

## Center or Periphery? The Future of Osteopathic Principles and Practices

Norman Gevitz, PhD

This essay is based on a single premise: The professional health of osteopathic medicine is directly proportional to the degree to which the discipline incorporates its distinctive principles and practices throughout the teaching of undergraduate and graduate medical students, in the management of patient problems, and in practice settings. From a sociological perspective, the viability of osteopathic medicine will ultimately rest on whether osteopathic principles and practices (OPP) lie at the center of this profession's activities or at its periphery.

My goal is to analyze the current status of OPP in osteopathic medical schools, particularly in the first 2 years of the curriculum. I will also discuss how these principles and practices came to be in the state they are in today, where they may be headed, and what steps the osteopathic medical profession needs to take in regard to OPP to ensure the long-term viability of the profession.

Some of the points I raise may be interpreted by many teachers of OPP as "preaching to the choir" because, on certain issues, I am sure we agree. On other matters, some faculty members and preceptors may wince as I challenge certain basic premises on which they educate osteopathic medical students. However, nociception can be part of the diagnostic and, ultimately, the therapeutic process, and I will not leave readers in anguish without providing what I think are reasonable ways and means by which more osteopathic students will embrace OPP, thereby building a stronger profession.

What do I mean when I refer to osteopathic principles? Simply put, they are those fundamental tenets of osteopathic medicine that guide how a physician approaches patients in health and disease. They offer a framework on how to evaluate the myriad intrinsic and extrinsic factors that bear upon wellness and sickness.

They also provide meaning to what osteopathic physicians (DOs) do to keep patients healthy or restore them to health. For DOs, these principles are especially important with respect to the formation and maintenance of a professional identity that is distinct from that of allopathic physicians (MDs).

### Evolution of a "Parallel Profession"

Osteopathic medicine is what I have elsewhere called a "parallel profession"<sup>1</sup>—that is, it performs the same general role and occupies the same professional space as allopathic medicine, an older and much larger profession. Because the two professions perform the same general role, the osteopathic medical profession, through OPP, must continually demonstrate its distinctiveness to outsiders as well as to its own members. Furthermore, the profession must prove that this distinctiveness makes a positive difference in the provision of healthcare.

The embodiment of a philosophy makes the osteopathic medical profession different from the profession it parallels. Although policy makers, social scientists, and others often refer to the MD profession as allopathic, this term is actually a historical artifact that does not reflect any body of beliefs shared by the members of this profession. For more than 150 years, the American Medical Association has pointedly rejected the adoption of any philosophical belief system governing health and disease and has argued that its profession's approach to medicine is based solely on scientific evidence.<sup>1,2</sup>

In the 1920s, the A.T. Still Research Institute of Pasadena, Calif, codified a set of fundamental osteopathic principles that were widely accepted throughout the profession. The four tenets enunciated by the Still Institute were somewhat revised in 1953 by what is now the Kirksville College of Osteopathic Medicine of A.T. Still University of Health Sciences (*Figure 1*). First, the body is a unit, and the person represents a combination of body, mind, and spirit. Second, the body is capable of self-regulation, self-healing, and health maintenance. Third, structure and function are reciprocally interrelated. Fourth, rational treatment is based on an understanding of body unity, self-regulation, and the interrelationship of structure and function.

---

From the Department of Social Medicine at the Ohio University College of Osteopathic Medicine in Athens.

Address correspondence to Norman Gevitz, PhD, Chairman, Department of Social Medicine, Ohio University College of Osteopathic Medicine, 302 Grosvenor Hall, Athens, OH 45701-2979.

E-mail: [gevitz@exchange.oucom.ohiou.edu](mailto:gevitz@exchange.oucom.ohiou.edu)

## EDITORIAL

During the past 2 decades, some members of this profession have sought to modify or update these tenets in the light of new understandings based on genetics and molecular biology.<sup>4-6</sup> In addition, many DOs and basic scientists have explained how these particular principles, however modified, both link the osteopathic profession to conventional medicine and provide a distinctive, holistic, patient-centered approach to healthcare.<sup>7,8</sup>

