



# Hats off to

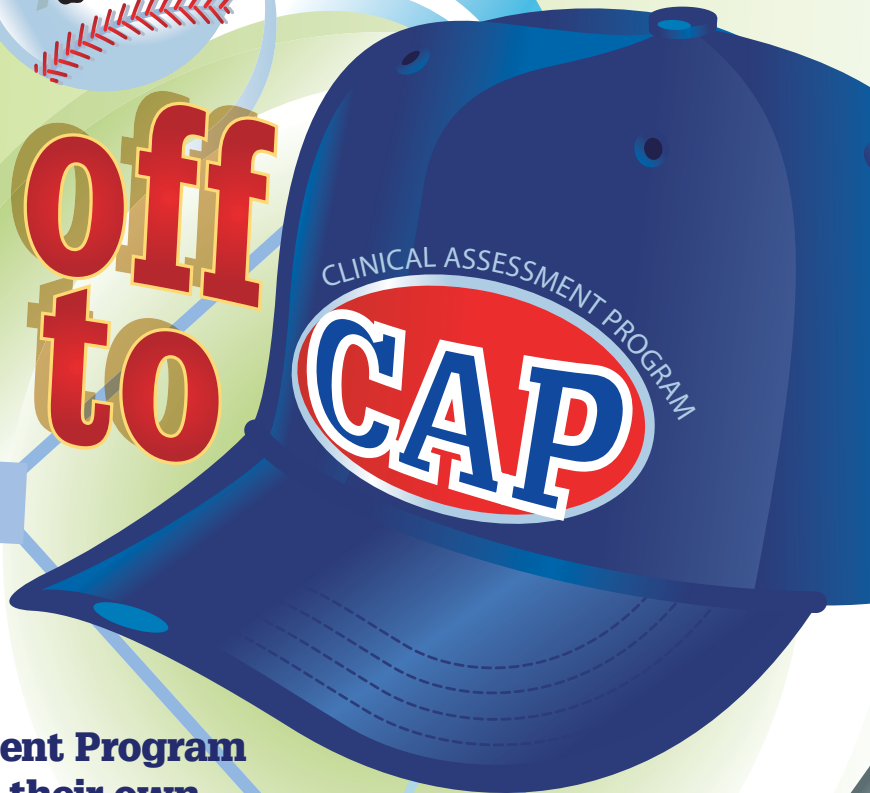
BARBARA GREENWALD  
STAFF EDITOR

## AOA's Clinical Assessment Program puts DOs in a league of their own

*"Hospitals, if they wish to be sure of improvement, must find out what their results are, must analyze their results, find their strong and weak points, must compare their results with those of other hospitals and must welcome publicity—not only for their successes, but for their errors."*

*"We need to look at and evaluate errors in a culture of 'no-blame' so that we can promote looking at our processes critically."*

This article is the second in a series focusing on patient-centered quality care, the yearlong theme for AOA President George Thomas, DO. The federal Centers for Medicare and Medicaid Services' Doctors' Office Quality—Information Technology project will be covered next month.



**I**n today's age of pay-for-performance programs and tiered insurance networks that hold healthcare professionals accountable for their outcomes, the preceding quotations could be attributed to any number of healthcare "players"—from number-crunching Medicare administrators to savvy insurance auditors to cutting-edge corporate employers. Yet both statements were made by physicians, arguably the stakeholders with the most to lose if their performance doesn't meet accepted guidelines.

Ernest A. Codman, MD, a Massachusetts surgeon, wrote the first passage in 1913 as an argument for compiling and analyzing surgical outcomes. Dr Codman felt that studying outcomes was the only way to gain insight into how to improve the practice of medicine. He proposed a system of follow-up in which hospitals would track patients after discharge to determine whether the patients were successfully treated.

