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Osteopathic Core Competencies for Medical Students

Addressing the AOA Seven Core Competencies and the Healthy People Curriculum Task Force's Clinical Prevention and Population Health Curriculum Framework

Prepared by the American Association of Colleges of Osteopathic Medicine, in conjuction with all U.S. Osteopathic Medical Schools

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AACOM: Osteopathic Core Competencies for Medical Students

Background

In 2007, AACOM created a Core Competency Workgroup to look at the core competencies for osteopathic medical students. The workgroup consisted of ten representatives from AACOM, osteopathic schools, and NBOME. The purpose of the workgroup was to assist osteopathic medical schools in defining and integrating the osteopathic core competencies into their curriculums. The workgroup developed into the Core Competency Liaison Group (CCLG), consisting of representatives from all osteopathic medical schools. Liaisons have shared teaching and evaluation ideas and challenges; collaborated with DMEs, residency program directors, and OPTI directors to look at training expectations of students verses interns and residents; and have helped to raise awareness about the core competencies with other faculty and administration in their schools.

At the suggestion of Dr. Stephen Shannon, president of AACOM, the CCLG expanded their task to include the recommendations of the Healthy People Curriculum Task Force (HPCTF). The HPCTF is made up of the presidents of the associations for: osteopathic and allopathic medicine, nursing and nurse practitioners, allied health, dentistry, pharmacy, and physician assistants. In response to the Healthy People 2020, the HPCTF developed the *Clinical Prevention and Population Health Curriculum Framework* document; a set of recommendations which can be applied to all of the health care professions. While the concepts in the HPCTF recommendations are mentioned in other Osteopathic Core Competencies documents, they were not addressed in sufficient detail to meet the HPCTF recommendations.

Overview

To meet these needs, the Core Competency Liaison Group (CCLG) has met regularly over the last two years to develop this document. They began with a review of the AOA definitions of the osteopathic core competencies and moved on to the ACGME Outcomes Project, the Canadian CanMEDS Project on physician roles, the NBOME Core Competencies documents for students (2006, 2009, 2011), the Society of Teachers of Family Medicine (STFM) competencies for medical students entering clinical rotations, the AAMC Medical School Objectives Project, and other recent publications related to various aspects of the core competencies. As the CCLG worked on the Healthy People Curriculum Task Force (HPCTF) recommendations, they focused on the AAMC Population Health Competencies, the AAMC Cultural Competency Education, the U.S. Preventive Services Task Force (USPSTF) Guide to Clinical Preventive Services, the Association of Teachers of Preventive Medicine (ATPM) Core Competencies in Disease Prevention and Health Promotion for Undergraduate Medical Education, the ATPM Interprofessional Education, and the Canadian Interprofessional Health Collaborative, as well as other recent publications related to various aspects of the HPCTF recommendations.

Keeping in mind the purpose of the CCLG, this document was written from a curricular perspective. The intent was to create a set of performance indicators that would be common to all osteopathic medical schools. While specific schools may have a need to develop additional performance indicators in some areas based on their particular missions or unique programs, the CCLG felt the performance indicators in this document should be reached by all osteopathic medical students.

This document is the 2012 iteration of the CCLG's work. The first half of the document addresses performance indicators for the AOA's seven core competencies. The second half addresses performance

indicators for the HPCTF's 2020 Clinical Prevention and Population Health Curriculum Framework. The hope is that the final documents can be used for:

- Guiding curriculum committees in educating osteopathic medical students
- Providing a template for sharing ideas on learning activities and evaluation tools, and
- Discussing ways in which osteopathic medical schools might work together to meet these needs

Where Do We Go From Here?

The Core Competency Liaison Group (CCLG) is committed to monitoring new developments related to core competencies in medical education and encouraging osteopathic medical schools and the profession to utilize the AACOM webpage on 'Best Practices for Osteopathic Core Competencies'. These best practices will allow the profession to share resources and offer a forum for discussions on new ideas across the continuum from Osteopathic Medical Schools to Osteopathic Internships and Residency Programs to Osteopathic Continuing Medical Education. Included in the best practices is a tool that will cross-reference the competencies listed in this document with the NBOME competencies as well as other selected references, allowing osteopathic medical schools to cross-reference these competencies with their own curriculum courses, objectives, and assessments.

The members of the CCLG hope this project will continue to thrive as core competencies grow within the osteopathic medical profession.

Acknowledgement

AACOM acknowledges the outstanding contribution of Elaine Soper, PhD, as the leader of this important project.

