PURPOSE

To assure that DOP inmates with Back Pain are receiving high quality Primary Care for their condition.

POLICY

All DOP Primary Care Providers are to follow these guidelines when treating inmates with this condition. Deviations from these guidelines are permissible only on a case by case basis. When deviations are made they must be clearly documented in the medical record along with a clear explanation of the rationale for the deviation.

PROCEDURE

Basic Premises

1. Back pain is an extremely prevalent problem in the DOP as it is in the society at large. All primary care physicians should be capable of fully evaluating and treating this presenting problem. The vast majority of back pain can and should be managed at the primary care level without consultation or referral to specialists.

2. Back pain is roughly divided into two types acute and chronic. Most acute back pain resolves in 1 – 2 weeks and >95% is gone in 2 months. Chronic pain is therefore is reasonably defined as pain present for more then 2 months or frequently recurrent over a longer period of time.

Evaluation

1. On initial presentation and when clinically indicated on follow up a complete and careful history needs to be taken and documented. It should generally include the following:

   A. History of Present Illness:

      1) History of injury or how the pain first started: when, where, how, etc.
      2) Description of pain: type (aching, burning, tearing, etc.), severity, location, and radiation (particularly whether or not the pain radiates below the knee).
      3) Aggravating and mitigating factors
      4) Length of time pain has been present, is it improving/deteriorating
      5) Associated or constitutional symptoms (fever, weight loss, morning stiffness)
      6) *Level of disability and activity restriction that is occurring due to the back pain*

   B. Past History of back injuries and/or surgeries, and any relevant problems that might have a bearing of the current condition

   C. GI, GU, musculoskeletal, and neurologic review of systems
      1) Sensory loss: presence, distribution, trends
      2) Muscular weakness: presence, distribution, trends
      3) Loss of bladder or bowel control (absence of urinary retention all but rules out Caudia Equina, < 1:10,000 risk)

   D. *If there is any concern about the reliability of the history attempts should be made to obtain confirming/conflicting evidence from nursing and/or custody observations and the past medical records.*

2. On initial presentation a through focus physical examination concentrating on the back; abdomen; and lower (upper) extremity musculoskeletal and neurologic examinations should be completed. Also a

general examination should be done if any thing in the above history or examination indicates the possible presence of a systemic disorder. This should at a minimum include the following:

A. Back
   1) Palpation of the spine and associated soft tissues noting location of tenderness and/or spasm.
   2) Range of motion particularly forward bending
   3) Presence of mal-alignment

B. Lower extremity (and/or upper extremity)
   1) Straight leg raises in both sitting and lying positions (a positive result = **pain below the knee at < 60 degrees** of hip extension. A negative SLR = <5% chance of surgically significant disc herniation)
   2) Palpation and range of motion of the major joints
   3) Palpation of the soft tissues
   4) Reflexes, strength, and sensation neurologic tests

C. Observe and document gait and how the patient gets up from sitting and/or gets on the exam table

D. Where there is a concern about the reliability of the history and/or the examination any or all of the following tests (based on the **"Waddell Signs"**) should be considered and the results carefully documented. Two or more positive findings on the following are high suggestive of malingering or other secondary gain issues such as drug seeking being present:
   1) Compare straight leg raising in the lying and sitting positions. Both should cause symptoms at a similar degree of elevation.
   2) Check active leg raising when lying down with your hand under opposite heel. If patient is giving a full effort, you should feel heel pressing down.
   3) Observe patient picking up objects off the floor such as clothing or a dropped pen and compare how he did when doing formal range of motion testing.
   4) Observe gait and other activities (either personally or through surrogates) and compare to how he acted in the exam room.
   5) Apply light pressure to tender areas and observe for exaggerated responses and/or pain at anatomically distant sites
   6) Failure to cooperate with the examination and/or overreaction during the examination
   7) Abnormalities that are non-anatomic such as cogwheeling on strength testing of non-dermatomal sensory loss
   8) Pain with axial loading, i.e. pain in lower back with pressure applied to the top of the head while standing

Diagnosis

Formulate a working diagnosis based on the above history and physical exam. The diagnosis will usually be one of the following:

1. ***Acute low back pain:*** Symptoms < 6 weeks, pain does not radiate below the knee
2. ***Acute sciatica:*** Symptoms < 6 weeks, **pain radiates below the knee**
3. ***Chronic low back pain:*** Symptoms > 6 weeks, pain does not radiate below the knee
4. ***Chronic sciatica:*** Symptoms > 6 weeks, **pain radiates below the knee**

5. ***Caudia Equina:*** Urinary retention, saddle anesthesia, unilateral or bilateral sciatica, sensory and motor deficits, and abnormal straight leg raising
6. ***Malingering/drug seeking:*** Objective findings do not support subject of complaints, multiple positive Waddell signs, history of drug diversion, etc..

