

DAcOM

# **Quality Improvement Plan (QIP)** Biomedical Physical Assessment Education and Integration for Acupuncturists

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# Cover Sheet

## Purpose

Biomedical education is a requirement for acupuncture licensure in many states. At AOMA, Master of Acupuncture and Oriental Medicine (MAcOM) students take two biomedical physical assessment (PA) classes before starting their clinical internship where they are expected to use it regularly during patient intake. However, in practice, acupuncture students are not using PA consistently and when they are asked to do so, have variability in confidence and competence. This QIP is a needs analysis inquiry into why students are not consistently integrating PA into their clinical internship and what change in educational practices could facilitate optimal integration. Additional questions posed include: Why is PA used by acupuncturists? Why is PA important and will it change the course of acupuncture treatment chosen? How is the PA curriculum determined and are the tests required for licensure standardized from class to clinical internship?

## Needs Analysis

Students are not using PA consistently in clinical internship and therefore are unlikely to use it in professional practice.

Surveys and interviews are needed to find out why skills being learned in didactic courses are not being applied practically in clinical internship. Does it reflect a gap in MAcOM PA education and subsequent practical incompetence, a lack of confidence, a belief system that PA is not necessary for acupuncture practice, or some other phenomenon? A systematic inquiry into the current state of PA education in the MAcOM and the PA practices of Licensed Acupuncturist (L.Ac.) faculty members and professional clinicians on the AOMA campus is executed in this QIP. The end goal is to determine whether or not PA education at AOMA should be reviewed and improved with adjustments to PA tests, educational video intervention and additional PA classes.

## Target Audience/Group

- AOMA Academic Departments and leadership who are responsible for curriculum review.

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- AOMA students and alumni.

### **Description of Intervention**

- Peripheral Nervous System (PNS) physical assessment instructional video.
- Survey of PA1 and PA2 students covering class content and educational study methods.
- IRB approved survey of AOMA faculty and professional clinic L.Ac.'s covering their belief concerning and use of PA in acupuncture practice.

### **End Product to Fill Needs/Gaps**

Intended end goals include:

1. A PA educational video that is accessible to students and alumni.
2. An Impact on PA curriculum changes at AOMA.

### **Method(s) of Sharing End Product**

1. Youtube channel: <https://www.youtube.com/watch?v=sxcwnUAogDg&t=118s>
2. Meeting with Biomed department heads, faculty, and director of MAcOM at AOMA.

### **Conclusions**

PA is an important part of Acupuncture education and practice, however it is not being consistently integrated into clinical practice by AOMA students or faculty. Not all L.Ac.'s believe PA is necessary. Possible curriculum changes could include: i) a paired down list of PA tests in PA1 and PA2, ii) a standardization of content covered in these classes regardless of faculty to reduce confusion, iii) an additional class (PA3) that MAcOM students will take after starting clinical internship that repeats PA tests and integrates biomedical PA into acupuncture practice, and iv) an increase in exposure to PA at AOMA through videos and additional PA review sessions in Clinic Theater 2 and mandatory quarterly intern meetings. Future endeavors could include a series of CEU classes teaching practical application of PA tests to Acupuncture treatment plans. Most importantly, this QIP concludes that PA is important in the practice of acupuncture and can inform acupuncture treatment plans.

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## Introduction

Physical assessment is an important component of medical intake and involves a physical exam that utilizes the observational skills of the practitioner. Students training to become licensed acupuncturists are required to learn a set of biomedical physical assessments (PA) to fulfill ACAOM standards and to pass the NCCAOM boards for acupuncture licensure.

### Physical Assessment Education at AOMA

There are two PA classes that students are required to pass before they may enter clinical internship. The first, PA1, is a review of vitals, cranial nerve and orthopedic tests by region (lumbar, cervical, shoulder, etc). The second, PA2, is a review of systems including cardiac, respiratory, HEENT (Head, eyes, ears, nose and throat), and abdomino-pelvic assessment. Students are expected to practice these PA tests in clinical practice as a part of their intake. The medical chart follow-up forms include an open-ended objective section with additional dedicated boxes for blood pressure (BP), heart rate (HR), respiratory rate (RR), temperature (Temp), weight, and height, Chinese pulse and tongue findings. As these classes are prerequisites for clinical internship, there is often a gap between practicing the tests in class and the opportunity to practice on patients in clinic. Students do have an opportunity to review PA in a Clinic Theater 2 class that is usually taken the term before internship. Student degree plans vary, however a student will usually take PA2 the term directly before they begin internship. Students learn Chinese medicine physical assessments including pulse, tongue and constitutional observation in their TCM Diagnostics classes.

Students are paired up with a clinical resident or teaching assistant (TA) during their first term of internship as Level 1 (L1) interns. This role must be filled by a graduate of the program who may or may not yet be licensed. They guide the L1 intern through their first term and observe the entire treatment, from intake to completion.

Supervisors who are faculty members who hold a current license oversee the entire student clinical rotation which includes 3-4 rooms of interns at different levels. They interact with the interns during presentation of case and treatment planning but are not present to observe the intake nor much of the treatment. They may ask the intern if they performed PA during presentation if they feel it is necessary. The resident and TA are

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valuable in that they are in the room the entire time with new interns, can see lapses in practice and give hands-on corrections at the beginning of a student's internship so they establish best practices early.

Students are required to complete checklists at different levels of internship totalling three. To have a task completed and signed, the intern must demonstrate competency in that particular task. The only checklist that lists PA tests is L1.

