Integrating Research Into Osteopathic Clinical Practice

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Objectives

- Hurdles for OMT research
- Amount of current research
- Needs for the future
- Definition of EBM
- Support and resources for osteopathic research
Who I am...
What I Did

- Full time pediatrician at Nationwide Children’s Hospital
- Co-Program Director of Osteopathic Recognition Track
- 75% pediatric OMM
- Taught residents, med students, and more
My New Role

- Director of Pediatric OMM
  - Developing peds OMM clinics
  - Increase pediatric OMM research
  - Integration with primary care
  - Improve pediatric OMM experiences for all students
And Research?

- Medical school
- Residency
- Larger projects and publications as an attending
  - Asthma
  - Latch dysfunction
  - OMT usage
  - OMT and Concussions
  - OMT and Autism
  - Osteopathic philosophy
Evidence-Based Medicine

- Evidence-based medicine - first “coined” in 1991 (JAMA)
- “Conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients.”
- “Good doctors use both individual clinical expertise and the best available external evidence, and neither alone is enough.”

BMJ 1996
What Is Evidence-Based Medicine?

Clinical Judgment

Relevant Scientific Evidence

Patients’ Values and Preferences

EBM

Osteopathic Roots in EBM

- Following in Still’s footsteps
  - Basis of osteopathic medicine is “of such exact, exhaustive, and verifiable knowledge of the structure and function of the human mechanism.” (Still, 1897)
  - “DO means Dig On.” (Still, personal papers)
Gaps to Fill

- Unprecedented growth of the field
- 1:4 med students
- 68% ↑ in last 10 years
- By 2030, >20% of all practicing physicians!

*Source: AOA Physician Masterfile
* Source: AACOM Fall 2017 Preliminary Enrollment Report (includes 2017 graduates)
Single Accreditation

- Agreement between AACOM, AOA, and ACGME to have single system for all GME - 2014
- 2015-2020 to implement
- Pros: Expands residency/fellowship opportunities, standardized/simplified approach
- Con: Potential decrease in osteopathic training in GME
Osteopathic Recognition

▶ ACGME Document on Osteopathic Recognition

I.A. Osteopathic Recognition is conferred upon any ACGME-accredited graduate medical education program providing requisite training in the Osteopathic Principles and Practice (OPP).

I.B. Programs may be deemed to have Osteopathic Recognition after appropriate application, evaluation, and review of the standards outlined below. Programs receiving Osteopathic Recognition may designate the entire program as osteopathic-focused or designate a portion of the program as an osteopathic-focused track.

I.C. Osteopathic Principles and Practice refers to a philosophical and practical approach to patient management and treatment based on an understanding of body unity, self-healing, and self-regulatory mechanisms, and the interrelationship of structure and function. Osteopathic-focused programs must include integration of Osteopathic Principles and Practice into the six ACGME core competency areas.
III.B. Osteopathic-focused programs, or such tracks within a program, must:

III.B.1. provide residents with instruction and evaluation in the integration of Osteopathic Principles and Practice;

III.B.2. promote the use of Osteopathic Principles and Practice throughout the educational program;

III.B.3. create an environment that supports scholarly activity to advance Osteopathic Principles and Practice;

III.B.4. embed the four tenets of osteopathic medicine into the educational program (see I.C.1);

III.B.5. demonstrate commitment from educators and leaders (e.g., DO, MD, PhD, EdD) to create and maintain the required learning environment for all residents;

III.B.6. maintain a sufficient number of faculty members (MD or DO) who, through prior training and certifications, are able to supervise the performance of osteopathic manipulative medicine in the clinical setting as applicable to patient care;
ensure access to a variety of learning resources to support osteopathic medical education, including reference material pertaining to osteopathic manipulative medicine and Osteopathic Principles and Practice integration into patient care;

provide learning activities to advance the procedural skill acquisition of osteopathic manipulative medicine for both residents and faculty members;

demonstrate participation by faculty members and residents in scholarly activity specific to Osteopathic Principles and Practice;

participate in the continuum of osteopathic medical education;

promote resident teaching of Osteopathic Principles and Practice, such as resident-delivered integrated Osteopathic Principles and Practice didactic lectures, hands-on osteopathic manipulative medicine workshops, and/or resident-led journal clubs; and,

communicate to the interprofessional collaborative team the philosophy of Osteopathic Principles and Practice.
National Institutes of Health (NIH) research funding in 2011 sorted by educational institution type using data extracted from NIH's RePORT (Research Portfolio Online Reporting Tools). The 7 lowest-funded institution types are shown in the inset to increase discrimination clarity, with “Schools of Osteopathy” last. The NIH categorizes osteopathic medical schools as “schools of osteopathy.”
For Our Future

