

Working Paper: The Osteopathic Learning Environment

Robert Cain, DO

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The Osteopathic Learning Environment

Medical student education is conducted within an environment that provides learners with the knowledge, skills, and experiences necessary to prepare them for graduate medical education (GME) and then eventually for successful independent practice in their chosen specialties. Graduates of this process are products of the environment in which they train, making the environment an important determinant of lifelong behavior for these learners. Immersing students in a setting that reinforces effective decision-making processes during their training is a key component of learning.

Providing care that is safe, effective, patient-centered, timely, efficient, and equitable are well-accepted goals for the health care system. The 2014 Institute of Medicine's report, "Graduate Medical Education That Meets the Nation's Health Needs," referenced several recommendations, including "encouraging production of a physician workforce that is better prepared to work in, help lead, and continually improve an evolving health care delivery system that can provide better individual care, better population health, and lower cost."¹ The learning environment should therefore prepare graduates to meet the broader goals of the U.S. health care system.² Osteopathic medicine and its well-articulated osteopathic principles and practice (OPP) are aligned with the nation's health care needs through its orientation to primary

care and community-based practice and its focus on social determinants of health and socially-accountable health care.

Osteopathic medicine can be viewed as a social movement within health care, expressing a practice philosophy and set of guiding principles. Osteopathic physicians (DOs) have long sought to maintain their independence and values while striving for greater professional respect.³ Unlike other medical reform movements, such as homeopathy, hydropathy, and eclecticism, osteopathic medicine did not decline, nor did it become co-opted by "mainstream" practitioners. It has held onto its tenets across a century of change in medicine while emerging as a health care profession far greater in scope than the "complementary care" status imposed upon it in the past. The nation's DOs seek to meet the needs of the communities in which they reside, practicing in underserved, rural communities at a greater rate than allopathic physicians, thereby helping to address the severe physician shortages in many parts of the U.S.^{4,5}

When considered individually, the profession's tenets and use of manual medicine may not be completely unique to osteopathic medicine. When considered together, however, they provide a framework of thought and guiding principles that define a subset of physicians who are uniquely American.

1. Institute of Medicine of the National Academies. *Graduate Medical Education That Meets the Nation's Health Needs*. Washington, DC: IOM; July 2014. Available at: <http://www.nationalacademies.org/hmd/Reports/2014/Graduate-Medical-Education-That-Meets-the-Nations-Health-Needs.aspx>
2. Bodenheimer T, Sinsky C. From triple to quadruple aim: care of the patient requires care of the provider. *Ann Fam Med*. 2014;12:573-576. Available at: <http://www.annfammed.org/content/12/6/573.full>
3. Gevitz N. From "doctor of osteopathy" to "doctor of osteopathic medicine": a title change in the push for equality. *J Am Osteopath Assoc*. 2014;114:486-497. Available at: <http://jaoa.org/article.aspx?articleid=2094883>.
4. Miller T, Hooker RS, Mains DA. Characteristics of osteopathic physicians choosing to practice rural primary care. *J Am Osteopath Assoc*. 2006;106:274-279. Available at: <http://jaoa.org/article.aspx?articleid=2093278>
5. McMahon S. Addressing physician shortage in rural areas. *Medical News*. June 6, 2016. Available at: <https://www.medicalnews.md/addressing-physician-shortage-in-rural-areas>

Importance of the Osteopathic Learning Environment

Osteopathic medicine has demonstrated a remarkable ability to adapt through major shifts in the health care environment over decades. Relying upon innovation and resilience, it has managed to evolve and thrive within an ever-changing milieu. Perpetuating the unique qualities of osteopathic medicine in an evolving health care environment is made possible through the presence of an osteopathic learning environment (OLE).⁶

The OLE is crucial for influencing the learner's osteopathic decision-making processes during pre- and postdoctoral training. In the osteopathic tradition, the learning environment is steeped in the context of the community in which one is practicing, so that the learned knowledge and skills are highly reflective of the needs of that community. The OLE has long emphasized primary care and underserved communities. Training students and residents in such specific environments increases the likelihood that these physicians will practice within those environments.⁷

Osteopathic principles and practice (OPP), including osteopathic manipulative treatment (OMT), are important components of the OLE. Training in an *osteopathic* learning environment should lead to observable differences in decision-making based upon OPP.

