MAYO CLINIC

Health Disparities and Inequities in the Treatment of Pain

What the Informed Clinician Needs to Know to Optimize Patient Care

Pain Management Nursing 2023 CNE Conference
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LEARNING OBJECTIVES

1. Identify individual and structural factors in healthcare that contribute to health inequities in pain treatment
2. Describe the intersection of individual identities (i.e. "intersectionality") in exacerbating adverse pain outcomes
3. Identify practical clinical and educational strategies that mitigate and dismantle health inequities in patient care

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RELEVANT TERMINOLOGY

- *Race*: **a social and political construction w**ith no inherent genetic or biologic basis. Used to arbitrarily categorize and divide groups of individuals based on physical appearance (particularly – skin color), ancestry, cultural history, and ethnic classification.
- *Gender*: **socially constructed** roles, behaviors, activities, and/or attributes that a given society associates with being a woman, man, girl, or boy, as well as relationships with each other. As a social construct, gender varies from society to society and can change over time.
- *Sex*: **biological** category based on reproductive, anatomical, and genetic characteristics, generally defined as male, female, and intersex; used when describing anatomical, chromosomal, hormonal, cellular, and basic biological phenomena
- *Sex and gender minority (SGM)*: populations include, but are not limited to, **individuals who identify as lesbian, gay, bisexual, asexual, transgender, Two-Spirit, queer, and/or intersex**. Individuals with same-sex or -gender attractions or behaviors and those with a difference in sex development are also included.
- *Intersectionality*: Non-additive impact of being disadvantaged by **multiple sources of oppression** that converge to impact an individual or community in ways beyond the influence of any of those factors individually, coined by Crenshaw in 1989

CSSP (2019) "Key equity terms and Concepts: A Glossary for Shared Understanding" Washington DC, Center for the Study of Social Policy available at https://cssp.org/resource/key-equity-terms-and-concepts-a-glossary-for-shared-understanding/
Sex, Gender, and Sexuality | National Institutes of Health (NIH)
Sex & Gender | Office of Research on Women's Health (nih.gov)
https://www.samhsa.gov/dtac/disaster-planners/diversity-equity-inclusion/key-dei-terms
LGBTQIA+ Glossary of Terms for Health Care Teams » LGBTQIA+ Health Education Center
Microaggressions: Fazio & Olson, 2003; Gawronski & Bodenhausen, 2006; Bargh, 1999; Devine, 1989; Greenwald & Banaji, 1995.

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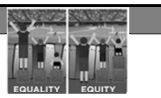
RELEVANT TERMINOLOGY

- *Equality*: effort to **treat everyone the same** or to ensure that everyone has access to the same opportunities. However, this may not consider historical or structural factors that may benefit or disadvantage social groups in taking advantage of such resources. This is term can exacerbate gaps in equity.
- *Equity*: effort to provide **different levels of support** based on an individual's or group's needs in order to achieve fairness in outcomes.
- *Implicit cognitive biases*: **automatic associations** with social groups, often based on **stereotypes** and having the potential to lead to **discriminatory treatment**
- *Microaggressions*: everyday verbal, nonverbal, and environmental **slights, snubs, or insults**, whether intentional or unintentional, which communicate hostile, derogatory, or negative messages to target persons based solely upon their **marginalized group membership**.



https://implicit.harvard.edu/implicit/aboutus.html

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Racial Disparities are widespread in Healthcare

Circulation: Heart Failure

AHA Journals | Journal Information | All Issues | Subjects | Features | Resources & Edu

FULL ACCESS RESEARCH ARTICLE

Racial Inequities in Access to Ventricular Assist Device and Transplant Persist After Consideration for Preferences for Care: A Report From the REVIVAL Study ⊙

PDF/EPUB

Tools | Share

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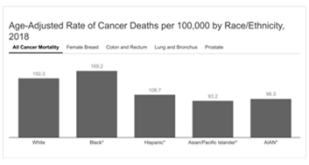
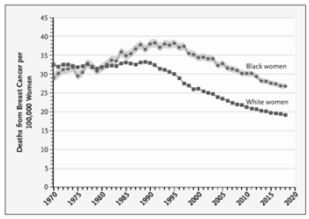


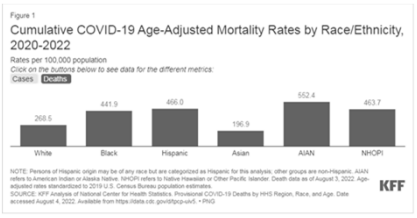
U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2020 submission data (1999-2018): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; www.cdc.gov/cancer/dataviz, released in June 2021.



Trends in Breast-Cancer Mortality among Black Women and White Women in the United States, 1970 through 2018.

