Defining and Integrating OPP throughout Osteopathic Medical Education

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Disclaimer

• I am a member of the ACGME Osteopathic Principles Committee (OPC)
• Opinions expressed are not those of the OPC

• I work for ATSU-KCOM, Kirksville MO
• I have no financial relationships to disclose
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Objectives

By the end of this educational activity, participants will be able to

• To define and describe osteopathic principles and practice in the context of modern interdisciplinary clinical practice

• To Identify barriers and methods to integrating osteopathic concepts throughout osteopathic medical education

• To define and discuss the five osteopathic treatment models
Definitions

• **OPP** – Osteopathic Principles and Practice is a conceptual and practical understanding of the distinct behavioral, philosophical, and procedural aspects of osteopathic medicine.

• **OMM** – Osteopathic manipulative medicine includes diagnosis of somatic dysfunction and treatment using osteopathic manipulative treatment.

• **OMT** - Osteopathic manipulative treatment includes a variety of hand-on techniques to treat somatic dysfunction.

• **Somatic dysfunction** – the presence of one or more of the following physical findings – tenderness, tissue texture abnormalities, asymmetry, restricted range of motion.

• **Structural examination** – assessing for the physical findings of somatic dysfunction.
“It is the object of a physician to find health, anyone can find disease”

Restore health
not just manage symptoms
Osteopathic Principles and Practice

Osteopathic Tenets

• The body is a unit; the person is a unit of body, mind, and spirit
• The body is capable of self-regulation, self-healing, and health maintenance
• Structure and function are reciprocally interrelated
• Rational treatment is based upon an understanding of the basic principles of body unity, self-regulation, and the interrelationship of structure and function
Understanding OPP

Each system in the body has self-healing, self-regulating mechanisms

Cardiac anatomy and physiology
• Valves
• Muscles
• Electrical conduction
• Local vasculature
• Local biochemistry
Understanding OPP

Each system is affected by other organ system self-healing, self-regulating mechanisms

Mechanisms from other systems
- Autonomic
- Endocrine & Biochemistry
- Lymphatic
- Vascular volume and composition
Understanding OPP

Self-healing, self-regulating mechanisms provide health maintenance = Homeostasis

Collectively known as Homeostatic Mechanisms

Allow system to function in the presence of stressors (allostatic load) without symptoms
Understanding OPP

The more allostatic load, the less reserve is left to handle new stressors without becoming symptomatic.
Understanding OPP

Intervention is indicated to treat (or prevent) overwhelmed homeostatic mechanisms

Pharmacology, Surgery, OMT, Lifestyle, Behavioral and Spiritual counseling

Eventually homeostatic mechanisms are overwhelmed and symptoms develop
OPP in Patient Care

Example

• Type 1 Insulin-dependent Diabetes
  – Pancreas has lost ability to produce insulin
  – Treat with insulin because homeostatic mechanisms are lost

• Type 2 Non-Insulin dependent Diabetes
  – Body has become resistant to insulin or pancreas cannot produce enough insulin to keep up
  – Use Rx to manage condition, **while working to restore homeostasis** – diet, exercise, lifestyle management
Understanding OPP

Organ systems are interrelated
Internal and external stressors can affect the allostatic load of the body.
OMT affects organ systems via reducing allostatic load - primarily on musculoskeletal system to affect the autonomic, vascular, and lymphatic systems.

- **Autonomic**
- **Body/MS**
- **Lymphatic**
- **Vascular**

Normalize Autonomic Tone

Reduce impingement of vascular and lymphatic vessels
Osteopathic Manipulative Medicine

• OMM is diagnosis of somatic dysfunction and treatment with OMT
• Form of manual medicine/therapy
• Techniques are not unique
• Unique perspective on goal of OMT
• Unique concept of integration within full scope of medical care
• **Unique language**
Somatic Dysfunction

Somatic dysfunction is the clinical indication for the OMT procedure.

Somatic Dysfunction – the presence of one or more of the following:

• Tenderness
• Asymmetry
• Restricted range of motion
• Tissue texture abnormalities (tissue tension, edema, etc)

Different types of OMT target different physical manifestations of somatic dysfunction.

