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Acupuncture in Pediatric Academic Health Centers: A Blueprint for Integration

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ABSTRACT

Background: Pediatric acupuncture within academic health centers is an expanding service, with more than one third of pediatric pain centers in the United States offering acupuncture-related modalities. Despite consumer demand for acupuncture, there is little information in the literature regarding the ''how-to'' of building these programs.
Methods: This article summarizes two models of incorporating pediatric acupuncture in academic health centers and describes methods of application of pediatric acupuncture within an academic health environment.
Results: A comparison of these models and a blueprint for the development and success of acupuncture services within pediatric health centers are presented.
Conclusions: Pediatric acupuncture can be a vital addition to holistic integrative care for children in an academic center, but it requires collaborative implementation, particularly in the areas of clinical service, education, research, and reimbursement strategies. Long-term viability of pediatric acupuncture within an academic pediatric setting is aided by joint administrative support from both hospital and medical school, as well as measures of performance outcome and patient satisfaction.

Key Words: Academic Medicine, Acupoint, Pediatric Acupuncture, Traditional Chinese Medicine

INTRODUCTION

The provision of pediatric acupuncture (PA) within the setting of academic health centers (AHCs) is not a novel concept. In 2009, Gold et al. reviewed acupuncture encompassing both pediatric in-hospital and outpatient diagnoses.[1] In 2015, all 12 of the U.S. children's hospitals on the *U.S. News & World Report* Honor Roll rankings had modalities of complementary and alternative medicine (CAM) incorporated into their clinical services.[2] Officials at pediatric hospitals estimate that at least a third of U.S. pain centers for children offer acupuncture alongside traditional treatments.[3] This parallels the significant consumer demand for holistic and complementary approaches. Among children 4–17 years old who used CAM in 2012, 45.6% used it to treat a specific health problem or condition.[4] Pediatric-specific acupoint therapy as part of a more comprehensive Traditional Chinese Medicine (TCM) approach (i.e., the other pillars of TCM: Herbology, Moxibustion, Tui Na, and Qi Gong) is appearing more frequently on websites for university-affiliated children's hospitals. Similar to what exists for the adult population, these programs are varied and services may be provided for inpatients, outpatients, or both groups. Acupuncture and related modalities may be part of an anesthesiology, pain, or integrative program, or stand alone. The goals of this paper are to (1) summarize two models incorporating PA in AHCs that inform a blueprint for development of future programs and (2) describe methods of application of PA within an academic health environment.

TWO MODELS

The experience of PA at two medical centers is presented, including background and a brief overview providing

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context. The blending of these two models informs conceptualization of a blueprint for PA program-building and integration.

The Umbrella Model

Primary Children's Hospital, Intermountain Health Care and the Department of Pediatrics, the University of Utah, Salt Lake City, Utah: In 2010, the Department of Pediatrics launched the Pediatric Integrative Medicine Service at Primary Children's Hospital. The chair of Pediatrics supported a mini-business plan presented by a pediatric integrative medicine physician (''physician champion'') for this service to be created within a 2-year time frame, after which achievement of milestones and financial data would be reviewed. This plan allowed for identification of key parties who should be included in the development process, clarification of demographic characteristics, and an outline of initial deliverables. A Pediatric Grand Rounds presentation that addressed pediatric integrative therapies with an emphasis on PA, as well as a meeting with the Medical Executive Committee of the hospital, increased understanding and support from the medical staff at the outset. A grant from the American Academy of Pediatrics Section on Integrative Medicine was used to pilot education methods for integrative modalities in the intensive care unit and enabled pediatric residents to experience acupuncture as well as to see ways in which PA could be integrated into intensive care.

Primary Children's is a 289-bed hospital which draws patients from a five-state referral area and has among its programs pediatric and neonatal intensive care, trauma, cardiac transplant, pediatric rehabilitation and neurotrauma, and oncology-bone marrow transplant. These patient populations, as well as outpatient consultation referrals, soon yielded a very busy acupuncture service. Initially, all PA was performed by a single physician who was board-certified in medical acupuncture and had additional training in TCM and shoni-shin. With the addition of a licensed acupuncturist, the PA portion of the integrative program was able to expand quickly and efficiently. To meet patient demand, a licensed acupuncturist–only, fee-for-service clinic was started. This increased the number of available appointments and enabled patients to schedule return visits in the same week, if necessary.