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I.	Osteopathic Principles and Practices
1.	**Approach the patient with recognition of the entire clinical context, including mind-body and psychosocial interrelationships.**
a.	Recognize and treat each patient as a whole person, integrating body, mind, and spirit.
b.	Listen and communicate effectively during the assessment and treatment of a patient presenting with somatic and/or visceral dysfunctions.
c.	Obtain consent for procedures, and effectively answer the patient's questions about potential risks, benefits and complications.
d.	Demonstrate caring, compassionate, and empathetic behavior during the application of OMT in the clinical setting.
e.	Identify potential contraindications to treatment or assessment.
f.	Demonstrate in a patient encounter the impact of culture and world view on the presentation of somatic and/or visceral dysfunctions.
2.	**Use the relationship between structure and function to promote health.**
a.	Promote and integrate OMT as a method of improving the anatomic and physiologic functioning of the patient both as a stand-alone treatment and as a component of a treatment plan.
b.	Apply knowledge of the biomedical sciences, such as functional anatomy, physiology, biochemistry, histology, pathology, and pharmacology, to support the appropriate application of osteopathic principles and OMT.
c.	Utilize knowledge of the clinical sciences to formulate a treatment plan, emphasizing the correction of clinical manifestations resulting from somatic dysfunction.
d.	Identify the association between organ systems, function, and structural findings.
e.	Understand how structure can adversely affect fluid in low-pressure systems (venous and lymphatic).
f.	Identify somatic dysfunctions that may affect sympathetic or parasympathetic nervous tone.
g.	Demonstrate appropriate OMT to normalize autonomic tone.
h.	Prescribe rehabilitative/therapeutic exercises to address specific musculoskeletal imbalances to more effectively manage conditions that otherwise would become chronic.
i.	Identify common and referred pain patterns.
3.	**Use OPP to perform competent physical, neurologic, and structural examinations incorporating analysis of laboratory and radiology results, diagnostic testing, and physical examination.**
a.	Obtain historical information to advance the care and treatment of the patient that integrates physical, psychosocial, and cultural factors.
b.	Perform a physical exam incorporating visual inspection, auscultation, palpation, percussion, and range of motion testing.
c.	Perform a structural examination:
	(c.1) Perform palpation of the spine and Chapman's Reflex points.
	(c.2) Perform an osteopathic structural screening assessment, noting spinal curvatures, posture, and positioning, including the ten areas of the body (cranium, cervical, thoracic, lumbar, ribs, pelvis, sacrum, upper and lower extremities, and abdomen).
d.	Determine asymmetry or restriction of motion through static and dynamic evaluation of a patient.
e.	Assess paravertebral tissue for tissue texture abnormalities, asymmetry, restriction of motion, and tenderness.
f.	Use anatomical landmarks in the seated, prone, and supine positions to identify correct vertebral levels.

Continue Table I. Osteopathic Principles and Practices

g.	Identify appropriate patterns of somatic dysfunction to evaluate in the differentiation of primary musculoskeletal disorders from primary visceral dysfunction.
	(g-1) Describe the symptoms and physical findings that are consistent with viscerovisceral, viscerosomatic, somatovisceral, and somatosomatic reflexes.
h.	Demonstrate the ability to diagnose and evaluate somatic dysfunction in the cervical, thoracic, lumbar, and sacral spinal regions; head, rib cage, abdominal and pelvis regions; and upper and lower extremities regions.
i.	Perform spinal segmental evaluation for evidence of facilitation related to viscerally mediated sympathetic and parasympathetic influences.
j.	Appropriately document somatic dysfunction related to primary medical diagnoses assessing for tenderness, asymmetry, restricted motion, and tissue texture abnormalities.
4.	**Diagnose clinical conditions and plan patient care.**
a.	Identify the patient's chief complaints and appropriately perform a logical physical examination in order to properly diagnose the condition.
b.	Identify key history and physical examination findings pertinent to the differential diagnosis.
c.	Use appropriate information resources to determine diagnostic options for patients with common and uncommon medical problems.
d.	Diagnose somatic dysfunction within the ten body regions relevant to the diagnosis (i.e., head, cervical, thoracic, rib, lumbar, abdomen, pelvic, sacral, upper extremity, and lower extremity body regions), prioritize a differential diagnosis, and develop an appropriate care plan.
e.	Describe how critical pathways or practice guidelines can be useful in sequencing diagnostic evaluations for the patient.
f.	Determine appropriate treatment for autonomic nervous system mediated symptoms.
g.	Formulate a differential diagnosis based on findings from the history and physical examination of the patient.
h.	Consider the patient's perspective and values in diagnostic decision making.
i.	Prioritize diagnostic tests based on sensitivity, specificity, and cost-effectiveness.
5.	**Perform or recommend OMT as part of a treatment plan.**
a.	Appropriately evaluate, position, and treat a patient with OMT while demonstrating cognizance of patient safety and dignity.
b.	Differentiate and perform specific manipulative techniques and assess their outcomes, e.g., high velocity-low amplitude (HVLA), articulatory, muscle energy, soft tissue, strain-counterstrain, myofascial release, lymphatic balanced ligamentous, ligamentous articular strain, facilitated positional release, Still, visceral, and cranial techniques.
c.	Differentiate specific visceral techniques and their expected outcomes, e.g., liver and splenic pump, mesenteric lift, colon release, collateral ganglia inhibition, and abdominal lymphatic drainage techniques.
6.	**Communicate and document treatment details.**
a.	Explain the anticipated benefits, potential complications and untoward effect(s) of osteopathic manipulative medicine to the patient and family members and/or caregivers.
b.	Respect and abide by an individual patient's decision to incorporate, or not incorporate, specific manipulative techniques (OMT) to specific body regions.
c.	Critically evaluate the relative value, advantages, and disadvantages of each treatment, indications, contraindications, and alternative treatments.
d.	Prescribe rehabilitative/therapeutic exercises to address specific musculoskeletal imbalances and

	improve management of these conditions.