The only other opportunity to assess student's competency and confidence with PA is in the first and second objective structured clinical examination (OSCE) where students must pass different stations to progress to the next level of internship. The second OSCE is more heavily focused on PA than the first however students are expected to use case-relevant PA tests during their intake in the first OSCE.

To review, the educational opportunities outside of internship for PA in the MAcOM are:

1. Didactic classes PA1, PA2, Clinic Theater 2, TCM Diagnostics for tongue, pulse, complexion observation, etc.
2. First term as a L1 intern with a clinical Resident or TA
3. L1 checklist
4. First and second OSCE

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## History & Context

Physical assessment is based on the belief that you can determine what is happening inside the body by observing outer symptoms. The findings are usually considered objective compared to the subjective narration of the patient. In Chinese medicine, physical assessment will include observation of the patient's body and constitution, their tongue, as well as palpation of the pulse and channels. In Western biomedicine, it is usually organized by systems including neurological, respiratory, cardiac, and musculoskeletal. In both, physical assessment is a set of tests used in a physical exam using the senses of the practitioner and may utilize additional tools for example, a reflex hammer or a scale. Palpation, auscultation, observation and percussion are skills that are developed through practice. Orthopedic tests often assess the state of the musculoskeletal system. All tests have different levels of sensitivity and specificity.

Arguably the most important physical assessment technique used in Chinese medicine is palpation of the pulse which has been used for thousands of years. In fact, pulse analysis is referenced in the Huang Di Nei Jing. In Kaptchuk's work, *The Web that has no Weaver*, he challenges the perceived mysticism of Chinese medicine saying, "Chinese medicine is a coherent and independent system of thought and practice that has been developed over two millennia. Based on ancient texts, it is the result of a continuous process of critical thinking, as well as extensive clinical observation and testing."<sup>1</sup>

In Western medicine, the majority of physical assessment techniques that are still used today occurred in the 19th century in Europe, though Rufus of Ephesus was including details of the location and nature of pain as early as 100 AD in ancient Greece.<sup>2</sup> In 1761, the Austrian physician Leopold Auenbrugger developed the use of percussion, stating, "I here present the reader with a new sign which I have discovered for detecting diseases of the chest. This consists in percussion of the human thorax, whereby, according to the character of the particular sounds thence elicited, an opinion is formed of the internal state of that

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<sup>1</sup> Kaptchuk, T. (2014). *The web that has no weaver: understanding Chinese medicine*. BookBaby.

<sup>2</sup> Walker HK. The Origins of the History and Physical Examination. In: Walker HK, Hall WD, Hurst JW, editors. *Clinical Methods: The History, Physical, and Laboratory Examinations*. 3rd edition. Boston: Butterworths; 1990. Chapter 1. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK458/>

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cavity.”<sup>3</sup> This profound statement supports the value of PA; to gain insight to the inner state of the body by assessing from the outside. Other milestones include the development of the first stethoscope by René Laennec in France in 1816, the ophthalmoscope by Hermann Von Helmholtz in Germany in 1852, the thermometer by Carl Wunderlich in Germany in 1871, the reflex hammer by Erb and Westphal in Germany in 1875 and the sphygmomanometer by Riva Rocci in Italy in 1896. The “modern” physical exam was developed at the French School in Vienna from 1800 to 1850 and physicians from the United States had to travel there to develop these skills as laboratory sciences were highly distrusted in the U.S. at this time. The physical exam included “Inspection, percussion, palpation, and auscultation” which were “used systematically for the chest, head, and abdomen... The skin, muscles, nerves, mucous and synovial membranes, lymphatics, and veins are noted specifically.”<sup>4</sup> These fundamental skills and tools still comprise the standard of the physical exam and are covered in the PA curriculum at AOMA.

The attitude toward physical assessment by acupuncturists is mixed. In the popular periodical, *Acupuncture Today*, one acupuncturist states, “Let's face it, exams are a pain but necessary in patient care. Following a good consultation, a thorough exam will help you confirm your suspicions and document the patient's condition. We don't need to go into the whole realm of examination standards and protocols, let alone the scope of different diagnostic tests available.”<sup>5</sup> The same acupuncturist states in another article, “There must be objective clinical correlation of the patient's complaint to validate a care plan. Taking the time to do an exam is important, but it does take time. The exam serves as a way to physically validate your clinical impression following a history and clinical consultation. None of us want to waste time doing "a bunch of tests," but a problem focused exam is part of good case management.”<sup>6</sup> In both articles, he acknowledges the value and necessity of PA tests but also paints them as a potential burden, a “bunch of tests,” a “pain,” and a time management hurdle to be overcome. Thus, it is important in this QIP to not only

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<sup>3</sup> New Invention by Means of Percussing the Human Thorax for Detecting Signs of Obscure Disease of the Interior of the Chest (1761)

<sup>4</sup> Walker HK. The Origins of the History and Physical Examination. In: Walker HK, Hall WD, Hurst JW, editors. *Clinical Methods: The History, Physical, and Laboratory Examinations*. 3rd edition. Boston: Butterworths; 1990. Chapter 1. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK458/>

<sup>5</sup> Briggs, Douglas R. (2011, March). The Tests You Don't Have to Do. *Acupuncture Today*, 12 (3).

<sup>6</sup> Briggs, Douglas R. (2015, February). Two for One: The Cervical Distraction Test. *Acupuncture Today*, 16 (02).

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assess education and resulting competence and confidence with execution of PA tests by acupuncturists but their attitudes and bias toward the necessity and/or burden of PA.