In 2011, a pediatric integrative medicine elective was started for fourth-year medical students and pediatric residents, which advanced the educational arm of the program. Collaborative practice between acupuncture practitioners, anesthesiologists, and surgeons facilitated placement of longer-dwelling acupuncture needles in the operating room for treatment of postoperative pain and nausea. These multidisciplinary collaborations led to a research study on pediatric acupuncture in adolescent headache[5] and development of a protocol for patients with posterior spinal fusion. It also opened the door to co-treatment with physical therapists on the Neurotrauma Unit and music therapists in many parts of the hospital. Development of a pro forma that included the addition of a nurse practitioner to the team, new milestones, and analysis of demographic characteristics and financials was prepared in 2012. The goal was to transfer the university-led administrative umbrella, under which PA had grown, to the hospital side. Within the hospital-administered structure, this approach placed PA (and the burgeoning integrative program) under the jurisdiction of Family Support Services. The rapid growth and acceptance of pediatric acupuncture services were aided by the same principles of the 5Cs that were applied to the design and implementation of the overall pediatric integrative medicine service (see Table 1).

The ''Co-op'' Model

University of Minnesota Masonic Children's Hospital, MHealth and the Department of Pediatrics, the University of Minnesota: In 2014, the Department of Pediatrics started the Pediatric Integrative Health and Wellbeing Program with support from the chair. PA and TCM are major constituent services of this program. Several key pieces were already in place. The Center for Spirituality and Healing on campus set the tone for acceptance of integrative health practice for many years with academic offerings ranging from certificate programs to advanced degrees to education for the lay public. Child and Family Life Specialists, music therapists, and other professionals had a network of supportive and collaborative care in the hospital. There was a preexisting relationship with Northwestern Health Sciences University (NWHSU), which trains many of the acupuncture and TCM practitioners in the area. This infrastructure formed the base for the current PA service, which has medical acupuncture available 3 days a week for inpatients and 2 half-days in outpatient clinic. The teaching service from NWHSU, under the direct supervision of experienced TCM faculty, provides no-cost acupuncture to staff, families, and patients one day per week.

This has been so well received that it will be expanding to outpatient clinic in the next several months. Case discussion and joint quality improvement efforts have broadened the perspectives of all participants. As a result of the commitment to revision of credentialing procedures, ongoing PA education for staff and providers, and the development of templates for documentation in the electronic health record, PA providers have been invited to participate in the National

Table 1. The 5Cs of Developing a Pediatric Acupuncture Program

Create opportunities
Collaborate with partners
Cotreat with other professionals
Celebrate success
Be a Commercial for the program

Table 2. Characteristics of Pediatric Acupuncture Programs

Characteristic	*Primary Children's Hospital, University of Utah*	*University of Minnesota Masonic Children's Hospital*
Physician-provided medical acupoint services	+	+
Licensed acupuncturist–provided acupoint services	+	+
Associated with a school of Oriental Medicine	−	+
Component of a university-affiliated pediatric integrative medicine service	+	+
Inpatient billing	Subsidized by philanthropy	In development
Outpatient billing	+	+
Associated with a pediatric rehabilitation program	On campus	Off campus
Acupuncture for caregivers/staff	−	+
Administration and hiring procedures	Credentialing through medical staff office	Transitioning to human resources
QA/QI reviews; joint teaching and case presentation	+	+

QA, quality assurance; QI, quality improvement.

Certification Commission for Acupuncture and Oriental Medicine committee to help develop uniform standards and procedures for provision of acupuncture in AHCs in the United States.

Table 2 compares the two models.

THE BLUEPRINT

With incorporation of ideas from the standard business plan approach and taking into account useful lessons from the two models presented, a blueprint for PA in AHC emerges.

Core Principles

The following fundamental concepts form the cornerstone for PA delivery, either as a stand-alone program or as part of a larger pediatric integrative medicine and health program, and should be agreed upon by critical program decision-makers:

1. Children and families should have access to high-quality acupuncture (acupoint) therapy, delivered in a safe and comfortable setting, and performed by well-trained licensed providers, acting within their scope of practice.
2. All pediatric staff should have the opportunity to observe, experience, and be educated about acupuncture both as a patient therapeutic modality and for their own self-care.
3. PA providers should be incorporated into the patient care team and plan of treatment. This may necessitate identification and removal of barriers, such as access to the medical record, active participation in rounds and care conferences, and revision of hiring practices.

