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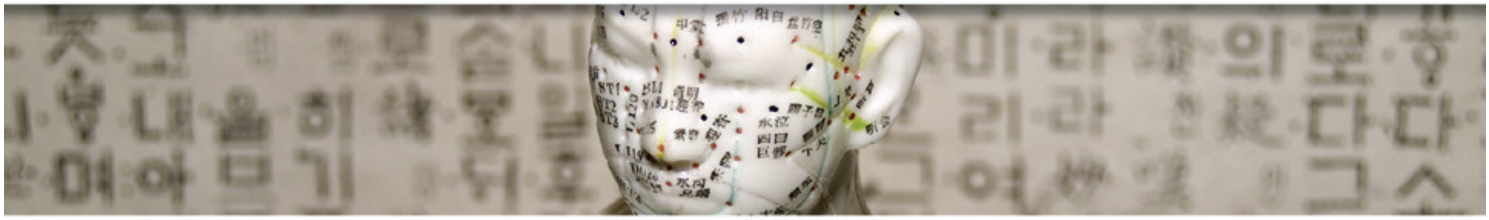

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MERIDIANS

The Journal of Acupuncture and Oriental Medicine

Letter from Editor in Chief Jennifer A. M. Stone, LAc

With this publication of the fall issue, V 4, #4, Managing Editor Lynn Eder and I ask you to join us in celebrating the third year—12 quarterly issues—of *Meridians: The Journal of Acupuncture and Oriental Medicine*!

We extend a heartfelt thank you to our authors, reviewers, editorial and publishing team and our subscribers and advertisers for your support and participation in making the journal a go-to resource for current AOM research, reviews of new books in the field, clinical pearls on a variety of conditions, and commentary on professional issues and education.

We also thank our sponsor NCCAOM for their financial support and their assistance in making the journal available to over 17,000 practitioners. We couldn't do it without you—Here's to many more issues of MJAOM for the AOM profession!

We feature an original research piece by Kory Ward-Cook, PhD, CAE, Bill Reddy, Dipl AC (NCCAOM), LAc, and Scott D Mist, PhD, Dipl AC (NCCAOM), LAc, "A Snapshot of the AOM Profession in America: Demographics, Practice Settings and Income." Data were collected from recertifying Diplomates (n=1047) collectively for the years 2014, 2015 and 2016 and analyzed for trends and to provide a benchmark for the profession. Data from this analysis will be used to inform government agencies, such as the Centers for Medicare and Medicaid Services, the Bureau of Labor Statistics, the Department of Veterans Affairs, and the National Center for Health Workforce Analysis that require nationwide data for policy decision-making and for publication of annual reports.

We have a unique case report for our readers in this issue. It's entitled "Treatment of Chronic Idiopathic Thrombocytopenic Purpura in a 15-Year-Old Adolescent Male: A Case Report" prepared by Maya Noble, DOM, LAc, Dipl Ac (NCCAOM). This case report illustrates the efficacy of acupuncture, licorice root tea, and bone broth in a 15-year-old male with a three-year history of chronic idiopathic thrombocytopenic purpura, refractory to all western medical management.

This issue also includes a valuable resource for all faculty teaching case study reporting. Dr. Edward Chiu, DAOM, Dipl OM (NCCAOM), LAc and a team of faculty from Oregon College of Oriental Medicine prepared the manuscript, "Using a Rubric to Evaluate Quality in Case Study Writing" as a resource for all AOM schools faculty. In it, Chiu describes the items needed for both the case study as taught in an academic context and its trimmed down structure that is required for scientific publication.

And another resource we present in this issue is a report on the enormous review of all systematic reviews, the 83 page *Acupuncture Evidence Project*, by Mel Hopper Koppelman, MSc, MSc. The Acupuncture Evidence Project was spearheaded by The Australian Acupuncture and Chinese Medicine Association (AACMA). The authors/editors are John McDonald, PhD and Stephen Janz, MPH. It is an update of two previous reviews, one by the Australian Department of Veterans' Affairs in 2010 and the other by the U. S. Department of Veterans Affairs in 2014. In it is a summary of the best evidence for acupuncture for any given condition or symptom.

Meridians JAOM welcomes letters to the editor from our readership. Please send them to info@meridiansjaom.com and be sure to include your full name and any licenses and/or titles, your phone number, and email address.

The Acupuncture Evidence Project publication provides both positive and negative evidence for any clinical condition or symptom and is an excellent reference tool.

Clinical Pearls editor and PCOM faculty member Mitch Harris, LAc attended and writes about the 2017 SIO Conference: The Process of Integrating Evidence for Complementary and Integrative Health Educators. Over 100 attendees from educational programs across the U.S., Canada, and even New Zealand, attended presentations designed to provide CIH educators additional training on the principles, practice and teaching of evidence-informed practice (EIP).

Be sure to also take a look at the point presented in the "Gates of Life," a project portraying the nature, action and *qi* transformation of acupuncture channels and points by Maimon Yair, DOM, PhD, Ac and Chmielnicki Bartosz, MD. This beautifully illustrated piece discusses the "Kid-1, *Yong Quan*, Gushing Spring."

As always, we invite your questions, feedback, submissions and letters to the editor: info@meridiansjaom.com. And don't forget—**Acupuncture Day is October 24. There is still time to participate: www.aomday.org**

Jennifer Stone, LAc
Editor in Chief
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Case Report

Treatment of Chronic Idiopathic Thrombocytopenic Purpura in a 15-Year-Old Adolescent Male

By Maya Noble, DOM, Dipl Ac (NCCAOM), LAc

Maya W. Noble, DOM, Dipl Ac (NCCAOM), LAc began her acupuncture and Oriental medicine studies in 1993 as an apprentice, followed by formal studies of Japanese meridian therapy, Five-Element Worsley style, TCM, Kiiko style, and Chinese traditional and herbal medicine. She received her bachelor's degree in microbiology and cell science from the University of Florida, her master's in acupuncture from the Eastern School of Acupuncture and Traditional Medicine, and her first doctorate in Oriental medicine from the Maryland University of Integrative Health. Maya is currently pursuing her second doctorate at the Oregon College of Oriental Medicine. She is the owner of Four Winds Acupuncture Clinic and Integrative Therapies in Tunkhannock, Pennsylvania, and specializes in the treatment of complex neurological and internal medical disorders.

Abstract

Thrombocytopenia is a condition in which the body does not have enough platelets to properly clot blood, i.e., the body's own immune system destroys the platelets. Idiopathic thrombocytopenic purpura occurs without an apparent cause. Children with this condition require close monitoring of platelet count due to potentially serious complications from bleeding. While some episodes resolve spontaneously in a few days, chronic cases generally require some form of medical intervention (steroids, intravenous gamma globulin, splenectomy) and can last well into adulthood. This case report illustrates the efficacy of acupuncture, licorice root tea, and bone broth in a 15-year-old male with a three-year history of chronic idiopathic thrombocytopenic purpura, refractory to all western medical management, and a negative bone marrow biopsy. The patient received 11 acupuncture treatments concurrent with taking licorice root tea and bone broth. Absent any other medical interventions, the patient's platelet count rose from 28,000 to 98,000 with no interval decreases and continued to rise to 156,000 after conclusion of treatment.

Key Words: Refractory chronic idiopathic thrombocytopenic purpura, adolescent ITP, acupuncture, bone broth, licorice root tea

Introduction

Originating in bone marrow, platelets are tiny cell fragments that circulate in our blood and bind together when they recognize damaged blood vessels.[1] Their primary function is to form a blood clot and thus prevent bleeding at an injured site. A normal platelet count is 150,000 to 450,000 platelets per microliter of blood.

Thrombocytopenia is a blood disorder in which the normal number of platelet cells circulating in our bloodstream decreases. Idiopathic thrombocytopenic purpura (ITP) is a blood disorder characterized by an abnormal decrease in the number of platelets in the blood for which the cause is unknown.[2] Symptoms of ITP include epistaxis, petechiae, bruising, and purpura (purple discoloration of the skin). These symptoms are not always present, thus treatment of ITP can be clinically challenging.[3,4]

Idiopathic thrombocytopenic purpura is the result of both increased platelet destruction and insufficient platelet production that generally results from an autoimmune response to an unknown trigger. Except for a dangerously low platelet count, young patients may exhibit no other signs of this condition.[5,6,7]

Based on the following criteria, the Scientific Working Group on Thrombocytopenias of the European Hematology Association has recommended classifying ITP as refractory: (1) persistent and severe, (2) continued need for therapeutic intervention to sustain the platelet count, and (3) failure to respond to splenectomy if attempted.[8] Approximately four to eight in every 100,000 children under the age of 15 develop ITP each year in the U.S.,[1] with a mean global age of 5.7 years (54.8% males and 45.2% females).[9]

ITP takes two forms: acute and chronic. Acute ITP is primarily seen in children ages two to six years. It is the most common form of ITP and may follow a viral illness.[2] The chronic form of ITP onset can occur at any age, with symptoms lasting from a minimum of a few months to several years. It is chronic in adults and self-limited in children, with most children spontaneously recovering.[10] While ITP is a commonly occurring blood disorder, it is also relatively understudied.[7,11]

Medical opinion varies in regard to treatment of children with ITP. Due to the belief that most children spontaneously recover from ITP, some advocate supportive care only or watchful waiting. Others recommend corticosteroids, intravenous gamma globulin (IVIG) infusions or even splenectomy.[8]

Chinese medicine categorizes thrombocytopenic purpura as *xue zheng* (bleeding condition), *ji xue* (spontaneous bleeding of the flesh), *fa ban* (macular eruption), *zi ban* (purple macules), *pu tao yi* (grape epidemic), and *xu lao* (vacuity taxation).[13]

The pattern discrimination for ITP falls into six categories. Acute ITP involves: (1) Heat toxins depressed within the constructive pattern or (2) Liver Fire effulgence and exuberance pattern. Chronic ITP includes: (1) *Yin* vacuity, Fire effulgence pattern, (2) Spleen *qi* debility and vacuity pattern, (3) Static Blood obstructing the network vessel pattern or (4) Spleen-Kidney *yang* vacuity pattern.[12]

"Medical opinion varies in regard to treatment of children with ITP. Due to the belief that most children spontaneously recover from ITP, some advocate supportive care only or watchful waiting. Others recommend corticosteroids, intravenous gamma globulin (IVIG) infusions or even splenectomy."

From a Chinese medical perspective, the primary etiology of ITP in children and young adults is a Heat syndrome which causes the Blood to escape the vessels.[13] The two major causes of this Blood Heat are excess Heat associated with a viral infection (treated by clearing Heat) and a *qi* and *yin* deficiency syndrome resulting from nutritional deficiency, prior diseases, or constitutional factors (treated by tonification).[13,14] Chronic thrombocytopenia results in the failure of *qi* to control Blood and bleeding. "*Qi* as the commander of Blood" and "Blood being the mother of *qi*" are the cause and result of each other.[14]

Fine-tuning treatment for ITP depends upon whether the stage is acute or chronic. In general, however, thrombocytopenia is treated by clearing Heat from the Blood, resolving toxins, promoting Blood circulation, stopping bleeding, supplementing *qi*, and nourishing *yin*.[12,13,14]

Acute ITP is due mainly from excess Heat and treatment involves administering cooling herbs.[12,13] Chronic ITP treatment addresses the underlying deficiency syndrome, primarily focusing on the Spleen.[13] The Spleen's involvement with the Blood is crucial. It is responsible for the transformation of nutrients rendered out by the Stomach's digestive actions into *qi* and Blood as well as the transportation of that *qi* and Blood to the other organs. The Spleen also replenishes *yin* and restrains the Blood within the vessels.[13]

In the case of prolonged illness, such as chronic, refractory ITP, the deficiency of *qi* extends beyond the Spleen to become a deficiency of the Kidneys as well. This is reflected by the bone marrow's inability to produce the platelet cells.[14] The Kidneys are regarded as the "congenital foundation" and origin of life; the Spleen is regarded as the "acquired foundation" and source of Blood and *qi* production. The two organs mutually nourish and promote each other.[15] By tonifying the *qi*, one tonifies the Blood and essence as well.[13]

Case Description

Case History

A 15-year-old Caucasian male presented with a three-year history of idiopathic thrombocytopenic purpura (ITP), which was originally diagnosed in May 2013 during a well-child checkup. During this routine primary care checkup, the patient was asymptomatic and his routine blood work was normal except for a platelet count of 1 k/uL (a normal platelet count is 150 to 450 k/uL—platelets per microliter of blood).

From May 2013 through November 2015, the patient underwent various unsuccessful biomedical treatments consisting of six courses of intravenous gama globulin (IVIG) and five courses of high-dose steroid treatments. See Table 1. In November 2015, the patient's mother declined further medical intervention and presented to this clinic.

Table 1. Pretreatment Lab Values and Biomedical Interventions

5/1/2013	Platelet count: 1,000 k/uL
5/2013 - 8/2013	5 IVIG infusions + 5 high-dose steroid courses resulted in >150,000 Aug 2013
7/1/2015	Platelet count: 13,000 k/uL. Bone marrow biopsy negative ITP diagnosis given
10/22/2015	Platelet count: 10,000 k/uL, no result value for MPV (mean platelet volume)
10/23/2015	Hospital admission. IVIG infusion.
10/26/2015	Platelet count: 31,000 k/uL. Decreased WBC. High monocyte count, low absolute seg count, low absolute lymphocyte count
10/30/2015	Platelet count: 48,000 k/uL, low WBC, elevated MPV
11/13/2015	Platelet count: 34,000 k/uL, normal WBC, no result MPV
11/23/2015	Platelet count: 28,000 k/uL, high MPV

Clinical Findings

Review of Systems

Past Medical History

The patient had no other significant past medical history. The mother stated he had been healthy and active with no illnesses outside of an occasional cold. She said that prior to this diagnosis, the patient had no symptoms suggestive of a bleeding disorder nor any bloodwork prior to 2013 that indicated a bleeding disorder. The patient was positive for childhood vaccinations.

The patient's mother stated that she and his siblings were all in good health. The patient's father had been diagnosed with high blood pressure.

Social History

The patient was active in sports. He lived on a farm, ate only organic food, and drank four glasses of water per day. The patient denied use of cigarettes, alcohol, recreational or prescription drugs, coffee, tea, and soda.