N ENGL J MED 386;25 NEJM.ORG JUNE 23, 2022

6



Kaiser Family Foundation www.kff.org

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A Lens THROUGH HISTORY…

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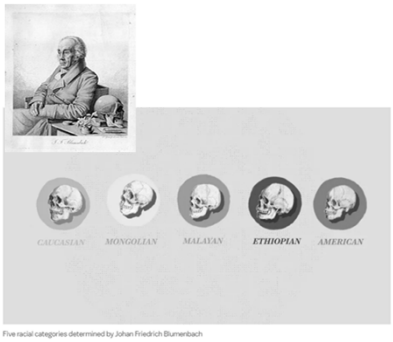
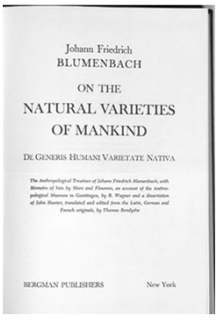


Five racial categories determined by Johan Friedrich Blumenbach

https://www.vox.com/2015/1/13/7536655/race-myth-debunked



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Race Is a Social Construct, Scientists Argue

Racial categories are weak proxies for genetic diversity and need to be phased out

By Megan Gannon, LiveScience on February 5, 2016

https://www.scientificamerican.com/article/race-is-a-social-construct-scientists-argue/

Credit: Liz von Hoene *Getty Images*

More than 100 years ago, American sociologist W.E.B. Du Bois was concerned that race was being used as a biological explanation for what he understood to be social and cultural differences between different populations of people. He spoke out against the idea of "white" and "black" as discrete groups, claiming that these distinctions ignored the scope of human diversity.

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RACE IS NOT REAL BUT RACISM IS….

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- **Structural racism** refers to the totality of ways in which societies foster **racial discrimination** through **mutually reinforcing systems** of **housing, education, employment, earnings, benefits, credit, media, health care and criminal justice**.
- **These patterns and practices in turn reinforce discriminatory beliefs, values** and **distribution of resources**

[1]Bailey ZD, et.al. Structural racism and health inequities in the USA: evidence and interventions. *Lancet*. 2017; 389 (10077):1453-1463.

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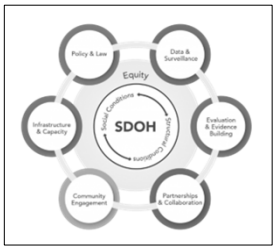
Social determinants of health

- The **nonmedical factors** that influence Health Outcomes
  - The conditions in which people are born, grow, work, live, and age
  - The wider set of forces and systems shaping the conditions of daily life



www.cdc.gov

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Misconceptions about pain along racial lines

- **Dates back centuries**
  - Cartwright 1851, "blacks are insensible to pain due to less sensitive nervous system"
  - "Blacks could tolerate surgical operations with little pain"

Wiki.org

- 1846-1849, J. Marion Sims performed gynecological procedures on enslaved black patients without anesthesia

Wiki.org

Wiki.org

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Unethical experiments on black subjects due to notion of less pain and injury

- **Mustard gas on black soldiers during World War II**

Black enlisted men were used as human guinea pigs in chemical experiments during World War II—not by Nazi Germany, but by Uncle Sam.

By David Love

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Tuskegee syphilis experiment (Federally funded program) in black men 1932-1972

Wiki.org

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- Survey of 222 Caucasian white medical students and residents, 92 Caucasian non-healthcare personnel
  - "Black skin is thicker than whites and less likely to experience pain"
    - 58% of the general population, 40% of medical students, 25% of residents.

Clinical Trial > Proc Natl Acad Sci U S A. 2016 Apr 19;113(16):4296-301.
doi: 10.1073/pnas.1516047113. Epub 2016 Apr 4.

Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites

Kelly M Hoffman [1], Sophie Trawalter [2], Jordan R Axt [2], M Norman Oliver [3]
Affiliations + expand

PMID: 27044069 PMCID: PMC4843483 DOI: 10.1073/pnas.1516047113

Item	General	1st year	2nd year	3rd year	Residents
Blacks age more slowly than white	23	21	28	12	14
Blacks' nerve endings are less sensitive than whites'	20	8	14	0	4
Black people's blood coagulates more quickly than whites	39	29	17	3	4
Whites have larger brains than blacks	12	2	1	0	0
Whites have a better sense of hearing than blacks	10	3	7	0	0
Blacks' skin is thicker than whites'	58	40	42	22	25
Blacks have a more sensative sense of smell than whites	20	10	18	3	7
White have a more efficient respiratory system than blacks	16	8	3	2	4
Black couples are significantly more fertile than white couples	17	10	15	2	7
Blacks are better at detecting movement than whites	18	14	15	5	11
Blacks have stronger immune systems than whites	14	21	15	3	4

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WHAT DOES THE LITERATURE SAY ABOUT RACIAL DISPARITIES IN PAIN MEDICINE TODAY?

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Editorial > J Pain Res. 2020 Nov 6;13:2825-2836. doi: 10.2147/JPR.S287314. eCollection 2020.

Chronic Noncancer Pain Management and Systemic Racism: Time to Move Toward Equal Care Standards

Malini Ghoshal [1], Hannah Shapiro [2], Knox Todd [3], Michael E Schatman [4,5]

Affiliations + expand

PMID: 33192090 PMCID: PMC7654542 DOI: 10.2147/JPR.S287314

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> Pain Med. 2019 Feb 1;20(2):223-232. doi: 10.1093/pm/pny074.