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## Needs Analysis

Physical assessment is a system based on the belief that you can determine what is happening internally by observing outer symptoms. In Chinese medicine, physical assessment will include pulse and tongue diagnosis as well as palpating channels. In western biomedicine, it is usually organized by systems including neurological, respiratory, cardiac, and musculoskeletal. In both, physical assessment is a set of tests used in a physical exam using both the senses of the practitioner and additional tools as needed. Palpation, auscultation, observation and percussion skills are developed through experience. Orthopedic tests assess the state of the musculoskeletal system.

PA is an important skill and a necessary part of acupuncture practice because “if a detailed physical assessment is omitted and, as a consequence, care is delivered in the absence of an appreciation of the impact of pathophysiological adaptations”<sup>7</sup> the quality of care is compromised. This is understood in Western Biomedicine and is a routine part of training for Medical Doctors (MD) and nurses. A Licensed Acupuncturist (L.Ac.) has the responsibility to refer out patients should they exhibit red flag symptoms and without objective findings, it can be difficult to manage the case accordingly. Therefore it is an issue of safety and quality of care. Furthermore, PA can help define which tissue is being affected and has the potential to integrate nicely into Chinese medicine systems, like channel distribution and zang fu theory. When utilized in an integrative fashion, PA can guide the Chinese medicine treatment plan.

### Level 1 Interns & Residents

MAcOM students at AOMA are paired up with a clinical resident or teaching assistant (TA) during their first term of internship as Level 1 (L1) interns. The resident or TA is a graduate of the MAcOM program and may or may not be licensed. In their role, they guide the L1 intern through their first term and observe the entire treatment, from intake throughout treatment. The students will remain at L1 status until they pass the first level objective structure clinical examination (OSCE). They are required to complete a L1 clinical checklist as well which lists various clinical skills. The exact expectation on the sheet reads, “All items

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<sup>7</sup> West, S. L. (2006). Physical assessment: whose role is it anyway?. *Nursing in critical care*, 11(4), 161-167.

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must be witnessed and evaluated by the supervisor or resident who is signing off. These are to be done on patients during regular clinic treatment sessions. Sign-off only if item was demonstrated safely and competently without assistance. CNT must be demonstrated for competency. CNT, clean hands, clean fields, skin prep, needling, and proper disposal of contaminated items of expected every treatment session”<sup>8</sup> There are a total of five clinical checklists to complete before graduating the MACOM which include one for observation, Levels 1, 2, 3 and herbal medicine internship. The L1 checklist is the only one of the group that includes physical assessment competencies:

1. Palpation of points or along channels or abdomen for tenderness - three times
2. Tongue and Pulse; All Vitals Measurements - three times
3. Perform and record Range of Motion Measurements, muscle strength - one time
4. Perform and record peripheral neurologic system exam (PNS) (peripheral pulses, reflexes, dermatomes, myotomes) - one time

During residency from 2015-2016, it was observed that interns were both reluctant and incompetent at performing PA, especially items 3 and 4. One resident who tracked these tendencies from January 2015 to May 2016 noticed that none of their interns were able to perform range of motion (ROM) or PNS physical assessments without review or intervention. TA’s and residents also admitted to feeling underprepared to evaluate item 4 in their interns. This garnered further inquiry as these skills were covered in PA didactic classes for the interns and graduates supervising them in clinic. Informally, interns reported that they didn’t feel confident or competent, they didn’t understand the clinical significance of the tests, that it was irrelevant to their Chinese medicine treatment plan and it had been too long since they had covered the material before entering clinic. This observation supported a need to conduct an inquiry of PA education at AOMA and integration of didactic material into clinical internship.

## **Faculty Interviews**

6 AOMA Faculty members were informally interviewed. All had a history of teaching PA material at either the master’s or doctoral level. The degrees held by this group included MD, DC, DAOM and MACOM. Their training included degree programs in China, the United

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<sup>8</sup> Checklist available for download at: [http://aoma.edu/assets/uploads/files/Checklist\\_of\\_Procedures\\_Level\\_1.pdf](http://aoma.edu/assets/uploads/files/Checklist_of_Procedures_Level_1.pdf)

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States and India. The interviews asked about PA education at AOMA, the importance of PA in acupuncture practice from their perspectives and educational gaps they had observed. Important conclusions are listed below:

1. Tests are not standardized in PA1 and will cover different material depending on which professor is teaching. Professors change throughout the year, depending on the term the class is offered. This can be confusing for students when they review the material with their peers and supervisors later.
2. There is not enough time to cover content, including practice time. Additional PA classes would be helpful.
3. Instructional videos are helpful because they allow students to review material before class, making practice time more productive and effective.
4. Some tests being taught are redundant and will not be used in clinical practice.
5. PA is not practiced by MD's during regular intakes in China, however they are covered in specialties like orthopedics.
6. Students are not using PA regularly in clinic.
7. Red flag screening and the ability to refer out is of primary importance for acupuncturists.
8. Multiple names and ways to do PA tests depending on educational references are confusing for students.
9. "There are too many tests." A review of all the tests should be conducted, taking into consideration current specificity and sensitivity, changing lesson plans to cover only the most useful and relevant tests.

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## Intervention

The needs analysis suggested a gap in applied learning between when students complete their didactic classes and when they enter clinic. A popular way to review material when students don't have the class to practice is via free educational videos on the internet. One instructor of PA2 had already created review videos in-house for students to review the material which were used frequently since 2014. There were no such videos previously created for PA1. PA1 is the class that covers the PNS tests mentioned in the L1 clinical checklist.

