

## **CHRONIC PAIN CAN BE A MULTISYSTEM DISEASE**

### **Committee of Origin: Committee on Pain Medicine**

Approximately 100 million Americans suffer from pain that lasts weeks to years according to the Institute of Medicine (IOM) report *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education and Research*. The annual national economic cost associated with chronic pain is estimated to be \$560-635 billion – more than diabetes, heart disease and cancer combined. The IOM report also noted that when pain becomes chronic, it is no longer merely a symptom, but a disease in itself, one that fundamentally alters the entire nervous system with significant psychological and cognitive correlates.

Chronic pain, while primarily centered on the nervous system, is a multisystem disease, and as such also involves musculoskeletal, endocrine, immune, inflammatory and other body systems. In addition, genetic and environmental factors contribute to the serious pathophysiological changes observed with chronic pain. The concept of chronic pain as a disease originated from the pioneering work of the anesthesiologist John J. Bonica, M.D. in the 1940s. Further, the evidence to support this conclusion has been summarized in landmark publications by many, including anesthesiologist Michael J. Cousins, A.M., M.B., B.S., M.D. (SYD), F.A.N.Z.C.A., F.R.C.A. Despite the serious multisystem changes associated with chronic pain, signs and symptoms may be subtle and difficult to interpret. Treatment of pain requires an understanding of anatomy, pathology, physiology, pharmacology, epidemiology, and psychology as well as skills in imaging and interventional pain and spinal techniques.

Treatment algorithms for chronic pain are often complex and require integration of an in-depth and continually evolving understanding and expertise in multiple areas of medical practice since treatment must be customized to the individual patient. As Bonica recognized and his successors have confirmed, the disease of chronic pain is most effectively managed in a multidisciplinary setting in which skilled physicians guide patients with chronic pain through all aspects of their medical care. This orchestration involves an actual or virtual neuroscience center of healthcare professionals who diagnose and manage the wide variety of existent chronic pain conditions. Comprehensive knowledge of the spectrum of chronic pain states is vital to appropriately guiding patients through comprehensive, integrated treatment models.

The standard for proficiency in guiding patients with chronic pain through all aspects of medical care is formidable. An effective multidisciplinary team must be led by a physician with fundamental training in the practice of medicine, advanced residency training in a medical appropriate specialty, and extensive clinical experience or subspecialty fellowship training in pain medicine.

An accurate diagnosis is of paramount importance to successful treatment. The pain medicine specialist can analyze the multiple systems involved in triggering and perpetuating the condition, and finally guide patients through selected therapeutic treatments in a timely and systematic manner. The trajectory of optimal treatment will depend upon the specific type of chronic pain and will vary from one patient to another. Individualized care requires sophisticated coordination of other specialty physicians, psychologists, physical and occupational therapists and allied healthcare professionals. The patient's response to therapy must be monitored to ensure optimal progress along the continuum of care. Historically, methods used to assess responses to therapy reflect the seminal efforts of the anesthesiologist

Henry Beecher, M.D. and colleagues to measure subjective responses to analgesic therapy, including the recognition of psychological factors and placebo effects.

Sophisticated, specialized management of chronic pain is not only medically necessary for patients but is essential to ensure optimal utilization of precious healthcare resources. Only a skilled physician trained in pain medicine can accurately determine when a patient with chronic pain should be referred for physical or occupational therapy; perform advanced interventional spine and pain procedures using fluoroscopy with or without digital subtraction angiography, ultrasound or CT; diagnose and treat concomitant disorders such as anxiety, depression and insomnia; and prescribe medications in an evidence-based manner. To do this in a manner in which patients with this disease are optimized in every facet of their care requires individualization and modification of treatment algorithms and advanced physician training in management of the disease of chronic pain.

Most of the treatment options for chronic pain have associated risks. The medications used for the treatment of chronic pain can have side effects ranging from minor annoyances to serious life threatening adverse events. There may be complex drug-drug interactions occurring with many of the pharmacologic agents used to treat chronic pain. Furthermore, there is the special situation of prescription opioids since this class of medication is associated with the growing problem of misuse, abuse and addiction. In addition to the risks associated with pharmacologic treatment of chronic pain, the interventional procedural aspects of chronic pain management carry unique risks. Bleeding, infection, nerve injury, paralysis and death are all possible consequences of interventional procedures and these may occur at a higher rate when performed by unskilled practitioners. Taken together the treatment risks associated with chronic pain management are real and potentially serious. When adverse events occur, their treatment is best handled by a pain medicine physician trained in how to address complications when they arise. Weighing the risks, benefits and alternatives of these therapies and making the safest treatment choice for a particular patient requires a physician with the knowledge, experience, and technical skills acquired with their training in pain medicine.

A lack of advances in pain prevention, education, and research compound the complexities in the diagnosis and treatment of chronic pain. To help address these challenges, the ASA Committee on Pain Medicine recommends that federal agencies and other stakeholders take steps to:

- improve the collection and reporting of data on pain by standardization of patient-centered questionnaires and surveys,
- promote and enable patient self-management of pain,
- reduce barriers to pain care,
- increase collaboration between primary care physicians and pain medicine specialists,
- educate primary care physicians on the judicious and appropriate use of interdisciplinary pain assessment and treatment including advanced specialty care.

The pain medicine physician has the requisite skills, advanced training and tools available to facilitate these recommendations to reduce the societal and economic burden of chronic pain.

Access to care for patients in rural or underserved areas is not compromised by adhering to this rigorous process because physicians currently provide the overwhelming majority of chronic pain services. Although more than a third of Americans are burdened by chronic pain, pain care is available in multiple

settings. Most patients reduce or cope with chronic pain through self-management or by obtaining treatment in the primary care setting. Patients who present with severe persistent pain should be directed for treatment by pain medicine specialists who have access to an interdisciplinary approach and have the education and training to provide an accurate diagnosis, develop and coordinate a safe and effective treatment plan, prescribe and monitor medications, and perform highly specialized interventional procedures.

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