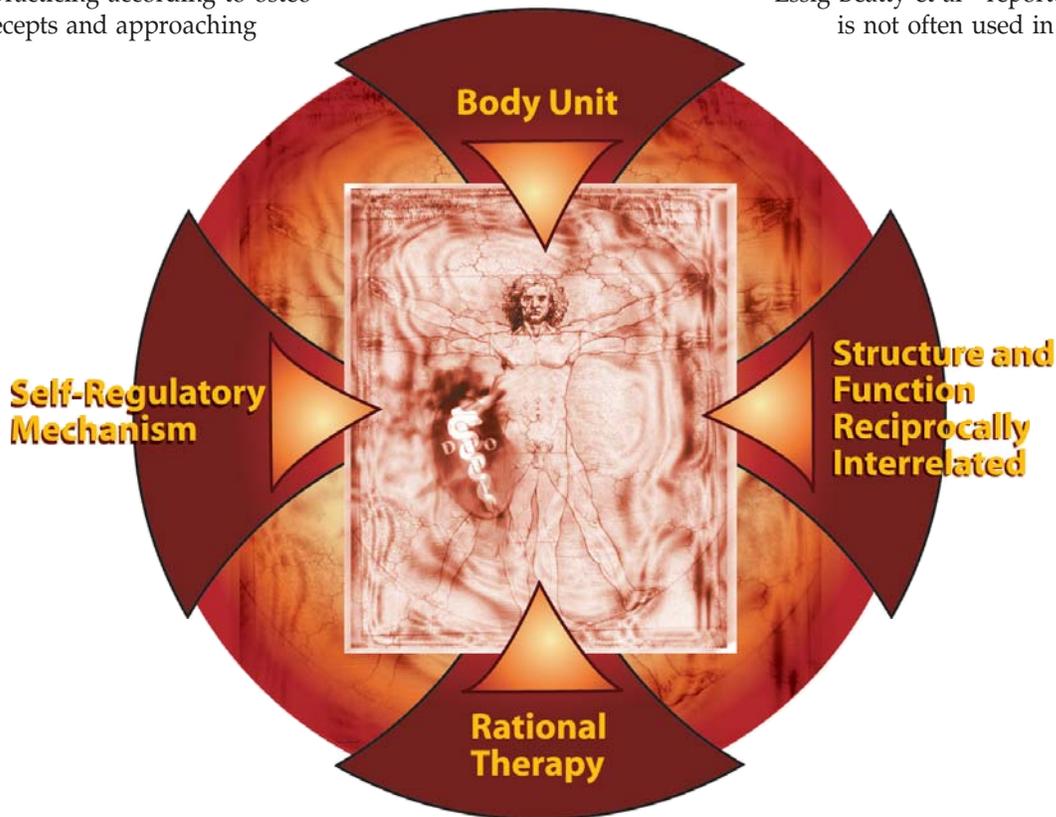
However, there is nothing in any of the various iterations of osteopathic principles that would necessarily distinguish osteopathic from allopathic physicians in any fundamental sense. Indeed, when these precepts have been presented to MD educators and administrators in recent years, they report nothing objectionable in them, and some even endorse them as broad medical principles.<sup>9</sup> Because of this general acceptance, the only way that MDs, patients, or the media will recognize significant differences between the two medical professions is if these principles are applied in clearly distinct ways in teaching and practice.

Some contemporary DOs argue that the use of palpatory diagnosis and osteopathic manipulative treatment (OMT) in their practices is not the “acid test” as to whether they are practicing according to osteopathic precepts and approaching

patients “osteopathically.” This argument may have some validity. However, I would respectfully maintain that if patients perceive no meaningful differences between DOs and MDs on the basis of stated tenets or the application of care, then the term *osteopathic* in the phrase *osteopathic physician* becomes an unneeded—even an irrelevant—descriptor.

The assertions of some DOs that palpatory diagnosis and OMT are not essential characteristics of being an osteopathic physician come in an era when the use of OMT in patient management has markedly declined. The National Ambulatory Medical Care Survey,<sup>10</sup> which was conducted by the National Center for Health Statistics in 1974, estimated that OMT was included in fewer than 17% of patient visits to office-based DOs. More recent studies by Fry,<sup>11</sup> Johnson et al,<sup>12</sup> and Aguwa and Liechty<sup>13</sup> confirm a continuing downward trend in OMT use.

In 2001, Johnson and Kurtz<sup>14</sup> noted that only 20% of osteopathic family physicians surveyed reported that they used OMT for more than half their patients. Only 30% of the osteopathic specialists in the survey<sup>14</sup> reported using OMT on more than 5% of their patients. That same year, Essig-Beatty et al<sup>15</sup> reported that OMT is not often used in hospital set-



**Figure 1.** A graphic depiction of the four general principles of osteopathic medicine codified in the 1920s by the A.T. Still Research Institute and revised in 1953 by what is now the Kirksville College of Osteopathic Medicine of A.T. Still University of Health Sciences. Originally published in Leleszi JP, Lewandowski JG. Pain management in end-of-life care. *J Am Osteopath Assoc.* 2005;105(suppl 1):S6-S11.

tings. They described how osteopathic medical students, even when they are required to conduct structural examinations, seldom write diagnoses of somatic dysfunction on patients' charts and rarely administer OMT.

From a sociological perspective, it is less important to study what a profession believes and more important to examine what it actually does. On the basis of what the osteopathic medical profession does, it appears that OPP have moved from the center toward the periphery of the osteopathic medical profession. Why has this happened?

