


Get to the Point -  
 Integrating  
 Acupuncture Into  
 a Community  
 Hospital Pain  
 Management  
 Program



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Disclosures

- None

...except

- I do love Traditional Chinese Medicine




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OBJECTIVES

- Brief History of Acupuncture
- Current Theories/Bioscience/Literature
- Training/Licensure/Certification
- Best Practice
- Acupuncture in the Hospital-Privilging
- Mather Research Project




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### A Brief History

- 2-5,000 yr old- sharpened stones, animal bones
- Han Dynasty- basics of Chinese Medicine
- In the 6<sup>th</sup> Century introduced to Korea and Japan
- 17<sup>th</sup> Century Japan Blind Acupuncturists
- 20<sup>th</sup> Century China Acupuncture flourished till 1932-Banned CKC
- 1945 Mao Tse Tung closed the doors to China and the West
- 1960s Barefoot Doctors- focus on well being of the rural population
- TCM and Western Medicine integrated into Healthcare Sys
- in the US, Acupuncture appeared in the 18<sup>th</sup> century
- Started to become mainstream 1971. NYT journalist visited China, underwent appendectomy, post op px control

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### A Brief History

- Acupuncture regulation in the US began in the 1970s, prompted by an article by New York Times reporter James Reston
- In 1973, Nevada became the first US state in the nation to authorizing the practice of acupuncture, and many states thereafter followed suit.
- The Food and Drug Administration first regulated acupuncture needles in 1972 as "investigational devices". In 1996, the FDA changed the status of acupuncture needles from Class III to Class II Medical Devices, meaning that needles are regarded as safe and effective when used appropriately by licensed practitioners.
- As of 2004, nearly 50% of Americans enrolled in employer health insurance plans were covered for acupuncture treatments.
- January 2018 Bureau of Labor Statistics added a new occupational classification code for Acupuncturists
- Acupuncture was placed in the Code category of "Diagnosing and Treating Healthcare Practitioners". Allows federally managed entities like the VA to hire.

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### Traditional Chinese Medicine

- Acupuncture
- Acupressure/Cupping/Tui Na/Gua Sha
- Moxibustion
- Herbal Medicine
- Dietary Therapy
- Physical Arts- Tai Chi/Qi Gong

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Concepts in TCM- Qi

Vital Energy  
 Permeates all things  
 Assume different forms  
 Travels in Meridians

Qi disturbances/diagnoses may be described as

- Stagnant
- Depleted
- Collapsed
- Rebellious

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Concepts in TCM  
 Yin/Yang



- Complementary opposites
- Describe all things in nature
- Their interplay is dynamic and cyclical
- Health is a balance of the 2 energies
- Rooted in Taoist Philosophy

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The Tao Te Ching

The Tao produced the One  
 The One produced the two  
 The two produced the three  
 And the three produced the ten thousand things.  
 The ten thousand things carry the Yin and embrace  
 the Yang and through the blending of the Qi, they  
 achieve harmony

-Chapter 42, Lao-Tze

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The Tao Te Ching

All things carry Yin  
Yet embrace Yang  
They blend their life breaths  
In order to produce harmony

-Chapter 42, Lao-Tze

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Yin Yang Characteristics

YIN	YANG
Femininity	Masculinity
Passivity	Activity
The Moon	The Sun
Yielding	Advancing
Cold temperature	Warm temperatures
Darkness	Brightness
Completion	Advancement
Submission	Creation
Yin is strongly associated with the Earth	Yang is strongly associated with the sky

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Concepts in TCM

Causes of Disharmony

- ☰ External- Wind Cold Heat Dryness Summer Heat Dampness
- ☷ Internal- Sadness, Grief, Pensiveness, Fear, Fright, Anger, Joy
- Lifestyle
- Strong Pathogenic Influences

Diagnosis

- Four Pillars- inspection, Auscultation, Inquiring, Palpation
- Tongue, Pulse

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ACUPUNCTURE: WHAT IS IT?



A key component of Traditional Chinese Medicine Acupuncture involves the insertion of very thin needles through your skin at strategic points on your body. Most commonly used to treat pain. Increasingly, it is being used for overall wellness, including stress management -Mayo Clinic

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Cupping

Cupping is a relaxing massage-like technique where a glass cup creates suction on the skin and draws out stagnation. This technique relieves pain where the cup has been placed, and is very relaxing. Cupping is the ideal technique to use for patients with back pain, most injuries or with asthma. It is also idea for motor vehicle accidents, as it immediately relaxes the soreness caused by impact or whiplash.

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TUINA

"Tui" means pushing, and "Na" means grasping. A form of deep tissue massage. used to relax the tendons and muscles and open the channels that flow through the body. Promotes blood circulation to alleviate pain, relieve muscle spasm, and gently break up adhesions and scar tissue.

Tuina is used for sports injuries, repetitive motion pain, back and shoulder pain, knee and elbow pain, and even hernias.

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Men do not think they know a thing till they have grasped the "why" of it

Aristotle (384-322 B.C.E.)  
Physics, The basic works of Aristotle,  
p240

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### Classical Chinese Explanation

- Each point provides a specific function to regulate a free flow of blood and vital energy, or 'qi' (pronounced 'chee').
- When this energy is impaired or blocked, it may result in physical discomfort and emotional distress.
- Acupuncture balances and restores the flow of this energy, which directs the body's natural healing ability to where it is needed (New York Presbyterian).