“TART”
Osteopathic Approach

Five Osteopathic Treatment Models

- Biomechanical
- Respiratory/Circulatory
- Metabolic/Energetic
- Neurologic
- Behavioral

Holistic approach to individual patient
Osteopathic Approach

Five Osteopathic **Treatment** Models

• Biomechanical
• Respiratory/Circulatory
• Metabolic/Energetic
• Neurologic
• Behavioral

Treatment models overlap

**Treatment Options:**
- OMT
- Pharmacology
- Surgery
- Diet
- Exercise
- Other Lifestyle
- Behavioral counseling
- Spiritual counseling
Osteopathic Approach

• **Biomechanical**
  – Optimize structure and function of the musculoskeletal system to affect the body’s homeostatic mechanisms

• **Respiratory/Circulatory**
  – Optimize respiratory and circulatory components of homeostatic responses

• **Metabolic/Energetic**
  – Optimizes the body’s biochemical processes, cellular functions, and energy consumption

• **Neurologic**
  – Normalizes nervous system function including somatic and autonomic nerves

• **Behavioral**
  – Utilizes mental, emotional, and spiritual influencers of health
Five Osteopathic Treatment Models

Five Models Overlap in Purpose and Practice

Example: Hospitalized patient with pneumonia is receives IV antibiotics, O2, and rib raising OMT technique:

• Rib raising improves biomechanical functioning of rib cage; larger chest cage excursion plus O2 improves gas exchange of respiration; improved biomechanics and O2 decreases energetic work of breathing to maintain oxygenation; antibiotic decreases energetic demand and optimizes lymphatic function; rib raising reduces musculoskeletal stressors affecting local sympathetic neural input into the lung; and touch relaxes patient to decrease behavioral stressors.

Treatment models overlap
OPP Competencies

- AACOM
- NBOME
- ACGME
- WHO
OPP Competencies

7 Core Competencies

1. Osteopathic Principles and Practices
2. Medical Knowledge
3. Patient Care
4. Interpersonal and Communication Skills
5. Professionalism
6. Practice-Based Learning and Improvement
7. Systems-Based Practice
OPP Competencies

Goal is to create an Osteopathic Physician

Goal is to prepare student for Osteopathic Recognized ACGME residency

• Integrate OPP in 6 core competencies
• Approach diagnosis and treatment holistically
• Diagnosis and treat somatic dysfunction with OMT
How to integrate OPP into Pre-Doctoral Education
Integrating OPP into Basic Science

• Osteopathic medicine has unique language
• Use that language in presentations
  – Describe and use the term “structure-function relationships” wherever appropriate
  – Describe and use the term “self-healing” or “self-regulating mechanisms”
  – Describe and use the term “homeostatic mechanisms”
  – Describe and use the term “allostatic load”
Integrating OPP into Clinical Science

• Discuss relevant anatomy and physiology
• Discuss the impact of interventions, such as pharmaceuticals and surgery, on the whole body, in addition to the intended outcome
• Discuss holistic, full scope treatments to conditions and disease
• Mention the use of OMT when discussing full scope treatments

Effect of Lasix on urinary incontinence and social life of elderly
Integrating OPP into Basic Science

Mention 5 Models of diagnosis and treatment

• Discuss diagnosis from the view of the a "whole patient"
  – Discuss the multitude of contributing factors to health and disease

• Refer to 5 Diagnosis and Treatment models when applicable
  – “Optimize structure-function relationships”
  – “Improve vascular and lymphatic drainage”
  – “Decrease energetic or metabolic demand on the body”
  – “Normalize autonomic tone”
  – Acknowledge “mind-body-spirit” connection and its importance role in disease and restoring health

Atherosclerosis increases the energetic demand on the heart and, if in coronary vessels, reduces vascular flow to cardiac muscle.
Integrating OPP into Clinical Science

• Discuss the role of the osteopathic physician is to restore health
• Intervention is indicated when “homeostatic mechanisms are or may become overwhelmed”
• The ultimate goal of management is to return patient to state of health
• Teach students when to take patients OFF medications
Integrating OPP into Clerkships

• Require minimum OMM experiences
• Encourage clinical use of OMM where possible
• **Train students** to request to perform OMM when appropriate

Train preceptors
• Ask students to use OMM when appropriate
• Discuss psychosocial implications to cases
• Train students when to take patients off medications
• Train students how to motivate patients to make lifestyle changes
QUESTIONS?
References

- FOM3
- The Ad Hoc Committee on GME Transition “Next Steps for Graduate Medical Education: Osteopathic Graduate Medical Education (OGME) and the Single Graduate Medical Education (GME) Accreditation System” White Paper published Dec 2014