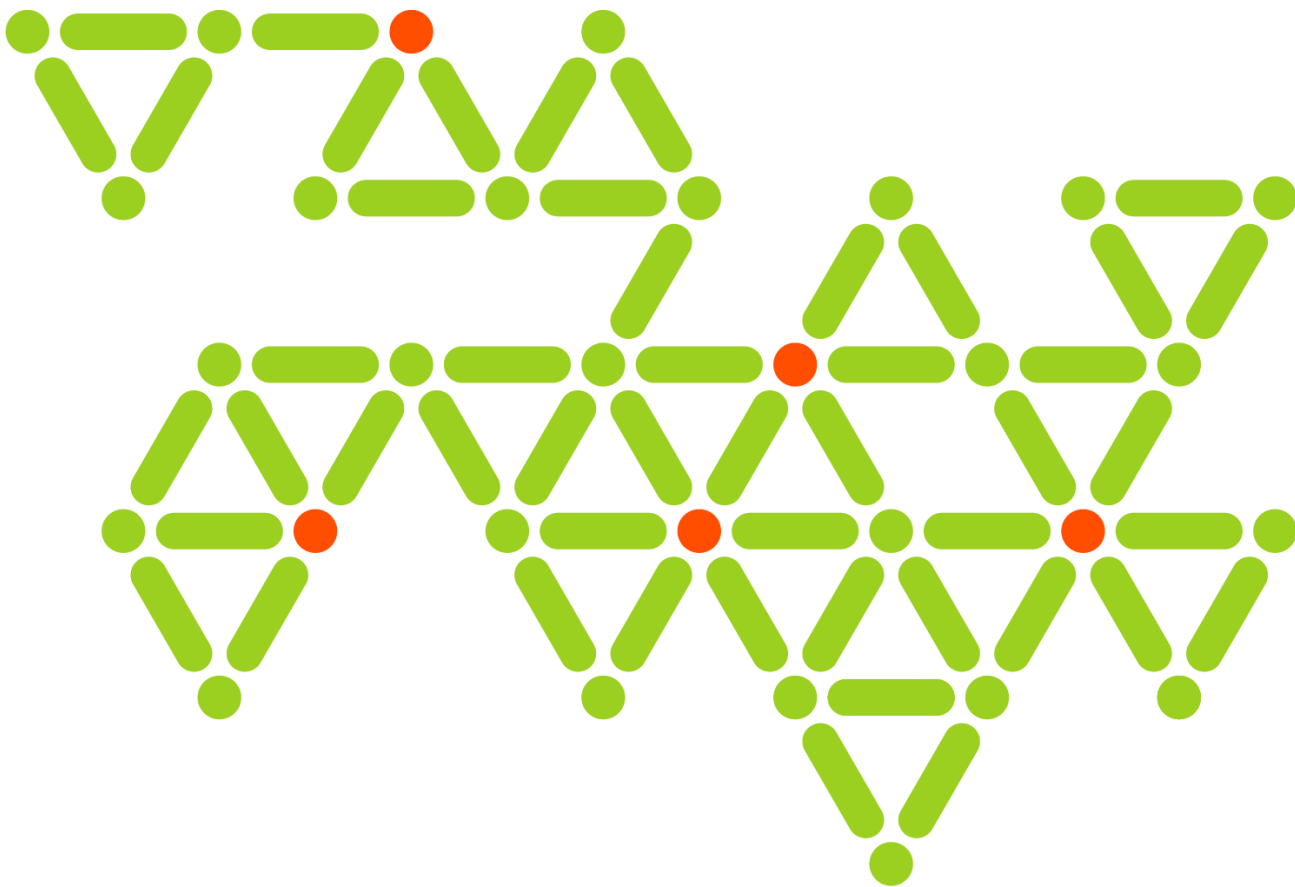


# Comprehensive pain management

A guide for establishing a comprehensive pain management program



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## Overview

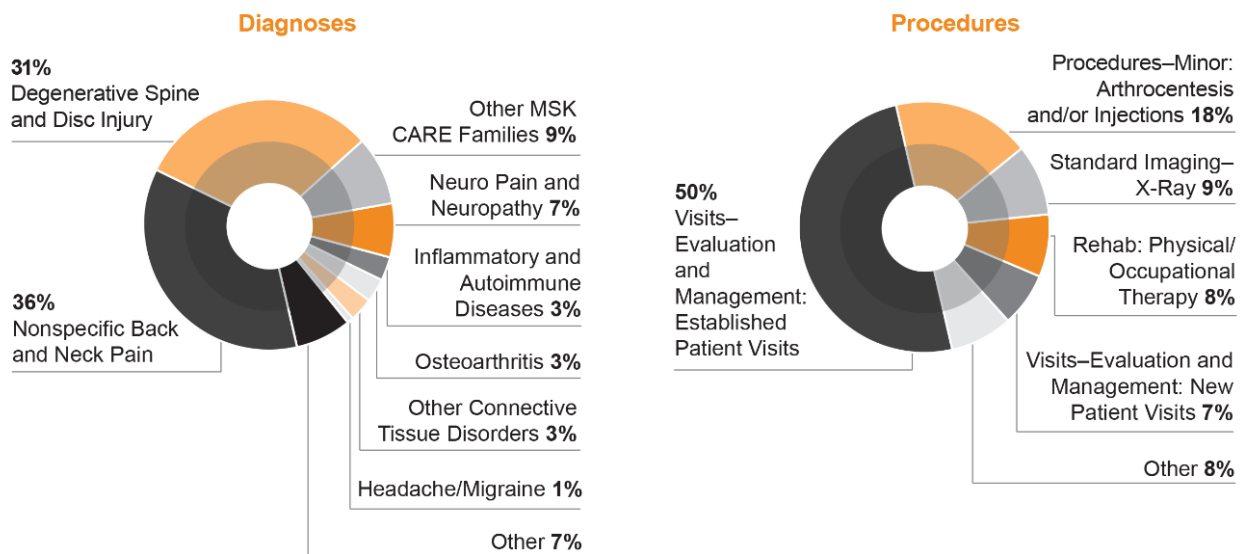
According to the American Academy of Pain Medicine, pain is the number-one reason patients seek medical care. The Centers for Disease Control and Prevention (CDC) estimates that 50 million adults in the U.S. have chronic pain daily.<sup>1</sup> Despite increased opioid prescribing, CDC data suggests there has not been a reduction in the occurrence of chronic pain, while opioid overdose has become one of the leading causes of death in the U.S. Since about 2010, opioid prescribing has declined as a result of increased awareness, improved decision-making and increased access to nonopioid treatments, as well as changes in legislation, regulations and guidelines. However, legislative overreach, misapplication and misinterpretation of guidelines, and the pressure to reduce opioid utilization make the management of chronic pain challenging for both providers and patients.<sup>2</sup> Efficiently and effectively navigating the health care system and accessing an appropriate level of care is critical for patients suffering from chronic pain.

The intent of this document is not to duplicate existing resources for opioid stewardship and prescribing, clinical practice guidelines or best practice reports, but to provide a guide for Vizient<sup>®</sup> members that are working to implement a comprehensive approach to pain management.

## Building a business case

The impact of chronic pain is astounding. In the U.S., chronic pain costs as much as \$635 billion per year and affects almost one-third of the population.<sup>3</sup> According to Sg2<sup>®</sup> (a Vizient company), health care providers face continual challenges in managing chronic pain in their communities.<sup>4</sup> Figure 1 depicts one of the most challenging elements in building a pain program: defining the target population. Sg2 Ambulatory Market Strategist data demonstrate that, although pain programs often focus on patients with spine injuries and other musculoskeletal disorders, conditions such as neuropathy and headache disorders are also commonly addressed.

