

## Establishing a Professionalism Score in an Osteopathic Manipulative Medicine Curriculum

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**As osteopathic medical education shifts to competency-based learning, course curriculums must adapt to measure behavioral milestones in addition to traditional knowledge and technical skills. Of the core competencies, medical professionalism or lack thereof has been shown to correlate with future state disciplinary board action; therefore, early identification of poor professionalism and intervention is imperative. However, performance indicators, such as humanistic behavior and primacy of patient need, are difficult to measure in most first- and second-year medical school courses. Therefore, A.T. Still University–Kirkville College of Osteopathic Medicine developed a rubric to objectively measure professionalism within the first- and second-year osteopathic manipulative medicine curriculum. The rubric assesses such measures as timeliness and professional appearance. In the present article, the author describes the grading rubric and the methods for implementing a professionalism score within an osteopathic manipulative medicine curriculum.**

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In the late 1990s, the Council on Graduate Medical Education<sup>1</sup> and others<sup>2,3</sup> defined core competencies that all physicians should master to practice medicine within the modern framework of managed care and team-based practices. By the early 2000s, the American Osteopathic Association established the 7 osteopathic core competencies<sup>4</sup> that shifted graduate medical education from experienced-based to competency-based learning: osteopathic principles and practice, medical knowledge, patient care, interpersonal communication skills, professionalism, practice-based learning and improvement, and systems-based practice. These competencies were the same as those adopted by the Accreditation Council for Graduate Medical Education with the addition of a specific competency for osteopathic principles and practice and training in osteopathic manipulative medicine (OMM).<sup>5-7</sup> By 2005, the American Osteopathic Association recommended that the 7 osteopathic core competencies be integrated into predoctoral and postdoctoral medical education.<sup>7</sup>

To guide the assessment of the 7 osteopathic core competencies, the American Association of Colleges of Osteopathic Medicine developed performance indicators to standardize assessment among colleges of osteopathic medicine and osteopathic residency programs. Many of the competencies, such as medical knowledge and patient care, can be assessed using quantitative measures such as multiple choice questions; other competencies, such as professionalism, are more difficult to assess, particularly in the first- and second-year curriculums. Of all the core competencies, lack of profes-

sionalism during predoctoral and postdoctoral training has been shown to correlate with future state disciplinary board action.<sup>8-10</sup> Therefore, the American Association of Colleges of Osteopathic Medicine described 9 performance indicators for assessing professionalism—knowledge, humanistic behavior, primacy of patient need, accountability, continuous learning, ethics, cultural competency, professional and personal self-care, and honest, transparent business practices.<sup>11</sup> Each performance indicator has between 4 and 11 objectives required to master the competency. However, these objectives are mostly qualitative and difficult to assess objectively. For example, the first objective of humanistic behavior is to “provide polite, considerate, and compassionate treatment to every patient,”<sup>11</sup> which is difficult to quantify consistently across all colleges of osteopathic medicine. Each college of osteopathic medicine must decide how to assess competency in these performance indicators.

A.T. Still University–Kirksville College of Osteopathic Medicine (ATSU-KCOM) uses 2 objective measures of professionalism within the first- and second-year OMM curriculum and the third- and fourth-year clerkship evaluations. In the present article, I describe these measures, which include timeliness and professional appearance. Students are either on time or they are not; they are either dressed appropriately or they are not. Although some subjectivity occurs when assessing timeliness and professional attire, these 2 measures are more objective than assessing whether a student shows humanistic behavior.

## Professionalism Score

The OMM curriculum at ATSU-KCOM is composed of 4 separate courses spread over 4 consecutive semesters. The curriculum includes didactic lectures, hands-on didactic laboratory activities, practical and written assessments, and clinical experiences, along with peer evaluations of their partners in laboratory activities. As

part of the course grade each semester, students receive a professionalism score based on their performance of objective behavioral elements associated with required OMM course activities. Each behavioral element is given a point value that is entered into a spreadsheet. The professionalism score for the course is calculated at the end of the semester, and the final score is equal to the total number of points earned divided by the total possible points. The professionalism score is worth 10% of the course grade. A summary of the grading rubric for the professionalism score is depicted in the *Table*. The behavioral elements are described below.

### Timeliness

An important aspect of professionalism, timeliness demonstrates personal responsibility and respect and consideration for others. In clinical practice, punctuality is a good predictor of patient satisfaction with a physician.<sup>12-15</sup> Because most medical students have experienced waiting in a physician’s office, the goal of this element of professionalism is to encourage students to arrive in a timely fashion to appointments and other obligations of their future practice. Therefore, students are expected to arrive on time to required OMM curricular activities, which include OMM didactic laboratory activities, clinical experiences, and practical and written assessments.

