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## Acupuncture for Inpatients in General Hospitals – Special Features of this Service

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### 1. Introduction

Acupuncture and related techniques have increasingly been offered in conventional medical settings in Western societies. The number of patients seeking acupuncture therapy has increase [Chernyak et al 2005]. Acupuncture has become a thriving and notable part of ordinary healthcare systems. The contact of Acupuncture with the Western culture created the concept of Western acupuncture that is an adaptation of Chinese acupuncture using knowledge of anatomy, biochemistry, physiology, and pathology.

Acupuncture in hospital became an integrated complementary therapy. Its efficacy is scientifically based, it's a medical specialty and, recently, is considered for coverage by insurance companies of health. Acupuncture as treatment for inpatients has potential to support recovery, to abbreviate the period of hospitalization and avoid unnecessary surgeries [SantaAna 2001]. However, few general hospitals offer this service and the scientific literature that describes this activity is practically nonexistent.

### 2. Differences between outpatients and inpatients

We have observed that acupuncture given to inpatients at the hospital differs in several ways from that given to outpatients, due to fundamental difference between the two populations.

Compared to outpatients, inpatients tend to have more severe and acute conditions, a worse general state, stress by the environment, apprehension by the non usual procedures, and necessity for more immediate results of the therapys [Nasir 1998]. Analgesic therapies must produce short-term results, and there is reduced opportunity for developing a strong relationship between the patient and the practitioner. In spite of this, the literature about these differences is practically nonexistent.

The fundamental differences between these populations were already listed in our previous publication [Saad et al 2009]. Figure 1 summarizes the particularities of inpatients that impact in acupuncture treatment. It also brings suggestions of attitudes of the practitioner to contour these obstacles.

