

Recommendations for Pain Management Research*

1. **Definition:** Define all terms (such as “new opioid prescription” or “long-term opioid use”) precisely, using criteria established by the Centers for Disease Control and Prevention (CDC) or a similar institution if possible. If a more established descriptor is not applicable to the database, explain why and clearly state the criteria for the definition used.
2. **Quantification:** Quantifying opioid use in morphine milligram equivalents (MMEs) enables comparisons within the literature. As >1 conversion factor is available, state how MMEs were calculated. The CDC provides a toolkit for calculating MMEs.
3. **Population:** As different groups experience pain differently, the study population (age, sex, socioeconomic, cultural) should be defined precisely. Research on sex-based differences in pain experienced and response to opioids is needed.
4. **Risk factors/predictors:** Factors such as previous pain/opioid use, demographics, depression, catastrophizing, expectations, sleep disturbance, somatosensory function, physical activity, and coping ability should be studied as contributors to musculoskeletal pain and risk of opioid overuse.

Outcomes:

5. The key measure should be better patient-related outcomes—including a positive experience that is free of complications and excessive pain—not just number of pills taken.
6. Distinguish among medications prescribed, obtained, and consumed. Be clear about the methods used to obtain these data and their limitations.
7. Pain relief using alternative strategies (nonsteroidal antiinflammatory drugs [NSAIDs], ice, nerve growth factor inhibitors, psychological interventions), as opposed to elimination of opioids, should be a goal.

*These recommendations are based on presentations and discussions at the Pain Management Research Symposium held in Newton, Massachusetts, on November 19, 2019, as well as the articles in the *Supplement on Pain Management Research (J Bone Joint Surg Am 2020 May 21;102[Supplement 1])* authored by experts in pain research participating in that meeting. They were published by *The Journal of Bone & Joint Surgery*. They are also being published in *The Spine Journal*, *The Journal of Hand Surgery*, *Journal of Pediatric Orthopaedics*, *Journal of Shoulder and Elbow Surgery*, *Foot & Ankle International*, and *Arthroscopy: The Journal of Arthroscopic and Related Surgery*.

Disclosure: Funding for this conference was made possible (in part) by a grant (1R13AR076879-01) from the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS). The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention

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0749-8063/\$36.00

<https://doi.org/10.1016/j.arthro.2020.04.008>