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### Proposed Mechanism of Action

#### EASTERN

- Yin Yang- Complementary Opposites
- 5 Elements- Wood, Fire, Earth, Metal
- Qi- Vital Energy
- Meridians

#### WESTERN

- Cytokines
- Hormones (eg, cortisol and oxytocin)
- Biomechanical effects, electromagnetic effects
- The immune system
- The autonomic and somatic nervous systems

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### Proposed Mechanisms of Action

- Multiple physiologic models have been proposed to explain the effects of acupuncture;
- Various models have implicated cytokines, hormones (eg, cortisol and oxytocin), biomechanical effects, electromagnetic effects, the immune system, and the autonomic and somatic nervous systems.
- Questions remain as to what is the optimal form of acupoint stimulation and whether acupunctured points have any physiological specificity as espoused by traditional Chinese theory

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### Current Theories

- Endorphins — The most thoroughly studied application of acupuncture is for pain relief. 1970-1980s acupuncture stimulates the secretion of the endogenous opioid endorphin.
- Opioid antagonists block the analgesic effect
- The significance- establishes the neural model of acupuncture mechanism

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### Endorphins

- Endorphin release may be induced by stimulation of any free nerve ending or muscle afferent.
- Does not offer support specificity of acupoints e.g. particular indications (rationale for selection) and locations

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Functional MRI

- fMRI studies have demonstrated physiologic effects with acupuncture.
- fMRI can measure brain activity by detecting changes in blood flow
- "Sham" vs "Verum" Acupuncture compared.
- Verum subjects' fMRI demonstrated more widespread and sustained changes in the blood oxygenation level-dependent (BOLD) signals in various regions of the central nervous system (cerebral, limbic, and brainstem)

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Connective Tissue Hypothesis

- Idea that acupuncture channels and points have an anatomical reality as fascia or connective tissue planes.
- This relationship is relevant to acupuncture's therapeutic mechanism.
- A study that looked at points and meridians in the arm concluded that such an association was present.
- It is possible that such an association might relate to the concept of "needle grasp" or tissue response to acu needling.

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Summary of proposed model of physiological effects

TCM

- Meridians
- Acupoints
- Qi
- Meridian Qi
- Blockage of Qi

Equivalent?

- Connective Tissue Planes
- Convergence of tissue planes
- Metabolism, movement, signaling, information exchange
- Conn tissue, biochem/bioelec signaling
- Altered tissue matrix leading to altered signal transduction

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Summary of proposed model of physiological effects

<u>TCM</u>	<u>Equivalent?</u>
• Needle Grasp	• Tissue winding/contraction of fibroblasts surrounding the needle
• De Qi Sensation	• Stimulation of conn tissue sensory mechanoreceptors
• Propagated De Qi Sensation	• Wave of connective tissue contraction and sensory mechanoreceptor stimulation along connective tissue planes

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Summary of proposed model of physiological effects

<u>TCM</u>	<u>Equivalent?</u>
• Restoration of the flow of Qi	• Cellular activation/gene expression leading to restored connective tissue matrix composition and signal transduction

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Acupoints

Juan Li, Qing Wang, Huiling Liang, et al., "Biophysical Characteristics of Meridians and Acupoints: A Systematic Review," Evidence-Based Complementary and Alternative Medicine, vol. 2012, Article ID 795841, 6 pages, 2012.  
doi:10.1155/2012/795841

Peer-Reviewed  
Journal of  
Acupuncture  
and  
Moxibustion  
Research

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**There is a significant relationship between the tones and channels**

*Yi, Q., Niu, L., Xu, J., Wang, Y., and Li, L. "An Investigation of the Relationship Between Five Musical Modes and Corresponding Internal Organ Functions." Acupuncture and Electro-Therapeutics Research, vol. 38, no. 3-4, pp. 229-236, 2013.*

**The sound wave's amplitude is significantly higher in acupoints than non-acupuncture points**

*Y. Li, W. Li, J. Xiang, et al. "Research of Acoustic Energy and its Content of Song Tone versus The Chinese Music Therapy Association of the Chinese Society." Evidence-Based Complementary and Alternative Medicine, 2016.*

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**Frequency of microwaves transmitted in different channels are different. Additionally frequency of microwaves transmitted along the channels in cancer patients are different from healthy control**

*M. A. Kinsley, F. S. Zhusun, Y. Koshimizu, et al. "Microwave Propagation on Acupuncture Channels." Acupuncture & Electro-Therapeutics Research, vol. 38, no. 3-4, 2013.*

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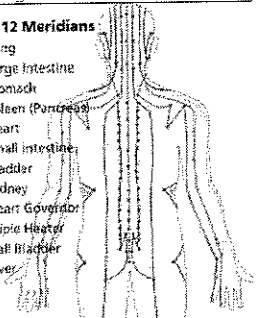
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**Meridians are webs, comprehensive distribution networks or pathways that supply vital energy to the entire body**

**The 12 Meridians**

- ☉ Lung
- ☉ Large Intestine
- ☉ Stomach
- ☉ Spleen (Pancreas)
- ☉ Heart
- ☉ Small Intestine
- ☉ Bladder
- ☉ Kidney
- ☉ Heart Governor
- ☉ Triple Burner
- ☉ Gall Bladder
- ☉ Liver



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**There are detectable lines of infrared radiation similar to meridians described by ancient Chinese**

-P. Q. Wang, X. L. Hu, J. S. Xu et al., "The indication of infrared thermal images on body surface along 14 meridians lines," *Acupuncture Research*, vol. 29, no. 4, 2004, pages. 20-22.

