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Recommended Curriculum Guidelines for Family Medicine Residents

Chronic Pain Management

This document was endorsed by the American Academy of Family Physicians (AAFP).

Introduction

This Curriculum Guideline defines a recommended training strategy for family medicine residents. Attitudes, behaviors, knowledge, and skills that are critical to family medicine should be attained through longitudinal experience that promotes educational competencies defined by the Accreditation Council for Graduate Medical Education (ACGME), www.acgme.org. The family medicine curriculum must include structured experience in several specified areas. Much of the resident's knowledge will be gained by caring for ambulatory patients who visit the family medicine center, although additional experience gained in various other settings (e.g., an inpatient setting, a patient's home, a long-term care facility, the emergency department, the community) is critical for well-rounded residency training. The residents should be able to develop a skillset and apply it appropriately to all patient care settings.

Structured didactic lectures, conferences, journal clubs, and workshops must be included in the curriculum to supplement experiential learning, with an emphasis on outcomes-oriented, evidence-based studies that delineate common diseases affecting patients of all ages. Patient-centered care and targeted health promotion and disease prevention techniques are hallmarks of family medicine and should be integrated into all settings. Appropriate referral patterns, transitions of care, and the provision of cost-effective care should also be part of the curriculum.

Program requirements specific to family medicine residencies may be found on the ACGME website. Current AAFP Curriculum Guidelines may be found online at www.aafp.org/cg. These guidelines are periodically updated and endorsed by the AAFP and, in many instances, other specialty societies, as indicated on each guideline.

Each residency program is responsible for its own curriculum. **This guideline provides a useful strategy to help residency programs form their curricula for educating family physicians.**

Preamble

Chronic pain is a state in which pain persists beyond the expected time for healing of an acute disease or injury (typically greater than three months), resulting in continuous or recurrent pain lasting months or years. It has neurological, emotional, and behavioral features that often impact a patient's quality of life, function, and social roles. Chronic pain is a leading cause of occupational disability and is one of the most common reasons patients visit a family physician.

Patient suffering can evoke empathy and compassion in health care professionals. However, complex psychosocial factors and learned behavior influence how individuals experience pain and interact with the health care system in patients who have chronic pain. These factors can impair the physician-patient relationship. Family physicians are challenged to use new toolkits in their approach to chronic pain and to find new ways of communicating care goals that will engage and activate their patients.

Neuroscience has shown that pain is a neural output of the brain that responds to a threat message. Even without physical injury or pathology, the brain can turn down or up the pain volume. This evolving understanding of how the brain affects pain requires a multidisciplinary approach to chronic pain, re-education of patients, and creative treatment plans that restore function and improve quality of life. Multimodal therapies that include cognitive, physical, and behavioral therapy and non-opioid medications should be the first-line treatments for chronic, noncancer pain.

Chronic opioid therapy (COT) should no longer be considered the mainstay of chronic pain management. While opioid prescription rates peaked in 2012 at 81 prescriptions per 100 people, as of 2019, there continued to be 46 prescriptions per 100 people. In addition, prescription hotspots have emerged, with some areas having rates six times the average.

Despite the widespread use of COT, there is little evidence to support the long-term (greater than 12 weeks) efficacy of COT in improving pain or function, and there is ample evidence of its risk for harm. An alarming rise in deaths from prescription opioids and admissions to drug treatment programs for prescription opioid abuse has mirrored the steep rise in opioid prescriptions. Significant long-term side effects of COT include falls and fractures, hypogonadism, immunosuppression, hyperalgesia, and sleep-disordered breathing. It is of concern that an adverse selection has occurred so that COT is now prescribed more often, for the longest duration, and at the highest doses to the highest risk patients (i.e., those with preexisting substance abuse and mental health disorders).

Training programs need to teach residents safe prescribing practices and skills that will protect their patients' communities, as well as their medical licenses and practices. This

can be achieved by determining an accurate diagnosis, adhering to standardized guidelines, properly documenting cases, and systematically detecting and responding to aberrant patient behaviors. The focus should be on preventing the inappropriate transition from acute to COT and avoiding COT altogether when other alternatives for treating pain may be equally effective and less harmful. Finally, residents must be trained to safely and ethically taper patients off COT when it is determined to be no longer appropriate.

