

A Path to Osteopathic Distinction: The Touro California GROUPIE Program

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Since the inception of the osteopathic medical profession, there has been a continued internal dialogue within its ranks—and to a lesser extent an external dialogue with the public—as to its unique, distinctive, and distinguishing role within the US health care system.¹

In the early years, the profession's distinction revolved around osteopathic manipulative treatment (OMT).²⁻⁴ However, when full practice privileges were granted to the profession, there was a shift from OMT toward a more comprehensive focus embracing the full scope of diagnostic and therapeutic modalities. Yet throughout its existence, there remains a profession-wide emphasis on community-based and primary care aligned with a “holistic” patient care approach enveloped within an overarching osteopathic philosophy.²⁻⁴ During the past half century, the continued convergence of allopathic and osteopathic medicine has resulted in phrases such as “separate but equal” and “parallel and distinctive” to describe conceptual differences.²⁻⁴

As time progresses, the conceptual difference between the osteopathic and allopathic professions continues to blur. Fewer osteopathic physicians (ie, DOs) use palpation and OMT, allopathic physicians (ie, MDs) make up a notable percentage of faculty at colleges of osteopathic medicine (COMs), and DO graduates increasingly choose Accreditation Council for Graduate Medical Education (ACGME) residency programs.⁴⁻⁹

Over the past decade, the number of osteopathic medical students has nearly doubled to more than 26,000 with 5323 graduating in 2015,¹⁰ and the number of DOs and students now exceeds 129,000.¹¹ This expansion has led to arguably the most significant change: an agreement between the ACGME, the American Osteopathic Association (AOA), and

the American Association of Colleges of Osteopathic Medicine to create a single accreditation system for all graduate medical education (GME) programs.¹²

Osteopathic Distinction, Uniqueness, and Distinguishing Characteristics

A search on the *The Journal of the American Osteopathic Association (JAOA)* website for articles published between 1978 to July 2016 that demonstrate distinguishing characteristics, uniqueness, or distinctiveness of the osteopathic medical profession uncovered 479 citations. Of these citations, many did not align with the topic, and those that did were predominately opinion pieces (eg, editorials, letters to the editor). Fewer than 15 of these citations were original research presenting evidence-based outcomes demonstrating osteopathic medicine's unique, distinguishing, and definitive contributions. Those areas in which the research demonstrated a difference can be coalesced into 4 themes: OMT, practice characteristics, innovation and educational outcomes, and other outcomes.

OMT

Osteopathic manipulative treatment was the most robust theme. Research was centered on low back pain and suggested that benefits from OMT could be attained with less medication, fewer referrals to specialists, and earlier and improved function.¹³⁻¹⁶ Two OMT pilot studies on otitis media in children and pneumonia in adults produced provocative results, but neither study was large enough for conclusive recommendations.^{17,18} Other areas focused on retrospective anecdotal data in wound healing, headache, geriatric ambulation, and generalized management of pain.¹⁹⁻²²

Practice Characteristics

Practice characteristics were based principally on reviews of large sets of national survey data. These analyses suggested that DO and MD practice patterns were generally similar. In the subgroup of DOs who used OMT predominantly, OMT was generally prescribed for musculoskeletal conditions and short-term pain relief.²³⁻²⁶ Another differentiating characteristic was the larger percentage of DOs choosing a career in primary care, rural medicine, and community-based medicine. However, none of these characteristics is unique to osteopathic medicine, and all have far more practicing MDs than DOs.²

Innovation and Educational Outcomes

Although the data for innovation and educational outcomes are not robust, osteopathic medicine differs from allopathic medicine in the cost to produce a physician. Compared with allopathic medical schools, osteopathic medical schools typically employ fewer faculty and staff, rely more on volunteer community-based practitioners, and have a significantly smaller infrastructure.^{27,28} They also have fewer affiliations with tertiary care centers and markedly smaller research infrastructures.^{27,28} These differences may serve as a double-edged sword, where on the one hand, the time spent in tertiary care centers is significantly curtailed for osteopathic medical students, while on the other hand, more time is spent in community settings, where the majority of health care is provided.

Other Outcomes

Although the data are limited, another potential difference between osteopathic and allopathic medical students is their perception of empathy. Preliminary data suggest osteopathic medical students may not have as marked of a decline in empathy as allopathic medical students during training.^{29,30}

GROUPIE Overview

Given the lack of hard evidence-based outcomes demonstrating the osteopathic difference, the Touro

University College of Osteopathic Medicine-CA (TUCOM) in Vallejo initiated a prospective outcomes-based program in 2010 with the objective of showing what may distinguish TUCOM graduates. The acronym GROUPIE represents 7 distinct and measureable outcomes that can help define the unique and distinctive skills of TUCOM graduates as health care providers:

G = Global health

R = Research

O = Osteopathic manipulative medicine and obesity

U = hand-held Ultrasonography

P = Public health

I = Interprofessionalism

E = Empathy

Although none of these skills individually is unique to TUCOM when combined, we at TUCOM hope they will demonstrate an osteopathic difference that will ultimately enhance patient adherence to medical advice, improve quality outcomes, and boost practice efficiency while reducing cost by enriching communication throughout the entire health care system.