**Lines of higher temperature are formed after acupuncture along the meridians**

-D. Zhang, E. Y. Wang, and Q. Y. Wang, "Determination of deep temperature inside the line of high temperature along meridians," *Chinese Journal of Basic Medicine in Traditional Chinese Medicine*, vol. 3, no. 410, 52 pages, 2004.

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**Meridians and acupoints have high luminous biophysical properties**

-Z. G. Yan, Y. G. Shi, Y. Z. Wang et al., "Research on the biophysical features of strong luminescence phenomena in the 14 regular meridians of human body," *Acupuncture Research*, vol. 7, no. 337-341, 1979.

**There is relatively stable circular current of electromagnetic and chemical oscillation along the low electric resistance pathway**

D. Z. Li, S. T. Fu, and X. Z. Li, "Study on theory and clinical application of meridians," *Chinese Acupuncture & Moxibustion*, vol. 25, no. 1, pp. 52-59, 2005.

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**There are channels of low hydraulic resonance along meridians causing more fluid to flow along meridian lines than in surrounding tissues**

-W. B. Zhang, Y. Y. Tian, H. Li et al., "A discovery of low hydraulic resistance channels along meridians," *Journal of Acupuncture and Meridian Studies*, vol. 1, no. 1, pp. 20-25, 2008.

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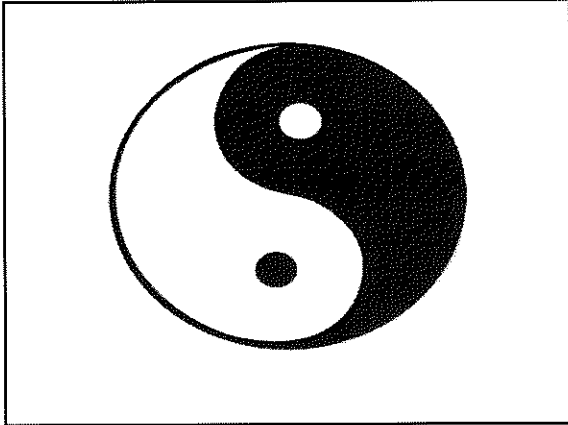
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*US Training/licensing according to criteria set by three professional organizations, all founded in the early 1980's*

- The Accreditation Commission for Acupuncture and Oriental Medicine (ACAOM) accredits schools/programs Recognized by the United States Department of Education
- The Council of Colleges of Acupuncture and Oriental Medicine (CCAOM) an association for acupuncture schools. Promotes educational excellence and quality patient care. Administers the Clean Needle Technique (CNT) course to train acupuncturists in safe, sterile needling technique.
- The National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM), certifies acupuncturists nationally; its programs are certified by the National Commission for Certification Agencies (NCCA).

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*According to the World Health Organization*

In competent hands, acupuncture is generally a safe procedure with few contraindications or complications.

Risks due to inadequate training may include inappropriate selection of patients, errors of technique, and failure to recognize contraindications and complications.

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*Precautions/Contraindications*

- Active infection, non intact skin
- Avoid Electroacupuncture in patients with an automatic implantable cardioverter-defibrillator (AICD) or pacemaker.
- Neutropenia, Blood dyscrasias, bleeding disorders, anticoagulants
- There are points that contraindicated during Pregnancy.

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*Preventing Acupuncture Needling Adverse Events*

- Although rare in terms of frequency, the most common adverse events associated with acupuncture are needle site bleeding, superficial hematoma and needle site pain
- Screen patients, palpate and observe anatomy, avoid points near vessels, apply light pressure esp scalp and ear
- Practitioner-related issues that may increase needling sensation include poor technique, needling sites where alcohol remains, over manipulation

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*Adverse Events*

- Despite the variety of listed complications and the occasional case reports in major journals, major adverse events are rare and are usually associated with poorly trained, unlicensed acupuncturists
- Infection
- Nerve damage
- Pneumothorax

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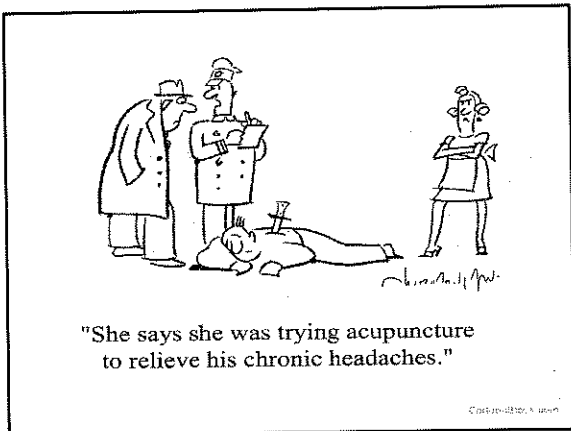
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*Brief Review of Adverse Events*

