

TRAINING MDS TO SUPERVISE DO STUDENTS PERFORMING OMM

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Learning Objectives

1. Describe the reasons for the declining use and supervision of OMT
2. Describe highlights of COM's solutions to increase OMT exposure in the curriculum
3. Describe ATSU-SOMA's development of "Top Ten" basic skills
4. Demonstration and Participation of "Top Ten"



Current Climate

- Declining use of OMT in practice
(Fry¹, Johnson et al², Aguwa and Liechty³, Johnson and Kurtz⁴)
- Lack of thoroughness in hospital osteopathic structural exams
(Fennig and Shubrook⁵)
- Declining use of OMT in hospital settings and rare documentation of structural findings
(Essig-Beatty et al⁶)

Reasons for Declining Use of OMT

- Increasing reliance on prescriptive medications
 - Antibiotics, analgesics, etc.
- Anecdotal basis for OMT
 - Scientific basis hasn't kept pace
- Increased basic science hours in curriculum
 - Reduction of OPP contact hours
- Incoming students not motivated for osteopathic medicine
 - Allopathic alternative

Craft Teaching Model

“Master teaches the student how he/she performs a particular task, and the student imitates the master until gaining the desired degree of proficiency.”⁷





Where's the Master in the 3rd
and 4th Clerkship years?

- Declining OMT use by DOs
- Mixed preceptors, increasing numbers of MDs
 - No formal training in OMT

