

## Hospital guidelines for diagnosis-related groups/osteopathic manipulative treatment

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**The DRG/OMT [Diagnosis-Related Groups/Osteopathic Manipulative Treatment] Master Matrix is a tabulated guideline for helping osteopathic physicians and hospitals document their unique form of healthcare. The DRG/OMT Master Matrix is a quality management tool designed for osteopathic physician care of hospitalized patients. It furnishes a mechanism for relating various diagnostic entities to probable areas of somatic dysfunction. This matrix and the accompanying patient record aid the physician in recording diagnosis and treatment, thus providing the hospital with documentation of osteopathic patient care's competitive advantage. In a hospital record review, OMT use increased from 5% to 15% of patients after the DRG/OMT Master Matrix was introduced.**

**(Key words: Diagnosis-related groups, hospital guidelines, osteopathic manipulative technique, osteopathic medicine, somatic dysfunction)**

Healthcare in the United States exists in a dynamic tension. Hospitals struggle to furnish quality healthcare while controlling the cost for rendering service. Hospital administrators and physicians are burdened with meeting the growing number of healthcare regulations. These regulations monitor how healthcare providers deliver services while conforming to state and federal regulations and fulfilling accreditation requirements of various organizations. Accredited hospitals must conform to quality standards, which increase operation costs. Simultaneously, governmental agencies and third-party insurance carriers want to reduce the reimbursement costs for healthcare.

Osteopathic hospitals have a unique opportunity to increase quality and to control costs by providing

osteopathic manipulative treatment (OMT) for their patients. The noninvasive protocols that compose OMT give the osteopathic physician potent methods for treating somatic dysfunction associated with visceral diseases, dysfunctions, and injuries.<sup>1-4</sup>

During the 1970s, Stiles<sup>5</sup> comprehensively examined patients for somatic dysfunction, including viscerosomatic reflex patterns, and provided OMT to patients in the hospital setting. He documented improved quality of health and decreased length of stay for both surgical and medical conditions once OMT was added to the patient's management program. He reported improved pulmonary function and decreased incidence of shock, arrhythmia, and mortality when OMT was combined with medical care. His work demonstrated that OMT is a cost-effective approach in meeting patients' healthcare needs.

Most osteopathic physicians, however, do not use OMT in the hospital setting. A review of hospital charts at the Chicago Osteopathic Health System (COHS) showed that less than 5% of the patients received any documented OMT for their somatic dysfunction. This finding led to the development of an osteopathic task force. The task force, working with the Osteopathic Concepts Committee (OCC), was given a twofold charge. First, they were to provide viable approaches to improve the use of osteopathic diagnosis and manipulative treatment within the hospital organization. Second, they were to furnish guidelines for the use and documentation of OMT as a therapeutic intervention for patients with diagnoses of primary or secondary somatic dysfunction. The latter charge was based on the request by governmental agencies and third-party carriers for osteopathic hospitals. I was the chairman of the committee.

### Matrix development

In 1989, the OCC at the Olympia Fields Osteopathic Hospital and Medical Center developed a diagnosis-related study. This study evaluated the documentation of somatic dysfunction and the use of OMT in various categories and departments of the hospital.

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For the 2 academic years 1989 to 1991, OCC members met monthly and reviewed hospital charts by diagnosis and departments providing patient healthcare. During this time, 200 charts were reviewed. Fifteen percent of the patients admitted with various injuries and diseases mentioned somatic complaints or musculoskeletal pain (or both) as their chief complaint. Fifty percent of all patients had documented somatic dysfunction, as identified by a third-year student or a supervising house staff physician (or both) performing the history and physical examination, but less than 5% of all patients received OMT.

In 1991, a DRG/OMT [Diagnosis-Related Groups/Osteopathic Manipulative Treatment] Master Matrix was developed; it was modified in 1992 with the addition of 55 entries. This DRG/OMT Matrix provides a structured guideline to (1) areas of somatic dysfunction associated with various diagnostic entities, for physicians and house staff, and (2) necessary documentation of OMT used in the hospital, for third-party payers.