At the time, Dr Codman's calls for an "outcomes tracking system" fell on deaf ears. But today, he is regarded as a visionary. His rudimentary outcomes management program is widely accepted as the model for the American College of Surgeons and its former Hospital Standardization Program. The latter eventually grew into the Joint Commission on Accreditation of Healthcare Organizations.

The second statement was made by AOA President George Thomas, DO, who was speaking about his passion for quality in healthcare. It was this passion, he explained to *The DO* last summer, that compelled him to choose the Year of the Patient—Patient-Centered Quality Care as the theme of his presidency. Dr Thomas' emphasis on quality is in tune with a 2001 report by the National Academies' Institute of Medicine (IOM) titled *Crossing the Quality Chasm: A New Health System for the 21st Century*. The report calls for a renewed focus on evidence-based medicine, which the IOM found to be lacking in healthcare.

But Dr Thomas and his colleagues at the AOA already knew that.

Three years before *Crossing the Quality Chasm* was published, Dr Thomas led the AOA task force that developed the AOA Clinical Assessment Program (CAP)—a performance measurement program that engages physicians in evaluating clinical outcomes. CAP measures clinical practices against

evidence-based guidelines and tracks patient outcomes in order to improve the quality of care.

Originally designed as a means of self-evaluation for osteopathic primary-care residency programs, CAP is currently being expanded to osteopathic physicians' offices. "Our main goal for CAP was to make sure that we were adequately training our residents," Dr Thomas explains. "Our ultimate goal is to bring it to all our physicians' offices as a tool for quality improvement."

What makes CAP so timely is that it measures the kind of outcomes used by pay-for-performance

## Walking through the CAP process

The AOA's Clinical Assessment Program analyzes data abstracted directly from patients' medical records to determine the performance of residents and the effectiveness of a residency program's treatment protocols. Eight steps are involved in the process.

1. An osteopathic residency program registers online to participate in the AOA's Clinical Assessment Program.
2. The residency program selects one to seven measurement sets (see the accompanying article on Page 31). Each measurement set includes data dictionaries, Independent Review Board submission materials and an abstractor training course.
3. Qualifying medical charts are identified using parameters such as study period, diagnostic criteria, patient inclusion and exclusion criteria, and sampling technology.
4. Data are abstracted from qualifying medical records.
5. Data are electronically transmitted to the AOA for analysis.
6. Within 14 days, the residency program receives a performance analysis report, which compares its performance with other residency programs and national benchmarks.
7. The program is given the opportunity to discuss and share "best practice" protocols with other programs.
8. Residency programs can choose to remeasure to look for performance trends.



AOA President George Thomas, DO, reads through patient charts at his office at Marymount Hospital in Garfield Heights, Ohio. Dr Thomas has directed quality and patient safety at Marymount since 1998. (Photo by Patrick Sinco)

initiatives to determine rewardable standards of care. If and when performance-based compensation systems become commonplace, the AOA will be ready. (For more on pay for performance, see the cover article in the March 2005 issue of *The DO*, which can be accessed at [www.do-online.org](http://www.do-online.org).)

### Materials and methods

Both Dr Codman and Dr Thomas realized that healthcare quality can be achieved using one tool—information.

Dr Codman kept what he called “end results cards,” on which he recorded each patient’s preoperative diagnosis, operating team members, procedures and results. He used the cards to study outcomes, which he considered the basis for quality improvement.

CAP is a Web-based program that analyzes outcomes using information abstracted directly from patients’ charts. Because the program is Web-based, participants only need access to the Internet to get started. CAP was designed to assess the performance of primary-care residents, so it focuses on several clinical practices associated with outpatient care.

CAP’s residency programs can participate in one or more of seven measure

sets, each of which correlates to a clinical diagnosis or clinical grouping. The CAP measure sets cover acute low back pain, coronary artery disease, diabetes mellitus, hypertension and metabolic syndrome, women’s health screening, and adult and childhood immunizations. (See the chart on Page 31.)

