



# Editorial: Chronic Pain and Health Disparities in Older Adults With Complex Needs

Maile Young Karris<sup>1\*</sup> and Margaret Danilovich<sup>2</sup>

<sup>1</sup> Department of Medicine, University of California, San Diego, San Diego, CA, United States, <sup>2</sup> CJE Senior Life, Chicago, IL, United States

**Keywords:** health disparities, pain, older adults, vulnerable, special populations

## Editorial on the Research Topic

### Chronic Pain and Health Disparities in Older Adults With Complex Needs

Decades of research have demonstrated that disparities in pain management access and outcomes exist (1–4). These disparities are present in all health care settings (i.e., primary care, the emergency room, post-operative, and palliative) across all types of pain (i.e., cancer, neuropathic, acute, chronic) (5–9). Despite this overwhelming evidence, little progress has occurred because barriers to equitable healthcare exist at multiple levels from the individual level to healthcare providers, healthcare systems, and local governments (1, 3, 10–17). A person with pain may not believe that non-pharmacologic therapies such as behavioral therapy will work and thus may not follow up or engage in these proven treatments, especially if there is a share of cost (19–21, 23). The implicit biases (race, gender etc.) of healthcare providers contribute to differences in pain intervention access and medication doses for patients who are Black, Indigenous, People of Color (BIPOC), and women (1, 2). Despite extensive studies that non-pharmacologic therapies such as massage and physical therapy are helpful for pain management, these services are inconsistently covered by health insurance that limits access to people who can pay out of pocket (22). The complicated intertwining of pain management and the opioid epidemic is leading to shortages of providers willing to manage pain (18).

Gender and race disparities persist in later-life pain experiences and pain management that impact patients' quality of life, mental health, function, and cognition (32–34). Pain management in older adults is further complicated by normal age-related changes in pharmacokinetics and pharmacodynamics further limiting pain medication options including non-opioid therapies such as non-steroidal anti-inflammatory drugs and muscle relaxants due to increased risks of side-effects (such as gastrointestinal bleed and cognitive function) and polypharmacy (24–27). Thus, non-pharmacologic pain treatments are central to the management of pain in older adults, but common barriers including awareness, appeal and approach persist (28–31, 35). Concerns about the side effects of pain medicine (including opioids) also result in the under treatment of pain in older adults, further contributing to age-associated pain disparities (36–39).

This Research Topic aims to promote work to enhance our understanding of the disparities that impact vulnerable older adults with chronic pain and influence innovation and policy that addresses disparities to enhance equity. Allen-Watts et al. reported a secondary analysis of the study Examining Racial and SocioEconomic Disparities (ERASED), which focused on individuals with chronic low back pain. Significant associations emerged between race and the use of pharmacologic therapies for pain with Non-Hispanic Whites (NHW) being twice as likely to take one or more medications for pain than Non-Hispanic Blacks (NHB). Opioid use

## OPEN ACCESS

### Edited and reviewed by:

Cary Reid,  
NewYork-Presbyterian, United States

### \*Correspondence:

Maile Young Karris  
m1young@health.ucsd.edu

### Specialty section:

This article was submitted to  
Geriatric Pain,  
a section of the journal  
Frontiers in Pain Research

**Received:** 11 May 2022

**Accepted:** 20 May 2022

**Published:** 28 June 2022

### Citation:

Karris MY and Danilovich M (2022)  
Editorial: Chronic Pain and Health  
Disparities in Older Adults With  
Complex Needs.  
Front. Pain Res. 3:941476.  
doi: 10.3389/fpain.2022.941476

was similar, but NHW were more likely than NHB to utilize antidepressants and non-steroidal anti-inflammatory drugs. Because the national area deprivation index (NADI) was significantly greater in NHB, the authors hypothesized that access to medications and care contribute to differences in pharmacologic treatments. In this study, age did not impact the use of one or more pharmacologic treatments. However, older age and female gender did impact the utilization of primary and tertiary care for pain. For every decade of increased age, utilization of primary or tertiary care for pain increased the odds by 30%. The authors hypothesized that age-associated access to MediCare and more frequent utilization of healthcare providers due to additional medical comorbidities contributed to these differences.