Racial and Ethnic Disparities in the Evaluation and Management of Pain in the Outpatient Setting, 2006–2015

Dan P Ly [1]

Affiliations + expand

PMID: 29688509 PMCID: PMC6374136 DOI: 10.1093/pm/pny074

- **National Ambulatory Medical Care Survey (NAMCS)**
- **4,764 white patients, 692 black patients, and 682 Hispanic patients**
- **Back pain visits of Hispanic patients lasted 1.6 fewer minutes than those of white non-Hispanic patients ($P = 0.04$)**
- **Black patients were less likely than white patients to receive opioids for abdominal pain ($P = 0.04$) and less likely than white patients to receive opioids for back pain ($P = 0.046$)**
- **Hispanic patients were less likely than white patients to receive opioids for abdominal pain ($P = 0.003$) and less likely than white patients to receive opioids for back pain ($P < 0.001$)**

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Original Contribution

January 2, 2008

Trends in Opioid Prescribing by Race/Ethnicity for Patients Seeking Care in US Emergency Departments

Mark J. Pletcher, MD, MPH; Stefan G. Kertesz, MD, MSc; Michael A. Kohn, MD, MPP; et al

> Author Affiliations | Article Information

JAMA. 2008;299(1):70-78. doi:10.1001/jama.2007.64

Setting: Pain-related visits to US emergency departments were identified using reason-for-visit and physician diagnosis codes from 13 years (1993-2005) of the National Hospital Ambulatory Medical Care Survey.

Results: Of the roughly 157,000 pts analyzed, white patients with pain were more likely to receive an opioid (31%) than Black (23%), Hispanic (24%), or Asian/other patients (28%) ($P < .001$ for trend)

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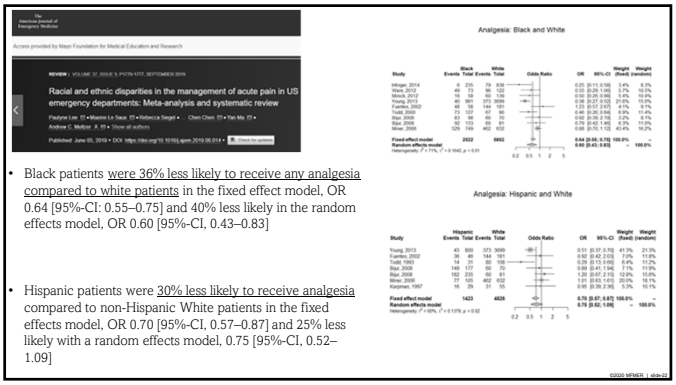

- Black patients were 36% less likely to receive any analgesia compared to white patients in the fixed effect model, OR 0.64 [95%-CI: 0.55–0.75] and 40% less likely in the random effects model, OR 0.60 [95%-CI, 0.43–0.83]
- Hispanic patients were 30% less likely to receive analgesia compared to non-Hispanic White patients in the fixed effects model, OR 0.70 [95%-CI, 0.57–0.87] and 25% less likely with a random effects model, 0.75 [95%-CI, 0.52–1.09]

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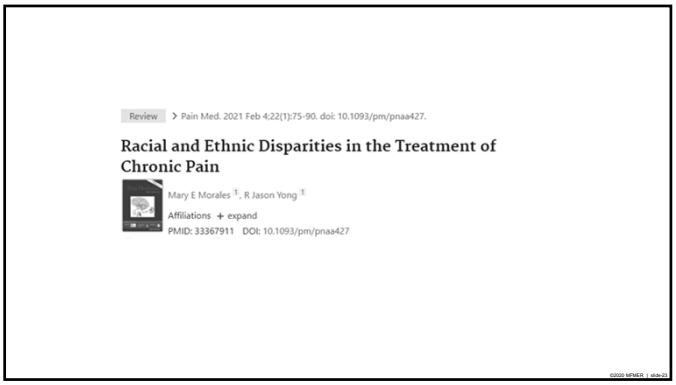

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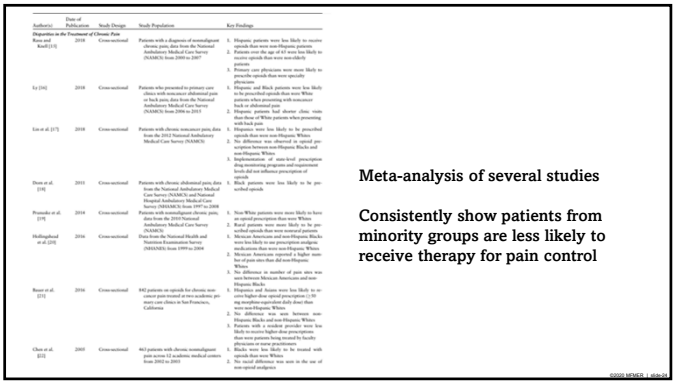

Meta-analysis of several studies

Consistently show patients from minority groups are less likely to receive therapy for pain control

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J Pain Res. 2018 Apr 12;11:753-761. doi: 10.2147/JPR.S158128. eCollection 2018.