Student perceptions of why OMT is not used

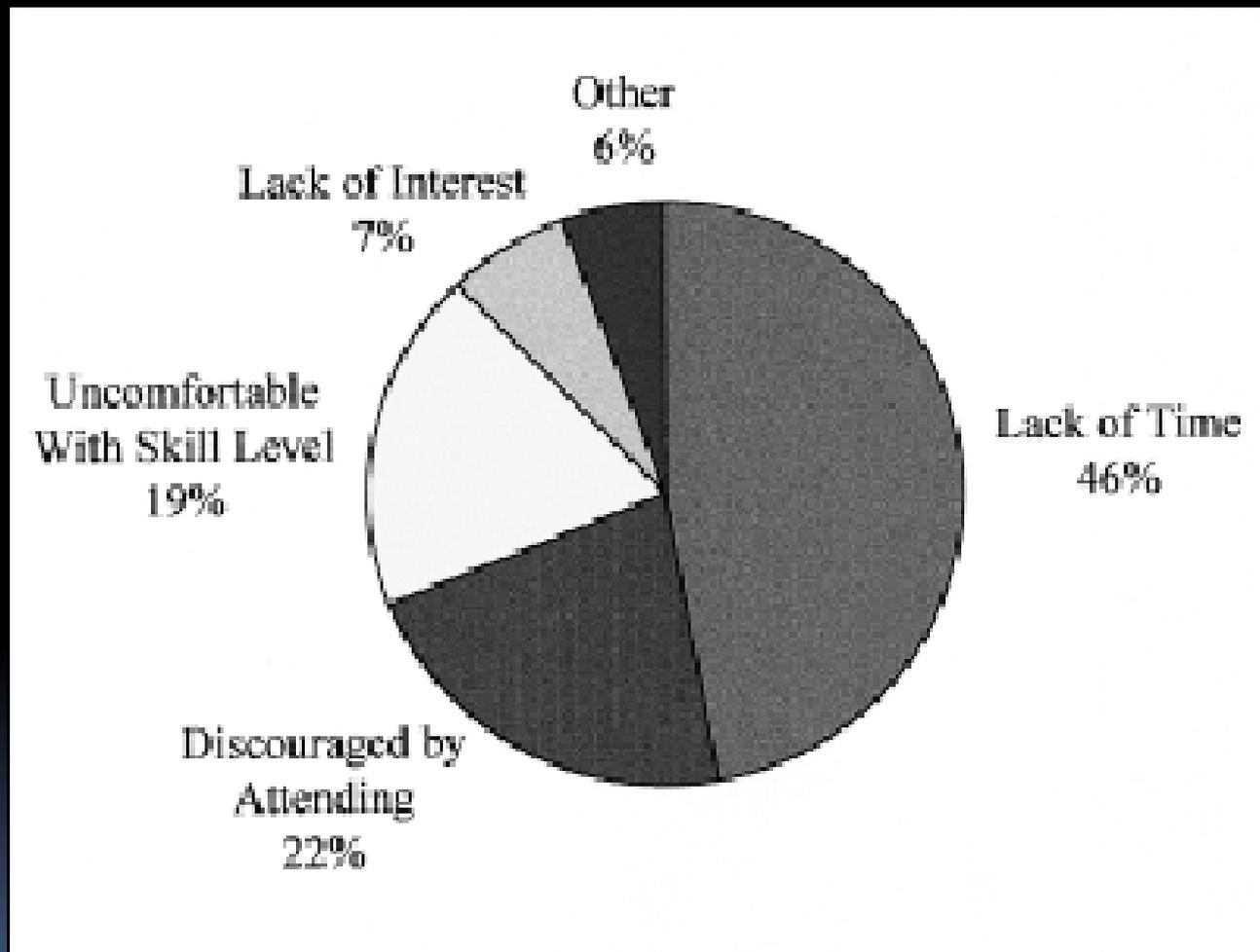


Figure 5. Student perceptions of why osteopathic manipulative treatment was not used.

Student's Experience

- Preclinically, 73% believed they were prepared to conduct structural examinations, and 71% believed they were prepared to use OMT.
- Pregraduation- 64%-73% reported few opportunities to use these skills during clinical rotations.
- Planned to use OMT for fewer than 25% of their future patients
 - mostly musculoskeletal problems.



Suggested Solutions

- Structured OPP curriculum that extends from clerkships into residency training programs
 - Provide educational sites in which they can hone their skills as distinctive DOs. (Gevitz)
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Educational Sites

- WVSOM - OMM student clinic
 - Supervised experience in OMT before clinical rotations – builds confidence. (9 Steele et al JAOA 2005)
- UNDNJ-SOM-
 - Requires 3rd yr. OMM clerkship
 - In-hospital consultative service
 - FP's get annual faculty development in OMM
- OU-COM – OMM “champions” @11 CORE sites
- KCOM – Monthly “Education” days integrate OPP

(10 Krueger et al Acad Med 2009)

Unique Challenges of SOMA

- All students spend their first year on campus
- Next 3 yrs 10 teams go to 10 different community health campuses across US
- Four full-time OPP Mesa-based develop web-based materials delivered by OPP faculty at each community health campus
- Early clinical experiences with many MD preceptors and DO's not using OMT

SOMA's "Top Ten" Solution

- Developed training materials – video and hardcopy of “top ten”
- Selected for:
 - Basic skill level “simplicity”
 - Safety
 - Ability to be taught in consistent manner
 - Applicability to common clinical problems

Overview of “Top Ten” Procedures

- At the end of the first year, all students reach competency in the “top ten”
- CHC OPP faculty further develop skills in 2nd yr
- CHC regional medical directors (MDs and DOs) have participated in faculty development sessions on the “top ten” and requested more detail and video recordings and more sessions to develop their OPP skills



Outcome Goals

- SOMA faculty and preceptors provide opportunities for the students under their supervision to integrate OMT where appropriate into their patient contacts.
 - Documentation of increased opportunities for incorporation and utilization of OMT by SOMA students during clinical training
 - OMT faculty development resources for SOMA faculty and preceptors with feedback for quality improvement
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“Top Ten” Basic OMT Skills

1. Osteopathic Structural Exam Standing/Seated
2. Soft Tissue and Myofascial Release Techniques
3. Indirect Techniques (Balanced Ligamentous Tension) Cervical/thoracic/lumbar/sacrum
4. Diaphragm release – Thoracic inlet /respiratory
5. Thoraco-lumbar junction Inhibition
6. Occipito-atlantal release and decompression
7. Venous sinus release techniques
8. Sacroiliac release techniques
9. Strain-Counterstrain techniques: C/T/L/S/Ext
10. Lymphatic pump techniques: thoracic and pedal