Diagnostic studies

The ordering of diagnostic studies should be based on your working diagnosis and previously done testing

1. ***Acute low back pain:*** In most patients no diagnostic testing is necessary. Plain X-rays are usually only indicated when there is a concern about tumors or fractures, they are of little value in evaluating for radiculopathy.
2. ***Acute sciatica:*** In most patients without signs of Caudia Equina or severe neuropathy no diagnostic testing is necessary during the acute phase. Plain X-rays are usually only indicated when there is a concern about tumors or fractures, they are of no value in evaluating for radiculopathy.
3. ***Chronic low back pain:*** In most patients since surgery is rarely indicated, there is little value to advanced imaging. Plain X-rays should be considered if not done in the recent past to rule out secondary diseases.
4. ***Chronic sciatica:*** If the patient is a surgical candidate and has indications for surgery (see below) then advanced imaging (MRI in most cases) is indicated.
5. ***Caudia Equina/critical radiculopathy:*** Usually requires immediate referral and further testing should be done in consultation with the consultant.
6. ***Malingering/drug seeking:*** this is primarily a **clinical diagnosis best made by the patient's Primary Care Provider**. There are no diagnostic studies that will rule this in or out, and the vast majority of consultants are no more skilled in making this determination then DOP Primary Care Providers. Diagnostic studies and/or consultations are rarely indicated. If a substance abuse is a possibility, then a **mental health consultation** should be considered.
7. ***Indications for plain x-ray:***
   A. Age >50
   B. Unrelenting night pain or pain at rest
   C. History for suspicion of cancer
   D. Fever for greater than 48 hours
   E. Osteoporosis
   F. Neuromotor deficits
   G. Chronic oral steroids
   H. Serious attacks/injury involving high levels of energy (i.e. falls from heights, MVA, etc.)
   I. Recent history of drug/alcohol abuse
8. ***Indications for MRI or other advanced imaging:*** the patient is a reasonable surgical candidate and is willing to consider surgery and at least one of the following is present:
   A. Chronic sciatica with a positive straight leg raise failing more than six to eight weeks of aggressive conservative therapy
   B. Rapidly progressive neuropathy, particularly motor neuropathy

Treatment

1. ***Acute low (upper) back pain and acute sciatica:***
   A. **Pain Control Phase** (usually first 1 – 3 weeks): most acute low back problems do not go beyond this phase

1) **Non-narcotic analgesics** (acetaminophen or NSAIDS) – usually for 5 to 10 days, should rarely be needed on a regular basis for more then 6 weeks.
2) **Muscle relaxants** – Some studies have shown benefit in controlling pain but usually only during the first 1 – 2 weeks, rarely should these be used for more then 4 weeks. There is a high level of abuse of these agents in the DOP; therefore their use ***should be avoided*** where ever possible.
3) **Narcotic analgesics** – Usually required only in severe mechanical strain and radiculopathy for the first 3 to 5 days, rarely should they be used for more than 2 weeks.
4) **Corticosteroids –** High dose (40 to 60 mg per day) for seven to 14 days with or without taper is often helpful in acute sciatica.
5) **Non-pharmacologic measures** –
    a. **Bed rest** – this should **be avoided** and if used **limited to only 1 – 2 days**.
    b. **Rapid return to activity** –studies have consistently shown that a **rapid return to both work and non-work activity speeds recovery**.
        1. Encourage programs and custody to have partial duty programs so inmates can return to their regular duties before full recovery.
        2. The longer a patient remains out of work the less likely they will ever return to work.
        3. Continue routine activity while paying attention to correct posture.
        4. Temporarily limit or avoid specific activities known to increase mechanical stress on the spine, especially prolonged unsupported sitting, heavy lifting, and bending or twisting the back, especially while lifting.
        5. Discontinue any activity or exercise that causes spread of symptoms
    c. **Strengthening and stretching exercises** – these can be started as soon as they can be done without aggravating the pain. (See Taking Care of your back.)
        1. Most can be done at "home" without professional supervision
        2. Encouraging patients to become active in their own treatment often speeds recovery
        3. Aerobic programs that minimally stress the back (walking, jogging, etc.) can be started during the first two weeks for most patients with acute low back problems.
        4. Strengthening exercises for trunk muscles (especially back extensors), gradually increased, and are helpful for patients with acute low back problems.
    d. **Heat or cold** which ever the patient prefers

