Educate hypertensive patients to increase compliance

To the Editor:

In their original contribution, “Potential barriers to control of blood pressure” (J Am Osteopath Assoc. 2002;102:209-213), Julie L. Kalb, DO, et al raise important issues on the difficulty of gaining maximum compliance in hypertensive patients. The following are points we believe are worth further consideration.

It is clear that reduction of a patient’s blood pressure to <140 systolic and <90 diastolic, as the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC VI) guidelines dictate, will significantly lessen the risk for a complication such as stroke,1,2 but why limit the goal to the desired guidelines? Optimum blood pressure, according to JNC VI guidelines, is <120 systolic and <80 diastolic.1 This should be the goal for our patients.

To achieve this goal, it is imperative to obtain full patient compliance. The leading cause of patient noncompliance with medication regimens is a lack of understanding as to why they are taking the medication.3 As physicians, we can help increase the likelihood of compliant behavior through increased patient education.2 Patient education and empowerment has significantly improved compliance in other chronic diseases such as diabetes and asthma.4 It stands to reason that the same results can be obtained with hypertensive patients.

As osteopathic physicians, we need to have expectations that exceed minimum standards for our patients. Through increased patient education, we can enhance compliance and therefore diminish the probability of complications from chronic hypertension.

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References

Ratings interest in clinical research among osteopathic medical students

To the Editor:

Little has been published concerning institutional or profession-wide efforts to study clinical research among osteopathic medical students. With controversy about the positioning of osteopathic physicians among healthcare providers2 and calls for research on the efficacy of osteopathic manipulative treatment,2,3 the importance of stimulating clinical research among osteopathic medical students seems evident.

We developed a 5-minute survey regarding clinical research and administered it to first- and second-year students at the Texas College of Osteopathic Medicine at the University of North Texas Health Science Center, Fort Worth in fall 2001. The survey was approved by the institutional review board of the university. Participation was voluntary, no student identifiers were used, and there were no incentives provided. The survey collected data on whether students would contemplate taking a clinical research elective (CRE), which topics students wished to be addressed in a CRE, and motivational factors for participating in a CRE.

Overall, 85 of 122 first-year students and 95 of 120 second-year students completed the survey. Of 178 respondents, 132 students (P=.03) reported interest in a CRE. Table 1 summarizes the core areas that respondents wished to have addressed in a CRE, including 69 first- and second-year students (P=.03). Table 1 also demonstrates significant (P<.001) differences among motivational factors for contemplating a CRE, though there were no significant differences in motivations between first- and second-year students.

Table 2 indicates that preventive medicine was the only significant factor associated with being a CRE contemplator and that several motivational factors were significantly associated with being a CRE contemplator, even after adjusting for each of the other motivational factors. Giving a poster or conference presentation was the most significant motivation for contemplating a CRE, whereas securing a desired residency was inversely associated with being a CRE contemplator after adjusting for each of the other motivational factors.

Thus, this survey found that three of four osteopathic medical students would contemplate spending up to 1 month in a CRE. However, a significant reduction in interest was observed among second-year students. Exposure to laboratory bench research, as occurs during the first-year curriculum, may negatively influence students’ perceptions of applied clinical research.5 The multivariate results indicate that students interested in preventive medicine were approximately three times more likely to be CRE contemplators than students without such interest. This suggests that some students who expressed interest in osteopathic manipulative treatment or primary care may have been influenced by the health promotion aspects of these disciplines. One possible reason why students concerned with securing a residency were less likely to contemplate a CRE is that time spent in a CRE might constrain their ability to spend time at their desired residency site.

These findings should be interpreted cautiously for several reasons. First, they reflect only preclinical students at one institution. Second, differences between first- and second-year students are based on cross-sectional surveys, not on prospective follow-up of the same cohort. Third, being a CRE contemplator is only a surrogate measure of actually performing clinical research. Additional research using stronger methodological techniques aimed at larger and more
### Table 1
Topical Areas and Motivational Factors for a Clinical Research Elective*