Arising from negotiations to form a single GME accreditation system, osteopathic recognition is a new designation offered by the Accreditation Council for Graduate Medical Education (ACGME). Following a formal application and review process, osteopathic recognition is conferred upon any ACGME-accredited program that is providing requisite training in OPP.⁸ This effort represents yet another adaptation by osteopathic medicine. It offers an opportunity for osteopathic education to occur in any hospital, hospital system, or institution that sponsors GME. As such, it is an unprecedented opportunity to advance osteopathic medicine. While created to allow historically osteopathic programs (i.e., those that were American Osteopathic Association (AOA)-approved only) to formally maintain OPP in their curriculum, osteopathic recognition creates a new pathway for any ACGME-accredited program to integrate OPP into its curriculum. Osteopathic recognition will have a significant impact upon the OLE in the future, as it defines the location and characteristics of osteopathic education.

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6. American Association of Colleges of Osteopathic Medicine, UME-GME Task Force. The Value of Collaboration for the Osteopathic Medical Education Clinical Learning Environment [working paper]. 2018. Bethesda, MD: AACOM
 7. Stojicic P. The importance of residents' sense of belonging, trust, and power. ReThink Health, A Rippel Initiative. February 27, 2018. Available at: <https://www.rethinkhealth.org/the-rethinkers-blog/the-importance-of-residents-sense-of-belonging-trust-and-power>.
 8. Accreditation Council for Graduate Medical Education. *Osteopathic Recognition Requirements*. Chicago, IL: ACGME; 2018. Available at: <https://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/801OsteopathicRecognition2018.pdf?ver=2018-02-20-154513-650>

Characteristics of the Osteopathic Learning Environment

The OLE is characterized by several key elements, which will be defined below. These elements include a patient-centered, educationally oriented culture; role models; a consistent educational framework or structure built upon OPP; a balance of the physician-servant and physician-scientist; relationships to the desired practice environment; connectivity between undergraduate and graduate medical education; and opportunities to disseminate OPP and osteopathic manipulative medicine (OMM).

Patient-centered, educationally oriented culture

The osteopathic postdoctoral training institution (OPTI) concept was built upon decades of collaboration between colleges of osteopathic medicine (COMs) and hospitals, where strong academic and professional relationships had formed. Initially, there was a direct relationship between the osteopathic hospitals and the COMs. Relationships evolved between the COMs and the hospitals sponsoring osteopathic GME under the OPTI construct as a consortium model. These relationships were focused on the quality education of learners and on service within the community—continuing the patient-centered, educationally oriented culture of osteopathic medicine.

The OPTI relationships focused on the continuum of osteopathic medical education, strengthening the link between undergraduate and graduate medical education. The community-based academic health centers created through the OPTI structure

were recipients of supplemental programming and services. These services, such as research support and faculty development, augmented the local learning environment to the benefit of medical students, residents, faculty, and GME leaders.

The OPTI program flourished after it was established in the 1990s as the operating framework for AOA-approved internships and residencies. Partnerships and collaborations between academic medical centers, hospitals, community-based health care facilities, and other institutions were central aspects of the OPTI system. The system was considered the most important change in osteopathic postdoctoral education up to that time. Further changes have continued with the objective of advancing the osteopathic medical profession and its commitment to education, training, patients, and community.^{9,10}

Role models in the clinical learning environment

The importance of osteopathic role models cannot be emphasized enough. Role models must be visible to students and residents, reinforcing OPP on a regular basis. The role models must incorporate the following points:¹¹

- a. Exemplify the holistic approach to health care, focusing on the mind, body, and spirit.
- b. Demonstrate empathy and encourage appropriate and direct contact with patients.
- c. Consider the inter-relationships of structure and function.

9. Obradovic JL. Osteopathic postdoctoral training institutions. *J Am Osteopath Assoc*. 2007;107:54-55. Available at: <http://jaoa.org/article.aspx?articleid=2093383>

10. American Osteopathic Association, Department of Education. *Osteopathic Postdoctoral Training Institution (OPTI): Accreditation Handbook* [BOT 2/2014]. Chicago, IL: AOA; 2014. Available at: <https://osteopathic.org/wp-content/uploads/2018/03/opti-accreditation-handbook.pdf>

11. Yoon JD, Ham SA, Reddy ST, Curlin FA. Role models' influence on specialty choice for residency training: a national longitudinal study. *J Grad Med Educ*. 2018;10(2):149-154.