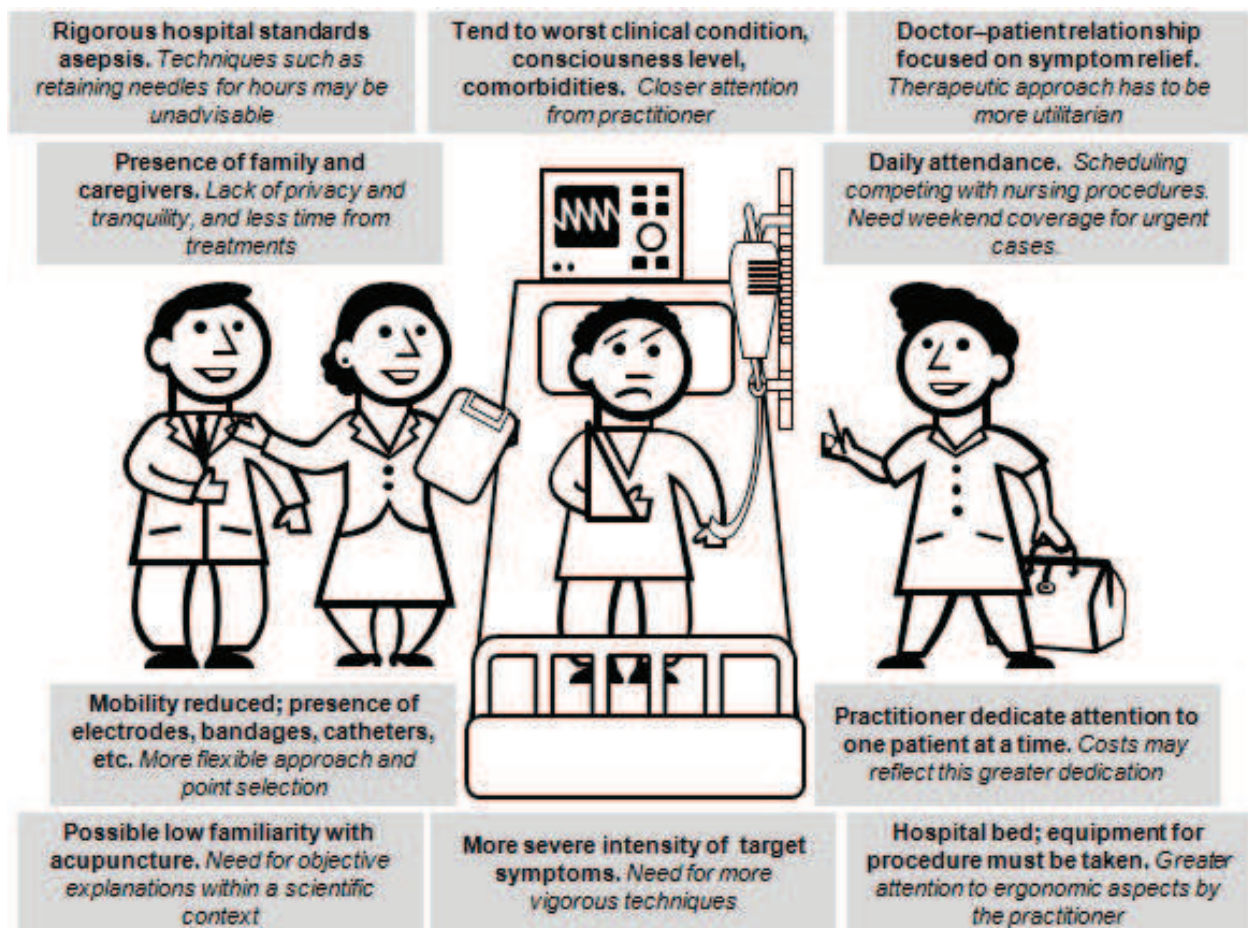


Fig. 1. Particularities of inpatients state that impact in acupuncture treatment (bold highlight) and suggestions of attitudes to contour these obstacles (italic highlight).

### 3. Potential areas for hospital acupuncture

**SURGERY:** in pre-surgery period, acupuncture activates endogenous opioids. During surgery, it promotes deep analgesic effect and sedation in painful procedures (hysteroscopy, etc.). In post-surgery period, it reduces the need for symptomatic medication (mainly for pain and nausea).

In the preoperative stage, acupuncture can be used to reduce postsurgery pain, as a complement to anaesthesia and to increase patients' comfort before and after surgery [Lin 2006]. A previous study [Wang et al 2003] showed that most surgical patients would accept complementary practices as part of their perioperative management. Among these practices, acupuncture was the only modality patients accepted to pay out of pocket if it were not covered by their insurance company.

**EMERGENCY DEPARTMENT (ED):** In this service, Acupuncture is a viable option for some clinical conditions. It doesn't cause drowsiness as do the opioids; the patient leaves the service awoken [Grout 2002]. So, it can be advantageous both for patients and for healthcare service.

A paper published by a Cuban hospital reported the results of using acupuncture associated with the ED during one year. In this retrospective study, a total of 2705 patients attended. A

reduction in the administration of 6192 injected and 850 oral medications was reported [Sanchez et al 2007].

A study in New Zealand [Yates et al 2009] showed that more than half of ED patients had used a complementary therapy in the past. The majority of the surveyed patients would follow the advice of their doctor if a complementary therapy was prescribed, suggesting that such an offer is practical in a hospital setting.

A report of acupuncture use for muscle-skeletal pain at the ED of Phoenix Memorial Hospital (Arizona, USA) registered a complete relief in 17% of patients, a partial relief in 74% and no relief in only 5% [Grout 2002]. This report also registered that no patient worsened with acupuncture, and the use of this therapy did not increase significantly the time of the patient at the ED.

**REHABILITATION:** A study with 1502 in-patients in a rehabilitation unit of a general hospital in Singapore showed that one of the factors associated to higher functional independence at delivery was the use of Acupuncture [Sien 2007].

In fact, the effectiveness of acupuncture as an analgesic reveals significant improvement. In this description of results of a Chinese hospital, the use of acupuncture in controlling resulted in a mean effectiveness rating of 74% [Yun 1999].

**ONCOLOGY:** patients with cancer have reported an increased use of complementary and alternative medicine (CAM). Many individuals with cancer have turned to acupuncture because their symptoms persisted with conventional treatments or as an alternative or complement to their ongoing treatments. Acupuncture is a well documented way to reduce many of the symptoms to the cancer or secondary to its treatment [Cohen et al 2005; Wesa et al 2008]. Antiemetic studies are the most prevalent and contain the most conclusive results. Several studies have found that acupuncture significantly reduces the number of emesis (vomiting) episodes for patients receiving chemotherapy [COHEN et al 2005].

