**Body System:** Musculoskeletal  
**Session Topic:** Osteoarthritis

<table>
<thead>
<tr>
<th>Educational Format</th>
<th>Faculty Expertise Required</th>
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<td><strong>REQUIRED</strong></td>
<td>Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&amp;A during the final 15 minutes of the session are required.</td>
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<td>Interactive Lecture</td>
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<td><strong>OPTIONAL</strong></td>
<td>Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. Please describe your interest and plan for teaching a PBL on your proposal form.</td>
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<td>Problem-Based Learning (PBL)</td>
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**Professional Practice Gap**  
- Family physicians have a knowledge and competence gap related to the screening and prevention of patients at risk of developing OA  
- Family physicians have a knowledge and competency gap related to use of evidence-based treatment options, including nonpharmacologic, CAM, pharmacologic, and surgical referral  
- Family physicians have a knowledge and competence gap related to overall OA management of elderly patients  
- Family physicians have a knowledge and competence gap related to patient participation and adherence to behavioral change and nonpharmacologic

**Learning Objective(s) that will close the gap and meet the need**  
1. Conduct a thorough physical exam of patients who present with the signs and symptoms of osteoarthritis and refer for appropriate diagnostic imaging tests to confirm the condition.  
2. Develop evidence-based treatment plans that focus on a stepwise approach.  
3. Counsel patients on lifestyle modifications they can make to prevent osteoarthritis and safe treatments they can utilize to minimize pain.  
4. Counsel older adult patients to engage in preventive physical and occupational therapy with a goal to maintain function and mobility.

**Outcome Being Measured**  
Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.
Needs Assessment
Degenerative joint disease, also known as osteoarthritis (OA), is the most common joint disorder, affecting an estimated 27 million Americans over the age of 25.¹ Data from the 2015 National Ambulatory Medical Care Survey indicates that family physicians make a diagnosis of osteoarthritis in more than 2.4 million office visits annually.² Two in three people who are obese may develop symptomatic knee OA in their lifetime, and 1 in 4 people may develop painful hip arthritis in their lifetime.³ Family physicians can help patients prevent the onset of OA by providing preventive measures such as weight control recommendations, exercise prescriptions...
and appropriate rest/relief periods to avoid excess stress on affected joints. Because OA tends to develop slowly, patients who express concern about joint pain can be advised to make appropriate activity modifications early in the pathogenesis of the condition to prevent potential exacerbations.\(^1\)

**Practice Gaps**

Data from the 2012 American Academy of Family Physicians (AAFP) CME Needs Assessment Survey indicate that family physicians have statistically significant knowledge gaps regarding the diagnosis and management of patients with degenerative joint disease. More specifically, CME outcomes data from 2012 and 2014 AAFP FMX (formerly Assembly) *Degenerative Joint Disease* sessions, suggest that physicians have knowledge and practice gaps regarding diagnosis confirmation, including appropriate diagnostic testing; effective treatment options, including joint injections; and patient counseling on lifestyle modifications.\(^4,5\)

The *Report of the May 2012 Chronic Osteoarthritis Management Initiative (COAMI) Work Group Meeting and Call to Action* suggests that OA should be viewed as a chronic condition, subject to screening for risk factors, prevention-oriented intervention, ongoing monitoring, and utilize comprehensive care models typical of other chronic diseases.\(^6\) The focus of this work group is to change the paradigm of OA management from an approach that tolerates and expects joint pain, disability, and possibly joint replacement as an inevitable part of aging, to an approach focused on prevention, ongoing monitoring, and chronic disease management strategies in a patient-centered model of care. This report outlines some important patient-level and provider-level barriers and obstacles to optimal management:

- **Patient-level**
  - Behavioral changes to lose weight
  - Behavioral changes to increase physical activity
  - Lack of community support to reinforce behavioral changes
  - Tendency to quickly turn to pharmacologic therapies
  - Lack of awareness that OA is not a normal part of aging
  - Ignoring, and not reporting joint pain

- **Provider-level**
  - Lack of awareness of symptoms, impacts, and treatment options
  - Lack of awareness of need to address risk factors or symptoms of OA
  - Lack of multi-disciplinary approach to management
  - Inconsistent set of recommendations about which modalities to use, when, or with whom
  - Lack of specific guidelines for treating younger patients
  - Lack of tools for gauging levels of disability, pain or loss of function
  - Lack of screening tools that have been tested in different settings