Non-Hispanic Black-White disparities in pain and pain management among newly admitted nursing home residents with cancer

Deborah S Mack [1], Jacob N Hunnicutt [1], Bill M Jesdale [2], Kate L Lapane [2]

Affiliations + expand

PMID: 29695927 PMCID: PMC5905487 DOI: 10.2147/JPR.S158128

Method: Cross-sectional study design, we compared reported pain and pain management between non-Hispanic White and non-Hispanic Black newly admitted nursing home residents with cancer (n=342,920)

Results: While most residents received some pharmacologic pain management, Blacks were less likely to receive any compared with Whites (Blacks: 66.6%, Whites: 71.1%; aPR: 0.98, 95% CI: 0.97-0.99), consistent with differences in receipt of non-pharmacologic treatments (Blacks: 25.8%, Whites: 34.0%; aPR: 0.98, 95 CI%: 0.96-0.99)

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Pain. 2022 Sep 1;163(9):1688-1699. doi: 10.1097/j.pain.0000000000002574. Epub 2022 Jan 19.

Beyond Black vs White: racial/ethnic disparities in chronic pain including Hispanic, Asian, Native American, and multiracial US adults

Anna Zajacova [1], Hanna Grol-Prokopczyk [2], Roger Fillingim [3]

Affiliations + expand

PMID: 35250011 PMCID: PMC9294074 (available on 2023-09-01)

DOI: 10.1097/j.pain.0000000000002574

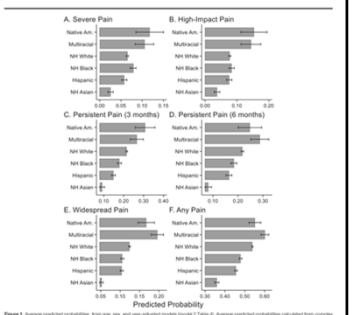

Figure 1. Average predicted probabilities, from age, sex, and year-adjusted models (model 2 Table 4). Average predicted probabilities calculated from complex survey-adjusted logistic models of each pain measure as a function of race/ethnicity, year of interview, age (centered at approximately 65 years) and age-squared, sex, and region (model 2 in Table 4).

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WHY?

mcmedia.mayo.edu

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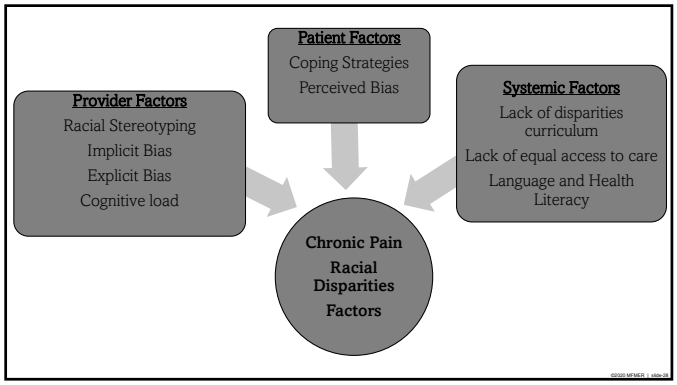

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SOCIO-ECONOMIC DISPARITIES IN PAIN MANAGEMENT

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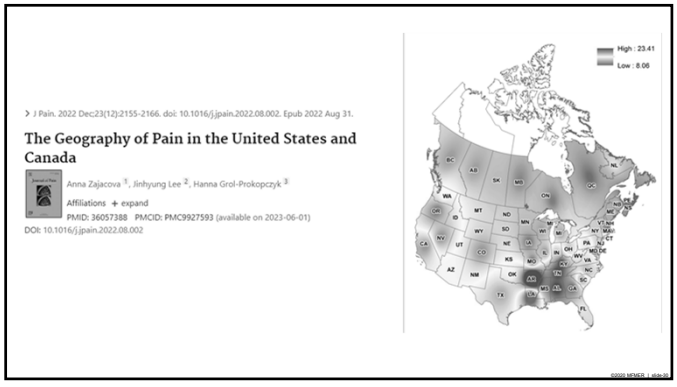

> J Pain. 2022 Dec;23(12):2155-2166. doi: 10.1016/j.jpain.2022.08.002. Epub 2022 Aug 31.

The Geography of Pain in the United States and Canada

Anna Zajacova [1], Jinhyung Lee [2], Hanna Grol-Prokopczyk [3]

Affiliations + expand

PMID: 36057388 PMCID: PMC9927593 (available on 2023-06-01)

DOI: 10.1016/j.jpain.2022.08.002

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Individuals with lower socioeconomic status do not receive the same medications for chronic pain conditions.

> Can J Pain. 2022 Sep 1;6(1):142-170. doi: 10.1080/24740527.2022.2104699. eCollection 2022.

The relationship between patients' income and education and their access to pharmacological chronic pain management: A scoping review

Nicole Atkins [1], Karim Mukhida [1]
Affiliations + expand
PMID: 36092247 PMCID: PMC9450907 DOI: 10.1080/24740527.2022.2104699

Responsible Factors include:

- Access to care
- Unaffordability of certain therapies
- Health literacy
- Prescribing biases

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> Neuromodulation. 2021 Mar 15. doi: 10.1111/ner.13373. Online ahead of print.