### PNS Video

A video covering the PNS tests, specifically myotomes, dermatomes and deep tendon reflexes (DTR) was produced during this QIP as a result of the needs analysis. This was the one set of PA tests interns, TA's and residents seemed the least equipped to perform on the level 1 checklist. There were several considerations made in the production of the video including choice of physician to demonstrate, the choices of tests covered, and how the information was summarized.

#### *Demo Physician*

The professional who demonstrated the techniques was considered well qualified as a doctor of chiropractic and a faculty member who has taught PA for over 10 years. He also has experience working in orthopedic and physical therapy hospital rotations.

#### *Choice of Tests*

Myotomes can be confusing because multiple spinal nerves affect muscular movements, for example elbow flexion is technically testing for the C5 and C6 spinal nerves that innervate the muscles. If an AOMA student were to reference a review video made by medical students<sup>9</sup> they might see that "C5/C6" are responsible for elbow flexion. However, if that same student referenced the most common google result for "myotome"<sup>10</sup> on wikipedia, they would see that C5 is responsible for shoulder abduction and C6 is

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<sup>9</sup> <https://www.youtube.com/watch?v=0hhcxaeOCYs>

<sup>10</sup> <https://en.wikipedia.org/wiki/Myotome>

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responsible for elbow flexion. Both resources are technically correct but one has simplified the information. These differences likely add to confusion when students try to review PA tests on their own and reinforces the belief that consistency of information is key for learning as mentioned in the faculty interviews. The latter and simplified view of myotomes was applied to a cervical and lumbar reference sheet available in the student clinic. This sheet was used as the basis for the PNS video so that information was consistent across multiple educational tools available to AOMA students. Streamlined content may also help students memorize the material more easily.

Myotomes covered in the video cover C5 to T1 and L1 to S1. DTR's include C5, C6, C7, L4 and S1. Dermatomes include C5 to T1 and L1 to S1. The video begins with a review of the peripheral pulses as they are listed on the checklist alongside PNS tests.

The video is available to review at the following link:

<https://www.youtube.com/watch?v=sxcwnUAogDg&t=118s>

The video concludes with the following statement:

*“Physical assessment is important. Make the time to include it. It can enhance your plan and give a good baseline to monitor patient progress. This also helps in communication with other healthcare practitioners. Thank you for reviewing with us. Now grab a hammer and go enjoy the magic of PNS physical assessment”*

The intention was to make the video informative and slightly humorous. Student mental fatigue is a concern and educational videos should aim to be engaging and informative.<sup>11</sup> The video achieved that by using costumes that might make a viewer do a double-take or smile and upbeat music that isn't too distracting. Each test includes text that describes the spinal level, the muscle innervated, and the movement. There is a slide that reminds the viewer to hold each movement for 5 seconds to test for muscle strength. Future videos elaborating on clinical significance of these tests and examples of case studies would be worth developing if this intervention proves to be helpful and effective.

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<sup>11</sup> Pettit, RK, (2017) A descriptive, cross-sectional study of medical student preferences for vodcast design, format and pedagogical approach. BMC Medical Education

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## PA1 Survey

The PA1 professor started showing the PNS video in his class in Spring of 2016. He screened it at the beginning of a twelve-class term. He also gave the students access to the video to review outside of class. He had informal positive feedback from students and continued to show it in subsequent terms. On class twelve of Fall term in December, 2016, after the final exam for PA1, an informal survey was distributed to each student by the professor.<sup>12</sup> The surveys did not include the student's name and the professor did not see the results. Completed surveys were delivered to the QIP investigator. The same survey was distributed to the PA2 class which had a different instructor. As mentioned in the intervention section of this paper, PA2 uses review videos made by the instructor in 2014 that were created specifically for the class.

Participants included twelve PA1 students and fourteen PA2 students.

100% said they found videos helpful and would like to see more videos dedicated to physical assessment for acupuncturists. 48% said they did not observe interns using PA in clinical internship which helped support the observations of the resident and faculty. 90% said they felt the number of tests covered was manageable. When asked what educational tools they found most helpful, 100% said videos and 83% said more practice time.

## Level 1 Intern Interviews

In Spring term of 2016, the clinical resident started informally showing this video in clinic before a case started when the L1 interns said they felt unable to perform PNS tests on the upcoming patient. If there was enough time, the resident would load the video, step out and let the intern watch it, step back in and let them practice on the resident. Then they would perform the PNS tests during the intake and informally answer questions after the case was complete. As time is limited, this opportunity only presented itself four times.

All students reported they felt the video was helpful as a review as all regularly used youtube videos to review PA material since finishing the PA classes. All the students felt better able to perform tests after a "refresher", "review" and "memory jogger." Two of the

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<sup>12</sup> Full Survey in Appendix 2-1

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students said there were too many tests covered in PA 1 & 2 that they didn't feel were useful. Four said a scaled down number of tests would be more practical and easier to master. Two students said that having more clinical case examples when learning PA would be helpful. Three said they didn't know what positive PA tests meant clinically. One said they would suggest adding an additional case-based PA class after students have already entered internship.

Limits to this type of informal interview is that it is conducted by someone who created the video so interns may have felt pressured to give complimentary feedback. As this is not anonymous, interns may feel weary of being completely honest. A strength of this intervention is that it utilized real clinical examples and instant feedback and application of the educational intervention.

