Do Osteopathic Physicians Provide Greater Value? A Multi-level Analysis

Mark Speicher, PhD, FNAOME; Lori A. Kemper, DO, FACOFP; Michael Jones, OMS II; Midwestern University, Arizona College of Osteopathic Medicine

Introduction: What we are doing

Value is considered the right price at the right time for the right service with the goal of timely and beneficial outcomes. The rising costs of healthcare have engendered important conversations about the current value of health care. In November 2008, the Institute of Medicine (IOM) Roundtable on Value and Science-Driven Health Care determined that the value of healthcare was dependent upon the stakeholder involved: patients wanted quality relationships with their physicians and were sensitive to the value of their time and out of pocket costs; employers wanted their employees and employees’ families to be healthier; insurers wanted interventions that were supported by high-level scientific evidence.

There are reasons to believe that the care provided by osteopathic (DO) physicians should be measurably different than the care provided by their allopathic (MD) counterparts. The osteopathic tenets provide a framework through which osteopathic medical care is provided. The tenets are:

- The body is a unit and the person is composed of mind, body and spirit.
- The body is able to self-regulate, self-heal and maintain health.
- There is a reciprocal interrelationship between function and structure.
- Rational treatment is based on an understanding of the first three tenets.

This focus on holistic treatment, self-healing, and long-term beneficial outcomes should deliver the value that patients, employers, and insurers desire. Although previous research findings are inconclusive, some research appears to support the hypothesis that osteopathic care brings greater value.

Methods: How we will conduct the study

Propensity Score Matching (PSM) – goal is to mimic a Randomized Controlled Trial (RCT) and eliminate selection bias by balancing covariates (the characteristics of participants) between treated and control groups.

Propensity Score (PS) – probability that a unit with certain characteristics will be assigned to the treatment group.

Create Propensity Score – this balances observed covariates.

Matching to Create Treatment/Control Groups – match each patient seen by DO with patient seen by MD based on PS.

Test Treatment/Control Group Balance – to ensure variables of interest are better balanced after propensity scoring than before.

Use Treatment to Predict Outcomes – after checking groups of balance, multi-level model of patients nested within physicians is developed.

Review Outcomes – this is our current step. Once analysis is complete, we will review results with statistical consultant and physician advisory group.

Literature Review: What we know about the value of osteopathic clinical care

Previous studies have attempted to find the link between osteopathic philosophy and the value of care. These studies generally have focused on low back pain or other conditions that could be thought of as more “somatic,” such as migraine headache. These studies demonstrated evidence of a cost of care differential—osteopathic physicians prescribed fewer medications and office visit care by osteopathic physicians cost less than that provided by their allopathic colleagues. However, the length of time of treatment and outcomes in low back pain were similar between providers. In migraine treatment, even when osteopathic manual treatment (OMT) was not used, the prescription costs were less when patients were treated by osteopathic physicians.

In a small study done in 2003, an attempt was made to evaluate whether other aspects of osteopathic philosophy, namely communication, might be a distinguishing factor between osteopathic and allopathic approaches to patients seeing their physicians for hypertension, low back pain, headache and health maintenance. Osteopathic physicians communicated more regarding family and social issues, recommendations for alternative therapies (not including OMT), and discussion of the musculoskeletal system’s effects on health. Only discussion of the scientific literature trended higher for allopathic physicians.

Currently, over half of practicing osteopathic physicians are in primary care specialties (family medicine, internal medicine or pediatrics). Licardone and Singh found in 2011 that patients utilized osteopathic physicians with more frequency as their primary care physicians in the Northeast and Midwest parts of the United States, but less in the West and South. As far as other conditions, the differences are not yet known. It is important that research is focused on the effect that osteopathic philosophy has on the treatment of a wider diversity of disease conditions, rather than only on those conditions for which OMT is typically performed.

More research is needed to determine if osteopathic physicians practice in a way that creates value for patients. This study attempts to fill that gap.