In 1992, the DRG/OMT Master Matrix was introduced systematically throughout the hospital. Charts then were reviewed selectively for the recorded use of OMT through two different intern and third-year student classes. The results showed a great increase in the documented use of OMT of these *selected* hospitalized patients. In 1994, the Medical Records Department chart review showed that approximately 15% of all admissions (*nonselected* hospitalized patients) received OMT compared with 5% prior to the DRG/OMT Matrix use.

### DRG/OMT Matrix description

The DRG/OMT Master Matrix lists various visceral and somatic diseases categorized by DRG. The *Table* lists a sample of entries in the DRG/OMT Master Matrix. The areas of somatic dysfunction likely to be associated with the disease are identified by an ICD-9-CM (International Classification of Diseases—Clinical Modification) code number and description<sup>6(p71)</sup> and reference to an authoritative textbook.<sup>7</sup> Commonly, such associated areas of somatic dysfunction also need treatment. Suggestions of how to order OMT and where to record the examination results, diagnosis, and treatment follow. The physician then is directed to the DRG/OMT Master Matrix patient record.

This patient record (*Figure*) provides a centralized record of the admitting diagnosis, site of somatic dysfunction found, and the OMT techniques used. It also provides a place for the treating physician to record the patient's responses to treatment.

### Using the matrix

Attending physicians and house staff can effec-

tively provide osteopathic manipulative medicine in patient care by using the DRG/OMT Master Matrix. The chart helps to direct the physician's examination efforts to neurologically related regions where musculoskeletal findings are most probable and treatment will most likely have a favorable impact. The physician, however, must treat all the patient's somatic dysfunction important to the patient's current health status. Frequently, more than two or three body regions will require OMT.<sup>8</sup>

When the patient is admitted to the hospital, an admission note must include the osteopathic structural examination findings; then, the attending physician will determine if OMT is needed. If OMT is required, orders for it must be included in the patient's order form if performed by anyone other than the attending physician. A consultation with an osteopathic manipulative medicine specialist may be called if necessary. The consultant may prescribe OMT to be done by either the attending physician, the consultant, or the house staff. The treatment then is recorded on the patient's flow sheet. During the patient's hospital stay, the physician records OMT on the progress note and, finally, in all discharge summaries.

Osteopathic physicians and house staff can give third- and fourth-year osteopathic medical students clinical opportunities to use the appropriate OMT protocols on patients.<sup>9</sup> Through use of the DRG/OMT Master Matrix, clinical students can improve their cognitive skills in osteopathic medical management and, with the attending physician's guidance, improve their manipulative diagnostic and treatment skills.

The documentation that is needed to comply with quality management and utilization review standards are described and listed in this matrix. Quality management and utilization review activities at osteopathic hospitals provide an administrative mechanism that can assist the development and use of osteopathic manipulative medicine (Olympia Fields Osteopathic Hospital/Chicago Osteopathic Hospital Osteopathic Concepts Committee: Minutes, March 11, 1994).

### Discussion

Many injuries, illnesses, and disease systems are associated with specific areas of musculoskeletal dysfunction. Pulmonary system diseases such as pneumonia and bronchitis often have associated somatic findings at spinal segments T-1 through T-5. These musculoskeletal findings include altered skeletal, arthrodial, or myofascial structures singly or in combination, with the related neurologic, vascular, and lymphatic elements. They are the basis for the somatic dysfunction in the region. Treatment of the T-1 through T-5 region involves

**Table**  
**DRG/OMT Master Matrix—Modified**

**How to order OMT/OMM\***

OMT by house staff to affected area(s) daily and record; or OMM consult and participate; or OMM consult for OMT prescription to be carried out by house staff