Positive effects in the few studies about oncologic symptoms include: respiratory distress associated with end-stage cancer, xerostomy by salivary glands irradiation and fatigue post-chemotherapy. Besides, potential benefits documented anecdotally include: hot flushes due to hormonal imbalance, peripheral neuropathy, chemotherapy-induced leucopeny, anorexy and constipation. While studies on pain control vary due to the heterogeneity of pain, there are few studies investigating pain caused from cancer and the removal of cancerous tumors. Acupuncture can collaborate with the reduction of symptoms in patients under palliative care [Pan et al 2000]

**PEDIATRICS.** Acupuncture already showed promising results as potential treatment for handling diverse clinical conditions, specially those that course with pain. Acupuncture has been well studied in infants for the prevention and treatment of nausea and vomit by diverse etiologies (as chemotherapy or post-operative), showing to be a trustable and efficient approach [Jindal et al 2008]. Acupuncture can help to reduce the need for antiemetic drugs and episodes of vomit in pediatric oncology, besides improving the alert level during chemotherapy session.

The acceptability of the acupuncture by infants tends to be higher in patients with chronic illnesses, severe symptoms or in hospitalization by acute conditions [Jindal et al 2008]. In neonates hospitalized using opioids or benzodiazepines for pain or sedation, acupuncture can improve agitation, pain and symptoms of the retreat of opioids [Golianu et al 2007].

**OBSTETRICS AND MATERNITY.** Acupuncture can be used for back pain, pubalgia, ciatalgia, pelvic pain, without risk to the fetus. During the birth, acupuncture promotes

smaller pain, higher relaxation, higher seric endorfine and triptamine concentration [QU et al 2007]. Acupuncture during the birth reduced the need of painkillers and had high rate of satisfaction of patients [Neisheim et al 2003].

#### 4. Treats and opportunities

In order to consider adopting acupuncture, the hospital management directory must consider administrative factors such as [SantaAna 2001]: consumers' needs, scope of service, reimbursement, availability of an experienced team and mission of the institution.

Underutilization of acupuncture in hospital may be expected and is already described in North American university hospitals [Highfield et al 2003]. In a research among hospitals affiliated to the Harvard Medical School [Highfield et al al 2003], acupuncture was present in 8 in 13 institutions. It were available for inpatients only in 1 of them. The reference inside the own institution were reduced. Telephone operators has not information about which sector offered Acupuncture, or even if there was acupuncture in the hospital.

This publication [Highfield et al 2003] associated the underutilization to factors as absence of internal communication, complexity for reimbursement and conflicts of communication (language of the chinese traditional medicine), professional staff did not know that the service were offered; medical community divergencies about Acupuncture; the service resulted by the effort of a minority.

Questions about the competency to practice acupuncture must be established. This issue is discussed worldwide, and each country has its local legislations to assign who is allowed to perform acupuncture.

Medical Acupuncture is the treatment performed by a physician who obtains additional training and qualifications in acupuncture. By similarity, the concept extends to other licensed health care professionals such as dentists, physiotherapists, chiropractors, osteopaths, and even veterinarians who integrate acupuncture in their practices within the scope of their professional licenses.

Indeed, acupuncture should only be offered when fully incorporated into orthodox healthcare and used as a therapeutic tool for the treatment of some defined clinical conditions. A professional with formal biological science training is the ideal provider of acupuncture because of the consistent training curriculum in most countries. When this Professional offers acupuncture:

- An assessment of risks and benefits can be made based on knowledge of comorbidities of the patient treated.
- An orthodox clinical diagnosis is considered, and the practitioner makes sure that the causes, not only the symptoms, are being treated.
- Fundamental areas related to the treatment process, such as clinical psychology and bioethics, are observed.
- Responsibilities are monitored not only by civil legislation, but also by national professional councils.
- Communication with other patients' therapists is easier, by conversion of TCM terms to a physiologic language.
- He/she may provide acupuncture alone, conventional treatment of his/her competence, or a combination of both.
- The concept of evidence-based medicine, with respect to efficacy, safety, and cost-effectiveness, is better understood.

- Coverage and reimbursement policies for treatment can be considered by insurance companies.

A safe, ethical, efficacious treatment with acupuncture can only be offered when all these conditions are present [Saad 2009]:

- Executed by a professional graduated in biological sciences
- Respecting the scope of the provider license practice
- Fully incorporated into an orthodox healthcare plan
- Used for the treatment of well-defined clinical conditions.