Continue Table I. Osteopathic Principles and Practices

e.	Use appropriate clinical documentation of structural findings and procedures, including the use of appropriate ICD and CPT terminology when documenting patient assessments.
7.	**Collaborate with OMM specialists and other health care providers to maximize patient treatment and outcomes, as well as to advance osteopathic manipulation research and knowledge.**
a.	Recognize the role of and demonstrate a commitment to the utilization of other health care professionals in the diagnosis and treatment of the patient.
b.	Critically self-evaluate your knowledge and clinical skills regarding the diagnosis of somatic dysfunction and pathological structure and function in patients, your ability to apply treatments for somatic dysfunction, obtain clinical improvement for your patient, and incorporate other physicians with additional expertise and skills when indicated for the benefit of the patient.
c.	Communicate appropriately with specialists as part of the health care team to engage in collaborative medical decision making.
d.	Advocate for the use of OMT in the appropriate clinical setting by advancing the utilization of OMM/OPP in the diagnosis and treatment of patients and its recognition as a contributing medical therapy among physicians, regulators, payors and patients.
8.	**Evaluate the medical evidence concerning the utilization of osteopathic manipulative medicine.**
a.	Understand and apply current OMT practice guidelines and evidence-based medicine to improve patient outcomes and conditions in the prevention and treatment of disease and pathology among patients.
b.	Use medical informatics to access the evidence base for OMT and demonstrate the ability to incorporate best-available medical evidence into clinical practice.
c.	Interpret and report epidemiologic data in the patient population with musculoskeletal dysfunction.
d.	Demonstrate the ability to explain to non-osteopathic health professionals and patients the indications and benefits of osteopathic medicine and manipulative therapies, including the clinical indications for its application and risks.
e.	Teach medical student peers and facilitate their development of osteopathic manipulative skills as appropriate.

II.	Medical Knowledge
1.	**Articulate basic biomedical science and epidemiological and clinical science principles related to patient presentation in the following areas:**
a.	Understand and apply the concepts of osteopathic principles and practices.
b.	Digestive and metabolic diseases
c.	Cognitive, behavioral, and central/peripheral nervous system, including visceral pain and substance abuse
d.	Musculoskeletal system
e.	Genitourinary system, including human sexuality
f.	Circulatory and respiratory systems
g.	Thermoregulation
h.	Trauma, masses, edema
i.	Skin, hair, and nails
j.	Pregnancy, peripartum, and the neonatal period
2.	**Apply current best practices in osteopathic medicine.**
a.	Incorporate new developments in osteopathic medical knowledge and concepts.
b.	Retain knowledge of medical science appropriate for osteopathic patient care.
c.	Appropriately use informatics to increase personal knowledge of medical science and skills, including osteopathic principles.
d.	Identify the reliability of medical evidence in medical journal articles and abstracts.
3.	**Physician interventions**
a.	Use scientific concepts to evaluate, diagnose, and manage clinical patient presentations and population health.
b.	Recognize the limits of personal medical knowledge.
c.	Apply evidence-based guidelines throughout the scope of practice.
d.	Assess the value of information and knowledge introduced by the patient during a clinical encounter.
e.	Apply ethical and medical jurisprudence principles to patient care.
f.	Outline preventive strategies across stages of the life cycle.
g.	Describe and list risk factors for preventable diseases.

III.	Patient Care
1.	**Gather accurate data related to the patient encounter.**
a.	Plan the patient encounter and describe how he/she will approach the encounter based upon the context and information resources available prior to the interview.
b.	Take an accurate history by communicating effectively—verbally and non-verbally—with patients and families in a variety of simulated and/or clinical settings.
c.	Apply appropriate knowledge to the medical interview and demonstrate the ability to identify and/or address psychosocial, cultural, religious, health maintenance, and risk factor issues.
d.	Apply appropriate knowledge to the performance of the physical examination.
e.	Apply osteopathic principles and practice to history taking and the physical examination.
f.	Maintain sensitivity to issues of patient perspective, privacy, comfort, and dignity during the examination.
g.	Recognize and correctly interpret abnormal clinical findings.
h.	Gather essential data from all additional sources, as available, including medical records and social support networks (e.g., family members, caregivers, etc.).
i.	Perform an effective patient encounter regardless of clinical setting or patient age, cultural background, disability, or language (use translator as needed).
j.	Perform the patient encounter as appropriate for the situation (e.g., complete H&P, focused exam, interval exam, screening exam such as sports physical, etc.).
k.	Recognize and accurately interpret relevant laboratory, imaging, and other diagnostic studies related to patient care.
2.	**Develop a differential diagnosis appropriate to the context of the patient setting and findings.**
a.	Synthesize into an organized presentation all information gathered as part of the patient encounter, including history and physical findings, chart review, laboratory and diagnostic findings, epidemiological data, psychosocial, cultural, and religious factors, patient age, risk factors, and patient concerns.
b.	Generate and test multiple hypotheses during the course of the medical interview and physical examination.
c.	Prioritize the differential diagnosis based on the factors listed above.
3.	**Implement essential clinical procedures.**
a.	Perform a clinically appropriate standard physical examination, including evaluation of each of the body areas (i.e., head, neck, chest; abdomen; genitalia/groin/buttocks; back, including spine; upper and lower extremities) and organ systems (constitutional; cardiovascular; ears, nose, mouth and throat; eyes; genitourinary (female and male); hematologic/lymphatic/immunological; musculoskeletal; neurological; psychiatric; respiratory; skin).
b.	Perform an osteopathic structural examination and osteopathic manipulative therapy as appropriate.
c.	Perform a phlebotomy and administer intradermal, subcutaneous, and intramuscular injections.
d.	Perform peripheral intravenous access.
e.	Perform endotracheal intubation.
f.	Perform an abdominal thrust (i.e., Heimlich maneuver).
g.	Insert a nasogastric tube.
h.	Administer basic cardiac life support (BCLS) and advanced cardiac life support (ACLS).
i.	Control external blood loss by application of pressure and/or the appropriate use of a tourniquet.
j.	Perform a simple needle thoracostomy.
k.	Apply simple wound dressings and splints.
l.	Perform suturing for closure of an uncomplicated laceration.

