Management of Acute Episode of Low Back Pain

Disclaimer: This background information is not intended to be a comprehensive scientific discussion of the topic, but rather an attempt to provide a baseline level of information for anyone unfamiliar with the subject matter.

Background:

Only the common cold exceeds back pain in frequency of complaints at primary care doctors' offices (Katz, 2006). In the Western World, 15-30% of the population suffers from low back pain at any point in time. Up to 43% of cases persist for a full month. Most incidents are not severe and resolve within days to a few weeks. Up to 10% of patients suffer from recurrent or chronic low back pain (Eckman, 2005).

The Katz 2006 review paper estimates total costs of low back pain in the U.S. to exceed $100 billion/year. One-third are direct costs:

- Office visits $3 billion
- Medical admissions $2 billion
- Laminectomy & discectomy $4 billion
- Lumbar spinal fusion procedures $11 billion

Data from 1989 National Ambulatory Medical Survey

Two-thirds are indirect costs, due to lost wages and reduced productivity (National Academy Press, 2001). Not all workers have workers' compensation benefits, and yet expenditures for musculoskeletal disorders exceeds $20 billion/year. An estimated $50 billion is lost in productivity.

Stewart 2003 found that reduced work performance due to pain, not absenteeism, is the dominant cause of lost productive time. A four times greater loss was identified, with back pain at 2.9 hours lost per week.

Katz 2006 reports that a mere 5% of those with back pain generate 75% total costs. The most cost-effective period to treat back pain is in the subacute period – between 2 to 4 weeks and 6 months. Workers laid up longer than 6 months only return to work 50% of the time. Eighty percent of employees return to work in one month, and 90% return within 3 months. The least cost-effective time to treat back pain is in week 1 and 2 of an episode.

Pain definitions

Acute pain states can be brief, lasting moments or hours, or they can be persistent, lasting weeks or several months until the disease or injury heals (Bonica, 1990). The condition has a predictable beginning, middle and end.

Chronic pain is defined as persistent pain, which can be either continuous or recurrent and of sufficient duration and intensity to adversely affect a patient's well-being, level of function, and quality of life (Wisconsin Medical Society, 2004). If the patient has not been previously evaluated, attempt to differentiate between untreated acute pain and ongoing chronic pain. If a patient's pain has persisted for six weeks (or longer than the anticipated healing time), a thorough evaluation for the course of the chronic pain is warranted.

Supporting Evidence:

Institute for Clinical Systems Improvement. Adult low back pain health care guideline. November 2008.
An evidence-based guideline for acute and chronic evaluation and management of low back pain or sciatica for adult patients age 18 and over in primary care. The recommendations include content on evaluation, conservative treatment, and indications for non-surgical or surgical referral.

Chou R, Qaseem A, Snow V, et al. Diagnosis and treatment of low back pain: a joint clinical practice guideline from the American college of physicians and the American pain society. *Ann Intern Med* 2007;147:478-91.
A systematic review resulting in 7 recommendations for the assessment and management of low back pain that addresses history and physical exam, imaging, patient education, medications and nonpharmacologic therapy.

Chou R, Huffman LH. Medications for acute and chronic low back pain: a review of the evidence for an American pain society/American college of physicians clinical practice guideline. *Ann Intern Med* 2007;147:505-14.
A systematic review based on the other Chou 2007 article but focused on assessing benefits and harms of medications for low back pain.

Deyo RA, Weinstein JN. Low back pain. *N Engl J Med* 2001;344:363-70.
An overview of low back pain epidemiology, evaluation, natural history, therapy and prevention.

New Zealand Guidelines Group. New Zealand acute low back pain guide. June 2003.
An evidence-based guideline for clinical management of acute low back pain. Includes a recommendation for "Red flags" to identify potentially serious conditions and "Yellow flags" to indicate psychosocial barriers to recovery.

Atlas S, Deyo RJ. Evaluating and managing acute low back pain in the primary care setting. *J Gen Intern Med* 2001;16:120-31.
A review paper for primary care on importance of history and physical exam, the role of diagnostic testing, and current recommendations for treatment with an emphasis on conservative care, time, reassurance and education on acute low back pain.

Areas of Current Clinical Review and Discussion

- Role of the non-surgical spine specialist
- Treatment modalities (manual therapy, exercise, heat/ice, education, etc)
- Imaging
- Injections
- Surgical interventions

Basket of Care Scope Sample

- Management of adults age 18 and over with acute episode of low back pain through comprehensive assessment, conservative treatment, and re-evaluation with a specialist if conservative treatment fails.