## 5. Experience of the Hospital Israelita Albert Einstein

We present the experience of the Service of Acupuncture of the *Hospital Israelita Albert Einstein* (HIAE), that offers acupuncture to inpatients since October 2005. Our institution is a private tertiary general, with 489 inpatient beds located in S. Paulo (Brazil). It is one of the most respected healthcare organisations in Latin America and has been accredited by Joint Commission International since 1999.

The Service of Acupuncture of the HIAE It is associated to the Multiprofessional Service of Rehabilitation. Currently, the team is composed of 3 hired physicians, all board-certified by the Brazilian Medical Association, because, in Brazil, acupuncture is a medical specialty. Among these professionals, two act with outpatients, in the Rehabilitation Center, and one offers the therapy to the inpatients, in their beds.

Acupuncture is performed only by physicians, and is available for any patient who accepts this treatment. For outpatients, it is offered two or three times per week. For inpatients, it is performed, in most cases, on a daily basis.

In the HIAE, acupuncture is offered as a therapy, and not as a clinic (because Chinese Medicine itself is not offered). It is always combined with the conventional treatment, intended to support it. It follows the concept of Medical Acupuncture [White et al 2009]: na adaptation of the millenary Chinese practice that uses modern knowledge of anatomy, physiology, pathology and evidence-medicine, incorporated to the proper western medicine, and not as an alternative medical system.

Once routine treatment is in progress, medical acupuncture, if appropriate, can be used as a complementary modality. We have observed a good level of adherence to therapy from patients and a relevant analgesic effect in association with other medication and physical therapies. Since our hospital advocates a short length of stay and discharge immediately after clinical stabilisation, inpatients referred to acupuncture actually receive an average of four sessions until their discharge.

The acupuncture points are chosen according to the present needs, focusing the symptoms. All the sessions are carried out by the physician with over 15 years of professional experience. The efficacy of the treatment is evaluated considering the control of the symptoms and/or the reduction of the rescue medicines need. For this purpose, it can be used the statement of the patient, of companions, of the professional staff (physician, therapists, nurses).

The treatment is completed as planned only in about 45% of the cases, because of the dynamic of an hospital routine (appearance of clinical intercourses, hospitalar discharge when patient becomes stabilized).

In general, the objectives are entirely reached in about 67% of cases when we consider only the cases where the treatment was completed as planned. Even when treatment were not completed (both because clinical interoccurrence or either by prescription suspension), some benefits of acupuncture can be noted.

Figure 2 shows a gross average of outcomes from acupuncture for inpatients at our service, based on data observation experience (unpublished data)

