

Chronic Pain in Veterans

A Profile of Patients in a VA Pain Clinic

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What characterizes veterans referred to chronic pain clinics—and which of these characteristics, if any, are associated with a higher pain score? To find out, these investigators considered patients at a regional VA pain clinic.

Pain is one of the most common reasons for seeking medical attention in the United States,¹ with health care utilization five times greater for patients with chronic pain than for patients in the general population.^{2,3} Experiencing chronic pain adversely affects patients' self-reported physical health,⁴ psychological health,⁵⁻⁷ and social and economic well-being.^{8,9} Pain also leads to decreased productivity and lost work days,¹⁰ which represents an estimated cost of \$61.2 billion per year in the United States.¹¹

At the time of this writing, **Dr. Drake** was a faculty member in the department of physical medicine and rehabilitation (PMR) and the director of the Pain Management Fellowship Program, **Dr. Beckworth** was a resident physician in the department of PMR, **Ms. Brown** was a doctoral student in psychology, **Dr. McNeary** was a recent medical school graduate, **Dr. Cifu** was the chairman of the PMR department, and **Dr. Kim** was a pain management fellow, all at the Medical College of Virginia at Virginia Commonwealth University, Richmond. In addition, Drs. Drake and Cifu were faculty members at Hunter Holmes McGuire VA Medical Center (HHMVAMC), Richmond, VA. Currently, Dr. Drake is the medical director of the USAG Schweinfurt Health Clinic, Würzburg MEDDAC, Bavaria, Germany, Ms. Brown is a researcher at the Parkinson's Disease Research, Education, and Clinical Center of HHMVAMC, Dr. McNeary is a resident physician in the department of PMR at William Beaumont Hospital, Royal Oak, MI, and Dr. Kim is a pain management physician in private practice in Warrenton, VA.

In the community, several patient characteristics have been associated with an increased incidence of chronic pain, including increased age, female gender, being divorced or separated, being unemployed or disabled, increased body mass index, and participation in a physically demanding job.^{12,13} Additionally, several studies have described the characteristics of patients who fail to respond to treatments for their pain.¹⁴⁻¹⁶ For example, the results of one meta-analysis revealed that qualifying for or having disability status

the congruence and ability to generalize these findings.¹⁹⁻²²

Patients in chronic pain clinics represent a unique population. Becker and colleagues found that only 39% of patients in a pain clinic were actively working, and nearly 45% were receiving disability assistance. In addition, 58% were diagnosed with either depression or anxiety, and 42% reported that pain affected their sleep.²³

Veteran patients with pain probably represent an even more unique group, owing to pain influences from

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pending was a negative predictor of treatment outcome.¹⁷ Other studies have found unemployment to be a predictor of poor outcome.^{14,18} Unfortunately, differences across these studies in terms of patient populations, pain treatments instituted, and outcome measures used have limited

both their civilian life and their prior military duty. The International Association for the Study of Pain suggests that the experience of pain is based partially on prior experiences.²⁴ The unique nature of military service has been said to influence patient reports of medical and pain symptoms.²⁵⁻²⁷

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Some studies have considered veterans with pain in a primary care setting,²⁸⁻³⁰ but no study has specifically reported the unique characteristics of veterans in a chronic pain clinic.

Attempting to remedy this gap in medical literature, we examined the characteristics of patients upon initial referral to an outpatient pain clinic at the Hunter Holmes McGuire VA Medical Center (HHMVAMC). Additionally, we sought to determine specific patient characteristics correlated with a higher pain score.

STUDY SET-UP

The pain clinic at HHMVAMC is regional and receives patients from Virginia, eastern West Virginia, northern North Carolina, and southern Maryland. After obtaining institutional review board approval, we reviewed the computerized medical records of consecutive initial referrals to the pain clinic for the period of one year (January 1 to December 31, 2002). A total of 269 completed medical records were reviewed from a computer template progress note used to document each new evaluation. Information for these initial progress notes came from patient self-reported surveys, physician interviews, and prior computerized medical records.

We collected the following demographic information: age, gender, ethnicity, marital status, education, and employment status. Employment status was self-reported as working, unemployed, retired, or receiving or applying for disability. Similarly, the following clinical information was collected: psychiatric history, prior opioid use, prior substance abuse, litigation related to pain, disability status (receiving or applying), work-related pain, prior surgery to relieve pain, pain location, and prior pain clinic treatment. Pain was measured in accordance with the numerical rating