The next article by Milani et al. focused on describing the relationship between multi-morbidity and pain in community-dwelling Mexican Americans aged 80 years+. Of the 841 participants in the Hispanic Established Populations for the Epidemiologic Study of the Elderly, 77.3% reported multimorbidity and 64.1% were female. Participants with multimorbidity had greater odds of pain on weight bearing (odds ratio or OR = 2.27, 95% confidence interval or CI: 1.74, 2.95) pain that limited their daily activities (OR = 2.12, 95% CI: 1.61, 2.78). High depressive symptoms were associated with higher odds of pain on weight bearing (OR = 1.69, 95% CI: 1.35, 2.12) and pain that limits daily activities (OR = 1.88, 95% CI: 1.50, 2.35). Higher cognition was associated with lower odds of pain that limits daily activities (OR = 0.98, 95% CI: 1.50, 2.35). The authors suggest that the association of multimorbidity and chronic pain in older adults complicates pain management and, ultimately, function and quality of life.

You et al. evaluated the age-associated differences of high impact chronic pain (HICP) in a sample ( $N = 133$ ) of mostly female (61.4%), married (62.7%), and highly educated persons (94% with some college or more). Using the graded chronic pain scale-revised (GCPS-R) 69.9% of the sample reported HICP. Age did not impact pain scores but did affect function in different areas. Both younger and older adults stated that pain commonly

impacted basic physical activities and the instrumental activities of daily living. However, younger people were more likely to report pain impact on work (but were also more likely to be working 87.3 vs. 10.7%). Older adults reported the impact of pain on participation in social activities (fun) more commonly than younger persons, outlining its contribution to cognitive burden in activity planning, and interference with intimate relationships. The authors discussed that their findings could inform discussions about the impact of pain on function in different domains based on age.

These contributions explore chronic pain across a diverse group of older adults and ultimately encourage readers to (1) consider the potential ability of healthcare policy to combat the social disparities of health and its outcomes, (2) challenge a “one-size fits all” approach to pain management of older adults by demonstrating that chronic pain is often accompanied by multimorbidity that may modify the outcomes of certain pain treatments, and (3) understand that pain may differentially impact older adults specifically by limiting social interactions and sex. To truly reach equity in the management of pain in vulnerable older adults ongoing advancements in healthcare policy, development of person-centered or precision medicine approaches to care and ongoing engagement of healthcare providers to better understand what matters most to older adults in pain are needed.

## AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

## FUNDING

MK's effort as an editor is in part supported by the National Institutes of Health (P30 AI036214 and R03 AG060183).

## REFERENCES

- Lloyd EP, Paganini GA, ten Brinke L. Gender stereotypes explain disparities in pain care and inform equitable policies. *Policy Insights Behav Brain Sci.* (2020) 7:198–204. doi: 10.1177/2372732220942894
- Green CR, Anderson KO, Baker TA, Campbell LC, Decker S, Fillingim RB, et al. The unequal burden of pain: confronting racial and ethnic disparities in pain. *Pain Med.* (2003) 4:277–94. doi: 10.1046/j.1526-4637.2003.03034.x
- Anderson KO, Green CR, Payne R. Racial and ethnic disparities in pain: causes and consequences of unequal care. *J Pain.* (2009) 10:1187–204. doi: 10.1016/j.jpain.2009.10.002
- Green C, Todd KH, Lebovitz A, Francis M. Disparities in pain: ethical issues. *Pain Med.* (2006) 7:530–3. doi: 10.1111/j.1526-4637.2006.00244.x
- Ezenwa M, Fleming M. Racial disparities in pain management in primary care. *J Pain.* (2012) 13:S20. doi: 10.1016/j.jpain.2012.01.088
- Salamonson Y, Everett B. Demographic disparities in the prescription of patient-controlled analgesia for postoperative pain. *Acute Pain.* (2005) 7:21–6. doi: 10.1016/j.acpain.2004.11.001
- Lee P, Le Saux M, Siegel R, Goyal M, Chen C, Ma Y, Meltzer AC. Racial and ethnic disparities in the management of acute pain in US emergency departments: meta-analysis and systematic review. *Am J Emerg Med.* (2019) 37:1770–7. doi: 10.1016/j.ajem.2019.06.014
- Are M, McIntyre A, Reddy S. Global disparities in cancer pain management and palliative care. *J Surg Oncol.* (2017) 115:637–41. doi: 10.1002/jso.24585
- Wilkie DJ, Ezenwa MO. Pain and symptom management in palliative care and at end of life. *Nurs Outlook.* (2012) 60:357–64. doi: 10.1016/j.outlook.2012.08.002
- Meghani SH, Polomano RC, Tait RC, Vallerand AH, Anderson KO, Gallagher RM. Advancing a national agenda to eliminate disparities in pain care: directions for health policy, education, practice, and research. *Pain Med.* (2012) 13:5–28. doi: 10.1111/j.1526-4637.2011.01289.x
- Meghani SH, Byun E, Gallagher RM. Time to take stock: a meta-analysis and systematic review of analgesic treatment disparities for pain in the United States. *Pain Med.* (2012) 13:150–74. doi: 10.1111/j.1526-4637.2011.01310.x
- Meghani SH, Rosa WE, Chittams J, Vallerand AH, Bao T, Mao JJ. Both race and insurance type independently predict the selection of oral