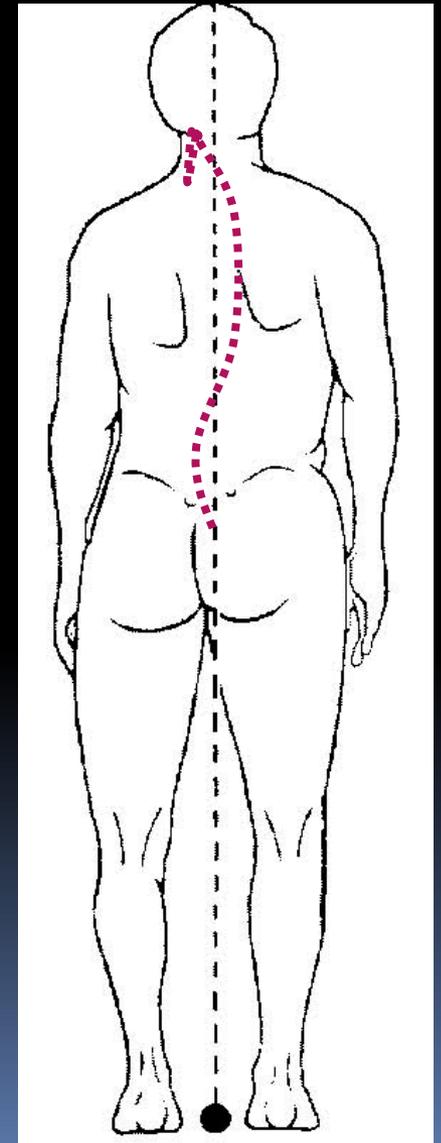
Demonstration of Selected Skills



Basic Skill #1

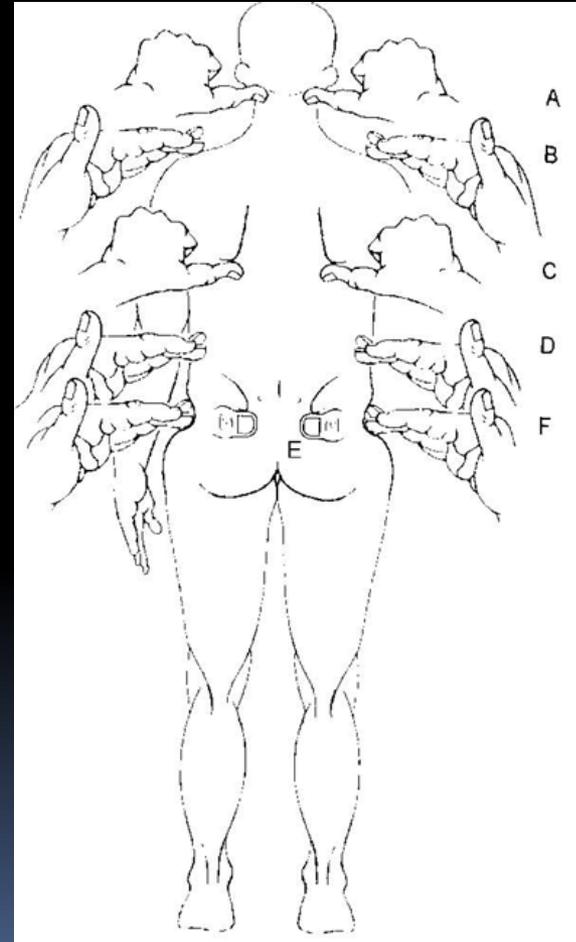
Standing Postural Exam:

- Establish relative heights of bony landmarks.
 - Shoulders
 - Inferior Border Scapula
 - Iliac Crests
- Note lateral curves and describe with right or left convexity, and spinal levels of apices of curves.



Standing Landmarks

- Iliac Crests, note asymmetry in level
- PSIS, not asymmetries in level
- Find L₅ between PSIS's
- Find posterior-most aspect of sacrum.
- Document your findings



Standing and Seated Flexion Tests



- With patient in standing / seated position, locate PSIS with thumbs
- Ask patient to slowly bend forward, while maintaining thumbs at PSIS Note which PSIS moves furthest superior/cephalad, and identify this as the “positive” side.
- Note rotational asymmetries of vertebral column during forward flexion indicating rotoscoliotic curvature.
- Positive Standing Flexion Test: Indicates dysfunction in the leg and/or in the pelvis on the “positive” side
- Positive Seated Flexion Test: Indicates some problem with the sacroiliac joint (innominate or sacrum somatic dysfunction) on the positive side

Audience Participation

Basic Skill #2 Soft Tissue Model

- Soft tissue technique is a direct technique that usually involves lateral stretching, linear stretching, deep pressure, traction and/or separation of muscle origin and insertion while monitoring tissue response and muscle changes by palpation.
- Proposed Mechanism(s)
 - Relaxes hypertonic muscles and reduce spasm
 - Stretches and increases the elasticity of shortened fascial structures
 - Enhances circulation to local myofascial structures
 - Improves local tissue nutrition, oxygenation, and removal of metabolic wastes
 - Improves abnormal somato-somatic and somato-visceral reflex activity, thus improving circulation in areas of the body remote from the area being treated
 - Identifies areas of restricted motion, tissue texture changes and sensitivity
 - Improves local and systemic immune response
 - Provides a general state of relaxation Provides a general state of tonic stimulation by stimulating the stretch reflex in hypotonic muscles