Continue Table III. Patient Care

m.	Perform an incision and drainage of a simple abscess, and collect fluid from an abscess for testing, as appropriate.
n.	Obtain appropriate specimens for common laboratory tests.
o.	Perform a lumbar puncture.
p.	Perform basic needle aspiration of a hip, knee, shoulder, and elbow joint.
q.	Insert a Foley catheter in both male and female patients.
r.	Perform an uncomplicated, spontaneous vaginal delivery.
4.	**Form a patient-centered, interprofessional, evidence-based management plan.**
a.	Demonstrate information literacy and the ability to find and apply evidence-based literature as part of the management plan.
b.	Formulate a management plan based on evaluation of the best evidence from the medical literature and other resources related to the findings obtained during and subsequent to the patient encounter. (Cases for which the student formulates a management plan should be increasingly complex as the student progresses through the curriculum.)
c.	Obtain informed consent for procedures and/or treatment.
d.	Include appropriate therapeutic procedures, including OMM, as part of the management plan.
e.	Include appropriate pharmacotherapy as part of the management plan.
f.	Include patient education and counseling as part of the management plan; ensure the patient's understanding of the nature of the diagnosis.
g.	Formulate a plan that provides relief of the patient's physical, psychosocial, and psychological distress.
h.	Elicit the patient's perspective on the current situation and modify the diagnostic and treatment plan as appropriate in response to the patient's needs and preference.
i.	Recognize personal limitations in training and ability; seek consultation and specialty referral as appropriate.
j.	Formulate a strategy to monitor the patient's health status throughout the course of treatment.
k.	Determine an efficient and cost-effective strategy that addresses all of the patient's concerns, including follow-up.
l.	Recognize and respond appropriately to the ethical dimensions of clinical decision making.
5.	**Health promotion and disease prevention (HPDP)**
a.	Provide health care services consistent with osteopathic principles and practices, including an emphasis on preventive medicine and health promotion.
b.	Utilize best evidence in incorporating screening, health promotion, and disease prevention during and following the patient encounter.
c.	Provide health education counseling as part of the patient encounter and within the larger community.
d.	Explain the nature of the patient's concern or complaint at a level appropriate to the patient's health literacy.
e.	Describe diagnostic procedures, therapeutic options, and care plans at a level appropriate to the patient's health literacy.
f.	Exhibit interest, respect, support, and empathy during interactions and counseling.
g.	Demonstrate cultural awareness and sensitivity when communicating with the patient, family, and caregivers.

Continue Table III. Patient Care

6.	**Documentation, case presentation, and team communication**
a.	Record patient information in an accurate, organized, and logical manner appropriate to the clinical situation.
b.	Enter and/or access patient information through a variety of electronic health record platforms.
c.	Comply with HIPAA and the Health Information Technology for Economic and Clinical Health Act (HITECH) regulations.
d.	Record information in a manner free of personal bias and/or inappropriate comments.
e.	Present relevant aspects of the patient's case in a logical and organized manner orally and in writing.
f.	Communicate verbally and in writing with other members of the interprofessional collaborative team, including those from other health professions, in order to provide effective and comprehensive patient-centered care.
g.	Facilitate collaboration so that other team members provide appropriate information to the interprofessional team.
h.	Assess team performance and implement strategies for improvement.
i.	Recognize and respect the unique cultures, roles, training, and expertise of other health care professionals.

IV.	Interpersonal and Communication Skills
1.	**Establish and maintain the physician-patient relationship.**
a.	Allow the patient to complete his/her opening statement without interruption and to articulate the full set of patient concerns.
b.	Use open-ended and closed-ended questions appropriately.
c.	Listen actively, using appropriate verbal and non-verbal techniques, maintaining open body posture and eye contact at comfortable intervals throughout interview.
d.	Encourage the patient to continue speaking, using appropriate facilitation skills.
e.	Use silence and nonverbal communication to encourage the patient's expression of thought and feelings.
f.	Provide opportunity for patients to communicate their beliefs, concerns, expectations, and literacy about health and illness, and provide appropriate care given contextual factors such as a patient's culture, age, literacy, spirituality, sexuality, and economic background.
g.	Share information using language the patient can understand, and check for patient understanding and questions.
h.	Encourage patients' active participation in decision making, and confirm patient's willingness and ability to follow treatment plans.
i.	Provide closure to interviews, summarizing and affirming agreements, asking if the patient has other issues or concerns, and planning follow-up (e.g., next visit, unexpected outcomes).
j.	Conduct appropriate ethical decision making as to involvement of the patient's family in the patient's care.
k.	Communicate effectively to deliver difficult news and information relative to death and dying and/or serious or life-threatening illness or disease.
l.	Communicate effectively with difficult or angry patients.
m.	Explore the psychosocial, occupational, and biomechanical environment in which the patient lives and/or in which health care is administered.
n.	Take responsibility when an error occurs, apologize promptly, and fully explain what occurred as well as short- and long-term implications.
2.	**Conduct a patient-centered interview that includes the following.**
a.	Eliciting the patient's entire agenda.
b.	Identifying and responding to the patient's emotional cues.
c.	Summarizing and checking for accuracy of content and interpretation.
d.	Negotiating a common understanding of the patient's issues.
e.	Agreeing on a plan that involves the patient as well as the physician/student.
f.	Communicate in a manner that demonstrates sensitivity to gender as well as to racial and cultural diversity.
g.	Describe patient, physician, and system barriers to successfully negotiated treatment plans and patient adherence.
h.	Describe strategies that may be used to overcome patient, physician, and system barriers to successfully negotiated treatment plans.
i.	Maintain confidentiality.
j.	Ensure that messages given are received and understood
k.	Close patient encounters appropriately.