- d. Recognize the body's inherent ability to prevent and recover from disease when provided with the necessary conditions.
- e. Value physician professionalism, patient safety, and quality of care.

Seamless integration of OPP

Learning activities that support osteopathic practice (e.g., OMM, OMT, OPP) and its seamless integration into the learning environment are crucial to the osteopathic medical profession. Ensuring that learners have consistent opportunities to apply their learning in an integrated and embedded curriculum is essential. This consistent integration is necessary to develop the neural pathways that will allow new osteopathic physicians to thrive as effective healers in their clinical practices.

The various COMs have developed special programs to ensure the integration of OPP into their curricula. These programs include an emphasis on both osteopathic philosophy and the application of OMT. Among the elements in such programs are student OMM clinics, preceptor programs, OMT case studies in family medicine rotations, and requirements to perform OMT in third- and fourth-year rotations.^{9,10} These practices are often part of a shared learning environment with GME, strengthening the experience for both pre- and postdoctoral trainees.

The right balance of physician-servant and physician-scientist

Osteopathic medicine tends to focus on the physician as a servant within the community. In the large allopathic academic medical centers, by contrast, the focus is often on the concept of the physician as a scientist and on propagating and promoting medical specialties through research. This is evidenced by the larger proportion of MDs engaged in research and specialized care.¹² Although COMs emphasize educating the physician-servant, whose

primary objective is to take care of patients in the community, research is also important in COMs. Thus, the ideal osteopathic learning environment balances training to develop the physician-scientist *and* the physician-servant. (See Figure 1.)

One of the challenges faced by traditional AOA-approved programs with the creation of the single GME accreditation system is faculty-generated scholarly activity, particularly research published in professional, peer-reviewed journals. This is a competence that is heavily stressed in some of the ACGME specialty requirements and not as much in the AOA accreditation standards. The dynamic tension between community-based training and academic-based training surrounding this issue is evident during the transition. Over time, this tension can be alleviated, but it will require changes in how medical students are selected, the engagement of residents in research, and the development of faculty comfortable with research methodology. Students, residents, and faculty should be interested in inquiry, research, and patient care; these individuals must show an aptitude for balancing both service and science.

There are differences between academic medical centers with a research mission and community-based academic hospitals, which require different models to support and create an environment of inquiry. For example, there are differing levels of scholarly activity and training among faculty regarding research methodology and assessment. The unique structures and environments of each setting create distinct needs that must be addressed for learning optimization.

Parallels with the practice environment

Medical students and resident physicians should be exposed to a diversity of clinical experiences in hospitals, ambulatory sites, and other settings, especially in environments resembling those where the graduates will practice upon the completion of

12. Gray R. MDs vs DOs—what are the differences (and similarities)? Medical School Headquarters. 2012. Available at: <https://medschoolhq.net/md-vs-do-what-are-the-differences-and-similarities>

their education and training. Studies and surveys have demonstrated the importance to residents of community connections and the value to them of feeling like they belong to a place and region.⁷ This is a powerful motivating factor for residents when it comes to investing their time and energy and remaining fully engaged in their work. Research has also linked such a sense of belonging to better health outcomes in patients.⁷

With large medical centers choosing to pursue osteopathic recognition, the osteopathic learning environment will evolve beyond community-based hospitals. As previously noted, osteopathic recognition represents a pathway whereby any teaching facility, regardless of setting, can integrate OPP into the curriculum. It is important that these new learning environments continue to prepare individuals to enter the community workforce.

Disseminating OPP

The learning environment should foster teamwork, shared learning, and mutual inquiry among nurses, physician assistants, pharmacists, residents, interns, attendees, and others. There are many opportunities within the learning environment to influence other professionals from different backgrounds. Health care providers in non-osteopathic professions should ideally be exposed to OPP through modeling and shared education opportunities.