### OMM Laboratory Activities

Students indicate on-time arrival to OMM laboratory activities by signing in next to their typed name on an attendance sheet. The attendance sheet is replaced with a late sign-in attendance sheet 10 minutes after the start of the activity. Signing in on time reinforces the practice of signing documentation in a timely fashion. For instance, when physicians attend continuing medical education programs to maintain licensure, they are expected to sign in every day (written or electronic) to document their presence. In the clinical setting, physicians must sign numerous medicolegal documents in a timely fashion.

Because medical litigation is common, prompt completion of medical documentation minimizes the risk of errors in recall. When assessing timeliness for the professionalism score, an on-time arrival equals 5 points, and a late arrival equals 0 points. Missing more than 50% of the laboratory activity or failure to sign in is counted as a laboratory absence (see the Absences section).

#### *OMM Clinical Experiences*

As part of the OMM curriculum, second-year students examine, diagnose, and treat first-year students using OMM. Under faculty supervision, this activity involves taking a medical history, performing a physical examination, and managing somatic dysfunction. All students are expected to arrive on time to the activity. No additional time is given to late arrivals to complete the clinical experience. When assessing timeliness for the professionalism score, an on-time arrival equals 5 points, and a late arrival equals -10 points.

#### *OMM Practical Assessments*

Students are assigned a precise start time for midterm and final practical assessments. During these assessments, one student serves as the physician and another serves as the patient. Because these practical assessments are precisely timed activities, a late arrival is counted as an absence and an alternate assessment time must be arranged. When assessing timeliness for the professionalism score, an on-time arrival equals 5 points, and a late arrival equals -10 points. Both late arrivals and absences must be remediated.

#### *OMM Written Assessments*

For their written assessments (midterm and final examinations), students are expected to begin on time as a class. Arriving after an examination has already started is disruptive to other students. Therefore, penalty points are assessed for late arrivals. This element of the professionalism score addresses respect for others and prepares students for their national board licensure examinations,

in which arriving late can result in being refused admittance and an additional fee to reschedule.<sup>16</sup> Late arrivals to a written assessment are recorded by the examination proctors, who record the student's name and arrival time. No additional time is given to late arrivals to complete the written assessment. When assessing timeliness for the professionalism score, an on-time arrival equals 10 points. Arriving 1 to 5 minutes late equals -10 points, arriving 6 to 15 minutes late equals -20 points, arriving 16 to 30 minutes late equals -30 points, and arriving later than 30 minutes equals -40 points.

#### *OMM Laboratory Partner Surveys*

Students are assigned partners for didactic laboratory activities. Laboratory partners are switched 3 to 4 times during each semester, and students are required to complete a survey about the professional behavior and attitude of their previous laboratory partner within 5 days of switching to a new partner. The information from these surveys is not included in the professionalism score, but faculty use it to identify students who are at risk for recurrent unprofessional qualitative behaviors (ie, inappropriate language, disrespectful behavior). Once identified, at-risk students meet individually with the course director or department chairperson to establish an action plan. The laboratory partner surveys teach students about the necessity of completing surveys in a timely fashion because surveys are a regular part of practice life and include topics ranging from evaluating continuing medical education presenters to conducting needs assessments for local hospitals. When assessing timeliness for the professionalism score, an on-time completion of the survey equals 10 points, and a 1-point penalty is levied for each day a survey is late. Completion of the survey after 10 days equals 0 points.

#### **Appropriate Attire**

Students are expected to dress appropriately for learning and assessment activities. Formal, professional medical attire, such as a white laboratory coat and business dress,

has been repeatedly shown to instill trust, confidence, and perceived empathy in patients.<sup>17-21</sup> No dress code is required for written assessments.

#### *OMM Laboratory Activities*

Students are expected to dress in lightweight, nonrestrictive fabrics that allow for easy removal for palpation and osteopathic manipulative treatment during OMM laboratory activities. Students' attire should allow exposure of the skin overlying nonsexual body parts, including the head, elbows, shoulders, clavicles, scapula, spine, posterior rib angles, abdomen, knees, and feet. For the upper body, male students are expected to wear a T-shirt that can be removed, and female students are expected to wear a sports bra or tank top. For the lower body, all students are expected to wear lightweight shorts or a garment that allows access to skin overlying the knees and is sufficiently modest to allow for assessment of hip range of motion without revealing genitalia. No heavy canvas, denim, or cargo shorts are permitted. Nonsexual body parts may remain covered when the students are not serving as patients, but coverings, including those worn for religious reasons, must be removed when they interfere with palpatory or visual assessment or with OMM. The students indicate on the daily sign-in sheet whether they are appropriately dressed for laboratory activities. This self-assessment specifically addresses honesty and personal integrity. When assessing for the professionalism score, appropriate attire equals 5 points, and inappropriate attire equals 0 points. If a student is identified by a faculty member as inappropriately dressed but the student indicated appropriate attire on the sign-in sheet, -15 points are entered into the spreadsheet.