Continue Table IV. Interpersonal and Communication Skills

3.	**Demonstrate effective written and electronic communication in dealing with patients and other health care professionals.**
a.	Maintain accurate, comprehensive, timely, and legible medical records.
b.	Use telephone, e-mail, and other communication modalities appropriately and professionally to communicate with patients and other members of the health care team.
4.	**Work effectively with other health professionals as a member or leader of a health care team.**
a.	Collaborate with other health care professionals in the care of the patient demonstrating effective personal skills and interpersonal dynamics.
b.	Communicate a coherent story of illness, diagnosis, and treatment.
c.	Be attentive to relationships and to one's personal ability to perform assigned roles or tasks within the health care team.
d.	Ensure that messages given are received and understood.
e.	Appropriately communicate with consultants and other health care professionals upon patient referral, providing the required background information and clarity regarding roles to ensure continuity of care.
f.	Communicate appropriately and directly with referring physicians after patient referral to ensure continuity of care.
g.	Communicate appropriately within the authority gradient.
h.	Demonstrate a respectful attitude toward other colleagues and members of interprofessional teams.
i.	Work with other professionals to prevent conflicts.
j.	Utilize collaborative negotiation to resolve conflicts.
k.	Respect differences, misunderstandings, and limitations in other professionals.
l.	Recognize one's own differences, misunderstandings, and limitations that may contribute to interprofessional tension.
m.	Reflect on interprofessional team function.

V.	Professionalism
1.	**KNOWLEDGE - Demonstrate knowledge of the behavioral and social sciences that provide the foundation for the professionalism competency, including medical ethics, social accountability and responsibility, and commitment to professional virtues and responsibilities.**
a.	Explain why a physician must demonstrate honesty, integrity, and respect for the patient in every interaction.
b.	Recognize personal values, attitudes, and biases as they influence patient care.
c.	Demonstrate social accountability and responsibility (i.e. the welfare of the patient or society should supersede the physician's self-interest).
d.	Assess the context of a patient's social and economic situation, capacity for self-care, and ability to participate in shared decision making.
e.	Consider the impact of social inequalities on health care, and incorporate social determinants of health outcomes into treatment plans.
2.	**HUMANISTIC BEHAVIOR - Demonstrate humanistic behavior, including respect, compassion, probity, honesty, and trustworthiness.**
a.	Provide polite, considerate, and compassionate treatment to every patient.
b.	Demonstrate respect for the patient's dignity and privacy with regard to end-of-life care (e.g. advance directives, DNR orders).
c.	Exhibit elements of altruism and empathy by listening to patients and respecting their views.
d.	Demonstrate openness, honesty, and trustworthiness during direct communication with patients and their families and in the writing of reports, the signing of forms, and the provision of evidence in litigation or other formal inquiries.
e.	Report accurate, relevant information to patients and members of the health care team.
f.	Demonstrate respect for colleagues and other health care professionals and their practices (e.g., avoid making inappropriate remarks and taking inappropriate action).
3.	**PRIMACY OF PATIENT NEED - Demonstrate responsiveness to the needs of patients and society that supersedes self-interest.**
a.	Make patient care the primary concern.
b.	Be self-sacrificing (e.g., willing to take reasonable risks to health, income, and job security when required to do so) to meet the needs of patients.
c.	Describe the physician's responsibility to choose effective diagnostic and therapeutic modalities based on the best evidence and the patient's priorities.
d.	Discuss the concept of "duty to treat" in the context of physician health risks.
e.	Prevent personal beliefs from prejudicing patient care.
f.	Work effectively with colleagues in ways that best serve patient interest.
g.	Be readily accessible to patients and colleagues when on duty, and make suitable arrangements for coverage when off duty.
h.	Demonstrate respect for the patient's right to decline participation in teaching or research endeavors, and ensure that his or her refusal does not adversely affect the physician-patient relationship.
i.	Demonstrate respect for the patient's right to a second opinion.
j.	Demonstrate respect for the patient's right to privacy and dignity during evaluation and treatment, particularly with regard to the utilization of osteopathic manipulative therapy.

Continue Table V. Professionalism

k.	Demonstrate respect for the value of the patient's time.
l.	Ensure the competency and courteous conduct of staff toward all patients.
m.	Provide care or secure appropriate referral for patients who cannot afford care or who have difficulty accessing care for other reasons.
4.	**ACCOUNTABILITY - Demonstrate accountability to patients, society, and the profession, including the duty to act in response to the knowledge of professional behavior of others.**
a.	Protect patients from risk if the physician has good reason to believe that he/she or a colleague may not be fit to practice.
b.	Properly use the position of physician, avoiding situations where personal and professional interests might be in conflict.
c.	Effectively communicate to colleagues when transferring responsibility for medical care.
d.	Conduct proactive discussions of substance abuse with colleagues.
e.	Promptly report adverse drug reactions to the proper authorities.
f.	Properly report and disclose medical errors and "near misses" that can lead to improvements in the quality of care provided.
g.	Act immediately to correct and apologize for adverse events and to explain short- and long-term effects to the patient.
h.	Demonstrate commitment to underserved, vulnerable, disadvantaged, disenfranchised, and special populations.
i.	Promote public confidence in the osteopathic medical profession.
j.	Promptly notify the medical board and other appropriate authorities if convicted of any criminal offense or action resulting in the suspension of a medical license.
k.	Demonstrate professionalism in the use of social media and the Internet.
5.	**CONTINUOUS LEARNING - Attain milestones that indicate a commitment to excellence, as, for example, through ongoing professional development as evidence of a commitment to continuous learning.**
a.	Ensure that one's professional knowledge and skills remain current.
b.	Actively participate in educational activities to maintain or develop competency.
c.	Demonstrate a commitment to continuous improvement of teaching skills and techniques.
d.	Recognize limits of personal knowledge and skill by consulting colleagues when necessary.
e.	Apply principles of evidence-based medicine in daily practice.
6.	**ETHICS - Demonstrate knowledge of and the ability to apply ethical principles in the practice and research of osteopathic medicine, particularly in the areas of provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices, the conduct of research, and the reporting of research results.**
a.	Respect and protect confidential information.
b.	Take measures to alleviate patient pain and distress, regardless of whether curative treatment is possible.
c.	Comply with current regulations, laws, and statutes that govern medical practice.
d.	Appropriately provide and procure informed consent, and explain battery in the context of the patient-physician relationship.
e.	Apply principles of academic honesty and demonstrate integrity in conducting research.

