Foreword on Moving Forward

Language about **identity**, **diversity**, **equity**, and **inclusion** evolves relatively quickly. The language and terms used throughout this course reflect contemporary best practice and guidance. To ensure continuous alignment with current best practice, terminology will be reviewed and updated as guidelines evolve. For example, when color is used regarding race, capital letters are used (e.g., Black, White, Brown), as recommended by the National Association of Black Journalists.

Patients throughout this course will use varying pronouns, such as she/her, he/him, and they/them, to reflect the range of gender identities that exist within our communities.

CMEO
BriefCase

Joint Health Care: Real-World Tactics to Address Health Inequities

Supported by an educational grant from Johnson & Johnson

CME OUTFITTERS

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Learning Objective 1

Identify the impact of health inequities on patients with joint health concerns.

Previous Activities to Check Out:

CME CAST

Equity and Health Care Disparities: The Role of Leaders in Addressing the Crisis

CMEO BriefCase

Addressing Racial Disparities in Orthopedic Care

CME CAST

Parameters of Pain Care: Mitigating Racial Disparities in Patients with Chronic Pain

CMEO BriefCase

Achieving Equity in the Management of Chronic Pain: Treating the Whole Patient

Audience Response

Which of the following do you think is true regarding joint health disparities in the United States?

A. Disparities in joint replacement rates are only partly explained by differences in the rates of disabling arthritis
B. Disparities in access to orthopedic services improve when financial barriers such as insurance coverage are addressed
C. The frequency of joint health disparities outside of densely populated, urban areas is poorly characterized
D. Black patients receive joint replacements at a lower rate than non-Hispanic White patients
E. I don't know

Health Disparities: How We Got Here[1-5]

Elements of ingrained systemic racism

- Unequal access to housing, education
- Higher exposure to poverty, crime
- ↓ access to fresh food supply
- HCP bias
- ↑ exposure to pollutants, toxins

Indirect effects of systemic racism

- Unequal health care access
- Deviation from SOC
- ↑ depression, anxiety, PTSD
- Elevated stress levels

Long-term effects of systemic racism

- ↓ retention in care
- Pro-inflammatory state

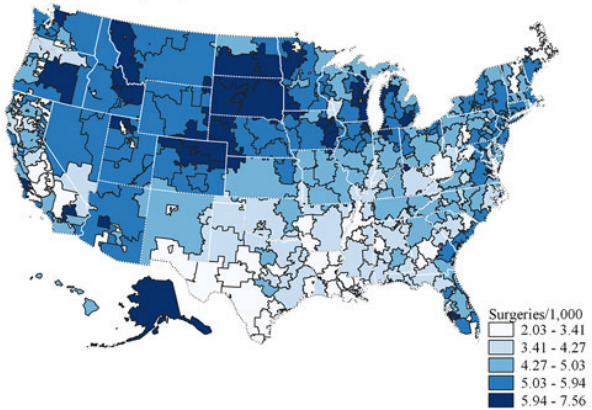
HCP = health care professional; PTSD = post-traumatic stress disorder; SOC = standard of care

1. Hasan B, et al. *Clin Rheumatol*. 2022;31:1-13. 2. CME Outfitters, LLC. 2021. Equity and Health Care Disparities: The Role of Leaders in Addressing the Crisis. 3. CME Outfitters, LLC. 2021. Addressing Racial Disparities in Orthopedic Care. 4. CME Outfitters, LLC. 2021. Achieving Equity in the Management of Chronic Pain: Treating the Whole Patient. 5. CME Outfitters, LLC. 2021. Parameters of Pain Care: Mitigating Racial Disparities in Patients with Chronic Pain.