For each of the seven measure sets, a collection of clinical indicators is selected for measurement. The clinical indicators amount to a checklist of practices that osteopathic residents should be performing on each patient with a specific diagnosis. Each checklist was developed using evidence-based standards that are widely accepted by the medical community. For example, one clinical indicator for the diabetes measure checks whether patients with diabetes receive one or more hemoglobin A1c tests during the study year. And a clinical indicator for women’s health screening looks at whether female patients receive annual breast mammograms.

An osteopathic diagnostic exam is included as a clinical indicator in all CAP measure sets except for adult and childhood immunizations.

Using the measure sets as guidelines, data from a specified calendar year are collected over a two-month period, called a “wave.” The data are abstracted from the charts of qualifying patients and elec-

tronically transmitted to the AOA for analysis. In two weeks, residency programs receive a performance analysis report, which the programs can use to compare their performance with national benchmarks and with one another. In addition, participating residency programs are given the opportunity to discuss and share “best practice” protocols and participate in re-measure studies to look for trends. (See the chart on page 29.)

At the same time the CAP study was being developed, a detailed CAP abstractor’s training course and user’s guide were created. These Web-based presentations are designed specifically for individuals who abstract data from medical records or supervise the procedure.

In 2001, the CAP Pilot Study demonstrated that CAP is able to collect consistent data from multiple clinical programs. The pilot study also demonstrated that residency programs can improve their outcomes using CAP’s practice guidelines. “We have shown that we can achieve measurable outcomes with our data sets,” says AOA Trustee Martin S. Levine, DO, who chairs the AOA Bureau of Osteopathic Clinical Education and Research (BOCER).

### CAP chronology

When the AOA created CAP in 1998, there was no other program like it.

“Quality is something I got interested in as I got more and more involved in quality healthcare, in its evaluation and in its demonstration,” says Dr Thomas, who chaired the Quality Management Utilization Review Committee at UHHS Richmond Heights (Ohio) Hospital from 1986 to 1994 and has directed quality and patient safety at Marymount Hospital in Garfield Heights, Ohio, since 1998.

In 1997, in response to rumblings from health maintenance organizations about

requiring physician accreditation, the late Howard M. Levine, DO, who was then the AOA's president, appointed Dr Thomas to chair an AOA task force to develop practice standards for osteopathic physicians. Among those named to the committee were Dwain L. Harper, DO, and Richard J. Snow, DO, who currently serve as the principal researchers for CAP.

In the 1990s, Dr Harper was the executive director of a public report card coalition that was collecting outcomes data from Cleveland-area hospitals. "George and I used to go to dinner once a month in Cleveland," Dr Harper remembers. "We would talk about quality assurance issues and how to improve performance outcomes. CAP evolved from those talks."

Dr Thomas' task force recommended that the AOA create the American Osteopathic Accreditation Program (AOAP) to help osteopathic physicians verify their professional credentials to hospitals and other entities. Two major programs came out of the AOAP. One was the Official Osteopathic Physician Profile Report Service, which is accepted today as a primary source for verifying osteopathic medical credentials. The other was CAP.

A secondary goal of the AOAP was to develop self-assessment instruments to help DOs prepare for performance assessments conducted by managed care organizations. By 1999, this portion of the AOAP had morphed into the CAP Pilot Study. Drs Snow and Harper were charged with the responsibility of designing the study's parameters.

At the suggestion of Joseph P. McNerney, DO, a former president of the American College of Osteopathic Family Physicians (ACOF), the ACOFP agreed to test CAP in osteopathic family medicine residencies. "After we showed that CAP was an effective methodology, the ACOFP decided to make CAP mandatory for all osteopathic family residency programs," recalls Dr McNerney, the director of medical education at St John Detroit Riverview Hospital.

Since July 2003, the ACOFP has made CAP participation a condition of accreditation for all family medicine residency

## Looking at the clinical indicators



The following clinical indicators are used in the Clinical Assessment Program's seven measurement sets.

