

12-31-2007

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Lori L. Davis
Tuscaloosa VA Medical Center

Stefan G. Kertesz
Birmingham VA Medical Center/University of Alabama at Birmingham

Ann F. Mahaney-Price
Tuscaloosa VA Medical Center

Michelle Y. Martin
University of Alabama at Birmingham

Kroshona D. Tabb
Birmingham VA Medical Center

Kristin M. Pettey
Tuscaloosa VA Medical Center

See next page for additional authors

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Recommended Citation

Davis, Lori, Stefan Kertesz, Ann Mahaney-Price, Michelle Martin, Kroshona Tabb, Kristin Pettey, Sandre McNeal, U. Granstaff, Karl Hamner, M. Powell, Michelle Hilgeman, A. Snow, Marietta Stanton, Patricia Parmelee, Mark Litaker, and Mary Hawn. 2007. "Alabama Veterans Rural Health Initiative: A Preliminary Evaluation of Unmet Health Care Needs." *Journal of Rural Social Sciences*, 26(3): Article 2. Available At: <https://egrove.olemiss.edu/jrss/vol26/iss3/2>

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Alabama Veterans Rural Health Initiative: A Preliminary Evaluation of Unmet Health Care Needs

Authors

Lori L. Davis, Stefan G. Kertesz, Ann F. Mahaney-Price, Michelle Y. Martin, Kroshona D. Tabb, Kristin M. Pettey, Sandre F. McNeal, U. Shanette Granstaff, Karl Hamner, M. Paige Powell, Michelle M. Hilgeman, A. Lynn Snow, Marietta Stanton, Patricia Parmelee, Mark S. Litaker, and Mary T. Hawn

**ALABAMA VETERANS RURAL HEALTH INITIATIVE:
A PRELIMINARY EVALUATION OF UNMET HEALTH CARE NEEDS***

LORI L. DAVIS

TUSCALOOSA VA MEDICAL CENTER

STEFAN G. KERTESZ

*BIRMINGHAM VA MEDICAL CENTER,
UNIVERSITY OF ALABAMA AT
BIRMINGHAM*

ANN F. MAHANEY-PRICE

TUSCALOOSA VA MEDICAL CENTER

MICHELLE Y. MARTIN

*UNIVERSITY OF ALABAMA AT
BIRMINGHAM*

KROSHONA D. TABB

BIRMINGHAM VA MEDICAL CENTER

KRISTIN M. PETTEY

TUSCALOOSA VA MEDICAL CENTER

SANDRE F. MCNEAL

BIRMINGHAM VA MEDICAL CENTER

U. SHANETTE GRANSTAFF

BIRMINGHAM VA MEDICAL CENTER

KARL HAMNER

UNIVERSITY OF ALABAMA

M. PAIGE POWELL

*UNIVERSITY OF ALABAMA AT
BIRMINGHAM*

MICHELLE M. HILGEMAN

TUSCALOOSA VA MEDICAL CENTER

A. LYNN SNOW

*TUSCALOOSA VA MEDICAL CENTER AND
UNIVERSITY OF ALABAMA*

MARIETTA STANTON

UNIVERSITY OF ALABAMA

PATRICIA PARMELEE

UNIVERSITY OF ALABAMA

MARK S. LITAKER

BIRMINGHAM VA MEDICAL CENTER

MARY T. HAWN

BIRMINGHAM VA MEDICAL CENTER

ABSTRACT

The Alabama Veterans Rural Health Initiative aims to better understand the health care needs, health status, and barriers to care for rural veterans. Following extensive community outreach, Veteran Community Outreach Health Workers assessed 203 veterans residing in rural counties of Alabama who either: 1) had never enrolled in VA health services, or 2) had not used those services in at least two years. While 71.4 percent of participants reported having utilized non-VHA primary care within the past year, 33.5 percent reported an inability or delay in obtaining needed health care for one or more services: primary care, specialty care, mental health care, addictions treatment, dental care, or prescription medication. The most commonly cited barrier

*We are grateful for the support of the VA Office of Rural Health (funding), Lawrence Biro, MD (VA VISN 7 Director), Alan Tyler (Tuscaloosa VA Medical Center Director), Rica Lewis-Payton (Birmingham VA Medical Center Director), and VA Research Services at the Tuscaloosa and Birmingham VA Medical Centers. Corresponding Author: Ann Mahaney-Price, ann.mahaney-price@va.gov.