### Reasons for the Shift

From its beginnings in the late 19th century, the osteopathic medical profession has evolved from a limited form of medical practice based almost exclusively on palpatory diagnosis and manipulative treatment to a practice that completely integrates all conventional diagnostic tools and therapeutic modalities. From a short curriculum embracing only a few subjects, osteopathic medical schools lengthened the curriculum to the standard 4 years, incorporating all the basic science and clinical subjects found in allopathic medical schools. Over the decades, osteopathic hospitals were founded and a greater percentage of DO graduates took internships and residencies. As a result of these changes, combined with effective legislative lobbying, osteopathic physicians became eligible for the same unlimited scope of licensure as MDs.<sup>16</sup>

Concurrent with these transformations, the dependence of DOs on distinctly osteopathic medical procedures steadily diminished. This shift partly resulted from the tremendous advancements in pharmacotherapeutics during the 20th century. In the mid-1930s, the first of the synthetically produced sulfonamides was introduced. In the 1940s, penicillin became available, followed quickly by a host of other antibiotics. After World War II, many new analgesics, anti-inflammatory agents, muscle relaxants, tranquilizers, and other medicines were developed for treating patients for conditions that had previously been managed by DOs through OMT.

Advocates for the new pharmacologic interventions were able to present statistics-based studies demonstrating the value of these types of treatments. In the meantime, the benefits of a traditional osteopathic approach continued to rest on anecdotal information. Because of the great patient demand for the new pharmacologic treatments, many DOs who wished to prove that they were scientifically literate "real doctors" did so by prescribing these medications. In addition, using three fingers to write a prescription for a medication was perceived as easier, less physically demanding, and a more effective use of time than using 10 fingers to administer OMT.

As technological changes led to reduced use of OMT in colleges of osteopathic medicine (COMs), the increasing

length and breadth of the curriculum had a dramatic effect on the standing of OPP within the colleges. Basic scientists, who were mostly PhDs with no prior experience in osteopathic medicine, taught courses exclusively from the perspective of their particular disciplines, without an osteopathic orientation. The growing number of curriculum hours devoted to the basic sciences—as well as to general medicine, physical diagnosis, pharmacology, and surgery—led to a reduction in the contact hours devoted to osteopathic manipulative medicine (OMM).

Some of the senior members of this profession remember the requirement of their osteopathic alma maters that they had to administer between 300 and 500 OMT sessions in both their third and fourth predoctoral years to graduate.<sup>17</sup> Unfortunately, this valuable educational experience ended because of increasing legal concerns about the colleges' medical liability for unsupervised students and the inability of the schools to provide supervision for so many patient encounters.

The backgrounds of individuals entering COMs also changed over the decades. In the early 20th century, most students entered COMs with, at best, a high school diploma. By the 1940s, COMs had a 2-year college prerequisite, and by the 1950s, all but a small percentage of entering students had at least bachelor's degrees. With each subsequent decade, the qualifications of osteopathic medical students improved—as indicated by the undergraduate schools they attended, their overall and science grade point averages (GPAs), and their scores on the Medical College Admission Test (MCAT).

As COMs increasingly mirrored MD colleges in terms of preprofessional requirements and as the osteopathic profession won an unlimited scope of practice privileges, a growing percentage of students entered COMs not because they had a DO as a physician, embraced osteopathic philosophy, or wanted to use their hands to treat patients, but because they viewed COMs as an acceptable alternative to becoming a physician after they did not get accepted into allopathic medical schools.<sup>18</sup>

Some of these "second-choice students" did become distinctive osteopathic physicians, but many others wanted little to do with what they perceived as undocumented and unconventional beliefs and practices. A number of these students became specialists and—whether they were trained in American Osteopathic Association (AOA)-approved or Accreditation Council for Graduate Medical Education (ACGME)-accredited residency programs—they were likely to eschew palpatory diagnosis and OMT. Furthermore, upon becoming hospital staff, they were unwilling to allow DO students to practice OMT.

It must also be emphasized that these allopathically oriented DOs were not alone. Many students who entered

COMs with firm convictions that they wanted to be distinctive DOs wound up not practicing OMM. The osteopathic medical profession needs to seriously consider why this has occurred.

### Problems in Osteopathic Medical Colleges

Over the decades, many administrators of COMs have failed to devote sufficient portions of their budgets to medical training that is distinctly osteopathic in nature. In too many COMs today, there are few full-time OPP faculty members. Instead, many programs rely on part-time and volunteer faculty. Having only one, two, or three full-time faculty members providing instruction to 300 or more students during the first 2 years of the curriculum cannot be educationally justified. Osteopathic manipulative medicine requires a great deal of individual hands-on instruction. Unlike many other medical school subjects, OMM cannot be learned primarily by lectures with students taking notes. It is a dynamic, small-group activity even if held in a large laboratory setting. If colleges do not have sufficient numbers of highly skilled table trainers, the chances are miniscule that students will gain satisfactory levels of palpatory literacy and confidence in their manipulative skills.

