



Complete Summary

GUIDELINE TITLE

Review criteria for cervical surgery for entrapment of a single nerve root.

BIBLIOGRAPHIC SOURCE(S)

Washington State Department of Labor and Industries. Review criteria for cervical surgery for entrapment of a single nerve root. Olympia (WA): Washington State Department of Labor and Industries; 2004 Jun. 1 p.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Washington State Department of Labor and Industries. Criteria for cervical surgery related to entrapment of a single cervical nerve root. Olympia (WA): Washington State Department of Labor and Industries; 2002 Aug. 1 p.

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SCOPE

DISEASE/CONDITION(S)

Entrapment of a single cervical nerve root

GUIDELINE CATEGORY

Evaluation
Treatment

CLINICAL SPECIALTY

Neurological Surgery
Neurology
Orthopedic Surgery

INTENDED USERS

Advanced Practice Nurses
Health Care Providers
Health Plans
Hospitals
Physical Therapists
Physician Assistants
Physicians
Utilization Management

GUIDELINE OBJECTIVE(S)

To present guidelines for cervical surgery related to entrapment of a single cervical nerve root in the injured worker

TARGET POPULATION

The injured worker with entrapment of a single cervical nerve root

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation (Criteria for Surgery)

1. Documentation of failure of patient to improve with conservative care (e.g., physical therapy, medications, cervical traction)
2. Evaluation of subjective clinical findings (sensory symptoms in a dermatomal distribution that correlated with involved cervical level or positive Spurling test)
3. Evaluation of objective clinical findings (motor deficit, reflex changes, positive electromyogram findings)
4. Imaging studies (myelogram with computed tomography [CT] scan, magnetic resonance imaging [MRI])

Surgical Treatment

1. Cervical laminectomy, discectomy, or laminotomy
2. Cervical foraminotomy with or without fusion, excluding fractures

MAJOR OUTCOMES CONSIDERED

- Benefits of cervical surgery, such as relief of pain, weakness, or sensory loss; return to work; relief of preoperative neurological deficit
- Risks of cervical surgery, such as postoperative complications
- Patient satisfaction

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A review of the current medical literature was conducted for prospective randomized trials of cervical discectomy with, or without, fusion; cervical discectomy with fusion and instrumentation; and the effect of smoking on spinal fusion.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Consensus development has generally taken place between the permanent members of the subcommittee (orthopedic surgeon, physiatrist, occupational medicine physician, neurologist, neurosurgeon) and ad hoc invited physicians who are clinical experts in the topic to be addressed.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Following input from community-based practicing physicians, the guideline was further refined.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Review Criteria for Cervical Surgery Related to Entrapment of a Single Cervical Nerve Root

| Procedure | Conservative Care | Clinical Findings | | | | | |
|---|---|-------------------|--|------------|---|------------|--|
| | | | Subjective | | Objective | | Imaging |
| Cervical Discectomy Laminectomy Laminotomy Foraminotomy With or Without Fusion Excluding Fractures | 6–8 weeks of: Physical therapy <i>OR</i> Medications <i>OR</i> Cervical traction | AND | Sensory symptoms in a dermatomal distribution that correlates with involved cervical level ¹ <i>OR</i> Positive Spurling test | AND | Motor deficit <i>OR</i> Reflex changes <i>OR</i> Positive EMG Changes should correlate with involved cervical level | AND | Abnormal imaging that correlates nerve root involvement with subjective and objective findings, on: Myelogram with CT scan <i>OR</i> MRI |
| A positive response to Selective Nerve Root Block² that correlates with imaging abnormality is required if there are complaints of radicular pain with no motor, sensory, reflex, | | | | | | | |

| Procedure | Conservative Care | Clinical Findings | | | | |
|--|-------------------|------------------------|-----------|---------|--|--|
| | | Subjective | Objective | Imaging | | |
| | | or EMG changes. | | | | |
| <p>Cases to be referred for physician review include:</p> <ul style="list-style-type: none"> • Repeat surgery at the same level • Request for surgery at the C3–4 level or above • Objective findings indicating myelopathy | | | | | | |
| <p>When requesting authorization for decompression of multiple nerve roots levels, each level is subject to the criteria.</p> | | | | | | |

¹ Sensory deficit, motor weakness, and reflex changes may vary depending on innervation.

- C4–5 disc herniation with compression of C5 nerve root may produce sensory deficit in the lateral upper arm and elbow; motor weakness in the deltoid and variably in the biceps (elbow flexion); and reflex changes variably in the biceps.
- C5–6 disc herniation with compression of the C6 nerve root may produce sensory deficit in the radial forearm, thumb, and index finger; motor weakness in the biceps, forearm supination, and wrist extension; and reflex changes in the biceps and brachioradialis.
- C6–7 disc herniation with compression of the C7 nerve root may produce sensory deficit in the index and middle fingers; motor weakness in the triceps (elbow extension), wrist flexion, and variably in the finger flexors; and reflex changes in the triceps.

² A selective nerve root block may be considered "positive" if it:

- Initially produces pain in the distribution of the nerve root being blocked, and
- Produces at least 75% reduction in pain for a duration consistent with the type of local anesthetic used for the block.