- A prospective study in Japan of 65,482 acupuncture treatments reported no major adverse events
- A prospective investigation in Germany of 97,733 patients constituting 760,000 treatment sessions reported that the two most frequently reported adverse events were needling pain (3.3 percent) and hematoma (3.2 percent). Potentially serious adverse events included two cases of pneumothorax. An asthma attack, a vasovagal reaction, an acute hypertensive crisis, and an exacerbation of depression were considered to be possibly related to treatment.
- Another two surveys performed in the United Kingdom totaling 66,000 treatments reported no serious adverse events.

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*Best Practices*

- Informed by Clinical research, clinical epidemiology, health economics and health services research
- The Council of Colleges of Acupuncture and Oriental Medicine administers a national needle safety course known as the Clean Needle Technique Course.
- This course is required by the National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM) to obtain Diplomate status from the Commission.
- Safe needling technique, the CNT course contributes to the high confidence level in the safety of acupuncture by patients, regulators, and third party payors in the U.S.

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Clean Needle Technique

- Safety Guidelines to Prevent Infection
- Designed to limit exposure of patients from both autonomous and cross infections
- Current knowledge, safe clinical practices and risk management techniques to reduce the risk of potential AEs, reduce the spread of infection and ensure public safety

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Clean Needle Technique

- Standard Precautions: Consider all patients as if they are carriers of bloodborne pathogens such as Hepatitis (HBV), Hepatitis C (HCV), HIV, Staph or MRSA.
- Safety Guidelines for Hand Sanitation.
- Safety Guidelines for Preparing and Maintaining a Clean Field.
- Follow Safety Guidelines for Skin Preparation.
- Single-use sterile needles and lancets.
- Check needles before use for sterilization expiration dates, breaks in the packaging or any evidence that air or water has entered the needle packaging prior to use.
- Glove use
- Immediately isolate used needles in an appropriate sharps container

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NYSED.gov  
Office of the Professions

- Certificate Programs  
Admission limited to licensed physicians and dentists eligible for authorization to practice acupuncture  
Instruction 200-300 hours of instruction, clinical demonstration,

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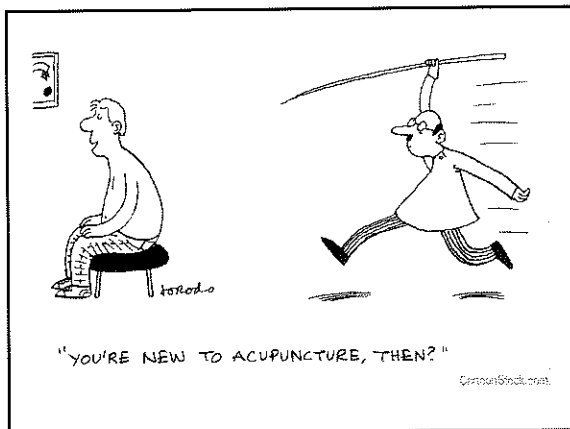
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[NYSED.gov](http://NYSED.gov)  
 Office of the Professions

- Licensure  
Admissions limited to persons who have successfully completed at least 60 semester hours of study, including at least nine semester hours in the biosciences, creditable as part of one or more college or university programs  
Curriculum Minimum of 4,050 hours classroom instruction, supervised clinical experience, and out-of-classroom or out-of-clinic study assignments. Each hour of classroom instruction must require two hours of out-of-classroom study assignments and each hour of supervised clinical experience must require one-half hour of clinic study assignments. As part of the 4,050 hours, the program must include, clinic study assignments.

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*Acupuncture Curricula*

- Biosciences including anatomy, physiology and pathology
- Instructional hours in acupuncture including acupuncture principles; acupuncture channel and point theory; acupuncture physiology; acupuncture pathology; acupuncture clinical examination and diagnosis; acupuncture techniques; acupuncture treatment principles; and sterilization and precautions; and
- Supervised clinical acupuncture experience in general health problems to include acupuncture diagnosis; therapeutic treatment planning; acupuncture needling technique; moxibustion; electroacupuncture; pre- and post- treatment instruction; contraindications and precautions; treatment of emergencies; when to refer to appropriate health professionals; and acupuncture hygiene.