If we look at present-day OMM laboratory facilities at some COMs, we find that they are far from ideal with respect to the educational needs of students. Many of these laboratories have languished for years in serious need of renovation. What message is conveyed to students about the value their colleges place on the distinctiveness of osteopathic medicine when the OMM labs are the least adequate facilities on their campuses? Poor educational quarters, together with few full-time instructors, speak volumes to students that the OMM portion of the curriculum has a low priority to college leadership and, thus, is not very important.

It is more than just inadequate physical resources that “turn off” osteopathic medical students; it is also the quality, breadth, nature, and orientation of OMM instruction. The teaching of osteopathic medicine has not changed sufficiently over the years to meet the intellectual and practical needs of students.

During the past several decades, students in the United States have been steeped in a scientific approach toward medicine long before entering medical school. The great majority of these students expect that all phases of their medical education will be grounded in scientific evidence. Indeed, during the past decade, the evidence-based medicine movement is transforming almost every clinical discipline.<sup>19</sup> Yet the teaching of OMM has not kept pace.

My conversations with students at COMs and at conventions throughout the United States indicate that this problem is not isolated to a handful of schools. Much of the teaching of OMM in COMs during the first 2 years of the

curriculum rests on the words of DO “authorities” rather than on scientific research and evidence.

In their assigned readings, students learn what certain prominent DOs have to say about various somatic dysfunctions. There is often a theory or model presented that provides conjectures and putative explanations about why somatic dysfunction exists and what its significance is. Instructors spend the bulk of their time demonstrating osteopathic manipulative (OM) techniques without providing evidence that the techniques are significant and efficacious. Even worse, faculty members rarely provide instrument-based objective evidence that somatic dysfunction is present in the first place.

The teaching of distinctive osteopathic medicine has followed a craft model of education. The master teaches the student how he or she performs a particular task, and the student imitates the master until gaining the desired degree of proficiency. Although craft teaching has certain virtues, it needs to be paired with demonstrations and exercises. Unfortunately, this is not being done.

Osteopathic students wish to see evidence. They want proof. Instead of scientific demonstrations, however, they get only case reports, anecdotes, testimonials, theories, speculations, reasoning by analogy, and pilot studies. These studies typically have few subjects and usually prove little or nothing.<sup>20,21</sup>

It is remarkable that despite the absence of scientific demonstrations and adequate research studies, many students remain willing to take a leap of faith and continue to develop their palpatory abilities. Certain students probably do so because they have better tactile skills than their peers. Other students are likely attracted to traditional osteopathic medical education because of its holistic approach to maintaining health and treating illness. Still others are religiously motivated, and touching the body for the purposes of healing fits nicely with their beliefs and perceived calling as physicians.

Although many students may regard the body as sacred in some sense, they may also view the body as profane—an object of dispassionate study consisting of various biological processes that can be documented to reveal those interventions that have value.<sup>22</sup> To be sure, the notion of the body as sacred has great personal value to a number of OPP faculty members and preceptors. However, the espousal of sacredness by some teachers—when unlinked to a perceived commitment to embrace scientific evidence wherever it leads and whatever its implications—serves to turn off many students who conclude that they are being taught only dogma.

When some osteopathic medical educators, whether faculty in the colleges or preceptors in the field, explain human physiology with such vitalistic concepts as “energy flow” and “life forces”—terms that are rooted not in physiology but in metaphysics—many students become intel-

lectually disengaged, sensing that nothing of scientific value is being imparted. How should scientifically oriented students respond when a term like “inherent therapeutic potency” is used to describe putative or hypothetical physiological processes? I do not doubt that some osteopathic practitioners use such a heuristic term and know generally what it means, but from a scientific standpoint, how does one directly measure “inherent therapeutic potency”? The answer is, one cannot make such a measure. Most students expect that distinctive osteopathic practices will be explained with scientifically understood physiologic processes.

Nor does it inspire confidence in distinctive osteopathic methods when students are exposed to OMM advocates—however small in number—who associate themselves with the farthest fringes of medical unorthodoxy. When students attend or hear about conventions in which a vocal minority touts crystals, magnets, or chelation for dubious and unapproved diagnostic and therapeutic purposes, we should not be surprised that these students raise questions about the credulity of the practitioners, the legitimacy of educational programs taught by such practitioners, the sensibility of the organizations that sponsor them, and the value of OPP.

Science is an indispensable key to the future of distinctive osteopathic medicine. Yet, students now experience an overwhelming emphasis on techniques. With the exception of a few DOs, most notably the late William L. Johnston, DO,<sup>23</sup> osteopathic physicians who base their practices on OMM gain prominence not through research activities but through developing techniques presented in books, training courses, lectures, and audiotapes. These techniques often are widely advertised in the profession’s newsletters and circulars. This profession is not noted for its clinical scientists but rather for its “technique gurus.” With so many techniques being promoted, many students are left to wonder, “Which are best?” Who knows?

I am aware of no research that scientifically demonstrates that any particular OM technique is more efficacious than any other. All we have are the assertions of the technique’s developer. But, quite frankly, where there is no science, any technique will do.

