



Managing Chronic Pain Through the Integrated Care Model

Introduction

Chronic pain is a complex, long-lasting condition affecting physical health, mental wellbeing, and social function. The **Integrated Care Model (ICM)** blends primary care, behavioral health, and physical rehabilitation into a unified, team-based approach to address the whole person.

1. Core Framework: The Biopsychosocial Model

Integrated care views chronic pain as a dynamic interaction across three main areas:

- **Biological (The Body):** Nerve signals, inflammation, genetics, and other medical conditions².
- **Psychological (The Mind):** Stress, anxiety, depression, past trauma, and “pain catastrophizing” (expecting the worst outcome)².
- **Sociocultural (The Environment):** Financial stress, social isolation, community ties, cultural values, and systemic factors like discrimination².

2. The Interdisciplinary Care Team

Rather than working in isolation, team members utilize a shared electronic health record (EHR) and communicate frequently to build single care plans together.

- **Primary Care Provider (PCP):** Leads the medical evaluation, manages general health conditions, and oversees baseline treatments.
- **Behavioral Health Consultant (BHC):** A licensed clinician embedded in primary care who introduces practical coping mechanisms, stress reduction, and behavioral sleep strategies.
- **Care Coordinator / Manager:** Guides the patient through appointments, monitors treatment consistency, and connects them with community resources.
- **Physical Therapist (PT):** Creates structured movement plans to restore physical function, build strength and safely lower the fear of movement.
- **Clinical Pharmacist:** Reviews all medications to prevent dangerous drug interactions, watches for side effects, and assists with safe medication tapering.

3. Clinical Workflow & Patient Goals

Step 1: Initial Screening

Clinics should implement brief, validated tools during routine intakes to understand each patient's specific risks and baseline function:

- **The PEG Scale:** A 3-item questionnaire tracking pain intensity alongside how much pain interferes with basic life activities and enjoyment.
- **Mental Health Screeners:** Short tools like the PHQ-9 (depression) and GAD-7 (anxiety).
- **Risk Assessments:** Evaluation tools used before prescribing any controlled substances to look for indicators of potential medication misuse.

Step 2: Shifting to Functional Goals

A core component of integrated care is shifting conversations away from numerical pain scales (e.g., *"What is your pain on a scale of 1 to 10?"*). Instead, clinicians work with patients to set achievable, practical goals (e.g., *"What activities would you like to return to this month?"*).

4. Evidence-Based Treatment Options

A comprehensive care plan combines movement, behavioral health, and appropriate medications.

Physical Activity: The Foundation

Clinical evidence indicates that physical activity is the single most effective foundation for managing chronic low back pain and osteoarthritis¹.

- **Patient Preference:** No specific type of exercise is superior; patients should choose activities they genuinely enjoy (such as walking, swimming, yoga, or physical therapy)¹.

- **Pain vs. Weight Loss:** The goal of exercise is direct pain management and improved movement, independent of weight loss¹.
- **Supportive Tools:** Providing a clear, written exercise plan or introducing wearable activity trackers can help patients stay motivated and gradually build their daily step count¹.

Behavioral Health Strategies

Psychological approaches help rewrite how the central nervous system manages chronic pain:

- **Cognitive Behavioral Therapy (CBT) & Mindfulness-Based Stress Reduction (MBSR):** Both strategies demonstrate clear clinical success in reducing chronic low back pain and neuropathic pain. These approaches build active coping skills and calm an overstimulated nervous system¹.

Clinical Medication Management

Medications should be chosen based on the specific type of pain, prioritizing options where clinical benefits heavily outweigh potential side effects:

- **Osteoarthritis:** Oral/topical Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) such as ibuprofen and naproxen, Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs) such as duloxetine, and joint corticosteroid injections show clear benefit. Acetaminophen shows no statistical benefit over placebo but can be considered cautiously if NSAIDs are contraindicated due to stomach or kidney risks¹.
- **Chronic Low Back Pain:** Oral NSAIDs, SNRIs, tricyclic antidepressants (TCAs), and spinal manipulation show clear benefit. Epidural injections offer no long-term benefit for general low back pain¹.

