Pelvic pain is defined as pain arising within the pelvic cavity, and although a frequent cause of chronic pain in women, it is not an uncommon source of pain in men. Studies have shown the prevalence of chronic pelvic pain to be in the range of 12%-20%, with a lifetime prevalence as high as 33%. Studies from the gynecologic literature suggest that up to 10% of referrals are for chronic pelvic pain and the initial course of treatment is surgical intervention, with the majority of these treatments being laparoscopies.

As a matter of interest, the diagnosis and management of chronic pelvic pain syndromes is not a comprehensively reviewed topic in pain fellowship training programs, with most of the etiologies being studied in the urologic and gynecologic literature. However, pharmacologic, behavioral, rehabilitative and interventional therapies are finding wider acceptance and relevance in the long-term management of chronic pelvic pain conditions. Comprehensive or multidisciplinary pain management strategies, therefore, are increasingly sought in addressing chronic pelvic pain, which can have a life-long, deleterious impact on function, both from a physical and psychological point of view. What follows is a broad overview of the etiologies of pelvic pain, common pharmacotherapeutic approaches and strategies, state-of-the-art interventional pain treatments and a review of the resources available through the Elliot Hospital Pain Management Center.

**General Etiologic Classification**

The pelvis contains a rich and varied array of tissue types, all of which are potential sources of pain. It can be difficult, therefore, to pinpoint the source of pelvic pain and, at times, this becomes an equivocal undertaking, relying, not infrequently, on a trial and error approach. More often than not, the "pain generator" is multi-etiological; that is, residing in multiple tissue sites. As always, history, exam, and laboratory and/or imaging studies are the mainstay of diagnosis and help lead the way toward identifying the source(s) of pain. In very broad terms, these sources of pain may emanate from visceral, neurologic, systemic, or musculoskeletal causes.

**Visceral**

Visceral sources encompass most commonly, gynecologic, gastrointestinal, and genitourinary systems. Gynecologic etiologies may be, in turn, classified as cyclic or noncyclic, with the latter category including neoplasms, adhesions, pelvic congestion and relaxation syndromes. Endometriosis is thought of as being both a cyclic and noncyclic source. Gastrointestinal causes fall frequently under the purview of the general surgeon and include the carcinomas, ulcerative and diverticular diseases. The diagnosis of interstitial cystitis is made if at least 2 of 3 consensus criteria are met: 1) Pain in the subrapubic, pelvic, vaginal or perineal region; 2) Pain on bladder filling relieved by emptying, and 3) Glomerulations on cystoscopy or diminished cystometrogram compliance.

**Neurologic**

Nerve entrapment syndromes, trigger points, and neuromas and neuralgias make up the majority of etiologies under this neuropathic pain category. Specifically, pudendal neuralgia is commonly an entrapment neuropathy, causing pain in the perirectal, perineal, and genital region (penile, clitoral, labial, scrotal). Vulvodynia, in fact, may be a manifestation of pudendal neuralgia. Typically, pudendal neuralgia is worse with sitting, has a lancinating or burning character, and will demonstrate abnormal latency testing of the pudendal nerve(s). Ilioinguinal, iliohypogastric and genitofemoral neuralgias may be idiopathic or arise after herniorrhaphy or other abdominal or pelvic surgery. They are amenable to specific injection or other interventional therapies.

**Systemic**

Chronic pelvic pain can be manifest in lymphoma, neurofibromatosis, acute intermittent porphyria, and systemic lupus erythematosus. Medical management is the mainstay of therapy.

**Musculoskeletal**

Sacroiliitis is a common somatic, chronic pelvic pain, usually presenting as unilateral, low back/upper buttock pain that radi-
ates down the thigh or at times, laterally to the hip. It is seen mostly in the setting of injury or after back surgery. Neuraxial degenerative conditions (scoliosis, spondylolisthesis, arthropathies), fibromyalgia, myofascial pain, and pelvic floor dystonias and spasm, round out this category.