### Adult immunizations

- pneumococcal immunization
- influenza immunization
- assessment of diphtheria and tetanus toxoid (DT) immunization status

- assessment and control of hypertension
- use of angiotensin-converting enzyme inhibitors for hypertension and proteinuria
- osteopathic assessment and treatment

### Coronary artery disease

- appropriate aspirin use
- smoking cessation counseling
- low-density lipoprotein levels evaluated and controlled
- appropriate beta-blocker use
- appropriate use of angiotensin-converting enzyme inhibitors and angiotensin receptor blockers
- appropriate use of warfarin sodium
- kidney function assessment
- depression screening
- osteopathic assessment

### Hypertension and metabolic syndrome

- hypertension control and assessment of glomerular filtration rate
- metabolic syndrome risk factors
- osteopathic assessment

### Acute low back pain

- comprehensive history for back pain
- comprehensive physical examination for back pain
- regional osteopathic structural examination
- progressive range of motion and exercise
- symptom control
- osteopathic manipulative treatment

### Childhood immunizations

- four diphtheria and tetanus toxoids and acellular pertussis immunizations or four DT immunizations
- three poliovirus vaccine-inactivated immunizations
- measles-mumps-rubella immunization
- three Haemophilus influenzae type B immunizations
- three hepatitis B immunizations
- one varicella immunization
- all required immunizations completed by age 2

### Women's health screening

- cervical cancer screening
- breast cancer screening
- chlamydia screening
- osteoporosis screening and treatment
- osteopathic assessment

### Diabetes mellitus

- hemoglobin A1c tests
- frequency of foot exams
- screening and treatment of microalbuminuria and assessment of glomerular filtration rate
- assessment and control of hyperlipidemia



programs. In March, the American College of Osteopathic Internists voted to follow suit, effective July 2005. Osteopathic family medicine residency programs are required to measure diabetes and low back pain; the internal medicine residencies, some of which have been voluntarily participating in CAP, will be required to measure diabetes and hypertension. At this point, using CAP's other measure sets is optional, although many residency programs do so.

According to Dr Harper, five waves

of data from 72 family medicine residency programs and three internal medicine programs have been submitted for analysis to date. Forty-two residency programs have already met or exceeded the two-set ACOFP requirement.

### Keeping physicians involved

"I see CAP as a quality improvement tool to help physicians treat patients," Dr McNerney says. "CAP is the only program of its kind that has ever been shown to have a positive influence on physician

practice patterns. Why? Because physicians are actually involved in its implementation."

One reason that AOA leaders are so excited about CAP is that DOs were its main architects. Many physicians fear that the current pay-for-performance trend may end up hurting them instead of helping them—especially if they are not involved in choosing the practice guidelines used to measure their performance.

In March, for example, the largest health system in St Louis, BJC HealthCare, announced that it would terminate its contract with UnitedHealthcare to protest the insurance company's pilot pay-for-performance program, which excludes most physicians in the St Louis market. In mid-March, the *St Louis Post Dispatch* reported that local physicians and health systems were not involved in the program's design and had no advance notice of its implementation at an area General Motors Corp plant. The UnitedHealthcare program uses claims data to evaluate provider performance.

"You need to involve physicians in how you're going to measure them, because you have to measure parameters that are actually measurable," says Sharon McGill, MPH, the director of the AOA's Division of Quality Programs and Public Health. "Most insurance companies use claims data instead of chart data to measure performance. CAP uses information taken directly from patient charts."

This summer, the AOA will launch a voluntary CAP program for osteopathic family physicians and osteopathic internal medicine physicians in Arizona and Ohio. However, DOs nationwide who practice family medicine or internal medicine can participate. The program will also be Web-based, but instead of collecting data in two-month "waves," it will collect data continuously. Data will be transmitted to the AOA on a monthly basis, and physicians will receive their data-analysis reports two weeks later. Participating physicians may receive continuing medical education credits as well.