#### *OMM Clinical Experiences and Practical Assessments*

When serving as the physician during OMM clinical experiences and practical assessments, students are expected to be dressed in business casual attire with a clean white laboratory coat. Business casual attire includes clean, wrinkle-free slacks; skirts or dresses that are no

shorter than 4 inches above the knee and cover the thighs when seated; and dress shirts, blouses, golf shirts, turtlenecks, or sweaters. All shirts must cover the back and abdomen. Footwear must be clean, in good repair, and not have open toes. Inappropriate clothing includes athletic wear; jeans, cargo pants, or ripped clothing; tank tops, T-shirts, or shirts or dresses that allow bare shoulders unless worn under another blouse, shirt, or jacket; excessively tight, revealing, or sexually suggestive clothing; and excessively high-heeled shoes. When serving as the patient, students are expected to dress in the attire required for OMM laboratory activities. Appropriate attire is determined by the academic coordinator when students arrive. When assessing for the professionalism score, appropriate attire equals 5 points, and inappropriate attire equals -10 points.

#### **Absences**

Absences from required OMM curricular activities may be either excused or unexcused depending on the reason for the absence. Excused absences are determined by the associate dean for the curriculum, and the OMM department is notified. A student whose absence is determined to be unexcused may receive a grade point penalty off their final grade depending on the total number of unexcused absences and the type of curricular activity. The first absence (either excused or unexcused) results in no penalty unless it is an unexcused absence from an OMM clinical experience, which carries a 2% point penalty off the final grade. The second absence (unexcused only) results in an additional 2% point penalty off the final grade. The third absence (unexcused only) results in an additional 7% point penalty. The fourth absence (unexcused only) results in an additional 17% point penalty. Five absences results in an incomplete or failure for the course, depending on the final grade.

Students with either an excused or unexcused absence are expected to proactively arrange to remediate a missed didactic laboratory activity, practical assessment, or written assessment. Students are expected to contact the

**Table.**  
**Professionalism Score Grading Rubric**

Scored Activities	Point Value <sup>a</sup>
<b>Arriving to didactic laboratory session on time</b>	5
Arriving late to laboratory session	0
<b>Dressing appropriately for didactic laboratory session</b>	5
Dressing improperly for laboratory (self-assessment)	0
Dressing improperly for laboratory with self-assessment stating proper dress (faculty assessment)	-15
<b>Missed didactic laboratory session/practical examination/clinical experience</b>	
Proactively contacting the instructional coordinator to arrange a remediation	5
Arriving on time and successfully remediating a missed laboratory session	5
Failing to contact the instructional coordinator within 5 business days of missed laboratory session	-5
Failing to arrive on time to remediation session	-5
<b>Appropriate attire for practical examination/clinical experience</b>	5
Improper attire for practical examination/patient encounter	-10
<b>Arriving to practical examination/clinical experiences on time</b>	5
Arriving late to practical assessments	-10
<b>Arriving on time to written examinations (includes midterm and final examinations)</b>	10
Arriving late without an excused absence from Student Services Office	
Arriving 1-5 minutes late	-10
Arriving 6-15 minutes late	-20
Arriving 16-30 minutes late	-30
Arriving after 31 minutes	-40
<b>Completing laboratory partner surveys on time</b>	10
Failing to complete laboratory partner survey by deadline	0

<sup>a</sup> Total possible points vary by quarter because the points are based on the number of required activities in that quarter. For each required activity, the point value earned is entered into a spreadsheet with the total points earned equal to the summative total. The total points earned divided by the total possible points are equal to 10% of the final course grade for the quarter.

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instructional coordinator within 24 hours of returning to campus to arrange a time for remediation. When assessing for the professionalism score, timely communication with the instructional coordinator equals 5 points. Failure to contact the instructional coordinator within 5 business days of returning to campus equals -5 points. Students are expected to arrive on time to their scheduled remediation

activity. When assessing for the professionalism score, an on-time arrival equals 5 points, and a late arrival equals -5 points. Because absence point penalties only affect the final course grade, a student may receive all professionalism points for an activity with an unexcused absence by contacting the instructional coordinator and remediating the activity within the specified time limits.