- opioids prescribed to cancer outpatients. *Pain Manage Nurs.* (2020) 21:65–71. doi: 10.1016/j.pmn.2019.07.004
13. Gleib DA, Stokes AC, Weinstein M. Widening socioeconomic disparities in pain and physical function among Americans are linked with growing obesity. *J Aging Health.* (2022) 34:78–87. doi: 10.1177/08982643211028121
  14. Meints SM, Cortes A, Morais CA, Edwards RR. Racial and ethnic differences in the experience and treatment of noncancer pain. *Pain Manage.* (2019) 9:317–34. doi: 10.2217/pmt-2018-0030
  15. Bonham VL. Race, ethnicity, and pain treatment: striving to understand the causes and solutions to the disparities in pain treatment. *J Law Med Ethics.* (2001) 29:52–68. doi: 10.1111/j.1748-720X.2001.tb00039.x
  16. Meghani SH. Corporatization of pain medicine: implications for widening pain care disparities. *Pain Med.* (2011) 12:634–44. doi: 10.1111/j.1526-4637.2011.01074.x
  17. Palanker D. Enslaved by pain: how the US public health system adds to disparities in pain treatment for African Americans. *Geo J Poverty Pol'y.* (2008) 15:847.
  18. Brown MA, Lobb JQ, Novak-Tibbitt R, Rowe WJ. American Pain Foundation position statement on access to pain care. *J Pain Palliat Care Pharmacother.* (2011) 25:165–70. doi: 10.3109/15360288.2010.525602
  19. Matsuzawa Y, Lee YS, Fraser F, Langenbahn D, Shallcross A, Powers S, et al. Barriers to behavioral treatment adherence for headache: an examination of attitudes, beliefs, and psychiatric factors. *Headache.* (2019) 59:19–31. doi: 10.1111/head.13429
  20. Park J, Hirz CE, Manotas K, Hooyman N. Nonpharmacological pain management by ethnically diverse older adults with chronic pain: barriers and facilitators. *J Gerontol Soc Work.* (2013) 56:487–508. doi: 10.1080/01634372.2013.808725
  21. Choo EK, Charlesworth CJ, Gu Y, Livingston CJ, McConnell KJ. Increased use of complementary and alternative therapies for back pain following statewide Medicaid coverage changes in Oregon. *J Gen Intern Med.* (2021) 36:676–82. doi: 10.1007/s11606-020-06352-6
  22. Bonakdar R, Palanker D, Sweeney MM. Analysis of state insurance coverage for nonpharmacologic treatment of low back pain as recommended by the American College of Physicians Guidelines. *Glob Adv Health Med.* (2019) 8:2164956119855629. doi: 10.1177/2164956119855629
  23. Andrews-Cooper IN, Kozachik SL. How patient education influences utilization of nonpharmacological modalities for persistent pain management: an integrative review. *Pain Manage Nurs.* (2020) 21:157–64. doi: 10.1016/j.pmn.2019.06.016
  24. Ersoy S, Engin VS. Risk factors for polypharmacy in older adults in a primary care setting: a cross-sectional study. *Clin Interv Aging.* (2018) 13:2003. doi: 10.2147/CIA.S176329
  25. Morio K, Maeda I, Yokota I, Niki K, Murata T, Matsumura Y, et al. Risk factors for polypharmacy in elderly patients with cancer pain. *Am J Hosp Palliat Med.* (2019) 36:598–602. doi: 10.1177/1049909118824031
