

## Moving Medical Knowledge, Discovery, and Osteopathic Health Care Forward

Peggy Smith-Barbaro, PhD

David C. Mason, DO, MBA

Frank Filippetto, DO

From the Health Institutes at the University of North Texas Health Science Center (UNTHSC) in Fort Worth (Dr Smith-Barbaro) and the Departments of Family Medicine and Osteopathic Manipulative Medicine (Dr Mason) and Academic Affairs (Dr Filippetto) at the UNTHSC Texas College of Osteopathic Medicine (TCOM) in Fort Worth. Dr Smith-Barbaro was the assistant dean of research at UNTHSC/TCOM at the time of manuscript submission.

Currently, she is special advisor to the vice provost for Health Institutes.

Financial Disclosures: None reported.

Support: None reported.

Address correspondence to Peggy Smith-Barbaro, PhD, University of North Texas Health Science Center, 3500 Camp Bowie Blvd, Fort Worth, TX 76107-2699.

E-mail: [peggy.smith-barbaro@unthsc.edu](mailto:peggy.smith-barbaro@unthsc.edu)

Submitted

September 6, 2016;

accepted

September 28, 2016.

The Texas College of Osteopathic Medicine (TCOM) is housed within the University of North Texas Health Science Center (UNTHSC). The college's mission, which was developed by its department chairs and deans and approved by its faculty, is as follows:

Create solutions for a healthier community by preparing tomorrow's patient-centered physicians and scientists and advancing the continuum of medical knowledge, discovery, and osteopathic health care (Don N. Peska, DO, MEd, personal communication, September 2016).

This mission reflects the mission, vision, and values of the health science center while providing the distinctive purpose of a college of osteopathic medicine through education, research, and patient care. The articles published in the current issue of *The Journal of the American Osteopathic Association*, which represents the third installment of *The Journal's* ENGAGE Initiative,<sup>1</sup> focus on projects that support UNTHSC/TCOM's mission.

Collaborative and translational research programs are strongly supported by UNTHSC/TCOM. The Pregnancy Research in Osteopathic Manipulation Optimizing Treatment Effects (PROMOTE) study is one such successful clinical collaboration between the departments of osteopathic manipulative medicine and obstetrics and gynecology. This study, with 400 patients, examined the efficacy and safety of osteopathic manipulative treatment (OMT) on labor and delivery outcomes<sup>2,3</sup> as adjunctive treatment for pregnant women with low back pain during their third trimester.

Hensel et al found that the OMT protocol developed was an effective treatment for low back pain and its associated disabilities.<sup>3,4</sup> Using the PROMOTE OMT protocol during pregnancy did not result in increased risk of high-risk status, and women had longer labor durations but no increased incidence of complications, such as perineal lacerations, episiotomy, and use of forceps or vacuum device.<sup>3</sup>

To address the need for bridging the gap between OMT research findings and clinically practical OMT applications, the PROMOTE OMT protocol developed by Hensel et al<sup>2</sup> was evaluated for ease of replication and application to clinical practice. The PROMOTE protocol was established based on physiological theory and the concept of interrelationships of structure and function, and it was designed to be simple and concise, taking just 20 minutes. The PROMOTE OMT protocol has been successfully taught at osteopathic workshops and expanded into a module taught to nonosteopathic obstetricians and family physicians, increasing the availability of this approach for pregnant women.

Providing a curriculum of instruction that is evidence-based and grounded in the learning sciences is also central to UNTHSC/TCOM's mission. Papa and D'Agostino<sup>5</sup> explored several faculty development models and curricular reforms designed to improve patient care outcomes. Of particular note is the college's Academy of Medical Educators (AME), which is attended by close to 40 clinical and academic faculty members who have 40% of their time protected for research and education. At its inception, the AME took a learning sciences-based approach toward creating enduring and meaningful changes in the learner's behavior.

Specific foundational needs for training future clinicians in systems-based health care concepts have been addressed at UNTHSC/TCOM via a 3-phase logic model, as described by D'Agostino and Papa.<sup>6</sup> Phase 1 provides faculty with training in learning sciences-derived models of mind, competence, outcomes, and education; phase 2 is designed to develop course contents for a systems-based course; and phase 3 will involve application of procedural knowledge developed in the previous 2 phases.