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was cost. Among all participants, 56 percent screened positive for at least one Axis I mental disorder. Rurally-residing, non-VHA utilizing veterans appear to have fairly good access to primary care, but need dental care, prescription medication, and mental health care.

Approximately 40 percent of the eight million veterans enrolled in the Veterans Health Administration (VHA) live in rural areas. Compared with urban residents, people who live in rural areas are more likely to be older, in worse health with more functional limitations and poorer health-related quality of life, from a lower socioeconomic status, and uninsured (Rosenthal and Fox 2000; Rowland and Lyons 1989; Stearns, Slifkin, and Edin 2000). Studies document problems with access to care and lower health care utilization for rural residents, even after accounting for enabling factors such as insurance status and income. Rural residents, especially the elderly, face several constraints, including: fewer health providers, fewer physician visits, lengthy travel time, less access to preventive services, and higher hospitalization rates related to preventable conditions, compared with urban residents (Ansari, Laditka, and Laditka 2006; Casey, Call and Klingner 2001; Doshi and Polsky 2007; Mooney et al. 2000; Nemet and Bailey 2000; Probst et al. 2004; Rosenthal and Fox 2000; Rost et al. 2007; Rowland and Lyons 1989; Stearns, Slifkin, and Edin 2000).

Rural veterans report difficulty with access to care due to cost (West and Weeks 2006) and distance to care, which affects use of both VHA and non-VHA services. Mooney and colleagues (2000) found that younger veterans were most sensitive to travel distances, but that sensitivity decreased for all age groups who resided more than 15 miles from a VA facility. Age and rurality appear to affect utilization of VHA services. For example, older, rural veterans are more likely to use Medicare-funded emergency services than VHA emergency services (Weeks et al. 2005).

Literature on rural veterans remains limited in several respects. In a comprehensive review of the literature, Weeks and his colleagues (2008) identified 106 articles that included rural veterans in the United States, of those identified 50 clearly defined “rural” status and provided specific analyses focused on veterans. Interestingly, only four examined access to care, three of which focused on mental health services; eleven reported on rural veterans’ characteristics; and none examined innovative outreach interventions. For policymakers considering the expansion of VA services in rural areas, understanding the health care needs and access problems of veterans who are not currently using VA services would be especially important. Yet this group is typically absent from studies conducted among veterans.

The present report seeks to remediate this gap in knowledge by profiling veterans who have not utilized VA care, but who nonetheless might represent a target for future VA efforts, depending on the nature of their needs. In a comprehensive assessment, we addressed the following specific research questions: (1) What is the current medical and mental health care utilization pattern for rural Alabama veterans who do not utilize VA services?; (2) What are the unmet clinical needs for this population?; and (3) What are the barriers to obtaining care for such veterans? The resulting detailed profile provides a strong basis for future research to address the health care needs of rural veterans.

METHODS

Subject Recruitment

A multipronged approach for subject recruitment and sampling was used. Sample design was focused on targeted outreach to rural veterans unlikely to be currently receiving VA services, and therefore, it did not represent a population-based sampling strategy. Mail-out invitations, community outreach, IRB-approved flyers and advertisements were employed in the recruitment process. The mail-out invitation was an IRB-approved letter explaining the study with an opt-in or an opt-out postcard sent to veterans who lived in rural counties who had previously enrolled, but had not accessed a VA in two years or more. Similar mail-outs that targeted veterans who have never enrolled were not possible, as a mailing list for these individuals was not available through VA resources. Those veterans who did not opt out of the study were contacted by a Veteran Community Outreach Health Worker (VCOHW). Besides the mail-out invitation, grassroots community outreach by the VCOHWs involved working with community contacts to meet directly with veterans who lived in rural counties. These community contacts included Veteran Service Officers, county government offices, churches, local veteran organizations, civic organizations, and individual veterans residing in rural counties. The VCOHWs met directly with representatives from these organizations to explain the program and request referrals. IRB-approved flyers and advertisements were posted in public places in the communities of rural counties. A minority of the entire sample came from veteran responses to the mail-out, with most of the subjects recruited through grassroots efforts by the VCOHWs.