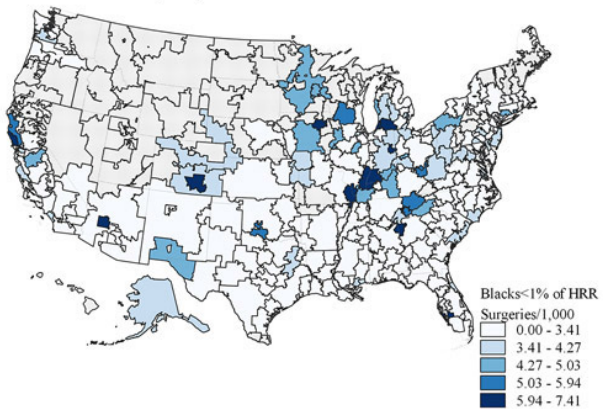
Joint Health Disparities

- Similar prevalence of disabling osteoarthritis between Black, Hispanic, and non-Hispanic White patients[1]
- 35% longer wait between first consultation and joint replacement for Black patients[2]
- Lower rates of joint replacement in Black patients[3]
- Patients with commercial insurance more likely to receive orthopedic appointments[4]

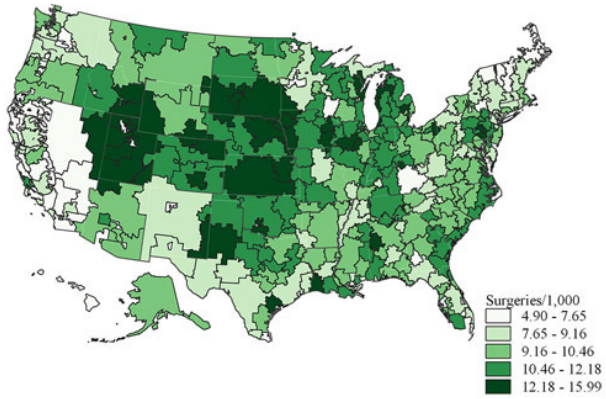
Hip Replacements for White Patients in 2017



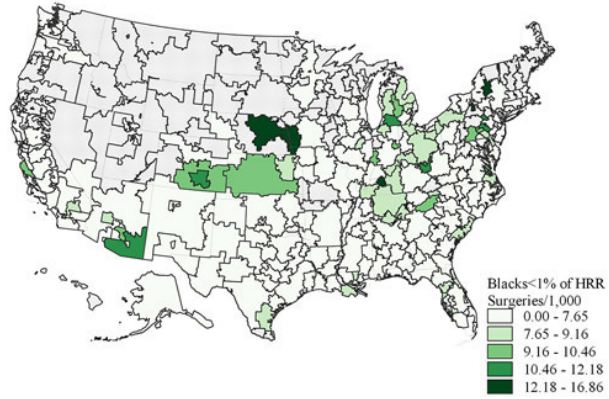
Hip Replacements for Black Patients in 2017



Knee Replacements for White Patients in 2017



Knee Replacements for Black Patients in 2017



1. Burns R, et al. *JAMA*. 2007;99(9):1046-1051. 2. Suleiman LI, et al. *J Arthroplasty*. 2021;36(8):2729-2733. 3. Thirukumaran CP, et al. *J Bone Joint Surg Am*. 2020;102(24):2120-2128. 4. Labrum JT IV, et al. *Clin Orthop Relat Res*. 2017;475(6):1527-1536.

Audience Response

Now, which of the following do you think is true regarding joint health disparities in the United States?

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E. I don't know

Patient Case: Mary

- 52-year-old Indigenous/Native American female with chronic right hip osteoarthritis
- Past medical history: hypertension, postpartum depression
- Height = 5’2”, weight = 176.8 lbs, BMI = 32.3
- Has previously seen a number of clinicians for severe right hip pain; clinical note states that *“she is difficult and noncompliant”*
- Doesn’t work; receives disability benefits secondary to hip pain and limited mobility
- Isolates herself from her family because she feels she cannot contribute
- Unable to work in/out of the house, cook, or help with household chores without having excess pain for the next several days

BMI = body mass index

Patient Case: Mary

- Has tried various creams and herbal remedies with little or no relief
- Intermittent use of acetaminophen; used some NSAIDs
- No current physical therapy/exercise treatment regimen
- Patient-reported goals:
  - States she does not want to have surgery because a family member struggled with opioid addiction after surgery
  - *"I just want to feel better so I can work. I don't have time to drive here for appointments every week"*
  - Misses cooking and working around the house and yard

NSAID = nonsteroidal anti-inflammatory drug

Audience Response

In what percentage of your patients do you screen for social determinants of health (SDoH) during visits or as part of preoperative screening?