**Documentation needed**

- a. Narrative in history and physical examination form (ie, osteopathic lesions, alteration in motion, temperature, tenderness, tissue texture change, and pain in the area of the paravertebral spinal muscles)
- b. Documentation in Admit Note
- c. Osteopathic Orders in Order Sheet
- d. Documentation in Progress Notes
- e. Documentation of OMT on all Discharge Summaries
- f. Documentation of Somatic Dysfunction as secondary diagnosis on Face Sheet
- g. Check DRG/OMT Matrix flow sheet (patient record [*Figure*])

**Sample of Entries**

| DRG <sup>†</sup><br>No. | Disease                                     | ICD-9 <sup>‡</sup>                                 | Probable primary<br>location of somatic<br>dysfunction                                        | Reference <sup>§</sup><br>page(s) |
|-------------------------|---------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------|
| 243                     | Appendicitis                                | 739.2                                              | Thoracic region                                                                               | 192                               |
| 243                     | Bronchitis, acute<br>and chronic            | 739.1<br>739.2                                     | Cervical region<br>Thoracic region                                                            | 13-51,<br>192                     |
| 247<br>143              | Concussion                                  | 739.0<br>739.1                                     | Head<br>Cervical region                                                                       | 1                                 |
| 243                     | Congestive heart failure                    | 739.1<br>739.2                                     | Cervical region<br>Thoracic region                                                            | 55, 56,<br>66, 71,<br>72, 85, 185 |
| 243                     | Coronary artery disease                     | 739.1<br>739.2                                     | Cervical region<br>Thoracic region                                                            | 53-76                             |
| 243                     | Cystocele                                   | 739.4<br>739.5                                     | Sacral region<br>Pelvic region                                                                | 123-127                           |
| 243                     | Hypertension                                | 739.2                                              | Thoracic region                                                                               | 61-64                             |
| 247<br>243              | Otitis media, all types                     | 739.0<br>739.1                                     | Head<br>Cervical region                                                                       | 10, 15                            |
| 243<br>247              | Sprain and strain                           | 739.4<br>739.5                                     | Sacral region<br>Pelvic region                                                                | ...                               |
| 243                     | Sprain and strain                           | 739.8                                              | Rib cage                                                                                      | ...                               |
| 247                     | Sprain and strain to<br>appendicular region | 739.6<br>739.7                                     | Lower extremity<br>Upper extremity                                                            | 206<br>206                        |
| 247                     | Somatoform disorder                         | 739.0<br>739.1<br>739.2<br>739.3<br>739.4<br>739.5 | Head<br>Cervical region<br>Thoracic region<br>Lumbar region<br>Sacral region<br>Pelvic region | ...                               |
| 247<br>243              | Surgical procedures<br>related to adenoids  | 739.0<br>739.1                                     | Head<br>Cervical region                                                                       | 16-19                             |

\*OMT = osteopathic manipulative treatment; OMM = osteopathic manipulative medicine.

<sup>†</sup>DRG = Diagnosis-related group.

<sup>‡</sup>ICD-9 = International Classification of Diseases—Clinical Modification.

<sup>§</sup>Kuchera M, Kuchera WA: *Osteopathic Considerations in Systemic Dysfunction*, ed 2 revised. Kirksville, Mo, KCOM Press, 1991.

# DRG/OMT Master Matrix

[Patient name plate]

Admitting diagnosis: 1. \_\_\_\_\_

Somatic dysfunction found: Yes \_\_\_\_\_ No \_\_\_\_\_

Somatic dysfunction diagnosed at (Check):

- |                           |                                  |
|---------------------------|----------------------------------|
| A. _____ Head (739.0)     | F. _____ Pelvis (739.5)          |
| B. _____ Cervical (739.1) | G. _____ Lower extremity (739.6) |
| C. _____ Thoracic (739.2) | H. _____ Upper extremity (739.7) |
| D. _____ Lumbar (739.3)   | I. _____ Ribs (739.8)            |
| E. _____ Sacrum (739.4)   | J. _____ Abdomen (739.9)         |