Abbreviations: CT, computed tomography; EMG, electromyogram; MRI, magnetic resonance imaging

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

The recommendations were developed by combining pertinent evidence from the medical literature with the opinions of clinical expert consultants and community-based practicing physicians. Because of a paucity of specific evidence related to the injured worker population, the guideline is more heavily based on expert opinion.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

The (surgical) guidelines are meant to increase the proportion of surgical requests authorized for workers who truly require surgery and to decrease the proportion of such authorizations among workers who do not fall within the guideline.

POTENTIAL HARMS

None stated

CONTRAINDICATIONS

CONTRAINDICATIONS

Current cigarette smoking is a relative contraindication.

QUALIFYING STATEMENTS

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- This medical treatment guideline was developed through collaboration with the Washington State Department of Labor and Industries and the Washington State Medical Association (WSMA) Industrial Insurance Advisory Section of the Interspeciality Council. Labor and Industries is solely responsible for coverage decisions that may result from use of this guideline.
- The Office of the Medical Director works closely with the provider community to develop medical treatment guidelines on a wide range of topics relevant to injured workers. Guidelines cover areas such as lumbar fusion, indications for lumbar magnetic resonance imaging (MRI), and the prescribing of controlled substances. Although doctors are expected to be familiar with the guidelines and follow the recommendations, the department also understands that guidelines are not hard-and-fast rules. Good medical judgment is important in deciding how to use and interpret this information.

- The guideline is meant to be a gold standard for the majority of requests, but for the minority of workers who appear to fall outside of the guideline and whose complexity of clinical findings exceeds the specificity of the guideline, a further review by a specialty-matched physician is conducted.
- The guideline-setting process will be iterative; that is, although initial guidelines may be quite liberally constructed, subsequent tightening of the guideline would occur as other national guidelines are set, or other scientific evidence (e.g., from outcomes research) becomes available. This iterative process stands in contrast to the method in some states of placing guidelines in regulation. Although such regulation could aid in the dissemination and quality oversight of guidelines, flexibility in creating updated guidelines might be limited.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

All of the surgical guidelines established by the Department of Labor and Industries in collaboration with the Washington State Medical Association (WSMA) have been implemented in the context of the Utilization Review (UR) program (complete details regarding the Utilization Review program can be found on the [Washington State Department of Labor and Industries Web site](#)). It has been critical in contract negotiations with UR vendors to specify that the vendor is willing to substitute WSMA-generated guidelines for less specific standards already in use by the company. The Department of Labor and Industries initiated an outpatient UR program, and this has allowed full implementation of guidelines related to outpatient procedures (e.g., carpal tunnel surgery, magnetic resonance imagings [MRIs]). The scheduled drug use guideline has been used internally, but has not been formally implemented in a UR program.

The intention of the joint Department of Labor and Industries and WSMA Medical Guidelines Subcommittee was to develop treatment guidelines that would be implemented in a nonadversarial way. The subcommittee tried to distinguish between clear-cut indications for procedures and indications that were questionable. The expectation was that when surgery was requested for a patient with clear-cut indications, the request would be approved by nurse reviewers. However, if such clear-cut indications were not present, the request would not be automatically denied. Instead, it would be referred to a physician consultant who would review the patient's file, discuss the case with the requesting surgeon, and make recommendations to the claims manager.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1991 May (revised 2004 Jun)

GUIDELINE DEVELOPER(S)

Washington State Department of Labor and Industries - State/Local Government Agency [U.S.]

SOURCE(S) OF FUNDING

Washington State Department of Labor and Industries

GUIDELINE COMMITTEE

Washington State Department of Labor and Industries (L&I), Washington State Medical Association (WSMA) Industrial Insurance Advisory Section of the Interspecialty Council

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Medical Director, Washington State Department of Labor and Industries (L&I):
Gary Franklin, MD

The individual names of the Washington State Medical Association (WSMA) Industrial Insurance Advisory Committee are not provided in the original guideline document.

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

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This guideline updates a previous version: Washington State Department of Labor and Industries. Criteria for cervical surgery related to entrapment of a single cervical nerve root. Olympia (WA): Washington State Department of Labor and Industries; 2002 Aug. 1 p.

GUIDELINE AVAILABILITY

Electronic copies: Available from the [Washington State Department of Labor and Industries Web site](#).

Print copies: L&I Warehouse, Department of Labor and Industries, P.O. Box 44843, Olympia, Washington 98504-4843.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Washington State Department of Labor and Industries. Guideline for Cervical Surgery. (Provider Bulletin: PB 04-10). Olympia (WA): Washington State Department of Labor and Industries; 2004 Jun. 4 p.

Electronic copies: Available from the [Washington State Department of Labor and Industries Web site](#).

Print copies: Available from the L&I Warehouse, Department of Labor and Industries, P.O. Box 44843, Olympia, Washington 98504-4843.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on February 14, 2000. It was sent to the guideline developer for review on February 15, 2000; however, to date, no comments have been received. The guideline developer has given NGC permission to publish the NGC summary. This summary was updated by ECRI on May 27, 2004. The information was verified by the guideline developer on June 14, 2004. This summary was updated again by ECRI on October 20, 2004. The information was verified by the guideline developer on November 5, 2004.

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