### Suggested Solutions

In independently analyzing this set of circumstances, my goal is to offer some solutions to the profession that will increase the interest in and practice of distinctive medical procedures by first- and second-year students. To this end, my recommendations on how to move OPP back to the center from the periphery of osteopathic medical education fall under four headings—student admissions, resources, organization, and curriculum.

### Student Admissions

Colleges of osteopathic medicine should evaluate prospective students not only on the basis of their GPAs, MCAT scores, and interpersonal skills, but also on their special interests in and aptitudes for becoming DOs. If the administrations and faculty members of our COMs believe that learning and applying distinctive osteopathic diagnostic and treatment tools are vital to becoming a DO, they need to consider indirect and direct measures of the tactile abilities of applicants as part of the admittance process.

Indirect measures of tactile abilities may include such considerations as whether applicants play musical instruments, paint, sculpt, or participate in other activities that require sensitive tactile skills. Direct measures of tactile abilities may include tests of the acuity of an applicant’s sense of touch.

At the Ohio University College of Osteopathic Medicine in Athens, scientists and clinicians are engaged in the Virtual Haptic Back Project, underwritten by the Osteopathic Heritage Foundations.<sup>24,25</sup> In practice sessions, students can feel a virtual spinal column (*Figure 2*). Differences between textures and segment movements can be programmed at various levels of difficulty. Although the principal function of the Virtual Haptic Back is to improve student skill level (*Figure 3*), this virtual-reality program can also be used as a sensitizing tool for introducing prospective medical students to the distinctive emphases of osteopathic medical education.

It is important for all matriculating students to appreciate that, whatever their initial level of palpatory abilities, osteopathic medical schools are different from allopathic medical schools in that DO-granting institutions are committed to students who seek to develop their skills in OMM.

### Resources

Resources include the facilities, personnel, and equipment available at COMs.

With respect to the traditional OMM laboratory, OPP should be taught in an environment that encourages learning. Some schools have recognized this. For example, visitors to the University of New England College of Osteopathic Medicine in Biddeford, Me, cannot help but notice that the OMM lab is the centerpiece of this institution. It is an architectural model of form and function that not only promotes osteopathic distinctiveness on the part of students but motivates faculty members as well.

With respect to the personnel teaching OMM, COMs need the requisite number of faculty members to ensure that students receive sufficient individual attention to develop their skills and competencies. Students must be able to get expert help and supervision when they need it



**Figure 2.** Emily Drummond, a medical student at the Ohio University College of Osteopathic Medicine in Athens, practices her palpatory skills on the Virtual Haptic Back under the guidance of John N. Howell, PhD, one of the developers of the virtual-reality device. While looking at a three-dimensional image of a back on a computer screen, the student tries to sense a tissue abnormality with her fingers, which are placed in motor-driven thimblelike cups. The motors exert forces inside the cups in response to her finger movements, simulating the feel of pressing fingers into the tissues of a patient's back. In practice sessions, the student can select the difficulty level of the exercise. When the student has located the abnormal region, she presses a foot switch while holding a finger on the abnormal spot. A computer-generated voice then tells her whether the abnormality was correctly localized.

to avoid losing interest and falling behind in their medical education. The Educational Council on Osteopathic Principles of the American Association of Colleges of Osteopathic Medicine (AACOM) must propose educationally sound OMM faculty standards, and all COMs that belong to AACOM need to adhere to the standards if they are to obtain continued accreditation from the AOA Commission on Osteopathic College Accreditation.

Even if these changes in traditional OMM laboratories and personnel were instituted, it would not be sufficient. In my opinion, the teaching of OMM in the first and second years of the curriculum has always been incomplete. Historically, this portion of the college curriculum centers almost exclusively on anatomy as its basic science foundation. This has been a mistake. Although it is understandable that distinctive osteopathic diagnosis and treatment depend on clinicians' knowledge of the body's anatomy, the science of physiology has allowed osteopathic researchers to achieve the most significant understanding of somatic and segmental dysfunction.