**Figure 1. Diagnoses and procedures treated by pain providers<sup>a</sup>**



Sources: Sg2 Ambulatory Market Strategist; Health Intelligence Company, LLC; 2016 Sg2 analysis.

Abbreviations: CARE = Clinical Alignment and Resource Effectiveness; MSK = musculoskeletal.

<sup>a</sup> Data represent volumes of pain medicine providers in calendar year 2015.

In addition to identifying target populations, organizations need to assess the available resources in their communities, identify gaps, and consider potential business partnerships and growth opportunities.

## Referral streams

The various sources for referrals — primary care, emergency medicine, surgical and specialty care, patient self-referral — require different strategies to build, maintain and manage those referral streams.

A simple but formal referral process should be used to assist referring physicians. And although referrals from primary and specialty care providers will likely be the primary drivers of volume, patient self-referrals need to be considered. Many chronic pain patients have experienced numerous cycles of fragmented or ineffective care and are seeking a comprehensive program offering a range of treatment options. Therefore, the organization must decide whether and how the program will manage self-referrals.

Establishing whether the referring physician is responsible for determining eligibility or if the pain program will assess and triage will be important to maintaining efficiency as well as physician and patient satisfaction. In general, referring physicians prefer not to determine specific eligibility criteria but instead refer patients when they have exhausted their available resources and expertise, relying on the pain program to triage and manage the patient with the appropriate modalities.

For non-pain specialists (primary care, emergency medicine, surgical care, subspecialty care, etc.), the approach to acute pain and acute-on-chronic pain should entail appropriate, multimodal use of the pharmacologic and nonpharmacologic treatment options outlined in Table 1. In addition to providing analgesia, providers must continue to screen for clinical red flags such as atraumatic back pain with significant weight loss and/or neurologic symptoms or a family history of aortic aneurysms; headaches that are sudden and maximal in onset, exertional, severe with no prior history of headaches, and/or involve neurologic symptoms or vision changes; suspected renal colic in the elderly; or atraumatic extremity pain. Findings such as these likely require additional work-up in addition to pain management.

When a patient's acute or chronic pain is not controlled with the options in Table 1, a more advanced interdisciplinary approach is required and the patient should be referred to the pain program. Patients who should be referred include those with multiple presentations for similar acute pain and any acute-on-chronic pain or chronic pain patients who have not previously been referred to the pain program.

**Table 1. Common first-line pain management approaches**

Nonpharmacologic	Pharmacologic
<ul style="list-style-type: none"><li>• Short-term rest, ice, compression, elevation</li><li>• Heat therapy</li><li>• Physical therapy</li><li>• TENS units</li><li>• Meditation/relaxation techniques</li><li>• Controlled breathing</li><li>• Massage</li><li>• Exercise/yoga/tai chi</li></ul>	<ul style="list-style-type: none"><li>• Acetaminophen</li><li>• NSAIDs/COX-2 selective inhibitors</li><li>• Topical analgesics</li><li>• Muscle relaxants</li><li>• Antidepressants</li><li>• Gabapentinoids</li><li>• Partial opioid agonists</li><li>• Short-term opioids</li><li>• Monitored ketamine or lidocaine infusion</li></ul>

Abbreviations: NSAIDs = nonsteroidal anti-inflammatory drugs; TENS = transcutaneous electrical nerve stimulation.

## Pain program development

The development of a comprehensive pain program is complex; multiple factors will affect the program's success. Table 2 lists crucial elements and attributes of a pain program from basic to comprehensive, to provide structure for a start-up program and components that can be added as the program advances and matures. Program maturity is defined by an increasing level of sophistication in structure, activities and

capabilities. Achieving the comprehensive pain management program goals listed in the table is expected to provide the most complete pain care.