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*Licensure and National Certification*

- Written Exam/Point Location Exam
- National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM) National Certification.
- Estab 1982- mission is 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
- Designation "Diplomate NCCAOM"

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*NCCAOM Recertification*

- Every 4 years
- Requires current CPR plus
- Professional Development Activities
  - AOM – ABT – BIO
  - Safety (SA)
  - Ethics (ET)

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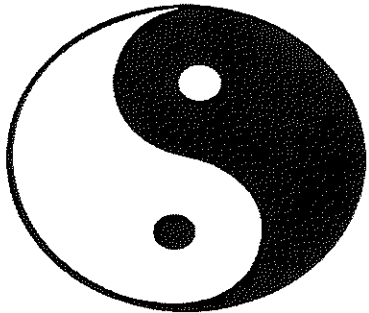
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National Institutes of Health  
National Center for Complementary and Integrative Health

# Pain in the U.S.



**25.3 million**  
American adults  
suffer from daily pain



**23.4 million**  
American adults  
report a lot of pain

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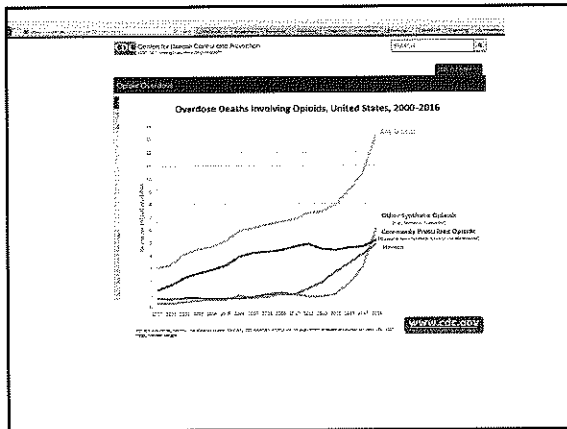
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**CDC** Centers for Disease Control and Prevention  
1600 Clifton Road, NE Atlanta, GA 30333

Morbidity and Mortality Weekly Report (MMWR)

**CDC - MMWR**

**CDC Guideline for Prescribing Opioids for Chronic Pain – United States, 2016**

With the release of the 2016 CDC Guidelines, patients who have:

**NCCIH** National Center for Complementary and Integrative Health

1600 Clifton Road, NE Atlanta, GA 30333

www.cdc.gov

1600 Clifton Road, NE Atlanta, GA 30333

www.cdc.gov

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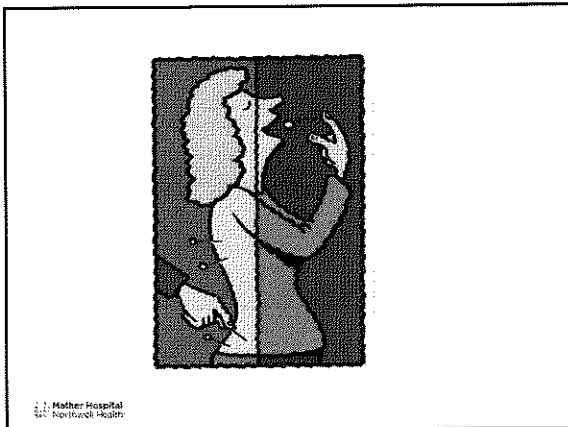
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Hudson, NH 03051

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**AMPA** (American Medical Pain Academy) is a national organization of physicians, nurses, and other healthcare professionals who are dedicated to the study and treatment of pain. AMPA's mission is to advance the science of pain and to improve the lives of people who suffer from pain.

**Pain Management and the Opioid Epidemic: Balancing Societal and Individual Benefits and Risks of Prescription Opioid Use**  
 Statement from the American Academy of Pain Medicine

The American Academy of Pain Medicine (AAPM) applauds the National Academies of Sciences, Engineering, and Medicine (NASEM) for its report published in July 2016, *Pain Management and the Opioid Epidemic: Balancing Societal and Individual Benefits and Risks of Prescription Opioid Use*. The report, which systematically details the growing public health challenges stemming from the burden of pain in America and the societal impact of the opioid epidemic, is a timely and comprehensive review of the current state of the science of pain and offers a number of thoughtful recommendations to increase understanding of the interplay between the two.

In particular, AAPM supports the recommendations of the report's authors that address the dual public health burden of unmet pain and opioid use disorder, and include the following: research to better understand pain and opioid use disorder; the development of comprehensive pain education, training, and workforce development programs; and greater access to high-quality pain programs, especially in underserved areas. AAPM also supports the report's recommendations for comprehensive and coordinated pain management, including the development of comprehensive and coordinated pain management programs for and access to comprehensive pain management programs for the long history and mission of AAPM.

The authors of this report have provided a history between balancing the quality of life for patients while managing the risks of opioid use. As AAPM President Robert James, MD, "We need to focus on providing better advice when treating our patients' pain, especially when their treatment plan has become more complex. The focus is on managing the burden of pain, not just the opioid epidemic, but the overall burden of pain, including chronic pain, and the consequences they live by."

July 14, 2017

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**Joint Commission 2018 Pain Standards**

R<sup>3</sup> Report 1: Requirement, Rationale, Reference  
 Issue 11, August 28, 2017 Page 2

