

2013-2022 Strategic Plan for Research: A Role for Everyone in Promoting Research in the Osteopathic Medical Profession

Brian F. Degenhardt, DO
Paul R. Standley, PhD

From the A.T. Still Research Institute at A.T. Still University in Kirksville, Missouri (Dr Degenhardt), and the University of Arizona College of Medicine in Phoenix (Dr Standley). Dr Degenhardt is a member of the American Osteopathic Association's Council on Research.

Financial Disclosures:
None reported.

Address correspondence to
Brian F. Degenhardt, DO,
A.T. Still Research Institute,
A.T. Still University,
800 W Jefferson St,
Kirksville, MO 63501-1443.

E-mail:
bdegenhardt@atsu.edu

Submitted
July 30, 2013;
accepted
August 6, 2013.

During the 20th century, the osteopathic profession demonstrated that it is a comprehensive medical profession, producing physicians who work equally and cooperatively with allopathic physicians. As a result, the osteopathic profession has earned the right to share the same obligations, responsibilities, and challenges as the allopathic profession. Because the aim of medicine is to provide safe, effective, efficient, timely, patient-centered, and equitable care, society expects that this care be identified, described, and implemented—ie, evidence based.¹ Through technology, records of practitioners and their associated health care facilities can be assessed for the type of care they provide. After comparison with evidence-based medicine standards, practitioners and their facilities can be held accountable for the consistency of their services to national benchmarks. Further, society obligates medical professions and their institutions of higher learning to advance the knowledge and understanding of health, health maintenance, and disease prevention, eradication, and management. This dual responsibility of demonstrating and sustaining quality patient care, as well as performing research to advance the health of society, defines health care professions of the 21st century.

One could argue that the osteopathic profession arose from the desire to improve the efficacy of medical practices. Yet for several decades there have been calls within the osteopathic medical profession for its colleges and graduate medical education programs to prioritize research to advance the practice of medicine.²⁻¹³ In the second half of the last century, the American Osteopathic Association (AOA) provided grants to support pilot projects to help its members gain the experience and data needed to compete for government and foundation grants. Although such support is important, the funding was limited and produced minimal contributions to the published scientific literature.^{14,15}

Crafting the Strategic Research Plan

At the beginning of this century, the profession began to take ownership of its important role in research by increasing its investment in infrastructure and research activities.^{14,15} Several organizations within the osteopathic medical profession established the Osteopathic Research Taskforce, held several Osteopathic Clinical Coordinating Trials Initiative Conferences, and financially supported the establishment of The Osteopathic Research Center in Fort Worth, Texas.¹⁶ Foundations financially supported higher-level research projects,¹⁷ and the Osteopathic Heritage Foundations established endowments at various osteopathic medical schools to promote meaningful research productivity.¹⁸ The Osteopathic Research Taskforce, made up of representatives from numerous constituencies within the osteopathic medical profession, produced the 2003 report *Osteopathic Manipulative Medicine Research: A 21st Century Vision—National OMM Research Synergy White Paper*,¹⁹ the profession's first strategic plan for research. Using manual medicine research as a marker of the research performed within the profession, there has been a 300% increase in peer-reviewed publications in the first decade of this century.²⁰ Underlying these successes, though, are some signs of immaturity as a fully recognized, comprehensive health care profession. Only a few osteopathic institutions sustain research programs. On an annual basis, the AOA commits approximately \$250,000 to research from funds originally donated by members of the profession in the 1990s. This amount is less than what the National Institutes of Health invests in a single pilot project.²¹ Furthermore, the profession has not addressed many of the priorities and strategies outlined in the 2003 strategic plan¹⁹ (*Figure*), and many constituents may not even be aware of them.²²

In 2011, the AOA's Council on Research (COR) prioritized the evaluation of research performed within the osteopathic medical profession and the development of a new 10-year strategic research plan. In 2012, an online community was developed, inviting representatives within the profession from all osteopathic medical colleges and research communities to participate in a "strengths, weaknesses, opportunities, and threats" analysis of research within the osteopathic profession, including a critical assessment of the 2003 White Paper. On the basis of these analyses, recommendations and strategies for the 2013-2022 Strategic Research Plan were constructed and then refined by the online community.

In September 2012, the plan was vetted and refined at the COR's special strategic planning meeting. Then, as part of the AOA Annual Research Conference in October 2012, approximately 250 members of the profession reviewed and commented on the plan. In December 2012, the AOA Bureau of Osteopathic Clinical Education and Research (BOCER) reviewed, refined, and approved the Strategic Research Plan. Concurrently, leadership at the American Association of Colleges of Osteopathic Medicine reviewed and offered refinements to the plan, which were consistent with BOCER's actions. The deans and directors of research from all osteopathic medical schools were given another opportunity to review the plan and give feedback in January 2013. The Strategic Research Plan, designed to enable a culture of research within the osteopathic family as promoted within the *AOA Strategic Plan FY 2014-16*,²³ was approved in concept by the AOA Board of Trustees in March 2013 (Resolution B-27—"2013-22 Research Strategic Plan for the Osteopathic Medical Profession").

