

How Many Patients Starting CIH Therapies Have Chronic Musculoskeletal Pain and How to Identify Such Pain in Electronic Health Records?

Xiaoyi Zhang (xyzhang7@uw.edu)

Department of Biomedical Informatics and Medical Education, University of Washington, Seattle, WA, USA

VA Center of Innovation (COIN) for Veteran-Centered and Value-Driven Care, VA Puget Sound Healthcare System, Seattle, WA, USA

Joy Toyama (joy.toyama@va.gov)

Center for the Study of Healthcare Innovation, Implementation and Policy (CSHIIP), VA Greater Los Angeles Healthcare System, Los Angeles, CA, USA

Gang Luo (luogang@uw.edu)

Department of Biomedical Informatics and Medical Education, University of Washington, Seattle, WA, USA

Stephanie L. Taylor (stephanie.taylor8@va.gov)

Center for the Study of Healthcare Innovation, Implementation and Policy (CSHIIP), VA Greater Los Angeles Healthcare System, Los Angeles, CA, USA

University of California Los Angeles Department of Medicine and Department of Health Policy and Management, Los Angeles, CA, USA

Steven B. Zeliadt (steven.zeliadt@va.gov)

VA Center of Innovation (COIN) for Veteran-Centered and Value-Driven Care, VA Puget Sound Healthcare System, Seattle, WA, USA

Department of Health Services, School of Public Health, University of Washington, Seattle, WA, USA

Objective. To assess how many patients starting complementary and integrative health (CIH) therapies in a health care system have chronic musculoskeletal pain, and to evaluate two criteria for identifying such pain in electronic health records (EHRs).

Methods. For 20 weeks starting from April 27, 2021, we queried EHRs to identify 21,169 patients who began using CIH therapies within the Veterans Health Administration (VHA) or had a new referral to the community for CIH therapies paid for by the VHA. Based on a list of pre-determined constraints, we chose 4,849 of these patients for a survey. We implemented two criteria to identify chronic musculoskeletal pain in EHRs. The simple criterion required ≥ 1 ICD-10 code of a musculoskeletal pain condition in the past year. The complex criterion required ≥ 1 ICD-10 code of a musculoskeletal pain condition plus two 0-10 Numerical Rating Scale (NRS) scores ≥ 4 that were ≥ 30 days apart in the past year. We evaluated these two criteria against the Center for Disease Control and Prevention's definition of chronic pain adopted in the survey – having pain most of the days or every day during the past three months.

Results. Among the 21,169 identified patients, 80.4% (17,030/21,169) met the simple criterion and 27.1% (5,729/21,169) met the complex criterion. Among the survey respondents who met the

complex criterion, 96.1% (1,741/1,811) reported having chronic pain in the survey. Among the survey respondents who met the simple but not the complex criterion, 91.9% (479/521) reported having chronic pain.

Conclusions. Most patients starting CIH therapies in the VHA have chronic musculoskeletal pain. The complex criterion can identify patients with chronic pain more precisely than the simple criterion.