A. 0%-25%

B. 26%-50%

C. 51%-75%

D. 76%-100%

Screening for SDoH

Surgery Scheduler provides Core 5 screening tool to patient at appointment check-in[1]:

1. Do you/your family worry about whether your food will run out and you won't be able to get more?

2. Are you worried about losing your housing, or are you homeless?

3. Are you currently having issues at home with your utilities such as your heat, electric, natural gas, or water?

4. Has a lack of transportation kept you from attending medical appointments, from work, or from getting things you need for daily living?

5. Are you worried that someone may hurt you or your family?

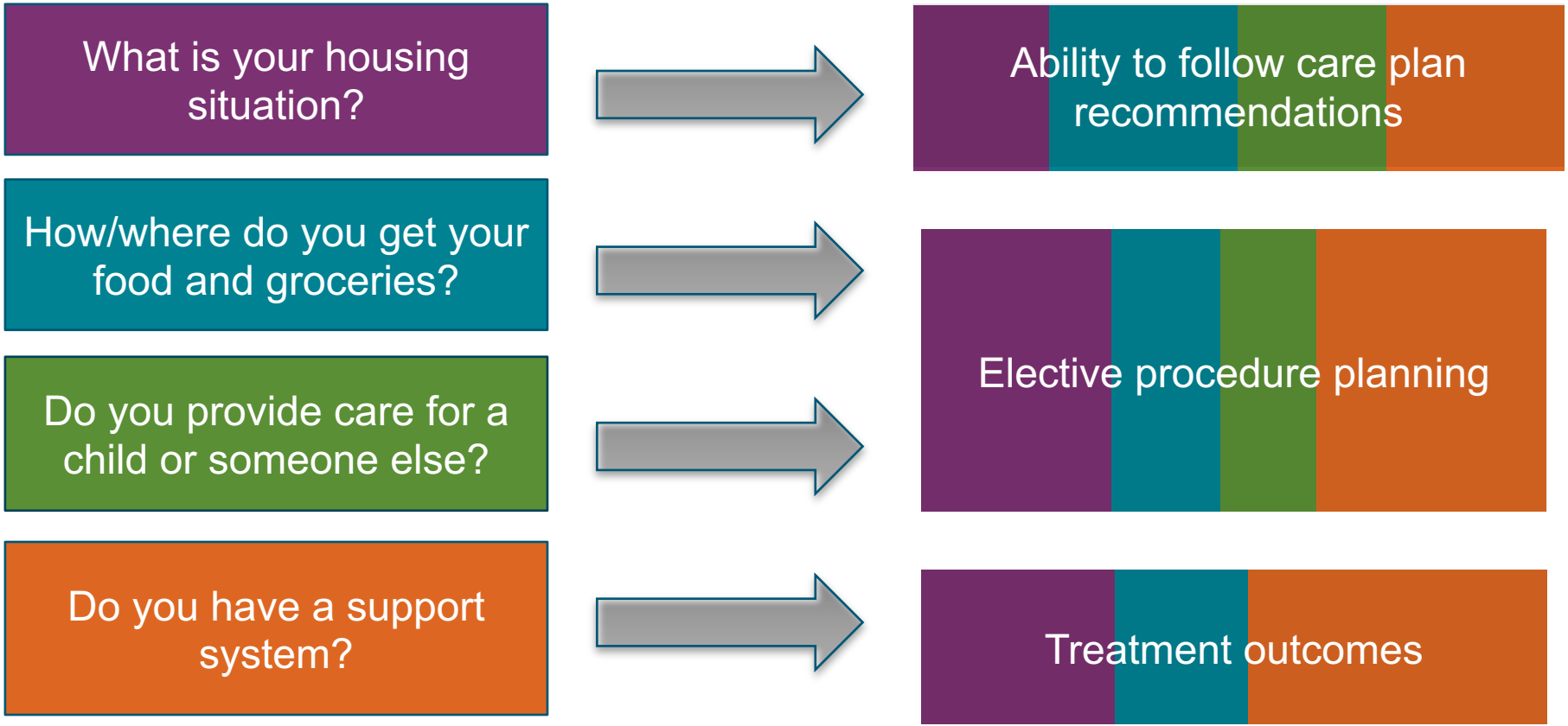
- Estimated 80% of overall health and well-being determined by SDoH
- Screening for SDoH should be universal and standardized
- Screening based on patient demographics or geographic location is not reliable[2]
- Use of the Core 5 screening tool identified social needs that should be addressed prior to neurosurgical intervention in 10% of patients[1]