Physical Examination

The patient was 5'5" and weighed 148 pounds. The patient's overall demeanor was very quiet and non-engaging. When he did speak, there was minimal energy in his voice. On visual observation, he was very pale with no luster to his face. He did not make eye contact; his eyes were dull and he had faint dark circles under his eyes. His tongue was pale, soft/flabby, and scalloped with minimal white coat. His voice had a groaning tone and he did not engage in conversation.

His skin was cool, damp, and spongy to the touch. He had bruising on his lower legs. He had no tenderness on palpation of his arms or legs. He had no tenderness on abdominal palpation and had minimal tone.

He stated his sense of temperature was "fine," neither warm nor cold. He denied abnormal sweating. He denied headaches, dizziness, fogginess, or difficulty in concentrating. He answered "fine" to questions about his urine or stool; however, he did acknowledge that his urine output seemed to be much greater than his water intake. Excessive thirst was denied. He stated he had a "normal" appetite but would not elaborate.

He also stated he had no trouble falling or staying asleep, although he added that he was very tired and could fall asleep easily at any time.

The patient's overall pulse was weak and thin in the upper *jiao*, floating, weak, and thin in the middle *jiao*, and very deep and weak in the lower *jiao*. The patient's tongue was pale, flabby, puffy, and wet with scalloped edges and a scanty coat.

"The patient's acknowledgment of being extremely tired, along with the overall deep and weak quality of his pulse, indicated an overall *qi* deficiency. His inability to engage, his overall lassitude, and the bruising of his lower extremities indicated a primary diagnosis of Spleen *qi* deficiency."

Diagnostic Assessment

The patient's acknowledgment of being extremely tired, along with the overall deep and weak quality of his pulse, indicated an overall *qi* deficiency. His inability to engage, his overall lassitude, and the bruising of his lower extremities indicated a primary diagnosis of Spleen *qi* deficiency. Despite the negative findings on the bone marrow biopsy, platelets are formed in the marrow which is governed by the Kidneys. Therefore, due to the foundational relationship between the Spleen and Kidneys, the Kidneys still needed attention. Based on the patient's presentation and his pulse and tongue picture, he was diagnosed with deficiency of Spleen and Kidney *qi*.

Therapeutic Intervention

Table 2. Acupuncture Points Needle Type and Technique

Acupuncture Points	Needle Type (DBC pipe handle) and Technique (Japanese/5 Element style)
SP3	0.5" subcutaneous insertion toward SP4
Lu7	0.5" subcutaneous insertion toward LU8
SI6	0.5" subcutaneous insertion toward SI7
ST36, K3, SP6, Kiiko Immune Point, CV6	1.0" perpendicular insertion
Lu2	1" subcutaneous insertion toward acromioclavicular joint
Du20	1" subcutaneous insertion threaded toward Du19
CV17	1" subcutaneous insertion threaded toward xiphoid process
K7	1" oblique insertion toward K8
K27	1" subcutaneous insertion threaded toward midline
Lu9, HT7	0.5" in and out even technique insertion
Ear *shen men*, ear sympathetic	0.5" needle insertion

Continued on page 10

Table 3. Treatment Summary

Visit #	Date	Diagnosis	Point Selection
1	11/25/2015	Diagnosis: Deficiency of Spleen and Kidney *qi*	Sp3, Lu7, SI6, ST36, K3, Du20, ear *shen men*
2	11/28/2015	Diagnosis: Deficiency of Spleen and Kidney *qi*	SP3, Lu7, SI6, ST36 , K3, Du20, ear *shen men*
	12/10/2015	n/a	Laboratory testing - Platelet count 58,000
3	12/16/2015	Diagnosis: Deficiency of Spleen, Kidney, and Lung *qi*, Rebellious Lung *qi*	Sp3, Lu2, CV17, Lu7, SI6, ST36, SJ9/Kiiko immune point, Du 20. Sliding hot cups along upper bilateral trapezius region.
	12/26/2015	n/a	Laboratory testing - Platelet counts: 69,000
4	12/30/2015	Diagnosis: Deficiency of Spleen, Kidney, and Lung *qi*, Rebellious Lung *qi*	Sp6, Lu2, Lu7, SI6 , CV6, K3, K7, ear *shen men*, ear sympathetic, Du20. Closed with SP3.
	1/7/2016	n/a	Laboratory testing - Platelet count: 71,000
5	1/11/2016	Diagnosis: Deficiency of Spleen, Kidney, and Lung *qi*	Sp6, ST36, Lu2, Lu7, CV6, K3, K7, ear *shen men*, ear sympathetic, Du20. Closed with SP3.
6	1/25/2016	Diagnosis: Deficiency of Spleen and Kidney *qi*, improved	Sp6, ST36, Lu7, SI6, CV6, K3, K7, ear *shen men*, ear sympathetic, Du20. Closed with SP3 and LU9
7	2/1/2016	Diagnosis: Deficiency of Spleen and Kidney *qi*, improved	Sp6, ST36, Lu7, SI6, CV6, K3, K7, ear *shen men*, ear sympathetic, Du20. Closed with SP3 and Lu9.
	2/3/2016	n/a	Laboratory testing - Platelet count: 83,000
8	2/9/2016	Diagnosis: Deficiency of Spleen and Kidney *qi*, improved	Sp3, ST36, Lu7, SI6, CV6, CV17, K3, K7, K27, ear *shen men*, ear sympathetic, Du20. Closed with LU9.
9	2/16/2016	Diagnosis: Deficiency of Spleen and Kidney *qi*, improved	Sp3, ST36, Lu7, SI6, CV6, CV17, K3, K27, ear *shen men*, Du20.
	2/24/2016	n/a	Laboratory Testing - Platelet Count: 98,000
10	2/29/2016	Diagnosis: Deficiency of Spleen and Kidney *qi*, improved	Sp3, ST36, Lu7, SI6, CV6, CV17, K3, K27, ear *shen men*, Du20
	3/2/2016	n/a	Laboratory testing - Platelet count: 96,000
11	3/21/2016	Diagnosis: Deficiency of Spleen and Kidney *qi*, improved	Sp3, ST36, Lu7, SI6, CV6, CV17, K3, K27, ear *shen men*, Du20. Closed with HT7.
	3/28/2016	n/a	Patient requested a break from a break from treatment. Patient's counts were continuing to rise.
	4/2/2016	n/a	Laboratory testing - Platelet count: 108,000
	5/2/2016	n/a	Laboratory testing - Platelet count: 156,000
	6/3/2016	n/a	Patient's mother said his platelet count on May 2, 2016 was 156,000. She stated that he was discharged from all western medical care.

Summary: At the conclusion of visit #1, all pulses in all *jiaos* were stronger. The recommendations were made for treatments twice per week for the next six weeks, and to refrain from eating sweets, eat breakfast, and that all meals should be warm and cooked. Marrow bone broth three times per day was also recommended. The patient was urged to be asleep by 9:00 p.m., to rest when not in school, and to refrain from all sports activities. At first, the patient was reluctant to try bone marrow broth and licorice tea, but over time he gradually complied when he developed a cold with relentless cough. This compliance continued until the final week during which he discontinued because he began to dislike the flavor. Likewise, the patient was at first compliant with resting, but by the third visit he had resumed skiing and playing soccer several times per week. The patient became compliant with dietary recommendations after his sixth visit. The pulses gradually became stronger and, at the end of the treatment course, were full and present in all *jiaos*. The tongue at first was pale, puffy, and scalloped with a scant white coat ,and at the conclusion of his treatment course it was pink with minimal scalloping and a thin, white coat. His skin progressed from pale with malar flushing to normal with a healthy glow, and dark circles under his eyes had disappeared. The patient progressed from unengaged with listless speech to fully engaged with strength and depth of voice.

Results and Follow-Up

The most significant incremental rise in the child's platelet count occurred during the first two treatments, which were three days apart (increasing from 28,000 to 58,000 with acupuncture alone.) At the first treatment, it was recommended that he ingest warm drinks and warm and cooked food only, to rest, refrain from all sports activities, drink two cups of marrow bone broth per day, and receive acupuncture treatments twice per week for six weeks. The patient was noncompliant with the recommendations.

At his third session, the patient presented with a cold and an unrelenting cough. It was recommended that he drink two cups per day of licorice root tea (Traditional Medicinals). This particular tea contains only *gan cao*/radix glycyrrhizae, which specifically tonifies the Spleen and augments *qi*. It also moistens the Lungs, resolves Phlegm, stops coughing, and clears Heat.[19] The patient was suffering from an external pathogenic factor manifesting as Lung Heat. Due to the supportive nature of *gan cao* for both the Lungs and Spleen, it was deemed a suitable choice of herbal treatment in addition to the marrow bone broth.

Although the patient was originally instructed to do all these recommendations, he did not comply. However, starting with the third treatment and for the duration of them, he drank both the bone broth and licorice root tea. He was noncompliant with the other recommendations of warm food and drink, rest, and the prescribed weekly treatments. The treatments he received were irregular, ranging from once per week to once every three weeks. Despite the patient's lack of compliance with rest and treatment frequency, his platelet count continued to rise during his course of treatment. Two months after conclusion of treatment, his mother called stating his platelet count rose to 156,000 k/uL and that he had been released from all other medical care.

Discussion

Prior to acupuncture and Oriental medical treatments (AOM), the patient's platelet count see-sawed over a two-year period while he was undergoing IVIG and high-dose steroid treatments. The patient's counts ranged from a low of 1,000 k/uL to a high of 48,000k/uL, only to plummet to 28,000 k/uL again prior to beginning AOM treatment.

During the course of 11 AOM treatments, the patient's platelet count rose steadily from 28,000k/uL to 96,000 k/uL. Two months after concluding treatment, the patient's mother called in with further laboratory values that indicated the patient was within a normal range count of 156,000 k/uL. He discontinued drinking bone broth and licorice root tea when the treatments ceased. He resumed all normal sporting activities and activities of daily living and was released from all medical care.

"While spontaneous remission cannot be ruled out, the routine laboratory documentation provided throughout this patient's course of AOM treatment, in addition to the absence of biomedical intervention during this treatment period, presents a strong case that the use of AOM in the treatment of refractory idiopathic thrombobcytopenic purpura should be further explored."

This was a difficult case as the patient would not directly engage at the onset of treatment. Per information from the mother, the patient had limited compliance with practitioner recommendations of food and rest, but, beginning with the third treatment, he did take the bone broth and licorice root tea as prescribed.

It is unclear if the patient would have responded in a similar manner if he received acupuncture alone without the inclusion of bone broth and licorice root tea. Also, there have been cases where refractive ITP resolves spontaneously in some children without intervention.[2] In this particular case, however, there was a doubling of the patient's platelet count 15 days after his initial acupuncture treatment and his platelet count continued to trend upwards with each successive treatment.

Treatment protocols were based solely on pulse, tongue, and physical presentation due to minimal subjective offerings from the patient. The primary indicator for efficacy of AOM treatment was the increase in routine platelet counts as provided by the mother.

Conclusion

This patient presented with a two-year history of documented ITP, classified as refractory due to his recalcitrant response to standard biomedical treatment. While spontaneous remission cannot be ruled out, the routine laboratory documentation provided throughout this patient's course of AOM treatment, in addition to the absence of biomedical intervention during this treatment period, presents a strong case that the use of AOM in the treatment of refractory idiopathic thrombobcytopenic purpura should be further explored. The combined therapies of licorice root tea and bone broth and their components are relatively safe, inexpensive, and easy to prepare when compared to the more invasive therapies currently used and should be evaluated for first-line use as well as refractory cases of this condition.

Informed Consent

The patient's mother provided informed consent for publication of this case report.

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A Snapshot of the AOM Profession in America: Demographics, Practice Settings and Income

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Please see bios at end of the article.

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Abstract

INTRODUCTION: Since 2008, the National Certification Commission for Acupuncture and Oriental Medicine has performed job analyses on its member Diplomates by collecting relevant data, including demographics and income profiles as well as practice patterns and environment. These data have significantly contributed to the profession's application to the U.S. Bureau of Labor Statistics requesting that "Acupuncturists" be assigned an independent Standard of Occupational Classification. As a result of the applications submitted in 2008 and 2016, a new code for Acupuncturists, SOC – 29-1291, will be included in the next edition of the *BLS Occupational Handbook*, which will be published in 2018. In addition to the demographic and clinical practice characteristics data identified by the periodic NCCAOM job analyses, the NCCAOM began collecting similar data from NCCAOM Diplomates during their 4-year recertification cycle.

METHODS: Data collected from recertifying Diplomates (n=1047) collectively for the years 2014, 2015 and 2016 were analyzed for trends and to provide a benchmark for the profession. Upon completion of their recertification application, Diplomates were asked to voluntarily complete a 28-item survey questionnaire.

RESULTS: The outcomes of these surveys demonstrated that the acupuncture and Oriental medicine workforce is 70% female, averaging 52 years of age and approximately 13 years of experience. Responding Diplomates were from 49 states and two territories, including a small sample from other countries. Initial evaluation and treatment fees averaged $112 among the respondents, with an average return visit costing $78. Roughly 45% of the respondents worked more than 32 hours per week and 26.1% worked less than 20 hours per week. The average Diplomate treated 24 patients per week. The median income of Diplomates was reported to be between $40,000 and $60,000 per year.

DISCUSSION: This descriptive research paper summarizes selected demographic, economic and practice setting characteristics for NCCAOM Diplomates each year, between 2014 and 2016, at the time of recertification. While the demographic profile of the Diplomates remained consistent (70% women, an average of 13 years in practice, and the majority in solo practice), there were some subtle changes that occurred between 2014

and 2016. One change indicated a greater number of practitioners working in other practice settings besides solo practice, such as hospital-based practice. Although the median annual income is in the range of $40,000 to $60,000, there were fewer Diplomates making less than $20,000/year and more earning greater than $100,000/year between 2014 and 2016.

CONCLUSION: There are a variety of business models employed among Diplomates across the country. These vary by location, employment status, and pay structures. Further information on the success and failure of acupuncture practices should be researched and distributed to students and practitioners to assist in supporting the acupuncture and Oriental medicine community. Additionally, government agencies, such as the Centers for Medicare and Medicaid Services, the Bureau of Labor Statistics, the Department of Veterans Affairs, and the National Center for Health Workforce Analysis, require nationwide data for policy decision-making and to publish annual reports as well as update their publications.