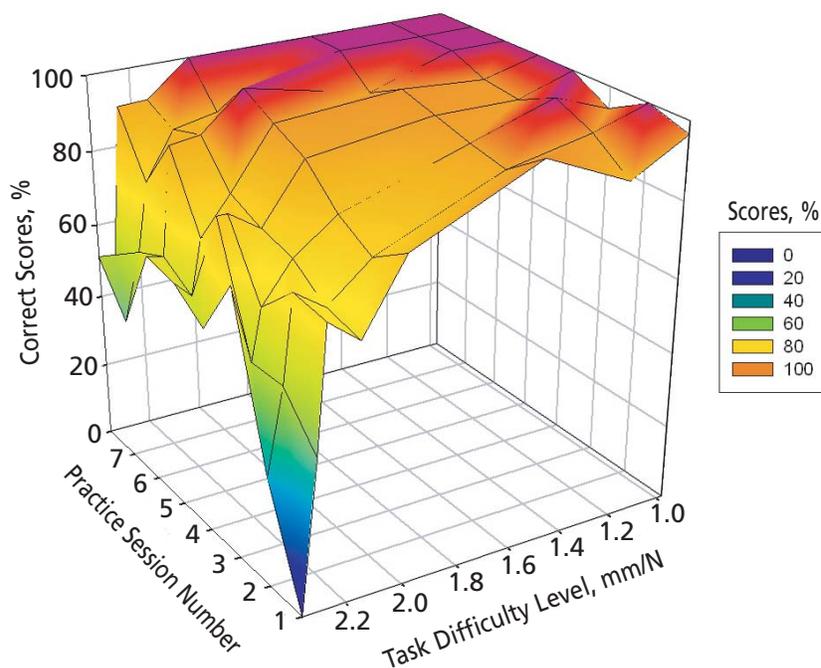
Yet, when I speak with students around the country, I am discouraged to learn that most are unfamiliar with the early physiology studies of J. Stedman Denslow, DO,<sup>26</sup>

Irvin M. Korr, PhD,<sup>27</sup> or their associates. Furthermore, most students have never seen demonstrations of the scientific equipment used by current investigators in empirical research.<sup>28</sup>

Every student should have the opportunity to witness the classic experiment demonstrating what Dr Korr called the "facilitated segment."<sup>29</sup> Every student should participate in demonstrations in which subjects are wired to electromyographic equipment to record electrical activity inside muscles. All students should observe thermographic results correlating in varying degrees with their diagnostic findings, including changes in surface temperatures that might be induced by OMT. Students should participate in demonstrations to test whether localized blood flow increases or decreases after OMT, as measured by Doppler technology. Students should observe the relative ability of subjects to breathe easier through rib raising, as measured by peak flow meters. And students should see how changes in range of motion after treatment can be accurately measured.

These demonstrations need to be combined with experiments. For example, members of the osteopathic medical profession have long championed the supposed

**Figure 3.** Three-dimensional graph showing improvements in student performance over several practice sessions (15 min each) with the Virtual Haptic Back at the Ohio University College of Osteopathic Medicine in Athens. The correct scores (%) are plotted against both the practice session number and the difficulty level of the task (ie, the subtlety of the tissue abnormality). To the right, where tasks are easy, students score close to 100% even in the first session. To the left, where tasks are more difficult, student performance declines. However, performance in difficult tasks improves with successive practice sessions.



virtues of applying the lymphatic pump, but they have offered no compelling scientific evidence that their procedures actually move lymph or are beneficial to patients. At the Annual Meeting of the American Academy of Osteopathy in 2003 in Ottawa, Canada, I proposed to the audience somewhat facetiously that through animal experiments the osteopathic medical profession should seek to definitively answer the fundamental question, “How much lymph can a lymph pump pump if a lymph pump can pump lymph?” I was gratified when some members of the audience took up the challenge, and now this research is beginning to be published.<sup>30</sup>

Rather than merely listening to “talking heads” telling them that OMT works and being expected to accept it on faith, first- and second-year students should be encouraged to discover what works for themselves through direct participation in demonstrations and experiments. If OPP faculty want to excite students about distinctive osteopathic methods of diagnosis and treatment, they should let their students experience these methods for themselves. That is the hallmark of adult education. Osteopathic medicine should be the life of the mind! Faculty members should invite physiologists and other scientists to participate in the education of aspiring DOs, and college administrators must devote resources to equipping physiology-based laboratories.

### Organization

How should the teaching of distinctive osteopathic methods be organized? I have long argued that a department of osteopathic principles and practices in each osteopathic medical school would have particular virtues. First, such a department gives status to those physicians whose use of OMM is a central feature of their practices. Second, the head of such a department has an equal voice with other department chairs, particularly with respect to negotiating with the dean for resources. Unfortunately, at some schools, OPP faculty constitute a section within a larger department of family medicine. As such, the section members can associate collegially with other faculty who are instrumental in contributing to anatomy-based OMM labs as table trainers.

Whichever way OPP clinicians are now organized, I believe they cannot function optimally unless they have time set aside for research. They need to be able to work with basic and social scientists to carry out projects advancing the understanding of the relative benefits of distinctive osteopathic diagnostic and therapeutic approaches.

Traditionally, basic and social scientists have shown all but exclusive loyalty to their own departments and disciplines. However, OPP faculty cannot be expected to carry out necessary research by themselves. If distinctive

osteopathic methods are to be taught scientifically and if osteopathic medical research is to advance, then these artificial disciplinary walls need to be broken down. There should be cross or joint faculty appointments for hard-money positions. Clinicians, basic scientists, and social scientists all have a stake in furthering two fundamental missions of COMs: to produce scientifically trained, distinctive osteopathic physicians and to generate scientific studies testing the premises of distinctive osteopathic practices. In so doing, they will enhance the reputation and visibility of osteopathic medical education generally.