"*Why treat people and send them back to the conditions that made them sick in the first place*?" ~ Rishi Manchanda[3]

SDoH = social determinants of health

1. Bradywood A, et al. *BMJ Open Quality*. 2021;10:e001362. 2. Cottrell EK, et al. *JAMA Netw Open*. 2020;3(10):e2016852.
3. Manchada R. Duke University Website. 2013. https://dukespace.lib.duke.edu/dspace/handle/10161/7514. Accessed September 21, 2022.

Assessing SDoH



American Academy of Family Physicians (AAFP) Website. 2019. https://www.aafp.org/dam/AAFP/documents/patient_care/everyone_project/hops19-physician-guide-sdoh.pdf. Accessed September 14, 2022.

Audience Response

Now, in what percentage of your patients will you screen for SDoH during visits or as part of preoperative screening?

A. 0%-25%

B. 26%-50%

C. 51%-75%

D. 76%-100%

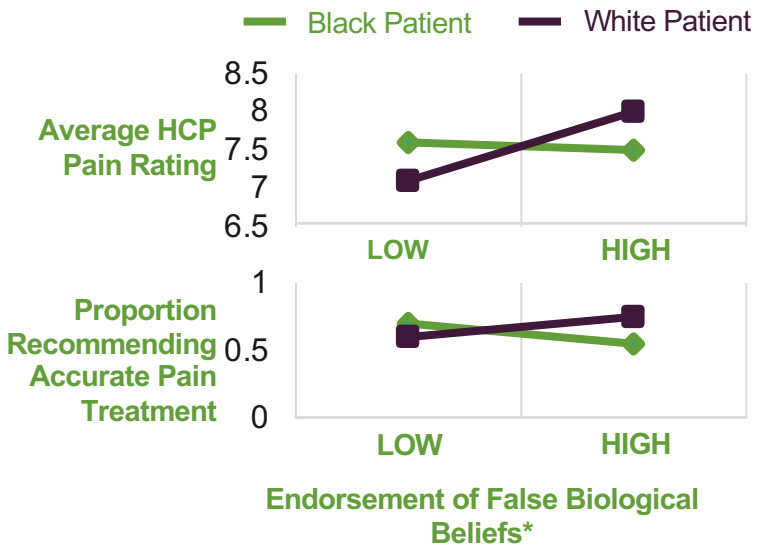
Cultural Competence During the Patient Interview and Physical Exam

1. Discuss physical exam procedures before the patient is in a gown
2. Prior to the exam, explain what the examination will involve and what you are looking for
   - Example: spine and lower back exam involves visualization of the spine while sitting and standing, bending to see how the spine moves, palpation of spine and paraspinal region, leg raise, etc.
3. Before starting exam, ask if the patient is comfortable with the described steps and if they have questions
4. Maintain an open dialogue so the patient feels comfortable asking questions

Berman AC, et al. *Korean J Med Educ*. 2016;28(2):243-249.