- Increased validity within the field and beyond
- More evidence/studies = more funding
- Improved reimbursement for OMT
- Promote the osteopathic profession
- Change the culture of osteopathic medicine starting at the student level
- Influence policy changes - locally and beyond
Evidence-based Medicine Spectrum

Practice Experience

Clinical Research

Evidence Review

Evidence Synthesis

Consensus Statement

Clinical Decision Support

Medical Education

Quality Improvement

Healthcare Policy

E-Decision Support

EMRs/e-reminders

Checklists pocketcards, etc

CME/non-CME

Simulation/VR

Other education

PMs

PIMs

Other PI projects

Reimbursement

Facilities planning/approvals

Health and Science Policy
EBM for OMM

THE EVIDENCE
Sports and Joint Mobility

The Science Of Osteopathic Medicine

American doctors come in two flavors: MD and DO. In addition to what MDs can do, DOs can diagnose & treat patients using a developed sense of touch. Here is just some of the science demonstrating the benefits of Osteopathic Manipulative Treatment (OMT).

Posted on November 16, 2014, at 9:16 p.m.

boltazsurgery
Community Brand Publisher

Back Pain

via ncbi.nlm.nih.gov

Share Pin


Knebl JA et al (JAOA, 2002) used OMT in a randomized controlled trial to improve shoulder function in the elderly.

Eisenhart AW et al (JAOA, 2003) showed OMT improves ankle injuries in the ER.

Howell JN et al (JAOA, 2003) showed OMT improves Achilles tendinitis.

Wynne MM et al (JAOA, 2006) showed OMT improves plantar fasciitis.

Alburquerque-Sendín F et al (Man Ther, 2009) showed that OMT improves standing stability.

Hidalgo-Lozano A et al (J Bodyw Mov Thor, 2011) treated shoulder pain with trigger point OMT.


Brumm LF et al (JAOA, 2013) did a cohort study and showed less stress fractures occurred in cross-country athletes who received OMT.

Bernes PL et al (J Bodyw Mov Thor, 2013) used objective measures to detect changes in neck muscle function after OMT.
The Evidence...

Lack of good evidence for many reasons

- Individualized nature → protocols are difficult
- Small numbers of patients enrolled in pilot studies
- Strength of evidence
- Number of D.O.s doing OMT
- Subjective nature
- Sham treatments
- Lack of training and funding starting in medical school
Individualized Nature

- Standardized protocols are difficult
  - Patients with low back pain
    - Pelvis/sacrum vs lumbar spine
    - Muscles vs ligaments vs nerves
    - Viscerosomatic
  - Patients with headaches
    - Trauma history
    - Migraines
    - Sinus headache
    - Tension/cervicogenic
*TRIP searches filtered AND unfiltered information simultaneously.
Small Number of D.O.s

Ohio, 2002

- 871 physician responses
- 75% had not or had rarely used OMT
  - 44% using none
  - 31% <10 pts/week prior to the survey
  - 25% treated >10/week
  - 6% treated >30/week

National, 1998

- 955 physicians responses
- ~85% rarely or no OMT use
  - 53.5% have <5% of OMT pts
  - 30.1% have 5-25%
  - Only 6.1% have 76-100%
Subjective Nature

Some things are hard to quantify or explain

- Increased appetite
- Better mood
- Quality of life
- Improved sleep
- Being more “present”
Sham Treatments?

