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Comprehensive Evaluation for Chronic Pain                    375
   Susan Kuchera Fidler
   Chronic pain is a common presenting problem in primary care offices. Primary pain disorders and chronic pain secondary to another underlying medical problem can significantly impact a patient’s function and quality of life. Chronic pain is a complex diagnosis requiring individualized biomedical, psychosocial, and behavioral evaluations for each patient. Through thorough patient interview, physical examination, diagnostics, and standardized assessment tools, primary care clinicians can create a robust care plan for patients with chronic pain. Given the multifaceted nature of chronic pain, it is a diagnosis that fits into chronic disease model of care managed appropriately in the primary care setting.

Pharmacologic Management of Chronic Pain                     387
   Sarah Coles, William Dabbs, and Susanne Wild
   Pharmacologic management of chronic pain is one component of a patient-centered care plan. Multiple classes of medications are available and can be used individually or in combination. Choice of medication is determined by the type and cause of pain, safety profile of the medication, patient values and preferences, comorbid conditions, cost, and availability. Incorporating shared decision making is critical when implementing a pharmacologic pain management regimen.

Nonpharmacologic and Rehabilitative Strategies to Address Chronic Pain 403
   Hiu Ying Joanna Choi
   With benefits on pain and pain-related outcomes and low-risk profile, there has been an emphasis on nonpharmacologic management of chronic pain. Physical therapy uses exercises, manual therapies, and electrotherapy. Exercises include aerobic, strengthening, and flexibility exercises. Aquatic exercises have similar efficacy to land-based exercises. Multidisciplinary care uses a biopsychosocial approach. All are effective for pain-related outcomes. Occupational therapy focuses on ergonomics, joint protection, orthoses, and assistive devices. Limited evidence exists for tapping, orthoses, assistive devices, thermotherapy, and education on pain-related outcomes. Weight loss in patients who are overweight or obese is effective for pain reduction in knee arthritis.
Trauma and Behavioral Health Care for Patients with Chronic Pain 415
Daniel Salahuddin and Tracey Conti

Chronic pain is a public health problem that affects millions of people; however, those with comorbid behavioral health issues are overrepresented in that number. Although pain can be caused by a variety of factors, it has traditionally been associated directly with physical pathology. We know there is variation in how patients report pain whether in the presence or absence of physical pathology; therefore, pain must be viewed as a complex issue. In this article, the authors review the relationship between pain and mental illness and discuss strategies and various modalities for addressing pain in the primary care setting.

Primary Care-Based Interventional Procedures for Chronic Pain 425
Alex McDonald

Chronic pain interventions in the primary care setting can provide temporal relief and are best used as part of a comprehensive treatment plan. Interventional therapies may use steroids, local anesthetic, saline, prolotherapy, no medication at all (dry needling), acupuncture, or transcutaneous electrical nerve stimulation. These interventions may include adjuvant modalities, such as ultrasound, to improve precision and accuracy of injection. Choice of interventional therapy for chronic pain in the primary care setting is highly dependent on the clinician, location, and cause of the pain as well as a multitude of patient factors, which are discussed in this article.

Chronic Pain Across the Ages 439
Robert L. “Chuck” Rich Jr, Robert N. Agnello, and Garett Franklin

This article examines the occurrence of chronic pain across the human life-span from pediatrics and adolescents through adulthood and concludes with geriatrics (>65). As a subset of the adolescent and adult age group, the article also explores the impact of chronic pain involving the obstetric population. Within the age groups and populations, we explore available information regarding prevalence, epidemiology, and impact of chronic pain surrounding each group as well as some of the common pain conditions and syndromes unique to a given group. While not focusing on treatment, the article reviews physiologic and other factors impacting treatment in a given group.

Management of Chronic Pain in Patients with Substance Use Disorders 455
Kellene Eagen, Laurel Rabson, and Rebecca Kellum

Understanding the risks for substance use disorders (SUDs) and how to diagnose and treat is essential to the safe and effective treatment of patients with chronic noncancer pain (CNCP). Because of the common neurologic pathways underlying addiction and chronic pain and common comorbid mental health and psychosocial challenges, these conditions should be treated concurrently. Depending on setting and comfort level of the provider, primary care clinicians may have the resources to provide office-based treatment or may consider referral to specialty
treatment. An awareness of the stigma facing patients with both CNCP and SUD is important to providing compassionate, patient-centered care.

**Integrative Health Strategies to Manage Chronic Pain**  
Corey Fogleman and Kathryn McKenna  
Chronic pain syndromes include chronic low back pain, tension type and migraine headaches, fibromyalgia, and osteoarthritis. Adjunctive therapies may provide real benefit by themselves, as well as when combined with one another and more traditional treatments such as medication and physical therapy. High-quality evidence, including systematic reviews, and/or clinical practice guidelines support the use of acupuncture, acupressure, massage, and/or mindfulness-based stress reduction (MBSR) in patients with one or more of these chronic pain syndromes.

**Systems-Based Practice in Chronic Pain Management**  
Margot Latrese Savoy  
Chronic pain is a significant public health concern. Care for patients with chronic pain is complex and involves many intersecting systems, policies, and procedures. Applying systems engineering concepts to chronic pain management opens the door to addressing a wide range of performance gaps through a structured, evidence-based approach. Successful implementation of systems-based practice includes effectively incorporating interprofessional teamwork, community resources, team-based care, patient safety, hospital readmissions, use of evidence-based medicine, transitions of care, and care for the underserved, including social determinants of health into the routine delivery of health care services including pain management.

**Ethical Challenges in Chronic Pain**  
Kathleen Reeves and Nora Jones  
Health care providers are ethically obligated to provide effective management for patients suffering from chronic pain. Many patients have not had access to such management, and current bioethical principles are not sufficient to create the roadmap needed on how to improve current standard of care. Principles described in the emerging field of urban bioethics greatly enhance the toolbox available to providers regarding chronic pain management. Redefining the principles of autonomy, beneficence/nonmaleficence, and justice to agency, social justice, and solidarity is essential to having the framework needed to provide more ethical, equitable care.

**Guidelines and Policies: Implications for Individual and Population Health**  
David T. O’Gurek and Menachem J. Leasy  
Rising rates of prescription opioids for chronic pain from the 1990s along with a concomitant worsening overdose crisis led to rapid evaluation and public health strategies to curb problems with prescription opioids. Guideline development, grounded in solid theory but based on limited evidence
that translated into rigid and discordant policies, has contributed to controversies in pain management, worsening the treatment experience for people experiencing chronic pain and highlighting existing inequities from a system clouded with systemic racism. Newer public health approaches need to evaluate root causes and be more holistic addressing inequities as well as using trauma-informed principles.