Association between chiropractic care and use of prescription opioids among older medicare beneficiaries with spinal pain: a retrospective observational study

James M. Whedon1*, Sarah Uptmor2, Andrew W. J. Toler1, Serena Bezdjian1, Todd A. MacKenzie3 and Louis A. Kazal Jr.3

Abstract

Background: The burden of spinal pain can be aggravated by the hazards of opioid analgesics, which are still widely prescribed for spinal pain despite evidence-based clinical guidelines that identify non-pharmacological therapies as the preferred first-line approach. Previous studies have found that chiropractic care is associated with decreased use of opioids, but have not focused on older Medicare beneficiaries, a vulnerable population with high rates of comorbidity and polypharmacy. The purpose of this investigation was to evaluate the association between chiropractic utilization and use of prescription opioids among older adults with spinal pain.

Methods: We conducted a retrospective observational study in which we examined a nationally representative multi-year sample of Medicare claims data, 2012–2016. The study sample included 55,949 Medicare beneficiaries diagnosed with spinal pain, of whom 9,356 were recipients of chiropractic care and 46,593 were non-recipients. We measured the adjusted risk of filling a prescription for an opioid analgesic for up to 365 days following diagnosis of spinal pain. Using Cox proportional hazards modeling and inverse weighted propensity scoring to account for selection bias, we compared recipients of both primary care and chiropractic to recipients of primary care alone regarding the risk of filling a prescription.

Results: The adjusted risk of filling an opioid prescription within 365 days of initial visit was 56% lower among recipients of chiropractic care as compared to non-recipients (hazard ratio 0.44; 95% confidence interval 0.40–0.49).

Conclusions: Among older Medicare beneficiaries with spinal pain, use of chiropractic care is associated with significantly lower risk of filling an opioid prescription.

Keywords: Opioids, Analgesics, Chiropractic, Spinal pain, Medicare, Spinal manipulation, Aged

© The Author(s) 2022. Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article’s Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/. The Creative Commons Public Domain Dedication waiver (http://creativecommons.org/publicdomain/zero/1.0/) applies to the data made available in this article, unless otherwise stated in a credit line to the data.