"Right now, it appears that practicing

## Front-line reactions to CAP: It's working!

When asked what makes the AOA's Clinical Assessment Program (CAP) exciting for him, AOA President George Thomas says, "It's nice to see that the idea I came up with in 1998 is now bearing fruit."

That's an understatement. Not only has CAP evolved from a concept to a hands-on program involving hundreds of osteopathic residents and physicians, it is also being used exactly as Dr Thomas had envisioned.

Joseph Stasio, DO, is the director of the osteopathic family medicine residency program at Palmetto General Hospital in Hialeah, Fla, which is affiliated with the Nova Southeastern University College of Osteopathic Medicine in Davie, Fla. The residents under his supervision have been participating in CAP since February 2004. Palmetto General's family medicine residents treat a large black and Hispanic patient population. Both blacks and Hispanics are more likely than whites to develop diabetes mellitus.

"I thought CAP's measure set for diabetes would provide good feedback for residents who treat a lot of patients with diabetes," Dr Stasio explains. "So we did the diabetes study four times. It was a good measuring stick for us—something we could pick out and see if we did well."

Residents at Palmetto General electronically submitted four waves of data from the charts of patients with diabetes. "After reviewing the feedback from the AOA, it looks like our program did pretty well," Dr Stasio says. "I'm really proud of our residents."

Not only did Dr Stasio's residents stay more aware of the important clinical indicators for diabetes, but they also grew more adept at incorporating recommended procedures into their examinations, he points out, citing eye exams, foot exams and hemoglobin A1c tests as examples.

"CAP is very helpful in reviewing patients' charts and meeting guidelines," Dr Stasio notes. "We actually have a checklist on our own charts."

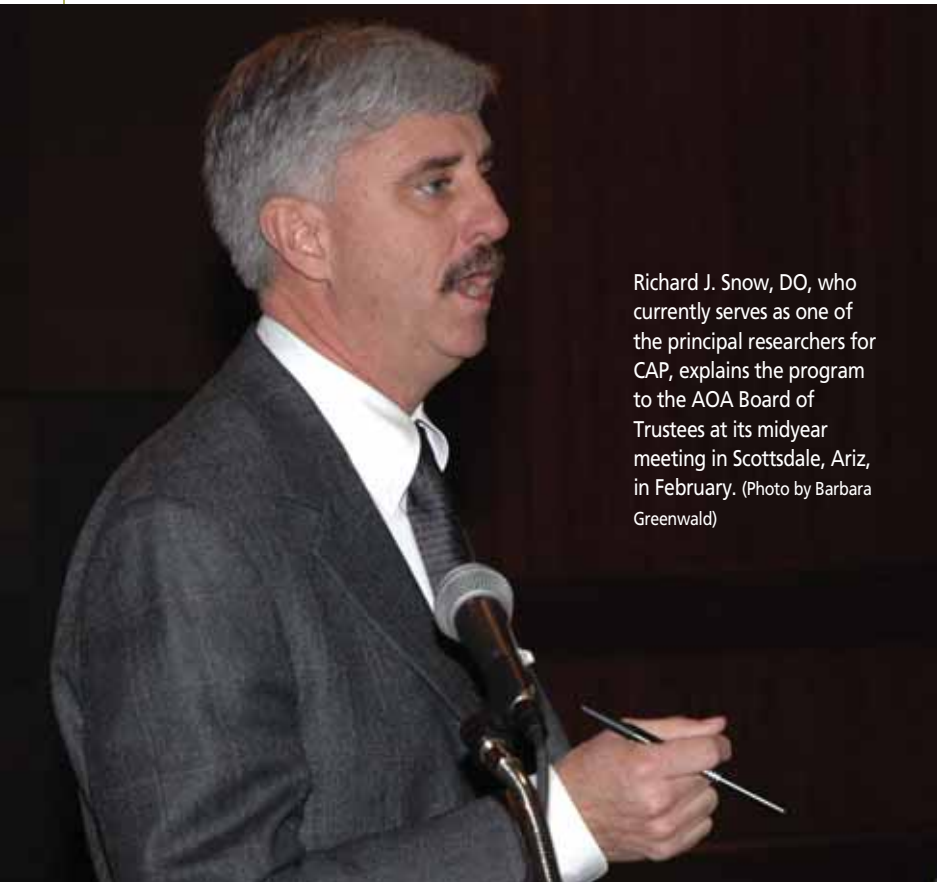
"What I do is give my residents the data-extraction forms to check off while they're performing their examinations instead of extrapolating the data from the charts afterward," he explains. "CAP is most effective when you're sitting with your residents and they're actually doing exams on their patients with the checklist in front of them."

