



NBOME

COMLEX-USA
Blueprint 2.0

ALIGNED WITH *FOMCD 2026*

Contents



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Introduction

The **Comprehensive Osteopathic Medical Licensing Examination of the United States (COMLEX-USA)** is the pathway to licensure for osteopathic physicians seeking to practice medicine. It is the principal means through which the NBOME fulfills its mission to protect the public by evaluating competencies for the distinctive practice of osteopathic medicine.

The COMLEX-USA examination series is designed to assess osteopathic medical knowledge, fundamental clinical skills, and competencies essential for osteopathic medical practice. The intended purpose of COMLEX-USA is licensure of osteopathic physicians, and COMLEX-USA is accepted for medical licensure in all 50 states and U.S. territories.

The COMLEX-USA Blueprint emphasizes the competencies required for generalist osteopathic physicians to deliver safe and effective patient care. It is designed to assure state licensing boards and the public that a DO has demonstrated minimal competence through a series of national standardized examinations. Aligned with the osteopathic medical education and training pathway, passing Levels 1 and 2-CE is required for graduation with a DO degree and entry into residency training.

Since its implementation, the COMLEX-USA Blueprint has been reviewed and revised regularly to reflect the distinctive practice of osteopathic medicine, consistent with the recommendations of the *Standards for Educational and Psychological Testing* (2014) established by the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME). The COMLEX-USA Blueprint continues to evolve to reflect contemporary

osteopathic medical practice and advancements in competency-based assessment.

To support clarity and consistency over time, the COMLEX-USA Blueprint will be referred to as the COMLEX-USA Blueprint 2.0. During phased implementation across examination levels and administration cycles, some examinations will be based on the existing [COMLEX-USA Blueprint](#) (revised February 2025) and some will be based on this document, the COMLEX-USA Blueprint 2.0.

COMLEX-USA Blueprint 2.0 Implementation

COMLEX-USA Blueprint 2.0 will be implemented beginning with:

- **Level 1 in May 2028**
- **Level 2-CE in June 2028**
- **Level 3 in January 2029**

Examinations administered before these dates will be based on the existing [COMLEX-USA Blueprint](#) (revised February 2025).

COMLEX-USA Blueprint 2.0 incorporates the [Fundamental Osteopathic Medicine Competency Domains 2026 \(FOMCD 2026\)](#) and the [Core Competency Capstone for DOs \(C3DO\)](#) and [Comprehensive Competency Verification \(CCV\)](#). The Clinical Presentations have been revised to align with *FOMCD 2026* and contemporary osteopathic medical practice.

Osteopathic Distinctiveness in COMLEX-USA

The distinctive practice of osteopathic medicine forms the foundation of the COMLEX-USA examination series. The distinctive practice of osteopathic medicine is defined in *FOMCD 2026* as follows:

Osteopathic medicine is an evidence-based approach to care that centers on the unity of body, mind, and spirit. It emphasizes compassion, professionalism, and the importance of physician-patient relationships. Osteopathic physicians are trained and entrusted to listen carefully, engage patients in shared decision-making, and respect their individual goals and values throughout the course of care.

Osteopathic physicians are highly trained physicians who complete a comprehensive medical education and receive integrated training in osteopathic principles and practice (OPP), including the musculoskeletal system, hands-on physical diagnosis, and osteopathic manipulative treatment (OMT). This added focus strengthens their ability to diagnose and treat patients, deliver preventive health care, and contribute to positive patient outcomes.

Osteopathic Tenets in COMLEX-USA

Every test question in COMLEX-USA is grounded in the tenets and principles of osteopathic medicine. As approved by the AOA House of Delegates, the tenets include:

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

Source: American Osteopathic Association. *Tenets of Osteopathic Medicine*. American Osteopathic Association, <https://osteopathic.org/what-is-osteopathic-medicine/tenets-of-osteopathic-medicine/>.

Blueprint Framework: Two Dimensions

COMLEX-USA examination content is organized by two dimensions: Dimension 1, Competency Domains, and Dimension 2, Clinical Presentations.

Dimension 1: Competency Domains

Dimension 1 consists of the seven **COMPETENCY DOMAINS** defined in *FOMCD 2026* and represents the knowledge, skills, experience, attitudes, values, behaviors, and established professional standards required for osteopathic medical practice.

Each competency domain is described in detail through required elements and measured outcomes. For each examination in the COMLEX-USA series, test specifications outline content distribution across these domains.

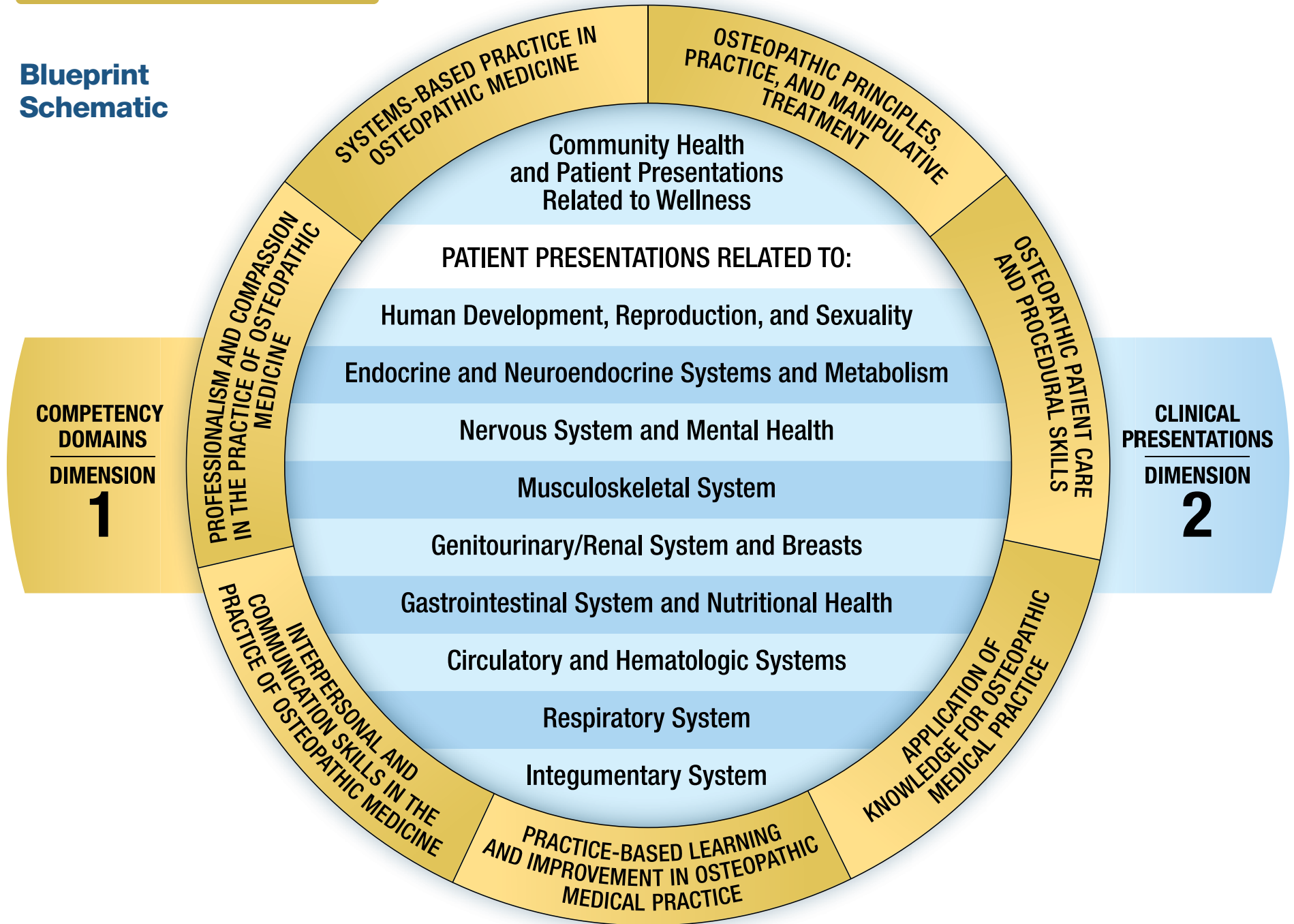
Dimension 2: Clinical Presentations

Dimension 2 consists of the 10 **CLINICAL PRESENTATIONS**, which represent the ways in which osteopathic physicians encounter patient concerns, health conditions, and community- and population-based health issues. These high-frequency and high-impact categories are based on evidence from osteopathic medical practice and have been updated to align with *FOMCD 2026*.

Patients of various ages and gender identities and from diverse backgrounds, cultures, and abilities are represented in a variety of clinical settings throughout the clinical presentations.

Each clinical presentation is organized into specific topics, with associated categories and subtopics (e.g., diagnoses). For each examination in the series, test specifications outline the content distribution as it relates to the 10 clinical presentations.

Blueprint Schematic



COMLEX-USA and the Osteopathic Medical Education Pathway

The COMLEX-USA examination program is aligned with the pathway for osteopathic medical education and training, supporting progression from undergraduate medical education through graduate medical education and into independent practice.

COMLEX-USA Examination Program

	ASSESSMENT PURPOSE
Level 1	Promotion along the licensure pathway for entry into supervised clinical training
Level 2-CE	Promotion toward licensure for supervised practice in patient care settings
Core Competency Capstone for DOs (C3DO)*	Demonstration of fundamental clinical skills , to a national standard, at the level expected for entering graduate medical education
Level 3	Demonstration of readiness for unsupervised osteopathic medical practice

*Comprehensive Competency Verification (CCV) is the alternative eligibility pathway for Level 3 and is aligned with the COMLEX-USA Blueprint 2.0.



Definitions

As the practice of osteopathic medicine continues to evolve—particularly with advancements in technology and emerging domains of care—the NBOME recognizes the importance of clear and consistent terminology. The following definitions are drawn from *FOMCD 2026* and align with the COMLEX-USA Blueprint 2.0. These terms reflect key concepts relevant to contemporary osteopathic practice and assessment.

Artificial intelligence: computer systems that simulate human abilities across a range of tasks, from simple functions to complex analysis.

Augmented intelligence: the use of artificial intelligence by qualified individuals to enhance their knowledge, skills, abilities, and decision-making.

Note: *Osteopathic physicians must use artificial intelligence in an ethically and legally responsible manner. Maintaining awareness of the potential applications, benefits, and limitations is essential. While artificial intelligence can be an effective tool in augmenting patient care—particularly in collaboration with an interprofessional health care team—it is not a substitute for the expertise and judgment of a qualified osteopathic physician. Osteopathic physician involvement remains essential in delivering osteopathic care.*

Digital health: the use of electronic technologies to promote wellness, improve patient outcomes, and strengthen patient engagement in their health and health care. Digital health encompasses a broad scope, including—but not limited to—electronic health records, clinical decision support systems, telehealth, mobile apps, wearable devices, data analytics, and augmented intelligence.

Nutrition in osteopathic medicine integrates safe, effective, evidence-based dietary knowledge, *food-as-medicine* principles, and concepts of disease prevention into comprehensive, person-centered care. It considers socioeconomic, cultural, and psychological influences on eating and uses compassionate, collaborative, interprofessional, community-oriented strategies in shared decision-making to address nutritional needs across the lifespan.

Telehealth: the use of electronic information and telecommunication technologies to support remote health care, health-related education, health administration, and public health. Telehealth is a subset of digital health.

Blueprint Oversight

The COMLEX-USA Blueprint is developed and maintained through a rigorous, evidence-based process led by the **COMLEX-USA Blueprint Subcommittee (BPSC)** of the **COMLEX-USA Composite Examination Committee (CCEC)**. The BPSC is composed of NBOME National Faculty members representing diverse areas of osteopathic medical education, licensure, clinical practice, and assessment.

The subcommittee is responsible for conducting reviews of the COMLEX-USA Blueprint and ensuring that the COMLEX-USA series reflects the current practice of osteopathic medicine. The Blueprint is reviewed regularly and updated as needed to ensure continued relevance, validity, and alignment with the practice of osteopathic medicine.

Test Specifications

Represent the Minimum Percentage Required for Each Exam

Dimension 1: Competency Domains	Level 1	Level 2-CE	C3DO/ CCV*	Level 3	Series Minimum
1. Osteopathic Principles, Practice, and Manipulative Treatment	12%	12%	15%	10%	12%
2. Osteopathic Patient Care and Procedural Skills	6%	30%	15%	40%	23%
3. Application of Knowledge for Osteopathic Medical Practice	60%	25%	10%	15%	28%
3.1 Foundational Biomedical Sciences Knowledge Base	75%	25%	–	10%	–
4. Practice-Based Learning and Improvement in Osteopathic Medical Practice	4%	7%	2%	8%	5%
5. Interpersonal and Communication Skills in the Practice of Osteopathic Medicine	3%	5%	25%	5%	10%
6. Professionalism and Compassion in the Practice of Osteopathic Medicine	3%	6%	20%	6%	8%
7. Systems-Based Practice in Osteopathic Medicine	2%	5%	2%	6%	4%

*Core Competency Capstone for DOs (C3DO) / Comprehensive Competency Verification (CCV)

Dimension 2: Clinical Presentations	Level 1	Level 2-CE	C3DO/ CCV*	Level 3	Series Minimum
1. Community Health and Patient Presentations Related to Wellness	10%	10%	17%	10%	10%
2. Human Development, Reproduction, and Sexuality	6%	6%	0-17%	6%	6%
3. Endocrine and Neuroendocrine Systems and Metabolism	6%	6%	0-17%	6%	6%
4. Nervous System and Mental Health	11%	11%	0-17%	11%	11%
5. Musculoskeletal System	11%	11%	33%	11%	11%
6. Genitourinary/Renal System and Breasts	6%	6%	0-17%	6%	6%
7. Gastrointestinal System and Nutritional Health	10%	10%	0-17%	10%	10%
8. Circulatory and Hematologic Systems	11%	11%	0-17%	11%	11%
9. Respiratory System	9%	9%	0-17%	9%	9%
10. Integumentary System	5%	5%	0-17%	5%	5%
Other**	–	–	0-17%	–	–

* Core Competency Capstone for DOs (C3DO) / Comprehensive Competency Verification (CCV)

** (Human Development, Reproduction, and Sexuality, Endocrine and Neuroendocrine Systems and Metabolism, Genitourinary/Renal System and Breasts, Integumentary System)



Photo courtesy ICOM

Competency Domains

Competency domains are related sets of foundational abilities representing the required elements and outcomes that define knowledge, skills, experience, attitudes, values, behaviors, and established professional standards for the practice of osteopathic medicine. They constitute a general descriptive framework for the practice of osteopathic medicine.

Required elements articulate the essential foundational components that define the standards for each competency domain, including specific, definable knowledge, skills, experiences, attitudes, values, and/or behaviors—each aligned with one or more outcomes.

Measured outcomes can be directly assessed in a reliable manner in the assessments that make up the COMLEX-USA examination program.

Content Across the Examination Series

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COMPETENCY DOMAINS

1 Osteopathic Principles, Practice, and Manipulative Treatment

Overview

Osteopathic physicians must demonstrate knowledge of osteopathic principles and practice and approach patient care by incorporating the distinct behavioral, philosophical, and procedural aspects of osteopathic medical practice. This is based on the four tenets of osteopathic medicine:

1. The body is a unit; the person is a unit of body, mind, and spirit.
2. The body is capable of self-regulation, self-healing, and health maintenance.
3. Structure and function are reciprocally interrelated.
4. Rational treatment is based on an understanding of the basic principles of body unity, self-regulation, and the interrelationship of structure and function.