In the following paragraphs, I briefly describe each of the GROUPIE components to explain how these areas are interconnected in establishing DO graduates with unique, distinctive characteristics that will meet the challenges of providing health care.

Global Health

The global health program includes a robust international program. Since its inception in 2004, TUCOM has had approximately one-third of its students electively participate at 1 or more of 6 international sites. These students were more satisfied with their understanding of multicultural issues and global health care disparities.

The global health program at TUCOM also includes a local global experience in the school's 3 community-based Federally Qualified Healthcare Centers (FQHCs). Through these FQHCs, students provide preventive and primary care to ethnically diverse populations of medically underserved people. This program aims to measure the effectiveness in improving the social mission for all TUCOM students and demonstrate their

ability to effectively communicate with all patients to eliminate health disparities across race and ethnicity.

Research

The research component of GROUPIE represents a specific focus of TUCOM's research efforts in exploring the root biologic causes of the detrimental effects of metabolic syndrome.³¹ For example, in this issue of the *JAOA*, Schwarz et al³² focus on the cross talk between sugar, hepatic fat, metabolic syndrome, and cardiovascular disease. This type of research is rapidly translated into clinical applications and taught to TUCOM students in both didactic and clinical settings.

Osteopathic Manipulative Medicine and Obesity

The evidence base demonstrating the efficacy of OMT from randomized controlled trials is limited.³ The Reducing Inflammation by Osteopathic Treatment (RIOT) trial is investigating the ability of OMT to reduce the silent inflammation noted in obese patients with metabolic syndrome. This trial is being conducted in parallel with the Cardiovascular Inflammation Reduction Trial (CIRT), which is a multicenter study supported by the National Institutes of Health and is investigating the potential benefit of low-dose methotrexate as an anti-inflammatory agent to reduce cardiovascular events in persons at high risk for cardiovascular disease.³³ Currently, CIRT has approximately 400 participating centers in the United States and Canada, with 29 of the sites affiliated with osteopathic programs. If the CIRT demonstrates a reduction in cardiovascular events and RIOT demonstrates that OMT can reduce subclinical inflammation, then further studies can address the benefit of OMT in individuals at high risk for cardiovascular disease either added to proven therapies or independent of those therapies to reduce the number one cause of mortality, coronary heart disease.³⁰

Obesity has become a global pandemic. In 2011, after the United States failed to achieve the Healthy People 2010 obesity goals, the AOA House of Delegates passed Resolution 435A, which stipulated

that all DOs should address the obesity epidemic in their practice. At that time, TUCOM designed and implemented the Fundamentals for an Osteopathic Obesity Designed Study (FOODS), which was designed to test the hypothesis that by improving osteopathic medical students' knowledge of obesity, their inherent bias against obese patients³⁴ would improve. In this issue, Gayer et al³⁵ report the first 5 years of data from FOODS and demonstrate that a comprehensive obesity curriculum can significantly improve the inherent student bias and that improvement can be sustained over all 4 years of medical school. The second phase of FOODS will investigate if this curriculum is transferable to COMs and selected primary care residency programs.

Ultrasonography

Ultrasonography has been used for decades by traditional imaging specialists as a diagnostic tool. The recent development of portable and handheld equipment has led to the use of this technology by the clinician at the point of care. To this end, TUCOM joined Ultrasound in Medical Education, California (UMeCali), which consists of a consortium of medical schools in California. The mission of UMeCali is to introduce a longitudinal ultrasonography education program addressing specific competencies.³⁶ Along with UMeCali, many medical schools are developing curricula to improve students' diagnostic and procedural skills. Preliminary data from COMs suggest a benefit in enhancing osteopathic palpatory skills and OMT outcomes.^{37,38} The AEIOU (An Education In Osteopathic Ultrasound) program has been initiated in which TUCOM is measuring anatomic knowledge and diagnostic skills in concert with the collaborating schools in UMeCali. However, beyond the standard diagnostic and therapeutic outcomes, plans have been made to initiate a TOUCH (Targeting OMT or Ultrasound or Combination for Health) program to help determine whether patient-physician communication is improved with OMT or ultrasonography and whether the combination of these 2 modalities

enhances communication and patient adherence to an even greater extent.

Public Health

Education in public health is recommended to be incorporated into the medical school curriculum by the Institute of Medicine.³⁹ In 2006, the dual-degree MPH program was first offered at TUCOM. The program has grown to be the largest DO/MPH program in the osteopathic medical profession, to our knowledge. In 2012, TUCOM partnered with 3 local FQHCs, thus opening the full array of county public health services to all TUCOM students. This affiliation underscored the school's commitment to public health and stands as a significant contributor related to its success in the public health component of GROUPIE. The strong public health culture derives much of its strength from its ability to overlap with various components of GROUPIE, such as the global health program, where 43% of dual-degree DO/MPH students are receiving their MPH in Global Public Health.