Continue Table V. Professionalism

f.	Apply the ethical principles of autonomy, beneficence, non-malfeasance, fidelity, justice, and utility.
g.	Incorporate appropriate ethical principles in business as well as in medical practices.
h.	Identify the ethical hazard and respond appropriately, as, for example, in situations such as: * when the educational benefit to students increases patient risk; * performing procedures upon the newly dead; and * acceptance of gifts.
i.	Maintain an appropriate professional relationship with patients.
j.	Demonstrate the ability to take responsibility for one's own actions, including errors.
7.	**CULTURAL COMPETENCY - Demonstrate awareness of and proper attention to issues of culture, religion, age, gender, sexual orientation, and mental and physical disabilities.**
a.	Treat all patients, colleagues, and others fairly, ensuring that no group is favored at the expense of any other.
b.	Refrain from imposing personal beliefs and values on patient care.
c.	Openly discuss cultural issues, and be responsive to cultural cues.
d.	Demonstrate how to cope with differences in people in a constructive way.
8.	**PROFESSIONAL AND PERSONAL SELF-CARE - Demonstrate understanding that he/she is a representative of the osteopathic profession and is capable of making valuable contributions as a member of this society; lead by example; provide for personal care and well-being by utilizing principles of wellness and disease prevention in the conduct of professional and personal life.**
a.	Provide medical treatment to himself/herself only as a lay person would engage in self-care.
b.	Ensure that his/her mental, physical, or health condition does not have a negative impact on patient care or welfare.
c.	Take appropriate safety measures (e.g., obtain immunization against communicable diseases) when such treatments are available and when they do not pose extraordinary risk to the physician.
d.	Seek qualified care from a health professional outside the family of the physician.
e.	Describe the physiological and psychological consequences of stress.
f.	Identify personal sources of stress, and apply appropriate interventions.
g.	Describe issues associated with substance abuse and addictive disorders among health professionals.
h.	Identify useful prevention strategies, treatment resources, and unique recovery issues for substance abuse by health professionals.
9.	**HONEST, TRANSPARENT BUSINESS PRACTICES**
a.	Do not exploit patients' vulnerability in charging for treatment or services.
b.	Clarify his/her personal interest to patients when selling goods from his/her office.
c.	Do not encourage patients to make donations or gifts that will benefit him/her.
d.	Do not pressure patients or their families to make donations to other people or organizations.

VI.	Practice-Based Learning and Improvement
1.	**Describe and apply evidence-based medical principles and practices. Interpret features and meanings of different types of data, quantitative and qualitative, and different types of variables, including nominal, dichotomous, ordinal, continuous, ratio, and proportion.**
a.	Define basic biostatistical and epidemiological terms and their application—e.g., RRR, ARR, NNT, NNH, p-values, confidence intervals, risk, benefit, prevalence, incidence, morbidity, mortality, sensitivity, specificity, PPV, NPV, odds ratio, and attributable risk.
b.	Interpret and apply biostatistical and epidemiological terms, e.g., RRR, ARR, NNT, NNH, p-values, confidence intervals, risk, benefit, prevalence, incidence, morbidity, mortality, sensitivity, specificity, PPV, NPV, odds ratio, and attributable risk..
c.	Convert the need for information (e.g., prevention, diagnosis, therapy, prognosis, causation) into an answerable question.
d.	Apply the five steps of the evidence-based medicine approach to a clinical question.
e.	Locate the best evidence with which to answer a clinical question with maximum efficiency.
f.	Critically appraise evidence for its validity, impact, and applicability.
2.	**Evaluate the relevance and validity of clinical research.**
a.	Identify the hierarchical approach to levels of evidence, and apply this information appropriately.
b.	Identify the most valid study design for interpreting articles relating to therapy, prognosis, diagnosis, and etiology.
c.	Appraise the suitability of given information for clinical questions.
3.	**Describe the clinical significance of and apply strategies for integrating research evidence into clinical practice.**
a.	Calculate and interpret pre-test/post-test probabilities in diagnostic and screening tests as applied to clinical practice.
b.	Describe the relationship among incidence, duration, and prevalence of a disease in a population.
c.	Interpret the results of various study designs.
d.	Utilize information technology to manage and access online medical information.
e.	Distinguish between causality and association.
f.	Communicate evidence to patients and colleagues.
4.	**Critically evaluate medical information and its sources, and apply such information appropriately to decisions relating to patient care.**
a.	Locate, appraise, and assimilate evidence derived from clinical guidelines.
b.	Identify sources of design bias and limitations and sources of scientific uncertainty.
c.	Utilize web sites, online search engines, PDA-based programs, information services, and journals to locate information related to patients' health needs.
d.	Apply decision-making tools.
5.	**Describe and apply systematic methods to improve population health.**
a.	Identify the determinants of populations' health.
b.	Identify sources of disparities in populations' health and access to care.
c.	Identify vulnerable or marginalized populations within those served, and respond appropriately.
d.	Describe public health surveillance and vital statistics.
e.	Identify opportunities for advocacy, health promotion, and disease prevention in communities served, and respond appropriately.