<b>Reference</b>	<ul style="list-style-type: none"> <li>Kinlan HC, et al. The Model for Understanding Success in Quality (MUSIQ): Building a Theory of Change in Healthcare Quality Improvement. <i>BMJ Quality &amp; Safety</i>. 2012;21(11):13-20.</li> <li>Quality Improvement. U.S. Department of Health and Human Services Health Resources and Services Administration. April 2011.</li> <li>Chassin NR and Lloyd JS. <i>High-Reliability Health Care: Getting There from Here</i>. The Milbank Quarterly. 2013;91(3):459-90.</li> </ul>
<b>Requirement</b>	<p>EP.2: The hospital provides nonpharmacologic pain treatment modalities.</p>
<b>Rationale</b>	<p>While evidence for some nonpharmacologic modalities is mixed and/or inconclusive, a complementary approach for pain management and patient education can reduce the need for opioid medications in some circumstances. The hospital offers nonpharmacologic modalities by ensuring that patient preferences are discussed and, at a minimum, providing active nonpharmacologic treatment options relevant to their patient population. When a patient's preference for a safe nonpharmacologic therapy cannot be provided, hospitals should educate the patient on where the treatment may be accessed post-discharge. Nonpharmacologic strategies include, but are not limited to, physical modalities (for example, acupuncture therapy, chiropractic therapy, osteopathic manipulative treatment, massage therapy, and physical therapy), relaxation therapy, and cognitive behavioral therapy.</p>

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Chronic Pain Nurse Practitioner Service now  
The Integrative Pain Service

- Staffed by a Full-time NP and Full-time NP
- Nurse Practitioner clinicians with the Chronic Pain / Interventional Pain Management Physicians
- The Chronic Pain Management Nurse Practitioner Service (CPMNP) provides expert consultation for the needs of the patient admitted to Mother who has uncontrolled pain.
- Conduct on-site data with a variety of disease states and/or conditions including but not limited to: uncontrolled cancer pain, low back, headache, neuropathy, chronic pain, multiple drug resistant opioid therapy, coexisting uncontrolled pain, substance use and non-operative pain uncontrolled after the surgical service has completed.
- Expanding our "tool box" of interventions to offer patients who suffer from pain.

Mother Hospital  
Northwest Health

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Integrative Pain Service

Element of performance LD.04.03.13

- The Integrative Pain Service is the leadership team that is responsible for safe opioid prescribing and developing and monitoring performance improvement R/T pain management
- The hospital provides information to staff and LIP on available services for consultation and referral of patients with complex pain management needs

	Consults	Patient follow up	Total patient encounter
2017 Total YTD	720	1675	2395
2018 QTR 1	186	335	481
2018 QTR 2	179	442	621

\* This does not include "unofficial consults" or recommendations provided on the TCU unit.

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Expanding our "tool box" of interventions to offer patients who suffer from pain.

More Expertise- the addition of 2 Holistic Nurses

Nina RN, trained in Homeopathy, Jin Shin Jyutsu, Physical Arts, and Aromatherapy  
Marge RN, Reiki Master, Certified Hypnotist and Labryinth Facilitator

Integration

Aromatherapy-Aromatics/Armassage  
Meditation/Guided imagery/Hypnosis  
Breathe work  
Reiki  
Coaching

Recent Research

Pain Ctr Aromatherapy M Technique  
Reiki and the Total Joint Replacement

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**OBJECTIVES:**

- The purpose of this research study is to explore the feasibility of Acupuncture as a nonpharmacological modality for the treatment of pain in patients admitted to Mather Hospital with a primary or secondary diagnosis of uncontrolled pain.
- Acupuncture has been extensively quoted in the literature as a recommended nonpharmacological modality for the treatment of pain(American College of Physicians.2017).
- This pilot study is pending grant support from to study the impact of Acupuncture for the patient hospitalized in a small community teaching hospital.
- It is expected that the findings of this study will add to the current body of literature on nonpharmacological pain modalities and provide a foundation for the expansion of integrative modalities with further research opportunities for the inpatient pain management Nurse Practitioner (NP) Service.

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**BACKGROUND:**

- In the midst of the Opioid crisis, The Joint Commission's (JC) 2018 Pain Standards require the inclusion of nonpharmacological pain treatment modalities(Joint Commission,2018).
- In response, the Mather NP Chronic Pain Service has developed a more robust integrative skill set.
- The NPs looks to further expand treatment options to limit or spare opioid prescribing and the associated risks.
- The NPs strive to offer comprehensive treatment to provide meaningful relief for patients with multidimensional pain.
- Current trends in healthcare worldwide include the introduction of Acupuncture into the inpatient setting for this purpose ([www.hasc.org/health-care-headlines/holistic-opportunities-abound-us-hospitals](http://www.hasc.org/health-care-headlines/holistic-opportunities-abound-us-hospitals)).

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- The NP Chronic Pain Service aspires to keep pace with the Community's expectation to provide research- based comprehensive care.
- Mather Hospital's Chronic Pain Service has a NP who holds a Master's degree in Oriental Medicine and is trained, licensed and certified as a New York State Acupuncturist.
- Her physician collaborator, a Pain Specialist, is also trained and certified as a Medical Acupuncturist.
- The addition of an inpatient Acupuncture program may have the potential to improve both patient outcomes and overall satisfaction.
- As a teaching hospital, Mather Hospital Northwell Health is bound to align with current Medical and Nursing school curricula through the inclusion of Integrative Pain care.

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ELIGIBILITY CRITERIA:

**Subjects:** Adult patients admitted to Mather Hospital Northwell Health (Mather) with a primary or secondary diagnosis of uncontrolled pain.

**Inclusion Criteria:** Adult patients admitted to Mather who have a primary or secondary diagnosis of uncontrolled pain (R52) and have been evaluated by the Chronic Pain NP Service to not have any contraindications to being treated with Acupuncture. Patients will be screened by the NP/Licensed Acupuncturist for appropriateness of treatment.