While these tenets form the foundation for the other six osteopathic competency domains, this competency domain emphasizes the distinctive osteopathic approach to providing compassionate osteopathic patient care, including the integration of foundational osteopathic principles, somatic dysfunction diagnosis, osteopathic manipulative treatment (OMT), and an emphasis on the use of palpation for both diagnostic and therapeutic purposes. Osteopathic physicians must recognize, diagnose, and treat patients with

somatic dysfunction using OMT in the clinical setting. Considerable overlap—particularly in [Competency Domains 2. Osteopathic Patient Care and Procedural Skills](#) and [3. Application of Knowledge for Osteopathic Medical Practice](#)—demonstrates the integration of osteopathic principles throughout the practice of osteopathic medicine.

The Educational Council on Osteopathic Principles (ECOP) of the American Association of Colleges of Osteopathic Medicine (AACOM) defines OMT and somatic dysfunction in the 2026 *Glossary of Osteopathic Terminology* as follows:

Osteopathic manipulative treatment (OMT): “The therapeutic application of manually guided forces by an osteopathic physician... to improve physiologic function and/or support homeostasis that has been altered by somatic dysfunction.”

Somatic dysfunction: “Impaired or altered function of related components of the body framework system: skeletal, arthrodial, and myofascial structures, and their related vascular, lymphatic, and neural elements... Somatic dysfunction is treatable using osteopathic manipulative treatment.”

Required Elements

1.1 Knowledge of Osteopathic Principles, Practice, and OMT

DEFINITION

The osteopathic physician must demonstrate an understanding of osteopathic principles and practice, including basic science, structure, function, mechanisms of action, and physical findings of somatic dysfunction, and the foundational application of OMT.

MEASURED OUTCOMES

The osteopathic physician...

1. recognizes the role of body-mind-spirit unity in whole-person health care.
2. recognizes the relevance of osteopathic principles in the compassionate care of all patients.
3. articulates how the five osteopathic models of care (behavioral-biopsychosocial, metabolic-nutritional, neurologic, respiratory-circulatory, and biomechanical-structural) support the osteopathic tenets.
4. describes the interrelationship between structure and function in the human body and explains how it guides patient evaluation, including physical examination.
5. identifies the reciprocal effects of dysfunction within the musculoskeletal system and dysfunction within the vascular, lymphatic, neurologic, and organ systems.
6. articulates the scientific knowledge supporting the use of osteopathic principles, practice, and OMT, including the mechanisms of somatic dysfunction and OMT and evidence for the clinical application of OMT in facilitating health.
7. identifies the effects of a patient's diet and nutrition on the whole person for both health and disease.
8. identifies biomechanical elements of the patient's history, including those relevant to the patient's occupation, exercise habits and tolerance, posture, and mechanism of injury.
9. identifies physical examination findings consistent with somatic dysfunction.
10. lists and describes the types of somatic dysfunction found within the 10 body regions (head, cervical, thoracic, lumbar, sacral, pelvic, lower extremity, upper extremity, rib, and abdominal/visceral).
11. explains the underlying mechanisms, signs, symptoms, and physical findings associated with viscerosomatic, somatovisceral, viscerovisceral, and somatosomatic reflexes.
12. applies knowledge of Chapman reflex points to diagnostic and disease processes.
13. differentiates between direct, indirect, and combined OMT treatment methods.
14. names and describes the diagnostic examination, initial positioning, monitoring, motion barriers, activating forces, therapeutic timing, repetition, and reassessments used in indirect, direct, and combined OMT techniques.

- 15. identifies and describes the various OMT techniques, including counterstrain; muscle energy; myofascial release; high velocity, low amplitude; soft tissue method; lymphatic treatment method; osteopathic cranial manipulative medicine; articulatory technique; balanced ligamentous tension; ligamentous articular strain; facilitated positional release; Still technique; and visceral manipulation.
- 16. identifies the indications and contraindications for different OMT techniques.
- 17. recognizes the relative value, advantages, and disadvantages of different OMT techniques.

1.2 Skills In Osteopathic Principles, Practice, and OMT

DEFINITION

The osteopathic physician must apply osteopathic principles, including the use of OMT, to an appropriate patient care plan.

MEASURED OUTCOMES

The osteopathic physician...

- 1. incorporates osteopathic principles into problem solving in clinical settings.
- 2. obtains medical, family, social, diet and nutritional, and cultural histories, including patient belief systems and other relevant information from or about the patient pertinent to the presenting concern, emphasizing structure-function and body-mind-spirit relationships.
- 3. performs an appropriate osteopathic structural examination.
- 4. diagnoses somatic dysfunction within the 10 body regions (head, cervical, thoracic, lumbar, sacral, pelvic, lower extremity, upper extremity, rib, and abdominal/visceral), prioritizes a differential diagnosis, and develops an appropriate care plan.
- 5. identifies locations of Chapman reflex points.
- 6. obtains appropriate patient consent for the administration of OMT.
- 7. performs direct, indirect, and combined OMT techniques effectively, including counterstrain; muscle energy; myofascial release; high velocity, low amplitude; soft tissue method; lymphatic treatment method; osteopathic cranial manipulative medicine; articulatory technique; balanced ligamentous tension; ligamentous articular strain; facilitated positional release; Still technique; and visceral manipulation.
- 8. provides for the safety and dignity of the patient while diagnosing somatic dysfunction and administering OMT.
- 9. incorporates OMT into the patient's care plan in a way that takes into consideration their lived experiences.

1.3 Integration of Osteopathic Principles, Practice, and OMT into Care

DEFINITION

The osteopathic physician must demonstrate the knowledge and skills necessary to recognize and diagnose somatic dysfunction and to apply the principles and practice of osteopathic medicine in patient care.

MEASURED OUTCOMES

The osteopathic physician...

1. articulates the scientific knowledge underlying osteopathic principles, practice, and OMT.
2. incorporates the five osteopathic models of care into preventive health care and patient care management.
3. recognizes the value of the osteopathic structural examination within the complete physical examination in identifying elements such as somatic dysfunction, viscerosomatic relationships, and the role of the musculoskeletal system in patient care.
4. integrates OMT into multidisciplinary treatment plans and in diverse clinical settings (e.g., specialty care, hospitalized patients, and patients with varying needs and across the age spectrum from newborns through geriatrics).
5. recognizes the limits of their knowledge and clinical skills in the use of OMT and the application of osteopathic principles, and seeks referrals when appropriate.
6. describes how patients from diverse lived experiences may express the symptoms of their somatic and/or visceral dysfunctions in various ways.
7. appropriately employs the use of palpation in both diagnostic and therapeutic contexts.

COMPETENCY DOMAINS

2 Osteopathic Patient Care and Procedural Skills

Overview

Osteopathic physicians must provide osteopathic medical care that is patient-centered, compassionate, safe, effective, evidence-based, timely, efficient, and equitable in order to promote health and support the body's self-regulatory and self-healing capacities. This includes maintaining an awareness of new and emerging medical practices and incorporating information gathered about social determinants of health—including food security—to inform patient care. This care applies to patients across the life cycle, in all clinical settings, including care for patients with varying needs, and is adapted to the osteopathic physician's scope of practice and clinical practice setting.

Effective osteopathic care requires understanding why the patient is seeking care, assessing and following their health over time, applying osteopathic principles and OMT appropriately, and using sound clinical reasoning. Effective patient interviewing, history-gathering, physical examination expertise, clinical reasoning, and use of other appropriate data enable osteopathic physicians to make accurate diagnoses and support patients and caregivers in making informed, evidence-based decisions about care. An inquisitive mind, mastery of core physical examination techniques, and an understanding of humanity, health, structure-function relationships, and the underlying pathophysiology of disease all

support clinical reasoning and help the physician guide the patient toward desired health outcomes.

Osteopathic patient care emphasizes developing mutually agreed-upon diagnostic and patient care plans, including appropriate patient education and follow-up. It encompasses preventive and therapeutic plans and the performance of clinically necessary procedures essential to the physician's scope of practice. In delivering the highest-quality patient care, osteopathic physicians must promote wellness, focus on body-mind-spirit unity, and emphasize prevention of disease. They must be able to serve appropriately and contribute effectively as members and/or leaders of interprofessional health care teams and must foster effective, open, collaborative communication with and among other professionals.

Outcomes related to communication skills are primarily mapped to [Competency Domain 5. Interpersonal and Communication Skills in the Practice of Osteopathic Medicine](#). Compassion also appears in [Competency Domain 6. Professionalism and Compassion in the Practice of Osteopathic Medicine](#), and interprofessional collaboration is primarily mapped to [Competency Domain 7. Systems-Based Practice in Osteopathic Medicine](#). Patient education is an essential part of osteopathic patient care and is primarily mapped to [Required Element 5.3 Information Giving and Patient Education](#).

Required Elements

2.1 Patient-Centered Data Gathering and History Building

DEFINITION

The osteopathic physician must effectively gather relevant and reliable information from the patient through the medical interview and from secondary sources, including the patient's caregivers and health records. Compassionate care is reflected in the osteopathic physician's approach to how the information is gathered in the interview and the extent to which the osteopathic physician explores the patient's identity, desires, and life context.

Note: [Required Element 5.1 Eliciting Information](#) focuses on interpersonal and communication skills used in eliciting information from patients and caregivers.

MEASURED OUTCOMES

The osteopathic physician...

1. directly elicits the patient's view of the reason for presentation, gathering this information from family members or other caregivers when the patient is unable to provide it.
2. elicits the patient's description of relevant factors, when possible, including the onset, duration, timing, location, setting, and factors potentially aggravating or alleviating symptoms.
3. elicits the essential information from the patient, and, when appropriate, from caregivers and other sources, regarding health history contributing to the patient's presentation (e.g., past medical and surgical histories, allergies, physical and psychological trauma, exercise habits and tolerance, occupation, family history, diet and nutrition history, travel, sexual history, developmental milestones, social determinants of health).
4. elicits a comprehensive history of medication use and medication allergies.
5. elicits relevant essential information regarding the patient's presenting symptoms or condition (e.g., mechanism of injury, biomechanical influences).
6. determines, with the patient and/or caregiver, any need for interpretive or adaptive services to provide effective communication and care.
7. elicits and explores essential information about the patient's beliefs, concerns, expectations, and health literacy—while considering contextual factors such as age, gender, culture, sexual orientation, religious or spiritual beliefs, and socioeconomic background—that may influence clinical decision-making and patient care.
8. elicits information about the patient's family and support system, living situation, occupation, and hobbies.
9. elicits information about the patient's financial ability to implement agreed-upon diagnostic and therapeutic care plans based on health insurance and other potential resources.
10. adapts information-gathering to the situation, effectively interviewing the patient, family members, and/or caregivers in various clinical settings.
11. compiles and documents a comprehensive synopsis of all relevant clinical patient information in the context of patient care in both written and oral formats.

2.2 Physical Examination Expertise

DEFINITION

Expertise in physical examination skills for osteopathic medical care is built on consistent practice of the core techniques—including vital sign measurement, inspection, palpation, percussion, auscultation, and other components of the structural examination—within a systematic framework, such as a comprehensive, “head-to-toe” assessment or an organ-system-based approach, including a mental status examination when indicated. Key factors for developing this expertise include an inquisitive mind, mastery of core physical examinations, and the clinical reasoning ability to interpret findings in the context of the patient’s history, grounded in knowledge of health and disease pathophysiology.

MEASURED OUTCOMES

The osteopathic physician...

1. performs a complete head-to-toe assessment or a comprehensive organ- or body system-based approach within a logical, ordered framework, which includes head, neck, chest, abdomen, genitalia/groin/buttocks, back/spine, and upper and lower extremities, as well as organ and body systems (constitutional; cardiovascular; ears, nose, mouth, and throat; eyes; genitourinary; hematologic/lymphatic/immunologic; musculoskeletal: joints, bones, muscles, tendons, ligaments, and fascia; neurologic; psychiatric, mental status; respiratory; and skin), and applies clinical reasoning and an inquisitive, sensitive mind to interpret findings within the context of the patient’s history and the mechanisms and pathophysiology of disease.
2. performs a patient presentation-focused physical examination, using clinical reasoning and caution to ensure that atypical clinical presentations (e.g., referred pain) are identified.
3. recognizes normal patient variations during physical examination, the importance of bilateral comparisons, and the need to examine the joints above and below the site of presenting symptoms.
4. integrates an understanding of viscerosomatic and somatovisceral reflex patterns and referred pain (e.g., always using knowledge of the neuromusculoskeletal system in health and disease to further guide patient evaluation).
5. demonstrates proficiency in accurately measuring vital signs—including temperature, blood pressure, heart rate, and respiratory rate—for patients across the lifespan and with diverse body sizes.
6. demonstrates proficiency in patient observation and visual inspection, including observations related to gait and movement as well as abnormalities in shape, size, and/or color.
7. demonstrates proficiency in palpation, using hands-on skills to assess texture, temperature, moisture, vibration, tenderness, and other tissue abnormalities on or within the body.
8. effectively uses percussion by tapping on specific areas of the body to produce sounds that help assess aspects of underlying structures and fluid.
9. effectively uses a reflex instrument to assess both deep tendon reflexes and pathologic reflexes.

10. effectively uses auscultation by listening to bodily sounds, usually with a stethoscope, to evaluate organs like the heart, lungs, and intestines.
11. assesses elements of the structural and musculoskeletal examinations, including range-of-motion testing, joint and myofascial structure evaluation, and assessment for somatic dysfunction—as further characterized in [Competency Domain 1. Osteopathic Principles, Practice, and Manipulative Treatment](#).
12. effectively conducts a structured mental status evaluation to further assess a patient's mental state and cognitive function.

2.3 Differential Diagnosis and Diagnostic Testing Interpretation

DEFINITION

The osteopathic physician must formulate a differential diagnosis based on clinical reasoning informed by the patient evaluation (e.g., medical interview, physical examination, diagnostic test results), prioritize diagnoses appropriately, and determine the nature of the concern in the context of the patient's unique circumstances across various health care settings. Using evidence-based principles, clinical reasoning, and patient-centered decision-making to balance benefits, limit harm, and control costs, osteopathic physicians must work with their patient to reduce uncertainty in diagnosis and guide responsible management decisions.

Note: Further guidance on the appropriate use of diagnostic testing and appropriate testing selection as an adjunct, and not a replacement for clinical reasoning and acumen by the osteopathic physician (e.g., knowing the sensitivity and specificity of tests and

estimating pre-test probability of disease), is included in [Competency Domain 4. Practice-Based Learning and Improvement](#).

MEASURED OUTCOMES

The osteopathic physician...

1. generates, assesses, and tests appropriate initial hypotheses during the medical interview and physical examination.
2. generates and prioritizes an appropriate list of potential diagnoses given the patient's medical history, physical examination findings, and other available data, recognizing the effect of biomedical, biomechanical, psychosocial, genetic, age-related, and cultural factors.
3. interprets the results of relevant laboratory, imaging, and other diagnostic evaluations, recognizing their scope, capabilities, risks, and limitations.