- Light touch
- Pediatrics
- Cranial osteopathy
- Ultrasound
- What else?
Osteopathic Brainstorming

- Utilization of OMT
- Patient satisfaction
- Problem-focused
  - Large volume of specific complaint
  - Lack of allopathic treatment options: plagiocephaly, concussions, herniated disks, carpal tunnel, latch problems
  - Zebra diagnoses - great case studies!
- OMT teaching techniques
- Basic science
- Passion!
Case Study

- Specific case write-up about one patient
- Example: Concussions and Osteopathic Manipulative Treatment: An Adolescent Case Presentation (JAOA, Mar 2016)

- Great for unique cases or as foundation for future needs/studies!
Case Series

- Tracks series of patients with similar known exposure (e.g. treatment with OMT) to observe their outcomes

Case Control Studies

- Observational
- 2 groups with different outcome are identified and compared on a supposed causal attribute

Example: Osteopathic Manipulative Treatment in Prenatal Care: A Retrospective Case Control Design Study (JAOA, December 2003)
- Compared those who got OMT to those who did not and looked at meconium staining, preterm delivery, use of forceps, and cesarean delivery
Cohort Studies

- Longitudinal follow-up of a group of people with documentation of relevant characteristics or events (risk factors that lead to a disease for example)

- Predictive Relationship of Osteopathic Manual Medicine Grades and COMLEX-USA Level 1 Total Scores and Osteopathic Principles and Practice Subscores (JAOA 2014)
Randomized-Controlled Trials

- “Gold standard” for clinical trial
- Randomized to a group - treatment or not
- Controlled - compared to group receiving no treatment

- Example: Recovery from Chronic Low Back Pain After Osteopathic Manipulative Treatment: A Randomized Controlled Trial (JAOA, March 2016)
Systematic Review

- Literature review that collects and critically analyzes multiple studies/papers

Meta-Analysis

- Conducting research about prior research
- Aims to give higher statistical powers and minimize error
- Example: American Osteopathic Association Guidelines for Osteopathic Manipulative Treatment (OMT) for Patients with Low Back Pain (JAOA, Nov 2010)
- Need more research before can do more meta-analysis!
Barriers in Practice

- TIME
- Funding
- Lack of interest/engagement
- Inadequate training
- Lack of mentors
Time

- Be aware of the time you have!
- Protected admin time
- Prioritize
- Delegate

http://www.inspiredlivingmedical.com/thechicagoms-precious-time/
Funding

Grants available

- American Osteopathic Association
- American Academy of Osteopathy
- American Osteopathic Foundation
- American Association of Colleges of Osteopathic Medicine
- FORCE
- NIH - National Center for Complementary and Integrative Health
- Local/state foundations
- Institutional grants - schools and hospitals
Lack of Engagement

Create the culture
- Invest in research faculty
- Incentivize research
- Mentoring
- Training for students and faculty
  - Epidemiology
  - Statistics
- Research accreditation standards/mission statement
Training and Mentors

- Train faculty
- Establish mentors
- Engage students/faculty
- Increase demand
- Increase productivity
Incentives for Scholarly Activity

- Poster competitions
  - OMED, Convocation
  - Local conferences/research day
  - Financial awards
- Research experience invaluable for future career
  - Easier to do with faculty and institutional support
- Build CV with publications and presentations
Show me the money!
5 research priorities for AOA

- Osteopathic Philosophy
  - Cost Effectiveness and Value-Based Care
  - Osteopathic Philosophy and Differences in Communication, Compassion/Empathy, or Patient Satisfaction Grant

- Chronic Diseases and Conditions
  - Obesity and Metabolic Disorders

- OMM/OMT
  - Effect of OMT on inflammation
  - Osteopathic approach on Parkinson’s Disease

- Musculoskeletal Injuries and Prevention
  - Upper Crossed Syndrome

- Pain Management
  - Chronic Pain Management (>3 months)
American Academy of Osteopathy

Louisa Burns Osteopathic Research Committee

Research Focus Areas

- Mechanisms of action of NMM/OMM treatment
- Clinical efficacy of NMM/OMM treatment
- Inter- and intra-rater reliability of palpatory/sensory assessment
- Cost effectiveness of osteopathic health care
- Osteopathic physician-patient interactions
- Methods of teaching palpation, sensing, diagnosis, and NMM/OMM treatment
- Collection of normative data in OMM techniques
- Validation of OMM techniques specific research methodology
The AOF offers a variety of scholarships and awards, special projects and programs, and grants for members of the osteopathic profession.