## Pro Clinic Survey

The types of exams learned should be appropriate for the profession. Research has been conducted to pair down PA tests taught and practiced based on necessity and scope of practice. For example, nurses shouldn't be taught the same bank of PA tests as an orthopedic surgeon or PT. In a 2007 study, 193 nurses were surveyed about their use of different physical assessment tests due to a "concern regarding excessive content within nursing curricula."<sup>13</sup> They found that only thirty skills were identified as consistently practiced by the group and the rest were occasionally used or not performed at all. The study concludes that, "Nurse educators should assess the skills currently taught in nursing programs and consider what skills graduates actually need to enter nursing practice." This should be the same at AOMA. It is important to consistently review AOMA PA curriculum to ensure the tests being taught are still relevant to acupuncturists and students aren't being overwhelmed with unnecessary material that distracts them from practicing what is clinically pertinent to their practice.

Additionally, there is a concern that by overwhelming students with too much content, they may be unsure of what tests to use in everyday practice. To address this concern, a national survey was conducted in 2011 and 2012 with the goal to create a "core" physical

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<sup>13</sup> Giddens, J. F. (2007). A survey of physical assessment techniques performed by RNs: Lessons for nursing education. *Journal of Nursing Education*, 46(2).

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exam comprised of the most important and clinically useful tests for medical students.<sup>14</sup> They contacted 132 U.S. allopathic medical schools to gain the insight of educators about which tests belonged in a streamlined, core physical exam. They concluded that “there was openness to teaching medical students a streamlined core physical exam to which other maneuvers are added as clinically indicated. These educators closely agreed on the maneuvers this core exam should include.”

Studies like these formed the basis for a survey sent out to professional L.Ac. clinicians and MAcOM clinic supervisors working at AOMA in June and July of 2017.<sup>15</sup> The survey intended to assess the attitudes and belief systems around PA in acupuncture practice as well as the PA tests being used by the participants. The bank of tests was generated based on physical assessments on SOAP notes, student intern checklists, PA review sheets in clinic and OSCE review sheets given to students and second level OSCE grading rubrics. The survey was reviewed and approved by the Institutional Review Board (IRB) at AOMA and granted exempt status. Data was collected using the secure RedCAP software and identities were kept anonymous. 17 employees were sent the survey and 47% responded. 25% had degrees from China and 75% were trained in the United States. Degrees held include MAcOM, DAOM, MD, ND, PhD and MPH. All participants have practiced acupuncture and Chinese medicine for over 5 years with 50% having practiced 11-15 years.

## Results

75% use biomedical PA regularly in their acupuncture practice and 25% do not. In response to the question, “Do you believe that biomedical physical assessment is a necessary part of acupuncture practice?” 62.5% said yes and 37.5% said no. The survey had a section for participants to explain why or why not and the responses are listed below:

1. “they allow us to document objective findings regarding physical function,” and “allow one to rule in, and rule out, red flags and specific orthopedic diagnoses.”
2. “Diagnosis and differential diagnosis” and to “Guide treatment.”
3. “A base level understanding of anatomy and assessment is important in understanding the occurrence of physical illness in patients.”

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<sup>14</sup> Gowda, D., Blatt, B., Fink, M. J., Kosowicz, L. Y., Baecker, A., & Silvestri, R. C. (2014). A core physical exam for medical students: results of a national survey. *Academic Medicine*, 89(3), 436-442.

<sup>15</sup> Full survey in Appendix 3-1 to 3-4

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4. "On initial assessment it gives baseline for clinical-patient outcomes. It may help identify red flags or need for referral. Results sometimes guide my treatment choices. It validates to the patient that their issue is getting a fuller assessment than (if) PA is skipped."
  5. "While I understand the potential benefits, I believe you can (competently) practice acupuncture without it except to the extent that it is a State requirement (such as vitals in Texas)."
  6. "I have seen plenty of examples of practitioners who do incredible work without it."

25% did not think biomedical PA affected their acupuncture and CM plan, while 75% did.

When asked how, answers included:

1. "They just really aren't part of my working paradigm. I love the idea of exams integrated with treatment, so that my findings would be able to influence them, but for now, they exist unintegrated, taught in a bubble away from my TCM courses. They sit in a box in a dusty corner of my mind. In a closet labels, "Time I could have better spent doing qi gong."
2. "I may refer patients to gain additional examination and workup by an orthopedist, other specialist, or to the ER, based on the findings. I may also customize the treatment chosen, based on the findings of the PE."
3. "For the pain diseases, physical assessments indicate the location and nature of the pain which the treatment could be focus on."
4. "I do not use a lot of physical assessments, though I use a few regularly such as range of motion testing and a few basic nerve assessments. It can help localize issues in order to create a more accurate treatment strategy by guiding to affected channels."
5. "Example: if a sciatic like pain seems to be coming from lumbar spine I may use jia ji, but if it seems to be coming from musculature impingement, like piriformis, then I would not use jia ji points."
6. "I try to incorporate the information, for example even though the patient may have pain in the small intestine channel, a BPA could clarify neck involvement that would drive me to include treating the neck as part of my approach."

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There was a section that was open ended for any “additional thoughts to share about the role of biomedical physical assessments in the education and practice of acupuncture and Chinese medicine?” Responses include:

1. “Biomedical PE (Physical Examination) are needed to rule in, and out, red flags and to document patient-centered outcomes in the normal provision of clinical care.”
2. “They are undervalued by supervisors, practitioners, and students. It is a culture change to increase perceived value!”
3. “I dream of an Integrated future. TCM students won't have a TCM track, and a Biomed track, but a TCM track and an integrative medicine track. Professors will have to give up teaching in silos and relinquish old syllabi to the purpose serving our patients as they come, already integrated.”