2.4 Essential Clinical Procedures

DEFINITION

The osteopathic physician must perform basic clinical procedures essential for the practice of osteopathic medicine while respecting and considering the diverse backgrounds, identities, and personal circumstances of each patient.

Note: OMT techniques are primarily mapped to [Competency Domain 1. Osteopathic Principles, Practice, and Manipulative Treatment](#), and physical examination is mapped to [Required Element 2.2. Physical Examination Expertise](#).

MEASURED OUTCOMES

The osteopathic physician...

1. employs hand hygiene, infection control practices, and universal precautions.
2. understands indications and techniques for common clinical procedures.
3. recognizes indications for injections and aspiration procedures.
4. describes appropriate wound care and minor surgical procedures.
5. recognizes indications for immobilization and splinting.
6. recognizes indications for and complications of emergency procedures.
7. demonstrates and maintains competency in basic life support and advanced cardiovascular life support.

2.5 Patient Care Management**DEFINITION**

The osteopathic physician must provide diagnostic information; develop a safe, evidence-based, cost-effective, equitable, patient-centered care plan; and use all ethical and appropriate options with the goal of addressing the patient's physical, psychosocial, and spiritual needs as well as their social challenges. Within the context of evidence-based and cost-effective care, the osteopathic physician must assess the patient's motivation, willingness, and resources to implement the diagnostic and therapeutic plan.

MEASURED OUTCOMES

The osteopathic physician...

1. uses an unbiased and collaborative approach with the patient and their caregivers to develop a care plan that incorporates the patient's knowledge and social environment and that maximizes the patient's desired outcomes.
2. applies a person-centered, osteopathic approach to develop an evidence-based care plan that may include diagnostic testing, nonpharmacologic treatment (including OMT), dietary and nutritional management, and medication use/reconciliation.
3. incorporates lifestyle and body-mind-spirit unity principles—including attention to diet, nutrition, social determinants of health, and the patient's belief systems—into the patient's wellness and care plan.
4. identifies, addresses in an ethical manner, and appropriately works toward the relief of suffering and distress while maintaining patient dignity and respecting the unique aspects of the patient's circumstances and lived experiences.
5. ensures that informed consent is obtained and that the patient and/or caregiver is given clear pre- and post-procedure information and instructions.
6. recognizes and effectively and empathetically manages post-procedure complications.
7. provides appropriate care in a telehealth environment, while recognizing the scope and limitations of virtual care.

COMPETENCY DOMAINS

3 Application of Knowledge for Osteopathic Medical Practice

Overview

Osteopathic physicians must demonstrate fluency in foundational biomedical, clinical, and health systems sciences and be able to apply principles of health, disease, and diagnostic and treatment options to the care of patients. This knowledge base includes the application of core scientific and clinical practice concepts relevant to osteopathic medical practice (e.g., the body's innate capacity to heal, determining differential diagnoses and disease etiologies, recognizing treatment indications and contraindications, evaluating the risks and benefits of diagnostic and therapeutic interventions).

Fluency in knowledge is fundamental to an osteopathic physician's competence and is demonstrated by the ability to interpret, integrate, and skillfully apply principles of foundational biomedical, clinical, and health systems sciences in a timely manner.

Foundational osteopathic principles of body, mind, and spirit underlying the human condition—including biological complexity, genetic diversity, homeostasis, nutrition and the importance of diet, biomechanical and neuromusculoskeletal structure-function interrelationships, social determinants of health, and the influence of systems and environment—guide osteopathic physicians in understanding health and in diagnosing and treating disease across the lifespan. Osteopathic physicians must understand common

religious and spiritual beliefs in order to respond sensitively to the needs of patients and their support networks and assist the patients in meeting their desired outcomes.

Although application of knowledge also includes health systems sciences, those concepts are primarily mapped to [Competency Domain 7. Systems-Based Practice in Osteopathic Medicine](#). Knowledge related to osteopathic medical practice can also be mapped to other Competency Domains.

Required Elements

3.1 Foundational Biomedical Sciences Knowledge Base

DEFINITION

Given the various clinical presentations common and important to osteopathic medical practice, the osteopathic physician must be able to demonstrate the application of knowledge of foundational biomedical science concepts related to patient care and health, homeostasis, diet and nutrition, structure-function relationships, disease prevention, and disease recognition and management and do so in an integrated, compassionate, and patient-centered manner for patients presenting with various concerns or opportunities to maintain wellness.

MEASURED OUTCOMES

The osteopathic physician effectively applies clinically relevant foundational biomedical science knowledge related to the following:

1. Anatomic and structural bases of health and disease
2. Biopsychosocial, cultural, and religious influences on health and health care
3. Diet and the nutritional bases of health and disease
4. Epidemiology and population sciences
5. Medical genetics
6. Microbiologic and immunologic bases of health and disease
7. Molecular, biochemical, cellular, and tissue bases of health and disease

8. Neurosciences
9. Pharmacologic principles and pharmacotherapeutics in health and disease
10. Physiologic and pathologic bases of health and disease

3.2 Clinical Sciences Knowledge Base

DEFINITION

Given the various clinical presentations common and important to osteopathic medical practice, the osteopathic physician must be able to demonstrate the application of knowledge of established and evolving clinical science concepts related to patient care and health, homeostasis, diet and nutrition, structure-function relationships, disease prevention, and disease recognition and management and do so in an integrated, compassionate, and patient-centered manner for patients presenting with various concerns or opportunities to maintain wellness.

MEASURED OUTCOMES

The osteopathic physician effectively applies clinical science knowledge pertaining to the primary care-oriented focus of osteopathic medical practice, including generalist concepts from the following specialties and their relevant subspecialties:

1. Anesthesiology and pain management
2. Dermatology
3. Diet and nutritional care
4. Emergency and acute care medicine
5. Family medicine

6. General surgery
7. Geriatrics
8. Internal medicine and medical subspecialties
9. Neurology
10. Obstetrics and gynecology
11. Ophthalmology
12. Orthopedics
13. Osteopathic neuromusculoskeletal medicine
14. Otorhinolaryngology
15. Palliative and hospice care
16. Pathology
17. Pediatrics and adolescent medicine
18. Physical medicine and rehabilitation
19. Preventive and occupational medicine
20. Psychiatry and behavioral medicine
21. Radiology

COMPETENCY DOMAINS

4 Practice-Based Learning and Improvement in Osteopathic Medical Practice

Overview

Practice-based learning and improvement involves the continuous self-evaluation of osteopathic medical practice using evidence-based approaches to develop best practices that enhance patient experiences and optimize outcomes. Osteopathic physicians must assimilate and apply evidence-based principles and biostatistical and epidemiologic concepts. They must also apply clinical decision-making skills and employ methods for evaluating the relevance and validity of both established and emerging scientific evidence. Additionally, they must appraise the clinical significance of research findings and apply principles of judicious diagnostic testing to avoid unnecessary procedures, reduce medical errors, and monitor costs.

Osteopathic physicians must demonstrate the use of best-available evidence and practical strategies to integrate evidence-based principles into patient care. This includes applying systematic methods for ongoing self-evaluation of clinical practice patterns and improvements—such as those that reduce medical errors, address health care inequities, and promote health. They must also set learning and quality improvement goals, incorporating feedback and reflection into daily practice.

Required Elements

4.1 Fundamental Biostatistical and Epidemiologic Concepts

DEFINITION

The osteopathic physician must identify and apply basic statistical methods and fundamental epidemiologic concepts to practice-based learning and improvement.

MEASURED OUTCOMES

The osteopathic physician...

1. interprets features and meanings of different types of data, including quantitative and qualitative, and different types of scales (e.g., nominal, dichotomous, continuous).
2. interprets measures of central tendency, including mode, median, and mean, and measures of variability, including variance and standard deviation.
3. explains and interprets measures of frequency of disease, injury, and death in forms of rate, ratio, and proportion, including incidence and prevalence.

4.2 Clinical Decision-Making Tools

DEFINITION

The osteopathic physician must interpret literature regarding research, health care delivery, and other clinical topics for use in understanding disease- and patient-oriented evidence. This includes interpreting research regarding augmented intelligence use, emerging health care technologies, and platforms for patient care.

MEASURED OUTCOMES

The osteopathic physician...

1. conducts, interprets, and applies the results of systematic reviews of literature and various types of research studies.
2. understands research limitations, such as design bias and sources of scientific uncertainty.
3. objectively compares, contrasts, and critiques disease- and patient-centered evidence in the interpretation of literature.
4. identifies and applies population health data to address health care disparities.
5. describes different types and clinical applications of technology-based health interventions (e.g., ambulatory blood pressure monitoring, continuous glucose monitoring) and how they can be incorporated into population-based care.

4.3 Evidence-Based Medicine Principles and Practices

DEFINITION

The osteopathic physician must recognize, interpret, and discern what constitutes evidence-based osteopathic medical principles and their application to patient care.

MEASURED OUTCOMES

The osteopathic physician...

1. accesses the best-available/highest level of evidence to answer clinical questions with accuracy, precision, and maximum efficiency.
2. critically appraises the available evidence and its validity, impact, and applicability based on clinical outcomes.
3. applies evidence-based clinical practice guidelines (e.g., American Cancer Society, U.S. Preventive Services Task Force) to patient and population care.
4. integrates evidence-based nutrition guidelines, incorporating patient history and/or self-monitoring data into patient and population care.
5. incorporates evidence-based medicine when applying osteopathic principles, practice, and OMT into clinical decision-making.

4.4 Clinical Significance of Research Evidence and Statistical Inferences

DEFINITION

The osteopathic physician must determine the clinical significance of research evidence as applied to osteopathic medical practice.

MEASURED OUTCOMES

The osteopathic physician...

1. interprets aspects of statistical inference and hypothesis testing (e.g., sample size, confidence intervals, number needed to treat/harm).
2. interprets pretest/posttest probabilities in diagnostic and screening tests.
3. recognizes disinformation/misinformation and explains potential biases in research that could have implications on health care.
4. interprets and applies scientific evidence in social, regulatory, and economic contexts (e.g., global pandemic, vaccine shortage).

4.5 Translating Evidence into Practice-Based Improvement

DEFINITION

The osteopathic physician must identify, describe, and apply systematic methods for continuously evaluating personal clinical practice patterns, implementing practice-based improvements, reducing medical errors, and supporting lifelong learning. These methods should incorporate information about individual patients, patient populations, and/or communities to improve care.

MEASURED OUTCOMES

The osteopathic physician...

1. recognizes and identifies the role of quality improvement strategies within the context of the health care system.
2. describes and demonstrates the use of tools employed in quality improvement.
3. converts the need for information (e.g., prevention, diagnosis, therapy) into an answerable clinical question.
4. applies evidence-based quality improvement strategies to improve daily clinical practice.
5. uses quality improvement strategies to understand and address health system failures and conduct related analyses (e.g., Six Sigma, lean principles, root cause analysis).
6. applies the outcomes of audits, appraisals, and performance reviews to practice.

7. recognizes methods for evaluating and improving clinical practice by analyzing patient outcomes relative to external benchmarks and self-reflection (e.g., clinical assessment programs, performance improvement modules, Healthcare Effectiveness Data and Information Set [HEDIS] criteria).
8. incorporates ongoing learning—by acquiring, evaluating, and applying new knowledge in areas such as disease prevention, diagnosis, management, nutrition, patient education, and palliative care—into patient-centered care.
9. uses information technology, including augmented intelligence, for ongoing knowledge development and clinical decision-making.
10. engages in regular self-assessment and pursues educational activities to address identified gaps in competence and performance, consistent with professional standards.
11. recognizes the limits of personal competence in knowledge, skill, and/or experience.

COMPETENCY DOMAINS

5 Interpersonal and Communication Skills in the Practice of Osteopathic Medicine

Overview

Osteopathic physicians must demonstrate the knowledge, skills, experience, attitudes, values, and behaviors that facilitate accurate and efficient information gathering, empathetic rapport building, and clear communication with patients, their support networks, and members of the interprofessional health care team. They must also effectively document and synthesize clinical findings, diagnostic impressions, and treatment plans across verbal, written, electronic, and virtual formats, incorporating appropriate resources—such as interpretation services—when communication barriers exist.

Effective interpersonal and communication practices in osteopathic medical care require physicians to demonstrate inclusivity, cultural sensitivity, and freedom from bias. These attributes are essential for understanding patient concerns, building and sustaining therapeutic relationships, educating patients, facilitating shared decision-making, and implementing care plans.

Effective communication involves active listening, attentiveness to both verbal and nonverbal cues, motivational interviewing techniques, and appropriate use of touch. Osteopathic physicians must engage in empathetic, nonjudgmental dialogue with patients and their support networks.

In osteopathic medical practice, a person-centered approach is essential—one that encompasses the osteopathic philosophy of body, mind, and spirit, providing a comprehensive, compassionate, and respectful approach to each individual's unique characteristics and experiences.

Required Elements

5.1 Eliciting Information

DEFINITION

The osteopathic physician must communicate effectively with patients and their support networks in an inclusive, culturally sensitive manner to help determine the nature of patient concerns and to establish diagnostic impressions. The osteopathic physician should begin interviews by encouraging patients to fully express their concerns. Information must be gathered in an unbiased, nonjudgmental way that promotes effective exchange and collaboration with patients, their support networks, and members of the interprofessional health care team.

Note: [Required Element 2.1 Patient-Centered Data Gathering and History Building](#) includes topics related to gathering information on patients.

MEASURED OUTCOMES

The osteopathic physician...

1. allows interviewed individuals to complete their statements without interruption to elicit the full set of concerns.
2. uses open-ended and closed-ended questions effectively.
3. listens actively using appropriate verbal and nonverbal strategies (e.g., eye contact, body language, facial expressions), sitting at eye level with the seated patient when possible to support optimal face-to-face communication.
4. recognizes and responds appropriately to verbal and nonverbal cues from the patient and/or caregivers.

5. elicits information about social determinants of health (e.g., occupation, living circumstances and safety, housing stability, food security, access to care) to understand factors impacting the patient's health and treatment adherence.
6. elicits sensitive information (e.g., sleep history, substance use, sexual history, past trauma) in a compassionate, nonjudgmental manner.
7. gathers information on the patient's dietary habits and food choices in a sensitive manner, incorporating social and personal context.
8. uses resources as appropriate (e.g., whiteboard, models, images, interpretation services) to effectively communicate with the patient, minimizing any information exchange barriers.
9. adapts appropriate communication techniques for telehealth encounters (e.g., telephone, videoconferencing).

5.2 Rapport Building

DEFINITION

The osteopathic physician must develop, maintain, and appropriately conclude therapeutic relationships and demonstrate competence in the rapport-building functions of the interview while respecting individual characteristics and lived experiences.

MEASURED OUTCOMES

The osteopathic physician...

1. develops, maintains, and appropriately concludes the therapeutic relationship by communicating interest in, respect for, support of, and empathy for the patient (e.g., by employing person-first and gender-affirming language).