Racial and Socioeconomic Disparities in Spinal Cord Stimulation Among the Medicare Population

Mark R Jones [1], Vwaire Orhurhu [2], Brian O'Gara [3], Ethan Y Brovman [4], Nikhilesh Rao [5], Stephanie G Vanterpool [6], Lawrence Poree [7], Amitabh Gulati [8], Richard D Urman [9]
Affiliations + expand
PMID: 33723896 DOI: 10.1111/ner.13373

- **1,244,927 patients between 2016-2019**
- **Diagnosis of post-laminectomy syndrome/Chronic pain syndrome**
- **59,182 (4.8%) had a spinal cord stimulation implant**
  - **90.4% were White (53,498/59,182)**
  - **20.4% were dually enrolled in Medicare and Medicaid (12,059/59,182)**
- **Black (0.62, p < 0.001), Asian (0.66, p < 0.001), Hispanic (0.86, p < 0.001), and North American Native (0.62, p < 0.001) patients had lower odds of receiving SCS compared with White patients**
- **Similar studies for other pain interventions are needed**

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> J Pain. 2017 Dec;18(12):1459-1467. doi: 10.1016/j.jpain.2017.07.005. Epub 2017 Jul 29.

Racial and Socioeconomic Disparities in Disabling Chronic Pain: Findings From the Health and Retirement Study

Mary R Janevic [1], Sara J McLaughlin [2], Alicia A Heapy [3], Casey Thacker [4], John D Piette [5]
Affiliations + expand
PMID: 28760648 PMCID: PMC5682226 DOI: 10.1016/j.jpain.2017.07.005

Method: Subsample of Health And Retirement Study (HRS) respondents (n = 1,925) who were randomly selected for a supplementary pain module in 2010.

Results: Overall, 8.2% (95% confidence interval = 6.7-10.1%) of adults older than age 50 met criteria for high-impact chronic pain. This proportion rose to 17.1% (95% confidence interval = 12.3-23.4%) among individuals in the lowest wealth quartile.

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Psychooncology. 2016 Oct;25(10):1212-1221. doi: 10.1002/pon.4218. Epub 2016 Aug 12.

Sociodemographic inequalities in barriers to cancer pain management: a report from the American Cancer Society's Study of Cancer Survivors-II (SCS-II)

Kevin D Stein [1 2], Kassandra I Alcaraz [3], Chelsey Kamson [4], Elizabeth A Fallon [3], Tenbroeck G Smith [3]

Affiliations + expand

PMID: 27421683 DOI: 10.1002/pon.4218

Method: 4707 cancer survivors in the American Cancer Society's Study of Cancer Survivors-II, who reported experiencing pain from their cancer. A multilevel, socioecological, conceptual framework was used to generate a list of 15 barriers to pain management, representing patient, provider, and system levels.

Results: Two-thirds of survivors reported at least 1 barrier to pain management. While patient-related barriers were most common, the greatest disparities were noted in provider- and system-level barriers.

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GENDER DISPARITIES IN PAIN MANAGEMENT

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Sex and Gender Disparities in Pain

OBSERVED BUT NOT WELL UNDERSTOOD

- Women report greater pain sensitivity
- Women are more likely than men to:
  - Experience multiple pain complaints
  - Have higher rates of MSK related disability
  - Recover from MSK injuries less quickly
  - Return to work later
- Female: Male ratios
  - 1.5 : 1 Headache, neck, shoulder, knee, and back pain
  - 2 : 1 Orofacial pain conditions
  - 2.5 : 1 Migraine headache
  - 4 : 1 Fibromyalgia

Sex & Gender | Office of Research on Women's Health (orh.gov)

Fillingim RB, King CD, Ribeiro-Dasilva MC, Rahim-Williams B, Riley JL 3rd. Sex, gender, and pain: a review of recent clinical and experimental findings. J Pain. 2009;10(5):447-485. doi:10.1016/j.jpain.2008.12.001

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Gender Disparities in Pain
THE PARADOX

Compared to men:

- It is more acceptable for women to show pain
- Women clinically present with more pain symptoms
- Women are diagnosed more frequently with chronic pain syndromes

Yet, paradoxically, women's:

- Pain reports are taken less seriously
- Their pain is more often discounted as being psychologic or nonexistent
- And their care plan is not the same evidenced based care

Hoffmann DE, Tarzian AJ. The girl who cried pain: a bias against women in the treatment of pain. *J Law Med Ethics*. 2001;29(1):13-27. doi:10.1111/j.1748-720x.2001.tb00037.x

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Sex and Gender Disparities in Pain
CLINICAL IMPLICATIONS