Study Location

The study was conducted by investigators from the Tuscaloosa VA Medical Center (TVAMC) and the Birmingham VA Medical Center's (BVAMC) Center for

Surgical, Medical Acute care Research and Transitions (C-SMART). Study procedures were conducted in community settings, such as the home or other private location, chosen by the prospective participant (e.g., a library or civic office).

Subject Inclusion Criteria

Veterans of the U.S. military over the age of 19 years residing in a rural Alabama county in the TVAMC, BVAMC, and Central Alabama VA Health Care System catchment areas were eligible for study participation. Counties identified for recruitment were selected based on ZIP code designations as rural. Individual residential street addresses in non-rural counties were also eligible, if identified as rural per U.S. Census Bureau designation. A total of six outreach workers targeted the 45 designated rural counties in the state of Alabama. Out of the 45 rural counties, we enrolled veterans from 31 rural counties into the study; however, most of the respondents came from eight rural counties in the northern half of the state. Eligibility for receiving VA health care services was not used to determine eligibility for the current research study, as a primary goal of this analysis was to better understand characteristics that affect health care access across settings. Policy regulations that affect eligibility for services have been modified as recently as 2009 (e.g., regarding income) and can be challenging to determine in the field; therefore, an all-inclusive approach was utilized for the current study.

Study Procedures

A trained VCOHW met with prospective participants and obtained an IRB-approved written informed consent before completing the baseline assessments. The assessment included general demographics and military history, VCOHW-administered questions, and self-report instruments. The VCOHW-administered assessment ascertained the subjects' use of various types of health care services as well as their perception of barriers to obtaining care in the previous 12 months. The inventory assessed the subjects' utilization of, and perceived barriers to having, a usual source of health care. Specifically, it assessed barriers to receiving timely primary care, specialty care, mental health care, addictions treatment, dental care, prescription medication, and lifetime VA care; and use of emergency, inpatient, nursing home, residential, and surgical services.

The VCOHW-administered assessment included the Cumulative Illness Rating Scale (CIRS; Linn, Linn, and Gurel 1968), which is an established inventory of 14 categories of general medical conditions. Illness severity is rated from 0 (no problem) to 4 (extremely severe/immediate treatment required/end organ

failure/severe impairment in function) for each category. The CIRS produces a summary score (total of summed items) and a severity index (ratio of total score to the number of applicable categories). The range of possible scores for the CIRS is 0-56, with 0 indicating a report of no illness in any of the 14 categories and a score of 56 indicating extremely severe illness or illness requiring immediate attention in all of the 14 categories of illness. The CIRS has good validity and inter-rater reliability with intraclass correlations of 0.78 and 0.88 (Miller et al. 1992). Commonly used in psychogeriatric research, it has been used in veteran populations (Mistry et al. 2004) and has comparable validity to other established measures (de Groot et al. 2003).

The self-report assessments included basic demographics and military history, a health history questionnaire, the Psychiatric Diagnostic Screening Questionnaire (PDSQ), and the World Health Organization Disability Assessment Schedule II (WHODAS-II). The PDSQ is a self-report 126-item “yes” or “no” survey to screen for psychiatric disorders, which has well-established psychometrics when compared with structured clinician-administered interviews, such as the Structured Clinical Interview for DSM-IV (Zimmerman and Mattia 2001). The WHODAS-II provides a summary measure of functioning and disability that is reliable and valid across geographic regions, diagnostic groups, ages, and genders. Twelve daily activities (e.g., “taking care of your household responsibilities”) are rated on a five-point Likert scale indicating the difficulty (1 = none to 5 = extreme/cannot do) experienced in the past 30 days. The range of possible total WHODAS-II scores is 12-60, with 12 indicating a self report of no disability for each of the twelve functional areas and a 60 indicating a self report of extreme disability for each of the twelve functional areas. A score of 24 would represent a mild level of disability across categories; a score of 36 would represent a moderate level of disability across categories.