As part of its commitment to interprofessional collaboration in education, AACOM belongs to the Interprofessional Education Collaborative (IPEC),¹³ along with several other health care education organizations. Through this collaboration, several projects and activities have been initiated to make interprofessional health care teams a vibrant functioning reality. Among these projects is the MedEdPORTAL IPEC Collection, featuring peer-reviewed open-access resources that promote educational scholarship.¹⁴

In the future, as a new balance between the physician-servant and physician-scientist is established, the OLE will likely include a more prominent culture of inquiry, in which scholarship in some form is strengthened. Role models for osteopathic medical students must demonstrate scholarship around OPP, and residents and fellows should be encouraged to pursue these opportunities. This broadening of scholarship as part of the educational experience can be one of the most effective ways to disseminate new knowledge about osteopathic medicine and to advance interprofessional collaboration within health care.

Models for Effective Collaboration: Business versus Education

The optimal learning environment can be fostered through any number of operational models, including those based upon collaboration. The models are likely to differ according to the goals of the involved institution, program, or community. Understanding the goals of a collaborative model will help to determine its structure. There are collaborative models to support business and those to support education. Business relationships can be developed to support the sharing of resources at lower costs, but programs can also be developed to advance a common educational goal within the learning environment. In collaborative models focused on education, the community-of-learning concept may play a key role. Organizations may also pursue a hybrid model that is focused on both educational and business goals.

Collaborative models may take on several forms based upon specific needs and desired outcomes. Business models can be structured around sponsorships, partnerships, or “vendor-ship.”¹⁵ The OPTI, described as a consortium, is a form of collaboration wherein two or more entities work together toward furthering a common goal.

13. American Association of Colleges of Osteopathic Medicine. Interprofessional education. AACOM. 2018. Available at: <https://www.aacom.org/reports-programs-initiatives/initiatives/ipec>

14. Association of American Medical Colleges, MedEdPORTAL. Interprofessional education. AAMC. 2017. Available at: <https://www.mededportal.org/collection/interprofessional-education>

15. This refers to a ‘vended services partnership’

Conclusion

The osteopathic medical profession has a long history of providing distinctive and effective patient-centered treatment to people, including those in underserved communities. At the core of this efficacious, socially conscious clinical care are osteopathic principles and practice. These solid but adaptable guidelines have built a strong framework of thought that has allowed osteopathic medicine to maintain its resiliency and innovation in the face of the ever-shifting winds of the health care environment in the United States. The single GME accreditation system and the osteopathic recognition offered by the ACGME provide new opportunities to strengthen and advance the osteopathic medical profession. To ensure that the profession continues its tradition of

excellence, it is crucial that COMs and associated hospitals provide students and residents with the optimal learning environment. The optimal osteopathic learning environment immerses students in a patient-centered, community-based culture (as encouraged by the OPTI system); it exposes them to role models and curricula that reinforce OPP; it balances the concepts of physician-servant and physician-scientist; and it fosters teamwork and collaboration with other health care professionals. Collaboration is important in both educational and business constructs. Thanks to a robust osteopathic learning environment, the osteopathic medical profession is meeting present challenges and is well-positioned to meet those of the future.

FIGURE 1. Perspectives on the Physician-Servant and Physician-Scientist from Osteopathic Medical Students

The osteopathic balance between the **physician-servant and physician-scientist** is clearly reflected in the insightful book, *Body, Mind, and Spirit: Essays from Osteopathic Medical Students*,¹⁶ published annually by AACOM. In their essays, osteopathic medical students from all COMs express their full engagement and pride in both community service and scientific research.

The students discuss their involvement with many community causes and people in need, including underserved minority and rural communities, local hospitals and clinics, youth sports' organizations and local schools, health care fairs, public health projects, COM student groups, global outreach in underdeveloped countries, and political advocacy for community needs. They also discuss their laboratory research in a wide variety of areas such as neurocircuitry, motor-function restoration, tissue inflammation, metabolic pathways, cardiovascular dysfunction, immunology, infectious diseases, minimally invasive surgery, and mental health, as well as evidence for the efficacy of OMT. The students bring together these two aspects of medicine by noting that their findings and experience in the research setting will help them and other physicians better serve their patients in the clinical setting.

16. American Association of Colleges of Osteopathic Medicine. *Body, Mind, and Spirit: Essays from Osteopathic Medical Students*. Bethesda, MD: AACOM; 2018.

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