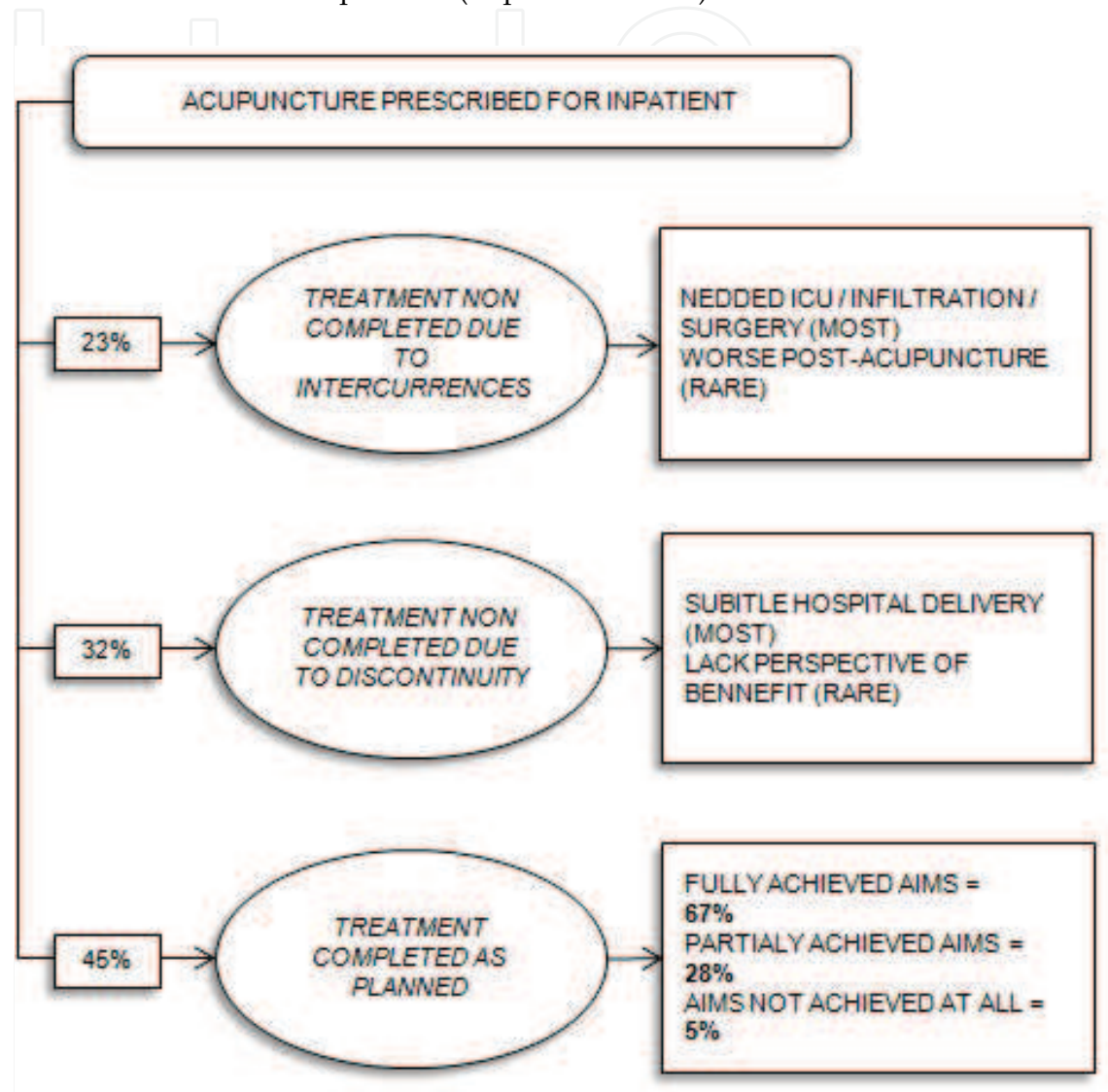


Fig. 2. Gross average of outcomes from acupuncture for inpatients at HIAE (ICU = Intensive Care Unit)

Acupuncture in our hospital environment brought diverse advantages recognized by the clinical staff and by the institution. In the HIAE, Acupuncture conquered respect and there are still fields for growing.

## 6. Conclusion

Acupuncture as treatment for inpatients in general hospitals has potential to support recovery, abbreviate the period of hospitalization and avoid unnecessary surgeries.

Acupuncture given to inpatients differs in several ways from that given to outpatients, due to fundamental difference between the two populations.

The dynamic of acupuncture offered to inpatients is very different of that offered for outpatients, resulting in high rate of discontinuity by intercourses. Even so, many patients tend to be benefited by this treatment.

Introduction of acupuncture for inpatients in general hospitals must pay attention to the particularities of inpatients that impact in acupuncture treatment, the potential areas for hospitalar uses of acupuncture the predictable treats when offering this service. We hope the above description of the experience of our service could encourage other hospitals to develop an acupuncture service.