For each of the six categories (primary care, specialty care, mental health care, addictions treatment, dental care, and prescription medications), participants were asked several questions concerning access to care. These included: “In the last 12 months, were you unable to get, or delayed in getting, (name of category of care, tests, or treatments; or prescription medications) that you or a health care provider believed necessary?” If the participant affirmed that they were unable to get or were delayed in getting services, they were asked: “Which of these best describes the main reason you were unable to get, or delayed in getting, (name of category of care, tests, or treatments; or prescription medications) that you or a health care provider believed necessary?” and “How much of a problem was it that you did not

get, or were delayed in getting, (name of category of care, tests, or treatments; or prescription medications) that you or a health care provider believed necessary?"

Statistical Analyses

Descriptive statistics were calculated for baseline demographic and clinical characteristics. Measures of central tendency (mean, median) and variability (standard deviation, minimum, and maximum) were calculated for each continuous measure; counts and percentages were calculated for categorical variables. Proportions were compared among categories using the Chi-square test.

RESULTS

Participants

Two-hundred and seventy-four veterans were approached for the study participation, 69 did not consent to the study, 205 signed the informed consent, and two were excluded after further review showed that they did not reside in a rural area. Two-hundred and three veterans were assessed and included in this preliminary report. Table 1 summarizes the demographic data. The age range was 21-85, with a mean of 55.6 years ($SD = 14.4$). Ninety-three percent were male, 58.6 percent were white, 40.9 percent were African American, and one individual was Asian (0.5 percent). Two individuals (one white and one African American) also identified their ethnicity as Hispanic (1 percent). Most of the sample was married (63.1 percent); ninety-five percent completed a GED, high school, or higher education, with 53 percent reporting formal education past high school; twenty-two percent reported having no health insurance or other coverage; thirty-one percent reported no income or household income less than or equal to \$20,000; and 19.8 percent reported they were looking for work or unemployed. The majority (65 percent) served in the Army or Army National Guard and a majority (56 percent) of subjects reported they had been deployed or had served overseas at least once in the past. A minority (11 percent) reported that during their last deployment they spent the most time in Afghanistan (3 percent), Iraq (5 percent), or Kuwait (3 percent).

TABLE 1. DEMOGRAPHICS OF RURALLY-RESIDING ALABAMA VETERANS NOT CURRENTLY ENROLLED OR UTILIZING VA HEALTH CARE SERVICES IN ≥ 2 YEARS.

	N = 203*	
	PERCENT	N
Gender		
Male.	93.1	189
Female.	6.9	14
Race		
White.	58.6	119
African American.	40.9	83
Asian.	0.5	1
Hispanic Ethnicity		
Yes.	1.0	2
No.	99.0	201
Current Marital Status		
Married.	63.1	128
Divorced.	16.3	33
Separated.	4.4	9
Widowed.	7.4	15
Never been married.	8.9	18
Highest Level of Education		
Some high school (9 th to 11 th grade).	4.9	10
High school equivalency (GED).	7.4	15
High school graduate (12 th grade).	33.5	68
Some college or technical training.	40.4	82
College graduate.	7.4	15
Graduate Work.	4.9	10
Health Care Coverage**		
No health care insurance.	22.0	44
Provided by an employer or union.	23.0	46
Self paid health insurance.	33.5	67
Medicare.	24.5	49
Medicaid.	3.0	6
Tri-care.	13.0	26
VA.	0.0	0
Other health care coverage.	5.5	11

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TABLE 1. DEMOGRAPHICS OF RURALLY-RESIDING ALABAMA VETERANS NOT CURRENTLY ENROLLED OR UTILIZING VA HEALTH CARE SERVICES IN ≥ 2 YEARS. (CONTINUED).