2. develops a safe and supportive clinical environment by ensuring predictability, transparency, and respect for patient autonomy, being mindful of individuals with a history of trauma.
3. facilitates shared decision-making by actively listening, respecting patient autonomy, and ensuring that diagnostic and treatment decisions align with patient values, preferences, and goals.
4. communicates effectively with emotionally charged patients and/or their caregivers in a nonjudgmental manner.
5. fosters trust with patients experiencing pain or other mental health issues by validating their experiences, addressing concerns about stigma, and emphasizing a person-centered approach.
6. communicates effectively and encourages open communication with the patient as appropriate during clinical procedures, including OMT.
7. employs therapeutic touch appropriately to foster trust, communication, and therapeutic rapport.
8. identifies and establishes effective communication with any individuals acting on the patient's behalf.
9. clarifies the osteopathic physician's role in the patient's care and/or on the health care team with the patient and their support network.
10. fosters patient trust and builds rapport in telehealth encounters by using clear verbal communication, exhibiting active listening, managing expectations, and ensuring patient comfort with the virtual environment.

5.3 Information Giving and Patient Education

DEFINITION

The osteopathic physician must provide information and patient education in a manner that ensures understanding of the condition, management options, risk factors, and physician recommendations for patients. This involves empathetic communication that achieves consensus among patients, their caregivers, and the physician; facilitates informed consent; outlines mutually agreed-upon diagnostic, therapeutic, or health promotion strategies; and supports coping mechanisms and lifestyle changes to prevent illness and promote health.

MEASURED OUTCOMES

The osteopathic physician...

1. provides information to the patient using inclusive and culturally sensitive language and concepts.
2. provides explanations to the patient at a level commensurate with the patient's health literacy, circumstances, and lived experiences.
3. communicates the potential benefits of osteopathic principles and practice and OMT to the patient.
4. exhibits compassion and employs precise language when communicating with the patient, particularly when sharing life-altering news and diagnoses that may evoke strong emotions.
5. explains the rationale when not recommending a test or treatment requested by the patient.

6. obtains and documents informed consent, communicating appropriately based on the patient's health literacy.
7. elicits the patient's outcome goals and confirms the motivation, readiness, and means of the patient and their caregivers to follow the care plan.
8. identifies and strengthens the patient's coping skills by applying biopsychosocial-spiritual principles and addressing the social and psychological impacts of their condition and treatment.
9. recommends and explains appropriate disease prevention and health promotion strategies, including lifestyle changes and available community support services.
10. recommends dietary and nutrition-based strategies that support health promotion, disease prevention, and patient management, taking into account the patient's dietary habits and goals and the roles of macronutrients and micronutrients.
11. provides education on strategies to support function, mobility, and overall health, including therapeutic exercises, activity modifications, safe ergonomic and workstation practices, lifestyle changes, the use of assistive or supportive devices, and sleep hygiene principles.
12. provides education on the benefits, limitations, and appropriate uses of in-person care versus telehealth.
13. effectively communicates directions for next steps related to diagnostic and treatment care plans.
14. provides closure to the patient interview by summarizing and affirming agreements, checking for understanding, asking about remaining concerns, and planning follow-up as necessary (e.g., follow-up care, awareness of unexpected outcomes).

5.4 Documentation and Communication

DEFINITION

The osteopathic physician must demonstrate effective documentation and communication in patient care and in working as a member of the interprofessional health care team.

MEASURED OUTCOMES

The osteopathic physician...

1. documents subjective elements of the patient's history and review of systems—including information provided by the patient or secondary sources—covering medical, surgical, family, medication, diet and nutrition, allergy, social, cultural, and sexual histories.
2. documents objective patient information (e.g., physical examination findings; laboratory, diagnostic, and point-of-care test results).
3. demonstrates the ability to prioritize relevant information in the medical record.
4. documents a reasonable diagnostic assessment and/or differential diagnosis as supported by subjective and objective findings, relevant data, and diagnostic reasoning.
5. documents elements of the patient care plan.
6. interprets medical record entries made by other care providers.
7. obtains informed consent for the use of augmented intelligence and related technologies in medical documentation and transcription.

5.5 Interprofessional Team Communication

DEFINITION

The osteopathic physician must communicate effectively with other health care professionals as a member or leader of an interprofessional health care team.

MEASURED OUTCOMES

The osteopathic physician...

1. effectively communicates critical information about the patient's condition that requires immediate attention.
2. facilitates closed-loop communication to ensure that information conveyed by the sender is understood by the receiver as intended.
3. effectively communicates during transitions of care to enhance information exchanges.
4. communicates to the interprofessional health care team the principles of osteopathic care and the benefits of OMT.

COMPETENCY DOMAINS

6 Professionalism and Compassion in the Practice of Osteopathic Medicine

Overview

Osteopathic physicians must uphold the osteopathic tenets through ethical, behavioral, technological, and social science principles that form the foundation of osteopathic medical professionalism. This includes demonstrating accountability to patients, society, and the profession while consistently maintaining high moral, ethical, and professional standards in medical education, training, research, and practice.

Professionalism requires osteopathic physicians to establish, maintain, and appropriately conclude the physician-patient relationship with altruism and conscientiousness.

Osteopathic physicians must exemplify integrity, humanistic behavior, and responsiveness to patient needs considering the body, mind, and spirit. They must treat each patient with respect and demonstrate cultural sensitivity and inclusivity in caring for a diverse patient population. They must demonstrate compassion, a quality once regarded as separate from, or even incompatible with, being “professional,” but now recognized as essential for improving patient outcomes and supporting physician well-being. An appreciation for patients as people in body, mind, and spirit aids physicians in delivering compassionate patient care and includes a willingness to address patients’ religious or spiritual belief systems

appropriately, recognizing how this might impact their health care and outcomes.

As technology and artificial intelligence become increasingly integrated into osteopathic medical practice, physicians must develop digital intelligence and collaboratively use these tools when appropriate to enhance patient safety and physician well-being.

Additionally, osteopathic physicians must recognize and address factors that affect physician well-being and contribute to burnout. This includes developing skills to manage stress, build resilience, and foster a culture of wellness within the profession.

Although professionalism also includes a commitment to excellence and continuous professional development, those attributes are classified in [Competency Domain 4. Practice-Based Learning and Improvement in Osteopathic Medicine](#). In addition, many of the actions of compassion are outlined in [Competency Domain 5. Interpersonal and Communication Skills in Osteopathic Medicine](#).

Required Elements

6.1 Knowledge of Ethics and Jurisprudence

DEFINITION

The osteopathic physician must demonstrate knowledge of the behavioral and social sciences that underpin professionalism—including medical ethics, jurisprudence, social accountability and responsibility, and awareness of human diversity—and apply this knowledge to build trust in the health care system and in physician-patient relationships.

MEASURED OUTCOMES

The osteopathic physician...

1. explains and applies moral, legal, and ethical guidelines for professional behaviors.
2. explains and applies the ethical principles of autonomy, beneficence, nonmaleficence, fidelity, justice, and utility in professional practice.
3. engages compassionately to correct misinformation and builds trust, addressing misinformation and disinformation about evidence- and science-based patient care recommendations, including that spread via social networks, digital communities, and online platforms.
4. demonstrates familiarity with key national laws and regulations governing medical practice, including those related to patient rights, privacy, health data management, discrimination, and health care access.

5. assesses the patient's social and economic situation, capacity for self-care, and ability to participate in shared decision-making, and integrates these considerations into treatment planning.
6. demonstrates understanding of the ethical and legal principles related to social determinants of health, structural bias, health inequities, and other systemic factors.
7. demonstrates understanding and application of social accountability and responsibility in professional interactions.

6.2 Compassion and Humanistic Behavior

DEFINITION

The osteopathic physician must demonstrate respect, altruism, compassion, integrity, honesty, and trustworthiness toward patients of all backgrounds, cultures, and identities.

MEASURED OUTCOMES

The osteopathic physician...

1. exhibits respect for the autonomy, dignity, and privacy of the patient.
2. recognizes the impact of past experiences on patient health and behavior (e.g., adverse childhood experiences, catastrophic injuries).
3. demonstrates empathy, sensitivity, active listening, and compassion when counseling the patient.
4. exhibits openness, respect, honesty, and trustworthiness when sharing health information with the patient and their caregivers, including during formal inquiries or litigation.

5. demonstrates kindness, warmth, and understanding while taking steps to alleviate the patient's suffering and improve their well-being.
6. demonstrates humanistic behavior in digital interactions (e.g., email, social media, virtual consultations).
7. upholds and advocates for equitable and inclusive values in all aspects of health care.
8. takes timely and appropriate action to protect individuals at risk of abuse, neglect, or harm.

6.3 Primacy of Patient Need

DEFINITION

The osteopathic physician must demonstrate responsiveness to each patient's unique needs, prioritize patient needs over personal interests while maintaining personal well-being, and recognize inequities within communities and among individuals with varying needs.

MEASURED OUTCOMES

The osteopathic physician...

1. respects the right of the patient to personal privacy and dignity during evaluation and management.
2. respects patient autonomy and the right of the patient to be fully involved in decisions about care.
3. uses sound judgment and reasoning to develop care plans that incorporate the patient's perspective, considering their socioeconomic status, culture, and unique personal circumstances.

4. provides compassionate, unbiased care using evidence-based strategies that minimize harm and enhance quality of life (e.g., pain management, palliative and hospice care, trauma-informed care, dietary and nutritional care).
5. addresses the physical, emotional, and spiritual needs of the patient and their caregivers and takes steps to minimize unnecessary suffering or distress.

6.4 Spirituality and Belief Systems in Health Care

DEFINITION

The osteopathic physician must demonstrate an understanding of the role of spirituality and religion in patient care and integrate this awareness into clinical decision-making and communication, being open to learning from patients and their support systems about how their belief systems might impact health care decision-making and patient outcome goals. Religious belief systems can significantly influence health care through beliefs about illness, healing, diet and nutrition, organ donation and transplants, reproductive health, and end-of-life issues. The osteopathic physician must support the spiritual well-being of patients as part of comprehensive, person-centered care, consistent with the tenets of osteopathic medicine and with an awareness that understanding a patient's source of meaning and purpose can promote trust and alleviate suffering.

MEASURED OUTCOMES

The osteopathic physician...

1. conducts a basic patient-centered spiritual assessment, as appropriate, identifying spiritual needs, strengths, and beliefs relevant to health, well-being, and treatment options, and performing this assessment routinely in the care of the patient with a serious illness.
2. collaborates with spiritual care providers (e.g., chaplains, clergy, traditional healers, humanist counselors) to support the patient's spiritual well-being in ways guided by their values and meaningful traditions.
3. collaborates with palliative care teams to incorporate spiritual care.
4. adapts diagnostic and therapeutic options for the patient based on their input, which may be influenced by their religious belief system or spirituality.
5. addresses the spiritual needs of specific populations (e.g., immigrants, refugees, Native communities, trauma survivors).

6.5 Cultural Awareness and Responsiveness

DEFINITION

The osteopathic physician must demonstrate cultural humility, recognizing that understanding diverse patient experiences is a lifelong process. This includes showing sensitivity, respect, and responsiveness to all patients, taking into account factors such as culture, religion, age, gender, sexual orientation, socioeconomic status, and mental and physical abilities.

MEASURED OUTCOMES

The osteopathic physician...

1. exhibits cultural awareness, respect, and responsiveness when communicating with the patient, their caregivers, and other health care team members.
2. addresses cultural factors openly and responds appropriately to culturally informed cues, interpreting patient-reported symptoms in light of the patient's culture and lived experiences.
3. recognizes how social determinants of health affect patient experiences and adjusts communication and care strategies accordingly to enhance patient trust and engagement.
4. demonstrates awareness of and respect for the patient's sense of meaning, core beliefs, and spiritual practices in health care decision-making.

6.6 Accountability and Duty in the Physician-Patient Relationship

DEFINITION

The osteopathic physician must establish, maintain, and conclude the physician-patient relationship in accordance with ethical and legal standards. The osteopathic physician is accountable for their actions and their impact on patients, the public, and the profession.

MEASURED OUTCOMES

The osteopathic physician...

1. applies proper ethical and legal standards in establishing and maintaining the physician-patient relationship by examining, diagnosing, and treating the patient with proper consent.

2. engages in shared decision-making that respects the patient's lived experiences while adhering to ethical and legal guidelines.
3. takes appropriate action to protect the patient from risks that compromise patient care (e.g., health care provider impairment, substance use, incompetence, unethical conduct, inappropriate relationships, discriminatory practices).
4. properly terminates physician-patient relationships when necessary (e.g., physician relocation, inappropriate patient conduct).
5. reports adverse events promptly and accurately to support improvements in quality of care.
6. promptly apologizes and discloses any adverse events to the appropriate parties, fully explaining what occurred, including the short- and long-term implications.

6.7 Physician Well-Being

DEFINITION

The osteopathic physician must cultivate a strong, osteopathically distinctive professional identity while maintaining personal well-being and resilience. This includes recognizing and addressing factors that contribute to burnout, mental health challenges, and personal and professional stressors, as well as developing self-awareness, mindfulness, work-life balance, and effective coping strategies.

MEASURED OUTCOMES

The osteopathic physician...

1. recognizes their own risk factors for burnout, as well as those that could affect their health care team (e.g., excessive workload, prolonged work hours).

2. recognizes signs of burnout, including depression, substance use, suicidal ideation, and other mental health challenges.
3. describes evidence-based strategies to build resilience, reduce stress, and improve work-life balance in clinical practice.
4. defines and communicates clear boundaries for patient communication, including expected response times for digital messages and availability for office and telehealth visits.

6.8 Ethical Business Practices and Legal Compliance

DEFINITION

The osteopathic physician must demonstrate commitment to honest and transparent business practices, complying with relevant laws, policies, and regulations. This includes maintaining ethical conduct in digital and electronic communications, ensuring that shared information—especially regarding service quality, outcomes, credentials, and qualifications—is factual and evidence-based.

MEASURED OUTCOMES

The osteopathic physician...

1. follows current regulations, laws, and statutes governing medical practice, including those related to reportable diseases.
2. recognizes the professional, ethical, legal, and regulatory standards related to digital health and the handling of health information.
3. discloses any personal interest to patients when offering or selling goods or services directly from their own practice.

6.9 Ethical Principles in Research

DEFINITION

The osteopathic physician must demonstrate knowledge of and commitment to ethical and equitable principles in osteopathic medical research, particularly those related to autonomy, justice, confidentiality, and accountability.

MEASURED OUTCOMES

The osteopathic physician...

1. ensures that ethical standards guide decisions to provide or withhold clinical care in research, particularly when diagnostic or treatment interventions may be futile.
2. ensures that informed consent is obtained from all research study participants using clear, understandable language.
3. respects the research study participant's right to withdraw from a study at any time without penalty.
4. provides additional protection for vulnerable populations in research, including children, incarcerated individuals, and those with impaired decision-making capacity.
5. conducts a thorough risk-benefit analysis before initiating any research project.
6. maximizes potential benefits while minimizing risks to research study participants.
7. ensures the fair and equitable selection, recruitment, and treatment of research study participants.
8. maintains patient confidentiality in research projects by implementing appropriate safeguards such as data encryption.

6.10 Digital Intelligence

DEFINITION

The osteopathic physician must apply best practices in digital professionalism, comply with privacy and security policies, and uphold ethical standards in all technology-enabled interactions. This includes the responsible integration of emerging technologies, such as augmented intelligence, to enhance decision-making, improve efficiency, and support patient-centered care.

MEASURED OUTCOMES

The osteopathic physician...

1. maintains a professional digital identity that adheres to privacy, confidentiality, and security regulations.
2. recognizes the scope, capabilities, and limitations of telehealth.
3. identifies the scope and limitations of the Internet of Medical Things (IoMT)—including medical devices, wearables, patient tracking systems, and real-time data—in supporting patient care.