#2 Indications

- Somatic dysfunction of the soft tissues of the body as characterized or inferred by asymmetry, restriction of motion, tissue texture changes and tissue tenderness: hypertonic muscles excessive tension in fascial structures abnormal somato-somatic and somato-visceral reflexes
Clinical conditions that would benefit from:
- Enhanced circulation to local myofascial structures
- Improved local tissue nutrition, oxygenation, and removal of metabolic wastes
- Improved local and systemic immune responsiveness As an adjunct to additional manipulative treatment in order to:
 - Identify other areas of somatic dysfunction
 - Observe tissue response to the application of manipulative technique
 - Provide a general state of relaxation
 - Provide a general state of tonic stimulation
 - Prepare tissues for other types of manipulation

#2 Cautions and Relative Contraindications: Must Use Good Clinical Judgment in the Following Cases:

- Skin: Disorders which would preclude skin contact, e.g., contagious skin diseases, acute burns, painful rashes, abscesses, skin cancers, etc.
- Fascia: Acute fasciitis (infectious or autoimmune), acute fascial tears.
- Muscle: Acute muscular strains, acute myositis, muscle neoplasms.
- Ligament: Acute ligamentous sprain, acute ligamentous inflammatory disorders, septic arthritis, primary or secondary joint neoplasms.
- Bone: Acute fracture, osteomyelitis, primary or secondary bone tumors, osteoporosis

#2 Soft tissue-paraspinal muscles

1. Patient is supine and the physician stands at the side of the table near the patient's head.
2. Physician contacts the medial aspect of the cervical paraspinal muscles with the pads of the fingers of one hand while the other hand controls the forehead.
3. The fingers are drawn anteriorly carrying the muscle fibers with them while the other hand rotates the head away from the physician.
4. Enough force is applied to feel the muscles relax but not enough to cause discomfort or to cause the muscles to tighten further.
5. The force is slowly relaxed, the fingers are repositioned and the kneading and stretching are repeated.
6. Kneading and stretching are continued until maximal response is obtained
7. Recheck





#2 Clinical Presentations:

- Arm Pain
 - Cervicobrachial syndrome
 - Headache, cervicogenic
 - Neck Pain
 - Cervical Sprain/Strain
 - URI
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Basic Skill #3

Cervical Indirect-Balanced Ligamentous Tension (BLT)

1. Patient is supine and the physician sits at the head of the table
2. Physician supports the patient's head with his/her forearms and contacts the articular pillars bilaterally with the index fingers
3. Physician sidebends to the left or right, and rotates to the left or right, and flexes or extends as needed to balance ligamentous tension in all three planes at the dysfunctional segment. (take joint into the direction of ease)
4. The respiratory phases are tested and the patient is instructed to hold his/her breath as long as possible in the phase that provides the best ligamentous balance. This is usually inhalation. The physician makes minor adjustments in all three planes as needed to maintain ligamentous balance
5. Step 4 is repeated until the best motion is obtained (average is 3 times)
6. Recheck



#3 Clinical Presentations

- Arm Pain
- Cervicobrachial syndrome
- Headache, cervicogenic
- Neck Pain
- Cervical Sprain/Strain
- URI Otitis Media
- Vertigo, cervicogenic
- Cardiac Arrhythmia (cervicogenic)
- Any CP where improved circulation and drainage to and from the cranium would be of direct benefit
- Any CP where improved autonomic balance would benefit

Basic Skill #4 Thoracic Inlet Release

1. Patient is supine and the physician sits at the head of the table
2. Physician places hands over of the thoracic inlet with fingers spread over the anterior thorax and thumbs over the posterior thorax
3. Physician carries the thoracic inlet into right or left rotation to the point of balanced ligamentous tension, then adds components of left or right sidebending and flexion or extension until all three planes are at ligamentous balance
4. The respiratory phases are tested and the patient is instructed to hold breath as long as possible in the phase that provides the best ligamentous balance until maximal tissue response has been obtained
5. Recheck



#4 Clinical Presentations

- HEENT problems: URI Headache Sinus Infection/Congestion Tinnitus Otitis Media
- Any clinical presentation that would benefit from enhanced lymphatic drainage (thoracic duct proximity)

Basic Skill #5

Thoraco-Lumbar Junction Inhibition

1. The pt. is supine with their arms crossed over the chest. The physician is seated @ pt.'s side.
2. The physician makes a fist w/ cephalad hand, and the thumb extended.
3. The physician slides that hand under pt's upper lumbar spine, fitting the lumbar spinous processes in the depression between the distal phalanges and the base of the hand.
4. The physician applies a gentle superior lift with the cephalad hand, the knuckles and base of the hand maintaining even pressure on transverse processes.
5. With the caudad hand on the patient's elbows, the physician uses downward pressure into the bed (or treatment table) to closely control the lift of the fingers, balancing the lift to the resistance felt in the tissues. Hold until release is felt.
6. The area of the thoracolumbar junction is rechecked for reduced hypertonicity.



