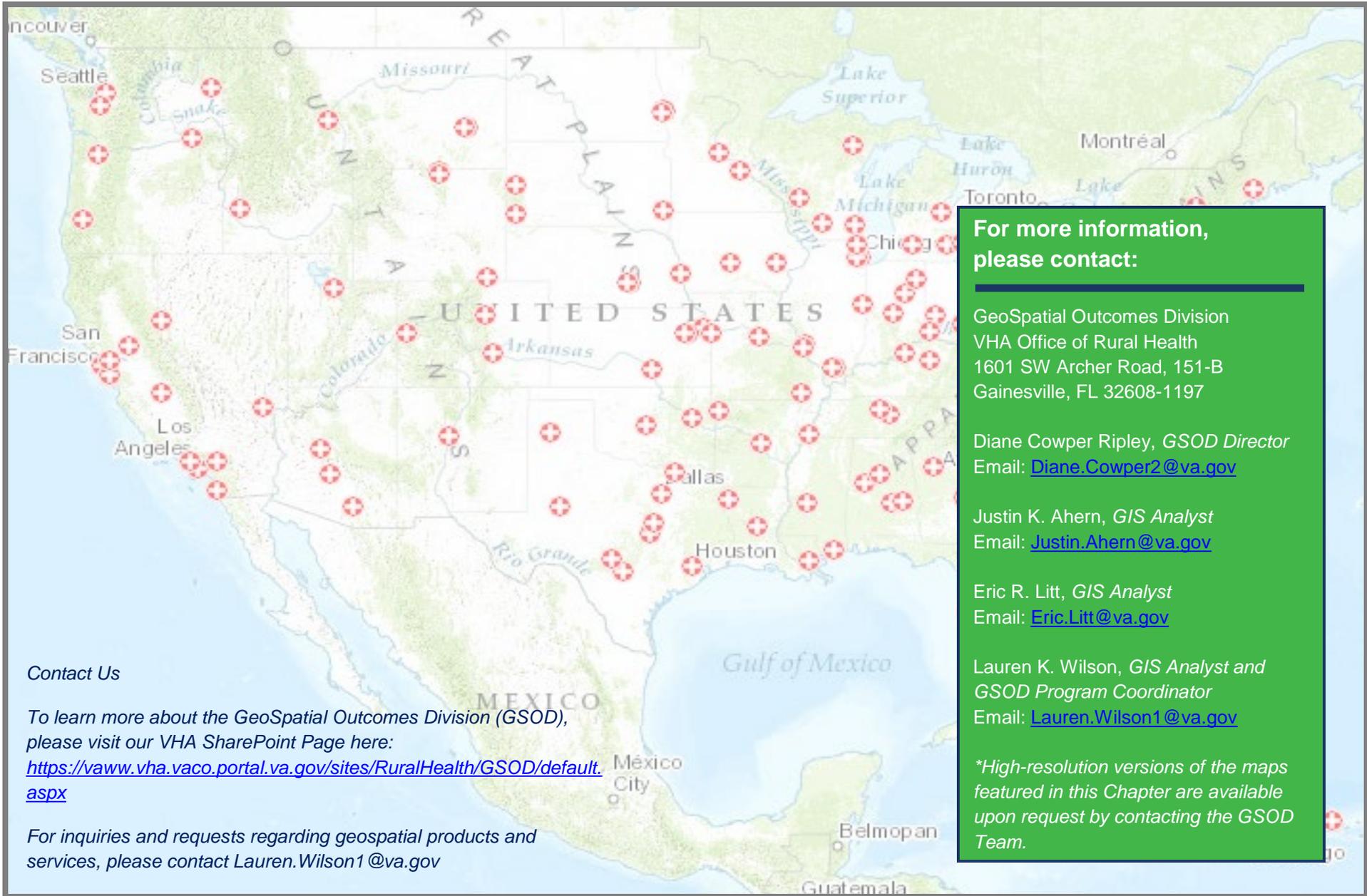
Project Team

Diane C. Cowper Ripley, Ph.D. is presently Site Co- Director of the HSR&D-funded Center of Innovation on Disability and Rehabilitation Research (CINDRR) and the Director of the Veterans Rural Health Resource Center-Eastern Region's GeoSpatial Outcomes Division (GSOD). Her research has focused on Veterans' access and utilization issues for over 31 years.

Justin K. Ahern, B.A. is a geographer and the newest staff member of the GeoSpatial Outcomes Division. He hopes to bring his diversity of skills and experiences to satisfy the GSOD's mission of supporting both Research and Operations related to improving access to health care for rural Veterans.

Eric R. Litt, B.A. is a geographer and has been with the VA since 2006. He also serves as Deputy Director of the GeoSpatial Outcomes Division. Mr. Litt has a strong interest in and deep commitment to assisting our Veterans by providing geospatial analyses that ultimately may improve access to health care services.

Lauren K. Wilson, B.S. serves as the program coordinator and GIS Analyst with the GeoSpatial Outcomes Division. She has been employed with the VA since 2009 and has been using GIS tools since 2005. Her main focus is geospatial analyses and geostatistics and their myriad uses for evidence-based research and policy influence for meaningful change in access to health care for rural Veterans.



**For more information,
please contact:**

GeoSpatial Outcomes Division
VHA Office of Rural Health
1601 SW Archer Road, 151-B
Gainesville, FL 32608-1197

Diane Cowper Ripley, *GSOD Director*
Email: Diane.Cowper2@va.gov

Justin K. Ahern, *GIS Analyst*
Email: Justin.Ahern@va.gov

Eric R. Litt, *GIS Analyst*
Email: Eric.Litt@va.gov

Lauren K. Wilson, *GIS Analyst and
GSOD Program Coordinator*
Email: Lauren.Wilson1@va.gov

**High-resolution versions of the maps
featured in this Chapter are available
upon request by contacting the GSOD
Team.*

Contact Us

To learn more about the GeoSpatial Outcomes Division (GSOD),
please visit our VHA SharePoint Page here:
<https://vaww.vha.vaco.portal.va.gov/sites/RuralHealth/GSOD/default.aspx>

For inquiries and requests regarding geospatial products and
services, please contact Lauren.Wilson1@va.gov