Adherence to evidence-based clinical recommendations and guidelines is a frequent practice gap for physicians.\(^7-9\) Family physicians require continuing education and training to improve the quality of their imaging decision requests, to improve pharmacologic treatment options, to improve nonpharmacologic therapy prescribing and patient adherence, and to improve overall management of OA in elderly patients.\(^10-17\)
In an effort to provide physicians with clinical performance measures, designed for quality improvement of OA management, the American Medical Association (AMA) collaborated with the American Academy of Orthopaedic Surgeons to develop the Osteoarthritis Physician Performance Measurement Set. Family physicians should receive continuing education on utilizing these measures, to establish an OA management quality improvement initiative. Family physicians should be aware of evidence-based studies from the Agency for Healthcare Research and Quality (AHRQ) on the management of OA, especially as it relates to the elderly, as the presence of OA significantly predicts whether or not elderly people will become functionally limited in their ability to care for themselves. Findings from AHRQ studies of OA management have identified several key considerations for management:

- The Chronic Disease Self-Management Program (CDSMP) has helped patients manage their symptoms and reduce health care use. The CDSMP is discussed in Research in Action Issue 3
- The Well Elderly Study showed that providing preventive occupational therapy to the elderly helps improve their personal and social relationships as well as their health status
- NSAIDs provided very little relief of pain or improvement in function, and they were associated with ulcers, bleeding, and gastrointestinal perforation
- Patients who used NSAIDs utilized more hospital and emergency services than nonusers, resulting in increased medical care costs
- The elderly reported better quality of life, less pain, and better physical function after knee replacement surgery
- Surgical complications and mortality rates were lower for surgeons and hospitals that performed more knee replacement surgeries
- Patients have better outcomes when they receive education and training about their condition because they become more involved in their care. Two ways to achieve improved outcomes are through self-management and occupational therapy

Physicians may improve their care of patients with OA by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following:

- Radiography can confirm the diagnosis of OA and may be helpful before surgical referral, but findings tend not to correlate well with symptoms.
- Exercise, physical therapy, knee taping, and tai chi are beneficial for knee OA.
- Ineffective treatments for OA include vitamin D and antioxidant supplements, shoes specifically designed for persons with OA, lateral wedge insoles for medial knee OA, physical therapy for hip OA, ionized wrist bracelets, and hyaluronic acid injections.
- Medical therapy for OA should begin with full-strength acetaminophen and topical therapy, then proceed to nonsteroidal anti-inflammatory drugs and selectively to tramadol and other opioids. Nonsteroidal anti-inflammatory drugs and opioids may reduce pain and improve function, but have significant potential harms.
- Joint replacement should be considered for patients with moderate to severe pain and radiographically confirmed OA.
- Corticosteroid injections may be helpful in the short term, but evidence is mixed.
- Physical therapy using land-based or water-based exercise can help reduce pain and improve function in patients with OA.
Acetaminophen should be used as first-line therapy for mild OA.
Nonsteroidal anti-inflammatory drugs are superior to acetaminophen for treating moderate to severe OA.
Intra-articular corticosteroid injections can be beneficial for short-term (i.e., less than eight weeks) relief of OA pain of the knee.
Compared with intra-articular corticosteroids, intra-articular hyaluronic acid injections of the knee are less effective in the short term, equivalent in the intermediate term (i.e., four to eight weeks), and superior in the long term.
The combination of glucosamine and chondroitin may decrease pain in patients with moderate to severe knee OA, although the evidence for this effect is limited and inconsistent.
Patients who have continued pain and disability from OA of the hip, knee, or shoulder despite maximal medical therapy are candidates for total joint replacement.

Best Practice Recommendations from Choosing Wisely®:19,21
- Do not use glucosamine and chondroitin to treat patients with symptomatic OA of the knee.
- Do not use lateral wedge insoles to treat patients with symptomatic medial compartment OA of the knee.

These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may result in new knowledge and recommendations. These recommendations are only one element in the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

Family physicians require continuing education and training on current evidence-based recommendations and guidelines for the management of OA. As physicians change their approach to OA management, emphasizing more prevention and health coaching, they will require additional continuing education on appropriate documentation and coding of the preventive care visit, as well as strategies to encourage patient participation and adherence.22,23

Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures
- Osteoarthritis: Rapid Evidence Review19
- U.S. Bone and Joint Initiative (USBJI). A New Vision for Chronic Osteoarthritis Management. 20126
- Ottawa panel evidence-based clinical practice guidelines for aerobic walking programs in the management of osteoarthritis14
- AMA PCPI Approved Quality Measures: Osteoarthritis18
- Osteoarthritis: diagnosis and treatment20
- Treatment of knee osteoarthritis24
• Shoulder Osteoarthritis: Diagnosis and Management
• Dietary supplements for osteoarthritis
• Analgesics for osteoarthritis
• American College of Rheumatology 2012 recommendations for the use of nonpharmacologic and pharmacologic therapies in osteoarthritis of the hand, hip, and knee
• Documenting and Coding Preventive Visits: A Physician’s Perspective
• Health Coaching for Patients With Chronic Illness
• FamilyDoctor.org. Osteoarthritis | Overview (patient resource)

References