	N = 203*	
	PERCENT	N
Total Household Income***		
No income.....	9.9	20
Less than or equal to \$20,000.....	20.8	42
\$21,000 to \$40,000.....	32.7	66
\$41,000 to \$60,000.....	20.8	42
\$61,000 to \$80,000.....	8.4	17
\$81,000 to \$100,000.....	4.0	8
\$101,000 to \$150,000.....	2.0	4
Don't know.....	1.0	2
Refused.....	0.5	1
Current Employment Status***		
Working full-time.....	35.2	71
Working part-time.....	9.4	19
Looking for work or unemployed.....	19.8	40
Retired.....	24.3	49
A homemaker.....	1.0	2
A student.....	1.0	2
On illness or sick leave.....	0.0	0
On disability.....	11.9	24
Other.....	2.0	4
Current VA Disability Status***		
None.....	88.1	178
Filing for first time.....	1.0	2
Filing for appeal.....	0.5	1
Receiving disability.....	8.9	18
Receiving disability and filing for increase.....	1.5	3
Receives SSI Disability Income		
No.....	90.2	183
Yes.....	9.9	20

TABLE 1. DEMOGRAPHICS OF RURALLY-RESIDING ALABAMA VETERANS NOT CURRENTLY ENROLLED OR UTILIZING VA HEALTH CARE SERVICES IN ≥ 2 YEARS. (CONTINUED).

	N = 203*	
	PERCENT	N
Military Service		
Air Force/Air National Guard.....	12.3	25
Army/Army National Guard.....	65.0	132
Coast Guard.....	0.0	0
Marine Corps.....	10.3	21
Navy.....	14.8	30
Other.....	2.5	5

NOTE: *Sample N = 203 unless otherwise indicated. **Data missing on three respondents. ***Data missing on one respondent

Health Care Needs

Of the 203 veterans, 82.8 percent “strongly agreed” and 16.3 percent “agreed” with the statement, “I think it’s important to have a regular health care provider.” Within the past year, 71.4 percent reported they had received non-VA primary care services and 44.8 percent had received non-VA specialty care in their rural area. As shown in Table 2, 10.8 percent of the veterans reported a delay in obtaining, or an inability to obtain, primary care services in their community, and 33.5 percent reported a delay in obtaining, or an inability to obtain, at least one category of needed health care (primary care, specialty care, mental health care, addictions treatment, dental care, or prescription medication). Among veterans whose last deployment was spent mostly in Afghanistan, Iraq, or Kuwait, 2 percent reported a delay in obtaining, or an inability to obtain, primary care services in their community versus 12 percent for the non-Afghanistan-Iraq-Kuwait group. This difference was not statistically significant. Among the Afghanistan-Iraq-Kuwait veterans, 22 percent reported a delay in obtaining, or an inability to obtain, mental health care versus 5.6 percent who reported a delay in obtaining, or an inability to obtain mental health care among the non-Afghanistan-Iraq-Kuwait veterans. This difference was statistically significant ($p = .0054$). No other statistically significant differences regarding obtaining care or services were found between the Afghanistan-Iraq-Kuwait veterans and all others.

While 9.4 percent of the sample reported that they or a health care provider believed they needed mental health treatment in the past 12 months, 7.4 percent of

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TABLE 2. BASELINE CLINICAL NEEDS FOR NON-VA UTILIZING, RURAL ALABAMA VETERANS (N = 203).

TYPE OF CARE IN PAST 12 MONTHS	UNABLE OR DELAYED IN OBTAINING	
	PERCENT	N
Primary Care.	10.8	22
Specialty Care.	6.9	14
Mental Health Care.	7.4	15
Addictions Treatment.	2.0	4
Dental Care.	20.2	41
Prescription Medicines.	19.3	39
At least one service above.	33.5	68
At least one service above, excluding prescriptions.	27.1	55
At least one service above, excluding dental.	26.6	54

the participants indicated they were unable to obtain, or experienced delays in obtaining, mental health services. Based on the PDSQ inventory, as shown in Table 3, 55.7 percent screened positive for at least one Axis I mental disorder and 21.7 percent screened positive for four or more comorbid Axis I mental disorders. Fewer than half the participants (44.3 percent) screened negative for an Axis I disorder.