- Prospective cohort with 981 patients with acute abdominal pain in the ED
  - 62% received analgesic medications
- Similar Pain Scores, but Women *less likely to receive any analgesia*
  - Men: 67%
  - Women: 60%
  - (95% CI: 1.1% to 13.6%)
- Similar Pain Scores, but Women *less likely to receive opioid analgesia*
  - Men: 56%
  - Women: 45%
  - (CI:4.1 to 17.1)
- Similar Pain Scores but *longer wait times* for analgesia
  - Men: median 49 min
  - Women: median 65 min
  - (95% CI= 3.5-33 min)
- Controlling for age, race, triage class and pain score; sex-specific dx excluded

Chen EH, Shofer FS, Dean AJ, Hollander JE, Baxt WG, Robey JL, Sease KL, Mills AM. Gender disparity in analgesic treatment of emergency department patients with acute abdominal pain. Acad Emerg Med. 2008 May;15(5):414-8. doi: 10.1111/j.1553-2712.2008.00100.x. PMID: 18439195.

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Gender Disparities in Pain
CARE FOR TRANSGENDER INDIVIDUALS

Gender identity may play a more significant role in pain sensation than genetic sex

Transgender women:
- Demonstrated greater temporal summation for heat pain stimuli or mechanical stimuli than cis-gender men and cis-gender women
- Reported similarly to cis-gender women with greater chronic pain severity compared to cis-gender men

Yet…
- Restricted access to pain care
- Less personalized, biopsychosocial approaches to pain management
- Heightened risk of substance misuse, especially pain medications

- Craig KD, Holmes C, Hudspith M, Moor G, Moosa-Mitha M, Varcoe C, Wallace B. Pain in persons who are marginalized by social conditions. Pain. 2020 Feb;161(2):261-265. doi: 10.1097/j.pain.0000000000001719. PMID: 31651578; PMCID: PMC6970566.
- Paschen-Wolff MM, Kidd JD, Paine EA. The State of the Research on Opioid Outcomes Among Lesbian, Gay, Bisexual, Transgender, Queer, and Other Sexuality- and Gender-Diverse Populations: A Scoping Review. LGBT Health. 2023 Jan;10(1):1-17. doi: 10.1089/lgbt.2022.0036. Epub 2022 Oct 31. PMID: 36318023.
- Ruppert R, Kattari SK, Sussman S. Review: Prevalence of Addictions among Transgender and Gender Diverse Subgroups. Int J Environ Res Public Health. 2021 Aug 22;18(16):8843. doi: 10.3390/ijerph18168843. PMID: 34444595; PMCID: PMC8393320.
- Strath LJ, Sorge RE, Owens MA, Gonzalez CE, Okunbor JI, White DM, Merlin JS, Goodin BR. Sex and Gender are Not the Same: Why Identity Is Important for People Living with HIV and Chronic Pain. J Pain Res. 2020 Apr 24;13:829-835. doi: 10.2147/JPR.S248424. PMID: 32425587; PMCID: PMC7187934.

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Age-related and SES Disparities in Pain

- Older adults (age 65+), the unemployed, those living in/near poverty, and rural residents experience the highest rates of chronic pain and high-impact pain.
- COVID-19: lack of access to telemedicine for rural and lower SES patients
- Lower health literary associated with worse pain outcomes

Bauer, 2014; Crenshaw, 1989; Dahlhamer J et al., 2018; Ghoshal et al., 2020; Institute of Medicine, 2011; Lucas et al., 2018; Moxley, 2011; Narouze et al., 2018; Wilson et al., 2019; Zelaya et al., 2020

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Intersectionality & Health

- Non-additive impact of being disadvantaged by multiple sources of oppression that converge to impact an individual or community in ways beyond the influence of any of those factors individually
- Confluence of factors that impact physical and mental health, and exacerbate health inequity
- Influence on cognitive implicit bias is complex
- An intersectional lens offers a holistic look and highlights the limits of healthcare

March 27, 202: Our View: Racist language found in Rochester property deeds - Post Bulletin | Rochester, Minnesota news, weather, sports By Post Bulletin Editorial Board

May 10, 2021: Impact of racially restrictive covenants seen in current policies and attitudes - Post Bulletin | Rochester, Minnesota news, weather, sports By Dennis Finnerud

Crenshaw, 1989
Cour & Sawicki-gu, 2015
Kapilashrami & Hankivsky, 2018

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Intersectionality in Pain Medicine

- Recognition of intersecting impact of race and gender on pain outcomes
- Intersectional factors impact physical and psychological outcomes
- Exacerbation of pain-related functional disturbance
- Identity factors (e.g. race, sex and gender identity) further influenced by pain behaviors and psychiatric history do influence patient care

Cole, 2009
Bauer, 2014
Brady, Valjakova, & Chipchase, 2018
Wilson et al., 2019

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Research Paper
PAIN

Sociodemographic patterns of pain in an urban community sample: an examination of intersectional effects of sex, race, age, and poverty status

Raini L. Gulton[a,*], Daniel K. Leibel[a], Erika L. Boyd[a], Shari R. Waldstein[a,b,c], Michele K. Evans[d], Alan B. Zonderman[d]