**Table 2. Elements of a comprehensive pain program**

Program element	Attributes by program maturity level		
	Basic	Intermediate	Comprehensive
<b>Strategy</b>	<ul style="list-style-type: none"> <li>Community gaps in care for pain patients are understood.</li> <li>Program goals are established.</li> <li>Initial target patient population is defined.</li> <li>Legislative impacts are understood.</li> </ul>	<ul style="list-style-type: none"> <li>Additional prioritized patient populations are addressed in program goals and initiatives.</li> <li>Telehealth capabilities are leveraged to enhance efficiency and reach; there is a plan to advance capabilities.</li> <li>Community and physician partnerships aligning pain program goals are defined.</li> </ul>	<ul style="list-style-type: none"> <li>Current and future geographic facility footprint by service (e.g., physiatry, rehabilitation, behavioral health) vs. full provider panel is outlined and implemented in stages.</li> <li>Ongoing partnerships are being explored and implemented to advance program capabilities and address community need.</li> </ul>
<b>People</b>	<ul style="list-style-type: none"> <li>A multidisciplinary team is in place (physiatry, behavioral health, and rehabilitation staff; midlevel and primary care providers; interventionalists; pharmacists).</li> <li>Primary care physicians and community stakeholders have been actively engaged to understand community need.</li> </ul>	<ul style="list-style-type: none"> <li>The multidisciplinary team is co-located to enhance the consumer experience and provider communication.</li> <li>Patient navigators support care transitions and the patient experience.</li> <li>CAM providers (e.g., chiropractors, acupuncturists, massage therapists) actively participate in the program.</li> <li>Defined clinician referral channels beyond primary care providers and surgeons exist.</li> </ul>	<ul style="list-style-type: none"> <li>Adequate staffing exists to ensure access within 24 hours for urgent patients and 1 week for nonurgent patients.</li> <li>Programs are in place (specific to pain program employees) to ensure employee health and wellness and job satisfaction.</li> <li>Physician and staff recruitment plans are in place, as appropriate, to ensure program growth and longevity.</li> <li>Clinician CME pain programs exist.</li> </ul>
<b>Services</b>	<ul style="list-style-type: none"> <li>Service offerings include basic diagnostics, medication management, and injections.</li> <li>Behavioral health services are available and offered in individual or group settings.</li> </ul>	<ul style="list-style-type: none"> <li>Virtual health technologies are used for triage and/or patient navigation.</li> <li>An early intervention program to avoid onset of chronic pain is in place.</li> <li>CAM, yoga, pilates and other provider-supported complementary services are provided.</li> </ul>	<ul style="list-style-type: none"> <li>Job-specific services are provided to meet the needs of local employers.</li> <li>Multifaceted virtual health capabilities (e.g., remote monitoring, patient navigation, virtual visits, telerehab) are in place to efficiently address patient and community need.</li> </ul>
<b>Process</b>	<ul style="list-style-type: none"> <li>A self-referral process (separate from physician referral) is outlined.</li> <li>Behavioral health screening occurs with every patient referral.</li> </ul>	<ul style="list-style-type: none"> <li>A multifaceted referral process is in place that expands beyond MSK conditions.</li> <li>Links to the ED are in place to prevent unnecessary ED visits.</li> <li>Direct access to physical therapy is provided as allowed by state practice guidelines to support efficient access.</li> </ul>	<ul style="list-style-type: none"> <li>Processes are in place to support tertiary care referrals (program awareness, referral process, out-of-town patient and family support, follow-up after treatment episode).</li> </ul>

Source: Sg2.

Abbreviations: CAM = complementary and alternative medicine; CME = continuing medical education; ED = emergency department; MSK = musculoskeletal.

## Interdisciplinary staffing

The primary care provider is usually responsible for the management of chronic pain, but it is important to have an interdisciplinary pain management team with all individuals performing at the top of their licenses. This will require reviewing state regulations that apply to advanced practice providers, nurses, pharmacists, physical therapists and other team members to maximize their roles through collaborative practice agreements, protocols and prescriptive authority. Deployment of virtual health technology may be necessary to maximize access to these providers.