People

The individuals at the inception of the plan to bring PA to an academic center may include the dean of the Medical School, the department chair, and one or more division chiefs who understand the applications of PA in their subspecialties, high-level hospital administration, or high-level administration at an Accreditation Commission for Acupuncture and Oriental Medicine–accredited school of TCM. These individuals may be interested in propagating integrative health modalities, exploring research opportunities, increasing patient satisfaction, having a clinical internship to train future acupuncturists, or having a competitive edge in the expanding pediatric integrative market share. These are the parties who provide resources, help with financial planning, guide philanthropic contributions, and provide the initial financial commitment. A physician champion, who can bridge the gap between medical school and hospital administrations, has passion for PA, and is well-informed regarding acupuncture practice, is invaluable at this stage.

Opportunity

From a business perspective, this aspect concerns what will sell and to whom, whether it can grow, and what stands in the way of success. The consumers of the PA concept are referral centers, patients, families, staff, trainees, and the hospital itself. Reviewing and addressing obstacles on the ground level ensure a healthy product. Performing a needs assessment may identify an initial group on which to focus service provision.

Context

Creating an environment of safety and quality control and an objective view of the big picture minimizes threats from factors the program cannot control. Incorporating PA into

existing quality assurance/quality improvement programs versus developing new PA-specific procedures are both options.

Development and Milestones

Working from the business plan to identify short-term deliverables and financial milestones allows accurate information regarding return on investment, whether programmatic, hospital-based, or philanthropic.

Sustainability

Clarity of vision and goals allows for flexibility to support new growth and ideas. Sustainable financial models may include reimbursement through philanthropy, service line modifications, insurance models (flexible spending, bundling), self-pay, and community support. Public relations personnel from both staff and hospital can assist in the use of social media to help create a ''consumer audience'' supportive of PA based on their hospital experience. Transparency in billing practices and clear expectations regarding payment options make it easier for parents and families to plan for any financial impact.

DISCUSSION

The primary categories comprising the mission of most AHCs lie in the areas of service, education, and research.

Service

The most common reasons for inpatient consultation for PA in the two AHCs discussed here are pain, nausea, insomnia, and anxiety. For outpatients, chronic pain, headache, fatigue, and recovery from chemotherapy and bone marrow transplant predominate. These symptoms may overlap and are often important challenges for children and families. The ability to provide acupuncture service in many parts of the hospital and to different age groups demonstrates the broad applications of the modality, as well as the flexibility of the practitioners.

Education

Teaching patients, parents, and families ways of using acupoint therapy for themselves, both in the hospital and at home, can be successful and rewarding. Patients want to feel empowered, and parents and caregivers want to participate in their child's healing. Careful use of language, for example ''acupoint'' instead of ''acupuncture,'' and use of handouts to reinforce demonstration may be helpful. The techniques of self-moxa, acupressure, and Tui Na have proven most accessible for home use.

TCM students and Western medicine trainees seek to understand the applicability, mechanisms of action, and appropriate referral for pediatric acupuncture. These are therapies that families seek outside the hospital. Exploring acupuncture and related therapies in a controlled hospital setting where they are used in combination with allopathic methods is a wonderful opportunity.

Research

Adding to the evidence base in pediatric acupuncture is a worthy and attainable goal. Children do not necessarily respond to acupuncture in the same way as adults. The broad range of ages seen in a pediatric AHCs lends itself to research on various clinical outcome measures, a strategic goal for the National Center for Complementary and Integrative Health (formerly the National Center for Complementary and Alternative Medicine).[6] This partnership among traditional academic health providers, integrative health providers, medical acupuncturists, and TCM practitioners sets an example for the whole-person type of care that bridges academic centers to the larger community.

Sustainable financial plans, not only for PA but also for other integrative modalities, such as massage and related mind-body therapies, are a priority. The balance of relieving symptoms, empowering healing, showing efficacy, and meeting patient satisfaction, all while avoiding a ''have and have-not'' distinction based on an additional out-of-pocket patient payment, are ongoing challenges for the future of PA in AHCs.

The same topics of credentialing, consent, malpractice insurance, and ensuring consistency for acupuncture delivery that have been addressed within some adult AHCs[7–9] have relevance for pediatric academic centers looking to establish acupuncture programs. Clarifying roles, hiring procedures, and scope of practice for PA are key components of a blueprint for the future.

CONCLUSIONS

PA adds a richer quality to diagnosis and treatment for patients and providers. Until the broader view of what is ''therapeutic'' and ''healing'' is fully embraced at all levels in our academic centers, we have much work before us. For those willing to be part of the solution, PA can serve as a model in this journey of health and wellness for our children and families. The Hawaiian proverb ''Energy flows where intention (attention) goes,'' is as true for the individual acupuncture experience as it is for building the future of PA.

AUTHOR DISCLOSURE STATEMENT

No competing financial interests exist.

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