Osteopathic manipulative treatment (OMT) techniques used:

- |                                         |                             |
|-----------------------------------------|-----------------------------|
| (1) General mobilization (93.61)        | (5) Indirect (93.65)        |
| (2) High-velocity/low-amplitude (93.62) | (6) Lymphatic pump (93.66)  |
| (3) Articular—rib raising (93.63)       | (7) Fascial release (93.67) |
| (4) Muscle Energy—Isometric (93.64)     |                             |

| DATE | TREATED REGIONS | TECHNIQUE USED<br>(Enter number<br>from above) | COMMENTS | TREATMENT<br>GIVEN BY<br>SIGNATURE |
|------|-----------------|------------------------------------------------|----------|------------------------------------|
|      |                 |                                                |          |                                    |
|      |                 |                                                |          |                                    |
|      |                 |                                                |          |                                    |
|      |                 |                                                |          |                                    |
|      |                 |                                                |          |                                    |
|      |                 |                                                |          |                                    |

REASON IF NOT TREATED: \_\_\_\_\_

Signature of Physician (Attending) \_\_\_\_\_ DATE \_\_\_\_\_

**Figure.** DRG/OMT Master Matrix patient record, with ICD-9-CM codes given in parentheses. (©1992 Richard A. Feely, DO.)

providing the appropriate manual therapy to specific joint motion restriction via manipulation and general myofascial release of the restrictive barriers present. Treatment may involve soft tissue protocols to designated regions; it may include specific joint mobilization using indirect or direct manipulative methods (or both) and various activating forces, such as muscle energy (isometrics), high-velocity/low-amplitude (thrust), respiratory cooperation, and either or both articulatory and inherent forces.<sup>10</sup>

The purpose of these manual procedures is to alleviate biomechanically the patient's somatic dysfunction. Usually, OMT is designed to overcome restricted motion of the various arthrodial and myofascial structures. Although this is the immediate objective, additional positive changes should result. These include quality-of-life measures, such as the following: reduction of pain; increased range of motion; freedom of motion; enhanced ability to sit, stand, bend, and move about with ease; increased blood flow; and improved neurovascular and lymphatic function.<sup>11</sup> These latter improvements aid the healing of visceral diseases and dysfunctions for which the patient is hospitalized.<sup>5</sup>

Thus, somatic dysfunction in a single segment or multiple segmental regions may be the chief somatic manifestation of the patient's visceral disease.<sup>8</sup> For example, a patient may have lower gastrointestinal illness associated with viscerosomatic reflex responses at spinal segments T-10 and T-12. If the physician restricted treatment to those two thoracic spinal segments, improvement probably would be limited. If the physician found somatic dysfunction of the first rib in addition to that of the lower thoracic region, and correctly treated it, the results generally would be more effective. Therefore, the total patient must be examined so that somatic dysfunction can be identified and treated in all regions of the body as the patient's condition requires and tolerates.

Because each patient is an individual, the treatment provided must be tailored to the specific patient. The DRG/OMT Master Matrix does not furnish precise recommendations for each patient. Still, it offers general guidelines that will aid in the documentation of osteopathic principles and prac-

tice in patient care. The examining physician and the treating physician must make the appropriate diagnostic and therapeutic judgment for the use, type, and frequency of OMT in treating somatic dysfunction.

### Comment

The DRG/OMT Master Matrix offers a quality management tool for physicians and hospital administrators to document their distinctive osteopathic patient care. For physicians, payers, and researchers, it provides an easy record of diagnosis, somatic dysfunction found by region, OMT performed, and results. This matrix focuses the attention of physicians, hospital administrators, quality management personnel, house staff, and students on osteopathic diagnosis and manipulative treatment, thereby providing valuable educational opportunities. Through the use of the DRG/OMT Master Matrix, further statistical analysis of the effects of OMT can be performed for outcome-based research.

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