#5 Clinical Presentations

- Back Pain
- Lower extremity lymphatic stasis/edema
- Diaphragm tension
- Congestive heart failure
- Any CP benefiting from improved drainage of lymphatics from lower extremity through cisterna chyli
- Any CP benefiting from improved balance of lumbar sympathetic ganglia

Basic Skill #6 Occipito-atlantal Release

1. Pt. is supine ; physician sits at the head of the table
2. Physician uses index fingers to contact the occiput as near to the condyles as possible. Asking the patient to nod the head helps obtain access to the area. The index fingers may be reinforced with the middle fingers. Physician hands support by the table.
3. Tension is applied toward the orbits to make firm contact with the occiput
4. Physician applies traction while his/her elbows are moved medially. This moves the fingers laterally to widen the foramen magnum along its entire margin and decompress the tension on the occiput.
5. The respiratory phases are tested for the best increase in tension on the side of the restriction.
6. Pt. is instructed to hold breath as long as possible in this phase.(Usually inhalation) minor adjustments in all 3 planes to maintain balanced ligamentous tension.
6. Step 5 is repeated until the best motion is obtained (average is 3 times)
7. Recheck



#6 Clinical Presentations:

- Headache
- Sinusitis
- Allergic rhinitis
- Otitis media
- GI disorders
- Any CP benefiting from improved autonomic balance (parasympathic influences via vagus nerve)

Basic Skill #7 Venous Sinus Release

1. Physician identifies external occipital protuberance (inion)
2. The pads of the middle fingers contact the inion so that tips of middle fingers touch each other.
3. The weight of the patient's head completely rests on the pads of the middle fingers, no additional pressure is exerted by the physician.
4. Finger contact should be comfortable to the patient .
5. Physician waits for the tissue texture changes and warmth occurs.





#7 Clinical Presentations:

- Headache
 - Sinusitis
 - Allergic rhinitis
 - Otitis media
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Basic Skill #8 Sacral Rocking

1. Patient prone, physician stands at bedside
2. Palms over sacrum longitudinally, one hand over the other
3. Lean over sacrum, and apply pressure anteriorly over base, and rock sacrum anteriorly at the base.
4. Apply pressure anteriorly over the apex of the sacrum, rocking the sacrum posteriorly at the base.
5. Continue with slow gentle rocking alternating with first anterior pressure over the base and then over the apex.
6. Continue for 30 seconds to a minute or until tissue texture change signals release of somatic dysfunction
7. Recheck sacral motion





#8 Clinical Presentations

- Menstrual disorder/difficulty
 - Low back pain
 - Hip pain
 - Gait abnormality
 - Lower extremity pain
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Basic Skill #9

Counterstrain to Thoracic Region

1. Patient seated
2. Physician stands at head of table with knee on the table
3. Locate tender point midline on the sternum
4. Support patient's head and upper back with the knee
5. Flex patient's upper back and neck to the level of the tender point, while supporting head and spine w/ physician's hand and thigh.
6. Fine tune in 3 planes to reduce tenderness at the tender point by at least 70%.
7. Hold for 90 seconds.
8. Slowly return the patient to the neutral position.
9. Recheck the tender point for tenderness.





#9 Clinical Presentations

- Non-cardiac chest pain
 - Sprain/Strain of rib cage and/or sternum
 - Costochondritis
 - Pneumonia
 - Bronchitis
 - Asthma
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Basic Skill #10 Lymphatic Techniques

1. Patient supine; physician at the foot of the table.
2. Place the palms of both hands over the metatarsal heads on the plantar surface of the feet and dorsiflexes them to their physiologic barriers.
3. Apply a low velocity, moderate amplitude springing force in a cephalad direction. The repetition rate of the springing is varied until the maximal abdominal visceral motion is observed.
4. Continue for 1-2 minutes, to patient's tolerance, or until the desired fluid response is obtained.



#10 Clinical Presentations

- Influenza
- Viral infections
- Pneumonia
- Lower extremity edema
- Any CP that would benefit from reduced Lymphatic edema or improved drainage of lymphatic fluid



Discussion

- Use it or lose it!
Fewer Masters, mixed faculty, fewer bedside opportunities
 - **Actively design** OPP curriculum for clinical experiences
 - SOMA “Top Ten”:
 - Safe
 - Simple
 - Wide clinical application
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