Funding and Resources
Lack of adequate money to fund pilot projects
Research Activities
Insufficient number of OMM research studies under way
Inadequate interactions between basic and clinical scientists
Inadequate vehicles for disseminating research results
Inadequate supply of trained researchers
Lack of accountability for researchers
Non-OMM osteopathic specialists question the relevance of OMM research to their practices
No universally available central data pool on previous research studies
Research Training
Insufficient opportunities for research training in OMM
No broadly adopted and assessed research objectives or competencies
No National Institutes of Health–supported osteopathic medical scientist training program
No identified mechanism to train and support midcareer physician scientists
No dedicated pool of money for timely osteopathic medical student and resident research
Infrastructure
No commitment from most colleges of osteopathic medicine to foster a culture of research
Health Policy
General paucity of evidence-based medicine to justify reimbursement
Evidence base that does exist is not recorded or disseminated to impact stakeholders and health policy decision makers
Poor communication between OMM researchers, OMM research-oriented committees and organizations, and AOA leadership
Leadership
Unclear OMM research priorities cause lack of cohesiveness in OMM research
No broad-based team given formal recognized authority to serve as the strategic leader of OMM research efforts

Figure.

Summary of challenges facing the osteopathic medical profession in the arena of osteopathic manipulative medicine (OMM) as noted in *Osteopathic Manipulative Medicine Research: A 21st Century Vision—National OMM Research Synergy White Paper*.¹⁹ Adapted with permission from Degenhardt BF, Stoll ST. Research priorities in osteopathic medicine. In: Chila AG, executive ed. *Foundations of Osteopathic Medicine*. 3rd ed. Baltimore, MD: Lippincott Williams & Wilkins; 2011:1039-1052.²²

Overview of the Strategic Research Plan

The 2013-2022 Strategic Research Plan²⁴ consists of 13 prioritized recommendations (*Table*), proposed implementation strategies, responsible parties for carrying out each recommendation, and a timeline for implementation. This format was developed to focus the COR's responsibilities as facilitators and coordinators of research within the profession. Even though many people participated in the plan's development, optimal success is contingent on everyone in the profession fulfilling a role in the plan. The AOA wants to promote an attitude within each individual and each institution's administration that says, "Hey, I can do this, and we can do that," to identify strategies to make each recommendation a reality. By doing so, the implementation strategies, responsible parties, and priorities originate throughout the profession and not from the architects of the plan. Having the entire profession take ownership of this strategic plan is the foundation for its success. The recommendations are intentionally worded very strongly, demonstrating the AOA's affirmation of and commitment to the insights established in the strategic planning process. Also, some recommendations focus on certain groups within the profession, such as osteopathic medical schools. As such, these recommendations recognize the critical roles that these groups fill within the osteopathic profession.

The first 2 recommendations are pivotal for success. Research requires resources. Resources require investment, which begins with dollars. Smart investors do not finance businesses that do not have the skill sets to make reasonable returns on their investments. In this case, the return from research is expected to be advancement in the practice of medicine. Consequently, the profession must invest in itself to demonstrate that it is worth the risk of greater investments. Each individual and each institution has a role in meeting this recommendation. Currently, the profession should not worry about the amount of the investment but the principle and com-

mitment of meeting our societal obligation to advance the practice of medicine. Better financing of research is fundamental and will take a little time, creative thinking, coordination, and commitment from the entire profession to delineate the right strategy to address this recommendation. We are confident that by the end of 2015, such a plan will be implemented.

Readers may be skeptical and want to ignore this plan because of these financial issues. This inclination could be justified if research was performed as it was in the 20th century, when large buildings, expensive equipment, and independent researchers were required for every institution to move research forward. The AOA challenges the members of the profession to engage the 21st century research model that occurs wherever patient care and clinical training occur. Therefore, the profession needs to prioritize clinical research that pursues meaningful questions with methods designed by experts in the field of study.