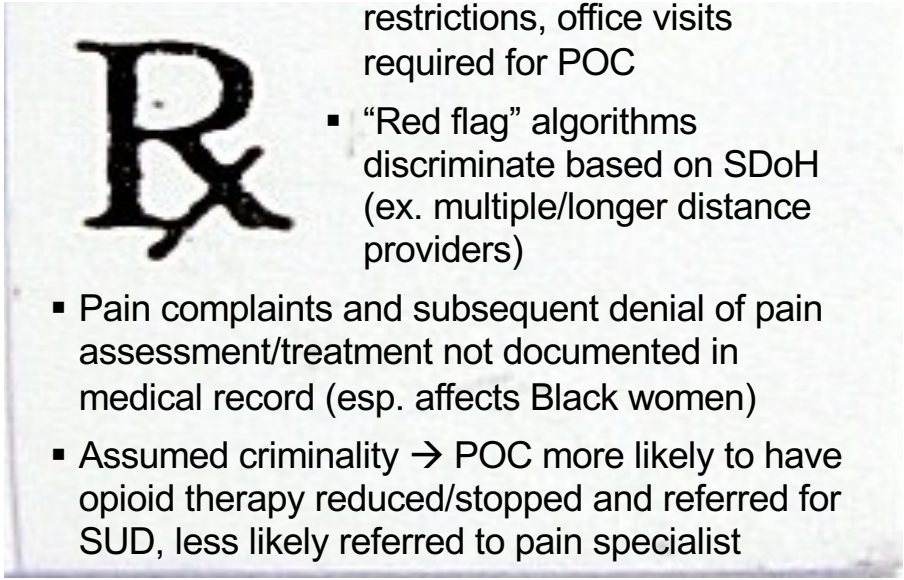
Drivers of Pain Care Disparities

HCP Bias in Pain Recognition



- HCPs who endorse false beliefs about Black bodies (e.g., "*Blacks' nerve endings are less sensitive than whites*'") underrecognize and undertreat pain in Black patients

Institutional PDMP Bias



- More urine drug screens, fill restrictions, office visits required for POC
- "Red flag" algorithms discriminate based on SDoH (ex. multiple/longer distance providers)
- Pain complaints and subsequent denial of pain assessment/treatment not documented in medical record (esp. affects Black women)
- Assumed criminality → POC more likely to have opioid therapy reduced/stopped and referred for SUD, less likely referred to pain specialist

PDMP = Prescription Drug Monitoring Program; POC = people of color; SUD = substance use disorder

Morales ME, et al. *Pain Med*. 2021;22(1):75-90. Netherland J, Hansen H. *Biosocieties*. 2017;12(2):217-238. Gillispie-Bell V. *Obstet Gynecol*. 2021;137(2):220-224. Hoffman KM, et al. *Proc Natl Acad Sci U S A*. 2016;113(16):4296-4301.

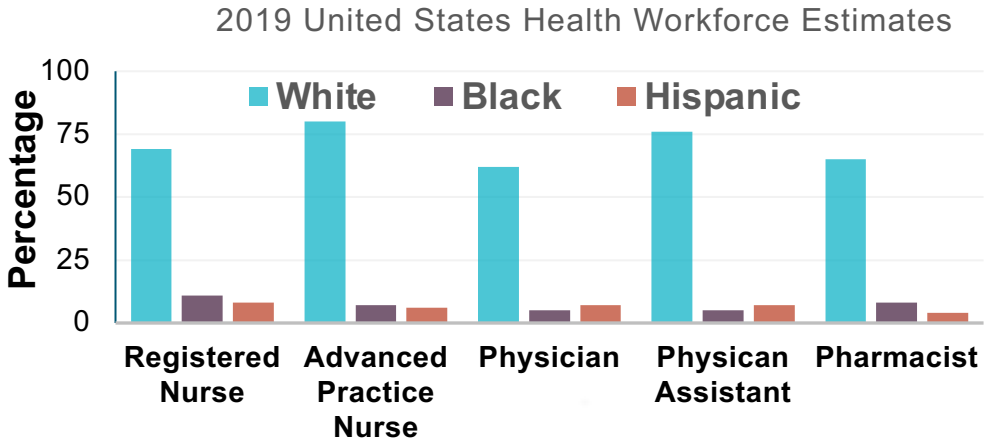
Drivers of Pain Care Disparities

Stress-Induced Hyperalgesia

CAUSE	**Racial discrimination**	Social exclusion
	Generational trauma	Socioeconomic disadvantage
	Health inequities and injustices	Poor mental health
	Medical mistrust	Allostatic overload
EFFECT	**Chronic stress-induced hyperalgesia**	
	Increased sensitization to pain compounded with age	

