Defense Health Agency (DHA) Clinical Communities Speaker Series

Resource List – September 2020

Military Health Care- Select Promising Practices

To Image or Not to Image: Clinical Review to Address Low Back Pain

The American College of Radiology (ACR) noted in the Patient Friendly Summary of the ACR Appropriateness Criteria: Low Back Pain that most people who go to the doctor with recent low back pain do not need to have x-rays, Magnetic Resonance Imaging (MRI), or other types of imaging tests. If the pain persists for more than six weeks despite physical therapy, exercise, and medication (conservative treatment), then some form of imaging test may be needed. Imaging tests should also be considered for patients who have symptoms (red flags) that may mean there is a serious condition causing the pain. These may include a fracture, cancer, compressed nerves, or infection. Many different ways of imaging the spine are available to physicians to request on behalf of their patients. The one to use depends on what is suspected to be the cause of the pain, the urgency of the problem, and other patient medical conditions. If a fracture of the lower part of the spine (lumbar spine) is suspected, a Computerized Tomography (CT) scan is recommended. Patients that continue to have pain after six weeks of conservative treatment and have persisting issues with nerves not working properly resulting in pain, weakness, numbness, or difficulty controlling specific muscles may want to have an MRI. Patients that have severe or worsening problems with their nerves not working properly should be evaluated with MRI.

Low back pain (LBP) is an extremely frequent reason for patients to present to an emergency department (ED). Despite evidence against the utility of imaging, simple and advanced imaging (i.e., computed tomography [CT], magnetic resonance imaging) for patients with LBP has become increasingly frequent in the ED. The objective of the review Effectiveness of Interventions to Decrease Image Ordering for Low Back Pain Presentations in the Emergency Department: A Systematic Review was to identify and examine the effectiveness of interventions aimed at reducing image ordering in the ED for LBP patients.

Ultrasound imaging (US) may be a cost-conscious alternative to magnetic resonance imaging (MRI), which is the criterion standard for muscle cross-sectional area (CSA) assessment. Within the trunk, when compared to MRI, US has been shown to be valid for assessing lumbar multifidi CSA in younger, asymptomatic individuals. To date, there are no studies validating US for multifidi CSA assessment in older adults or individuals with low back pain. Given age- and pain-related muscle changes, validation of US is needed in these populations. If valid for multifidi CSA assessment, US may be used to evaluate short-term changes in muscle size in response to exercise-based interventions among older adults. The primary objective of the study, Criterion Validity of Ultrasound Imaging: Assessment of Multifidi Cross-Sectional Area in Older Adults with and without Chronic Low Back Pain was to evaluate the validity of US for multifidi CSA assessment as compared to MRI in older adults with and without chronic low back pain (CLBP). The secondary objective was to determine whether a single US image was valid for assessment of multifidi CSA or if the average of three US images should be recommended.

The authors of the study, Care for Low Back Pain: Can Health Systems Delivery noted distribution of guideline-concordant care for low back pain requires system-wide changes. Strong governance at each level of the health system will be key to redefining how society views and manages low back pain. Health systems should prioritize policies that: empower clinicians and consumers to make well-informed choices; encourage clinicians to deliver the right care to those who need it most; provide financial support to

evidence-based non-pharmacological treatment; and regulate the influence of those with vested interests in the current situation. Small adjustments to health policy will not work in isolation. Workplace systems, legal frameworks, personal beliefs, politics and the overall societal context in which all experience health, will also need to change. Addressing system-level barriers to guideline-based care could be cost-neutral, every year health systems waste billions of dollars on unnecessary tests and treatments for low back pain. Although disinvestment is difficult, redistributing funds to support guideline-concordant care is a promising way forward. Current approaches to treatment often lack formal evidence, therefore the authors strongly encourage careful evaluation of any new approach to funding or service delivery.

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