Establishing the best and most effective way to teach osteopathic medical students continues to be a critical focus at UNTHSC/TCOM. Applying adult learning theory and engaging educational

technologies to deliver innovative strategies while facing the challenges of limitations on faculty contact time, instructional OMT videos were developed and evaluated for use with novice medical students in an OMT skills laboratory. As reported by Seals et al,<sup>7</sup> instructional videos were an appropriate tool for delivery of OMT educational material content. Optimizing student's time with faculty table trainers could be effectively met by using a video format to teach OMT skills.

To promote scientific discovery through mentored research, UNTHSC/TCOM has developed a rigorous program for its students.<sup>8</sup> The importance of exposing osteopathic medical students to research has been stressed by the American Association of Colleges of Osteopathic Medicine (as defined in osteopathic medical schools' mission statements<sup>9</sup>) and the American Osteopathic Association's Council on Research.<sup>10</sup> Actively engaging in research and the research process increases intellectual curiosity by laying the foundation needed for understanding research on new treatments, cures, and patient management. Smith-Barbaro and O-Yurvati<sup>8</sup> outline the various research opportunities open to the school's medical students. During any given academic year, between 70 and 80 students are actively working on a research project.

The mission of UNTHSC/TCOM serves as the light that guides day-to-day operations. We continue to explore innovative evidence-based approaches toward advancing the continuum of osteopathic medical education and its competency initiative through improving osteopathic-based education methods, developing and supporting research programs, and establishing excellence in patient care. Focusing our mission on preparing tomorrow's patient-centered physician has also allowed us to focus on major initiatives centered around patient safety, interprofessional education and practice, and population health. Through these efforts, UNTHSC/TCOM continues to create solutions for a healthier community. (doi:10.7556/jaoa.2016.139)

## Acknowledgment

*We thank Don N. Peska, DO, dean of UNTHSC/TCOM, for his continued support of research.*

## References

1. Orenstein R. ENGAGE Initiative: showcasing osteopathic scholarly activity [editorial]. *J Am Osteopath Assoc*. 2016;116(5):276-277. doi:10.7556/jaoa.2016.054
2. Hensel KL, Carnes MS, Stoll ST. Pregnancy Research on Osteopathic Manipulation Optimizing Treatment Effects: the PROMOTE study protocol. *J Am Osteopath Assoc*. 2016;116(11):716-724. doi:10.7556/jaoa.2016.142
3. Hensel KL, Roane BM, Chaphekar AV, Smith-Barbaro P. PROMOTE study: safety of osteopathic manipulative treatment during the third trimester by labor and delivery outcomes. *J Am Osteopath Assoc*. 2016;116(11):698-703. doi:10.7556/jaoa.2016.140
4. Hensel KL, Buchanan S, Brown SK, Rodriguez M, Cruiser dA. Pregnancy Research on Osteopathic Manipulation Optimizing Treatment Effects: the PROMOTE study. *Am J Obstet Gynecol*. 2015;212:108.e1-108.e9.
5. Papa FJ, D'Agostino D. Faculty development directed at curricular reforms designed to improve patient care outcomes. *J Am Osteopath Assoc*. 2016;116(11):736-741. doi:10.7556/jaoa.2016.144
6. D'Agostino D, Papa FJ. Outcomes-oriented medical training: a critical curricular design consideration in developing 21st century health care professionals. *J Am Osteopath Assoc*. 2016;116(11):742-746. doi:10.7556/jaoa.2016.145
7. Seals R, Gustowski S, Kominski C, Li F. Does replacing live demonstration with instructional videos improve student satisfaction and osteopathic manipulative treatment examination performance? *J Am Osteopath Assoc*. 2016;116(11):726-734. doi:10.7556/jaoa.2016.143
8. Smith-Barbaro P, O-Yurvatti AH. Programmatic approach to increasing osteopathic medical student participation in research: the TCOM experience. *J Am Osteopath Assoc*. 2016;116(11):747-752. doi:10.7556/jaoa.2016.146
9. Osteopathic Medical College Information Book: Entering Class 2017. Chevy Chase, MD; American Association of Colleges of Osteopathic Medicine; 2016. [http://www.aacom.org/docs/default-source/cib/cib\\_web\\_full-publication.pdf?sfvrsn=36s](http://www.aacom.org/docs/default-source/cib/cib_web_full-publication.pdf?sfvrsn=36s). Accessed October 12, 2016.
10. Degenhardt BF, Standley PR. 2013-2022 strategic plan for research: a role for everyone in promoting research in the osteopathic medical profession. *J Am Osteopath Assoc*. 2013;113(9):654-659. doi:10.7556/jaoa.2013.029

© 2016 American Osteopathic Association

**Keywords:** medical education, osteopathic medicine