COMPETENCY DOMAINS

7 Systems-Based Practice in Osteopathic Medicine

Overview

Osteopathic physicians must navigate the broad and complex U.S. health care system to provide high-quality, compassionate, patient-centered care. They must understand how factors such as health care policies, the business of medicine, and social determinants of health influence care delivery for individuals and populations. Effective coordination of care requires optimal use of available resources.

Osteopathic physicians must collaborate effectively as both members and leaders of interprofessional health care teams. In doing so, they must identify opportunities to improve care quality, enhance patient safety, reduce medical errors, address health inequities, and eliminate system inefficiencies and waste.

By applying principles of health systems science, osteopathic physicians can improve access, quality, and outcomes of care for both individuals and communities. They must demonstrate the ability to provide compassionate, patient-centered care that integrates body, mind, and spirit while accounting for the effects of health care systems on care delivery. They must be guided by osteopathic tenets when interacting with health care systems, influencing care delivery, and contributing to improvements in system performance.

Required Elements

7.1 Health Care Systems Awareness

DEFINITION

The osteopathic physician must understand the structure and function of health care systems and apply systems thinking and adaptive learning to navigate and improve all aspects of care delivery.

MEASURED OUTCOMES

The osteopathic physician...

1. demonstrates knowledge of different medical practice types and national health care delivery systems, including their effects on individuals and communities.
2. recognizes systemic challenges in delivering health care by understanding the complexities of access, cost, and quality of care (e.g., hospital closures, workforce shortages).
3. recognizes the impact of environmental factors and the built environment on health and health care delivery (e.g., climate change, pollution, community infrastructure, occupational exposures, food production).

- identifies the need for health system preparedness and the role of public health agencies in addressing pandemics, natural disasters, emerging global health threats, and other large-scale health crises.

7.2 Social Determinants of Health

DEFINITION

The osteopathic physician must recognize and assess the social determinants of health (SDoH) that impact health outcomes and access to care at both the individual and population levels. The osteopathic physician must use systems-based approaches to address health inequities and advocate for policies that enhance accessibility, equity, and patient well-being.

MEASURED OUTCOMES

The osteopathic physician...

- identifies key SDoH (e.g., economic stability, education, food security, health care access, neighborhood and built environment, social and community context) relevant to patient- and population-based care.
- recognizes how structural bias and systemic inequities contribute to health disparities and impact patient outcomes.
- understands and assesses how SDoH influence individual and population health outcomes, care access, and overall well-being.
- identifies community-based resources for patients (e.g., nutrition resources for patients experiencing food insecurity, transportation services for health care, social work resources, spiritual resources).

- integrates screening for SDoH into clinical practice through validated tools.
- assesses the effectiveness of health systems in addressing SDoH that impact patient care.

7.3 Health Informatics Technology

DEFINITION

The osteopathic physician must apply health data science and digital technologies—including augmented intelligence—to enhance patient care, improve health system efficiency, and advance community health outcomes while upholding ethical, legal, and professional standards.

MEASURED OUTCOMES

The osteopathic physician...

- manages health data efficiently and securely through health information systems.
- explains how health informatics supports public health initiatives and influences the delivery and effectiveness of health care.
- explains how precision medicine and digital health contribute to improving public health.
- recognizes the impact of data analytics and augmented intelligence on health system outcomes while also acknowledging potential biases and ethical considerations in their implementation.

7.4 Interprofessional Health Care Teams

DEFINITION

The osteopathic physician must understand the function of the interprofessional health care team and the roles of individuals on the team, with the goal of enhancing team performance to optimize patient outcomes.

MEASURED OUTCOMES

The osteopathic physician...

1. identifies the roles of trainees (e.g., medical students, residents, fellows) and other health care professionals within the interprofessional health care team.
2. collaborates with interprofessional health care team members (e.g., non-physician licensed health care professionals, community organizations, public health experts, dietitians, social workers, religious leaders) to provide compassionate and whole-person care (e.g., body-mind-spirit unity).
3. maintains a distinct osteopathic identity in clinical training or practice environments where others are less familiar with osteopathic medical practice.
4. engages with colleagues and others on the health care team in an ethical and professional manner.
5. explains the importance of seeking appropriate consultations and ensuring timely follow-up.

7.5 Patient Safety

DEFINITION

The osteopathic physician must understand, advocate for, and implement strategies to evaluate and improve patient care systems, with the goal of improving patient safety and the quality of care.

MEASURED OUTCOMES

The osteopathic physician...

1. identifies and uses effective strategies to recognize health care system errors (e.g., error reporting, root cause analysis).
2. applies strategies to improve patient safety and care systems (e.g., infection control, disease reporting, disaster management).
3. identifies and addresses environmental health risks (e.g., air and water quality concerns, climate change-related infectious diseases, environmental food contamination, occupational exposures) and ensures disaster preparedness within health systems.
4. recognizes and adheres to patient safety and quality improvement measures in medication management, including safe prescribing guidelines and prescription drug monitoring programs (PDMPs).
5. applies strategies to prevent overdose and addiction and to ensure safe, effective transitions of care for patients at risk of inappropriate use of medications or substances.
6. recognizes the impact of physician moral injury, burnout, secondary trauma, and mental health on patient safety, and advocates for and implements systemic interventions to address these issues.

7. uses patient outcome data to drive system-wide quality improvement initiatives.

7.6 Value-Based Medicine

DEFINITION

The osteopathic physician must assess strategies for allocating health care resources, taking into account value, quality, cost, risks and benefits, equitable distribution, and systemic inefficiencies.

MEASURED OUTCOMES

The osteopathic physician...

1. incorporates considerations of cost awareness, risk-benefit analysis, and perception of value into patient- and community-centered care.
2. makes cost-effective decisions in providing optimal patient care by working within the constraints of health care systems and available resources (e.g., requesting consultations effectively, using appropriate diagnostic tests, ensuring effective transitions of care).
3. recognizes the impact of treatment costs and financial barriers on patient care, and provides alternative options to maximize health outcomes.
4. evaluates health care resource allocation with a focus on long-term sustainability and efficiency.

7.7 Economics and Business of Medicine

DEFINITION

The osteopathic physician must understand the economic and business aspects of medical practice, including services, reimbursement structures, practice management, and associated financial impacts. The osteopathic physician must communicate financial considerations effectively to patients, maintain ethical business practices, and advocate for equitable access to health care services.

MEASURED OUTCOMES

The osteopathic physician...

1. demonstrates an understanding of medical practice management fundamentals, including regulatory and financial compliance and financial sustainability.
2. demonstrates knowledge of the economics of medicine, including reimbursement methods (e.g., insurance coverage, private payers) and billing and coding processes.
3. explains how national health care services (e.g., Medicare, Medicaid, Veterans Health Administration, tribal health services) influence provider reimbursement structures and patient access to care.
4. evaluates the advantages and limitations of value-based care models (e.g., managed care organizations, accountable care organizations, patient-centered medical homes).
5. provides clear and transparent information about health care costs to patients and designated members of their support networks.

6. recognizes the influence of health care financing and economic policies on inequities in access to care.

7.8 Policy and Advocacy

DEFINITION

The osteopathic physician must recognize how advocacy influences health policy and supports the delivery of optimal patient care.

MEASURED OUTCOMES

The osteopathic physician...

1. recognizes how health policy affects patient care at the local, regional, state, and national levels.
2. recognizes the value of collaborating with community organizations, public health initiatives, and policy efforts to improve individual and population health outcomes.
3. understands how logistical and systems-level barriers (e.g., transportation challenges, limited appointment times) can affect patient care.
4. identifies systemic barriers to equitable health care access for all populations.

Clinical Presentations

Clinical presentations represent the ways in which osteopathic physicians encounter patient concerns, health conditions, and community- and population-based health issues. The emphasis within each clinical presentation is on high-frequency and high-impact categories based on evidence from osteopathic medical practice. Patients of various ages and gender identities and from diverse backgrounds, cultures, and abilities are represented in a variety of clinical settings throughout the clinical presentations.

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CLINICAL PRESENTATIONS

1 Community Health and Patient Presentations Related to Wellness

Patient presentations span all ages and gender identities, reflecting patients from diverse backgrounds, cultures, and abilities and their reasons for presenting to osteopathic physicians in varied clinical settings.

This clinical presentation focuses on patient presentations and clinical decision-making in population-based contexts and situations not limited to a single body system. It emphasizes multisystem health promotion and disease prevention at both the patient and community levels, as well as the application of epidemiologic principles, data interpretation, and professional responsibilities in the delivery of care.

- 1.1** Public Health
- 1.2** Health Care Systems
- 1.3** Health Promotion and Disease Prevention
- 1.4** Risk Assessment
- 1.5** Patient Safety
- 1.6** Health Informatics Technology and Biostatistics
- 1.7** Ethics, Jurisprudence, and Professionalism
- 1.8** End-of-Life/Palliative Care

Clinical presentations in this category may include, but are not limited to, the following situations and contexts relevant to osteopathic medical care in patient and population settings:

Public health

- environmental exposures (e.g., pollution, secondhand smoke)
- outbreaks/pandemics/epidemics
- population health trends
- public health emergency preparedness and response
- vaccination programs

Health care systems

- advocacy and policy
- digital health tools (e.g., artificial/augmented intelligence)
- health system strain
- resource allocation
- triage protocols
- value-based care

Health promotion and disease prevention

- modifiable risk factors (e.g., nutrition, exercise)
- population-level health promotion and disease prevention strategies

- population-level risk reduction and behavior change
- wellness examinations/preventive care across the lifespan (non-disease-specific)

Risk assessment

- population risk identification and stratification
- social determinants of health

Patient safety

- medication safety (e.g., error reporting, reconciliation)
- nosocomial infections
- procedural safety practices
- systems-based error prevention
- transitions of care (e.g., handoff communication)

Health informatics technology

- business of medicine
- clinical decision support
- data security and use
- electronic health records
- quality improvement
- telehealth

Biostatistics

- data collection and measurement (e.g., sampling, validity)

- interpretation and critical appraisal (e.g., sensitivity, number needed to treat)
- probability and inference (e.g., confidence intervals)
- statistical analysis (e.g., risk measures)
- study design (e.g., bias and design flaws)

Ethics, jurisprudence, and professionalism

- compassionate and humanistic behavior
- confidentiality
- cultural awareness, respect, and responsiveness
- decision-making capacity
- ethical digital professionalism
- informed consent
- legal/ethical dilemmas
- medical malpractice
- physician well-being
- professional responsibilities
- spirituality and belief systems in care

End-of-life/Palliative care

- end-of-life planning (e.g., advance directives)
- medical futility
- pain and symptom management
- surrogate decision-making

CLINICAL PRESENTATIONS

2 Patient Presentations Related to Human Development, Reproduction, and Sexuality

Patient presentations span all ages and gender identities, reflecting patients from diverse backgrounds, cultures, and abilities and their reasons for presenting to osteopathic physicians in varied clinical settings.

- | | |
|--|--|
| 2.1 Sexual Development and Maturation, Including Variations in Sexual Development and Gender Identity | 2.13 Physical Exam Findings Related to Human Development, Reproduction, and Sexuality |
| 2.2 Aging Milestones | 2.14 Laboratory and Diagnostic Testing Related to Human Development, Reproduction, and Sexuality |
| 2.3 Developmental Delay | 2.15 Health Promotion and Preventive Care Related to Human Development, Reproduction, and Sexuality |
| 2.4 Congenital Anomalies, Malformations, Primary and Acquired Immunodeficiency Disorders | |
| 2.5 Failure to Thrive | |
| 2.6 Infertility | |
| 2.7 Pregnancy Prevention and Contraception | |
| 2.8 Obstetrics, Including Labor and Delivery | |
| 2.9 Complications During Pregnancy and the Postpartum Period | |
| 2.10 Pregnancy Loss | |
| 2.11 Neonatal Conditions | |
| 2.12 Impairment of Sexual Function | |

Clinical presentations in this category may include, but are not limited to, the following conditions or situations prompting patients to present for osteopathic medical care:

Abortion and pregnancy loss

- elective
- incomplete
- inevitable
- medically induced
- missed
- recurrent
- spontaneous
- threatened

Antepartum care

- dermatologic changes
- multiple gestation
- nutrition and caloric requirements
- physiologic changes of pregnancy
- preconception counseling

Anticipatory guidance for infants and children

- dental care
- sudden infant death syndrome
- toilet training

Congenital/genetic neonatal anomalies or malformations

- androgen insensitivity syndrome
- branchial cyst
- congenital adrenal hyperplasia
- congenital hypogonadism
- craniosynostosis
- Down syndrome
- Klinefelter syndrome
- laryngomalacia
- meconium ileus
- pyloric stenosis
- thyroglossal duct cyst
- Turner syndrome
- virilization

Congenital neonatal immunodeficiencies

- ataxia-telangiectasia
- chronic granulomatous disease
- DiGeorge syndrome
- hyper IgM syndrome
- severe combined immunodeficiency
- Wiskott-Aldrich syndrome
- X-linked agammaglobulinemia

Contraception

- abstinence and fertility awareness
- barrier methods
- implantable
- injectable

- oral
- surgical (tubal ligation, vasectomy)
- vaginal rings

Developmental milestones

▪ by domain:

- cognitive
- language/communication
- physical (gross/fine motor)
- social/emotional

▪ by life stage:

- infant
- child
- adolescent
- adult
- geriatric

Fertility assistance

- embryo harvesting, storage, and implantation
- in vitro fertilization
- infertility evaluation

Fetal growth abnormalities

- intrauterine growth restriction
- large for gestational age
- small for gestational age

Gender in reproduction

- differences of sexual development
- gender-affirming care
- reproductive health care for transgender patients

Hemolytic disease of the newborn

- ABO incompatibility
- Rh isoimmunization

Labor and delivery

- bloody show
- labor induction
- preterm labor
- rupture of membranes
- stages of labor
- uterine rupture

Maternal, fetal, and neonatal infections

- fetal and neonatal (antepartum, intrapartum, postpartum)
- maternal bacterial (e.g., gonococcal, streptococcal)
- maternal viral (e.g., TORCH)
- neonatal sepsis

Medical complications during pregnancy

- appendicitis
- cholecystitis
- diabetes

- hypertension
- hypoglycemia
- hypothyroidism
- pyelonephritis
- substance misuse

Neonatal integumentary conditions

- erythema toxicum
- milia
- seborrheic dermatitis
- vascular birthmark

Placental abnormalities

- abruptio placentae
- gestational trophoblastic disease
- hydatidiform mole
- placenta accreta
- placenta marginatum
- placenta previa
- placental insufficiency

Postpartum care

- breastfeeding and maternal/infant nutrition
- postpartum depression
- postpartum hemorrhage
- postpartum psychosis

Pregnancy complications

- cervical insufficiency
- eclampsia
- ectopic pregnancy
- HELLP syndrome

- hyperemesis gravidarum
- oligohydramnios
- polyhydramnios
- preeclampsia

Preterm infant complications

- necrotizing enterocolitis
- retinopathy of prematurity

Reproductive and sexual maturity milestones

- menopause
- perimenopause
- puberty (e.g., menarche, thelarche)

Sexual dysfunction

- dyspareunia
- erectile dysfunction
- priapism
- reduced/absent desire, arousal, or orgasm
- vaginismus

Transient neonatal conditions

- birth injury
- colic
- hyperbilirubinemia
- respiratory distress of the newborn (e.g., meconium aspiration, transient tachypnea of the newborn)
- transient hypogonadism

Constitutional Signs and Symptoms

- anorexia
- chills
- fatigue
- fever
- generalized weakness
- jaundice
- malaise
- night sweats
- unintentional weight loss

Physical Examination Findings and Evaluations

- Apgar scoring
- bimanual ovarian and uterine palpation
- cervical examination in labor
- Chapman reflex
- external genitalia inspection and palpation
- fetal status indicators
- gynecologic speculum examination
- Leopold maneuvers
- pallor
- sexual maturity rating (Tanner stage)
- somatic dysfunction
- symphysis fundal height
- tender points
- viscerosomatic/somatovisceral reflexes

Laboratory and Diagnostic Testing

- amniocentesis
- β -HCG level
- bilirubin levels
- biophysical profile
- blood gas analysis
- bone age measurement
- bone density studies
- cervical culture and sensitivity
- colposcopy
- CT scanning
- endometrial biopsy
- fetal heart rate tracing
- genetic screening
- glucose tolerance testing
- Gram staining
- hemoglobin electrophoresis
- karyotyping
- lactic acid level
- lumbar puncture
- MRI
- newborn screening testing
- prenatal laboratory panel
- prolactin level
- radiography
- semen analysis
- sex hormone levels
- tocography
- ultrasonography

Health Promotion and Preventive Care

(as applied to human development, reproduction, and sexuality)

- dietary and nutritional impacts and counseling
- digital health tools and remote monitoring
- disease monitoring and complication prevention
- early disease detection
- genetic and risk-based screening
- patient education and shared decision-making
- procedure-related counseling
- vaccination recommendations

CLINICAL PRESENTATIONS

3 Patient Presentations Related to the Endocrine and Neuroendocrine Systems and Metabolism

Patient presentations span all ages and gender identities, reflecting patients from diverse backgrounds, cultures, and abilities and their reasons for presenting to osteopathic physicians in varied clinical settings.