B. **Stabilization** – Improved but still symptomatic (usually 2 – 6 weeks post injury)
    1. **Physical therapy** – this can be added if not making satisfactory progress with the above measures. However it should be reassessed every 1- 2 weeks to see if there is significant progress as gauged by an increase in activity not just pain control.
    2. **Taper off narcotics and muscle relaxants** and make non-narcotic analgesics PRN.
    3. Continue the above non-pharmacologic measures

C. **Rehabilitation**– (usually 6 – 12 weeks post injury)
    1) Stop narcotics and muscle relaxants if not already done
    2) Continue physical therapy only if there is clear progress in the return to activity.
    3) If persistent non-radicular pain (pain that does not radiate below the knee) consider changing management to Chronic Back Pain

D. **Consultation – consider** neurosurgical or spinal orthopedics if **all the following present**:
    1) Patient is a surgical candidate
        a. Medically a reasonable risk
        b. Willing to consider surgery
        c. Psychosocial factors do not indicate the likelihood of a poor outcome. Presence of one or more of the following significantly increase the risk of a poor outcome from surgery: (see appendix 1)

1. Severe depression or anxiety, or other out-of-control mental illness
2. Drug seeking behavior
3. Substance abuse that has not been appropriately treated and is in remission
4. Malingering or significant secondary gain issues
5. One or more psychological risk factors (see appendix 1)

2) One of the following is present
   a. Caudia Equina syndrome
   b. Progressive or significant neuromotor deficit
   c. Positive straight leg raise (a positive result = **pain below the knee at < 60 degrees** of hip extension.
3) Advanced imaging (MRI or CT) shows an anatomically appropriate lesion (not required if Cauda Equina syndrome clinically evident)

2. ***Chronic low back pain/Chronic sciatica***

A. This is a **Chronic Pain** condition. Refer to the **Chronic Pain Guidelines**
B. Consultation should be considered only after there has been an attempt at pain control via the Chronic Pain Guidelines
C. **Treatment**
   1. A written plan of care including the items listed below is the essential tool for ensuring a comprehensive approach to treatment of a patient with chronic back pain. It should
      a. Set personal goals (work, recreation, relationships)
      b. Improve sleep (through nonpharmacologic measures)
      c. Increase physical activity
      d. Manage stress, psychosocial issues
      e. Decrease pain
   2. Patients with chronic back pain should participate in a exercise fitness program to improve function and fitness
   3. Most patients want to return to a normal routine of completing activities of daily living. The focus should be on improving function.
   4. Self-management insures active patient participation in the care plan is essential.
      a. Determine baseline fitness, then set specific fitness goals with a gradual graded fitness program
      b. Patients should be taught self-management treatments to help manage pain (use of ice, heat, relaxation, cognitive behavioral)
      c. Focus on managing pain versus curing pain
   5. Chronic pain is frequently associated with **psychological problems** and even comorbid psychiatric diagnoses. If psychological difficulties or psychiatric comorbidities are found, the patient's treatment plan should include a Mental Health Referral.
   6. **Cognitive-behavioral approaches** to the rehabilitation of patients with persistent and unremitting chronic pain are considered to be among the most helpful available. Patients may be referred to Mental Health. However, there are many cognitive-behavioral steps that can be implemented by primary care physicians within the busy structure of their practice to assist their patients towards rehabilitation and compliment the work of psychotherapists (see Chronic Pain Guidelines).
D. **MRI indications**:
   1. Chronic sciatica with positive SLR (> 60 degrees with pain below the knee)

2. Persistent neuromotor deficit > 4-6 weeks of conservative therapy (this does not include minor sensory or reflex changes)
3. Progressive neurologic deficits
4. Suspected malignancy
5. Suspected osteomyelitis
6. Severe pain requiring hospitalization