- Participants (**N=1173**) were from the epidemiological Healthy Aging in Neighborhoods of Diversity across the Life Span (HANDLS) study; reported pain in various body sites.
- A significant three-way interaction was found for race, sex, and poverty status (odds ratio [OR] 5 6.04, 95% confidence interval [CI] [1.26-28.97], P 5 0.025)
  - Specifically, among Whites living in poverty, women were more likely to report pain than men (P 5 0.043), suggesting a **double disadvantage of being both female and living in poverty**.
  - Among those above the poverty line, **African American (AA) men were less likely to report pain** than White men (P 5 0.024) and AA women (P 5 0.019)-due to greater stoicism? coping skills? sources of resilience?
- Consistent with prior research, significant main effects revealed that **older age** (OR 5 2.16, 95% CI [1.28-3.64], P 5 0.004) and **higher depressive symptoms** (OR 5 1.03, 95% CI [1.02-1.04], P , 0.001) were associated independently with increased likelihood of reporting pain.
- Conclusion: in an urban population**, intersecting sociodemographic factors create unique social identities that impact pain**, and emphasizes the need for identification of relevant mediational pathways.

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The relationship of demographic and psychosocial variables to pain-related outcomes in a rural chronic pain population

Melissa A. Day[1] and Beverly E. Thorn[1]
[1] The Department of Psychology, The University of Alabama, Tuscaloosa, Alabama

- N=115 patients with chronic pain in rural Alabama
- Measures of pain catastrophizing, depression, pain intensity, pain interference, perceived disability, and life satisfaction
- Mean age of 52, 79% were female, 74% were African-American, 72% reported annual income between 00,000-12,999, and 61% were unemployed.
- Mean years of education=12.26, reading level percentile was 17.33.
- Cross-sectional multivariate and univariate analyses were conducted
- **African Americans reported higher pain intensity and pain interference than White Americans**
- Pain catastrophizing was uniquely associated with pain intensity, pain interference, and perceived disability; depression was uniquely associated with pain interference, and life satisfaction.
- Pain catastrophizing mediated the relation between primary literacy and pain intensity; age effects were differentially mediated by either pain catastrophizing or depression.
- Conclusion: data provides insight into the specific demographic and psychosocial factors associated with **chronic pain in a low-literacy, low-SES rural population**.

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Intersectionality is multifaceted

- Consideration of intersectionality aims to highlight oppressive systems
- Important to note that race and gender alone do not fully explore the potential reach and impact of intersectionality on patient outcomes
- Social class, education level, sexual orientation, etc also influence outcomes
- Mere identity-matching between patient and provider is not feasible in the medical landscape, nor would it guarantee patient satisfaction or desirable outcomes
- Diversifying healthcare benefits all, impacts patient outcomes

Wilson et al, 2019
Goshal et al, 2020

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PRACTICAL STRATEGIES TO:
MITIGATE BIAS & SYSTEMIC BARRIERS
PROMOTE HEALTH EQUITY
ENHANCE PATIENT OUTCOMES

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PRACTICAL STRATEGY #1: Provide Pain Education (PE)

- A range of educational interventions
- Biological processes underpinning pain
- Pain is a protector; can be overprotective
- **Pain is real** even though tissue may not be in danger (chronic pain)
- Knowing how pain works can decrease emotional responses to pain
- Address role of psychosocial impact of pain

Louw A, Zimney K, Puentedura EJ, Diener I. The efficacy of pain neuroscience education on musculoskeletal pain: A systematic review of the literature. *Physiother Theory Pract*. 2016;32(5):332-355. doi:10.1080/09593985.2016.1194646
Moseley, G. L., & Butler, D. S. (2015). Fifteen years of explaining pain: the past, present, and future. *The Journal of Pain*, *16*(9), 807-813.

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PRACTICAL STRATEGY #2: Standardize Clinical Practices

- Provider frustration with patients associated with worse symptom management and greater patient distress
- Provide brief PE, then assess for biological, psychosocial, and social contributors of pain
- Use standardized approach to assess for medication and recreational substance use for all patients

Homma, M et al. 2016. Association of physicians' illness perception of fibromyalgia with frustration and resistance to acceptive patients: a cross-sectional study. Clin Rheumatol. 35, 1019-1027.

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Example of a Standardization Approach: SBIRT

- **S**creening, **B**rief **I**ntervention, and **R**eferral to **T**reatment (**SBIRT**) is a public health approach to the delivery of early intervention and treatment services for substance use
  - **Screening:** universal screening is used to quickly assess severity of substance use and identify appropriate level of treatment
  - **Brief Intervention:** increase insight and awareness regarding substance use and motivation for behavioral change
  - **Referral to Treatment:** provide those identified as needing more extensive treatment with access to specialty care

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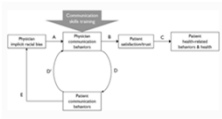
PRACTICAL STRATEGY #3: Communicate to Challenge Biases

- Acknowledge biases and assumptions (we ALL have them)
- Cultural humility is not about memorizing facts
- Avoid reliance on assumptions
- Avoid "Trans Broken Arm Syndrome"
- Work to provide *equitable* resources and treatment options