  26. Schneider J, Algharably EAE, Budnick A, Wenzel A, Dräger D, Kreutz R. High prevalence of multimorbidity and polypharmacy in elderly patients with chronic pain receiving home care are associated with multiple medication-related problems. *Front Pharmacol.* (2021) 12:686990. doi: 10.3389/fphar.2021.686990
  27. Hayes BD, Klein-Schwartz W, Barrueto Jr F. Polypharmacy and the geriatric patient. *Clin Geriatr Med.* (2007) 23:371–90. doi: 10.1016/j.cger.2007.01.002
  28. Cavalieri TA. Management of pain in older adults. *J Osteop Med.* (2005) 105:12–7. doi: 10.7556/jaoa.2005.20004
  29. Bruckenthal P. Integrating nonpharmacologic and alternative strategies into a comprehensive management approach for older adults with pain. *Pain Manage Nurs.* (2010) 11:S23–31. doi: 10.1016/j.pmn.2010.03.004
  30. Cavalieri TA. Pain management in the elderly. *J Osteop Med.* (2002) 102:481–5. doi: 10.7556/jaoa.2002.102.9.481
  31. Reid MC, Eccleston C, Pillemer K. Management of chronic pain in older adults. *BMJ.* (2015) 350:h532. doi: 10.1136/bmj.h532
  32. Brennan PL. Life stressors: elevations and disparities among older adults with pain. *Pain Med.* (2020) 21:2123–36. doi: 10.1093/pm/pnaa189
  33. Lavin R, Park J. A characterization of pain in racially and ethnically diverse older adults: a review of the literature. *J Appl Gerontol.* (2014) 33:258–90. doi: 10.1177/0733464812459372
  34. Janevic MR, McLaughlin SJ, Heapy AA, Thacker C, Piette JD. Racial and socioeconomic disparities in disabling chronic pain: findings from the health and retirement study. *J Pain.* (2017) 18:1459–67. doi: 10.1016/j.jpain.2017.07.005
  35. Garrett SB, Nicosia F, Thompson N, Miaskowski C, Ritchie CS. Barriers and facilitators to older adults' use of nonpharmacologic approaches for chronic pain: a person-focused model. *Pain.* (2021) 162:2769–79. doi: 10.1097/j.pain.0000000000002260
  36. Denny DL, Guido GW. Undertreatment of pain in older adults: an application of beneficence. *Nurs Ethics.* (2012) 19:800–9. doi: 10.1177/0969733012447015
  37. García CA, Santos Garcia JB, Rosario Berenguel Cook MD, Colimon F, Flores Cantisani JA, Guerrero C, et al. Undertreatment of pain and low use of opioids in Latin America. *Pain Manage.* (2018) 8:181–96. doi: 10.2217/pmt-2017-0043
  38. Tait RC, Chibnall JT. Under-treatment of pain in dementia: assessment is key. *J Am Med Direct Assoc.* (2008) 9:372–4. doi: 10.1016/j.jamda.2008.04.001
  39. Levi-Minzi MA, Surratt HL, Kurtz SP, Buttram ME. Under treatment of pain: a prescription for opioid misuse among the elderly? *Pain Med.* (2013) 14:1719–29. doi: 10.1111/pme.12189

**Author Disclaimer:** The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

**Conflict of Interest:** MD was employed by CJE Senior Life.

The remaining author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

**Publisher's Note:** All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

Copyright © 2022 Karris and Danilovich. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.