TECHNICAL SPECIFICATION

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Health informatics — Categorial structures for representation of acupuncture —

Part 2: Needling

Informatique de santé — Structures catégoriques pour la représentation de l'acupuncture —
Partie 2: Puncture

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Foreword

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The committee responsible for this document is ISO/TC 215, *Health informatics*.

Introduction

In this Technical Specification, acupuncture is a branch of traditional Chinese medicine which mainly involves the theory of meridians, location, usage, indications and combinations of acupoints, needling manipulations and application of ignited moxa in the treatment of disease through regulation of qi, blood and visceral functions.

Acupuncture therapy is widely practiced as a part of complementary and alternative medicine throughout East Asia and also in western countries.

A guideline for reporting acupuncture interventions in clinical trials is already available, and a large number of clinical trials have been conducted to assess efficacy and efficiency of acupuncture therapy. However, the descriptions of acupuncture interventions in clinical reports tend to be insufficient for interpretation of heterogeneity among trials, often causing difficulties for data synthesis in meta-analyses. This arises for three reasons: firstly because an appropriate information structure of acupuncture needling is not used, secondly because certain concepts within traditional medicine practice in the western pacific-rim region originated in China and are frequently not sufficiently considered, and thirdly because semantic associations between concepts of acupuncture needling need to be explicitly identified.

This Technical Specification defines the categorial structures within the subject field of acupuncture needling in order to address these problems.

Health informatics — Categorial structures for representation of acupuncture —

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1 Scope

The purpose of this Technical Specification is to specify categorial structures within the subject field of acupuncture by defining a set of domain constraints for use within terminological resources.

This Technical Specification describes a concept system detailing domain constraints of sanctioned characteristics, each composed of a semantic link and an applicable characterizing category.

The potential benefits of this Technical Specification include:

a) support for developers of new terminology systems concerning acupuncture needling;

b) support for developers of new detailed content areas of existing terminology systems concerning acupuncture needling procedures to ensure accuracy, repeatability and comparability;

c) facilitating the representation of acupuncture needling procedures using a standard core model in a manner suitable for computer processing;

d) providing a conceptual framework for the generation of compositional concept representation of acupuncture needling;

e) facilitating the mapping and improved semantic correspondence between different terminologies by proposing a core specification for acupuncture needling;

f) providing a core model to describe the structure of acupuncture, and facilitate improved semantic correspondence with information models;

g) providing a tool for acupuncture text mining, database construction, ancient documents processing and wide area of acupuncture information collection and processing;

h) providing a new method for researchers to conduct relevant research, and ideas for the development of acupuncture disciplines.

Target groups include:

— stakeholders such as companies that offer systems that incorporate Electronic Categorial Structures, by helping building knowledge databases or automatic processing of medical literature, and

— doctors, who can be better assisted with knowledge and documentation of needling procedures.

This Technical Specification can also be used in clinical decision support and to help in data mining for researchers.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 17115, *Health informatics — Vocabulary for terminological systems*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
concept
unit of knowledge created by a unique combination of characteristics

Note 1 to entry: A concept can have one or more names. It can be represented using one or more terms, pictures, icons or sounds.

3.2
categorial structure
minimal set of domain constraints for representing concept systems in a subject field

3.3
category
division of sets of entities regarded as having particular shared characteristics (3.4)

EXAMPLE Oral route, subcutaneous route and all other routes share characteristics particular to the category route.

Note 1 to entry: Categories may be more or less general. Where one category is subsumed by another, the is a relation is asserted to obtain a hierarchy between the more specific or subsumed category and the more general or subsuming category. For example, parenteral route is more general than intravenous route.

3.4
characteristic
abstraction of a property of an entity or of a set of entities

EXAMPLE Fever is a characteristic symptom of flu.

Note 1 to entry: Characteristics are used for describing concepts (3.1) and for differentiating categories (3.3).

3.5
semantic link
formal representation of a directed associative relation or partitive relation between two concepts

EXAMPLE is Cause Of (with inverse has Cause); has Location (with inverse is Location Of).

Note 1 to entry: This includes all relations except the generic relation.

Note 2 to entry: A semantic link always has an inverse, i.e. another semantic link with the opposite direction.

[SOURCE: WHO International Standard Terminologies on Traditional Medicine in the Western Pacific Region —WHO Western Pacific Region, 2007]

4 List of authorized representation of semantic links for acupuncture needling

4.1 Measures

Ascertains or marks the dimensions, quantity, degree, or capacity of.[7]

semantic link between Needle Type and Needle Characteristic by which NeedleType is measured.

semantic link between Additional Stimulation Method and Stimulation Dose Of Additional Stimulation Method by which Additional Stimulation Method is measured.

NOTE Every acupuncture needling method terminological phrase complying with this Technical Specification has this **semantic link**.

4.2 Uses

Employs in the carrying out of some activity. This includes applies, utilizes, employs, and avails.[7]

semantic link between Needle Type and Needle Grasping by which Needle Type is used.

NOTE Every acupuncture needling method terminological phrase complying with this Technical Specification has this **semantic link**.

4.3 Causes

Brings about a condition or an effect. Implied here is that an agent, such as, for example, a pharmacologic substance or an organism, has brought about the effect. This includes induces, effects, evokes, and aetiology.[7]

semantic link between Abnormal Situation and Insertion Technique by which Abnormal Situation is caused.

semantic link between Abnormal Situation and Stimulation Technique with Manipulation by which Abnormal Situation is caused.

semantic link between Abnormal Situation and Supplementation and Draining Method by which Abnormal Situation is caused.

NOTE Every acupuncture needling method terminological phrase complying with this Technical Specification has this **semantic link**.

4.4 Result_of

The condition, product, or state occurring as a consequence, effect, or conclusion of an activity or process. This includes product of, effect of, sequel of, outcome of, culmination of, and completion of.[7]

semantic link between Acupuncture Effects and Additional Stimulation Method which Acupuncture Effects is result_of.

semantic link between Acupuncture Effects and Supplementation and Draining Method which Acupuncture Effects is result_of.

semantic link between Acupuncture Effects and Sham Acupuncture which Acupuncture Effects is result_of.

NOTE Every acupuncture needling method terminological phrase complying with this Technical Specification has this **semantic link**.

4.5 Evaluation_of

Judgment of the value or degree of some attribute or process.[7]