E. **Consider referral for epidural steroids**
1. Patients with persistent severe predominantly leg pain in a dermatomal pattern with corroborative findings for radiculopathy (reflex or motor changes, positive SLR)
2. Positive MRI findings matching the clinical syndrome above
3. If surgery is being considered primarily for pain relief they should be strongly considered for epidural steroids prior to performing surgery

F. **Consultation for surgery–** Neurosurgical or spinal orthopedics
1. Patient is a surgical candidate
2. Epidural steroids have failed or are contraindicated
3. Progressive or significant neuromotor deficits (foot drop or functional muscle weakness)
4. Persistent neuromuscular deficits > 4-6 weeks of conservative therapy
5. Chronic sciatica with positive SLR (pain below the knee at < 60 degrees of hip flexion). ***Chronic back pain without sciatica is not generally an indication.***

3. ***Critical radiculopathy: This requires immediate referral to a back surgeon.***

Paula Y. Smith, M.D. 8/10/10

Paula Y. Smith, MD, Director of Health Services Date

SOR: Deputy Medical Director

Appendix 1: Psychosocial Screening and Assessment Tools

A. Screening Checklist for Depression:

1. depressed mood
2. markedly diminished interest or pleasure in all or most activities
3. > 5% body weight loss or gain
4. increased or decreased appetite
5. psychomotor agitation or retardation
6. insomnia or hypersomnia
7. fatigue or loss of energy
8. feelings of worthlessness or inappropriate guilt
9. diminished concentration or indecisiveness
10. recurrent thoughts of death or suicide

B. Psychological Risk Factors

There is consensus that the following factors are important to note and consistently predict poor outcomes:

- Belief that pain and activity are harmful
- "Sickness behaviors," such as extended rest
- Depressed or negative moods, social withdrawal
- Treatment that does not fit best practice
- Problems with claim and compensation
- History of back pain, time off or other claims
- Problems at work or low job satisfaction
- Heavy work, unsociable hours
- Overprotective family or lack of support

References

Institute for Clinical Systems Improvement (ICSI). Adult Low Back Pain. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2006 Sep. 66 p.

Philadelphia Panel evidence-based clinical practice guidelines on selective rehabilitation interventions for low back pain. Phys Ther 2001 Oct;81(10): 1641-74.

Borenstein, DG, Gladden, J. Management of Chronic Musculoskeletal Pain: Focus on Low Back Pain. AAFP Video Monograph; 1999.

Anderson, RE. Et al. Acute Low Back Pain-Radiculopathy, American College of Radiology Appropriateness Criteria.

Hayden JA, van Tulder MW, Malmivaara A, Koes BW. Exercise therapy for treatment of non-specific low back pain. *Cochrane Database of Systematic Reviews* 2005, Issue 3.

Schonstein E, Kenny DT, Keating J, Koes BW. Work conditioning, work hardening and functional restoration for workers with back and neck pain. *Cochrane Database of Systematic Reviews* 2003, Issue 3.

Assendelft WJJ, Morton SC, Yu Emily I, Suttorp MJ, Shekelle PG. Spinal manipulative therapy for low-back pain. *Cochrane Database of Systematic Reviews* 2004, Issue 1.

Deshpande A, Furlan A, Mailis-Gagnon A, Atlas S, Turk D. Opioids for chronic low-back pain. *Cochrane Database of Systematic Reviews* 2007, Issue 3.

van Tulder MW, Touray T, Furlan AD, Solway S, Bouter LM. Muscle relaxants for non-specific low-back pain. *Cochrane Database of Systematic Reviews* 2003, Issue 4.

Gibson JNA, Waddell G. Surgical interventions for lumbar disc prolapse. *Cochrane Database of Systematic Reviews* 2007, Issue 2.

Gibson JNA, Waddell G. Surgery for degenerative lumbar spondylosis. *Cochrane Database of Systematic Reviews* 2005, Issue 4.

Clarke JA, van Tulder MW, Blomberg SEI, de Vet HCW, van der Heijden GJMG, Bronfort G, Bouter LM. Traction for low-back pain with or without sciatica. *Cochrane Database of Systematic Reviews* 2007, Issue 2.

Patel, AT, Ogle, AA, Diagnosis and Management of Acute Low Back Pain. American Family Physician 2000;61:6

Anderson, RE, et al. Acute Low Back Pain-Radiculopathy. American College of Radiology Appropriateness Criteria

Boswell, MV, et al. Interventional techniques in the management of chronic spinal pain: evidence based practice guidelines. American Society of Interventional Pain 2005.