Key Words: Survey, acupuncturists, acupuncture and Oriental medicine, workforce, income, demographics

Introduction

Established in 1982 as a 501(c)6, the mission of the National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM) has been to establish, assess and promote recognized standards of competence and safety in acupuncture and Oriental medicine (AOM) for the protection and benefit of the public. More recently, in 2016 the NCCAOM updated its mission statement: "To assure the safety and well-being of the public and to advance the professional practice of acupuncture and Oriental medicine by establishing and promoting national evidence-based standards of competence and credentialing."

The NCCAOM offers certification programs in acupuncture, Chinese herbology, Oriental medicine, and Asian bodywork therapy, which are accredited by the National Commission for Certifying Agencies (NCCA), an independent accreditation commission within the Institute for Credentialing Excellence (ICE). Beginning in 2008, the NCCAOM began collecting demographic information from the acupuncture and Oriental medicine profession using online surveys to Diplomates for its Job Analysis (JA) Survey.

Diplomates are individual practitioners who are certified in one or more NCCAOM certifications. Eligibility for NCCAOM National Board Certification™ can be found at: http://www.nccaom.org/applicants/eligibility-requirements/. Acupuncturists must be licensed to practice in a state with a practice act for acupuncture; however, licensure standards differ from state to state. For more information see http://www.nccaom.org/state-licensure/.

In November 2007, the NCCAOM Board of Commissioners appointed a Job Analysis Taskforce consisting of practitioners, educators, researchers and regulators from the AOM community. The Taskforce members developed a survey questionnaire that included 28 demographic and practice environment questions. Some changes (addition or deletion of questions) were made to the survey and used in the 2013 Job Analysis (JA) Survey.

Methods:

Survey Administration

NCCAOM staff worked with Schroeder Measurement Technologies, Inc., NCCAOM's research and psychometric vendor partner, to convert the 2013 JA Survey questionnaire into an online survey instrument containing 28 items. This demographic survey was administered after each Diplomate renewed their certification and received an email confirmation that their recertification was complete. It included a link to an optional survey. These surveys were collected throughout the calendar year using SurveyMonkey.

"Sixty-two percent (61.7%) of the respondents indicated that they practiced alone. Twenty-four percent (23.9%) indicated that they work in a group setting and 10 percent (10.1%) work as an employee or contractor in a clinic, hospital or integrative setting. Other practice settings include wellness centers, spas and cruise ships, etc."

Statistical Analysis

Data were cleaned by eliminating multiple respondents using the same IP address and those who spent over 24 hours to complete the questionnaires. For those respondents that provided a range rather than a specific fee, the average of that range was used for analysis. Univariate and bivariate statistics were calculated on *a priori* areas of interest, including the relationship between income, practice type, gender, race and use of insurance reimbursement. Data were analyzed using Stata/MP 13.1 (Revision 16, December 2016, *StataCorp*, College Station, TX).

Results

Demographics

A collective convenience sample of n=448, n= 279, and n= 320 Diplomates responded to the questionnaires in 2014, 2015 and 2016 respectively. They were practicing in 49 states and two territories. Diplomate response rates were proportional to the number of licensed acupuncturists practicing in those states. The response rates averaged 9.7%, each year sample. During the three year span, there were no responses from practitioners in North Dakota. NCCAOM also received information from Diplomates practicing in Norway, Thailand, Switzerland, Canada, South Korea, China, Taiwan, United Kingdom, and American Samoa; however, these responses were not included in the analysis.

In aggregate, the average acupuncturist responding to the survey over the three-year period was 52.3 years old (SD 11.04), 69.8% female with 13.1 years (SD 8.5) experience. The median income was between $40,000 and $60,000 USD per year.

Certifications

The respondents of the survey included individuals with one or more certifications from NCCAOM. The distribution included 71.8% Diplomates of Acupuncture (AC) 12.8% Chinese Herbology (CH), 30.3% Oriental Medicine (OM), and 3.7% Asian Bodywork Therapy (ABT). A total of 15.0% have more than one certification, with the most common combination being Diplomate of Acupuncture and Chinese Herbology. In addition, over 20% of the respondents who answered indicated that they have additional healthcare degrees, to include 9.5% massage therapy, 5.7% nursing, 2.9% naturopathic physician, 1.8% chiropractor, and 1.4% physician.

Types of Practices

Sixty-two percent (61.7%) of the respondents indicated that they practiced alone. Twenty-four percent (23.9%) indicated that they work in a group setting and 10 percent (10.1%) work as an employee or contractor in a clinic, hospital or integrative setting. Other practice settings include wellness centers, spas and cruise ships, etc.

Respondents were asked about the types of conditions that they commonly see in their clinics. The most commonly identified condition was musculoskeletal, with 87.1% of respondents indicating that they very commonly or exclusively see these types of patients. Headaches or neurological conditions (56.5%) was the second most common, followed by gastrointestinal disorders (38.1%), immune and autoimmune conditions (30.4%), behavioral or psychological (27.4%), reproductive (25.4%), allergies or skin problems (21.6%), and respiratory conditions (18.3%).

Fees for Acupuncture Services

Fees varied across the nation from a low price of "free" ($0) for an initial consult to a high of $295, with an average charge of $112. Sliding scales were offered by 53.4% of those surveyed. Fees were based on the data received and not adjusted per year for inflation. For those respondents that provided a range rather than a specific fee, the average of that range was used for analysis. Average follow up treatment costs based on the three-year survey results were $78, with a low of "free" ($0) and a high charge of $205. The authors found it interesting that 0.2% of the respondents offered free treatments; we could not discern based on the survey if the practitioners were doing pro bono work or were retired and offering free service.

The majority (88.2%) of practitioners surveyed allow patients to self-pay. Slightly more than a third accept insurance (36.8%), and 34.1% have their patients submit insurance claims. Free services or bartering for services was also used among 19.4% of those surveyed.

Weekly Hours Worked

Respondents were asked about how many hours they worked per week. The most common response (45.5%) indicated that they work more than 32 hours per week, and 26.1% reported working less than 20 hours per week.

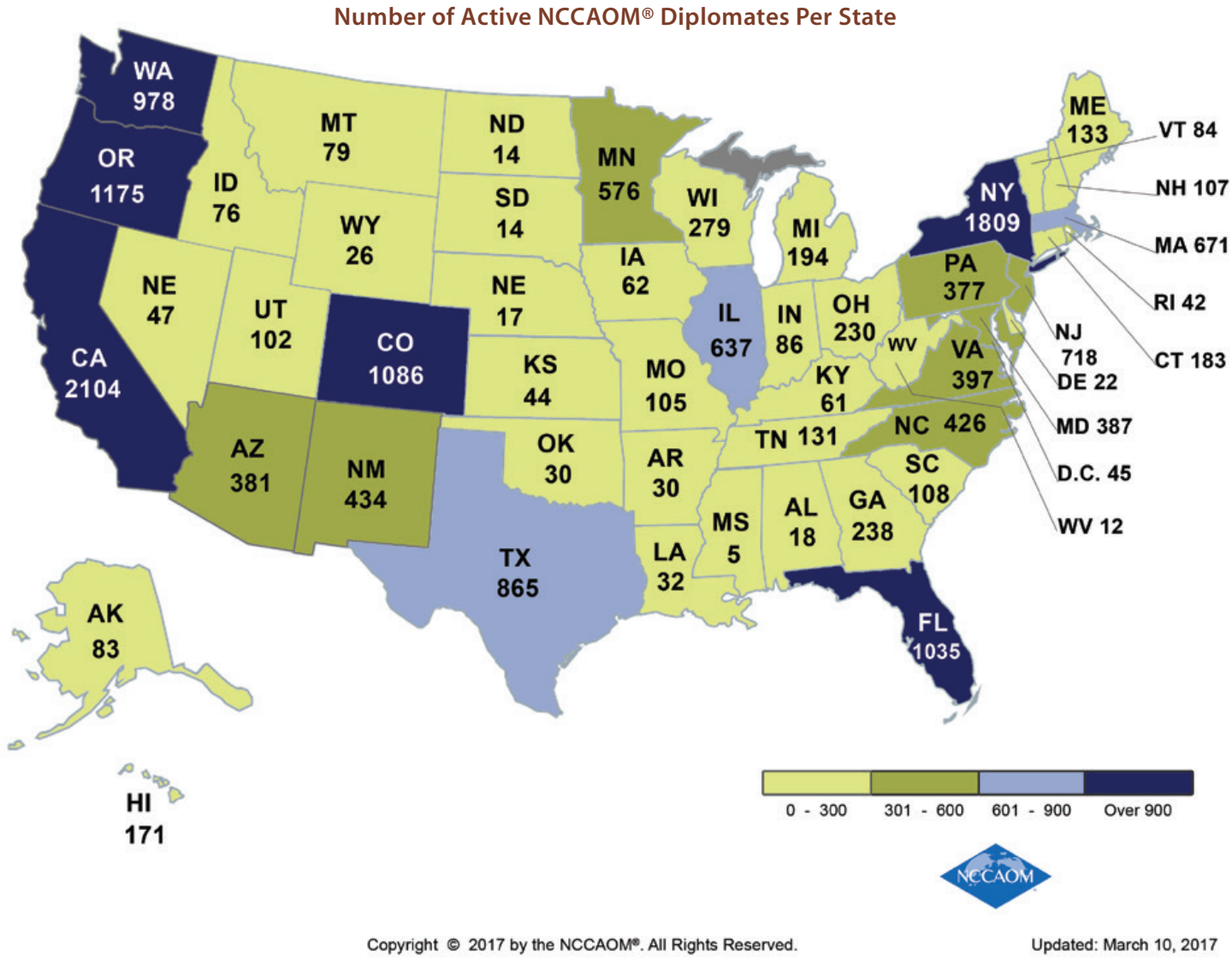
Discussion

Our study population has similar demographics to other studies of U.S. acupuncture practices.[1,2,3] Figure 1 depicts the distribution of NCCAOM Diplomates across the nation. In 2013 the NCCAOM contacted each acupuncturist regulatory board, in each U.S. state with a practice act, to get the number of licensed acupuncturists practicing in those states. If there was no practice act, the NCCAOM counted the number of active Diplomates practicing in these five unlicensed states. The aggregate was estimated to be roughly 29,000 actively practicing acupuncturists.

The value of these data is far-reaching for the AOM profession. The U.S. Department of Health and Human Services requires detailed information about healthcare professionals offering services through Medicare as does the U.S. Department of Veterans Affairs for the treatment of U.S. military personnel. Additionally, the NCCAOM provided evidence to the U.S. Bureau of Labor Statistics (BLS), meeting the requirements to create an independent Standard of Occupational Classification (SOC) in 2016 for acupuncturists (29-1291) to be included in the next edition of the BLS Occupational Handbook to be published in 2018. The Census Bureau and the National Center for Health Workforce Analysis publish annual reports tracking professions.

Hospital administrators are also interested in access to data about average incomes of acupuncturists across the country. This paper provides a snapshot of some demographic and economic workforce characteristics of active NCCAOM Nationally Board-Certified Diplomates™, based on data gathered over three consecutive years, 2014 to 2016, collected from a similar demographic questionnaire created for the NCCAOM 2013 JA Survey.

Figure 1. Distribution of NCCAOM Diplomates in the U.S. (Reprinted with permission from NCCAOM, June 2017.)[4]



The National Center for Education Statistics provides data on student demographics in ACAOM-accredited AOM and TCM and herbal programs at the master's and doctoral levels. Projections of the future AOM work force suggest graduates will be younger, female, and more likely to work part time.[5] See Table 1 for details.

Table 1. Acupuncture School Enrollment by Program and Sex: 2014-2015 Academic Year*

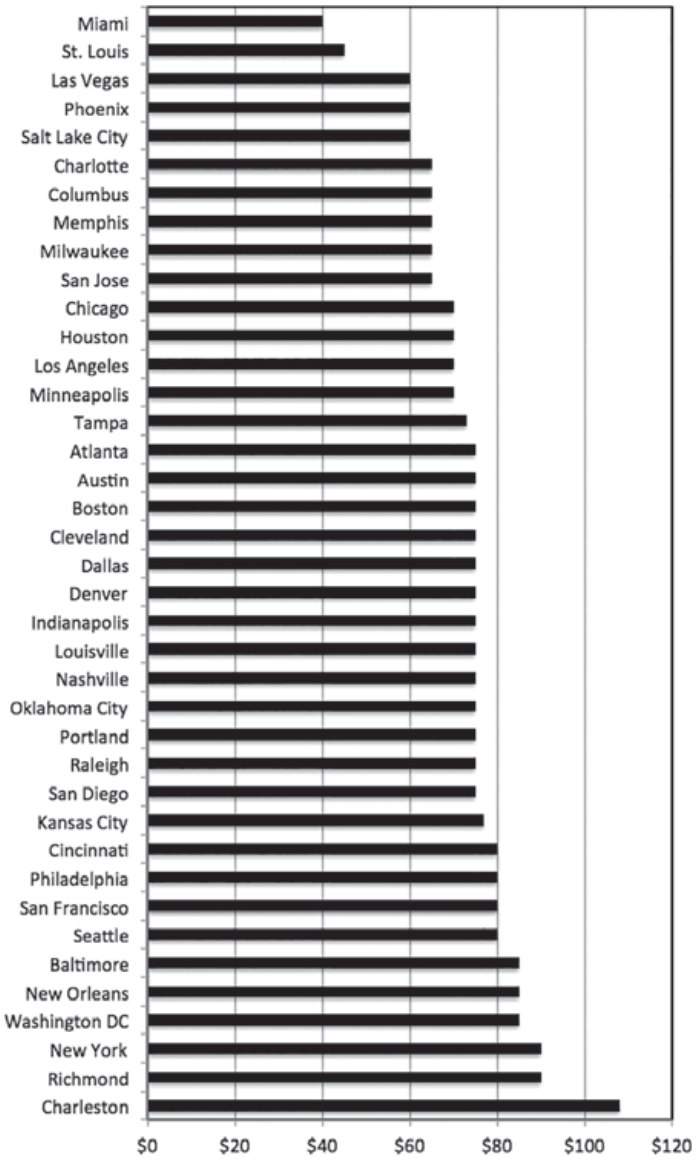
*Data drawn from National Center for Education Statistics

	Master's Programs		Doctoral Programs	
	Total Students	Females (%)	Total Students	Females (%)
Acupuncture & Oriental Medicine	1425	70.7	83	55
Traditional Chinese Medicine & Herbs	251	74.9	16	69

The Survey questions relating to fees charged reflected a wide variety of practices. Some respondents work in "Community Acupuncture" clinics, where their business model offers a sliding scale and supports a "mode of direct delivery of inexpensive care for people of ordinary income regardless of insurance coverage." Their return visits cost anywhere from $10-$25.[6]

Figure 2 reflects the average cost of a single acupuncture session (without using any form of insurance) in major U.S. cities based on 1020 prices collected by okcopay, ranging $40 to $108 with the average charge of $75. The data were collected through direct surveys to acupuncturists, publicly available claims data and provider websites.