- While race has no biological foundation, racial discrimination has real biological consequences

Lack of Diversity in Health Care



- Empathy and implicit bias directly correlate with relatability; cultural empathy has only recently been added to health professional training
- Patient-HCP communication and overall satisfaction with care increase with HCP empathy scores

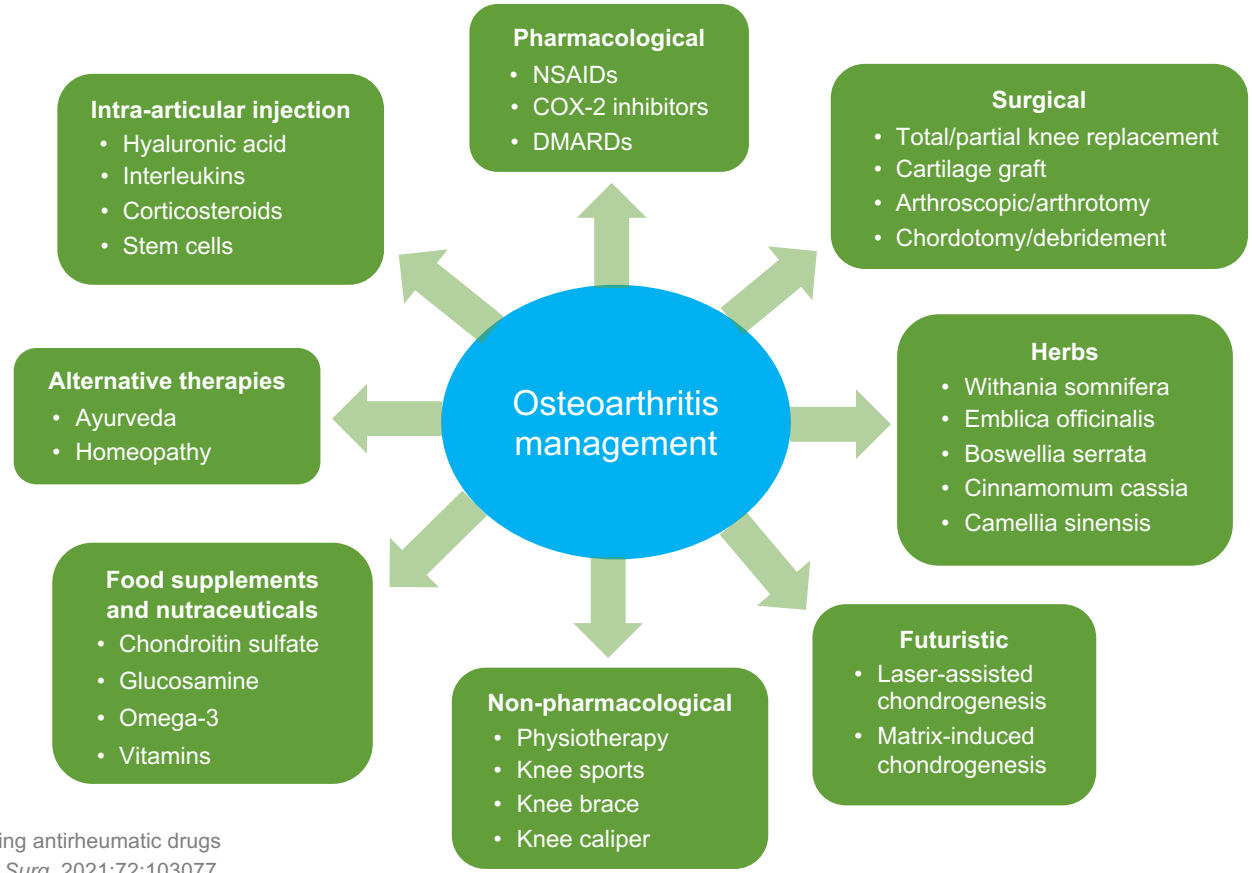
Berger M, Sarnyai Z. *Stress*. 2015;18(1):1-10. Robinson-Lane SG, Booker SQ. *J Gerontol Nurs*. 2017;1-8. Perry M, et al. *Pain Manag Nurs*. 2019;20(3):198-206. Morais CA, et al. *J Pain*. 2022;23(6):878-892. Salsberg E, et al. *JAMA Netw Open*. 2021;4(3):e213789.

