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Abstract
Low back pain (LBP) is among the most frequent causes of medical visits and lost-duty time in the Military Health System (MHS), second only to the common cold as the most common symptomatic reason for a primary care visit in the MHS. In 2009, LBP resulted in 606,332 outpatient medical encounters, accounting for 6.4% of all outpatient visits for any illness or injury among active component members. The majority of patients with LBP in the MHS initially access healthcare through a primary care provider. Given the volume of patients with LBP managed in primary care, decisions in this setting have substantial implications on the subsequent course of a patient's symptoms and implications for overall healthcare cost. However, defining optimal primary care management of patients with LBP has proven elusive, and wide variations in primary care practice have been observed for decisions such as prescribing medication, ordering imaging, and referral to specialists. Initial referral decisions for the majority of patients with non-specific LBP are based on clinical intuition, despite evidence to suggest that such a strategy provides inefficient and inconsistent access to treatment. Recent studies examining healthcare utilization trends in the MHS demonstrate increasing rates in the utilization of imaging, epidural injections, surgery, and opioid medications for individuals with LBP, despite recommendations that initial care be focused on a "wait and see" approach based on advice to remain active and simple analgesics. Despite increasingly aggressive treatments, there is no evidence that clinical outcomes are improving; in fact, rates of chronicity related to an episode of LBP are increasing. Alternatively, a one-size-fits-all primary care strategy that refers all patients with LBP for conservative treatment such as physical therapy is also generally thought to be suboptimum because it ignores the heterogeneity in patients, resulting in an impractical and inefficient system because of high numbers and costs. Nevertheless, research examining the outcomes of primary care management for patients with LBP indicates that many patients go on to experience persistent and/or recurrent symptoms, and up to one-third report moderate to severe pain one year following the initial primary care encounter. There is growing evidence that psychosocial factors are particularly useful for predicting individuals who will develop chronic back pain, but in primary care these patients are difficult to identify and frequently go unrecognized. Even when primary care clinicians do recognize psychosocial influences, they may not have the requisite training to manage these patients effectively.

A novel approach gaining interest in other medical specialties but only recently tested in the management of LBP is to determine whether stratified care according to the estimated risk of poor prognosis improves clinical outcomes while remaining cost effective. Researchers at Keele University in the United Kingdom have recently developed a stratified model of primary care management of LBP, which consists of two complementary components. First, they have utilized a previously developed, simple-to-use prognostic screening method referred to as the STarT Back Screening Tool, which classifies patients into one of three risk categories (low, medium, and high) for targeted treatment, based on the presence of potentially modifiable physical and psychological prognostic indicators for persistent, disabling symptoms. Patients are classified as "low risk" of future disabling LBP if they score positively on fewer than 4 questions. The remainder are then subdivided into "medium risk" (physical and psychosocial indicators for poor outcome, but without high levels of psychological indicators) and "high risk" (high levels of psychological prognostic indicators with or without physical indicators). Targeted interventions for patients in each risk subgroup have also been developed to address the specific modifiable prognostic indicators identified by the tool. In a recent trial to test its effectiveness, patients who received stratified care experienced significantly greater changes in disability compared to patients who received usual care at 4 months. Moreover, at 12 months, stratified care was associated with a mean increase in generic health benefit (additional quality-adjusted life years [QALYs]) and cost savings.

We conducted a pilot study in the Family Health Clinic at Keesler AFB to evaluate a risk-stratified care approach in the management of LBP in primary care using the recently developed STarT Back Screening Tool. Patient-completed screening questionnaires were used at baseline to assess all patients on key psychosocial and physical factors that have prognostic implications for predicting risk of delayed recovery. We utilized the STarT Back Screening Tool to classify patients into one of three risk categories (low, medium, and high) for targeted treatment, based on the presence of potentially modifiable physical and psychological prognostic indicators for persistent, disabling symptoms. Physical factors such as acuity and location of symptoms also have prognostic implications for predicting immediate benefit from spinal manipulation. We enrolled 10 consecutive patients with a primary complaint of LBP who consented to participation. All patients were assessed at baseline according to these factors, and then receive risk-stratified care based on the results of the STarT Back Screening Tool and spinal manipulation screening guidelines.

Three physical therapists experienced with the STarT Back Screening Tool delivered the risk-stratified care. We retained 100% of the sample through a 6-week follow-up. Risk stratified care for LBP implemented in family practice led to significant improvements in patient disability outcomes and improvements in return to work without increasing health care costs. Preliminary findings suggest that a more definitive randomized clinical trial research design is feasible within the MHS. Risk stratified care will be tested further in a large scale trial. Wider implementation may be recommended based on the results of a definitive RCT.