Figure 2. Average Cost of Single Acupuncture Session by City



"Ward-Cook and Hahn found that roughly one-third of the respondents from the 2008 JA Survey, who are working less than 32 hours a week, have made a personal decision to work part-time. When queried about their part-time status, an average of 24.3% across the 3-year span replied it was due to lack of patient load and would prefer full-time employment."

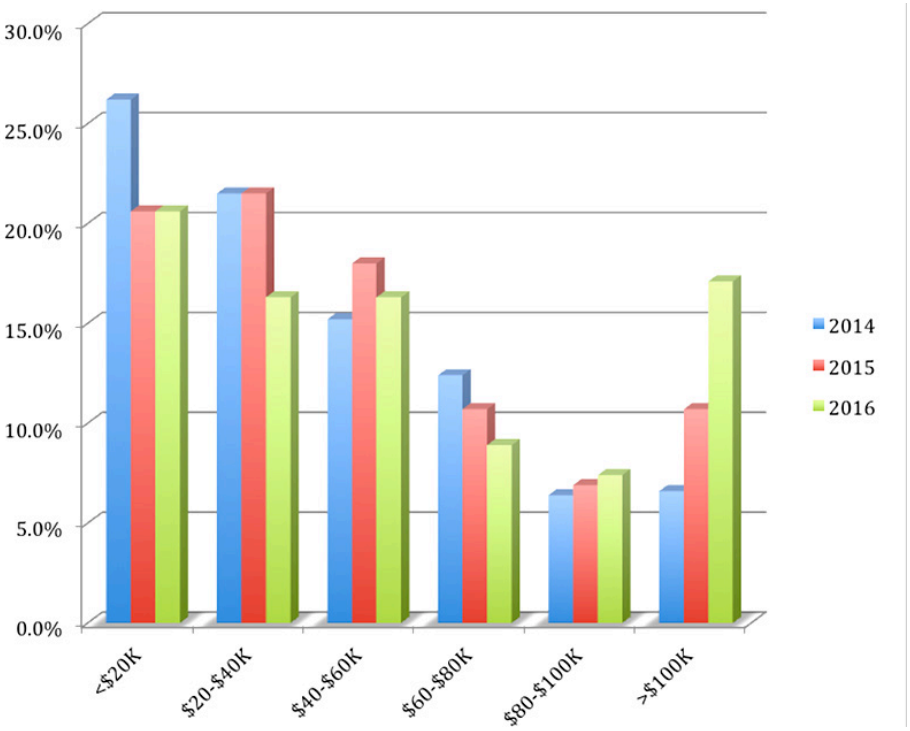
Scant studies have been performed evaluating the United States acupuncture workforce;[2,5] some suggest acupuncturists are unemployed or underemployed but would prefer to have the opportunity for full-time work. [8] Ward-Cook and Hahn found that roughly one-third of the respondents from the 2008 JA Survey, who are working less than 32 hours a week, have made a personal decision to work part-time.[9] When queried about their part-time status, an average of 24.3% across the 3-year span replied it was due to lack of patient load and would prefer full-time employment.

Some part-time practitioners were working another AOM-related job (8.4%); one out of five cited non-AOM-related jobs (20.7%), and 27% replied it was a personal preference or family

related reason. Since almost 70% of the respondents are women, a subset of those having children may choose to work part time. [10,11] Also, 19.1% of the respondents were Asian and may be caregivers to aging parents living with them.[12] Male practitioners tend to work more hours than women, with a statistically significant difference (chi2= 13.6, P=0.001), but practically speaking there is not an extreme difference between the sexes.

Figure 3 illustrates that over the 3-year period (2014 -2016) there was a 5% drop in the number of acupuncturists earning less than $20,000/year. Interestingly, the number of Diplomates earning between $80,000 -$100,000/year rose continually about 1%/year; however, there was a significant rise in the number of Diplomates earning over $100,000/year when 2014 findings are compared to the 2016 findings (7.5% versus 19.2%) over $100,000/year.

Figure 3. Income Distribution of Survey Respondents



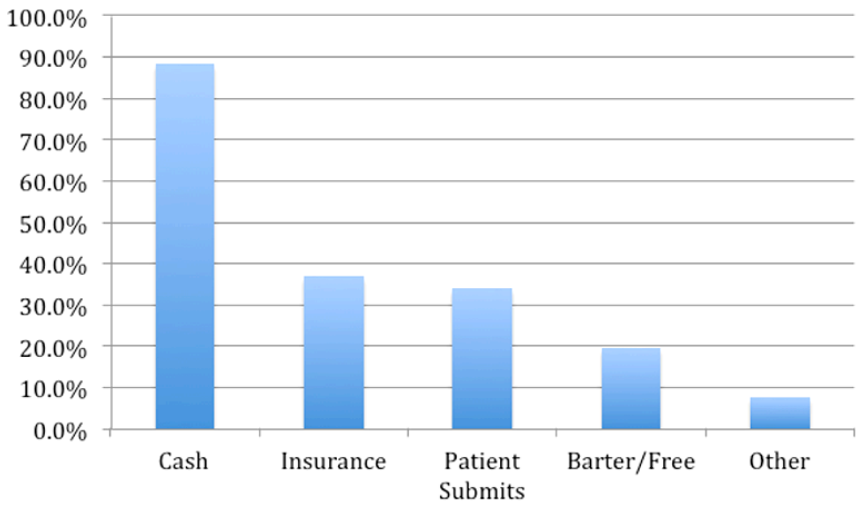
Not surprisingly, three predictors positively associated with income levels were years of experience, cost of the first visit, and number of patients treated per month (all $p<0.01$). Practitioners answering "Yes" to offering a sliding scale were negatively associated ($p<0.01$) with income levels. One can speculate that those who offer sliding scales live in lower income areas or treat predominantly senior or student populations earn less annually. Incomes per year differ by no more than five percent across the spectrum with the exception of 2016 where 17.1% reported making in excess of $100,000 per year compared to 6.6% in 2014 and 10.7% in 2015.

The average number of patient visits was reported to be 95 patients treated per month. Quite a few respondents entered "varies," provided no response, or entered a range (e.g., 35-50). Non-numeric answers were removed and ranges were averaged. The average total patients seen per month for 2014, 2015 and 2016 were 90.5, 95.7 and 100.6 respectively.

Cash vs. Insurance-Based Practices

Over 88% of the respondents reported that a portion of the patients they treat pay cash for their services. This was followed by 36.8% being "in-network" with one or more insurance carriers, 34.1% "out-of-network" offering "superbills" to their patients for insurance reimbursement, and 19.4% bartering for goods or services from the patients or offering free treatments. Figure 4 summarizes the averaged response to this survey question.

Figure 4. Cash vs. Insurance-Based Practices



"As more and more acupuncturists become credentialed in the hospital setting, employers are seeking benchmark data on salaries for acupuncturists. Future surveys will separate out hospital settings to collect more accurate data on this growing practice setting."

Practice Environment

The majority (61.7%) of our cohort works in a solo practice, with 24.7% working in group practices and an average of 10.1% working as an employee or independent contractor in a clinic or hospital. Hospital-based practice is on the rise across the nation; however, this survey did not make a distinction between "clinic" and "hospital," so this distinction cannot be quantitatively addressed in this paper.

Limitations to analysis

There are several limitations to the current analysis. First, the sample was confined to NCCAOM Diplomates who recertified. This was a convenient method of collecting data but may not be fully representative of the larger population of acupuncturists in the nation. The NCCAOM may have missed Diplomates that chose not respond, such as those with high-volume practices and those acupuncturists who only keep their licensure active and no longer keep their Diplomate status active. A second limitation is that the individual yearly sample sizes are not large enough to note statistically significant changes between each calendar year but just the trends over time.

Conclusion

There are a variety of business models employed among Diplomates. These vary by location, employment status, and pay structures. Further information on the success and failure of acupuncture practices should be researched and distributed to students, potential students, and practitioners to assist in supporting the AOM community. Additionally, government agencies such as the Centers for Medicare and Medicaid Services, the Bureau of Labor Statistics, the Department of Veterans Affairs, and the National Center for Health Workforce Analysis require nationwide data for policy decision-making and to publish annual reports. Soon the BLS will be publishing the 2018 Occupational Handbook and for the first time, acupuncturists will have their own unique profile and demographic; therefore, demographic and clinical practice, and economic workforce characteristics will be published.

As more and more acupuncturists become credentialed in the hospital setting, employers are seeking benchmark data on salaries for acupuncturists. Future surveys will separate out hospital settings to collect more accurate data on this growing practice setting. As licensed acupuncturists move into other practice settings, monitoring economic factors and practice models should provide valuable information for practitioners, educators and students of acupuncture and Oriental Medicine. The NCCAOM has recently published a guide on credentialing acupuncturists. This NCCAOM Diplomate benefit can be accessed by the Diplomate logging into their online account.

Acknowledgements

The authors had access to complied survey data from the NCCAOM. We would like to acknowledge the 2008 and 2013 Job Task Analysis Panels for developing the prototype surveys and to the NCCAOM Research Committee for their initial development of the NCCAOM Diplomate Demographic Survey in 2014.

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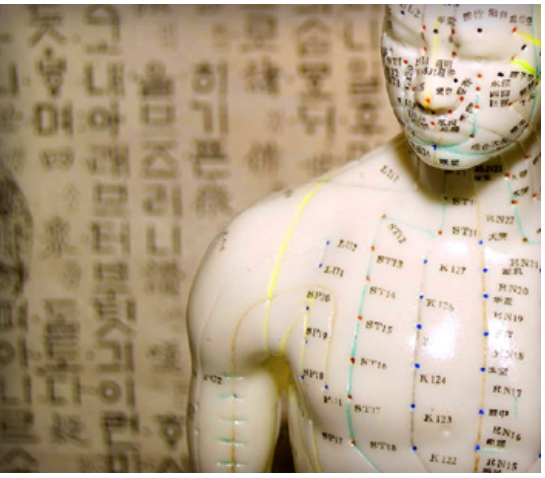

The Acupuncture Evidence Project: What It Is and Why It Matters

By Mel Hopper Koppelman, MSc, MSc

Mel Hopper Koppelman is an acupuncturist and functional medicine practitioner based in Rhode Island. She received her MSc in Acupuncture from the Northern College of Acupuncture in the UK in 2012 and an MSc in Nutrition and Functional Medicine from the University of Western States in 2015. She is currently the director of Evidence Based Acupuncture, a non-profit organization dedicated to improving public health through evidence-based information about acupuncture's benefits.

During the past few decades there has been an explosion of research on the clinical effects of acupuncture that covers a wide variety of clinical areas. A recent bibliometric study found that acupuncture research is growing at twice the rate of general medical research and that the quality of this research is improving.[1] The quantity of available research, coupled with controversy over acupuncture's efficacy, creates challenges for the practitioner who wants to stay informed about what the overall body of research shows.

Fortunately, a recent "review of reviews" of acupuncture that covers this scope of clinical indications goes a long way to ameliorating this problem. Earlier this year, The Australian Acupuncture and Chinese Medicine Association (AACMA) published *The Acupuncture Evidence Project* (AEP) by John McDonald, PhD and Stephen Janz, MPH. It is an update of two previous reviews, one by the Australian Department of Veterans' Affairs in 2010 and the other by the U. S. Department of Veterans Affairs in 2014.

What exactly does this "review of reviews" tell us?

Systematic reviews are considered the pinnacle of the evidence-based medicine hierarchy. They include all of the research literature for all trials in any given area and systematically, and often statistically, combines the results. They then summarize the conclusions that can be drawn from the evidence.

The AEP constitutes a review of systematic reviews for all clinical areas for which acupuncture has systematic review evidence. In simple terms, it's a summary of the best evidence for acupuncture for any given condition or symptom. Its approach is the opposite of cherry-picking (where someone carefully selects specific evidence to support their viewpoint while ignoring contradicting evidence). As such, if you want to know both positive and negative evidence for any clinical condition or symptom, the Acupuncture Evidence Project is an excellent reference tool.

What did they find?

Using the same methods and classifications set out in the previous versions of the review, the authors found evidence regarding effectiveness of acupuncture for 117 conditions. Of these, 46 conditions were classified as having either moderate (38) or strong (8) evidence for their effectiveness. Here are the conditions identified as having strong evidence:

Conditions with Strong Evidence Supporting Acupuncture's Effectiveness

- Allergic rhinitis (perennial & seasonal)
- Knee osteoarthritis
- Chemotherapy-induced nausea and vomiting
- Migraine prevention
- Chronic low back pain
- Postoperative nausea & vomiting
- Headache (tension-type and chronic)
- Postoperative pain

The AEP also found an increase in the evidence level for 24 conditions compared to the previous versions of the review. This improvement lends support to the idea that as more research is done, the evidence for acupuncture's effectiveness is increasing.

Conditions in the Acupuncture Evidence Project with Evidence of Cost-Effectiveness

- Allergic rhinitis
- Low back pain
- Ambulatory anesthesia
- Migraine
- Chronic pain
- Neck pain
- Depression
- Osteoarthritis
- Dysmenorrhea
- Post-operative nausea and vomiting
- Headache

"In addition to evaluating effectiveness, the AEP has also analyzed research on acupuncture's cost-effectiveness and safety. Evidence of acupuncture's safety was shown for ten conditions and support of its cost-effectiveness for eleven conditions."

Conditions in the Acupuncture Evidence Project with Evidence of Safety

- Acupuncture (in general)
- Depression
- Allergic rhinitis
- Low back pain
- Ambulatory anesthesia
- Migraine
- Alzheimer's disease
- Osteoarthritis of the knee
- Cancer-related psychological symptoms
- Prostatitis pain/chronic pelvic pain syndrome

But wait, there's more!

In addition to evaluating effectiveness, the AEP has also analyzed research on acupuncture's cost-effectiveness and safety. Evidence of acupuncture's safety was shown for ten conditions and support of its cost-effectiveness for eleven conditions.