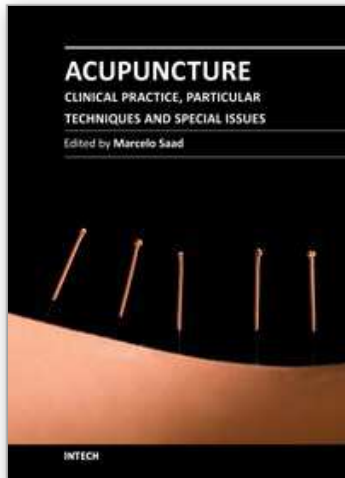
## 7. References

- Chernyak GV, Sessler DI. Perioperative Acupuncture and Related Techniques. *Anesthesiology* 2005;102:1031-49.
- Cohen AJ, Menter A, Hale L. Acupuncture: Role in Comprehensive Cancer Care – A Primer for the Oncologist and Review of the Literature. *Integr Cancer Ther.* 2005 Jun;4(2):131-43
- Golianu B, Krane E, Seybold J, Almgren C, Anand KJ. Non-pharmacological techniques for pain management in neonates. *Semin Perinatol.* 2007; 31 (5): 318-22
- Grout M. Medical Acupuncture In The Emergency Department. *Medical Acupuncture* 2002;14(1):39-40
- Highfield ES, Kaptchuk TJ, Ott MJ, et al al. Availability of acupuncture in the hospitals of a major academic medical center: a pilot study. *Complement Ther Med* 2003;11:177-83
- Jindal V, Ge A, Mansky PJ. Safety and Efficacy of Acupuncture in Children A Review of the Evidence. *J Pediatr Hematol Oncol.* 2008; 30(6): 431-442.
- Lin Y-C. Perioperative usage of acupuncture. *Pediatric Anesthesia* 2006;16:231-235
- Nasir L. Acupuncture in a University Hospital - Implications for an Inpatient Consulting Service. *Arch Fam Med.* 1998;7(6):593-596
- Nesheim BI, Kinge R, Berg B, Alfredsson B, Allgot E, Hove G, Johnsen W, Jorsett I, Skei S, Solberg S.. Acupuncture during labor can reduce the use of meperidine: a controlled clinical study. *Clin J Pain.* 2003;19(3):187-91
- Pan CX, Morrison RS, Ness J, Fugh-Berman A, Leipzig RM. Complementary and alternative medicine in the management of pain, dyspnea, and nausea and vomiting near the end of life. A systematic review. *J Pain Symptom Manage.* 2000 Nov;20(5):374-87.
- Qu FJ, Zhou J. Electro-Acupuncture in Relieving Labor Pain. *Evid Based Complement Alternat Med.* 2007 March; 4(1): 125-130.
- Saad M, Jorge LL, Vieira MSR, de Medeiros R. Integration of acupuncture for outpatients and inpatients in a general hospital in Brazil. *Acupunct Med* 2009;27(4):178-179
- Saad M. Why Medical Acupuncture? [Letter] *Medical Acupuncture* 2009;21(4):291
- Sanchez HAF, Robaina HF, Camejo SYG. Ventajas de la aplicació'n de la acupuntura en el servicio de urgencia. *Rev Cubana Invest Biomed* 2007;26:1-5
- Santa Ana CF. The adoption of complementary and alternative medicine by hospitals: A framework for decision making. *J Healthc Manage* 2001;46:250-60.



- Sien Ng Y. Results From a Prospective Acute Inpatient Rehabilitation Database: Clinical Characteristics and Functional Outcomes using the Functional Independence Measure. *Ann Acad Med Singapore* 2007;36:3-10
- Wang SM, Caldwell-Andrews AA, Kain ZN. The use of complementary and alternative medicines by surgical patients: a follow-up survey study. *Anesth Analg* 2003;97:1010-15
- Wesa K, Gubili J, Cassileth B. Integrative Oncology - Complementary Therapies for Cancer Survivors. *Hematology-Oncology Clinics of North America* 2008;22(2):343-353
- White A, Editorial Board of Acupuncture in Medicine. Western medical acupuncture – a definition. *Acupunct Med* 2009;27:33-5.
- Yates KM, Armour MJ, Pena A. Complementary therapy use amongst Emergency Medicine patients. *Complement Ther Med* 2009;17:224-8
- Yun Ip VH: The Use of Acupuncture for Pain Relief in a Chinese Hospital Clinic. *Acupuncture in Medicine*. 1999;17(2):101-09

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Acupuncture is growing in popularity world-wide. Acupuncture and related techniques are useful tools for treating a spectrum of diseases. However, there are still many areas of controversy connected to it due to the fact that mechanisms of action of acupuncture are not entirely clear. Another debilitating element is the absence of a convincing model of sham acupuncture for a control group in clinical trials. Therefore, there are still inappropriate prejudice and unfamiliarity regarding acupuncture. I hope this book can contribute to guide the advance of this ancient medical art. The reader will here find texts wrote by authors from different parts of the world. The chapters cover strategic areas to collaborate with the consolidation of the knowledge in acupuncture. The main objective is to share elements to make acupuncture more and better offered at health systems worldwide.

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