Interdisciplinary team members may include:

- Pain medicine specialist
- Psychiatrist
- Anesthesiologist
- Primary care provider
- Advanced practice provider
  - Advanced practice registered nurse
  - Physician assistant
- Clinical nurse specialist
  - Pain team coordinator
  - Nurse navigator
- Physical therapist
- Occupational therapist
- Psychologist
- Pharmacist
- Dietician
- Social worker
- Chiropractor
- Acupuncturist
- Massage therapist
- Personal trainer
- Yoga therapist

## Patient triage and flow

### Role of the pain management coordinator

Patients with acute or chronic pain can enter the health care system through a number of access points: the emergency department, primary care, specialty care, acute care, etc. However, primary care providers are the starting point for most patients with chronic pain. Limited provider time and access to appropriate care options can make the management of chronic pain challenging. Consultations with other providers and recommendations or referrals for additional treatment are necessary, but often lead to fragmented care. Coordination of care is essential to effectively managing chronic pain.

### Pain management coordinator credentials

For patients, the ideal situation would ensure access to a pain medicine physician and an interdisciplinary pain management clinic. However, this does not mean the pain medicine physician needs to be the first point of contact. The reality is there are insufficient numbers of pain management physicians to manage chronic pain. A 2011 Institute of Medicine report noted that for every physician who is board certified in pain care, there are more than 28,500 Americans living with chronic pain.<sup>5</sup> Similarly, the Veterans' Affairs Office of Inspector General found that only 54% of Veteran's Health Administration facilities have a board-certified pain medicine physician on staff.<sup>6</sup>

Effective coordination of care, including triage to the appropriate service, can improve efficiency by reducing the number of unnecessary consults.

## Recommended coordinator responsibilities

- Determining which provider would be the best initial point of contact to evaluate the patient
- Reviewing the intake questionnaire, survey tools and medical records and assessing the patient for “yellow flags” (i.e., psychological indicators that suggest a risk of progression to long-term distress or disability) that may need to be brought to the attention of the evaluating practitioner before the first visit
- Documenting any concerns after review of the patient portfolio so the assessing clinician can be prepared to engage any needed ancillary services such as psychology or addiction medicine
- Reviewing previous diagnostic tests, procedures and other history to ensure that an appropriate work-up is complete before the consultation or referral
- Using appropriate assessment tools to promote a consistent, holistic plan of care
- Assessing patient needs at the initial encounter and matching unmet needs with appropriate support services and other referrals
- Participating in coordinating the plan of care with the interdisciplinary team and promoting timely follow-up on treatment and supportive care recommendations
- Helping patients understand their diagnoses, treatment options and available resources and providing education on nonpharmacologic treatment options for eligible patients
- Serving as an essential link between patients and care providers

## Chronic pain management strategies

### Pharmacologic therapies

Pharmacologic therapies can be effective in the management of chronic pain, and according to the U.S. Department of Health and Human Services (HHS), such therapies should be a part of a *patient-centered, multidisciplinary* approach. There are many common nonopioid therapies that should be used prior to and in combination with opioid medications as appropriate. A growing number of pain syndrome-specific references and guidelines are available to help providers develop plans to treat chronic pain. All medications have their own sets of risks and benefits, and those change over time as the patient’s medical, clinical, biophysical and social circumstances change.

Ongoing monitoring, evaluation and active management of pharmacologic treatments are essential to effective chronic pain management. The pain program will need to establish risk assessment screening and evaluation for pharmacologic therapies, prescribing guidelines and a monitoring program for chronic opioid therapy. The publications “CDC Guideline for Prescribing Opioids in Chronic Pain” and *Quality Improvement and Care Coordination: Implementing the CDC Guideline for Prescribing Opioids for Chronic Pain* should serve as a framework for prescribing and monitoring chronic opioid use.<sup>7,8</sup> The ability to monitor adherence to patient-provider pain agreements or contracts, prescribing practices and urine drug screening are just a few critical monitoring parameters that need to be included.

### Interventional pain management

Interventional pain management employs minimally invasive, nonopioid, technology-based techniques to treat both acute and chronic pain.

