



Answering the call to address chronic pain in military service members and veterans: Progress in improving pain care and restoring health

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ABSTRACT

Chronic noncancer pain (CNCP) in military and veteran populations mirrors the experience of chronic pain in America; however, these two populations have unique characteristics and comorbid conditions such as traumatic brain injuries, postconcussive syndrome, posttraumatic stress disorder, and behavioral health disorders that complicate the diagnosis and treatment of chronic pain. Military members and veterans may also be stigmatized about their conditions and experience problems with integration back into healthy lifestyles and society as a whole following deployments and after military service. The military and veteran health care systems have made chronic pain a priority and have made substantial strides in addressing this condition through advances in practice, education, research, and health policy. Despite this progress, significant challenges remain in responding to the wide-spread problem of chronic pain. The purpose of this article is to: (a) examine the state of CNCP in military and veteran populations; (b) discuss progress made in pain practice, education, research, and health policy; and (c) examine research, evidence-based practice guidelines, and expert consensus reports that are foundational to advancing pain care and improving health for military service members and veterans with CNCP. In addition, recommendations are proposed to address this widespread health problem through the expanded use of advanced practice registered nurses, the implementation of models of care, and use of national resources to educate health care providers, support practice, and promote effective pain care.

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Chronic pain, defined as noncancer related, intractable pain persisting for 3 months or longer beyond the time of expected normal healing that does not resolve with treatment (International Association for the Study of Pain, 1986), is a significant and widespread health problem among active duty military service members and veterans. Chronic pain disproportionately affects military personnel with a high rate of 44% among U.S. service members after combat deployment compared to 26% in the general public (Toblin, Mack, Perveen, & Paulozzi, 2011). The Institute of Medicine (IOM) estimates that 30% of the U.S. population suffers from chronic pain; however, the percentage of the veteran population with chronic pain is over 50% (Institute of Medicine, 2011). Common chronic noncancer pain (CNCP) types for military service members and veterans include musculoskeletal pain and combat-related polytrauma pain (Haskell et al., 2012; Higgins et al., 2014). The purpose of this article is to: (a) examine the state of CNCP in military and veteran populations; (b) discuss progress made in pain practice, education, research, and health policy; and (c) examine research, evidence-based practice guidelines, and expert consensus reports that are foundational to advancing pain care and improving health for military service members and veterans suffering with CNCP. In addition, recommendations are proposed to address this widespread health problem through the expanded use of advanced practice registered nurses (APRNs); the implementation of models of care; and use of national resources to educate health care providers, support practice, and promote effective pain care.

Pain in Military and Veteran Populations

Pain among military service members and veterans represents a wide span of pain-related issues. In 2006, 743,547 injury-related musculoskeletal conditions were recorded for military service members with 82% attributed to inflammation and pain from exertional overuse (Hauret, Jones, Bullock, Canham-Chervak, & Canada, 2010). The overall rate for chronic arm and shoulder pain from 2003 to 2012 reflected a 25% increase possibly explained by a greater incidence of joint pain and higher rates of pain among older service members (Armed Forces Health Surveillance Center, 2013). Pain, typically low back pain, is the primary reason for military service members to seek health care (Childs, Wu, Teyhen, Robinson, & George, 2014). Military service requiring the operation of vehicles has contributed to high rates of low back pain (Knox et al., 2011). Complaints of pain in the spine area tend to

increase during training and combat deployments (Cohen, Gallagher, Davis, Griffith, & Carragee, 2012). Rates for chronic pain from combat injuries are higher than other sources of pain and much greater for those who sustained blast trauma from improvised explosive devices (Clark, Walker, Girona, & Scholten, 2009; Stratton, Hawn, Amstadter, Cifu, & Walker, 2014). A 2011 survey of 2,597 soldiers following deployments in Afghanistan or Iraq found that 44% were experiencing chronic pain and 15.1% had used opioids within the past month (Toblin, Quartana, Riviere, Walper, & Hoge, 2014). A retrospective review of fiscal year 2011 Veterans Health Administration (VHA) data on veterans with CNCP (N = 1,437,392) revealed the most common pain types to be arthritis pain (65.1%), back pain (42.1%), and neuropathic pain (13.5%) (Edlund et al., 2014). An executive summary report from the Department of Veterans Affairs, Office of Inspector General (2014) notes that the prevalence of hospitalized patients in VHA facilities discharged to home on opioid therapy for chronic pain ranges from 0.26% to 21.8% with an overall prevalence of 7.7% nationwide.

Table 1 summarizes six studies examining the incidence and prevalence of CNCP in military and veteran cohorts (Clark et al., 2009; Edlund et al., 2014; Higgins et al., 2014; Lew et al., 2009; Outcalt et al., 2014; Pugh et al., 2014). Evidence ratings were done using the rating system for the hierarchy of evidence (level 1—highest to level 7—lowest) from Melnyk and Fineout-Overholt (2011). Two studies used quasi-experimental designs for group comparisons (Clark et al., 2009; Outcalt et al., 2014) and were rated as level 3, whereas the remaining studies were assigned as level 4 evidence reserved for case-control or cohort studies employing descriptive-correlational designs. All these studies found concerning rates of CNCP and even higher rates in veterans of the Operation Enduring Freedom and Operation Iraqi Freedom wars with coexisting traumatic brain injury (TBI) and post-traumatic stress disorder (PTSD) (Lew et al., 2009; Outcalt et al., 2014; Pugh et al., 2014).

Complexity of Chronic Pain

Of importance is the understanding that unrelieved acute and acute persistent pain play a major role in the development of chronic pain. Chronic pain evolves from persistent moderate to severe acute pain that potentially evokes a cascade of cellular, molecular, and neuronal events causing enhanced neurotransmission between neurons and circuits in nociceptive pathways, which leads to “central sensitization.” Central sensitization is a pathological state defined by the inability to effectively modulate pain

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