A summary of every test used could be created should AOMA PA curriculum be reviewed. General trends in use of PA tests by the participants in this survey are as follows:

1. PNS tests including myotomes, dermatomes and DTR's were primarily used if it pertained to the chief complaint.
2. The tests where participants checked “I do not remember this test” were: Hoffman's (12.5%), Clonus (12.5%), Nerve Tension Test (12.5%), Cranial Nerve Exam (12.5%), Adson's test (12.5%), reverse Adson's test (25%), Spurling's test (37.5%), Hawkin's test (28.6%), Drop arm test (12.5%), empty can test (12.5%), Neer's test (25%), Ober's test (12.5%), Gillet's test (25%), Yeoman's test (12.5%), abdominal fluid wave test (25%).
3. The tests participants reported “I do not know this test” were: Spurling's test (12.5%), Hawkin's test (14.3%), Neer's test (12.5%), Thomas Test (25%), Gillet's test (12.5%), Yeoman's test (25%),
4. Use of vitals were varied with trends toward initial visit only and if it pertains to the chief complaint.
5. Range of Motion, cranial nerve tests, organ palpation, auscultation, percussion and inspection as well as most orthopedic tests were used if it pertained to the chief complaint.
6. The majority of tests that were not remembered or known at all were tests with a person's name as the title and not a description of what the test does or tests for.

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## End Product

The end products includes a publicly accessible PNS test video on youtube and the manuscript to help grant a first professional doctorate degree upon the author. This manuscript may or may not be edited at a future date for publication. Due to the unconventional layout of this QIP, it would certainly need to be edited down to fit the formatting of a typical research paper and may be appropriate for a journal such as *Meridians - The Journal of Acupuncture and Oriental Medicine*. This manuscript will hopefully spark discussion and change within the academic leadership at AOMA Graduate School of Integrative medicine and be a catalyst for curriculum review. This curriculum review could potentially add more exposure to PA throughout clinical internship, additional training of faculty and clinic supervisors to standardize PA instruction at the institution, a PA manual in the clinics with best practices at AOMA, and an additional PA class to be offered after L1 internship.

Many valuable relationships were formed during this project and talent was discovered that could be utilized to make truly integrative CEU opportunities for licensed acupuncturists in the future. This project definitely showed the gap in PA attitudes, interest and skill within the acupuncturist community.

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## Conclusion

Physical assessment is an important component of medical intake. Students training to become licensed acupuncturists are required to learn a set of biomedical physical assessments (PA) to fulfill ACAOM standards and to pass the NCCAOM boards. This inquiry raised questions about the effectiveness of PA education at AOMA.

The implications of this inquiry are profound. The climate of this medicine is veering toward this concept of integration, however in practice, it often doesn't match up and the execution is challenging, especially within the confines of a streamlined MAcOM track. Western Biomedicine classes are taught independently of Chinese medicine (CM) classes, making their integration in clinical internship a tall order. The National boards include a Biomedicine focused exam, however it is completely independent of acupuncture and CM treatment plans. Currently, there is no class that offers instruction of how to integrate Western biomedical physical assessment into a CM treatment plan yet the majority of seasoned practitioners who responded to the survey admit to doing just that.

Throughout this QIP, consistent themes arose about gaps in PA education and practice of PA in acupuncture and CM. More frequent review and practice of tests is needed and possible opportunities at AOMA are intern meetings and Clinic Theater 2. Integration of PA into acupuncture treatment plans is not covered in the AOMA curriculum and there should be a formal class that does so. Videos and other interactive educational resources are helpful in reviewing and practicing PA before and after didactic classes. Students, supervisors and professional practitioners interviewed and surveyed could not consistently remember PA tests that had names that did not refer to their function (ex. Thomas or Adson's test) suggesting a need to review and remove unnecessary PA tests. The tests covered in Physical Assessment 1, Physical Assessment 2, PA reference sheets in the clinic and OSCE exams should be paired down and standardized. Supervisors, faculty, residents and clinical TA's should be given the opportunity to access and review this streamlined PA material so that they can confidently guide students and interns consistently.

A MAcOM graduate of AOMA was interviewed during the final writing of this manuscript. He currently works in a hospital in Austin and has the unique perspective of working in a fast-paced, truly integrative setting where he is expected to work on a team with other

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medical professionals. He admits that he needed to review and improve his understanding of PA when he started the job because it added credibility and dramatically improved his treatment strategies. He did not feel equipped to use PA after graduating from the MAcOM program at AOMA and used books and videos to teach himself when he started practicing. He feels that many of his peers do not practice PA and do not understand how important PA is in the practice of acupuncture or how much legitimacy it gives when working on an integrative team. There are many times a day when he will have to legitimize a referral from an MD or a DO for acupuncture treatment and it can be argued that PA is the one language all healthcare practitioners have in common. To dismiss these tests because they are a “pain” or take too much time is limiting to one’s scope of practice and could even be argued as negligent. It is absolutely possible to practice CM without using biomedical PA but doing so ignores the changing climate and the greater goal to integrate Chinese medicine.