"In my program, we have 'Cap days,' during which residents are required to extract data on several patients based on CAP guidelines. This provides instant feedback to residents and alerts them to any gaps in treatment. The process makes them more aware of what they're doing or not doing."

Dr Stasio also points out that CAP has had a positive impact on his entire residency program. "CAP improves overall quality", he says, "because the residents carry over their new habits to patients who are not in the CAP study."

*Primary care and internal medicine physicians who are interested in participating in a voluntary CAP study this summer should send e-mail to cap@osteopathic.org.*

—Barbara Greenwald



Richard J. Snow, DO, who currently serves as one of the principal researchers for CAP, explains the program to the AOA Board of Trustees at its midyear meeting in Scottsdale, Ariz, in February. (Photo by Barbara Greenwald)

DOs using CAP will have measure sets for diabetes mellitus, coronary artery disease and women's health available, but the final selection is in flux," Dr Snow says. "We are evaluating whether to align initial measures for physicians with a Centers for Medicare and Medicaid (CMS) pay-for-performance demonstration project, which includes hypertension and heart failure. We will be deciding the exact measures at the next BOCER meeting on April 16."

The CAP program for practicing physicians will allow continuous data entry starting July 1, and residency programs will start with the same mode on Sept 1, Dr Snow adds. The AOA's goal is to eventually involve all osteopathic physicians in the program.

### Quality versus quantity

For Dr Snow, a family physician from Worthington, Ohio, with extensive experience in health services research, CAP

represents performance and outcomes measurements that have been missing in healthcare delivery.

"Right now, physicians are paid for procedures, not for management of care over time. This results in fragmented care," Dr Snow points out.

CAP can provide physicians with a tool to ensure that they are delivering the highest quality of care to their patients, Dr Snow adds. "If a patient's care over time is tightly managed, that patient is less likely to have a traumatic event. You're improving that patient's quality of life," he explains. "Take diabetes mellitus, for example. Studies have demonstrated that if we tightly control hypertension, lipids and glucose in patients with diabetes, we can reduce their risk for cardiovascular events by half. That can have a huge impact on a patient's quality of life.

"It's the difference between long-term prevention and constantly putting out fires. What we're trying to do with CAP

is get the focus back on the patient."

Dr Snow may be right on the mark. On March 13, *The New York Times Magazine* ran a cover article that presented the solution to healthcare reform suggested by David Cutler, PhD, a professor of economics at Harvard University in Cambridge, Mass. Dr Cutler argues that healthcare costs are not being contained because cost-cutting efforts are rooted in cutting programs and procedures rather than in improving quality.

"America's fee-for-service system does not require doctors to measure," Dr Cutler told *The New York Times Magazine*. "It rewards them for each instance of delivered 'care,' but not necessarily for the end result—for 'health.' This is especially true for chronic patients, whose well-being depends on following a long-term regimen of care."

Dr Cutler, the author of 2003's *Your Money or Your Life: Strong Medicine for America's Health Care System*, cited diabetes sufferers as a perfect example of the kind of chronic patient who needs to receive a number of periodic tests and exams in order to avoid problematic and expensive complications. Yet because physicians don't automatically get paid for recommending follow-up procedures, they don't always recommend them, he says. To follow Dr Cutler's theory, a program like CAP would help ensure that chronic patients receive continuous care, which, in the long run, would help them avoid the more expensive procedures that become necessary when continuous care is neglected and complications arise.