Opioid Misuse

- Disparities exist in acute pain management
  - False biological beliefs and superhumanization of Black bodies in the U.S. healthcare system directly relate to underrecognizing and undertreating pain in Black patients
- Bias exists in perception of misuse risk
  - Black patients perceived as having greater risk of opioid misuse than White patients despite lower rates of prescription drug use disorder
- Racial disparities exist in prescribing and monitoring practices in patients receiving long-term opioid treatment among patients with chronic pain

Hirsh AT, et al. *Am Psychol*. 2020;75(6):784-795. Hausmann LRM. *Pain*. 2013;154(1):46-52. Robinson-Lane SG, Booker SQ. *J Gerontol Nurs*. 2017;1-8.

Non-Surgical Management of Osteoarthritis



DMARDs = disease-modifying antirheumatic drugs

Maqbool M, et al. *Ann Med Surg*. 2021;72:103077.

Personalizing Care for Underserved and Underrepresented Patients

- Apply equity-oriented care framework[1]
  - Understand complexity of patient experiences
    - Pain may be discounted, poor access to pain management
    - Consider SDoH as well as cultural and language barriers
- Physical therapy (PT)
  - Recognize the role SDoH plays in patient's ability to go to PT and/or exercise[2]
  - Is in-home PT or PT via telehealth a good option?
- Joint surgery
  - Make minimizing opioid use a goal of care if it is a patient priority
  - Pain can be managed effectively and can be multimodal[3]

1. Craig KD, et al. *Pain.* 2020;161(2):261-265. 2. Angel MR. *Rheum Dis Clin North Am*. 2021;47(1):21-40. 3. Karam J, et al. *J Bone Joint Surg Am*. 2021;103(17):1652-1662.

Learning Objective 2

Individualize treatment strategies that include assessment of SDoH for optimal outcomes in patients with joint pain.

Patient Case: Mary

Physical exam:

- **General exam:** no apparent distress; noted flexion contracture of right hip
- **Spine:** pain on palpation right lumbar region; otherwise unremarkable
- **Lower extremities:** Right hip decreased passive adduction and internal rotation; right hip pain and tenderness with external rotation. Denies numbness, tingling; weakness present on right side
- **Gait:** slow pace, forward lean, asymmetric step length; no assistive device used

Patient Case: Mary

- X-rays of spine and pelvis/hips
- Pelvis/hips:
  - Moderate degenerative changes with joint space narrowing, osteophyte formation, and subchondral cystic changes in right hip
  - No significant degenerative changes of the left hip or sacroiliac joints
- Lumbar spine
  - Disc space narrowing at L2/L3
  - Mild degenerative changes

Ochani P. American Academy of Physical Medicine and Rehabilitation (AAPM&R) Website. 2013. Accessed September 21, 2022.

Personalizing Treatment Options

Build from Prior Therapies

- What do they currently use for pain control?
- What has/has not worked well in the past?
- Patients do not want to be perceived as “drug-seeking”
- Don’t label requests for pain management or specific treatments as “drug-seeking” behavior[1]

Treatment Based on Patient Assessment and Preferences for Care

- Don’t base treatment decisions on radiological findings alone
- Conservative therapies can produce good outcomes[2]
- Review of different SDoH required for each treatment option

Discuss All Available Treatment Options

- Don’t dismiss complementary therapies as ineffective or unimportant[3]
- Anti-inflammatory diet
- Dietary supplements
- OTC treatments
  - Acetaminophen +/- NSAID

OTC = over-the-counter

1. Sun M, et al. *Health Affairs*. 2022;41(2):203-211. 2. Jadidi S, et al. *Cureus*. 2020;12(10):e10829. 3. Corp N, et al. *PLoS One*. 2018;13(7):e0200879.