In the past, the focus of attention on the treatment of chronic pain was oriented mainly towards medications. Newer research and evidence suggest that non-pharmacologic treatment of chronic pain is often preferable. Also, prior treatment paid significant attention to measuring pain reduction (often using scoring systems such as the Visual Analog Scale) as a surrogate for treatment success. Current evidence suggests that instead, attention should be turned toward the documentation of functional improvement as a marker of treatment benefit.

This curriculum guideline outlines the competencies, attitudes, knowledge, and skills that should be among the objectives of training programs in family medicine, thereby leading to the safe and appropriate management of chronic pain by family physicians in the future.

Competencies

At the completion of residency, a family medicine resident should be able to:

- Understand the pathophysiology and treatment of chronic pain (Medical Knowledge)
- Understand how the complex interplay of psychosocial factors, cultural factors, adverse childhood events, and gender affect chronic pain (Medical Knowledge)
- Demonstrate empathy and compassion for patients who have chronic pain (Interpersonal and Communication Skills, Professionalism)
- Apply the knowledge of pain, patient-centered treatment, and delivery systems to the care of patients who have chronic pain (Patient Care)
- Conduct a chronic pain chart review to identify strategies for improved care (Practice-Based Learning and Improvement)
- Appropriately utilize available community resources to optimally manage pain (Systems-Based Practice)

Attitudes

At the completion of residency, a family medicine resident should be able to:

- Acknowledge the subjective and individual nature of pain
- Appreciate the biopsychosocial effects of pain and the therapeutic value of empathy
- Recognize the need for a multidisciplinary approach to pain management
- Understand the risk for adverse effects of long-term opioid use, opioid abuse, diversion, physical dependence, and addiction

Medical Knowledge

In the appropriate setting, a family medicine resident should demonstrate the ability to apply knowledge of the following:

1. Fundamentals of pain
    a. Definitions
    b. Epidemiology
    c. Pathophysiology, including central sensitization
    d. Acute to chronic pain continuum
    e. Psychology of pain, including common cognitive distortions

2. Assessment of pain
    a. Diagnosis
        i. History, including past evaluations and treatments
        ii. Physical examination, including non-organic signs (i.e., Waddell signs)
        iii. Diagnostic evaluation, including imaging studies and laboratory tests
        iv. Differential diagnostic considerations
            1) Musculoskeletal
            2) Neurologic
            3) Visceral
            4) Psychologic/psychiatric
    b. Assessment of function across domains
    c. Screening for comorbidities
        i. Chronic disease
        ii. Mental health disorders
        iii. Substance abuse/dependence
        iv. Adverse childhood events
    d. Role of disparities in assessment and treatment of pain
    e. Role of disparities in various contexts (i.e., medicolegal, workers compensation)

3. Categories of chronic pain
    a. Nociceptive (tissue damage or inflammation)
        i. Somatic
            1) Osteoarthritis
            2) Rheumatoid arthritis
        ii. Visceral
    b. Neuropathic (damage or dysfunction of the peripheral nerves)
        i. Peripheral neuropathies
        ii. Complex regional pain syndromes
        iii. Post-herpetic neuralgia
    c. Nociplastic (where there is no identifiable tissue insult with central sensitization)
        i. Fibromyalgia
        ii. Headache
        iii. Low back pain
        iv. Irritable bowel
    d. Psychiatric

i. Major Depressive Disorder
ii. Somatic Symptom Disorder

e. Mixed pain
i. Cancer pain
ii. Neck and back pain with radicular components
iii. Pelvic pain

4. Monitoring of pain
a. Pain and function scale significance
b. Lack of utility of Visual Analog Scales
c. The 4 A's of monitoring and documentation when medication is prescribed
i. Analgesic effect
ii. Activity/function
iii. Adverse reactions
iv. Aberrant behaviors
d. Setting realistic goals, including function
e. Regular follow-up

5. Nonpharmacologic treatment
a. Self-management through lifestyle modification
i. Sleep hygiene
ii. Healthy diet
iii. Smoking cessation
iv. Caffeine use
v. Graded exercise program
b. Physical rehabilitation and restoration of function
i. Physical/occupational therapy
ii. Biofeedback training
iii. Transcutaneous electrical nerve stimulation (TENS) unit
iv. Osteopathic manipulation
v. Ice and heat application
vi. Acupuncture
c. Cognitive
i. Address distressing negative cognitions and beliefs (catastrophizing)
ii. Cognitive-behavioral therapy
iii. Dialectical behavior therapy
iv. Relaxation, mindfulness, stress management
v. Pain neurophysiology education
d. Spiritual
i. Identify existential stress
ii. Seek meaning and purpose in life
e. Complementary/alternative medicine
f. Indications for surgical referral