- 3.1 Variations of Weight and Stature
- 3.2 Neck and Endocrine Masses
- 3.3 Hypothermia and Hyperthermia
- 3.4 Polyuria, Polydipsia, Polyphagia; Diabetes
- 3.5 Physical Exam Findings Related to the Endocrine and Neuroendocrine Systems and Metabolism
- 3.6 Laboratory and Diagnostic Testing Related to the Endocrine and Neuroendocrine Systems and Metabolism
- 3.7 Health Promotion and Preventive Care Related to the Endocrine and Neuroendocrine Systems and Metabolism

Clinical presentations in this category may include, but are not limited to, the following conditions or situations prompting patients to present for osteopathic medical care:

Adrenal masses

- adrenocortical tumor
- hyperaldosteronism
- neuroblastoma

Amino acid metabolism disorders

- homocystinuria
- maple syrup urine disease
- phenylketonuria
- tyrosinemia
- urea cycle disorder

Autoimmune endocrine disorders

- Addison disease
- Cushing syndrome
- Graves disease
- Hashimoto thyroiditis
- type 1 diabetes (including hyperosmolar hyperglycemic state, ketoacidosis, neuropathy, retinopathy)

Carbohydrate metabolism disorders

- galactosemia
- hereditary fructose intolerance

Cardiometabolic disorders

- hyperinsulinemia
- metabolic syndrome
- type 2 diabetes

Hereditary cancer syndromes

- familial adenomatous polyposis
- Li-Fraumeni syndrome
- Lynch syndrome
- multiple endocrine neoplasia
- von Hippel-Lindau disease

Hypothalamic-pituitary disorders

- craniopharyngioma
- diabetes insipidus
- hypopituitarism
- pituitary tumor
- prolactinoma
- syndrome of inappropriate antidiuretic hormone secretion

Inborn errors of metabolism

- Gaucher disease
- glycogen storage disorders
- mitochondrial disorders
- Niemann-Pick disease
- Tay-Sachs disease
- Wilson disease

Metabolic and nutrition-related disorders

- familial hypercholesterolemia
- hyperlipidemia

Neuroendocrine tumors

- carcinoid syndrome
- carcinoid tumor
- medullary carcinoma
- pheochromocytoma

Ovarian dysfunction

- polyendocrine metabolic ovarian syndrome (polycystic ovary syndrome)
- primary ovarian insufficiency

Pancreatic disorders

- hypoglycemia
- Zollinger-Ellison syndrome

Parathyroid disorders

- hyperparathyroidism
- hypoparathyroidism
- parathyroid cancer

Salivary gland disorders

- sialadenitis
- salivary gland neoplasms

Stature-based abnormalities

- gigantism
- short stature

Temperature regulation

- fever in immunocompromised patients
- fever of undetermined etiology
- heat exhaustion
- heat stroke
- hypothermia

Testicular disorders

- 5- α reductase deficiency
- hypogonadism

Thyroid disorders

- hyperthyroidism
(including thyrotoxic crisis)
- hypothyroidism
(including myxedema crisis)
- medullary thyroid carcinoma
- papillary carcinoma
- thyroid adenoma
- thyroid cancer
- thyroid nodule
- thyroiditis
- thyromegaly

Weight variations

- excessive or unintentional weight loss
- excessive weight gain
- obesity

Constitutional Signs and Symptoms

- anorexia
- chills
- fatigue
- fever
- generalized weakness
- jaundice
- malaise
- night sweats
- unintentional weight loss

Physical Examination Findings and Evaluations

- acanthosis nigricans
- acromegaly
- adipose distribution
- Chapman reflex
- Chvostek sign
- exophthalmos
- galactorrhea
- gynecomastia
- hirsutism
- hyper/hyporeflexia
- lid lag
- lymphadenopathy
- macroglossia
- pallor
- peripheral neuropathy findings
- retinopathy
- somatic dysfunction
- striae

- tender points
- thyromegaly
- tremor
- Trousseau sign
- viscerosomatic/somatovisceral reflexes

Laboratory and Diagnostic Testing

- autoantibody testing
- CT scanning
- DXA scanning
- electrolyte levels
- fine-needle aspiration
- glucose testing
- hemoglobin A1c testing
- hormone assays
- monofilament testing
- MRI
- nuclear medicine imaging
- radiography
- ultrasonography
- urine testing

Health Promotion and Preventive Care

- (as applied to the endocrine and neuroendocrine systems and metabolism)
- dietary and nutritional impacts and counseling
 - digital health tools and remote monitoring
 - disease monitoring and complication prevention

- early disease detection
- genetic and risk-based screening
- patient education and shared decision-making
- procedure-related counseling
- vaccination recommendations

CLINICAL PRESENTATIONS

4 Patient Presentations Related to the Nervous System and Mental Health

Patient presentations span all ages and gender identities, reflecting patients from diverse backgrounds, cultures, and abilities and their reasons for presenting to osteopathic physicians in varied clinical settings.

- 4.1 Anxiety
- 4.2 Disturbances of Mood/Depressive Disorders
- 4.3 Cognitive Disturbances
- 4.4 Disturbances of Behavior and Perception
- 4.5 Life Adjustment and Stressors
- 4.6 Disturbances of the Special Senses
- 4.7 Headache
- 4.8 Speech and Language Disturbances
- 4.9 Movement Disturbances
- 4.10 Seizures
- 4.11 Sensory Disturbances and Pain
- 4.12 Sleep Disturbances
- 4.13 Substance Use Disorders
- 4.14 Nervous System Trauma
- 4.15 Weakness and Paralysis
- 4.16 Physical Exam Findings Related to the Nervous System and Mental Health
- 4.17 Laboratory and Diagnostic Testing Related to the Nervous System and Mental Health
- 4.18 Health Promotion and Preventive Care Related to the Nervous System and Mental Health

Clinical presentations in this category may include, but are not limited to, the following conditions or situations prompting patients to present for osteopathic medical care:

Anxiety disorders

- agoraphobia
- breath-holding spells
- generalized anxiety disorder
- panic disorder
- separation anxiety disorder
- social anxiety disorder
- specific phobia

Autoimmune disorders

- Guillain-Barré syndrome
- multiple sclerosis
- myasthenia gravis

Bipolar and related disorders

- bipolar I disorder
- bipolar II disorder
- cyclothymic disorder

Brain tumors

- astrocytoma
- ependymoma
- glioblastoma
- medulloblastoma

- meningioma
- oligodendroglioma
- schwannoma

Cerebrovascular disorders

- amaurosis fugax
- stroke
- transient ischemic attack

Consciousness disorders

- coma
- delirium
- locked-in syndrome
- somnolence

Depressive disorders

- disruptive mood dysregulation disorder
- major depressive disorder
- persistent depressive disorder
- premenstrual dysphoric disorder
- suicidal ideation

Disruptive, impulse-control, and conduct disorders

- conduct disorder
- intermittent explosive disorder
- oppositional defiant disorder

Dissociative disorders

- amnesia
- depersonalization/derealization disorder
- dissociative identity disorder

Ear and auditory disorders

- benign paroxysmal positional vertigo
- cerumen impaction
- eustachian tube dysfunction
- hearing loss
- labyrinthitis
- Ménière disease
- otosclerosis
- tinnitus
- tympanic membrane perforation

Elimination disorders

- encopresis
- enuresis

Encephalopathies

- chronic traumatic encephalopathy
- Reye syndrome
- Wernicke-Korsakoff syndrome

Entrapment neuropathies

- anterior interosseous syndrome
- carpal tunnel syndrome
- cubital tunnel syndrome
- meralgia paresthetica
- pronator teres syndrome
- radiculopathy
- tarsal tunnel syndrome
- thoracic outlet syndrome

Eye and vision disorders

- blepharitis
- cataract
- corneal abrasion
- floaters
- glaucoma
- iritis
- nystagmus
- orbital floor fracture
- refractive error
- strabismus
- subconjunctival hemorrhage
- uveitis

Facial/cranial nerve dysfunction

- Bell palsy
- Ramsay Hunt syndrome

Feeding and eating disorders

- anorexia nervosa
- binge-eating disorder
- bulimia
- pica

Gender dysphoria

- in children
- in adolescents
- in adults
- nonbinary

Head and spinal cord injuries

- brain concussion
- central cord syndrome
- diffuse axonal injury
- epidural hematoma
- mild traumatic brain injury
- subarachnoid hemorrhage
- subdural hemorrhage
- traumatic brain injury

Headache syndromes

- cluster headache
- migraine
- tension-type headache

Movement disorders

- ballism
- chorea
- dystonia
- essential tremor
- myoclonus
- restless legs syndrome
- Tourette disorder

Nervous system infections

- encephalitis
- Lyme disease
- meningitis
- toxoplasmosis

Neurodegenerative disorders

- amyotrophic lateral sclerosis
- Creutzfeldt-Jakob disease
- dementia (e.g., Alzheimer disease, frontotemporal dementia, Lewy body dementia, mild cognitive impairment, vascular neurocognitive disorder)
- Horner syndrome
- Huntington disease
- multiple system atrophy
- normal pressure hydrocephalus
- Parkinson disease

Neurodevelopmental disorders

- attention deficit hyperactivity disorder
- autism spectrum disorder
- cerebral palsy
- heavy metal poisoning (e.g. lead)
- intellectual disability
- learning disability
- selective mutism

Neuropathic pain disorders

- complex regional pain syndrome
- postherpetic neuralgia
- trigeminal neuralgia

Obsessive-compulsive disorders

- body dysmorphic disorder
- excoriation disorder
- hoarding
- obsessive-compulsive disorder
- trichotillomania

Personality disorders

- antisocial
- avoidant
- borderline
- dependent
- histrionic
- narcissistic
- obsessive-compulsive
- paranoid
- schizoid
- schizotypal

Schizophrenia spectrum

- brief psychotic disorder
- catatonia
- delusional disorder
- schizoaffective disorder
- schizophrenia
- schizophreniform disorder

Seizure disorders

- absence seizures
- epilepsy
- febrile seizure

Sleep disorders

- circadian rhythm sleep disorder
- hypersomnia
- insomnia
- narcolepsy
- night terrors
- obstructive sleep apnea
- parasomnias
- somnambulism

Somatic symptoms and related disorders

- conversion disorder
- factitious disorder
- illness anxiety disorder
- malingering
- somatic symptom disorder

Spinal cord disorders

- anterior cord syndrome
- cauda equina syndrome
- syringomyelia

Substance-related and addictive disorders

- alcohol (including withdrawal)
- caffeine
- cannabis
- gambling
- hallucinogens
- inhalants
- opioids

- sedatives
- stimulants
- tobacco

Trauma and stressor-related disorders

- acute stress disorder
- adjustment disorder
- grief reaction
- posttraumatic stress disorder
- reactive attachment disorder

Voice disorders

- dysphonia
- vocal cord paralysis

Constitutional Signs and Symptoms

- anorexia
- chills
- fatigue
- fever
- generalized weakness
- jaundice
- malaise
- night sweats
- unintentional weight loss

Physical Examination Findings and Evaluations

- abdominal reflex
- acalculia
- action tremor
- agnosia
- agraphia
- akinesia
- alexia
- anomia
- aphasia
- apraxia
- ataxia
- athetosis
- audiologic testing
- Brudzinski sign
- Chapman reflex
- clonus
- cognitive function testing
- cogwheel rigidity
- corneal reflex
- cremasteric reflex
- deep tendon reflexes
- dysarthria
- dysdiadochokinesia
- dyskinesia
- dysphasia
- fundoscopic abnormalities
- Glasgow coma scale scoring
- heel-to-shin test
- Hoffmann sign

- Kernig sign
- muscle tone testing
- nuchal rigidity
- orthostatic hypotension
- pallor
- plantar reflex (Babinski sign)
- pupillary light reflex
- red reflex
- Romberg sign
- slit-lamp examination
- somatic dysfunction
- tender points
- tuning-fork testing
- viscerosomatic/somatovisceral reflexes
- visual acuity testing

Laboratory and Diagnostic Testing

- angiography
- audiologic testing
- autoimmune marker blood testing
- cerebrospinal fluid analysis
- CT scanning
- electroencephalography
- MRI
- nuclear medicine imaging
- PET scanning
- self-report questionnaires
- serum creatine kinase level
- transcranial Doppler ultrasonography
- vitamin levels (e.g., vitamin B₁₂, folate)

Health Promotion and Preventive Care

(as applied to the nervous system and mental health)

- dietary and nutritional impacts and counseling
- digital health tools and remote monitoring
- disease monitoring and complication prevention
- early disease detection
- genetic and risk-based screening
- patient education and shared decision-making
- procedure-related counseling
- vaccination recommendations

CLINICAL PRESENTATIONS

5 Patient Presentations Related to the Musculoskeletal System

Patient presentations span all ages and gender identities, reflecting patients from diverse backgrounds, cultures, and abilities and their reasons for presenting to osteopathic physicians in varied clinical settings.