In the 21st century, research teams often consist of interdisciplinary and interinstitutional experts. These projects will be managed by experienced research teams who will support academic and clinical sites throughout the profession where the protocols and data collection are performed. While some sites will be better suited for certain types of research, all sites will need to participate in studies that are appropriate for their structure. In addition, translational research, a necessary part of the profession's research portfolio, will likely be performed by the profession's established "research-oriented" universities, and their outcomes will shape future clinical research within the profession. From this 21st century research model, a culture of performing meaningful research will develop throughout the profession, and the profession will become recognized as an active contributor in discovering new knowledge and advancing health care. With appropriate planning, this blueprint is a model the profession can afford and must invest in. Facilitated by the

Table.
2013-2022 Strategic Research Plan for the Osteopathic Medical Profession²⁴

Recommendation	Timeline for Implementation
1. Every member of the osteopathic medical profession must financially support the research efforts of the profession.	Define and initiate strategy by 2016
2. Every college of osteopathic medicine (COM) must financially support the research efforts of the profession by establishing standards for internal research funding.	Initiate strategy by 2015
3. The American Osteopathic Association (AOA) Council on Research (COR) must develop and enhance funding collaborations with external organizations, such as patient advocacy groups, foundations, the National Institutes of Health (NIH), and the Agency for Healthcare Research and Quality.	Initiate strategy by 2014
4. The AOA and the AOA Commission on Osteopathic College Accreditation must set research standards, vigorously encourage research, and enforce these research standards at every COM and Osteopathic Postdoctoral Training Institution.	Define and initiate strategy by 2016
5. The AOA must broaden funding eligibility to ensure the best research is supported; priority must also be given to interinstitutional research programs.	Initiate strategy by 2014
6. The AOA must preferentially fund programs composed of teams of leading basic and clinical researchers. Clear priority criteria regarding how grant funding is prioritized must be defined and disseminated.	Initiate strategy by 2015
7. The AOA's COR must create specific requests for applications to ensure that only research that meets a threshold with the potential to significantly impact community and health policy is funded.	Initiate strategy by 2014
8. The AOA must ensure that some funding in each cycle targets promising junior investigators (those within 10 years of completing their terminal research degree or medical residency).	Initiate strategy by 2014
9. A review board must be established and empowered to monitor, assess, and promote research within the osteopathic medical profession.	Initiate strategy by 2014
10. A system of mentorship must be established and maintained among successful senior researchers and junior clinical and biomedical researchers.	Initiate strategy by 2017
11. A system needs to be developed and maintained to annually assess original research publications and disseminate conclusions to training programs to improve research and curriculum practices.	Initiate strategy by 2014
12. The profession must encourage more AOA members to serve on NIH study sections and other national review panels.	Initiate strategy by 2015
13. The AOA must update its scientific conferences to enhance member education, unity within the profession, and collaboration with other disciplines.	Initiate strategy by 2015

COR, leaders within the profession need to work together to design such a business plan, assist in achieving its broad support, and help in its implementation by the end of 2015.

Although many of the recommendations within the 2013-2022 Strategic Research Plan are self-explanatory, it is important to highlight 3 features. First, the 10-year strategic plan prioritizes the involvement of young clinicians in research so that successes can be maintained and expanded through subsequent generations of osteopathic physicians. Involving young physicians also ensures that lessons learned during the efforts of this decade are not forgotten and are used to develop new strategies to keep the profession meaningfully engaged in research. Second, the plan proposes that if the profession is committed to its responsibility of advancing health care through science, then the profession needs to provide the oversight and encouragement to keep research in the forefront of the profession's activities. Third, the plan recognizes that the profession needs to actively and systematically begin identifying newly discovered evidence, particularly in those areas relevant to osteopathic principles and practice, and concurrently disseminating and incorporating the evidence into current practices and educational programs.

Call to Action

The osteopathic medical profession needs to actively engage this plan, which is an unprecedented vision for research within the profession. The 2013-2022 Strategic Research Plan²⁴ is intended to be a living document that grows stronger over time with appropriate attention, nurturing, and pruning. It is paramount that this plan is not ignored. The AOA believes strongly that we, the entire osteopathic medical profession, must build, strengthen, and support a culture that promotes and sustains an attitude within each individual and each institution's administration of, "We can do this and we must do this."

Everyone is charged to identify his or her role within the plan, from osteopathic medical student to retired physician, from rural clinic to metropolitan hospital, from new osteopathic medical school to long-established university. Now is the time for the profession to create a culture and an infrastructure that produce meaningful research that contributes to the advancement of health care. (doi:10.7556/jaoa.2013.029)

Acknowledgments

We acknowledge and thank the following current and past members of the AOA Council on Research who were involved in the development of the strategic plan: Richard R. Thacker, DO, chair; John K. Lynch, DO, MPH; Brian H. Hallas, PhD; Justin McCormick, PhD; Gregg Lund, DO; Thad Wilson, PhD; Richard A. Vincent, MBA; Stanley E. Grogg, DO; Paul Wood, PhD; William J. Burke, DO (2010-2012, immediate past chair); Jay H. Shubrook Jr, DO (2011-2013); Jennifer DePry, DO (2011-2012); and Jayme D. Mancini, DO (2012-2013). In addition, we acknowledge and thank the following major contributors to the strategic plan: Ronald R. Burns, DO, chair of the Department of Research, Quality, and Public Health (2012-2013); Richard J. Snow, DO, MPH; David J. Massello; and Thanh V. Cao. And finally, we acknowledge and thank AOA staff members James Swartwout, MA; Sharon McGill, MPH; and Gloria Dillard, MPH.