### Endless possibilities

Not only can CAP help osteopathic physicians improve their clinical performances, it can also help them comply with whatever performance goals are rewarded by their health insurance companies down the road.

In April, CMS launched its first pay-for-performance initiative for physicians under the Medicare program, involving a quarter-million Medicare beneficiaries. The Physician Group Practice demonstration, which will run for three years,

links reimbursement to performance using a set of clinical measures. Several employer groups and insurance companies are rolling out similar programs.

“A new wave of pay-for performance measures is going to start in January 2006,” Dr Thomas told the AOA Board of Trustees at its midyear meeting in Scottsdale, Ariz, in February. “If we think this is not going to affect us, we are sorely mistaken.”

Thanks to CAP, the AOA and its members are ready.

“The National Quality Forum [NQF] and other organizations have been looking for a quality initiative that demonstrates how to measure performance against evidence-based standards,” says Dr Levine. “This is what everyone wants. They could use our program.”

“I’ve spoken twice to the NQF about CAP,” he adds. “The federal Agency for Healthcare Research and Quality is putting out a compendium on patient safety that will include a description of CAP. CMS is also looking for projects like CAP.”

The AOA has also discussed CAP with a number of insurance companies including Aetna, UnitedHealthcare, CIGNA Corp, BlueCross BlueShield Association and America’s Health Insurance Plans. According to Lisa J. Kaplan, JD, the AOA’s director of managed care relations, CAP has been very well received. “We have been told that we are one of the leading organizations in the development of a sophisticated quality-improvement program,” she says.

“All of the entities involved in health-care want outcomes measurement programs because they see them as promoting better medicine,” Dr Levine points out. “And better medicine leads to less cost in healthcare.”

“The return of investment on this kind of intervention is huge,” Dr Snow notes. “With the prevalence of diabetes at 6% nationally, you can imagine the impact this type of program can have. This is exciting stuff.”

“The American Medical Association has begun a self-evaluation study, but the AOA has a better data collection process.


We have two years worth of data collected to date—86 measurements have been abstracted. There is a fairly rich and robust database at this point.”

What can the AOA do with a “rich and robust database”? Research.

“Researchers can use this data to do all kinds of studies and to write articles,” Dr Harper explains. “Take low back pain. You could go into the data we’ve collected and do an analysis to figure out the relationship between missed days of work due to low back pain and whether patients received osteopathic manipulative treatment. Dr Snow has already co-authored an abstract on diabetes mellitus with a resident from the family medicine residency program at Doctors Hospital Ohio Health Inc in Columbus, Ohio.

The abstract, accepted for presentation at this year’s American Heart Association’s Outcomes Conference, is titled “Effect of Insurance Type and Patient Compliance on Control of Cardiovascular Risk Factors in Diabetic Patients Treated in Family Practice Residency Programs,” and addresses the barriers to patient compliance.

For Dr Levine, the CAP database is perfect for research involving osteopathic principles and practice. Osteopathic assessment is a clinical indicator in almost all of CAP’s measure sets, he points out, adding the obvious next step is to conduct outcomes studies using OMT as a variable.

“We can have all kinds of information that comes out of this pool of data,” Dr Levine told the AOA Board of Trustees at its midyear meeting. “When you have the data, you rule the world of health-care—and we have the data.” 



AOA Trustee Martin S. Levine, DO, performs osteopathic manipulative treatment on Theresa Chu during the AOA trustees’ midyear meeting, which was held Feb 17-19 in Scottsdale, Ariz. “Better medicine leads to less cost in healthcare,” says Dr Levine, who chairs the AOA Bureau of Osteopathic Clinical Education and Research.

Chu is the AOA’s executive communications specialist. (Photo by Michael Fitzgerald)