



## *American Chronic Pain Association*

### **COST OF PAIN FACT SHEET**

*Adapted from EFFICACY AND COST-EFFECTIVENESS TREATMENT FOR CHRONIC PAIN:  
AN ANALYSIS AND EVIDENCE-BASED SYNTHESIS\**

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#### **Prevalence of Pain Internationally**

- A review of 15 scientific and medical studies of the causes of disease across multiple countries found that in adults the prevalence of chronic pain ranges from 2% to 40%, On average, approximately 34% of people surveyed reported back pain.
- The World Health Organization estimates that 20% of individuals worldwide have some form of chronic pain ([www.who.int](http://www.who.int))

#### **Prevalence of Pain in the United States**

- According to the Bureau of Labor Statistics, in 2005, lower back injuries were the leading occupational injury in the United States. ([www.bls.gov](http://www.bls.gov))
- It is estimated that over 140 million days are lost to work because of back pain.<sup>2</sup>
- Primary care physicians reported, 18% of back pain patients asserted that they were unable to obtain or maintain full-time work over a 3-year period because of their pain.<sup>3</sup>
- 13% of people with headache reported excessive disability that they experienced due to their symptoms.<sup>3</sup>
- In 2004, 10.1% of all physician office visits and 13.9% of all emergency room visits were due to reports of musculoskeletal symptoms, and 15.6% of all emergency room visits were for general symptoms such as pain.<sup>4</sup>
- 17% of patients seen in primary care report persistent pain<sup>5</sup> and 5% of all patients treated in primary care receive a prescription for an opioid.<sup>6</sup>
- An internet-based survey of 2,569 people with fibromyalgia syndrome determined that over 50% of this sample reported 5 or more visits to health care providers in the previous year, with 13% noting 12 or more visits in this time period and 29% seeking treatment at a hospital emergency department at least once, and some as many as 4 times in the previous year.<sup>7</sup>

#### **Costs and Impact of Chronic Pain and Pain Treatments**

- Direct costs associated with migraine are estimated to be in excess of \$2.4 billion.<sup>8</sup>
- Estimated cost of treatment, per patient, in the first year following failed back surgery for pain in the United States was approximately \$34,716.<sup>9</sup>
- The annual total of both direct and indirect costs for chronic pain are estimated to be as high as \$294.5 billion per year,<sup>10</sup> with back pain alone estimated to cost in excess of \$100 billion per year.<sup>11</sup>

- The costs of health care for patients with chronic pain might exceed the combined costs of treating patients with coronary artery disease, cancer, and AIDS.<sup>12</sup>
- According to pharmaceutical industry data, pain is a \$13.2 billion market.<sup>13</sup>
- Approximately 31,000 lumbar surgeries are performed primarily for pain each year at a conservatively estimated cost of \$27,577 per operation.<sup>14</sup> Using these figures, the cost of lumbar surgery would exceed \$8.6 billion each year.
- The 5-year cost required for treating and maintaining patients with Spinal Cord Stimulators is estimated to be \$144,255. These costs would exceed several billion dollars committed to these devices, related services, and treatment for adverse events.<sup>15</sup>
- The estimated 5-year costs of implantable drug delivery systems (IDDS) range from \$82,893 to \$125,102<sup>9</sup>. The initial costs for screening, hospital, and professional charges can range from \$27,577 to \$55,134.<sup>15</sup>
- Based on a Market Data survey<sup>16</sup>, only about 176,850 (6% of those treated by pain specialists) of chronic pain patients are treated at multidisciplinary pain rehabilitation programs (MPRPs).
- Involvement at an MPRP is labor intensive and can be costly. This is in part due to the number of clinicians involved in providing treatment, and each of the clinicians involved expects payment for the services they provide. Based on the average cost of treatment at MPRPs (\$15,339)<sup>16</sup> and the number treated (176,850), the annual cost of treatment at MPRPs would exceed \$2.7 billion.
- Using the average figure of non-surgical health care expenditures of \$44,599<sup>17</sup>, seven years as the mean duration of pain, the mean number of surgeries of 1.7<sup>18</sup> at an average cost of \$15,000 - \$30,000<sup>19</sup>, the cost of health care alone prior to treatment of patients at MPRPs in 2006 might in excess of \$67 - \$135 billion.
- Projected the costs for back pain alone, the most prevalent chronic pain syndrome, to exceed \$34 billion for health care, \$18.9-\$71 billion for disability compensation, \$6.9 billion for lost productivity, and \$7 billion in legal services.<sup>19</sup>
- Indirect costs associated with migraine are anticipated to exceed \$30 billion each year.<sup>8</sup>
- Patients with rheumatoid arthritis are projected to incur over \$21 billion in medical expenditures and work loss.<sup>20</sup>

### **Effectiveness of Pain Treatments:**

- Based on available cost data, it appears that the cost to improve physical functioning would be \$35,672 (\$15,339/.42) for MPRPS, \$112,781 (\$30,000/.266) for SCS, and between \$73,539 (\$27,577/.374) and \$147,024 (\$55,134/.275) for IDDS. Based on these figures, MPRPS are 2 to 4 times more cost-effective than SCS and IDDS for producing improved physical functioning of patients with chronic pain.
- Return to work (RTW) rates following lumbar surgery have been reported to be as low as 20%.<sup>21</sup>
- Examination of outcomes of lumbar surgery for worker compensation patients reveal that none of the patients in the sample actually returned to work.<sup>22</sup>
- One recent study reported 50% RTW following radiofrequency facet joint denervation for the treatment of low back pain.<sup>22</sup>
- Studies of patients who have been implanted with SCSs suggest that from 5% to 40% eventually RTW.<sup>21, 23, 24,25</sup>
- RTW rates reported for patients treated at MPRPs range from 48% to 65%.<sup>18</sup>

- Two meta-analyses<sup>16,26</sup> confirmed that the long-term effects on RTW pain patients treated at MPRPs were very positive and that the results were superior to other active treatments.
- It is apparent that MPRPs are substantially more cost effective if the criteria is RTW, with MPRPs 12 times more cost effective than conventional medical care, 17.5 times more cost effective than SCS and 30 times more cost effective than surgery.<sup>27</sup>
- Disability payments may exceed medical costs for chronic pain sufferers by a factor of 5. Approximately 50% reduction in rates of disability following treatment at MPRPs.<sup>18</sup>
- Facet joint, epidural, trigger point and sclerosant injections have not clearly been shown to be effective and can consequently not be... recommended” Yet, in the U.S., epidural steroid injections are the most commonly performed pain management procedures.<sup>28</sup>
- Careful examination of the outcomes leads to a general conclusion that MPRPs produce clinical outcomes that are as least as good as the alternatives but at significantly lower costs. Paradoxically, there continues to be resistance of third-party payers to approve and reimburse for treatments at MPRPs.

\* Turk DC, Swanson K, Efficacy and cost-effectiveness of treatments for chronic pain: an analysis and evidence-based synthesis. In: Schatman M, Cooper A. eds. *Multidisciplinary Chronic Pain Management: A Guidebook for Program Development and Excellence of Treatment*. New York: Informa Healthcare, 2007:15-38.

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