Stephen Janz notes in the preface: "Acupuncturists should… take confidence from this report that their clinical expertise has been validated, and to confidently offer their services alongside other health professionals. . . It is no longer possible to say that the effectiveness of acupuncture can be attributed to the placebo effect or that it is useful only for musculoskeletal pain."

"The AEP should be the starting point for anyone interested in clinical research on any acupuncture topic. Using this tool will save practitioners both time and effort as we strive to stay up to date on the state of the evidence."

The Acupuncture Evidence Project, an 81-page document summarizing all of the systematic review evidence for over 100 conditions, is a goldmine of useful information for acupuncturists and healthcare policy makers. Published in 2017, it serves as a comprehensive and up to date resource. In addition to its wide scope of information concerning clinical effectiveness, the fact that it includes safety and cost-effectiveness data makes this document an invaluable resource.

The AEP should be the starting point for anyone interested in clinical research on any acupuncture topic. Using this tool will save practitioners both time and effort as we strive to stay up to date on the state of the evidence.

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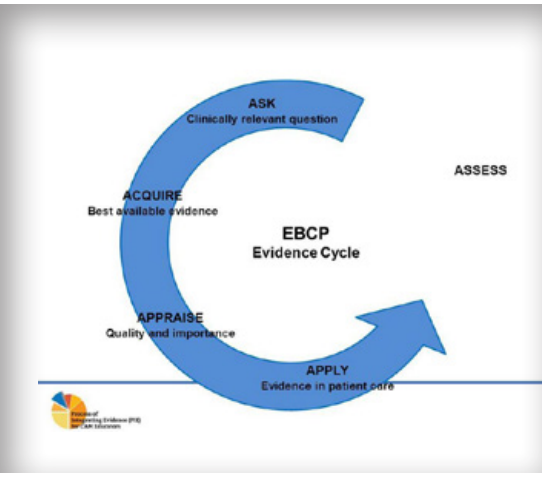
The AEP can be downloaded free of charge: http://www.acupuncture.org.au/OURSERVICES/Publications/AcupunctureEvidenceProject.aspx

With this publication of the fall issue, V 4, #4, Editor in Chief Jennifer A. M. Stone and Managing Editor Lynn Eder ask you to join us in celebrating the third year—12 quarterly issues—of *Meridians: The Journal of Acupuncture and Oriental Medicine*!

We extend heartfelt thanks to our authors, reviewers, and our editorial and publishing team as well as to our subscribers and advertisers for your support and participation in making the journal a go-to resource for current AOM research, reviews of new books in the field, clinical pearls on a variety of conditions, and commentary on professional issues and AOM education.

Thanks also to our sponsor, NCCAOM, for their financial support and assistance in making the journal available to over 17,000 practitioners.

Last but certainly not least, we couldn't do it without you—our readers! Here's to many more issues of MJAOM serving the AOM profession!



2017 Conference Summary:

The Process of Integrating Evidence for Complementary and Integrative Health Educators

By Mitchell Harris, Dipl OM (NCCAOM), LAc

Mitchell Harris, Dipl OM (NCCAOM), LAc practices traditional East Asian medicine at his clinics in Lakeview and Rogers Park, Chicago. He is the dual chair of clinical procedure and faculty governance at Pacific College of Oriental Medicine in Chicago and teaches as an assistant professor and supervisor. He is the clinical pearls editor for this journal, and co-founder of the evidence informed, integrative medical video website IMNEducation.com. Mitchell can be reached at info@healthfromeast.com

The Academic Collaborative for Integrated Health sponsored a conference, July 13-15, at the Northwestern Health and Sciences University in Bloomington, Minnesota. Over 100 attendees from educational programs across the U.S., Canada, and even New Zealand, attended presentations designed to provide CIH educators with additional training on the principles, practice and teaching of evidence-informed practice (EIP).

Participating in EIP is important in today's healthcare environment because this model of care offers clinicians a way to achieve the objectives of improved quality, improved patient satisfaction, and reduced costs. EIP is not only about using evidence to design treatment plans; it is meant to encourage a dialogue between patients and providers. Patients thus share in the decision-making and allow their values and preferences to be known. Together, patient and provider can determine an appropriate course of action—or no course of action—if that's the joint decision.

Using this approach, providers can discuss with the patient the most up to date, well-researched options, value them accordingly, and carefully listen to patient concerns. This allows both the provider and patient to mutually agree upon the appropriate treatment plan. All attendees were given access to the EIP Educator's Exchange, a website that allows its members of the Consortium of Evidence Informed Practice of Educators (CEIPE) to exchange teaching tools, tips and curricular ideas.

John Stites, DC

Opening speaker Dr. John Stites, DC said the main goal of EIP is to create an evidence cycle. This cycle is not about "the tyranny of research," but, rather, it aims to teach us that evidence can be a thoughtful tool with which to more deeply engage the practitioner and patient.

Photos reprinted with permission from the 2017 PIE Conference.

"The EIP cycle has been summarized as: *Ask; Acquire; Appraise; Apply; Assess*. Dr. Stites stressed that this cycle starts and ends with the patient and that it is not an endpoint unto itself. The process engages the practitioner to ask clinically relevant questions; acquire evidence; answer and appraise those questions for applicability; apply the evidence to patient care and management; and finally to assess if the chosen approach made a difference in the patient's overall care. "

Evidence-informed practice involves collecting researched information and resources; merging this with a health professional's experience; and then coupling this with patient values to produce a realistic treatment plan. EIP can be considered the intersection of research evidence, clinical experience, and patient values.

The EIP cycle has been summarized as: *Ask; Acquire; Appraise; Apply; Assess.* Dr. Stites stressed that this cycle starts and ends with the patient and that it is not an endpoint unto itself. The process engages the practitioner to ask clinically relevant questions; acquire evidence; answer and appraise those questions for applicability; apply the evidence to patient care and management; and finally to assess if the chosen approach made a difference in the patient's overall care.

Dr. Stites encouraged the audience of teachers and administrators to learn how the process of EIP conveys the importance of evidence-based ideas and to strive to pass these ideas on to our students and upcoming professionals within our fields. He stressed that these concepts should be conveyed to students in a manner that is simple, effective, and relevant to the learner. Many of the materials and conversations at the conference were devoted to this teaching-focused application.

He reminded us that as educators, we can convey the importance of asking good questions; finding resources; developing search-based strategies; and gaining knowledge of different types of studies. We also need to interpret results through our own critical assessments and not simply trust outside opinions. He stressed the importance of practitioners making individualized, critical assessments through probabilistic thinking on foundational epidemiologic concepts as well as incorporating patients' values into clinical decision making.

The second speaker, Ron LeFebvre, DC, spoke about making EIP a process that is relatable to both students and clinicians. He calls this an "EIP sandwich." He presented 6-12 types of outcomes to studies that as teachers we should understand. These include relative risk, odds ratios, and standard mean deviations. As teachers we don't run these numbers as do statisticians, but as well-informed practitioners, we should have a general understanding of what those numbers mean so we can better explain them to patients.

PIE Conference Opening Day (Photo: John Stites, DC)

Dr. LeFebvre stated three things to know about outcomes:

1. P Value: What is the statistical significance of the number? Is it an illusion or random chance?
2. Minimally Clinically Important Difference (MCID): Is the effect large enough that you or the patient should care to act? A small improvement is most likely not meaningful.
3. Confidence Interval: To what degree do statisticians themselves trust these numbers? How confident are they in this study? For example, an analogy he used is the estimated price for a car to be fixed vs. its actual cost, and how much faith do you have about the estimate, depending on who is doing the estimating.

Regarding evidence itself, Dr. Lefebvre said that on one side is the result and on the other side is the interpretation of the result. Reconciling the two is where EIP comes into play. This involves understanding the study types—some are stronger and some are weaker. What are the biases or errors in each of these? He emphasized that although we are not researchers, we need to understand the study and gain a working knowledge of the designs. Referring back to his EIP sandwich, he suggests that we need to evaluate whether or not we are evaluating something of quality or merely baloney.

Dr. Lefebvre proposed that teachers learn how to utilize checklists by offering mnemonic strategies. He emphasized that to make this concept teachable and learnable, these concepts need to be applied rigorously. The end goal of this

process would be to have the majority of practitioners learn and use these skills to elevate the care we offer.

Along with these benefits of research evaluation, he emphasized the importance of realizing that in our clinical professions we tend to feel somewhat threatened when research dominates the conversation. We have strong concerns regarding research that we need to recognize outright:

1. Clinical research is a narrow world that often involves more noise than productive gain.
2. Research on humans is especially hard to do, thus we must build this reality into the EIP understanding.
3. Most research ranges from flawed to fatally flawed. If you see something seriously flawed, just back away from it because as clinicians, our time is precious.
4. Most research information is not actually ready to be integrated into clinical practice. Our job in relation to the EIP process should be to cherry-pick what is potentially valuable for our clinical decision-making.

For example, questions may arise from research, such as "Would acupuncture treatment help migraine headaches?" or "Does drinking sodas increase risk of dementia?" What we want to know is how much can it reduce dementia and how much will an effective treatment cost to get that benefit? Sometimes we just don't have enough information to decide yet. But if we do, it has the potential to make major changes in what we recommend and refer to in our practices. It also influences how confident we are about this information for our patients.

Ronald LeFebvre, DC, Belinda Anderson, PhD, LAc

"There is also a strong concern in our field about maintaining a balance between scientific research, anecdotal and professional experience, lineage-based information, and especially the classical East Asian medical literature."

The one speaker who presented on East Asian medicine's approach to EIP was Dr. Belinda Anderson, PhD, LAc, academic dean of the Pacific College or Oriental Medicine (PCOM) in New York. She described the effects that using EIP has on the academic culture. This was funded by the award of an NIH NCCIH K07 grant in partnership with Albert Einstein College, Northwestern Health and Science University, and the University of Minnesota.

The goals of her work were: train PCOM faculty in New York to institute EIP at their campus; establish an EIP curriculum committee; and incorporate EIP into 70% of didactic and 100% of the clinical components of PCOM's entry level traditional and Chinese medicine (TCM) program. While all of these goals have not yet been realized, Dr. Anderson described a model that illustrates the particular issues that the TCM community faces when dealing with EIP.

She stated some well-known issues facing us. Although there exists roughly 7,400 scientific research studies on acupuncture, there is very little available about the other modalities that we utilize. She also discussed the fact that sham has been employed in many current studies on acupuncture, yet the growing consensus in our field is that sham is not an inert placebo and thus not a useful tool to measure acupuncture outcome effects. There is also a strong concern in our field about maintaining a balance between scientific research, anecdotal and professional experience, lineage-based information, and especially the classical East Asian medical literature.

When Dr. Anderson brought the EIP initiative to all the departments on her campus, the herbal medicine department stated they wanted a change in strategy regarding her wording. Specifically, they requested to delete the word "research" in the EIP guiding question: "How does one find relevant literature (remove word research) in herbal medicine?" Their concern was that while it is important to communicate to students to look for scientific studies in research, it is not clinically appropriate to only look there and not utilize the classics from which TCM derives.

The herbal medicine department also wanted to change the language of the EIP objective to "Understand best practices in literature (remove the word "research") and how it applies to practice of Chinese herbal medicine." The apprehension here is that most modern scientific articles that discuss Chinese herbs are reductionist—they discuss solely the chemical constituents and single herbs, thus limiting their use in a polypharmacy–formula orientated, traditional medicine, which views the body through a wide lens of differing health concepts and disease strategies.

From these experiences, Dr. Anderson made a strong case that the EIP process included in a traditional East Asian medical curriculum must be faculty driven. For example, the clinical learning outcomes must allow for the time and space for input and ideas from the community of teachers and faculty. There must be adaptability within the EIP model to fit our unique historical context of TCM and its practitioner-derived lineages of mentorship and education as avenues of evidence.

Dr. Anderson's second lecture and discussion concerned attitudes and beliefs about evidence-based medicine (EBM) and integrative medicine within the Chinese medicine profession. She said the attitudes and beliefs that underlie behavior and learning receive relatively little attention.

She did surveys (containing closed and open-ended questions) of Chinese medicine students and faculty as well as an ethnographic qualitative study of acupuncturists (via an online forum) to explore these perspectives on research, evidence-based and integrative medicine. The results of the survey (students responded at 42% and faculty at 89%) showed both groups indicated high degrees of interested in, and support for, the value of research and EBM.

This support and interest declined, however, as students progressed through their degree programs. Responses also indicated there is concern about the paradigm difference, the relevance of the scientific method and the power dynamics in the healthcare system. Responses also showed there is a preference for pluralism over integration. She discussed at length the relevance and impact of these outcomes upon learning and clinical practice.

Dr. Anderson said that clinicians who seek out and use the latest evidence to inform patient treatment also need to acquire an understanding of the barriers to the use of such evidence. As an example, she cited practical barriers, such as lack of time and lack of access to relevant databases that provide full text articles.

She concluded that although adapting clinical curriculum to EIP initiatives has challenges, we must face them. To incorporate an evidence-based approach, it is important to engage the ideas that make TCM unique to the medical field, while also keeping an eye on staying relevant and important to the modern medical environment.

Left to Right: Lamya Kamel, DAOM, LAc (PCOM faculty, Chicago), Belinda Anderson, PhD, LAc (PCOM Academic Dean, New York), Leena Guptha DO, MBA (PCOM Academic Dean, San Diego)

After the group openly discussed the challenges we all face in our attempts to incorporate EIP into curriculum and practice, Patrick Bodnar, DC helped summarize a few conclusions regarding the importance of incorporating EIP into all complementary medical programs, regardless of the medical profession:

1. Enhances the legitimacy of medicine we practice within the western paradigm
2. Aids in defending professions when "bad studies" are out there
3. Engenders common language usage with allopathic professionals
4. Referrals are made easier when same language is utilized
5. Provides patient centered/best care (with up to date, properly vetted studies)
6. Provides information that could be included on national board exams (This will soon be included for chiropractors)
7. Draws from knowledge banks available to new practitioners
8. Enables better ability to design and carry out cross cultural research
9. Allows the practitioner to be better informed than the patient
10. Enhances our ability to look for "honest" outcome measurements

The last plenary session discussed the topic of evidence-based public health. Dr. Jeff Schiff, MD, MBA and pediatrician presented on the importance of framing both evidence and the community it is helping. He asserted that wellness and preventive health is inconvenient to measure and he believes there is a need to

change that. He cited an example in which colleagues of his claimed that there is no evidence for wellness visits for children. He reminded them that one could argue there is also no evidence for adult wellness visits, but it is easier to pick on pediatricians (and children) as a group. Also discussed were concerns in general regarding research as a fair tool were discussed, such as the issue of American research being largely based on what works for white, middle aged men.