### Curriculum

What should an ideal, distinctive, undergraduate curriculum in osteopathic medicine look like? To answer this question, educators need to examine three issues. First, what essential competencies do students need to possess when they graduate? (This question has been addressed by the AOA's Core Competency Compliance Program.<sup>31</sup>) Second, what optimum formats will allow students to achieve these competencies? Third, how many contact hours of training in these formats does it take for students to develop these competencies?

Based on my conversations with students, I believe that most of them desire "the basics" during their predoctoral years of education. They want technical language that is understandable and consistently used. They want diagnostic procedures that are reproducible from operator to operator. They want scientific explanations that are rooted in anatomy and physiology. They want confirmation through objective instrumentation that specific osteopathic medical interventions produce desirable effects. They want to learn a narrow range of OM techniques—techniques that the great majority of experienced DOs agree are fundamental and at which all students can become reasonably adept.

Beyond the first 2 years of education, students need a structured OPP curriculum that extends from their clerkships into their internships and residencies.<sup>32</sup> They need educational sites in which they can hone their skills as distinctive DOs. They need the Comprehensive Osteopathic Medical Licensure Examination—USA to reflect a truly national standard for a distinctly osteopathic medical base. For the future of this profession, the wants and needs of these students must be met—whatever the cost.

### Conclusion

I realize that some of what I've written in this essay may be difficult for some DOs to read and accept. However, as a non-DO, I believe that outside assessments of the current status of OPP are necessary for the profession to consider as it plans for the future. There is no virtue in "pulling punches" in this regard.

Allowing OPP to move ever further from the center toward the periphery of the osteopathic medical profes-

sion portends a likely disaster. Without OPP, the osteopathic medical profession exists in name only. Yet, the profession must acknowledge the sad fact that many first- and second-year students either become disengaged by the distinctive elements of osteopathic medicine or have little opportunity of developing OMT skills after the first 2 years of the standard curriculum.

This set of circumstances must be directly addressed. It is incumbent on all members of the profession—whether serving as administrators or faculty at the colleges or preceptors in the field—to change the conditions and methods by which they educate students. We must make sure that our students see distinctiveness as essential to becoming an osteopathic physician. Members of this profession must not only be willing to serve as educators but also be amenable to changing with the times and accommodating themselves to evolving student wants and needs. This is not an easy challenge.

Colleges of osteopathic medicine must develop their teaching resources. They need to enrich the curriculum. They need to ensure that osteopathic practices conveyed to students are firmly rooted in science. They need to provide students with demonstrations of the physiologic changes that may be produced by distinctive osteopathic methods. They need to teach students basic practical skills, and they need to provide the conditions under which students can develop confidence in their professional abilities.

In planning and working together to accomplish these goals, college administrators, faculty members, and preceptors can begin to restore and eventually anchor OPP to the center of the osteopathic medical profession.

### References

1. Gevitz N. 'Parallel and distinctive': the philosophic pathway for reform in osteopathic medical education. *J Am Osteopath Assoc*. 1994;94:328–332. Available at: <http://www.jaoa.org/cgi/reprint/94/4/328>. Accessed December 22, 2005.
2. Gevitz N. The chiropractors and the AMA: reflections on the history of the consultation clause. *Perspect Biol Med*. 1989;32:281–299
3. Special Committee on Osteopathic Principles and Osteopathic Technic, Kirksville College of Osteopathy and Surgery. Interpretation of the osteopathic concept prepared by committee at Kirksville. *J Osteopath*. October 1953;60:7–10.
4. Sprafka S, Ward RC, Neff D. What characterizes an osteopathic principle? Selected responses to an open question. *J Am Osteopath Assoc*. 1981;81:29–33.
5. Hayes OW, Greenman PE. Reprise on a theme: osteopathic principles for the 21st century. *The DO*. 1993;34:21–28.
6. Rogers FJ, D'Alonzo GE, Jr, Glover JC, Korr IM, Osborn GG, Patterson MM, et al. Proposed tenets of osteopathic medicine and principles for patient care. *J Am Osteopath Assoc*. 2002;102:63–65. Available at: <http://www.jaoa.org/cgi/reprint/102/2/63>. Accessed December 22, 2005.
7. Korr IM. An explication of osteopathic principles. In: Ward RC, ed. *Foundations for Osteopathic Medicine*. 2nd ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2003:12–18.