<table>
<thead>
<tr>
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<th>First-year students</th>
<th>Second-year students</th>
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<tbody>
<tr>
<td><strong>Topical area</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osteopathic manipulative treatment</td>
<td>42.8% (77)</td>
<td>45.9% (39)</td>
<td>.43</td>
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<tr>
<td>Primary care</td>
<td>33.3% (60)</td>
<td>32.9% (28)</td>
<td>.92</td>
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<tr>
<td>Preventive medicine</td>
<td>38.9% (70)</td>
<td>43.5% (37)</td>
<td>.23</td>
</tr>
<tr>
<td>Rural health</td>
<td>17.8% (32)</td>
<td>16.5% (14)</td>
<td>.66</td>
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<tr>
<td><strong>Motivational factor</strong></td>
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<tr>
<td>Student stipend</td>
<td>42.8% (3.37)</td>
<td>45.9% (3.41)</td>
<td>.46</td>
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<tr>
<td>Experience in interpreting journal articles</td>
<td>33.3% (2.53)</td>
<td>32.9% (2.52)</td>
<td>.89</td>
</tr>
<tr>
<td>Poster or conference presentation</td>
<td>38.9% (2.39)</td>
<td>43.5% (2.51)</td>
<td>.11</td>
</tr>
<tr>
<td>Publication</td>
<td>17.8% (3.11)</td>
<td>16.5% (3.17)</td>
<td>.40</td>
</tr>
<tr>
<td>Securing a desired residency</td>
<td>17.8% (3.49)</td>
<td>16.5% (3.54)</td>
<td>.46</td>
</tr>
<tr>
<td>Career in academic medicine</td>
<td>17.8% (2.51)</td>
<td>16.5% (2.64)</td>
<td>.06</td>
</tr>
</tbody>
</table>

*Survey based on 180 respondents, including 85 first-year and 95 second-year students.
†Table entries refer to differences between first- and second-year students.
‡Number (%) who wished to have the topical area addressed in the clinical research elective. Of six other specialty-oriented topical areas, only emergency medicine generated student interest comparable to the core topical areas.
§Mean (±SD) based on a four-point scale of likelihood to be a motivational factor: very likely, 4; somewhat likely, 3; somewhat unlikely, 2; very unlikely, 1.

### Table 2
Topical Areas and Motivational Factors Associated with Being a Clinical Research Elective Contemplator

<table>
<thead>
<tr>
<th></th>
<th>Simple logistic regression</th>
<th>Multiple logistic regression*</th>
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<tbody>
<tr>
<td></td>
<td>OR† 95% CI‡ P</td>
<td>OR 95% CI P</td>
</tr>
<tr>
<td><strong>Topical areas</strong></td>
<td></td>
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<tr>
<td>Osteopathic manipulative treatment</td>
<td>1.18 (0.60-2.35)</td>
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<tr>
<td>Primary care</td>
<td>1.62 (0.77-3.42)</td>
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<td>Preventive medicine</td>
<td>3.00 (1.38-6.54)</td>
<td>.01</td>
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<td>Rural health</td>
<td>1.56 (0.60-4.08)</td>
<td>.37</td>
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<td><strong>Motivational factor</strong></td>
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<tr>
<td>Student stipend</td>
<td>4.87 (1.82-13.04)</td>
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<tr>
<td>Experience in interpreting journal articles</td>
<td>2.62 (1.31-5.25)</td>
<td>.01</td>
</tr>
<tr>
<td>Poster or conference presentation</td>
<td>6.53 (2.91-14.65)</td>
<td>&lt;.001</td>
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<tr>
<td>Publication</td>
<td>4.85 (2.30-10.19)</td>
<td>&lt;.001</td>
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<tr>
<td>Securing a desired residency</td>
<td>1.49 (0.48-4.61)</td>
<td>.49</td>
</tr>
<tr>
<td>Career in academic medicine</td>
<td>3.45 (1.66-7.14)</td>
<td>.001</td>
</tr>
</tbody>
</table>

*Results are adjusted for each of the other responses in the two respective analyses.
†OR = odds ratio.
‡CI = confidence interval.
representative target populations of osteopathic medical students is needed. Such research will be critical in identifying, nurturing, and mentoring a cadre of young osteopathic clinical researchers.

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References

Future issues of JAOA

- Public perceptions about cerebral palsy
- Student performances on COMLEX-USA level 2 following a clinical evaluation, feedback, and intervention program
- Evaluating the impact of stress on systemic disease: The MOST protocol in primary care
- Educating physicians, other health professionals, first responders, and the community about bioterrorism and weapons of mass destruction: An osteopathic medical school response
- Persistent open anterior fontanelle in a healthy 32-month-old boy
- Conditions and diagnoses for which osteopathic physicians used osteopathic manipulative treatment
- How physicians approach advance care planning in patients with mild to moderate Alzheimer’s disease
- A case of pulmonary embolism following insertion of a Greenfield filter
- Temporary vena cava filter placement for pulmonary embolism
- JAOA annual medical education issue

Correction

JAOA—The Journal of the American Osteopathic Association regrets the following omission:


Authorship for the article, “Students’ efforts in Africa,” was mistakenly unattributed and the accompanying biographical information was also omitted.

The article’s author is Parker R. Fillmore, an undergraduate student at Brigham Young University (BYU) in Provo, Utah. He has been involved with numerous rural health projects in Mexico, the Dominican Republic, and West Africa. Currently, he is president of the BYU chapter of the Humanitarian Aid Relief Team and plans to pursue an MD/MPH degree at the University of Arizona in Tucson.