AOMA Graduate School of Integrative Medicine is one of the top five programs in the United States and it is one that is constantly implementing new programs and curricular changes to keep it at the forefront of this ever evolving medicine. Most importantly, the institution as a whole is open to feedback, review and growth. The different experiences tracked within this QIP over the past two years are a testament to the intelligence and revolutionary attitudes of the students, faculty and academic leadership at this institution and while there are numerous products that have been created within the time span of this QIP, the future educational tools that will likely be developed as a result of it are exciting. It can be argued that biomedical PA is a valuable device in the practice of acupuncture and Chinese medicine and it warrants further exploration and development in education and in practice.

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## Appendix

Figure 1-1. Screen capture of PNS Video: Review of the C7 (triceps) deep tendon reflex.

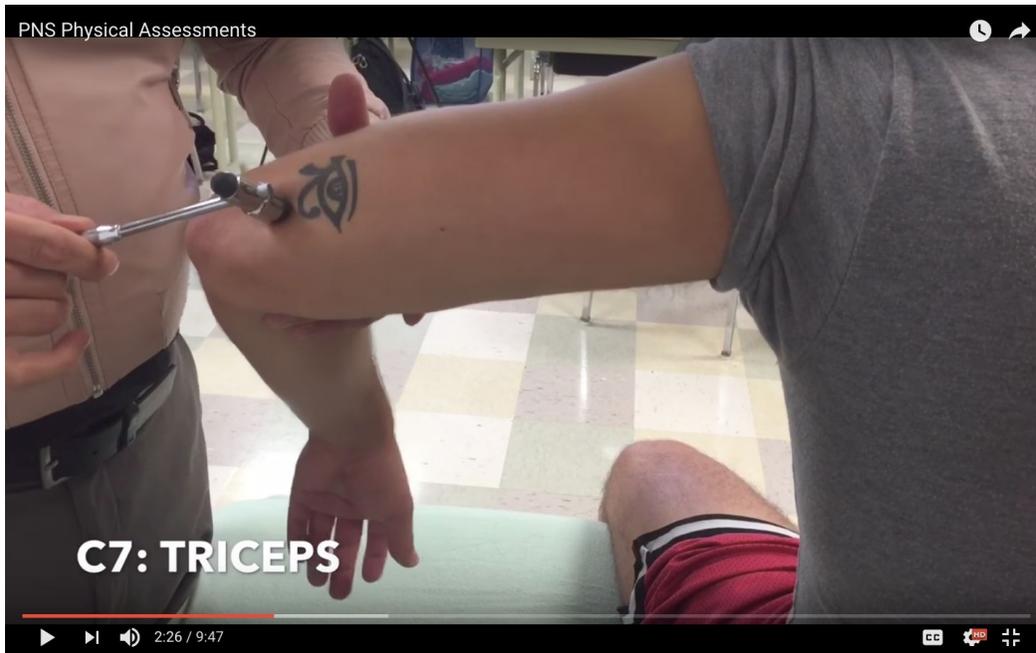


Figure 1-2. Review of the C7 elbow extension (triceps) myotome.

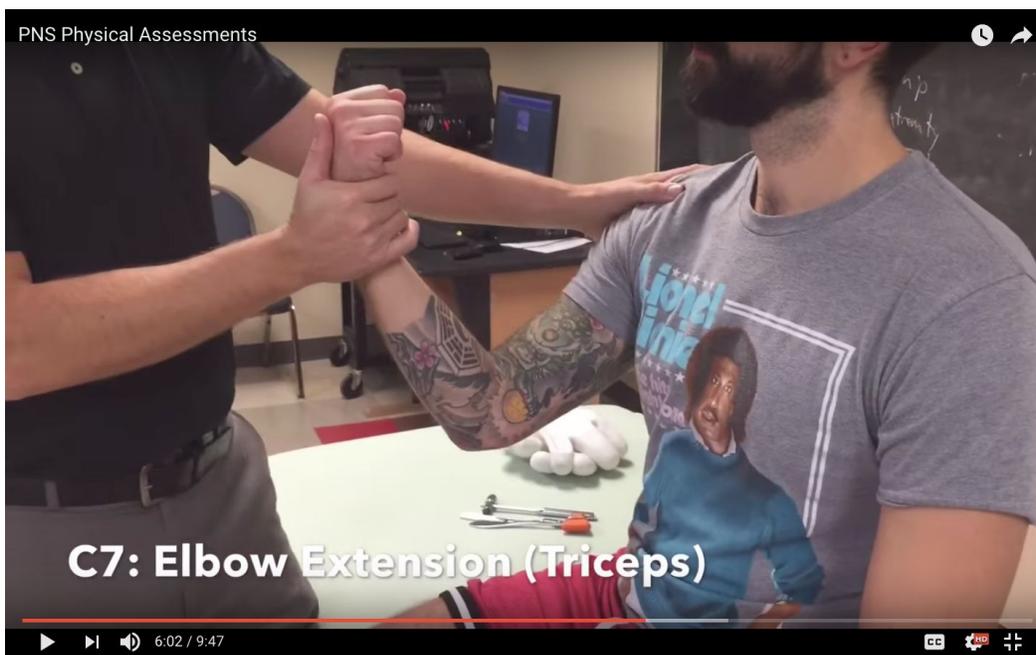


Figure 2-1. PA1 Survey

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**Physical Assessment Education Survey: December 2016**

**Please circle your response to the following questions:**  
A) Strongly agree B) Agree C) Disagree D) Strongly disagree