- 5.1 Postural and Spinal Variations
- 5.2 Back Pain and Somatic Dysfunction of the Pelvis, Sacrum, and Lumbar and Thoracic Spine
- 5.3 Neck Pain and Somatic Dysfunction of the Cervical Spine
- 5.4 Gait Variations
- 5.5 Joint Pain, Stiffness, and Swelling
- 5.6 Muscular Symptoms
- 5.7 Chest Wall Pain and Somatic Dysfunction of the Thoracic Region and Ribs
- 5.8 Head, Orofacial, and Temporomandibular Joint Pain and Somatic Dysfunction of the Head and Neck
- 5.9 Pain and Somatic Dysfunction of the Extremities
- 5.10 Musculoskeletal Trauma, Including Fractures and Dislocations
- 5.11 Sciatica and Radicular Symptoms
- 5.12 Musculoskeletal Masses
- 5.13 Somatic Manifestations of Systemic Disease
- 5.14 Viscerosomatic and Related Reflexes
- 5.15 Physical Exam Findings Related to the Musculoskeletal System
- 5.16 Laboratory and Diagnostic Testing Related to the Musculoskeletal System
- 5.17 Health Promotion and Preventive Care Related to the Musculoskeletal System

Clinical presentations in this category may include, but are not limited to, the following conditions or situations prompting patients to present for osteopathic medical care:

Bone disorders

- apophysitis
- Osgood-Schlatter disease
- osteitis deformans
- osteogenesis imperfecta
- osteomalacia
- osteopenia
- osteoporosis

Chronic pain disorders

- fibromyalgia
- myalgic encephalomyelitis (chronic fatigue syndrome)
- myofascial pain syndrome

Connective tissue disorders

- Ehlers-Danlos syndrome
- Marfan syndrome
- mixed connective tissue disease
- scleroderma
- Sjögren syndrome
- systemic lupus erythematosus

Crystal-induced arthropathies

- calcium pyrophosphate dihydrate crystal deposition disease
- gout

Cysts

- bone cyst
- ganglion cyst
- synovial cyst

Degenerative spinal disorders

- degenerative disk disease
- herniated disk
- spinal stenosis
- spondylolisthesis
- spondylolysis
- spondylosis

Disorders of muscles and muscle compartments

- compartment syndrome
- dermatomyositis
- iliopsoas dysfunction
- muscular atrophy
- muscular dystrophy
- piriformis syndrome
- polymyositis
- torticollis

Fractures and other trauma

- compression fracture
- crush injury
- epiphyseal fracture
- labral injury
- spinal fracture
- spiral fracture
- stress fracture
- whiplash syndrome

Infectious and inflammatory arthritis

- osteomyelitis
- polymyalgia rheumatica
- psoriatic arthritis
- reactive arthritis
- rheumatoid arthritis
- septic arthritis
- spondylitis

Joint disorders

- meniscal injury
- neuropathic arthropathy
- osteoarthritis
- synovitis
- temporomandibular joint dysfunction

Lower extremity disorders

- Blount disease
- femoral anteversion
- genu varum/valgum
- hip dysplasia

- leg length inequality
- Legg-Calvé-Perthes disease
- metatarsus adductus
- patellar tracking syndrome
- patellofemoral syndrome
- pes planus
- slipped capital femoral epiphysis
- tibial torsion
- tibiotalar effusion

Soft tissue disorders

- bursitis
- costochondritis
- hypermobility syndrome
- iliotibial band syndrome
- necrotizing fasciitis
- plantar fasciitis

Somatic dysfunctions

- abdominal
- cervical
- cranial
- elbow
- foot
- hip
- knee
- lumbar
- neuroreflexive mechanisms
- pelvic
- rib
- sacral

- shoulder
- thoracic
- wrist

Spinal abnormalities

- kyphosis
- lordosis
- scoliosis
- spina bifida

Sprains, strains, and dislocations

- ankle sprain
- glenohumeral dislocation

Tendon disorders

- Achilles tendinitis
- enthesitis
- impingement syndromes
- lateral epicondylitis
- medial epicondylitis
- tendon rupture
- tenosynovitis

Tumors

- enchondroma
- osteochondroma
- sarcoma

Upper extremity disorders

- adhesive capsulitis
- mallet finger
- rotator cuff injury

- trigger finger
- winged scapula

Constitutional Signs and Symptoms

- anorexia
- chills
- fatigue
- fever
- generalized weakness
- jaundice
- malaise
- night sweats
- unintentional weight loss

Physical Examination Findings and Evaluations

- active and passive range-of-motion testing
- Adams forward bending test
- Adson test
- anterior and posterior drawer signs (knee and ankle)
- Apley compression and distraction tests
- asymmetry, joint, regional, and segmental testing
- Barlow maneuver and Ortolani maneuver
- Bouchard and Heberden nodes
- bounce home test
- boutonniere and swan-neck deformities
- cervical compression test

- cervical distraction test
- Chapman reflex
- FABERE test
- Finkelstein test
- gait abnormalities
- Homans sign
- Hoover sign
- layer-by-layer palpation
- Lhermitte sign
- McMurray test
- muscle strength grading
- Ottawa ankle rules
- pallor
- percussion test
- Phalen maneuver and Tinel sign
- signs of inflammation (e.g., rubor, calor, tumor, dolor)
- shoulder apprehension test, Apley scratch test
- shoulder impingement testing (Hawkins-Kennedy test, drop-arm test, empty-can test, Neer test)
- somatic dysfunction
- straight-leg raising test
- stress testing of the ankle
- talar tilt test
- tender points
- tenderness
- Thomas test
- tissue texture abnormalities
- Trendelenburg test

- trigger points
- valgus and varus stress testing
- viscerosomatic/somatovisceral reflexes

Laboratory and Diagnostic Testing

- alkaline phosphatase level
- antinuclear antibody testing
- autoantibody testing
- calcium and phosphate levels
- C-reactive protein level
- creatine kinase level
- CT scanning
- DXA scanning
- erythrocyte sedimentation rate
- MRI
- nuclear medicine imaging
- parathyroid hormone level
- radiography
- rheumatoid factor testing
- synovial fluid evaluation
- ultrasonography
- vitamin D level

Health Promotion and Preventive Care

(as applied to the musculoskeletal system)

- dietary and nutritional impacts and counseling
- digital health tools and remote monitoring
- disease monitoring and complication prevention
- early disease detection
- genetic and risk-based screening
- patient education and shared decisionmaking
- procedure-related counseling
- vaccination recommendations

CLINICAL PRESENTATIONS

6 Patient Presentations Related to the Genitourinary/Renal System and Breasts

Patient presentations span all ages and gender identities, reflecting patients from diverse backgrounds, cultures, and abilities and their reasons for presenting to osteopathic physicians in varied clinical settings.

- 6.1 Anuria, Oliguria, Polyuria, and Edema
- 6.2 Enuresis/Incontinence, Prolapse, and Pelvic Relaxation
- 6.3 Urinary Frequency/Hesitancy, Nocturia, Urinary Retention, and Dysuria
- 6.4 Hematuria, Proteinuria, and Discolored Urine
- 6.5 Amenorrhea and Abnormal Uterine Bleeding
- 6.6 Urethral Discharge
- 6.7 Pelvic Pain
- 6.8 Vulvar and Vaginal Discharge, Pruritus, Lesions, and Pain
- 6.9 Penile, Scrotal, and Testicular Lesions, Masses, Pain, and Bleeding
- 6.10 Pelvic, Prostate, and Renal Masses
- 6.11 Breast Masses, Asymmetry, Skin Changes, Discharge, and Pain
- 6.12 Physical Exam Findings Related to the Genitourinary/Renal System and Breasts
- 6.13 Laboratory and Diagnostic Testing Related to the Genitourinary/Renal System and Breasts
- 6.14 Health Promotion and Preventive Care Related to the Genitourinary/Renal System and Breasts

Clinical presentations in this category may include, but are not limited to, the following conditions or situations prompting patients to present for osteopathic medical care:

Malignant breast disorders

- ductal carcinoma in situ
- invasive ductal carcinoma
- invasive lobular carcinoma
- Paget disease

Malignant gynecologic disorders

- cervical cancer
- endometrial cancer
- ovarian cancer
- vaginal cancer
- vulvar cancer

Malignant penile and prostate disorders

- penile cancer
- prostate cancer

Menstrual disorders

- amenorrhea (primary and secondary)
- anovulatory bleeding
- dysmenorrhea
- menorrhagia

Nephropathy

- acute kidney injury (including tubular necrosis)
- chronic kidney disease
- diabetic nephropathy
- focal segmental glomerulosclerosis
- glomerulonephritis
- hypertensive nephropathy
- minimal change disease
- nephrolithiasis
- polycystic kidney disease

Nonmalignant breast disorders

- fibroadenoma
- fibrocystic changes of the breast
- galactocele
- intraductal papilloma
- lipoma
- mastitis

Nonmalignant gynecologic disorders

- adenomyosis
- endometriosis
- leiomyoma
- ovarian cyst
- ovarian torsion
- pelvic adhesions
- pelvic inflammatory disease
- toxic shock syndrome
- vulvovaginitis

Nonmalignant penile and prostate disorders

- benign prostatic hyperplasia
- Peyronie disease
- phimosis
- prostatitis

Pelvic organ prolapse

- cystocele
- enterocele
- rectocele
- uterine prolapse
- vaginal prolapse

Sexually transmitted infections

- chlamydia
- genital herpes
- gonorrhea
- human papillomavirus
- syphilis
- trichomoniasis

Testicular and scrotal disorders

- epididymitis
- hydrocele
- orchitis
- spermatocele
- testicular torsion
- varicocele

Urinary cancers

- bladder cancer
- renal cell carcinoma
- urethral cancer

Urinary tract infections

- cystitis
- interstitial cystitis
- pyelonephritis
- urethritis

Urination dysfunctions

- congenital outflow tract abnormalities
- obstructive uropathy
- urinary incontinence (e.g., overflow, neurogenic, stress, urge)
- urinary retention

Constitutional Signs and Symptoms

- anorexia
- chills
- fatigue
- fever
- generalized weakness
- jaundice
- malaise
- night sweats
- unintentional weight loss

Physical Examination Findings and Evaluations

- abdominal tenderness
- bacteriuria
- breast or genital masses
- bogginess
- cervical motion tenderness
- Chapman reflex
- costovertebral angle tenderness
- enlargement, tenderness, or masses of the adnexal region
- galactorrhea
- generalized edema
- gross blood in urine
- gynecomastia
- hematochezia/melena
- hematuria
- jaundice
- lesions
- nodules
- pallor
- prostate size or symmetry abnormalities
- pyuria
- rectal tone abnormalities
- skin changes of the breast and genital region
- somatic dysfunction
- tender points
- tenderness
- viscerosomatic/somatovisceral reflexes

Laboratory and Diagnostic Testing

- antigen testing
- antibody testing
- blood gas analysis
- BUN level
- calcium level
- colposcopy
- CT scanning
- culture and sensitivity of blood, urine, semen, or vaginal discharge
- cystoscopy
- electrolyte panel
- endometrial sampling
- fine-needle aspiration
- Gram staining
- hormone levels
- MRI
- mammography
- microscopy
- nuclear medicine imaging
- Pap smear
- radiography
- renal stone analysis
- serum β -HCG levels
- serum creatinine level
- tumor markers
- ultrasonography
- uric acid level
- urinalysis
- urinary citrate level

- urinary protein level
- vaginal wet mount and KOH prep

Health Promotion and Preventive Care

(as applied to the genitourinary/renal system and breasts)

- dietary and nutritional impacts and counseling
- digital health tools and remote monitoring
- disease monitoring and complication prevention
- early disease detection
- genetic and risk-based screening
- patient education and shared decision-making
- procedure-related counseling
- vaccination recommendations

CLINICAL PRESENTATIONS

7 Patient Presentations Related to the Gastrointestinal System and Nutritional Health

Patient presentations span all ages and gender identities, reflecting patients from diverse backgrounds, cultures, and abilities and their reasons for presenting to osteopathic physicians in varied clinical settings.

- 7.1 Jaundice
- 7.2 Ascites
- 7.3 Anorexia (Loss of Appetite)
- 7.4 Nausea, Vomiting, and Hematemesis
- 7.5 Disorders of Bowel Frequency and Evacuation
- 7.6 Abdominal Pain
- 7.7 Abdominal and Gastrointestinal Tract Masses, Cancers, and Organomegaly
- 7.8 Melena/Hematochezia/Anorectal Bleeding and Pain
- 7.9 Gastroesophageal Reflux
- 7.10 Oropharyngeal and Dental Pain and Lesions
- 7.11 Nutritional Disorders, Malabsorption, and Weight Changes
- 7.12 Abdominal Trauma
- 7.13 Dysphagia and Odynophagia
- 7.14 Foreign Body in Gastrointestinal Tract
- 7.15 Abdominal Wall Abnormalities
- 7.16 Physical Exam Findings Related to the Gastrointestinal System and Nutritional Health
- 7.17 Laboratory and Diagnostic Testing Related to the Gastrointestinal System and Nutritional Health
- 7.18 Health Promotion and Preventive Care Related to the Gastrointestinal System and Nutritional Health

Clinical presentations in this category may include, but are not limited to, the following conditions or situations prompting patients to present for osteopathic medical care:

Abdominal injury

- blunt trauma
- penetrating trauma
- splenic rupture

Anorectal disorders

- abscess
- fissure
- fistula
- hemorrhoids
- pruritus ani

Bowel disorders

- bowel obstruction
- colon polyp
- congenital conditions (e.g., Hirschsprung disease, Meckel diverticulum)
- constipation
- diverticular disease
- fecal impaction
- gastroparesis
- inflammatory bowel disease
- irritable bowel syndrome
- intestinal adhesions

- paralytic ileus
- volvulus

Dental disorders

- abscess
- gingivitis
- periodontal disease

Esophageal disorders

- Barrett esophagus
- esophageal rupture
- esophageal stricture
- esophageal varices
- foreign body ingestion
- gastroesophageal reflux disease
- laryngopharyngeal reflux
- Mallory-Weiss tear

Gallbladder and biliary tract disorders

- bile duct obstruction
- cholecystitis
- choledocholithiasis
- cholelithiasis
- primary biliary cholangitis

Hernias

- abdominal
- femoral
- hiatal (diaphragmatic)
- inguinal
- umbilical

Infections

▪ bacterial:

- *Campylobacter*
- *Clostridioides difficile*
- *Escherichia coli*
- *Helicobacter pylori*
- *Salmonella*
- *Shigella*
- *Vibrio*

▪ parasitic:

- *Cryptosporidium*
- *Entamoeba histolytica*
- *Giardia*

▪ viral:

- norovirus
- rotavirus

▪ by site:

- appendicitis
- duodenitis
- esophagitis
- gastritis
- gastroenteritis
- mesenteric adenitis
- pancreatitis
- peritonitis

Intestinal malabsorption and hypersensitivity

- celiac disease
- food hypersensitivity
- lactose intolerance
- short bowel syndrome

Liver disorders

- cholestasis
- cirrhosis
- hepatitis
- steatotic liver disease

Neoplasms

- colorectal
- esophagus
- liver
- mouth
- pancreas
- stomach

Nutritional disorders and deficiencies

- cachexia
- kwashiorkor
- malnutrition (e.g., protein-calorie malnutrition)
- vitamin and mineral deficiencies

Ulcers

- duodenal
- gastric
- oral
- peptic

**Constitutional Signs and Symptoms
anorexia**

- chills
- fatigue
- fever
- generalized weakness
- jaundice
- malaise
- night sweats
- unintentional weight loss

Physical Examination Findings and Evaluations

- abdominal auscultation
- abdominal distention
- abdominal percussion
- abdominal rigidity
- abdominal tenderness
- asterixis
- caput medusae
- Chapman reflex
- Cullen sign
- fluid wave
- Grey Turner sign

- gross blood
- guarding
- hematochezia/melena
- hepatomegaly
- jaundice
- masses
- Murphy sign
- pallor
- peritoneal signs
- puddle maneuver
- rebound tenderness
- rectal tone abnormalities
- shifting dullness
- somatic dysfunction
- spider angiomas
- splenomegaly
- tender points
- viscerosomatic/somatovisceral reflexes

Laboratory and Diagnostic Testing

- ALT, AST, GGT levels
- amylase level
- carcinoembryonic antigen level
- *Clostridioides difficile* testing
- complete blood count
- C-reactive protein level
- CT scanning
- endoscopy (upper and lower GI)
- erythrocyte sedimentation rate
- esophageal
- manometry and pH monitoring

- fecal occult blood testing
- fluoroscopy
- gastrointestinal endoscopy
- *Helicobacter pylori* stool antigen testing or breath testing
- hematocrit
- hemoglobin levels
- lipase level
- MRI
- nuclear medicine imaging
- pancreatic function testing (e.g., fecal elastase)
- radiography
- SIBO culture
- stool culture
- stool for ova and parasites
- tissue transglutaminase and antimicrobial antibody levels
- ultrasonography
- viral hepatitis panels

Health Promotion and Preventive Care

(as applied to the gastrointestinal system and nutritional health)

- dietary and nutritional impacts and counseling
- digital health tools and remote monitoring
- disease monitoring and complication prevention
- early disease detection

- genetic and risk-based screening
- patient education and shared decision-making
- procedure-related counseling
- vaccination recommendations

CLINICAL PRESENTATIONS

8 Patient Presentations Related to the Circulatory and Hematologic Systems

Patient presentations span all ages and gender identities, reflecting patients from diverse backgrounds, cultures, and abilities and their reasons for presenting to osteopathic physicians in varied clinical settings.