**Treatment**

Medical management is dictated by diagnosis, nature of complaints, and co-morbidities and ongoing drug therapy. In general, visceral, systemic and somatic musculoskeletal pain etiologies respond to NSAIDS, antispasmodics, tramadol and topical modalities such as lidocaine patch and compounded gels. Opioid therapy, while most appropriate for acute pelvic pain syndromes, has limited application in chronic benign pelvic pain. Its implementation should be carefully thought out, taking into account not just physical complaints and refractory nature, but also psychosocial factors. On the other hand, opioid therapy should be within the first line of medications when treating malignant pelvic pain conditions.

The neuropathic class of pain medications, including anticonvulsants, antidepressants, alpha-2 receptor agonists and iv lidocaine infusion therapy all contribute toward management of neuropathic or neurologic-related pelvic pain states. This class of therapies also has a significant role in addressing visceral, musculoskeletal and systemic etiologies. Pregabalin is a relatively new agent, showing particular promise in this regard, and specifically in the management of entrapment neuropathies, such as pudendal neuralgia.

Complementary and alternative medicine, including, but not restricted to, chiropractic, acupuncture, reiki and therapeutic touch, may provide relief and expand upon the limited therapeutic responses seen with conventional therapies.

Rehabilitative interventions play a significant role in the management of acute and chronic pelvic pain conditions. Physical therapy, soft tissue manipulation, and modalities that include TENS and E-stim are particularly well suited interventions for myofascial pain states, dystonias and spasm, and for pain mediated by entrapment, fibrosis or scar formation.

The interventional pain physician has at his/her disposal a variety of treatments aimed specifically at management of chronic pelvic pain. While commonly thought of as “blocks”, these interventions can provide long-lasting relief, as they address both nerve conduction and inflammatory states. While seldom curative on their own, these treatments serve to complement other therapies and provide a break in the chronic pain cycle. These most commonly include lumbar and sacral epidural injections, hypogastric plexus injection, ganglion impar injection, sacroiliac joint injection, trigger point injections, botulinum toxin injection, peripheral nerve injection (ilioinguinal, genitofemoral and iliohypogastric) and pudendal nerve injection. Whenever possible, image guidance is utilized to ensure accurate placement of needle and drug. Image-guided techniques have recently been described for pudendal nerve injection (CT, Ultrasound and more recently, C-arm), ensuring delivery of medication to specific target landmarks.

Other tools available to the interventional pain specialist include neuroablative techniques (radiofrequency, cryotherapy, phenol injection) neuroaugmentation techniques (spinal cord stimulation) and implantation technologies that deliver medication to more central sources (intrathecal pumps and epidural catheter implants). Ziconotide is a novel analgesic derived from a snail toxin, for intrathecal delivery, that may be effective in specific, refractory benign and malignant pelvic pain syndromes. Pulsed radiofrequency denervation of the sacroiliac joint can help provide longer lasting relief than injection therapy alone.

The impact of chronic pelvic pain on psychosocial well-being is not a trivial matter. The literature has thoroughly documented the impact of chronic pain on mood, sleep, relationships and work. Psychological interventions, counseling, cognitive-behavioral therapies, biofeedback, and development of coping skills and strategies are essential interventions that aid in the overall management of chronic pelvic pain. These treatments and services are integral components within the scope of a multidisciplinary practice.

The Pain Management Center at Elliot Hospital (PMCEH) is a multidisciplinary pain clinic and the only pain clinic in the state of New Hampshire that is CARF-accredited. CARF (Commission on Accreditation of Rehabilitation Facilities) is the highest level of accreditation that can be achieved for these types of services. Chronic pelvic pain is managed at PMCEH using a wide array of services and resources. Treatment is tailored to each patient’s individual need and not infrequently, this necessitates interventions aimed at managing not only physical symptoms and health, but psychological well-being as well.