VII.	Systems-Based Practice
1.	**The candidate must demonstrate understanding of variant health delivery systems and their effect on the practice of a physician and the health care of patients.**
a.	Demonstrate knowledge and understanding of the role and interaction of the members of health care teams and their effect on outcomes for the patient and for the public.
b.	Use a variety of learning modalities to obtain basic understanding of health care systems ranging from local communities to global systems.
c.	Compare and contrast local, regional, national, and global practice and health care delivery systems, noting differences in individual vs. population-based health care systems (including environmental and occupational health issues), prevention and management policies, as well as organizations that influence outcomes and practices in the United States and across the globe.
d.	Demonstrate appropriate decision making relative to the characteristics of different health care systems, including individual vs. population-based and private vs. public. Demonstrate knowledge of quality and patient safety systems and of basic organizational structures and financing in the U.S. and global health care systems.-
e.	Be knowledgeable of functions and application of Practice Management Systems in private practice, group practice, government practices, Accountable Care Organizations (ACO), medical home, etc.
f.	Utilize knowledge of health care systems in the delivery of patient care.
2.	**Demonstrate understanding of how patient care and professional practices affect other health care professionals, health care organizations, and society.**
a.	Demonstrate knowledge of the collaboration of practicing physicians and other health care providers within the health care team.
b.	Demonstrate proper utilization of the health care team and knowledge of how medical organizations, managed health care systems, government, and the community affect the patients with whom and the communities in which they practice.
c.	Demonstrate understanding of how health policy is developed and strategies for influencing health policy, including an ethical framework for health policy decision making; measuring the impact of policy on health care and health outcomes—particularly with regard to impacts on vulnerable populations and the elimination of health disparities; and influences on the delivery of health services in response to the influence of individuals' and communities' cultural values and beliefs.
d.	Participate in health policy within the state or community.
e.	Demonstrate the ability to recognize public health systems, epidemiological systems, and individual systems in the practice of osteopathic medicine and utilization of resources.
f.	Demonstrate awareness of global issues affecting health and health care delivery globally.
g.	Demonstrate understanding of how current issues in the world are affecting the delivery of health care to patients and to the community.
3.	**Demonstrate knowledge of how different delivery systems influence the utilization of resources and access to care.**
a.	Recognize common methods of allocation and available resources in health care systems to ensure access to and the effect of access on the quality of health care, including methods of reimbursement (e.g., Medicare, Medicaid, uninsured, employment-based) as well as methods of financing health care institutions (e.g., hospitals, long-term care facilities, community health centers) and public health services in the United States and worldwide.
b.	Use resources to develop patient care plans in such a way as to maximize health care outcomes.

Continue Table VII. Systems-Based Practice

c.	Recognize common methods used in health care systems to ensure patient safety.
d.	Recognize resource-effective decision making and health care outcomes.
e.	Recognize ethical considerations of allocation or resources based on economic models.
4.	**Identify and utilize effective strategies for assessing patients.**
a.	Access care in the health care system.
b.	Demonstrate understand of the health care system as it relates to Medicare, Medicaid, insurance, and community health centers
c.	Demonstrate understanding of community resources, e.g., WIC, public health clinics, community health care centers, health fairs, public service communication, and other non-profit health care efforts.
d.	Demonstrate understanding of the barriers to care such as pre-existing conditions, catastrophic care, managed care and health literacy.
e.	Access appropriate community resources.
f.	Create a safe and healthy environment.
g.	Communicate with and distribute health care information to the public.
5.	**Demonstrate knowledge of and the ability to implement safe, effective, timely, patient-centered, equitable systems of care in a team-oriented environment to advance populations' and individual patients' health.**
a.	Communicate with and evaluate patients in order to design an appropriate treatment plan in a manner that emphasizes high-quality outcomes and patient safety.
b.	Recognize, properly report, and utilize methods known to be effective in the reduction of medical errors.
c.	Identify opportunities for advocacy, health promotion, and disease prevention in the community, and respond appropriately.
d.	Utilize scientifically valid outcome guidelines and other standards of care in medical practice.
e.	Demonstrate respect for and the ability to work with other health care providers to advance the health of individual patients and populations.
f.	Demonstrate appropriate interprofessional collaboration to advance the health care of the patient.

VIII.	Counseling for Health Promotion/Disease Prevention Competencies
1.	Coordinate preventive health care across providers.
2.	Identify roles for existing providers who provide clinical preventive services
3.	Collaborate within a patient-centered team.
4.	Demonstrate an understanding of and commitment to the patient-centered medical home concept of continuous, coordinated, and comprehensive care focused on quality, safety, and enhanced access for all.
5.	Apply quantitative epidemiological principles to inform clinical practice with regard to screening and prevention (include limitations of study designs).
6.	Identify and use existing sources of health data as well as appropriate prevention guidelines.
7.	Describe clinical, ethical, and legal issues which may result from screening (e.g., genetic counseling).
8.	Apply criteria used for screening tests, such as sensitivity, specificity, predictive values, bias, safety, cost, and prevalence.
9.	Apply periodic health screening guidelines from the U.S. Preventive Services Task Force.
10.	Demonstrate preventive health principles by modeling a healthy lifestyle.