Factors Underlying Decision-Making for Joint Replacement in Black and Latinx Patients

1. Self-assessment of “fit for surgery” based on age and comorbidities
2. Research and development of mental report cards of their surgeon
3. Reliving of social network experiences
4. Reliance on faith and spirituality for guidance
5. Acknowledgment of fear and anxiety
6. Setting expectations for recovery

Parks ML, et al. *J Long Term Eff Med Implants*. 2014;24(2-3):205-212.

Audience Response

What strategy do you think health care institutions could use to most effectively reduce bias in pain management?

A. Limit the use of urine drug screening
B. Utilize functional instead of numeric pain assessments
C. Implement evidence-based guidelines for pain medication dosing
D. Identify equitable care champions from each specialty service
E. I don’t know

Strategies for Equitable Pain Care

- Identify and address biases, discrimination, and stereotypes
  - Educate health care teams about the existence of pain care disparities and the impact on patient health outcomes
  - Address commonly identified myths and misconceptions
- Recognize the history of scientific racism and distrust toward the medical community
  - Understand complexity of individual patient experiences
  - Traumas are ongoing, not historic; patient trust of HCP is key
- Recognize communication differences that may impact pain assessment/care
- Use validated guidelines, protocols, and checklists to reduce individual discretion (and bias) in pain care
  - Track individual HCP and institutional adherence and care equity outcomes
- Collect data and update strategies based on findings
  - Identify the impact of training programs and protocols
  - Continue to identify new targets for creating equitable care

Telusca N, et al. *Pain Med*. 2022;23(7):1225-1230. Hagiwara N, et al. *Social Science & Medicine*. 2013;87:123-131.

Audience Response

Now, what strategy do you think health care institutions could use to most effectively reduce bias in pain management?

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C. Implement evidence-based guidelines for pain medication dosing
D. Identify equitable care champions from each specialty service
E. I don’t know

Patient Case: Mary

- 60-day follow-up visit
- Using scheduled acetaminophen 650 mg TID
- Walking 6,000 steps most days (uses fitness tracker)
- Some weight loss
- Still has pain but has seen significant improvement in her hip pain
- She has begun to cook again and said that has helped her feel more valued at home, as she cooks for multi-generational family

Discussing Different Treatments

- Talk through each option and discuss best next steps
- Increase dose or combine OTC agents
- Advise her to keep walking and advise that pain may improve with continued weight loss
- Ask her if she wants to continue current regimen or if she would like to try an injection in the hip joint and stay on an OTC (acetaminophen)
- Refer for hip-replacement surgery if needed
- Patient education
  - AAOS videos and articles on diagnosis and treatment: orthoinfo.org
    - Hip exercise program
    - Photos of at-home exercises
    - Insurance and transportation not a barrier

AAOS= American Academy of Orthopaedic Surgeons

American Academy of Orthopaedic Surgeons (AAOS) Website. 2021. https://orthoinfo.org/. Accessed September 14, 2022.

SMART Goals

- Identify inequitable processes and pathways in the prevalence, treatment, and pathophysiology of joint care in minority populations and change outdated pathways or processes immediately
- Incorporate solutions to address racial and ethnic disparities in joint disease diagnosis and management as well as improve access to care
- Integrate simple tools that provide more culturally competent and empathetic care
- Develop personalized treatment plans for the management of patients with joint disease, with consideration for SDoH and patient preferences

SMART = Specific, Measurable, Attainable, Relevant, Timely

Check out the entire series for additional activities, resources, and more.

Cardiology

Gastroenterology

Joint Health

Maternal Health

Mental Health

Obesity

Pain Management

Vaccination

Vision Care

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To Receive Credit

To receive CME/CE credit for this activity, participants must complete the post-test and evaluation online.

Participants will be able to download and print their certificate immediately upon completion.