Senator Chris Eaton, RN is a third term senator from Minnesota who sits on the health and human service and finance committees. She proudly told us how her state is one of the top five leaders in using evidence-based research for developing policy. For example, seatbelt wearing and cessation of smoking campaigns were not working by utilizing education and scare tactics alone. Only until a serious tax on cigarettes and a more expensive ticket for not wearing seatbelts were instituted did citizens change their behavior around these public health issues. These are examples of research driven, successful implementation of data into policy.

Senator Eaton cited one concern in efforts to gather research through government-funded programs. If the program is not showing the hoped-for outcomes, she noted that the natural next step would be to discuss the program structure and oversight to see if it can be improved while the program is in motion. However, legislators often try to cut funds rather than evaluate the ways to make a program more successful.

Opponents of the program state that the program has already failed and that they saved taxpayer money by cutting it. Senator Eaton believes instead that the right thing to do is make sure programs are properly set up before ending them prematurely. There is a need to speak up and encourage legislation and policy makers to act along these lines.

The final panelist, Dr. Mark Dehen, DC, helped develop the chiropractic clinical map to improve patient outcomes. This was established before "patient-centered care" was part of the national dialogue. The first topic was lower back care. The American Chiropractic Association (ACA) approached him to help the ACA to create terms such as "maintenance care," which were not yet accepted for reimbursement for this condition by healthcare plans.

The work of Dr. Dehen and others helped establish terms for different levels of care used by the chiropractic community on a national level. Acute, chronic, recurrent, and wellness care were all defined by crafting formal definitions and algorithms, which were eventually published. This helped establish guidelines for when to refer and to whom, when to continue care, and when to terminate care. This all focuses on how to apply evidence-based medicine so as to improve public outcomes.

These protocols were adopted by official disability guidelines and others to help get chiropractic care more fully covered by government agencies and insurers. Medicare value-based initiatives changed as a result of the work done in this area. He reminded us that the literature says it takes 17 years for new information to become standard practice, and in that light, we all need to be diligent and patient regarding the legislative outcomes that aim to enhance public health.

In conclusion, the conference is a good reminder of the ways in which evidence is currently being utilized in curriculums, clinical practice, legislation, and governance. These discussions are a good example of professions inside CAM working together. There are still very specific issues that each profession has to face, yet as a minority profession in the larger national context, it is in TCM

Final Plenary speakers left to right: Jeff Schiff, MBA, MD, Mark Dehen, DC, Senator Chris Eaton, RN

"Senator Chris Eaton, RN is a third term senator from Minnesota who sits on the health and human service and finance committees. She proudly told us how her state is one of the top five leaders in using evidence-based research for developing policy."

advocates' best interest to speak the language of EIP and be able to defend the profession and its associated studies by using our own voices and capacities.

The TCM community can utilize EIP to help get access to our medicine to larger gatekeepers of care in governance. It was made clear by the work of Dr. Anderson and those in attendance that our TCM community wants to keep our identity and connection to both the classical literature and the personal values each practitioner provides. According to the conference speakers, EIP is flexible enough to allow for our community to develop our own approach.

To this end, CIEPE representative and administrative track discussion leader, Dr. Lefebvre, DC offered to create a digital location for a TCM upload folder addition to the CIEPE's database. He encouraged our community to continue the work that Dr. Anderson has begun and help create a location to which we can upload more TCM-oriented case studies and share other ideas that reflect our specific concerns. This gesture was well received by the conference's East Asian medicine representatives.

Although it is clear to us that we have a long way to go to fully learn, train and adapt EIP ideas within our community, attendees expressed the feeling that this is a beginning of an important dialogue and that we are a part of it. The inclusion of Dr. Anderson's presentation in the conference signals an important step for participation of many types of CAM professions in this ongoing issue.

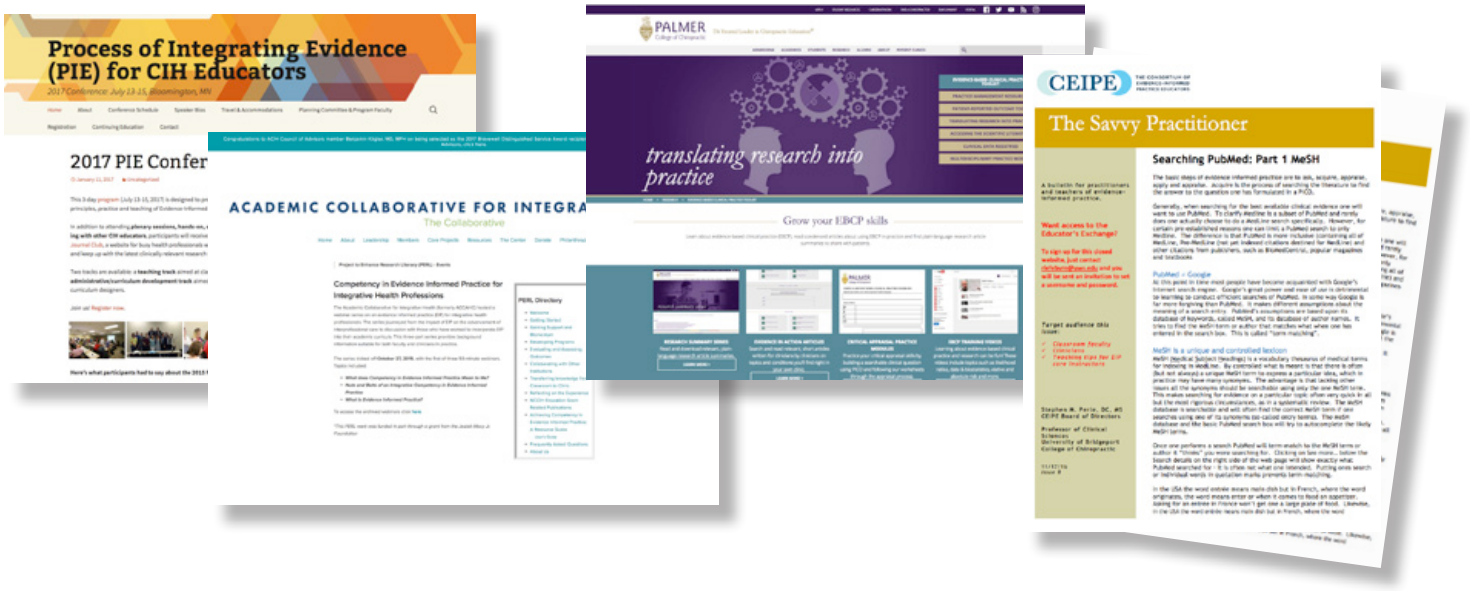
For practitioners interested in additional online resources:

www.ciheducatorsforeip.org

https://integrativehealth.org/competencyevidenceinformedpractice

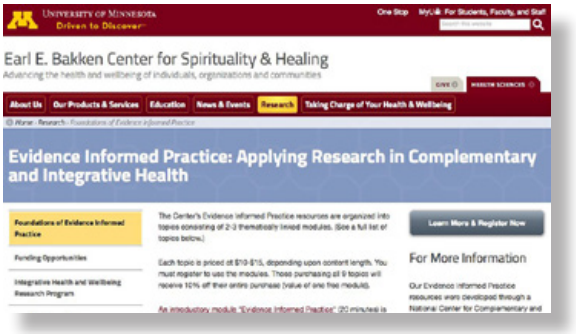
http://www.palmer.edu/research/clinician-research-resource-toolkit/translating-research-into-practice/

https://www.life.edu/wp-content/uploads/2014/08/The-Savvy-Practitioner_PubMed-Search-6-5-16-Issue-8.pdf



For those who want more education, a team at Northwestern Health Sciences University developed a series of EIP e-learning modules through a grant (NIH Grant #R25AT003582). The Center's Evidence Informed Practice resources are organized into topics consisting of 2-3 thematically linked modules, with each module priced at $10-15. They are available at the University of Minnesota's website:

http://www.csh.umn.edu/evidenceinformedpracticemodules/index.htm.



Spotlight on
Current Federally Funded Acupuncture Studies

Research Portfolio Online Reporting Tools provides access to reports, data, and analyses of NIH research activities, including information on NIH expenditures and the results of NIH supported research. It is updated three times a year. A recent query of acupuncture studies produced 44 results. This list highlights a number of these federally funded studies.

To see more details on these studies, visit: https://projectreporter.nih.gov/reporter.cfm

NON-SPECIFIC EFFECTS OF ACUPUNCTURE IN THE TREATMENT OF HOT FLASHES:
AVIS, NANCY E WAKE FOREST UNIVERSITY HEALTH SCIENCES NCCAM $372,443

ACUPUNCTURE TO PREVENT CHEMOTHERAPY DOSE REDUCTION:
BAO, TING SLOAN-KETTERING INST CAN RESEARC NCI $184,886

INNOVATIVE NEUROPHYSIOLOGICAL TECHNIQUES FOR ASSESSING TRUNK MUSCLE CONTROL AND FUNCTION:
CLARK, BRIAN C, OHIO UNIVERSITY ATHENS NCCIH $188,125

COMMUNITY-BASED, PHASE III TRIAL OF ACUPUNCTURE TO TREAT CHRONIC XEROSTOMIA:
COHEN, LORENZO, UNIVERSITY OF TX MD ANDERSON CAN CTR NCI $394,060

ELECTROPHYSIOLOGIC STUDY OF ACUPUNCTURE'S EFFECT ON THE PERIPHERAL NERVOUS SYSTEM:
DIMITROVA, ALEXANDRA K, OREGON HEALTH & SCIENCE UNIVERSITY NCCIH $136,547

NEUROIMAGING APPROACHES TO DECONSTRUCTING ACUPUNCUTURE FOR CHRONIC PAIN:
HARRIS, RICHARD E et al. UNIVERSITY OF MICHIGAN NCCIH $689,065

ACUPUNCTURE FOR AROMATASE INHIBITOR-RELATED ARTHRALGIAS IN BREAST CANCER PATIENTS:
HERSHMAN, DAWN, COLUMBIA UNIVERSITY HEALTH SCIENCES NCCIH $474,523

ROLE OF GDNF, ER STRESS AND MITOCHONDRIAL FUNCTION IN EFFECTS OF ACUPUNCTURE IN MODELS OF PARKINSONISM: HOFFER, BARRY J et al. CASE WESTERN RESERVE UNIVERSITY NCCIH $189,237

PAIN CARE QUALITY AND INTEGRATED AND COMPLEMENTARY HEALTH APPROACHES:
KERNS, ROBERT D YALE UNIVERSITY NCCIH $450,624

MECHANISTIC STUDIES ON VIDEO GUIDED ACUPUNCTURE IMAGERY TREATMENT OF PAIN:
KONG, JIAN MASSACHUSETTS GENERAL HOSPITAL NCCIH $425,769

PREDICTING ANALGESIC RESPONSE TO ACUPUNCTURE - A PRACTICAL APPROACH:
KONG, JIANG-TI STANFORD UNIVERSITY NCCIH $127,524

MECHANISMS OF CNS AUTONOMIC REGULATION BY ACUPUNCTURE:
LONGHURST, JOHN C et al. UNIVERSITY OF CALIFORNIA-IRVINE NCCIH $347,625

NEURAL SUBSTRATES OF ELECTROACUPUNCTURE IN CARDIOVASCULAR CONTROL:
LONGHURST, JOHN C UNIVERSITY OF CALIFORNIA-IRVINE NHLBI $386,250

OPTIMIZATION OF BRAIN-BASED MECHANISMS SUPPORTING PSYCHOSOCIAL ASPECTS OF ACUPUNCTURE THERAPY - A HYPERSCANNING FMRI STUDY: NAPADOW, VITALY, MASSACHUSETTS GENERAL HOSPITAL NCCIH/OD $488,169

NEUROIMAGING ACUPUNCTURE EFFECTS BRAIN ACTIVITY IN CHRONIC LOW BACK PAIN:
ROSEN, BRUCE MASSACHUSETTS GENERAL HOSPITAL NCCIH $643,938

Using a Rubric to Evaluate Quality in Case Study Writing

By Edward Chiu, DAOM, Dipl OM (NCCAOM), LAc

This rubric has been developed by the Oregon College of Oriental Medicine doctoral faculty for over 10 years. Faculty members who have made significant contributions include Elizabeth Burch, Zhaoxue Lu, Bob Quinn, Lee Hullender-Rubin, Henry McCann, and Edward Chiu. Please contact echiu@ocom.edu with any comments or suggestions for changes.

A case study, also called a case report, is defined as an individual record of the diagnosis and treatment of a single patient by a single physician. Case records have been found in Chinese medical writings dating back to the legendary physician Huatuo in the 3rd century CE.[1] Throughout Chinese history, their structure has varied greatly. In the early 20th century it shifted from a "notebook" format, which was more similar to a published chart note, to a "didactic" type of case study, which was used to explain why a particular treatment course was chosen.

During the past several centuries, large numbers of case studies by Chinese doctors have been published. They are regarded as an important aspect of scholarly work in Chinese medicine.[2] Case studies have been written to not only illustrate successful treatment of difficult diseases but also to guide a reader through the thought process of Chinese medicine by demonstrating practical application of theory to achieve an effective result. A small number of modern case studies in Chinese medicine have also described situations where treatment has not necessarily been successful, but the case is instructive nevertheless (e.g., cautions and contraindications).

Biomedical case studies have generally been used to build hypotheses or to highlight unusual aspects of patient care.[3] In 1972, a publication entitled *The American National Standard for the Preparation of Scientific Papers for Oral or Written Presentation* established a specific format known as IMRaD (Introduction, Methods, Results, and Discussion).[4] This convention was widely accepted by biomedical journals for research articles, and the format has been adopted for case study writing. In modern journals, an abstract, conclusion, and reference sections are often included.

The content within each section of a quality case study must be detailed, concise, and flow logically. With these ideals in mind, the evaluation of a complex narrative report can be somewhat subjective. In an academic context, assigning a number grade to a case study is not straightforward.