- 8.** Seffinger MA, King HH, Ward RC, Jones JM III, Rogers FJ, Patterson MM. Osteopathic philosophy. In: Ward RC, ed. *Foundations for Osteopathic Medicine*. 2nd ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2003:3–12.
- 9.** Sirica CM, ed. *Osteopathic Medicine: Past, Present, and Future*. New York, NY: Josiah Macy, Jr, Foundation; 1996:83–87.
- 10.** US National Center for Health Statistics. *Office Visits to Doctors of Osteopathy: National Ambulatory Medical Care Survey*. Washington, DC: US National Center for Health Statistics; 1974. ND: 19.
- 11.** Fry LJ. Preliminary findings on the use of osteopathic manipulative treatment by osteopathic physicians. *J Am Osteopath Assoc*. 1996;96:91–96.
- 12.** Johnson SM, Kurtz ME, Kurtz JC. Variables influencing the use of osteopathic manipulative treatment in family practice. *J Am Osteopath Assoc*. 1997;97:80–87.
- 13.** Aguwa MI, Liechty DK. Professional identification and affiliation of the 1992 graduate class of the colleges of osteopathic medicine. *J Am Osteopath Assoc*. 1999;99:408–420.
- 14.** Johnson SM, Kurtz ME. Diminished use of osteopathic manipulative treatment and its impact on the uniqueness of the osteopathic profession. *Acad Med*. 2001;76:821–828.
- 15.** Essig-Beatty DR, Klebba GE, LaPointe NG, Miller ED, Strong RE. Decline in structural examination compliance in the hospital medical record with advancing level of training. *J Am Osteopath Assoc*. 2001;101:501–508. Available at: <http://www.jaoa.org/cgi/reprint/101/9/501>. Accessed December 22, 2005.
- 16.** Gevitz N. *The DOs: Osteopathic Medicine in America*. 2nd ed. Baltimore, Md: The Johns Hopkins University Press; 2004.
- 17.** Stookey JR. Andrew Taylor Still memorial address: lessons from Mecca. *The DO*. 2000; 41:58–63.
- 18.** New, PK. The osteopathic students: a study in dilemma. In: Jaco EG, ed. *Patients, Physicians and Illness*. Glencoe, Ill: Free Press; 1958:413–421.
- 19.** Sackett D, Gray JM, Haynes RB, Richardson WS. Evidence based medicine: what it is and what it isn't. *BMJ*. 1996;312:71–72. Available at: <http://bmj.bmjournals.com/cgi/content/full/312/7023/71>. Accessed January 3, 2006.
- 20.** Gevitz N. Researched and demonstrated: inquiry and infrastructure at osteopathic institutions. *J Am Osteopath Assoc*. 2001;101:174–179. Available at: <http://www.jaoa.org/cgi/reprint/101/3/174>. Accessed December 22, 2005.
- 21.** Heath D, Gevitz N. The research status of somatic dysfunction. In: Ward RC, ed. *Foundations for Osteopathic Medicine*. 2nd ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2003:1188–1193.
- 22.** Eliade M. *The Sacred and the Profane*. New York, NY: Hartcourt, Brace, and World; 1959.
- 23.** Johnston WL. *Functional Methods: A Manual for Palpatory Skill Development in Osteopathic Examination and Manipulation of Motor Function*. Indianapolis, Ind: American Academy of Osteopathy; 1994.
- 24.** Virtual reality program to teach doctors, therapists about human back problems; June 1, 2004. Ohio University Web page. Available at: <http://news.research.ohiou.edu/news/index.php?item=137&page=87>. Accessed December 22, 2005.
- 25.** Sinco P. Vertebral reality: computer project simulates feel of palpation. *The DO*. 2004;45:41.
- 26.** Beal MC, ed. *American Academy of Osteopathy 1993 Year Book: Selected Papers of John Stedman Denslow, DO*. Indianapolis, Ind: American Academy of Osteopathy; 1993.
- 27.** Peterson B, ed. *The Collected Papers of Irvin M. Korr*. Colorado Springs, Colo: American Academy of Osteopathy; 1979.
- 28.** Northup GW, ed. *Osteopathic Research: Growth and Development*. Chicago, Ill: American Osteopathic Association; 1987.
- 29.** Korr IM. Symposium on the functional implications of segmental facilitation; a research report. I. The concept of facilitation and its origins. *J Am Osteopath Assoc*. 1955;54:265–268.
- 30.** Knott EM, Tune JD, Stoll ST, Downey HF. Increased lymphatic flow in the thoracic duct during manipulative intervention. *J Am Osteopath Assoc*. 2005;105:447–456. Available at: <http://www.jaoa.org/cgi/content/full/105/10/447>. Accessed December 22, 2005.
- 31.** American Osteopathic Association. Core competency compliance program (CCCP) part I. DO-online Web page. Available at: [http://www.do-online.osteotech.org/pdf/acc\\_cccpart1.pdf](http://www.do-online.osteotech.org/pdf/acc_cccpart1.pdf). Accessed February 22, 2006.
- 32.** Steele KM, Baker HH, Boxwell GF, Steele-Killeen S. Community-based osteopathic manipulative medicine student clinic: changes in curriculum and student confidence levels. *J Am Osteopath Assoc*. 2005;105:503–513. Available at: <http://www.jaoa.org/cgi/content/full/105/11/503>. Accessed February 13, 2006.
-