Zestcott, C., Blair, I., Stone, J. (2016) Examining the presence, consequences and reduction of implicit bias in healthcare: a narrative review. *Group Process Intergroup Relation.*



Hagiwara, N., Lafata, J., Mezuk, B., Vrana, S., Fetters, M. (2019). Detecting implicit racial bias in provider communication behaviors to reduce disparities in healthcare: Challenges, solutions and future directions for provider communication training. *Patient Education Council.*

Brady et al., 2018
Wilson et al., 2019

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PRACTICAL STRATEGY #4: Take advantage of consultation

momedia.mayo.edu

- Benefits of team-based treatment approach
- Formal and informal consultation with colleagues improves patient outcomes
- Recognize that pain comorbidities exacerbate the sensory experience
  - Shared neural mechanisms
  - Insomnia; Depression; Substance Use; PTSD
- Utilize referral resources to address biopsychosocial aspects of pain
- Mitigate clinician burnout

- DeBar L, Benes L, Bonthuy A, Dayo RA, Elder CR, Keefe FJ, Leo MC, McMullen C, Mayhew M, Owen-Smith A, Smith DH, Trinacty CM, Vollmer WM. Interdisciplinary team-based care for patients with chronic pain on long-term opioid treatment in primary care (PPACT) - Protocol for a pragmatic cluster randomized trial. Contemp Clin Trials. 2018 Apr;67:91-99. doi: 10.1016/j.cct.2018.02.015. Epub 2018 Mar 6. PMID: 29522897; PMCID: PMC5931339.
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- Roughan WH, Campos AI, Garcia-Marin LM, Cuellar-Partida G, Lupton MK, Hickie IB, Medland SE, Wray NR, Byrne EM, Ngo TT, Martin NG, Renteria ME. Comorbid Chronic Pain and Depression: Shared Risk Factors and Differential Antidepressant Effectiveness. Front Psychiatry. 2021 Apr 12;12:643659. doi: 10.3389/fpsyt.2021.643659. PMID: 33912086; PMCID: PMC8072020.

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Real-world considerations of intersectionality in patient care

- Practically speaking, clinicians must practice cultural agility and humility to understand the impact of intersectional identities, and adjust clinical approaches that achieve health equity to combat such influences in order to optimize clinician-patient relationship and patient outcomes
- Patient outcomes are improved through culturally-informed pain treatment

Brady et al., 2018
Wilson et al., 2019

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Case Examples

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CASE DISCUSSION #1

- Mr. C.F. is a Black 21-year-old male with Sickle Cell Disease
- Presents to the Emergency Department with diffuse body pain
- Home pain medication regimen:
  - Oxycodone 10 mg q6h prn
  - Oxycontin 20 mg BID
- Imaging and labs are unremarkable
- He is requesting admission to the hospital and "stronger" pain medications
- This is his 4th visit to the ED in the past two months

- What are your concerns as one of this patient's providers?
- Is this truly "sickle cell crisis" even with normal labs and imaging?
- How do you balance empathy with patient safety?
- He tells you.."you think I am drug seeking don't you?" How do you respond?
- What social determinants of health are at play here?

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CASE DISCUSSION #2

- Mrs. C.R. is a 57 year old Latinx Female with chronic back pain. Returns to clinic for a follow up evaluation
- Spanish-speaking only
- Home pain medication regimen:
  Hydromorphone 8 mg q6h prn
- She missed her last two clinic appointments
- Her last UDS was positive for oxycodone

- What are your general concerns?
- Impact of language barrier on these issues?
- The provider is considering dismissing the patient from the clinic. Your thoughts?
- What social determinants of health could be at play here?
- Preventative measures to help our patient?

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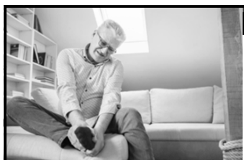

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CASE DISCUSSION #3

- Mr. RS is a 67 yo white male with diabetic neuropathy, DM2
- Home pain medication regimen:
  Gabapentin 300 mg TID
- Born intersex; clinical team using outdated terminology in rounds and in documentation
- Rounds discussion focused on intersex status at birth, not chronic pain

- **What are your general concerns?**
- **What social determinants of health could be at play here?**
- **How would you address the use of outdated terminology with your colleagues?**
- **The patient informs you that he has been reading his treatment notes. How would you address the team's terminology use with the patient?**

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Achieving Health Equity is not a Zero-Sum Game

- **Zero-Sum Game in Economics**: the net benefit of sums and losses add up to zero; if one person wins, the other loses in equal measure
- The US History of Wheelchair Ramps
  - First intro in 1950s
  - 1968 Architectural Barriers Act
  - 1990 Americans with Disabilities Act (ADA)
  - Did the need suddenly arise in the 1950s?
  - Who benefits?

https://dictionary.apa.org/zero-sum-game
https://www.economicshelp.org/

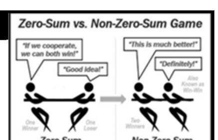

Image created by Market Business News.

Man using adapted cart and hand poles, carte-de-visite, 1860s
https://everybody.si.edu/media/925

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QUESTIONS & ANSWERS

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