- 1) **The number of assessments required to learn in this class is manageable** A B C D
- 2) I understand what the physical assessment exercises are measuring A B C D
- 3) **I understand the clinical relevance of test results** A B C D
- 4) Physical assessment is important for Acupuncturists to use in clinical practice A B C D
- 5) **The review videos provided were helpful** A B C D
- 6) I used physical assessment videos to review for my exams A B C D
- 7) **I feel competent using these tests in clinic** A B C D
- 8) I feel confident using these tests in clinic A B C D
- 9) **I observe physical assessments being used in the student clinic** A B C D

**Please write in your response to the following questions:**

- 10) What educational tools (lectures, videos, practice time, etc.) were most helpful with your understanding and confidence in practicing the assessments covered?
- 11) Did you use materials outside what was offered in this class to review? If so, which ones?
- 12) Do you want to see more videos dedicated to physical assessment for Acupuncturists?
- 13) If so, what specific tests would you like to see covered next?
- 14) Do you think physical assessment is important for Acupuncturists to use? Why/not?
- 15) Are there any other learning tools or review sessions you feel would be helpful for your understanding of physical assessments before you start your clinical internship?

Figure 3-1. Physical Assessment Survey (Page 1 of 4)

## Physical Assessment Survey

This survey is being conducted by AOMA Graduate School of Integrative Medicine.

This research survey is approved by the AOMA Institutional Review Board (IRB). We hope that the results of this research study help us educate the AOMA community on the use of physical assessments in the practice of acupuncture and Chinese medicine.

Please answer each question as completely as you are able.

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**This survey is an inquiry into the use of physical assessments by licensed acupuncturists working at the AOMA professional clinic and supervising in the AOMA student clinics.**

**The survey is being conducted for research and educational purposes. Your responses will be anonymous and confidential. It should take you 5 to 10 minutes to complete.**

**We hope that the results of this research study will educate the AOMA community on the use of physical assessments in the practice of acupuncture and Chinese medicine.**

**If you have already completed this survey, please do not complete the survey again. You may exit by simply closing your web browser.**

Age Range

- 20 to 29 years
- 30 to 39 years
- 40 to 49 years
- 50 to 59 years
- over 60 years

Gender

- Female
- Male

Which of the following educational degrees do you hold?

- MAcOM or Equivalent
- DAOM or Equivalent
- MD
- ND
- DC
- DO
- PT
- PhD
- Other

Please specify what other educational degrees you hold.

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Where did you study acupuncture and Chinese medicine?

- United States
- China
- Other
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Please specify where you studied acupuncture and Chinese medicine.

\_\_\_\_\_

Figure 3-2. Physical Assessment Survey (Page 2 of 4)

How many years have you been practicing acupuncture and Chinese medicine?  0-5  
 6-10  
 11-15  
 16-20  
 20+

Do you believe that biomedical physical assessment is a necessary part of acupuncture practice?  Yes  
 No

Please explain why you feel, or do not feel, that biomedical physical assessment is a necessary part of acupuncture practice.

Do you use biomedical physical assessment regularly during your practice of acupuncture and Chinese Medicine?  Yes  
 No

Do biomedical physical assessments affect your acupuncture and Chinese medicine treatment plan?  Yes  
 No

Please explain how biomedical physical assessments affect, or do not affect, your acupuncture and Chinese Medicine treatment plan.

**VITALS**

	Initial visit only	Every visit	Only if it pertains to the Chief Complaint	Rarely	Never	I do not remember this test	I do not know this test
Blood Pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heartrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respiratory Rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Height	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Neurological Physical Assessments**

	Initial visit only	Every visit	Only if it pertains to the Chief Complaint	Rarely	Never	I do not remember this test	I do not know this test
Dermatomes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Myotomes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deep-tendon Reflexes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hoffman's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clonus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Babinski's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nerve Tension Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cranial Nerve Exam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 3-3. Physical Assessment Survey (Page 3 of 4)

<b>Orthopedic Physical Assessments</b>							
	Initial visit only	Every visit	Only if it pertains to the Chief Complaint	Rarely	Never	I do not remember this test	I do not know this test
Active Range of Motion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Passive Range of Motion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Resisted Range of Motion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distratction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adson's Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reverse Adson's Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spurling's Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hawkin's Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drop Arm Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Empty Can Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neer's Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FABER - Flexion Abduction External Rotation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FAIR - Flexion Adduction Internal Rotation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hip Scour Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kemp's Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thomas Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ober's Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gillet's Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yeoman's test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>Abdominal Physical Assessments</b>							
	Initial visit only	Every visit	Only if it pertains to the Chief Complaint	Rarely	Never	I do not remember this test	I do not know this test
Abdominal Auscultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Abdominal Percussion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Abdominal Palpation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Murphy's Sign	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
McBurney's Point	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fluid Wave Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 3-4. Physical Assessment Survey (Page 4 of 4)

<b>Thoracic Physical Assessments</b>							
	Initial visit only	Every visit	Only if it pertains to the Chief Complaint	Rarely	Never	I do not remember this test	I do not know this test
Thoracic Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thoracic Heart Auscultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thoracic Lung Auscultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thoracic Percussion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thoracic Palpation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>Head and Neck Physical Assessments</b>							
	Initial visit only	Every visit	Only if it pertains to the Chief Complaint	Rarely	Never	I do not remember this test	I do not know this test
Head and Neck Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head and Neck Palpation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carotid Pulse Auscultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carotid Pulse Palpation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eye Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visual Fields	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ear Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auditory Fields	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mouth Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sinus inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please list any physical assessments that you use that were not covered above and how frequently you use them in practice:

Do you have any additional thoughts to share about the role of biomedical physical assessments in the education and practice of acupuncture and Chinese medicine?