TABLE 3. BASELINE MENTAL HEALTH NEEDS BASED ON PSYCHIATRIC DIAGNOSTIC SCREENING QUESTIONNAIRE FOR NON-VA UTILIZING RURALLY ALABAMA VETERANS (N = 203)

NUMBER OF AXIS I DISORDERS ENDORSED	PERCENT	N
Zero.	44.3	90
Less than one.	55.7	113
One.	15.8	32
Two.	12.3	25
Three.	5.9	12
Four or more.	21.7	44

Table 4 shows the results from the CIRS and WHODAS-II. The range of total CIRS scores for the veterans in this study was 0-34. The median CIRS score was 6.0 and the mean CIRS score was 7.5, indicating that the sample was moderately ill overall. Only 20 percent of the participants scored in the 0-1 range (low level of illness). Severe and extremely severe levels were most often reported for the

musculoskeletal (18 percent); neurological (14 percent); eye, ear, nose, and throat and laryngeal (14 percent); cardiovascular (12 percent); and upper gastrointestinal (GI; 12 percent) categories of general medical conditions studied.

TABLE 4. MEDICAL BURDEN AND LEVEL OF DISABILITY FOR NON-VHA UTILIZING ALABAMA RURAL VETERANS

Indicator of Burden or Disability	
CIRS Number of Categories Reported (mean \pm sd).....	3.8 \pm 2.7
Percent of Subject Reporting 0.	9.9%
Percent of Subject Reporting 1.	13.3%
Percent of Subject Reporting 2.	11.8%
Percent of Subject Reporting 3.	15.3%
Percent of Subject Reporting \geq 4.	49.8%
CIRS Total Severity (mean \pm sd).	7.5 \pm 6.5
CIRS Total Severity Median.	6.0
CIRS Total Severity Range.	0-34
CIRS Severity Index (mean \pm sd).....	1.8 \pm 0.8
WHODAS-II (mean \pm sd).....	20.3 \pm 9.6
WHODAS-II Total Severity Median.	16
WHODAS-II Total Severity Range.	12-60
Number of Poor Mental Health Days (mean \pm sd).	16.8 \pm 31.3
Number of Poor Physical Health Days (mean \pm sd).....	20.0 \pm 30.8

NOTE: Cumulative Illness Rating Scale (CIRS; N = 200); World Health Organization- Disability Assessment Schedule II (WHODAS-II; N = 202); CIRS Severity Index = ratio of total CIRS score to the # of categories

As a group, these veterans reported disability in all of the 12 functional areas of the WHODAS-II. The disability reported most often was an inability to walk a long distance such as a kilometer or equivalent (62 percent), followed by an inability to stand for long periods (58 percent). Most of the veterans reported difficulty taking care of household responsibilities (52 percent). The functions that were least often reported as a disability were maintaining a friendship (23 percent) and

washing your whole body (22 percent). Forty-six (24.6 percent) veterans scored a 12, denying any disabilities across the twelve functional categories. Nine (5 percent) veterans scored above a 36 – a score representing a moderate level of disability.

Barriers to Care

Inability to obtain, or delay in obtaining, dental care (20.2 percent) was the most frequently reported category, with prescription medicines (19.3 percent) and primary care (10.8 percent) also frequently reported. The main reason for inability to obtain care/prescriptions, or a delay in obtaining care/prescriptions, was “couldn’t afford,” with responses ranging from 46.7-100 percent across the six categories. For all categories of inability to obtain, or delay in obtaining, care/prescriptions, the majority responded that this issue was notably problematic (range 68.3-100 percent across the six categories).

Sixty-nine percent of the subjects stated that they had never received VA care, tests, or treatments; fourteen percent stated they were unable to obtain, or were delayed in obtaining, VA care. The main reasons for the inability to get, or delay in getting, VA care were “not eligible” and “could not afford VA care.”