References

1. Institute of Medicine. Committee on Quality of Health Care in America. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press; 2001.
2. Sorg RJ, Shaw HA. Osteopathic research priorities. *J Am Osteopath Assoc*. 1985;85(11):736-738.
3. Rivers DW. AOA initiatives in research. *J Am Osteopath Assoc*. 1987;87(11):753-754.
4. D'Alonzo GE. Clinical research in osteopathic medicine. *J Am Osteopath Assoc*. 1987;87(6):440-445.
5. Allen TW. Osteopathic research: where have we been and where are we going [editorial]? *J Am Osteopath Assoc*. 1991;91(2):122.
6. Korr IM. Osteopathic research: the needed paradigm shift. *J Am Osteopath Assoc*. 1991;91(2):156,161-168,170-171.
7. Papa FJ. Research secures the future of osteopathic medicine: part 1, research—foundation for faculty development, institutional recognition. *J Am Osteopath Assoc*. 1993;93(5):606-610.
8. Gevitz N. 'Parallel and distinctive': the philosophic pathway for reform in osteopathic medical education. *J Am Osteopath Assoc*. 1994;94(4):328-332.
9. Wood DL. Research lacking in osteopathic medical profession. *J Am Osteopath Assoc*. 1997;97(1):23.
10. McGill SL, Retz KC. Research programs of the AOA and their role in osteopathic medical education. *J Am Osteopath Assoc*. 1998;98(11):627-631.
11. Rodgers FJ, Dyer MJ. Adopting research. *J Am Osteopath Assoc*. 2000;100(4):234,237.
12. Northup GW. An adventure in excellence [reprint from *J Am Osteopath Assoc*. 1962;61:613-617]. *J Am Osteopathic Assoc*. 2001;101(12):726-730.
13. Patterson MM. Osteopathic research: challenges of the future. In: Ward RC, executive ed. *Foundations for Osteopathic Medicine*. 2nd ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2003:1219-1228.
14. Rose RC, Prozialeck WC. Productivity outcomes for recent grants and fellowships awarded by the American Osteopathic Association Bureau of Research. *J Am Osteopath Assoc*. 2003;103(9):435-440.
15. Guillory VJ, Sharp G. Research at US colleges of osteopathic medicine: a decade of growth. *J Am Osteopath Assoc*. 2003;103(4):176-181.
16. Rubin B, Rose RC. AOA Bureau of Research provides retrospective on 2000 Research Conference. *J Am Osteopath Assoc*. 2001;101(3):154-155.
17. Noll DR, Degenhardt BF, Morley TF, et al. Efficacy of osteopathic manipulation as an adjunctive treatment for hospitalized patients with pneumonia: a randomized controlled trial. *Osteopath Med Prim Care*. 2010;4:2. doi:10.1186/1750-4732-4-2.
18. Osteopathic medical education. Osteopathic Heritage Foundations website. <http://www.osteopathicheritage.org/FundingPriorities/EducationResearch/medicalresearch.aspx>. Accessed July 28, 2013.
19. Research Synergy Conclave. *Osteopathic Manipulative Medicine Research: A 21st Century Vision—National OMM Research Synergy White Paper*. Chevy Chase, MD: American Association of Colleges of Osteopathic Medicine; 2003. <http://www.aacom.org/InfoFor/researchers/Documents/synergy-white-paper.doc>. Published September 2003. Accessed July 29, 2013.
20. Degenhardt BF. Seventy-five years of osteopathic research. Presented at: American Academy of Osteopathy Annual Convocation; March 25, 2012; Louisville, KY.
21. NIH Exploratory/Developmental Research Grant Award (R21). National Institutes of Health website. <http://grants.nih.gov/grants/funding/r21.htm>. Accessed August 12, 2013.
22. Degenhardt BF, Stoll ST. Research priorities in osteopathic medicine. In: Chila AG, executive ed. *Foundations of Osteopathic Medicine*. 3rd ed. Baltimore, MD: Lippincott Williams & Wilkins; 2011:1039-1052.
23. *AOA Strategic Plan FY 2014-16*. Chicago, IL: American Osteopathic Association; 2013. <http://www.osteopathic.org/inside-aoa/about/leadership/Documents/aoa-strategic-plan.pdf>. Accessed August 8, 2013.
24. AOA Council on Research. *2013-22 Research Strategic Plan for the Osteopathic Medical Profession*. Chicago, IL: American Osteopathic Association; 2013.

© 2013 American Osteopathic Association