Select interventional pain treatment options include electrical neuromodulation (direct or transcutaneous), spinal cord and peripheral nerve stimulators, local or regional analgesia delivered through mechanical pumps or injections, and nerve ablation techniques (e.g., radiofrequency energy or cryotherapy). HHS provides an extensive overview of these technologies, including gaps and recommendations.<sup>9</sup>

Many of these techniques are well established and have been shown to reduce the use of oral pain medications in select settings, but they are often underutilized. A comprehensive pain management program should provide these options where appropriate.

Interventional options vary widely in complexity, ranging from simple office-based procedures to more involved and costly inpatient surgical procedures. Ultimately, their usage may depend on patient factors including refractoriness to other treatments, as well as the clinical evidence supporting their use, their cost-effectiveness, level of training locally and the availability of the technology. The use of such technologies, however, has been growing rapidly in recent years, and this trend is expected to continue given the current focus on multimodality pain management.

### **Nonpharmacologic therapies**

Nonpharmacologic therapies are often referred to as complementary and integrative therapies, but can be first-line or stand-alone treatments. Although there is evidence supporting the efficacy and safety of these modalities, the specific type of pain and the design and thoroughness of the supporting studies should be evaluated before choosing to use nonpharmacologic therapies. Once a relationship has been established between the patient and provider, a customized treatment plan potentially incorporating such treatments can be created depending on patient interest, availability, cost, safety and efficacy.

Because many of these services are provided in the community by licensed and regulated professionals, it is not necessary to provide all of these services within the health system.

### **Acupuncture**

When performed by a competent, certified practitioner, acupuncture is a low-risk procedure with demonstrated benefits for some acute and chronic pain conditions. There are many studies evaluating the efficacy of acupuncture for chronic, non-cancer-related pain of the neck and low back, osteoarthritis, headaches and migraines, as well as other pain conditions.<sup>10,11</sup> Acupuncture has been shown to have a statistically significant positive effect on headache and chronic pain and may also be of benefit for osteoarthritis, ankle sprain, labor pain, prostatitis, temporomandibular joint pain, plantar heel pain, pregnancy-related pain, sciatica, chronic knee pain and endometriosis-related pain.<sup>11</sup> Acupuncture has been included as a treatment option for chronic low back pain (cLBP) in the American College of Physicians' (ACP's) clinical practice guidelines and is recommended for the same condition by HHS and the National Institutes of Health (NIH).<sup>9,12,13</sup>

### **Behavioral health**

Behavioral health therapies are a key component of chronic pain management. Treatments are safe and have a low risk of adverse effects when conducted by an experienced, qualified provider. There are many therapies available, some of which can be effectively delivered via telehealth and web- and app-based programs. The ACP recommends cognitive behavioral therapy, mindfulness-based stress reduction, and progressive relaxation for cLBP.<sup>12</sup>

### **Chiropractic care**

A recent evidence-based evaluation of complementary health approaches reviewed published literature on spinal manipulation and osteopathic manipulation for back pain, neck pain and severe headache and migraine.<sup>10</sup> Spinal manipulation showed positive results for the treatment of back pain and severe headache and migraine when compared with sham, placebo and attention controls. Osteopathic manipulation demonstrated mixed results for back pain compared with the same controls. Compared with usual care, routine care or wait list, both spinal and osteopathic manipulation demonstrated mixed results for back pain.



The authors' overall conclusion was that there is weak evidence to suggest that spinal and osteopathic manipulation might be of some benefit to those with back pain.

### **Dietary and nutritional therapy**

Dietary and nutritional therapy can have a positive impact on overall health and chronic pain. Appropriate weight plays an important role in conditions such as osteoarthritis and cLBP. Weight management can improve mobility and increase the effect of functional and restorative therapies.