The AOF’s board of directors, committees, and staff take great pride in our ability to support programs and services that promote osteopathic medicine and enhance patient-centered care.
Funding Priorities

Community-based initiatives in targeted communities
Advancements in osteopathic medical care
- Undergraduate medical education
- Post-graduate training
- Medical research
Website provides resources for fellowships, grants, and internships

www.aacom.org

AACOM Research Grants

Priority given if potential for inter-institutional collaboration

Pertinent theme for osteopathic research:

Identification of distinctive features of OME (e.g. training in the use of touch as part of osteopathic practice, etc)
Foundation for Osteopathic Research and Continuous Education

FORCE funds an Executive Management Team for projects it sponsors

May also provide Project Teams for larger multi-faceted projects

Help fund the project itself
Under the NIH

“...studies focusing on complementary health interventions used frequently by the American public, and on the conditions for which they are most frequently used are particularly encouraged.”

“...Include...investigations of the impact of complementary health modalities in alleviating chronic pain syndromes and inflammatory processes, and improving health and wellness.”
Local Funding Opportunities

- Individual colleges have different funding opportunities or support for finding what you need
- Hospitals have research grants available
Osteopathic Resources
American Academy of Osteopathy

- The AAO Journal (AAOJ)
  - Printed quarterly
  - Not easily searchable
- OsteoBlast
  - Emailed weekly
  - Summarizes articles on manual medicine published by peer-reviewed journals
Louisa Burns Osteopathic Research Committee

- Focus on clinical research involving health care outcomes in practice of OMM

- Subcommittees
  - SOAR: Student Osteopathic Academic Research
  - Research Poster Competition
  - Research Training Conference
  - Research Grant
  - Networking/Consultation/Mentoring

- LBORC@academyofosteopathy.org
The *International Journal of Osteopathic Medicine* is a peer-reviewed journal that provides for the publication of high quality research articles and review papers that are as broad as the many disciplines that influence and underpin the principles and practice of *osteopathic medicine*. Particular emphasis is given to basic science research, *clinical epidemiology* and *health social science* in relation to *osteopathy* and *neuromusculoskeletal medicine*. 
American Osteopathic Association

- Journal of the American Osteopathic Association (JAOA)
  - Published monthly
  - JAOA
- AOA Data Request
  - Data Request Form
- OSTMED: The Osteopathic Literature Database
  - Sponsored by AOA and AACOM
  - Bibliographic citations with abstracts only
  - OSTMED.DR (Digital Repository)
    - Full text, indexed, searchable
    - OSTMED.DR
The Osteopathic Cranial Academy

- Access to bibliography of “most often cited and most useful research on osteopathic manipulation”
- A discussion on research with a focus on cranial osteopathy
- Osteopathic research news updates
The Osteopathic Research Center

- Affiliated with Texas College of Osteopathic Medicine, 2002
- Responsible for OSTEOPATHIC Trial → AOA’s only clinical practice guideline
- Original mission: “conduct research on mechanistic and clinical aspects of osteopathic manipulative treatment.”
  - Now also “address issues...relevant to health services and policy research and to primary care practice in general.”
- Consortium for Collaborative Osteopathic Research and Development - Practice-Based Research Network

https://jaoa.org/article.aspx?articleid=2094503
Mission, Purpose, and Values

Our mission is to promote and conduct practice-based research that will further the practice of osteopathic manipulative medicine.

Our purpose is to create and sustain a network of clinicians engaged in the assessment of the clinical usefulness of OMM.

Values

- We value a practice of medicine that promotes health and optimizes humans’ inherent healing capacity.
- We value and promote the advancement of osteopathic medicine through research by supporting clinicians who integrate research into the daily practice of medicine.
- We value, promote and produce research that translates easily into primary care.
Osteopathic Texts

- AAO's Bookstore
- AACOM's Recommendations
- OCA's Store
- Books and Bones
Questions?

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