- **Neuropathic (Nerve) Pain:** Treatments with clear benefit include gabapentinoids, SNRIs, and topical rubefacients (like capsaicin)¹.
- **High-Risk Interventions (Opioids and Cannabinoids):** Extensive evidence indicates that for chronic non-cancer pain, the long-term harms of opioids and cannabinoids (such as severe sedation, dependency, constipation, or lack of long-term effectiveness) generally outweigh their minimal short-term benefits. They should be avoided for most routine chronic pain conditions¹.
- **Tapering and Adjustments:** Pair slow opioid tapering with behavioral therapy. Medications should be adjusted one at a time so the team can accurately identify what is providing relief and what might be causing unwanted side effects¹.

5. Equity Focus: Addressing the Native American Pain Disparity

Data from the 5-year prospective **Oklahoma Study of Native American Pain Risk (OK-SNAP)** highlights a severe health disparity: healthy, pain-free Native Americans (NAs) are four times more likely to develop chronic pain over a 5-year period compared to non-Hispanic White individuals, even when matching for age, sex, and socioeconomic background².

The study demonstrated that this gap is not due to genetics. Instead, it is driven by the physical wear-and-tear of long-term stress, historical trauma, and everyday discrimination. This continuous stress alters how the brain and body process pain through specific, measurable pathways²:

The Stress-to-Pain Pathways

1. **The Anxiety Pathway:** Chronic discrimination creates persistent stress and anxiety, priming the nervous system to be hyper-reactive to pain².
2. **The Physical Strain Pathway (Cardiometabolic Load):** Ongoing sociocultural stress causes an accumulation of allostatic load-- manifesting as elevated body mass index (BMI), higher blood pressure, and low heart rate variability (HRV). Low HRV weakens the body's natural stress "brakes," keeping the body in a fight-or-flight state².
3. **The Faulty Pain-Filter Pathway (Impaired Descending Inhibition):** Due to the steady biological toll of stress and elevated blood pressure, the brain loses its ability to naturally quiet or filter out incoming pain signals. The spine's natural filtration system fails, meaning minor physical signals are amplified into severe pain².
4. **The Sleep Disruption Pathway:** Stress and discrimination severely degrade sleep quality. This lack of sleep directly drives temporal summation--a neurological glitch where repeated, mild painful stimuli feel progressively worse².

6. Adjusting Clinical Care Plans

To disrupt these pathways and provide culturally responsive, evidence-based care, integrated teams should adjust their clinical approach:

- **Prioritize Sleep Restoration Immediately:** Because poor sleep directly damages the body's ability to filter pain signals, treating sleep problems (using behavioral therapies like CBT for Insomnia or sleep-safe, non-addictive medications) must be prioritized early in the care plan, rather than addressed as a secondary symptom².
- **Incorporate Trauma-Informed Intakes:** Behavioral health consultants should gently screen for discrimination-related stress and cultural trauma alongside standard depression and anxiety questionnaires to understand the true source of a patient's chronic stress².

- **Encourage and Validate Cultural Connectedness:** The OK-SNAP research indicates that strong ties to tribal traditions, community events, and cultural practices act as a biological buffer against stress. Clinicians should support and encourage patients to participate in their cultural communities, which helps soothe an overactive stress response².
 - **Treat Combined Systems Simultaneously:** Because stress, sleep, and pain rely on the exact same pathways in the human body, the PCP, BHC, and pharmacist must work in tandem to treat a patient's sleep issues, blood pressure, and anxiety at the same time to successfully calm their chronic pain².
-

References:

¹Korownyk, C. S., Montgomery, L., Young, J., Moore, S., Singer, A. G., MacDougall, P., Darling, S., Ellis, K., Myers, J., Rochford, C., Taillefer, M. C., Allan, G. M., Perry, D., Moe, S. S., Ton, J., Kolber, M. R., Kirkwood, J., Thomas, B., Garrison, S., McCormack, J. P., ... Lindblad, A. J. (2022). PEER simplified chronic pain guideline: Management of chronic low back, osteoarthritic, and neuropathic pain in primary care. *Canadian family physician Medecin de famille canadien*, 68(3), 179-190. <https://doi.org/10.46747/cfp.6803179>

²Rhudy, J. L., Kell, P. A., Brown, T. V., Ventresca, H. M., Vore, C. N., Trevino, K., Jones, B. W., Lowe, T. S., & Shadlow, J. O. (2025). Mechanisms of the Native American pain inequity: predicting chronic pain onset prospectively at 5 years in the Oklahoma Study of Native American Pain Risk. *Pain*, 166(4), 936-955. <https://doi.org/10.1097/j.pain.0000000000003442>