Table 1. Characteristics of the pain clinic population at HHMVAMC*

Variable	n	% of patients for whom data is known	% of total no. of patients (including those with unknown data)
Sex			
Male	251	93.3	93.3
Female	18	6.7	6.7
Race			
White	133	63.6	49.4
Black	71	34.0	26.4
Hispanic	1	0.5	0.4
Native American	4	1.9	1.5
Not known	60	22.3	
Marital status			
Married	142	53.6	52.8
Single	33	12.5	12.3
Divorced	66	24.9	24.5
Separated	14	5.3	5.2
Widow/widower	10	3.8	3.7
Not known	4	1.5	
Education			
Less than GED [†]	41	15.8	15.2
GED	26	10.0	9.7
High school	82	31.7	30.5
College, AS [‡]			
or less	80	30.9	29.7
Bachelor's degree	24	9.3	8.9
Master's degree	6	2.3	2.2
Not known	10	3.7	
Employment status			
Working	51	19.0	19.0
Retired	80	29.7	29.7
Disability	112	41.6	41.6
Unemployed	26	9.7	9.7
Work-related pain			
Yes	88	33.7	32.7
No	173	66.3	64.3
Not known	8	3.0	
Litigation			
Yes	19	7.5	7.1
No	233	92.5	86.6
Not known	17	6.3	

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Table 1. Characteristics of the pain clinic population at HHMVAMC* (continued)

Variable	n	% of patients for whom data is known	% of total no. of patients (including those with unknown data)
Surgery to alleviate pain			
Yes	139	51.7	51.7
No	130	48.3	48.3
Prior pain clinic treatment			
Yes	79	35.1	29.4
No	146	64.9	54.3
Not Known	44	16.3	
Prior opioid use			
Yes	193	75.6	73.6
No	64	24.4	23.8
Not known	7	2.6	
Psychiatric history			
Not present	122	45.7	45.4
Present	145	54.3	53.9
Depression	58	21.7	21.6
PTSD [§]	35	13.1	13.0
Depression and PTSD	9	3.4	3.3
Psychosis	1	0.4	0.4
Bipolar disorder	9	3.4	3.3
Stress counseling	4	1.5	1.5
Depression and anxiety	2	0.7	0.7
Unspecified psychiatric diagnosis	27	10.1	10.0
Not known	2	0.7	
Substance abuse history			
None	150	55.8	55.8
Alcohol	57	21.2	21.2
Drug use	29	10.8	10.8
Alcohol and drug use	33	12.3	12.3

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scale (NRS), a verbal pain scale ranging from zero (no pain) to 10 (worst pain ever). Numerous studies have shown it to be valid and reliable,³¹⁻³⁴ and all patients at HHMVAMC who are referred to the pain clinic are assessed using the NRS.

STATISTICAL ANALYSIS

Data from each patient's initial visit was entered and analyzed using the Statistical Package for the Social Sciences (SPSS) version 11.0, for Windows (SPSS Inc., Chicago, IL). Means and standard deviations were calculated for the NRS pain scores and for any continuous variables, such as age. Frequencies were used to examine categorical demographic and clinical variables (for example, race, marital status, and psychiatric disorder). Associations between reported pain (based on the NRS score) and patient characteristics were analyzed. Statistical *t*-tests were used to determine significant differences in pain report among dichotomous (yes or no) independent variables, which included the presence of ongoing litigation, prior opioid use, prior pain clinic treatment, prior surgery to alleviate pain, and pain related to work injury. A series of one-way analysis of variance computations were conducted to evaluate the impact of demographic and clinical variables on pain rating at the initial visit.

PATIENT CHARACTERISTICS

The majority of patients were male, white, and married (Table 1). The average patient age was 55.7 (SD = 12.4). Only 51 (19%) were currently employed and 80 (29.7%) were retired, 112 (41.6%) were receiving or applying for disability, and 26 (9.7%) were unemployed. Of patients whose education level was recorded within their medical record, 88.4% completed two years of college or less.

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The medical review showed that 32.7% had pain that resulted from a work-related injury, 7.1% reported litigation related to their pain, 73.6% reported prior treatment with an opioid, and 29.4% had previously received treatment in a pain clinic. About half (51.7%) of all 269 subjects reported a history of surgery to alleviate their pain.

A history of psychiatric illness was reported by 53.9% of the patients. The most common psychiatric diagnoses were depression (21.6%) and posttraumatic stress disorder (PTSD, 13%), with 3.3% reporting diagnoses of both depression and PTSD. Prior substance abuse was reported by 44.2% of the patients, with 21.2% reporting alcohol abuse only, 10.8% reporting drug abuse only, and 12.3% reporting both.

Pain descriptions and diagnoses varied from fibromyalgia to knee osteoarthritis. Low back pain was the most common pain location (77.3%), followed by knee or thigh (33.1%), shoulder (18.6%), and neck (18.2%). Pain in multiple locations was reported by 63.1% of the patients. The average NRS for the entire population was 7.1 (SD = 2.0).