Interprofessional Education

The Commission on Osteopathic College Accreditation standards now includes interprofessional education for all COMs under standard 6.4.⁴⁰ As one example, the Diabetes Prevention Program (DPP) includes a full spectrum of health care providers at Touro University California (students from the osteopathic medicine, physician assistant, nursing, public health, and pharmacy schools) working as a collaborative team. To date, the DPP has trained more than 340 certified lifestyle coaches across all disciplines, and TUCOM is the first medical school in the nation to register with the Centers for Disease Control and Prevention to have a certified, university-accredited DPP (Jay H. Shubrook, DO, oral communication, June 2017).

Empathy

Empathy as an essential component of professionalism may indicate a potential outcome that may differentiate osteopathic and allopathic medical students.^{29,30} In the

Empathy in Osteopathic Training and Education (EMOTE) trial, Davis et al⁴¹ describe a different perspective in the evaluation of empathy in medical students. Preceptors for students at TUCOM and at least 1 other medical school (DO or MD) were surveyed on their perception of students' empathy during rotations. As Davis et al⁴¹ report, 40% of the preceptors rated TUCOM students as better or advanced compared with other medical students for displays of empathy. This analysis differs from prior studies in that it surveys the preceptor's perception of empathy rather than the student's self-perception. Taken together, these analyses complement each other in giving a fuller evaluation of empathy, opening options for the osteopathic medical profession to continue to explore this interesting potential distinction.

Discussion

Where is the osteopathic medical profession now in terms of osteopathic distinctiveness? In 2015, the AOA launched a national awareness campaign for the profession with the following key messages incorporated throughout the campaign⁴²:

- DOs have additional training in OMT and use this tool to help diagnose, manage, and prevent illness and injury.
- DOs listen to and partner with their patients to help them get healthy and stay well.
- DOs focus on prevention by gaining a deeper understanding of one's lifestyle and environment, rather than just managing symptoms.
- DOs are trained to see the person inside the patient.
- DOs practice a distinct philosophy. They strive to help patients be truly healthy in mind, body, and spirit.

These points are intended to increase awareness of the profession, but other than OMT, they do not exhibit the necessary outcome data that demonstrate why DOs are unique.

One of the characteristics not highlighted in these bullet points is the social mission and accountability that the osteopathic medical profession provides

toward an overall public good. In 2010, an analysis of the social mission of medical education in 124 allopathic (17 community based) and 17 osteopathic medical schools was conducted.⁴³ For this analysis, the definition of social mission was based on 3 factors: (1) percentage of graduates who practice primary care, (2) percentage who work in health professional shortage areas, and (3) percentage who are underrepresented minorities. In this study,⁴³ COMs produced relatively more primary care physicians and practiced slightly more in underserved communities but trained a smaller percentage of underrepresented minorities. The authors concluded that medical schools with a strong social mission were generally best prepared to produce primary care for the underserved.⁴³

Osteopathic medicine's foundation was based in primary care and rural medicine.⁴⁴ Although not explicitly stated, it could be inferred that the osteopathic medical profession continues to follow its roots as manifested by opening new schools that are predominantly located in rural and underserved communities. The new schools' missions are to a great extent focused on producing primary care physicians for the communities in which they reside. However, for more than a century, the osteopathic medical profession has steadfastly proven it can produce high-quality physicians, with a majority practicing primary care and at a fraction of the cost of its allopathic counterparts. This outcome begs the question, what is unique, distinctive, and distinguishing about osteopathic medicine to allow this phenomena to persist for 140 years?

At TUCOM, we appreciate the opportunity offered by the *JAOA* ENGAGE Initiative, which allows COMs to showcase their scholarly activity.⁴⁵ In this issue, TUCOM shares findings from a few of its programs and efforts, with GROUPIE representing just one of vast possibilities that may distinguish osteopathic medical students, COMs, and the profession. As with most COMs, TUCOM ranks near the top for the percentage of students selecting a career in primary care.⁴⁶ However, a focus on primary care and community-based practice, even when adding osteopathic principles and

practice, is inadequate to truly define TUCOM or osteopathic medicine's unique contributions to health care. As stated by Chen and Mullan in 2009, "The structure of today's osteopathic medical schools may be hard to distinguish from that of their allopathic counterparts, but the output of osteopathic medical schools remains clearly distinctive, and the nation's health care system benefits as a result."²⁷ If all COMs could find their particular "GROUPIE," the osteopathic medical profession could individually and collectively demonstrate an evidence-based approach detailing public benefits that are unique, with distinguishing characteristics and distinctive outcomes that represent and define osteopathic medicine for this millennium.

Conclusion

This brief overview of the GROUPIE program at TUCOM and the 3 articles in this issue of the *JAOA* related to the school's research only scratch the surface in identifying what makes osteopathic medicine distinct. As the GROUPIE program matures, TUCOM will collect additional data that it hopes will further distinguish its students as distinctive DOs. The goal is to eventually measure a systematic osteopathic adherence result that will evaluate an osteopathic approach through GROUPIE on health care outcomes. By meeting the objectives within each aspect of GROUPIE, TUCOM expects that the combined effect will improve patient-physician communication and thus result in improved quality outcomes, improved patient adherence, more cost-effective team-based approach, enhanced empathy, and improved mindfulness for DOs. (doi:10.7556/jaoa.2017.098)

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