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Exclusion Criteria:

- Pregnancy
- Patients with active infection
- Patients with coagulopathies, on blood thinners, heparin or lovenox.
- Patients who are neutropenic-absolute neutrophil count (ANC) less than 500/ $\mu$ L to thrombocytopenic-platelet count less than 25,000/ $\mu$ L.
- Patients with symptoms that require immediate medical or surgical intervention - Example "Red flag symptoms" that suggest Cauda equina syndrome
- Patients with an active Behavioral Health disorder or behavior that would place the NP Acupuncturist at risk.

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METHODOLOGY:

This study will be a Pragmatic Pilot Study using a convenience sample of patients who experience uncontrolled pain and have been referred to the Chronic Pain NP service.

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**Treatment Protocol**

- Arrangements for Acupuncture or related manual therapies are provided only after signed informed consent from the patient is obtained
- Patients are scheduled for Acupuncture treatment based on available treatment space
- It is expected at this time that treatments will be provided in the evening hours in the Pain Management Center after the Interventional Pain Physicians have completed their cases.
- Additional locations may be decided as per the study team and Hospital Administration deems appropriate.
- Grant monies are being sought to develop a dedicated space that may be used to provide holistic modalities such as acupuncture.
- If the initial phase of this pilot study supports the feasibility of this modality, grant funding will be used to configure a dedicated treatment space.
- As this is a Pilot study assessing feasibility for this treatment modality, location and scheduling of treatments will be based on current staffing of NP service.
- A goal of this research study will be to demonstrate the need for a dedicated space for Integrative In-Patient treatments.
- Treatment space must be quiet and conducive to healing.
- Treatments offered in a patient room are only at the discretion of the Licensed Acupuncturist.

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**DATA COLLECTION FORMS:**

The following instruments and data points will be used in this research study:

**Demographic Form** – Will be utilized to obtain attributes such as: age, gender, medical history, and pain history.

**Numeric pain score** – Obtained as part of the daily assessment by nursing staff and the chronic pain service. Patients will be tracked by evaluating their comfort function goal in contrast to their highest and lowest Numeric Pain Score.

**Defense and Veterans Pain Rating scale** – A valid and reliable pain rating scale that patient perception of pain intensity and the effect of pain on sleep and mood. This will be collected on a daily basis by the study team.

**Use of opioid medication in morphine equivalents** – Patients may continue to be treated with usual care throughout the study. Patients may use opioid medication as part of their multimodal treatment plan. All opioid medication will be calculated and recorded in Morphine equivalents when possible (some opioids do not have a morphine equivalent)

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**Satisfaction using the HCAHPS/Press Ganey** – Trends in patient satisfaction will be reviewed to determine correlation with this Pilot study

**Knowledge and attitudes related to the use of complementary modalities of the nursing and medical staff** – will be measured via survey monkey with the **CHBQ** – CAM Health Belief Questionnaire prior to study implementation and at the conclusion of the study.

**Knowledge, attitudes and current use of CAM modalities for patients** – (KACU-CAMP) Patients will be surveyed for past and present use of CAM modalities. A Likert scale will be used to quantify patient's satisfaction with current treatment regimen for pain prior to acupuncture as well as on discharge from the Pain Service.

**Time in motion evaluation** – Pain Management service will collect data related to time and resources utilized for this program to assist in determining feasibility and overall cost to the institution. Each patient folder will contain a log of hours related to study treatment and supplies/resources. In addition, a narrative may be provided by the study team related to any pragmatic successes and challenges.

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**Pre-data:**

- Data will be collected once patients sign a written consent.
- Baseline Demographics form, Numeric Pain score, Veterans Pain Rating scale, and KACU-CAMP will be provided in the study folder and collected by a member of the CPNPS.

**Post-data:**

- Data will be collected and submitted to the hospital statistician for ongoing data analysis and to identify trends.
- As this is a Pragmatic Pilot study to identify feasibility and efficacy, the study team expects to show the benefit of Acupuncture to reduce pain, improve function, and decrease use of opioid medication.
- These data points will be collected and analyzed and will guide further changes to a new program.
- Additional data review will focus on patient satisfaction, as well as medical and nursing staff knowledge for Integrative modalities.

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**Time Frame:**

- This study has anticipated grant funding
- The application for the grant is pending IRB approval.
- Upon IRB approval, Patricia Dodd will collaborate with Dr. Mehran Golpariani to add Acupuncture to her credentialing file.
- Ms. Dodd will be supervised per the credentialing department's guidelines with 5 cases by Dr. Golpariani who is Ms. Dodd's collaborative physician.
- Dr. Golpariani is a credentialed Interventional Pain Physician and Medical Acupuncturist on staff at Mather.
- He currently provides Acupuncture as a nonpharmacological pain modality to his office patients.
- These cases may currently take place at Mather Hospital or Dr. Golpariani's office.
- The study team anticipates that Acupuncture credentials will be added to Ms. Dodd's file September 2018.
- The study team plans to begin patient enrollment in the study beginning in October 2018

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**STATISTICAL CONSIDERATIONS:**

- A power analysis will be conducted to determine the number of subjects needed to reach statistical significance.
- Correlational statistics, Paired t-tests and Pearson's r will be used to determine if statistically significant relationships exist between the independent variable (Acupuncture) and dependent variables (Pain rating and Opioid use).
- Descriptive statistics will be used to analyze demographic data, Veterans Pain Rating scale, and KACU-CAMP.
- As this is a Pragmatic Pilot study, trends will be evaluated for statistical significance. Additional points of merit will include the time in motion study and patient satisfaction.