## Professionalism and Academic Performance

The OMM department of ATSU-KCOM began using the professionalism score in the second-year OMM curriculum in 2007 and in the first- and second-year curriculums in 2009. Shortly thereafter, the OMM course directors noticed that students who had course failures in other disciplines frequently scored in the lowest percentile of the professionalism score in the OMM course. To test this observation, the current author compared numerical course grades of 843 students from 2007 to 2012 with the OMM professionalism score from the same academic period and published the results in 2014.<sup>22</sup> During the study period, the OMM curriculum was divided into 7 courses, which had a mean (SD) professionalism score of 98.6% (3.3%) and a range of 23.1% to 100%.<sup>22</sup> The score was positively correlated to the final OMM course grades in 6 of 7 courses, and scores were significantly lower during second-year courses ( $P < .001$ ).<sup>22</sup> However, the professionalism score was not associated with performance on any OMM practical examinations. For courses outside the OMM curriculum, the score was positively correlated with course grades for 21 of 40 first- and second-year courses (52.5%).<sup>22</sup> The professionalism score was predictive of the academic performance in 70% of clinical courses with the highest correlations for Principles of Medicine and Dermatology ( $\rho = .28$  and  $\rho = .25$ , respectively).<sup>22</sup>

Other studies have shown that professionalism is positively associated with academic performance in predoctoral and postdoctoral training.<sup>8,9</sup> Papadakis et al<sup>8</sup> found that 96% of state medical board disciplinary actions taken against physicians in California were for professionalism issues. The authors also found that professionalism issues during medical school were a primary predictor of future disciplinary action by the state medical board and that physicians who had lower grade point averages in medical school were more likely to appear before state disciplinary boards.<sup>8</sup> In another study

investigating residency training, both professionalism issues and board certification scores were predictive of future state licensing board disciplinary actions.<sup>9</sup>

The professionalism score at ATSU-KCOM is similar to the conscientiousness index created by McLachlan et al.<sup>23</sup> This index scored similar objective elements of professionalism, such as attendance and completing assignments on time. In that study, the mean (SD) conscientiousness index was 94% (4%), and the students' scores were positively correlated with behavioral incident reports.<sup>23</sup>

Currently, the assessment of professional behaviors occurs during the third- and fourth-year clinical clerkships as part of the final clerkship evaluation.<sup>24,25</sup> Several studies have demonstrated that students who exhibit behaviors consistent with professionalism tend to have higher grade point averages and to score higher on clerkship evaluations.<sup>26,27</sup> Cope et al<sup>28</sup> found that professionalism scores on third- and fourth-year clerkship evaluations positively correlated with third-year student performance on objective structured clinical evaluations, with second-year overall grade point average, and with academic performance in the first- and second-year OMM curriculums.

The professionalism score described in the present article could also be applied to other first- and second-year courses that have required attendance and dress components, such as the gross anatomy laboratory, physician skills courses, and standardized patient encounters. However, several limitations should be considered when using a professionalism score to assess student behavior. Assessing professionalism requires diligence, consistency, and additional administrative work. For instance, the on-time and late sign-in sheets must be swapped in a timely fashion, or students arriving late will not be penalized. Alternative technologies such as key cards could be used to record arrival times. During written assessments, the examination proctors must be willing to record late arrivals. Further, assessing appropriate attire may be perceived as

arbitrary by students unless consistently enforced. Another factor to consider when using this tool is that the professionalism score does not assess subjective behaviors such as interpersonal skills, altruism, empathy, and compassion. The laboratory partner surveys included in the OMM curriculum at ATSU-KCOM are meant to assess these subjective elements, but the content of these surveys does not affect the course grade. To determine whether subjective assessments correlate with objective assessments of professionalism, future studies may compare the subjective laboratory partner survey data or preceptor evaluation findings from the third- and fourth-year clerkships to the professionalism score.

## Conclusion

Assessment and training in professionalism should occur during all 4 years of osteopathic medical school. When applied in the OMM curriculum, the professionalism score can objectively assess professionalism behaviors in first- and second-year students. As described, the professionalism score has the added benefit of correlating with academic performance, particularly in clinical courses. Future studies should follow students longitudinally to assess the correlation of professionalism scores obtained in the first 2 years of osteopathic medical education with academic and professional performance measures attained during clinical clerkships, residency, and unrestricted osteopathic medical practice.

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