Peer reviewers for journal publications recognize and evaluate the quality of case studies by virtue of having written and reviewed such papers in the past. However, what constitutes "quality" is not well-defined.[5] While checklists can ascertain all sections are included,[6] we must ask, "How do we rigorously evaluate the quality of a case study?"

At the Oregon College of Oriental Medicine (OCOM) in Portland, Oregon, over the past ten years, the doctoral faculty have developed and applied an assessment rubric to evaluate the quality of case studies written by doctoral students. A rubric is an educational scoring tool that lays out specific expectations for a complex assignment. Rubrics separate an assignment into its component parts and provide a detailed description of what constitutes acceptable or unacceptable levels of performance for each of those parts.[7]

The OCOM Case Study Rubric has 12 separate elements, each of which delineates specific expectations. A number of these elements are associated with specific sections within the format of the case study (e.g., Element 10: evaluating the quality of the Discussion section). Some elements consider more global aspects (e.g., Element 12: evaluating the use of references throughout the paper).

In a rubric, descriptions under each trait are not meant as a checklist but are followed by indicators of performance level.[8] For each of the elements in this rubric, there are four levels of performance: 1) unacceptable, 2) improvement required, 3) professional level, and 4) exemplary. A case study reviewer, after reading an entire case study, would choose a performance level indicative of the quality of writing regarding each element. The reviewer then writes comments after each element to indicate areas of strength and areas of weakness. By reading these comments, it should be clear to the author what changes would be necessary to achieve the highest level.

Please Note: *Before discussing the elements of the rubric, it is important to state that the expectations for an academic paper written for a master's or doctoral program is somewhat different from those for submission to a peer reviewed journal. However, this rubric may be adapted by instructors or editors, depending on the purpose. After each listed rubric element, annotations are included for consideration by peer reviewers and journal editors, which may help to guide its use.*

Element 1 – OVERALL APPEARANCE AND WRITING QUALITY

The document looks professional as indicated by: well-organized sections with clearly labeled headings, proper formatting (page numbers, margins, and use of standard fonts).

The text is well written, as indicated by consistent professional tone and absence of significant spelling and grammatical mistakes. The text flows well, and concepts are presented in a logical manner.

1 – Occasional spelling or grammatical errors, poor formatting;
Lack of consistent professional tone, poor organization

2 – Minor spelling or grammatical errors;
Minor inconsistencies in tone and/or poor formatting;
Minor issues with organization and flow

3 – Well-organized with proper formatting; consistent tone;
Very minor spelling or grammatical errors

4 – Well organized with clearly labeled headings, tables if appropriate;
No spelling or grammatical errors; consistent tone and proper formatting

This first element evaluates the readability of the case study, which should be written in a way that communicates clearly and is easy to follow. Instructors teaching a course on case study writing may find it helpful to supply students with sample case studies to communicate general expectations.

When preparing a case study to submit to a professional journal, it is advisable to read case study papers previously published in that journal. Before submitting a manuscript to a journal, it is essential to consult and comply with the "Instructions for Authors," also called "Author Guidelines."

"This first element evaluates the readability of the case study, which should be written in a way that communicates clearly and is easy to follow. Instructors teaching a course on case study writing may find it helpful to supply students with sample case studies to communicate general expectations."

Acupuncture and Oriental Medicine (AOM) Day, celebrated annually on October 24th, was created to raise awareness of the benefits of acupuncture and Oriental medicine. This national day of observance was spearheaded by the National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM)® in 2002.

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This year, the newly launched NCCAOM Academy of Diplomates, together with the NCCAOM, is celebrating AOM Day by advancing the acupuncture and Oriental medicine (AOM) profession through the promotion of its Diplomates and certification programs.

The AOM Day website (www.aomday.org), sponsored by the NCCAOM, is now ready for your AOM Day event postings. Register your celebration event and bring AOM awareness to your community!

Element 2 – TITLE AND LANGUAGE

The case study has an informative title, which is concise and accurately reflects the contents. Relevant and appropriate medical vocabulary and terminology are used. A complete title should include at least three items: the condition, the treatment modality, and the words "case study" (or "case report"). These three items are often sufficient.

1 – Inappropriate or insufficient medical terminology used, unclear title

2 – Insufficient use of medical terms or unclear title

3 – Relevant and sufficient use of medical terminology, appropriate title

4 – Publishable or nearly publishable quality, outstanding title

Biomedical terminology should be used appropriately. Any acronyms or abbreviations should be spelled out in parentheses the first time they appear in the text. Chinese medical terminology, if used improperly, can cause confusion or misinterpretation. A good reference for accepted definitions is *Wiseman's A Practical Dictionary of Chinese Medicine*.[10] Chinese medicine terms should be should be capitalized if the same word exists as a biomedical term. For example, names of meridians and Chinese medicine organs (e.g. Kidney, Liver, and Heart,) are capitalized to alert the reader and to prevent incorrect correlations between biomedicine and Chinese medicine that would lead to imprecise thought and practice. All words in Chinese pinyin should be italicized.

Each professional journal has its own conventions. A copy editor will help in the final revision stages if there is any question concerning capitalization or italicizing of specific terms. The wording of the title is especially important in publication; if the title does not accurately reflect the article's contents, a search might overlook the article in its results, thus negating the author's efforts.[9]

"Chinese medicine terms should be should be capitalized if the same word exists as a biomedical term. For example, names of meridians and Chinese medicine organs (e.g. Kidney, Liver, and Heart,) are capitalized to alert the reader and to prevent incorrect correlations between biomedicine and Chinese medicine that would lead to imprecise thought and practice."

Element 3 – ABSTRACT

A concise abstract is included, which adequately summarizes the overall contents of the document and includes appropriate information on the Background, Case Description, Results, and Discussion/Conclusion. No references are used in the abstract.

1 – Substantial relevant information missing; or provides different information or content than that which is included in the article

2 – All relevant information included as well as excessive extraneous material; or some relevant information lacking

3 – All relevant information included with minor extraneous material, or minor relevant material missing, or unclear rationale for writing case study

4 – All relevant information included with no extraneous material, good rationale for writing the case study

There are two types of abstracts. Structured abstracts include subheadings. Descriptive abstracts are written as a narrative paragraph. Either style of abstract should summarize information covered in the background, case description, results, and discussion. The rationale for writing the case study is the reasoning behind why this case is worthwhile reading. Abstracts should be concise yet complete, generally ranging between 150 and 250 words.[11]

When writing for publication, consult previously published case reports to determine which style of abstract is preferred as well as to follow typical subheadings if the abstract is structured. The abstract should include enough information (including background, case description, results, and discussion points) for the reader to decide whether or not to read the full article. The preferred word count of the abstract should be indicated in the "Instructions for Authors."

Element 4 – INTRODUCTION – BIOMEDICAL

A biomedical introduction section establishes a context for the case through an appropriate review of biomedical journal articles, texts and other research information. This introduction should include biomedical information on the condition being discussed in the case, including typical signs and symptoms, biomedical diagnosis, demographics, etiology and pathogenesis, and treatment options.

1 – Superficial treatment of biomedical condition, possibly without treatment options

2 – Inadequate depth of coverage of biomedical condition; or no journal articles referenced

3 – Well written, but missing minor aspects of condition or treatment, appropriate journal articles referenced

4 – Thorough description of biomedical condition with treatment options, good use of biomedical literature

The biomedical introduction section is a review of the condition being discussed in the case study. This is especially useful if the condition is rare but can also be helpful if the condition is fairly common. Establishing a biomedical context will make the reader aware of the range of severity and the variety of symptoms experienced by patients with this condition. When the individual patient is discussed in later sections of the case study, the reader will have an idea as to how the individual patient's experience fits within this range.

Consulting biomedical introduction sections from case report articles of the target journal may help the writer determine the scope of this section.

"Establishing a biomedical context will make the reader aware of the range of severity and the variety of symptoms experienced by patients with this condition. When the individual patient is discussed in later sections of the case study, the reader will have an idea as to how the individual patient's experience fits within this range."

Element 5 – INTRODUCTION – ACUPUNCTURE AND ORIENTAL MEDICINE (AOM)

An AOM introduction section establishes a context through an appropriate review of relevant journal articles, texts and other research information. Biomedical efficacy research should be reviewed for the condition, and articles from AOM journals with advanced information on the subject should be included where appropriate.

1 – Superficial treatment of AOM approach to the condition, possibly without treatment options; or section reiterates textbook description of disease treatment

2 – Inadequate depth of coverage of AOM analysis of the condition; or no journal articles referenced

3 – Well written, missing minor aspects of condition or treatment, review at least one article from an AOM journal

4 – Thorough description of AOM differentiation and treatment options with material cited from a variety of sources, thorough biomedical efficacy research review, and review of information from more than one AOM journal article

The AOM introduction section can take a variety of forms, depending on the case. For an academic paper, this section should review the AOM perspective on the condition discussed in the case, including differential diagnosis, etiology and pathogenesis, and treatment options. For a traditional Chinese medicine (TCM) case, the writer needs to identify the relevant AOM disease categories (*bian bing*). A chart may be included that indicates likely patterns (*bian zheng*), typical signs and symptoms, and sample treatment points or traditional Chinese herbal formulas to outline the basic approach. For a non-TCM case, including some basic concepts about any non-TCM approach applied in the case can greatly enhance the case for an uninitiated reader. This is particularly true because many TCM colleges do not necessarily have elective courses introducing students to the non-TCM schools of thought (e.g., Five Element or Japanese styles).

A review of biomedical research is also appropriate here. Systematic research reviews are good sources which can be used to determine our current understanding of efficacy. If relevant to the case, individual studies can be briefly mentioned by including basic details.

Journal publications vary greatly in their approach to this section. A biomedical journal generally will not emphasize AOM theoretical content and will lean more towards including evidence from mechanism research and clinical trials relevant to the condition.

Writers should consult sample articles from the journal to gauge the level and depth of AOM content, and journal peer reviewers may want to have a conversation with editors regarding AOM content expectations.

Element 6 – CASE DESCRIPTION – CASE HISTORY

The document includes a thorough narrative presentation of the patient's case history, including full details of the chief complaint, relevant past and present biomedical history, and AOM diagnostic information.

1 – Incomplete details on chief complaint; lack of AOM diagnostic information, lacking in both AOM and biomedical aspects of medical history

2 – Basic details on chief complaint; lack of adequate AOM diagnostic information, OR lack of significant biomedical history information

3 – Detailed description of case history, including AOM diagnostic information and biomedical history information

4 – Detailed description of case history, including AOM diagnostic information, possibly biomedical lab values and their relevance to the biomedical diagnosis

The case description is divided into four sections: case history, diagnostic assessment, treatment, and results. This section should be written in past tense and third person format. Accuracy and good reporting in the case description will offer a baseline to compare outcomes later stated in the paper. The case history section includes the patient's gender and age and full details about the chief complaint. The patient's chief complaint should be described by including information about the severity, specific symptoms experienced, and circumstances and time of onset. Relevant lab results and radiologic studies should be summarized along with any biomedical diagnosis made by an allopathic practitioner. This should be followed by a review of systems or a "10 questions" section where additional information relevant to the patient's AOM diagnosis is provided. Other pertinent observations should be noted, including pulse, tongue, and palpatory findings.

A biomedical journal might reduce or omit the AOM diagnostic information, including pulse, tongue, and palpatory findings, depending on the knowledge base of the readership. Excluding this information may oversimplify the diagnosis and thereby make the case report less useful to an AOM practitioner, so determining the appropriate AOM content level for the target audience may be an important consideration for each journal.

Element 7 – CASE DESCRIPTION – DIAGNOSTIC ASSESSMENT

A full assessment of the patient's AOM diagnostic status is provided, including differential diagnosis, disease categories, pathogenesis and etiology, patterns and differentiations, as appropriate. Justification for the diagnosis and pattern differentiation is required (symptoms, signs, pulse, tongue, other information that supports the diagnosis).

1 – AOM diagnosis stated with no rationale

2 – AOM diagnosis stated with rationale but no discussion of pathogenesis, and etiology

3 – AOM diagnosis stated with rationale, pathogenesis, and etiology, but minor omissions or inconsistencies

4 – AOM diagnosis stated with rationale, pathogenesis, and etiology

The presentation of the diagnostic assessment depends upon the style of acupuncture being performed. In a TCM acupuncture and/or Chinese herbal medicine case, the diagnosis should include disease diagnosis (*bian bing*) and pattern differentiation (*bian zheng*). Examples of disease diagnosis include headache (*tou tong*), low back pain (*yao tong*), and atrophy syndrome (*wei zheng*); examples of pattern differentiation include Heart Blood deficiency, Liver fire, and Phlegm obstructing the Lung. If the case involves another style of acupuncture with a diagnosis that is not conventional to TCM, this diagnosis is acceptable as long as it is explained. For example, in Kiiko Matsumoto acupuncture, diagnoses depend on palpatory findings, and include concepts like *Oketsu* (similar to Blood stasis), *Shaoyang* pattern, and Immune imbalance. In Japanese meridian therapy, a pulse pattern would determine a specific *sho* confirmation. Each of these is appropriate determination of diagnosis.

Every diagnosis requires a rationale (a set of signs and symptoms) to support it. For example, if the patient is diagnosed with Heart Blood deficiency, a list of signs and symptoms in the patient which support that diagnosis should immediately follow. A diagnosis of *Oketsu* requires the explanation that the patient exhibited sensitivity/and or hardness on palpation at left ST 25-27 area. A *sho* conformation requires a matching description of the patient's pulse. A case study models the process of medicine, and justifying the diagnosis is essential to this process.

For a biomedical journal, the theoretical rationale justifying the AOM diagnosis and treatment choices are likely beyond the knowledge base of the reader. Again, omitting the AOM perspective altogether to make the writing more accessible to readers is a choice of journal editors, with the consequence being a potential misapplication of the case report's conclusions in clinical practice and research.

"The presentation of the diagnostic assessment depends upon the style of acupuncture being performed. In a TCM acupuncture and/or Chinese herbal medicine case, the diagnosis should include disease diagnosis (*bian bing*) and pattern differentiation (*bian zheng*)."

Element 8 – DESCRIPTION – TREATMENT

State the treatment principles and describe the treatment. Include details on acupuncture point combinations and/or herbal formulas, specific needling techniques, herb dosages and methods of preparation, and justifications for their use based on your diagnosis. Include information on the case management—treatment frequency, length of treatment, adjunctive therapies (diet, exercise, etc.). Include a discussion of long-term case management and treatment strategies when appropriate. For cases with multiple treatments, treatments may be appropriately summarized.