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**BENEFITS/RISKS:**

- All treatment modalities related to the management of painful conditions carry risk that must be considered when weighing the benefit of comfort.
- Additionally, patients with uncontrolled pain are at risk for the sequelae of immobility and stimulation of the sympathetic nervous system which impedes healing, increases susceptibility to infection and impacts all aspects of quality of life and emotional wellbeing.
- Acupuncture has been well researched as a safe modality when proper precautions are used by a Licensed Acupuncture provider.
- One of the advantages of Acupuncture is that the incidence of adverse effects is substantially lower than that of many drugs or accepted medical procedures used for the same conditions.
- Risks may include bleeding, pain at insertion site of needle, lightheadedness and infection.
- Similar risks are associated with IV insertion/subcutaneous injections by RN staff and/or any activity that has an effect on the sympathetic/parasympathetic nervous system.

**Patients may benefit from receiving a reduction in pain and improvement in function and quality of life while decreasing use of opioid medication**

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**RECOMMENDATIONS FOR FURTHER STUDY:**

Collection of data through this grant funded program will guide further research and community outreach programs and pave the way for a more robust in-patient and out-patient Integrative Care program for the management of pain for all patients.

The Pain NP's have a vision for their service to viewed not as the Chronic Pain Service – BUT Rather as the...

Pain and Integrative Care Team

With a goal of dedicated space for the provision of Integrative Modalities and Holistic Nursing Care for patients and Holistic Self-Care for all staff

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**Conclusion**

- A literature review highlights multiple efficacy studies on the benefit of Acupuncture, however there are few that evaluate the pragmatic implications and feasibility of Acupuncture in an acute care setting.
- The CPNP Service is very fortunate to have the support of a National Organization for the study of this intervention at OUR HOSPITAL!
- The use of grant funding for this IRB approved pilot study will allow Mather Hospital Northwell Health the ability to evaluate the pragmatic impact of Acupuncture treatment on a small manageable sample of patients and provide participants and hospital staff the opportunity to evaluate the impact of a non-pharmacologic pain regimen that is hypothesized to reduce opioid use and provide for improved quality of life and functionality.
- Mather has the opportunity to stand-out as a leader in our community for the provision of Integrative Care
- Every journey begins with just ONE STEP
- This is the first step to an exciting journey!

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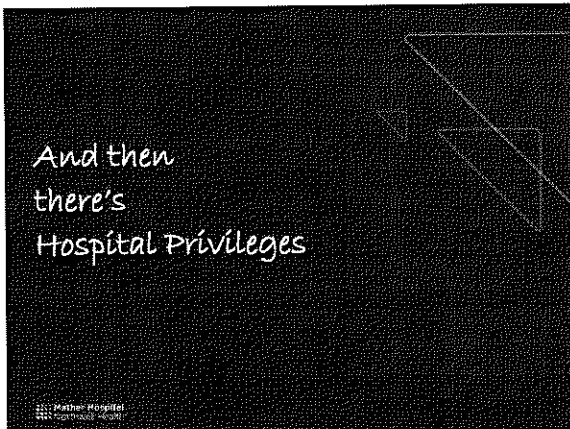
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Treatment for disharmony r/t HP

An Acupuncture Prescription for Anxiety/ Shen Disturbance  
 Spirit Treatment to Harmonize and Focus Mind and Spirit  
 Ht 7, Cv 15, Bl 44, Du 24, Du 11, Kid 25, Kid 23, Gb 13

5 Peaceful Sleep Points  
 Goodnight  
 H-3, PC-4, SP-6 and extra points Annlian and YinTang

Liver Depression/Qi Stagnation  
 Treat Frustration and Irritations  
 Yin Tang Third Eye- Emotional balance, CV17 Sea of Tranquility,  
 Lu 2 Letting Go,  
 CV14 Center of Power

Mather Hospital  
continuing health

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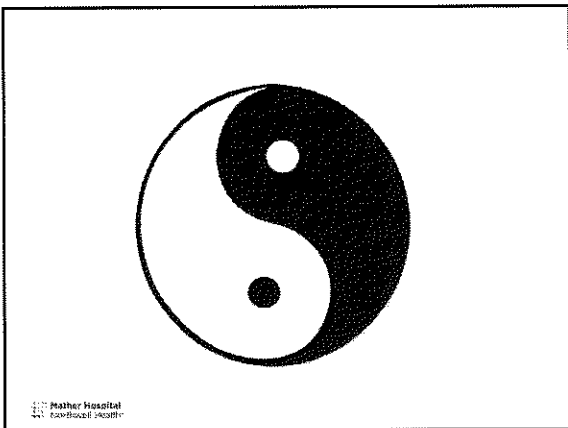
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