DISCUSSION

The current study of rural Alabama veterans who were either not enrolled or not currently utilizing VA services aimed to describe: 1) current medical and mental health care utilization outside the VA, 2) unmet clinical needs, and 3) barriers to health care to better inform future policy, outreach, and health care service development for rurally-residing veterans. Results revealed that 71.4 percent reported they had received non-VA primary care services within the past year. Despite a favorable percentage accessing primary care, a sizable number (33.5 percent) reported a delay in accessing, or an inability to access, at least one basic health care service: primary care, specialty care, mental health care, addictions treatment, dental care, or prescription medication. Discrepancies between desired care and potential need for care were even higher for mental health care services, in that only 9.4 percent reported that they or a health care provider believed they needed mental health treatment in the past year, although 55.7 percent screened positive for at least one Axis I diagnosis. This finding points to a substantial unmet need for further evaluation and treatment of mental disorders.

The prevalence of positive screens for unrecognized and untreated mental illness is consistent with previous findings. Wallace and colleagues (2006) found that psychiatric disorders, except for non-PTSD anxiety, were more prevalent

among rural veterans than urban veterans. Rural veterans have also been noted to have worse mental health status and reduced access to care and greater mental health disease burden, and are likely to incur higher mental health costs when they do seek services. These data underscore that neither the possession of health insurance, nor the receipt of primary care, assures screening and subsequent diagnosis and treatment of mental health problems for which veterans are at risk.

Twenty-two percent of all veterans in the Afghanistan-Iraq-Kuwait most-recent deployment group reported a delay in obtaining, or an inability to obtain, mental health care within the past year, suggesting a greater gap in care for this group; however, any conclusions about differences in the rate that particular subgroups sought services are limited by the relatively small sample size. Yet the finding of mental health need in this group is not surprising given recent studies of veterans returning from recent conflicts such as Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). These studies have demonstrated unmet needs for psychological evaluations and mental health services for OEF/OIF veterans (Hannold, Freytes, and Uphold 2011), and noteworthy rates of positive screening for OEF/OIF veterans for depression (48 percent in men and 39 percent in women) and PTSD (21 percent in men and 33 percent in women) (Haskell et al. 2010). An additional area of concern among OEF/OIF veterans is the interplay of PTSD and mild traumatic brain injury (mTBI). A previous study found that veterans who screen positive for mTBI are more likely to have PTSD than those who screen negative for mTBI; furthermore, PTSD appears to mediate the relationships between mTBI and unmet medical and psychological needs, mTBI and perceived barriers to mental health care, and mTBI and fair/poor overall health (Pietrzak et al. 2009b). Our study had very few veterans who reported mTBI, so further analyses were not possible. Additional studies have suggested that for the OEF/OIF group, negative beliefs about mental health care are associated with decreased likelihood of mental health counseling and medication visits (Pietrzak et al. 2009a). It may be that stigma related to mental health care is also a part of the cultural landscape of rural Alabama, posing an additional barrier to obtaining mental health care in this subpopulation.

Our study is consistent with previously-reported findings that rural-residing veterans have difficulty accessing care due to cost. Delay in obtaining, or inability to obtain, needed health care is of concern because of increased risk of disease progression when care is not provided quickly. Undiagnosed and/or untreated mental illness can progress and ultimately contribute to more severe, expensive, chronic, and complex mental and medical conditions. Increased mortality and

morbidity are associated with untreated medical problems, especially in the southeastern “stroke belt.” The barriers identified in this study continue to highlight the challenge of delivering care to rural veterans with limited financial resources.

The current study offers several strengths: specifically, a large sample size, broad eligibility criteria, use of the patient as unit of analysis, use of community individuals trained as outreach workers rather than more traditional research staff, and specific targeting of veterans who are not currently using VA services. Additional strengths include a comprehensive range of assessments (medical conditions, psychological conditions, barriers) providing a rich dataset for present and future studies. Furthermore, care was taken to clearly define and standardize the selection criteria for a VA rural classification system and a ZIP code level rural-urban community area designation. In addition, our sample offers a representation of rural veterans from recent southwest Asia conflicts. Very few studies concerning rural health issues in veterans have examined or collected data since the current Iraq and Afghanistan operations (i.e., most published studies use data from 2000 or earlier). This study updates the VA’s understanding of a priority population, and begins to shed light on how best to assist this group.