IX.	Cultural Competencies
1.	Demonstrate an understanding of the scope of culture and the elements that form and define it.
2.	Recognize personal and professional tendencies toward bias and stereotyping, and work to counter them.
3.	Understand the public health implications of cultural competence in health care.
4.	Demonstrate familiarity with basic religious and cultural beliefs that affect patients' understanding of the etiology of their illness and/or the efficacy of their treatment.
5.	Assess other health care resources and methods patients use (or used) either in addition to, or instead of their physician's recommended treatment (e.g., home remedies, traditional healers).
6.	Assist the health care team in developing a mutually acceptable, culturally responsive plan for patients.
7.	Demonstrate effective communication that takes into consideration the ability to elicit another's perspective, present concerns from another's perspective, refrain from behaviors that cause others to become defensive.
8.	Identify and attempt recovery from mistakes in communication.
9.	Use interpreters appropriately and effectively.
10.	Use the cultural profile and history in the treatment of individual patients and record them appropriately in the medical record.
11.	Use the cultural profile and history with individual patients to assess health care needs in the community.

X.	Evaluation of Health Sciences Literature Competencies
1.	Utilize current technologies, e.g. websites, online search engines, PDA-based programs, information services, and journals to locate health science literature.
2.	Use appropriate tools to critically appraise health science literature for its validity, reliability, impact, and applicability.
3.	Apply critical concepts from statistics, epidemiology, and research design to evaluate health science literature.
4.	Judge the statistical and clinical significance of findings in the health science literature.
5.	Appropriately apply scientifically valid outcome guidelines and other current standards to patient care.
6.	Apply critical concepts from statistics, epidemiology, and research design in the treatment of patients.
7.	Recognize personal limitations in evaluating health science literature.

XI.	Environmental and Occupational Medicine (OEM) Competencies
1.	Provide osteopathic evidence-based clinical evaluation and treatment for injuries and illnesses that are occupationally or environmentally related.
2.	Understand the policy framework and major pieces of legislation and regulations related to environmental and occupational health (i.e. regulations essential to workers' compensation, accommodation of disabilities, public health, worker safety, and environmental health and safety, etc.).
3.	Understand the ethical considerations related to environmental and occupational health.
4.	Complete an environmental health history, recognize potential environmental hazards and sentinel illnesses, and make referrals for conditions with environmental etiologies (i.e. the basic mechanisms and pathways of exposure to environmental health hazards, basic prevention and control strategies, the interdisciplinary nature of effective interventions, the role of research, etc).
5.	Demonstrate knowledge and skills relating to fitness and disability to determine whether a worker can safely work and complete required job tasks.
6.	Demonstrate knowledge and skills required to recognize, evaluate, and treat exposures to toxins at work or in the general environment (i.e. interpretation of laboratory or environmental monitoring test results, toxico-kinetic data, etc.)
7.	Demonstrate the knowledge and skills necessary to assess and provide control measures if there is risk of an adverse event from exposure to physical, chemical, or biological hazards in the workplace or environment.
8.	Identify and address individual and organizational factors in the workplace (i.e. absenteeism, health enhancement, and population health management) in order to optimize the health of the worker, etc.).
9.	Demonstrate the knowledge and skills to plan, design, implement, manage, and evaluate occupational and environmental health programs and projects.

XII.	Public Health Systems Competencies
1.	Apply understanding of the interaction of public health and health care systems in the practice of osteopathic medicine as it affects health promotion and disease prevention.
2.	Assesses and address the determinants of health and illness factors contributing to health promotion and disease prevention
3.	Assesses and address the factors influencing the use of health services.
4.	Apply basic public health principles, practices, and sciences to the practice of osteopathic medicine.
5.	Recognize differences among public health systems, epidemiological systems, and individual systems in the utilization of resources and in the practice of osteopathic medicine.
6.	Recognize the impact of environmental influences on human health.
7.	Understand and apply knowledge of cultural differences to improve public health among divergent populations.
8.	Understand the role of health policy on populations and individuals.

XIII.	Global Health Competencies
1.	Diagnose and manage diseases and/or patient presentations infrequently encountered in the United States.
2.	Provide appropriate preventative and post-return care for patients travelling outside the United States.
3.	Compare and contrast differing non-U.S. health care systems.
4.	Understand the threat of pandemic and/or endemic health events.
5.	Analyze the risk/benefit ratio of health care management in countries with differing health delivery systems and resources.
6.	Identify and treat individual patients with varying cultural beliefs regarding health, disease, and patient care.
7.	Compare and contrast population health and community health in the United States and in other countries.
8.	Identify key international organizations involved in global health.

XIV.	Interprofessional Collaboration Competencies
1.	Act with honesty and integrity in relationships with patients, families, and other team members.
2.	Respect the dignity and privacy of patients while maintaining confidentiality in the delivery of team-based care.
3.	Communicate one's role and responsibilities clearly to patients, families, and other professionals.
4.	Explain the roles and responsibilities of other care providers and how the team works together to provide care.
5.	Choose effective communication tools and techniques, including information systems and communication technologies, for facilitating interprofessional discussions and interactions that enhance team function.
6.	Give timely, sensitive, instructive feedback to others about their performance on the team, and respond respectfully to feedback from other team members.
7.	Engage other health professionals (appropriate to the specific care situation) in shared patient centered problem solving for effective team-base care.

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