The scope and depth of evidence for the impact of nutritional therapies on bodywide inflammation varies. A recent white paper reviewed the current literature.<sup>14</sup>

### **Massage therapy**

Massage has been shown to have a positive effect on neck, shoulder, arthritic, back, headache, temporomandibular joint, postoperative and general pain.<sup>11</sup> Massage had a potential positive effect for nine pain indications; for three of these (shoulder pain, general pain, postoperative pain), support can be found in several systematic reviews.<sup>11</sup> Less robust evidence or mixed findings were noted for the use of massage for a number of other pain conditions.<sup>14</sup> The ACP recommends massage for acute, subacute and chronic low back pain.<sup>10</sup> The NIH recommends massage for neck pain.<sup>13</sup>

### **Movement therapy**

Tai chi has been shown to have a positive effect on osteoarthritis, general pain, chronic pain, and musculoskeletal pain.<sup>10,11</sup> The ACP recommends tai chi for cLBP.<sup>12</sup> HHS found tai chi to be effective for cLBP and the NIH recommends it for osteoarthritis and fibromyalgia.<sup>9,13</sup>

Yoga has also demonstrated a positive effect on cLBP. The ACP and NIH recommend it for cLBP,<sup>12,13</sup> and the Agency for Healthcare Research and Quality has also found it to be effective for that indication.<sup>13</sup>

### **Rehabilitation services**

Physical, occupational and other restorative therapies have benefits for chronic pain beyond improving and maintaining function and mobility. HHS provides reviews of various therapies and identifies the biggest gap as the lack of clarity about indications for various restorative therapies in different pain syndromes.<sup>9</sup>

## **Measuring outcomes and success**

Establishing metrics to quantify performance is essential for improving the pain management program. Table 3 outlines recommended domains and metrics that will allow for a balanced and systematic evaluation of a comprehensive pain program. Core metrics provide fundamental measures of success. More advanced metrics may be used by comprehensive pain management programs to optimize services and care.

**Table 3. Metrics for evaluating a comprehensive pain program**

Domain	Metrics		
	Core	Progressive	Leading
<b>Operational</b>	<ul style="list-style-type: none"> <li>• Cancellation rates</li> <li>• No-show rates</li> </ul>	<ul style="list-style-type: none"> <li>• Wait times for initial appointments</li> <li>• Referrals converted to new evaluations</li> </ul>	<ul style="list-style-type: none"> <li>• Ratio of procedural to E&amp;M visits</li> </ul>
<b>Financial</b>	<ul style="list-style-type: none"> <li>• Gross revenue</li> <li>• Net revenue</li> </ul>	<ul style="list-style-type: none"> <li>• RVU percentile rank</li> </ul>	<ul style="list-style-type: none"> <li>• Revenue realization rate</li> </ul>
<b>Clinical</b>	<ul style="list-style-type: none"> <li>• Percentage of patients receiving opioid medications</li> <li>• Adherence to chronic opioid therapy monitoring guidelines (UDS, pain management agreement/contract, high-dose opioid use, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Number of procedures by procedure type</li> <li>• Use of nonpharmacologic therapies</li> <li>• Referrals to CAM providers</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of time pain management goals are met</li> </ul>
<b>Patient experience</b>	<ul style="list-style-type: none"> <li>• Patient satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Patient satisfaction by provider</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of patients engaged through a virtual health solution</li> </ul>
<b>Workforce</b>	<ul style="list-style-type: none"> <li>• Physician-to-RN ratio</li> <li>• Physician-to-total staff ratio</li> <li>• Physician-to-midlevel provider ratio</li> </ul>	<ul style="list-style-type: none"> <li>• Time to hire for open positions</li> </ul>	<ul style="list-style-type: none"> <li>• Retention rate</li> </ul>
<b>Market</b>	<ul style="list-style-type: none"> <li>• Market share</li> <li>• Referrals</li> </ul>	<ul style="list-style-type: none"> <li>• Referring provider satisfaction</li> <li>• Market share</li> </ul>	<ul style="list-style-type: none"> <li>• Decreased outmigration for pain services</li> </ul>

Abbreviations: CAM = complementary and alternative medicine; E&M = evaluation and management; RN = registered nurse; RVU = relative value unit; UDS = urine drug screening.