One potential limitation is that the current study design did not compare a rural population with an urban population of veterans. Instead, this study characterizes health care accessibility, health needs, and barriers for a high-priority rural population. In addition, the single-state design (i.e., Alabama) arguably produces a somewhat homogenous sample that could limit generalizability. However, Alabama’s high representation of rural combat veterans (a VA target population), coupled with Alabama’s relatively poor ranking on access to care, identifies a particularly vulnerable veteran population that may inform care priorities for other rural combat veterans nationally.

CONCLUSIONS

A large number of rural Alabama veterans who are nonusers of VA care experience problems with delays in accessing, or inability to receive health care in their communities. Cost is the main barrier to receiving needed health care. Furthermore, a clinically-significant unmet need for evaluation and treatment of mental disorders exists. Directions for future research and clinical programming include developing interventions to improve engagement in, and access to, VA care, to increase mental health screening and evaluations, and to overcome the cost barrier to care. Additional longitudinal research is needed to determine the impact

of VA health care enrollment of rural Alabama veterans on physical and mental health assessment, diagnosis, treatment, and health outcomes.

AUTHORS' TITLES AND AFFILIATIONS

Lori L. Davis, MD: Professor of Psychiatry, University of Alabama School of Medicine; Associate Chief of Staff, Research Service, Tuscaloosa VA Medical Center, Tuscaloosa, AL

Stefan G. Kertesz, MD: Center for Surgical, Medical Acute care Research and Transitions (C-SMART), Birmingham VA Medical Center, Birmingham, AL; Associate Professor, Division of Preventive Medicine, University of Alabama at Birmingham

Ann F. Mahaney-Price, DNP: Research Service, Tuscaloosa VA Medical Center, Tuscaloosa, AL; Tuscaloosa VA Medical Center, 3701 Loop Road East (151), Tuscaloosa, Alabama, 35404; telephone 205-554-2000, ext. 3574 (email: ann.mahaney-price@va.gov)

Michelle Y. Martin, Ph.D.: Assistant Professor of Medicine and Division of Preventive Medicine, University of Alabama at Birmingham, Birmingham, AL

Kroshona D. Tabb, Ph.D.: Center for Surgical, Medical Acute care Research and Transitions (C-SMART), Birmingham VA Medical Center, Birmingham, AL

Kristin M. Pettey, LGSW: Research Service, Tuscaloosa VA Medical Center, Tuscaloosa, AL

Sandre F. McNeal, MPH: Data Analyst, University of Alabama at Birmingham; Center for Surgical, Medical Acute care Research and Transitions (C-SMART), Birmingham VA Medical Center, Birmingham, AL

U. Shanette Granstaff, MPH: Center for Surgical, Medical Acute care Research and Transitions (C-SMART), Birmingham VA Medical Center, Birmingham, AL

Karl Hamner, Ph.D.: Assistant Dean, Nursing and Social Work, University of Alabama, Tuscaloosa, AL

M. Paige Powell, Ph.D.: Assistant Professor of Health Services Administration, School of Health Professions, University of Alabama at Birmingham, Birmingham, AL

Michelle M. Hilgeman, Ph.D.: Research Service, Tuscaloosa VA Medical Center, Tuscaloosa, AL

A. Lynn Snow, Ph.D.: Research Service, Tuscaloosa VA Medical Center, Tuscaloosa, AL; Associate Professor, Center for Mental Health and Aging and Department of Psychology, University of Alabama, Tuscaloosa, AL

Marietta Stanton, Ph.D.: School of Nursing, University of Alabama, Tuscaloosa, AL

Patricia Parmelee, Ph.D.: Director, Center for Mental Health and Aging and Professor of Psychology, University of Alabama, Tuscaloosa, AL

Mark S. Litaker, Ph.D.: Associate Professor of Biostatistics, University of Alabama at Birmingham; Center for Surgical, Medical Acute care Research and Transitions (C-SMART), Birmingham VA Medical Center, Birmingham, AL

Mary T. Hawn, MD: University of Alabama at Birmingham; Center for Surgical, Medical Acute care Research and Transitions (C-SMART), Birmingham VA Medical Center, Birmingham, AL

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