6. Medications (nonopioid medications)
a. First-line treatments: Pain relievers

i. Acetaminophen
ii. Nonsteroidal anti-inflammatories
iii. Topical analgesics and anesthetics

b. Second-line treatments: Adjuvants
i. Antidepressants
ii. Anticonvulsants

c. Musculoskeletal based injections

d. Naturopathic remedies

7. Chronic opioid therapy (COT)
a. Assessment for COT
i. Does the condition warrant treatment with COT?
1) Lack of evidence for fibromyalgia, headache, and low back pain
ii. Have all other treatments been exhausted?
iii. Is the patient an appropriate candidate for COT?
iv. Does the patient understand the long-term adverse risks of COT?
1) Behavioral/mental health
2) Endocrine
3) Gastrointestinal (GI) issues

b. Opioid medication of choice
i. Characteristics of and differences among opioids, including methadone
ii. Calculate morphine equivalent dose (MED)
iii. Conversion between opioids
iv. Appropriate titration and tapering of opioids

c. Formulating a treatment plan
i. Material risk notice
ii. Informed consent
iii. Maintaining a therapeutic alliance

d. Implementing a therapeutic trial

e. Ongoing management
i. Titration guidelines and dosing limits
ii. Modifying treatment plans based on treatment efficacy and achievement of functional goals
iii. Anticipating and managing side effects
iv. Avoiding disease state and drug interactions and concomitant central nervous system (CNS) acting medications and substances

f. Preventing and reducing aberrant behaviors and abuse
i. Tools to predict risk
ii. Structured management based on risk
iii. Prescription drug monitoring programs (PDMP)
iv. Random urine drug screening

g. When and how to taper and discontinue
i. Substance abuse, misuse, and/or diversion
ii. Ethics of nonconsensual tapering of high dose opioid therapy
iii. Lack of efficacy or no improvement in function
iv. Side effects

h. State and federal regulatory issues
    i. Scheduled drug monitoring systems
    ii. State PDMP systems

8. Delivery system design
    a. Family medicine practice
        i. Establishing a consistent approach to the treatment of chronic pain, including prescribing guidelines
        ii. Changing the patient focus from managing levels of pain to improving functional outcomes
        iii. Education and the role of support staff
        iv. Patient education toolkit
        v. Medication agreement
        vi. Documentation guidelines
        vii. Managing difficult patient behaviors
    b. Interdisciplinary collaboration
        i. Referral to internal or external behavioral health resources
        ii. Referral to physical and/or occupational therapist
        iii. Referral to clinical pharmacist
        iv. Referral to case management
        v. Referral to pain management
        vi. Referral for surgical correction
        vii. Referral for addiction and/or drug detoxification
        viii. Local law enforcement and U.S. Drug Enforcement Administration (DEA) reporting guidelines
        ix. State medical board guidelines for documentation

Skills

In the appropriate setting, a family medicine resident should be able to:

1. Accurately assess and monitor pain, level of function, and quality of life parameters

2. Develop an evidence-based, comprehensive, multimodal treatment plan for chronic pain

3. Communicate effectively with patients, including addressing common cognitive distortions, utilizing motivational interviewing techniques, and pain neurophysiology education

4. Risk stratify patients by assessing mental health and substance abuse risk using validated screening tools

5. Effectively establish a chronic pain medication agreement

6. Properly interpret randomly performed urine toxicology screening tests

7. Adjust treatment plans based on efficacy, function, adverse reactions, or aberrant

behaviors

8. Develop a structured follow-up plan based on risk, capacity, and tolerance

9. Calculate morphine equivalent doses

10. Perform musculoskeletal injections (i.e., joint, tendon/tendon sheath, trigger point, injections

11. Treat special populations, including children, pregnant women, and the elderly

Implementation

The curriculum should be structured as a combination of didactic presentations, workshops, reading materials, web-based modules, case conferences, and chart reviews.

Since pain management occurs in various settings throughout training, the curriculum is well suited to a longitudinal structure. In addition to the components listed above, faculty should model effective pain and systems management in the family medicine center. The residency website can host didactic content, calendars, tests, patient-care resources and tools, and opportunities for advanced training.

Resources

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Website Resources

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Boston University. Safe and Competent Opioid Prescribing Education (SCOPE) of Pain. www.scopeofpain.org/

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