1 – AOM treatment stated without principles, and with no details; or treatment principles and diagnosis from previous section do not match

2 – AOM treatment stated with treatment principles, missing technical aspects of treatment (e.g., herbal dosage and administration, needle technique, needle gauge)

3 – AOM treatment stated in sufficient detail so as to be performable by reader, including sufficient technical aspects of treatment and rationale behind point and herb choices

4 – AOM treatment stated in sufficient detail so as to be performable by the reader, including sufficient technical aspects of treatment and rationale behind point and herb choices. Good description of case management. Treatments are described or summarized appropriately if numerous.

Treatment principles and goals should be determined, then all treatment details should be provided and follow STRICTA guidelines.[12] This section should be written such that a reader would be able to repeat the exact same procedure if presented with an identical patient. For a case study involving multiple treatments, writing out each treatment individually can be laborious and may result in a section that is wordy and cumbersome. If all treatments are exactly the same, it is only necessary to describe one treatment and how many times that the treatment was repeated. If the treatments in the case are similar, it is acceptable to write a sample treatment and then describe the variations and in what circumstances they were applied.

Another common situation involves a treatment plan that occurs in multiple stages, where one approach proves unsuccessful and then the treatment goals are shifted and results are improved. In some cases, perhaps one approach is used to clear the first level of pathology, and then a second approach can be used to completely resolve the complex pattern. The treatments in these two situations may be described in phases. The goal of this section is to present treatment details thoroughly but in a concise way that is easy to understand.

A biomedical journal may choose to reword or reduce the traditional treatment rationale in a way that is accessible to readers; rationales based on mechanism and clinical trial evidence may be an alternative justification for treatment.

Element 9 – CASE DESCRIPTION – OUTCOMES AND PROGNOSIS

The outcomes of treatment are described, including signs, symptoms and tests that indicate progress (or lack of it). Include the patient's prognosis and discuss possible circumstances when additional AOM treatment may be recommended to maintain the patient's health.

1 – Outcomes and results briefly stated, with no objective markers, and not related to initial endpoint

2 – Outcomes and results with some detail, lacking prognosis

3 – Outcomes and results with adequate detail, prognosis is asserted with no basis

4 – Outcomes and results with adequate detail, prognosis is supported

The results section should provide specific details on the patient's response to treatment. Biomedical test results are appropriate here as well as qualitative results. The condition of the patient before and after treatment should be compared. If the data can be quantified, the results may be more compelling. For example, reporting that a knee pain patient "felt improvement" is not as useful as reporting that the patient was able to walk without pain for 30 minutes after a series of treatments, compared to only 5 minutes of walking before pain onset when treatment first began. For headaches, the frequency of headaches, duration of episodes, and amount of medication taken are measurable indicators of the severity of the condition and the level of improvement. Again, if good questions are asked during the intake, comparing the outcomes to the initial baseline will be more straightforward.

Biomedical journals will require objective measures of improvement, including but not limited to lab tests, radiology reports, range of motion measurements, and de-identified photographs of dermatological conditions. A decrease in medication levels supervised by the prescriber may also indicate recovery. Depending on the journal, limited subjective data may also be included.

Element 10 – DISCUSSION

Discuss your observations and the results in the case, summarizing the practical and theoretical points. Discuss how the case relates to the purpose described in the introduction. Propose recommendations for clinical practice, case management, and/or further research based on this case.

1 – Results superficially reviewed and no significant analysis is presented

2 – Results are analyzed, and conclusions drawn

3 – Results are thoroughly analyzed, and conclusions drawn. One reflection on or recommendation for clinical practice is suggested

4 – Results are thoroughly analyzed, and conclusions drawn. Discussion brings up more than one of the following: a new recommendation for clinical practice, a recommendation for further research, a newly proposed aspect of theory, or a suggestion for integrative practice

The discussion section includes a brief summary, which elaborates on important observations and recommendations for education, practice, and/or research. These may include considering specific techniques or formulas for similar patients, suggesting alternate interpretations of classical theory which are supported in the case, encouraging readers to pay attention to specific areas of diagnosis, or advising caution with particular acupuncture points or herbs. It may be worthwhile to discuss other treatment variables here because a case study can suggest a connection between treatment and results but cannot establish a clear cause and effect relationship. All recommendations should be supported by the case described in the paper.

Publication often depends on the points of significance discussed in this section. While a novel treatment approach for a common problem might be grounds for consideration, the background behind the approach may be useful discussion to inform clinical practice and research. Merely suggesting that "further efficacy research should be pursued" does not add much to the discussion, but examining logical gaps in the current research literature and making judicious suggestions for improving research methodology can help to further the field.

Element 11 – CONCLUSION

A concise conclusion summarizes the practical and theoretical points of the case.

1 – Case superficially summarized or incomplete conclusions drawn

2 – Case is summarized and conclusions are drawn

3 – Case is summarized, conclusions are drawn, and practical or theoretical points are also summarized

4 – Case is thoroughly summarized, conclusions are drawn, practical or theoretical points are also summarized, and reference is effectively made back to the objective(s) and/or rationale for the case

A conclusion section should be very brief—just one or two paragraphs, summarizing the case and its significance.

Not all journals include conclusions as part of the format because the information is already contained in the article itself; please check the conventions of the journal to determine the format of the conclusion section.

Element 12 – RESEARCH/REFERENCES

Multiple sources are cited (not just basic texts), including published journal articles. Citations are in proper format according to the journal's author instructions.

1 – Inadequate sources with improper format for citations; statements made in the case study which should be but are not cited; sources of poor quality

2 – Inadequate sources with minor problems with citation format; or sources of poor quality

3 – Section complete, with proper format of citations, both biomedical and AOM sources

4 – Section complete, with proper format of citations, both biomedical and AOM sources and more than one published journal article for both AOM and for biomedical sources

All references should be from scholarly sources. Relevant biomedical database searches should be done; biomedical material should come from current sources intended for a professional audience. Websites written for the layperson (e.g, webmd.com, mayoclinic.org) are not appropriate sources for academic papers and should

be avoided. Recent editions of specialist textbooks and biomedical journal article are acceptable resources as well as systematic literature reviews which provide current practice guidelines. For the academic paper, general AOM textbooks are acceptable but specialist textbooks are preferable. AOM journal articles may not be searchable in standard biomedical databases, but searching archives of AOM journals may turn up useful material.

Each statement taken from source material should be cited. Formatting style of references should be followed precisely, according to the journal's instructions for authors.

This rubric can be adapted for use in a variety of situations. For example, an instructor of a clinical seminar course who creates a student assignment to write a case description section can use the relevant elements (case history, diagnosis, treatment, and results elements). An author preparing a case study manuscript for publication can use the full version of the rubric to assess his or her own work before submitting it to a journal. A journal editor assessing a case study submission might weigh certain sections of the rubric more heavily in informing a decision to reject a manuscript or to recommend it for the peer review process.

If a case study seems to follow standard textbook TCM principles but lacks significant reflections or novel ideas in the discussion, it may be more likely to be rejected outright because editors may prefer material that goes beyond standard textbook knowledge. In all of these situations, an instructor or editor can provide written feedback on each element to improve a writer's future work and make sure that all points are addressed.

This rubric may also be used to train peer reviewers to review articles in a consistent and comprehensive manner. Although for decades, peer review has been a mainstay of medical journals, it has been criticized by some as a subjective stamp of approval, as there is no consistency in the peer review process across various institutions, and there is no universally agreed on opinion as to what constitutes a "good paper."[5] The rubric is an attempt to more specifically evaluate quality and may add some reliability to the peer review process. This particular rubric is specific to the evaluation of Chinese medicine case studies, but it can be adapted to evaluate case studies in other disciplines.

The gradation of performance level is meant to be as clear and objective as possible. However, after working with this rubric for years, there have been times when it is not completely clear which level of performance should be chosen for a given element. For example, in Element 2, Title and Language, a student might be very strong in biomedical terminology but weak in TCM language. In these types of situations, the number grade chosen is not absolute, and the comments made after this element would be the clearest indication of what improvements are necessary.

"The rubric is an attempt to more specifically evaluate quality and may add some reliability to the peer review process. This particular rubric is specific to the evaluation of Chinese medicine case studies, but it can be adapted to evaluate case studies in other disciplines."

Finally, while this rubric was designed as an objective measurement tool, any rubric cannot fully appraise the value of a particular case study. While it may be true that a higher numerical score may indicate a case that is more likely to be of interest to readers, a low score case study can still provide valuable information to a reader who has a similar patient. Each journal reader may take different views on strengths, weaknesses, and importance of a given paper[5] depending on his or her own knowledge, skills, and practice situation. Much as an individual student's capability in the practice of medicine cannot be solely defined by his or her numerical test scores or a patient cannot be defined solely by measurable lab values, the success of an individual paper cannot be solely defined by a number grade. Objective measures are helpful, but they do not tell the whole story.

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Kid-1 涌泉 *Yong Quan*, Gushing Spring

By Maimon Yair, DOM, PhD, Ac and Chmielnicki Bartosz, MD

Please see bios at end of the article.

Explanation of the picture:

Kidney is related to Earthly Branch 酉 You. Etymologically it shows a bottle of fermenting wine, where essences are pulled out of fruits. The quality of collecting goods and putting them into storage is common for physiology of *Kidney*, the eighth month of the year (the autumn equinox) and the afternoon time of day. That is why the whole Kidney channel is presented in autumn colors.

Ki-1, *YongQuan*, is a Wood and *jing-well* point on the Kidney channel; both functions are depicted as a tree and a well. As a Wood point, Ki-1 helps to connect with the roots of inspiration and power. It also enables the upward movement of *yin* and fluids.

The main function of the point is moving *yin* energy up and *Yang* energy down. These functions are shown as a bubbling spring (*yin* moving upwards) and a monk practicing *qigong* (directing *yangqi* downwards).

*The pictures are part of a project called the "Gates of Life" portraying the nature, action and *qi* transformation of acupuncture channels and points made by the CAM team © (Ayal, Chmielnick, Maimon). Illustration by the painter Martyna "Matti" Janik.

Characters of the Name:

涌 – ***Yong*** The character consists of two parts. The first part is the abbreviated character for *shui* – water. The second part is 勇 *yong*, providing a sound that means "to run through." Therefore, the character shows the water gushing from the ground.

泉 – ***Quan*** This is a pictogram showing a spring gushing out from the ground.

Meaning of the Name:

Gushing Spring

The name refers to the *yangqi* from *taiyang* flowing into the Kidneys, revitalizing the energy of Water.

Other names:

地衝 – *iChong* – Earth Highway.

Ki-1 is a point of connection between *chongmai* and the Earth – the internal branch of *chongmai* runs from Ki-11 to Ki-1.

陰谷 – *YinGu* – *Yin* Valley.

Ki-1 is placed in a depression (valley) on the sole of the foot—the most *yin* part of the body, so this name shows the location of the point.

Location:

Yong quan is located on the sole of the foot between the third and the second metatarsal bones, approximately one third of the distance between the base of the second toe and the heel.

Main Actions and Indications:

Jing-Well point:

Kid-1 receives *yang* energy from the *taiyang* Bladder channel, which is the longest *yang* channel in the body, originating on the head, communicating with all organs through the Back-*shu* points. The energy from the whole body is collected in Bl-67 and then passed to the Kid-1. Therefore Kid-1 is used to move excesses of *yang* from the Head and calm the Spirit. It brings the *yang* into *yin* vitalizing the Kidneys, tonifying deficiencies of Kidney *yang*, *yin* and *jing*.

Kid-1 is used to bring down excesses of *yang* energy from the upper part of the body in cases of headaches, hypertension, dizziness, agitation and insomnia, and also pain and stiffness of the neck, shoulders and upper back.

Since this point strongly roots the yang energy it is effective in treating epilepsy, vertex headache and hypertension.

A simple useful tip for treating insomnia from excess *yang* and *yin* deficiency is to massage Kid-1 before going to sleep. This can be also used for treating children who have fears at night and are afraid to fall asleep.

'Kid-1 is the only point located on the sole of the foot. It connects the body to the ground—the nourishing and calming energy of the Earth. Therefore, this point treats the symptoms of deficient Fire/Heat rising up in the body, such as menopause syndrome, hypertension, epilepsy, insomnia, etc.'

The connection of this kidney points to the earth and *yin* while being at root of the kidney meridian explain its effect on Kidney *jing* and hence its use for the treatment of infertility, impotence, and lumbar pain due to weakness.

As a *jing-well* point it has an effect on the other end of the meridian. It is indicated for sore throat, dryness of throat, and the swelling and congestion in the throat. It is also indicated for sudden loss of voice due to wind stroke.

Effecting Tendomuscular Meridian:

Treating the pathology of Kidney sinew channel, which manifests as chronic pain, spasms and Cold sensations of the lower back and spine, accompanied by limited range of motion.

Wood point

Ki-1 is a Wood point bringing energy of movement related to Wood into the realm of Water. It conveys the *yang* energy which is gently moving the yin. According to the Five Phases theory, Wood is a son of Water, therefore this point is useful in case of excesses manifesting as retention of urine and painful urination.

Wood energy is very dynamic, and, as other *yin jing-well* points, Kid-1 influences the other end of the channel. It also wakes up the channel by rescuing *yang* energy and reviving consciousness.

Kid-1 is the Wood point on the Kidney channel providing sparkling, vivid energy of the spring to the Water phase, animating it, bringing back the will of life, drive and strength to overcome fears as well as hope and new perspective helping in finding solutions and breaking away from fear patterns.

The lowest, the most *yin*, point of the body

Kid-1 is the only point located on the sole of the foot. It connects the body to the ground—the nourishing and calming energy of the Earth. Therefore, this point treats the symptoms of deficient Fire/Heat rising up in the body, such as menopause syndrome, hypertension, epilepsy, insomnia, etc.

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Bartosz Chmielnicki, MD
Bartosz Chmielnicki is a medical doctor, practicing and teaching acupuncture since 2004. In 2008 he established the Compleo–TCM clinic in Katowice, Poland, and soon after he opened an Academy of Acupuncture there. Dr. Chmielnicki teaches at many international conferences as well as in schools in Poland, Germany, the Czech Republic, and Israel. For the past five years, he has been working on a project with artist Rani Ayal and Yair Maimon, PhD to visually present acupuncture point names and physiology together.

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