IMPACT OF CHARACTERISTICS ON PAIN RATING

The only statistically significant difference between groups was found in employment status, with the actively employed patients reporting significantly less pain ($P < .05$) than those who were retired, receiving or applying for disability, or unemployed (Table 2). When selectively analyzing only those patients with reported low back pain, similar findings were found ($P < .05$). Age, ethnicity, gender, marital status, education, work-related injury, prior pain clinic treatment, prior opioid use, surgical history, litigation, psychiatric history,

Table 1. Characteristics of the pain clinic population at HHMVAMC* (continued)

Variable	n	% of patients for whom data is known	% of total no. of patients (including those with unknown data)
Pain locations			
Low back	208	77.3	77.3
Mid-upper back	6	2.2	2.2
Abdomen	7	2.6	2.6
Arm/hand	31	11.5	11.5
Shoulder	50	18.6	18.6
Neck	49	18.2	18.2
Headache	11	4.1	4.1
Knee/thigh	89	33.1	33.1
Ankle/foot	35	13.0	13.0
Genitourinary/ pelvis	8	3.0	3.0
Hip	24	8.9	8.9
Multiple locations	169	62.8	62.8

*HHMVAMC = Hunter Holmes McGuire VA Medical Center. †GED = general equivalency diploma. ‡AS = Associate's degree. §PTSD = posttraumatic stress disorder.

and substance abuse history did not significantly affect pain.

OUR POPULATION VERSUS OTHER PAIN POPULATIONS

The pain clinic at HHMVAMC draws a population of veteran patients with

conducting pain studies of civilian patients have found differences in pain reporting related to age, gender, and marital status. We did not find these associations. These disparities may be due to differences in pain assessment tools or to the predominantly

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characteristics that differ from prior reports of civilian pain clinic populations. For example, researchers

male gender of the veteran population. The almost exclusively male patient population at this VAMC pain

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clinic may have skewed the impact of both gender and marital status on pain scores.

The 53.9% incidence of prior psychiatric disorder we found is similar to a previous civilian pain clinic study in which investigators reported depression and anxiety in 58% of patients.⁶ By contrast, the Veterans Health Study (VHS),³⁵ which looked at the general, male VA outpatient

high percentages contrast the 2001 National Survey of Veterans (NSV), which found that 1.2% of veterans in the general population reported receiving treatment for alcohol or drug abuse³⁹—a surprisingly low incidence.

Two other similarly expected findings among our pain referral patients were the low incidence of employment (less than one in five were em-

disabled³⁵—similar to VA patients without chronic pain.³⁹ On the other hand, Reid and colleagues studied veterans within a primary care setting and found that 70% reported some level of disability.⁴⁰ It's important to note that Reid used a scale that rated pain with daily activities in order to determine disability, whereas we determined disability based on what providers had recorded in patients'

Table 2. Employment correlations with pain rating in the pain clinic population at HHMVAMC*

Employment status	n	Mean NRS [†] pain score	Mean difference from working veterans	P value
Working	48	6.35	--	--
Retired	73	7.44	1.08	.015
Receiving or applying for disability	107	7.23	0.88	.047
Unemployed	22	7.73	1.37	.032

*HHMVAMC = Hunter Holmes McGuire VA Medical Center. [†]NRS = numerical rating scale.

population, found a 40% prevalence of mental disorder.

These differences in the pain clinic population at HHMVAMC are particularly important in light of the well described interaction between psychological disorders, pain, and pain severity.³⁶⁻³⁸ Although the temporal and causal relationships between patient pain descriptions and psychiatric diagnoses is rarely clear cut, when treating pain, the importance of both screening for and appropriately intervening with psychiatric disorders cannot be overemphasized.

OUR POPULATION VERSUS VETERANS WITHOUT PAIN

As we anticipated, both the prior use of prescription opioids and a history of substance abuse were high in this VAMC pain clinic population. These

employed) and the high incidence of disability (more than two in five were disabled). These characteristics also were significantly different than other general veteran populations studied. For example, the 2001 NSV reported that 55% of veterans were employed, 32% were retired, and only 14% were receiving or applying for disability.³⁹ These differences highlight both the devastating impact of chronic pain on productivity and the added challenge health care providers face when caring for patients with pain.

PAIN AND DISABILITY

The relationship between pain and disability in VA patients has been investigated in two earlier studies. In conducting the VHS, Hankin and colleagues reported that only 16% of their chronic pain population were

medical records when patients were asked whether they were receiving disability or applying for it. While these studies were not specifically assessing disability in individuals referred to a pain clinic, they do highlight some of the difficulties inherent in evaluating a patient's "disability."

STUDY LIMITATIONS

While our investigation does provide insight into a specific patient population that has not been well studied, it does have limitations. The retrospective nature of the study restricted data collection to information available on a computerized template progress note. The historical items on this progress note were limited by patient recall. In all cases, we attempted to confirm the patients' reports by reviewing the computerized records.

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In the cases referred from outside facilities, however, this wasn't always possible.

Although the NRS, similar to the visual analog scale, is a valid and reliable means of measuring pain,²⁸⁻³¹ such questionnaires as the McGill pain questionnaire provide a more comprehensive assessment of pain and may be preferable in future investigations.⁴¹ Also, no information about pain related to military service injuries was available upon our review. This data would be useful in this population. In addition, our study was limited to a single health care facility's pain clinic and, therefore, limits the ability to generalize the findings.

While our investigation did not clarify the clinical relevance of all our results, our findings suggest that pain in the enrollees of VA pain clinics should be assessed and managed differently than it is in the general veteran population, the general VA outpatient population, and the civilian chronic pain population. ●

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