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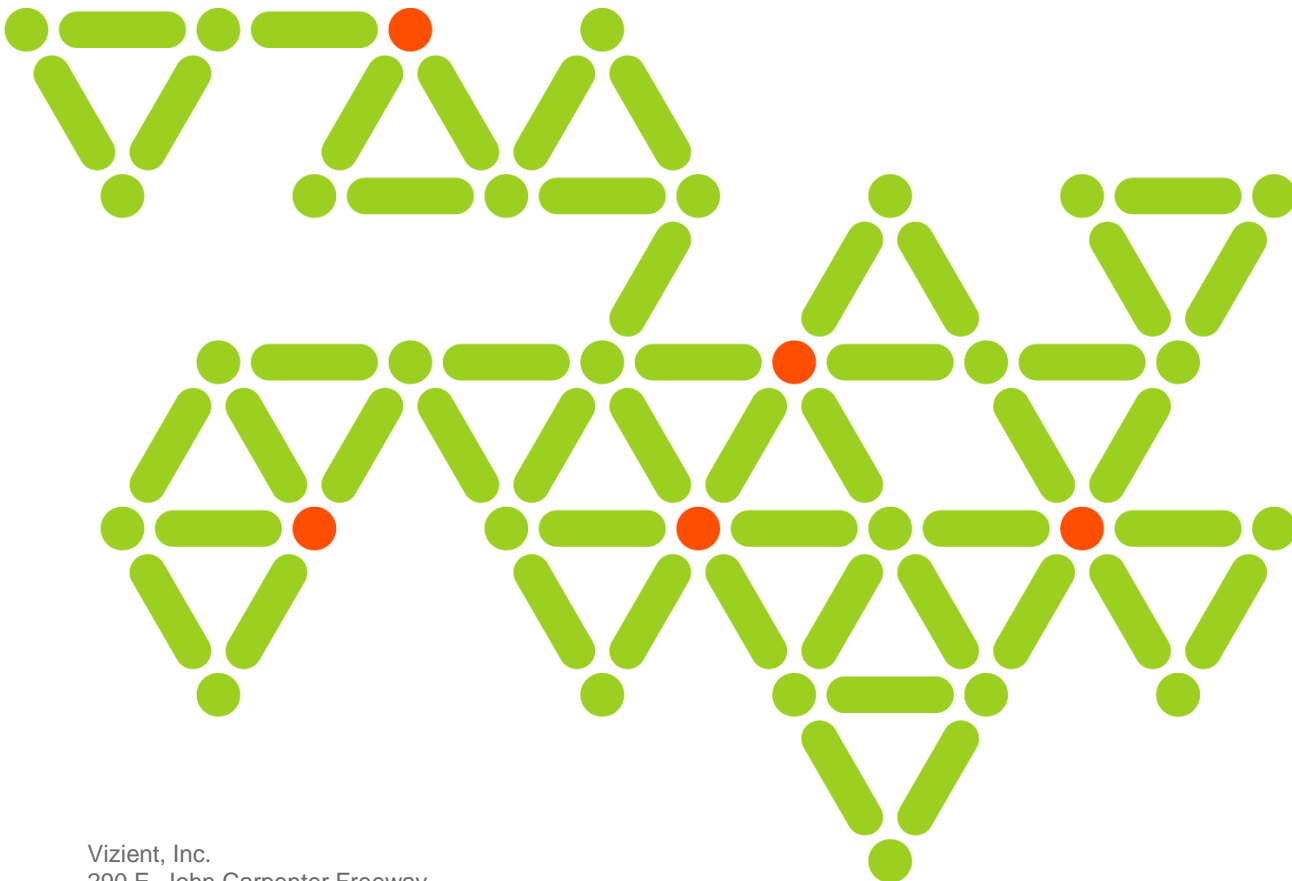
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