- 8.1 Cardiovascular Chest Pain
- 8.2 Palpitations and Rhythm Disturbances
- 8.3 Edema and Swelling
- 8.4 Masses and Lymphadenopathy
- 8.5 Extremity Pain and Claudication
- 8.6 Shortness of Breath/Dyspnea and Orthopnea
- 8.7 Bruising, Bleeding, and Clotting Disturbances
- 8.8 Circulatory Collapse and Shock
- 8.9 Blood Pressure Evaluation
- 8.10 Chest Trauma
- 8.11 Blood Dyscrasias
- 8.12 Physical Exam Findings Related to the Circulatory and Hematologic Systems
- 8.13 Laboratory and Diagnostic Testing Related to the Circulatory and Hematologic Systems
- 8.14 Health Promotion and Preventive Care Related to the Circulatory and Hematologic Systems

Clinical presentations in this category may include, but are not limited to, the following conditions or situations prompting patients to present for osteopathic medical care:

Anemias

- anemia of chronic disease
- aplastic anemia
- folate deficiency
- hemolytic anemia
- iron deficiency
- sickle cell disease
- thalassemia
- vitamin B₁₂ deficiency

Arrhythmias

- atrial fibrillation
- atrial flutter
- long QT syndrome
- premature atrial/ventricular contractions
- sick sinus syndrome
- sinus bradycardia
- supraventricular tachycardia
- ventricular fibrillation
- ventricular tachycardia

Blood pressure disorders

- hypertension
- hypotension

- near-syncope
- pulmonary hypertension

Cardiac disorders

- angina pectoris
- atrioventricular block (first-degree, second-degree, third-degree, congenital)
- cardiac arrest
- cardiac tamponade
- cardiomyopathy
- heart failure
- myocardial infarction

Chest injury

- blunt trauma
- cardiac contusion
- penetrating trauma

Coagulation disorders

- disseminated intravascular coagulopathy
- factor V Leiden
- hemophilia
- von Willebrand disease

Congenital cardiovascular disorders

- arteriovenous malformation
- atrial septal defect
- bicuspid aortic valve
- coarctation of the aorta
- patent ductus arteriosus
- patent foramen ovale
- pulmonary stenosis

- tetralogy of Fallot
- transposition of the great arteries
- ventricular septal defect

Hematologic disorders

- amyloidosis
- eosinophilia
- hemochromatosis
- hemolytic uremic syndrome
- HIV infection/AIDS
- malaria
- polycythemia vera
- sepsis
- thrombocytopenia
- thrombocytosis

Hematologic malignancies

- cancer metastasis
- leukemia
- lymphoma
- multiple myeloma

Inflammatory/infectious cardiovascular disorders

- aortitis
- endocarditis
- myocarditis
- pericarditis

Lymphatic disorders

- lymphangioma
- lymphangitis
- lymphatic obstruction
- lymphedema

Shock

- cardiogenic
- distributive
- hypovolemic
- mixed
- obstructive
- undifferentiated

Valvular heart disorders

- aortic regurgitation
- aortic stenosis
- mitral regurgitation
- mitral stenosis
- mitral valve prolapse

Vascular disorders

- aortic aneurysm and dissection
- arteriosclerosis
- arteritis
- coronary artery disease
- deep vein thrombosis
- hemangioma
- ischemic bowel disease
- Kawasaki disease
- occlusive and hemorrhagic disorders
- peripheral vascular disease

- Raynaud syndrome
- vasculitis
- venous insufficiency

Constitutional Signs and Symptoms

- anorexia
- chills
- fatigue
- fever
- generalized weakness
- jaundice
- malaise
- night sweats
- unintentional weight loss

Physical Examination Findings and Evaluations

- arterial pulse evaluation
- blood pressure measurement
- calf tenderness, swelling
- cardiac murmur
- cardiac rub
- cardiac thrill
- Chapman reflex
- clubbing
- cyanosis
- delayed/unequal pulses
- edema
- heart sounds
- hepatomegaly

- Janeway lesions
- jugular venous pressure
- jugular venous waveforms
- lymphadenopathy
- pallor
- parasternal heave
- petechiae
- point of maximal impulse
- pulsus alternans
- pulsus parvus et tardus
- purpura
- somatic dysfunction
- splenomegaly
- splinter hemorrhages
- tender points
- vascular bruits
- viscerosomatic/somatovisceral reflexes
- waterhammer pulse

Laboratory and Diagnostic Testing

- angiography
- B-type natriuretic peptide level
- blood cultures
- blood typing
- cardiac enzyme levels
- CD4 count
- coagulation factor assays
- coagulation profile
- complete blood count
- C-reactive protein level
- CT scanning

- D-dimer level
- ECG, 12-lead and rhythm strips
- echocardiography
- erythrocyte sedimentation rate
- genetic testing
- hemoglobin electrophoresis
- high-sensitivity troponin levels
- HIV testing (antibody, antigen, viral load)
- iron studies
- lipid profile
- MRI
- nuclear medicine imaging
- peripheral blood smear
- radiography
- reticulocyte count
- serum protein electrophoresis
- stress testing
- tilt-table test
- ultrasonography

Health Promotion and Preventive Care

(as applied to the circulatory and hematologic systems)

- dietary and nutritional impacts and counseling
- digital health tools and remote monitoring
- disease monitoring and complication prevention
- early disease detection
- genetic and risk-based screening

- patient education and shared decision-making
- procedure-related counseling
- vaccination recommendations

CLINICAL PRESENTATIONS

9 Patient Presentations Related to the Respiratory System

Patient presentations span all ages and gender identities, reflecting patients from diverse backgrounds, cultures, and abilities and their reasons for presenting to osteopathic physicians in varied clinical settings.

- 9.1 Cough
- 9.2 Sore Throat
- 9.3 Shortness of Breath/Dyspnea
- 9.4 Nasal Bleeding
- 9.5 Airway Obstruction
- 9.6 Nasal Discharge
- 9.7 Ear Pain/Ear Discharge
- 9.8 Respiratory Arrest
- 9.9 Respiratory Chest Pain
- 9.10 Respiratory Growths and Malformations
- 9.11 Physical Exam Findings Related to the Respiratory System
- 9.12 Laboratory and Diagnostic Testing Related to the Respiratory System
- 9.13 Health Promotion and Preventive Care Related to the Respiratory System

Clinical presentations in this category may include, but are not limited to, the following conditions or situations prompting patients to present for osteopathic medical care:

Acute respiratory disorders

- acute respiratory distress syndrome
- anaphylaxis
- bronchiolitis
- bronchitis
- epiglottitis
- foreign body aspiration
- hemothorax
- laryngitis
- mastoiditis
- nasopharyngitis
- otitis externa
- otitis media
- pharyngitis
- pneumonia
- pneumothorax
- pulmonary embolism
- retropharyngeal abscess
- rhinitis
- sinusitis
- smoke inhalation
- tonsillitis
- tracheitis

Chronic respiratory disorders

- asthma
- bronchiectasis
- chronic obstructive pulmonary disease
- interstitial lung disease
- occupational lung disease (e.g., asbestosis, hypersensitivity pneumonitis, pneumoconiosis, silicosis)
- pulmonary fibrosis

Genetic disorders

- α 1-antitrypsin deficiency
- cystic fibrosis

Infections

- **bacterial:**
 - anthrax
 - diphtheria
 - pertussis
 - tuberculosis
- **fungal:**
 - aspergillosis
 - blastomycosis
 - coccidioidomycosis
 - cryptococcosis
 - histoplasmosis
- **viral:**
 - adenovirus
 - coronavirus
 - influenza
 - mononucleosis

- respiratory syncytial virus

Neoplasms, masses, and nodules

- **by site:**
 - chest wall
 - lungs and bronchi
 - mediastinum
 - oropharynx
 - pleura
- **by type:**
 - teratoma
 - thymoma

Structural pulmonary disorders

- chylothorax
- pleural effusion
- pulmonary fistulas or webs

Constitutional Signs and Symptoms

- anorexia
- chills
- fatigue
- fever
- generalized weakness
- jaundice
- malaise
- night sweats
- unintentional weight loss

Physical Examination Findings and Evaluations

- breath sounds
- bronchophony
- Chapman reflex
- chest percussion
- chest wall expansion
- chest wall morphology abnormalities
- clubbing
- crepitus
- cyanosis
- diaphragmatic excursion
- dullness
- dyspnea
- egophony
- epistaxis
- fremitus
- hoarseness
- pallor
- rales
- resonance
- rhinorrhea
- rhonchi
- somatic dysfunction
- stridor
- subcutaneous emphysema
- swelling
- tactile fremitus
- tender points
- tenderness
- tympany

- viscerosomatic/somatovisceral reflexes
- wheezing

Laboratory and Diagnostic Testing

- allergy testing
- antigen testing
- blood gas analysis
- bronchoscopy
- CT scanning
- culture and sensitivity (e.g., sputum, blood, otic)
- fluoroscopy
- MRI
- nuclear medicine imaging
- PCR testing
- pulmonary function testing
- pulse oximetry
- tuberculosis testing (purified protein derivative (PPD) skin test, interferon-gamma release assay, Mantoux test)
- radiography
- special stains (e.g., acid-fast, Gram)
- spirometry
- sweat chloride testing
- thoracentesis (e.g., exudate, transudate)
- tympanometry
- ultrasonography

Health Promotion and Preventive Care

(as applied to the respiratory system)

- dietary and nutritional impacts and counseling
- digital health tools and remote monitoring
- disease monitoring and complication prevention
- early disease detection
- genetic and risk-based screening
- patient education and shared decision-making
- procedure-related counseling
- vaccination recommendations

CLINICAL PRESENTATIONS

10 Patient Presentations Related to the Integumentary System

Patient presentations span all ages and gender identities, reflecting patients from diverse backgrounds, cultures, and abilities and their reasons for presenting to osteopathic physicians in varied clinical settings.

10.1 Hair and Scalp Disorders**10.2** Cyanosis/Pallor/Pigmentation Disturbances and Disorders of Coloration**10.3** Nail Disorders**10.4** Lesions/Ulcers/Masses**10.5** Pruritus**10.6** Rashes, Exanthems, and Acne**10.7** Burns**10.8** Wounds**10.9** Urticaria and Angioedema**10.10** Dermatologic Presentations of Systemic Disease**10.11** Sweating Disorders**10.12** Bites/Stings/Infestations**10.13** Physical Exam Findings Related to the Integumentary System**10.14** Laboratory and Diagnostic Testing Related to the Integumentary System**10.15** Health Promotion and Preventive Care Related to the Integumentary System

Clinical presentations in this category may include, but are not limited to, the following conditions or situations prompting patients to present for osteopathic medical care:

Carcinoma

- basal cell
- melanoma
- squamous cell

Dermatologic disorders

- keratotic disorders
- lichen sclerosus
- neurofibromatosis
- precancerous lesions
- Stevens-Johnson syndrome

Hair-related disorders

- alopecia
- folliculitis
- hirsutism

Infections

- **bacterial:**
 - cellulitis
 - impetigo
- **fungal:**
 - candidiasis
 - tinea

▪ parasitic:

- pediculosis
- scabies

▪ viral:

- herpes simplex
- varicella

Inflammatory and immunologic disorders

- acne
- cutaneous lupus erythematosus
- dermatitis
- eczema
- lichen planus
- mast cell activation syndrome
- pemphigoid
- pemphigus
- psoriasis
- rosacea
- urticaria

Nail (ungal) disorders

- nail bed injury (e.g., onycholysis, subungual hematoma)
- onychomycosis
- paronychia

Pigmentation disorders

- lentigo
- melanocytic nevi
- vitiligo

Sweat gland-related disorders

- bromhidrosis
- hidradenitis suppurativa
- hyperhidrosis
- miliaria

Trauma and wounds

- abrasions/lacerations
- bites and stings (human, animal, insect)
- burns (chemical, electrical, thermal; sunburn)

Ulcers

- arterial
- pressure
- venous

Constitutional Signs and Symptoms

- anorexia
- chills
- fatigue
- fever
- generalized weakness
- jaundice
- malaise
- night sweats
- unintentional weight loss

Physical Examination Findings and Evaluations

- abrasions
- asymmetrical lesions
- atrophy
- Auspitz sign
- Beau lines
- blanching
- bullae/vesicles
- carbuncles
- Chapman reflex
- contusions
- dermatographia
- discharge
- erosion
- excessive skin moisture
- furuncles
- Janeway lesions
- koilonychia
- lacerations
- macules/patches
- Muehrcke lines
- Nikolsky sign
- nodules/cysts
- pallor
- palpatory findings
- papules
- petechiae/purpura
- pitting
- plaques
- pustules

- scaling
- skin discoloration
- skin thickening
- somatic dysfunction
- splinter hemorrhages
- temperature change
- tender points
- tenderness
- Terry nails
- urticaria
- viscerosomatic/somatovisceral reflexes

Laboratory and Diagnostic Testing

- allergy testing
- autoimmune testing
- complete blood count
- complete metabolic profile
- CT scanning
- cytology
- culture and sensitivity
- dermatoscopy
- fungal cultures
- Gram staining
- microscopy
- MRI
- sedimentation rate
- skin biopsy
- ultrasonography
- viral cultures
- Wood lamp examination

Health Promotion and Preventive Care

(as applied to the integumentary system)

- dietary and nutritional impacts and counseling
- digital health tools and remote monitoring
- disease monitoring and complication prevention
- early disease detection
- genetic and risk-based screening
- patient education and shared decision-making
- procedure-related counseling
- vaccination recommendations

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