PD ISO/TS 16843-1:2016

BSI Standards Publication

Health informatics — Categorial structures for representation of acupuncture

Part 1: Acupuncture points

Documents
Document Sharing Hub

Full document details: PD ISO/TS 16843-1:2016

National foreword

This Published Document is the UK implementation of ISO/TS 16843-1:2016.

The UK participation in its preparation was entrusted to Technical Committee IST/35, Health informatics.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2016.
Published by BSI Standards Limited 2016

ISBN 978 0 580 91316 7
ICS 35.240.80

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 December 2016.

Amendments/corrigenda issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: PD ISO/TS 16843-1:2016

TECHNICAL SPECIFICATION

ISO/TS 16843-1

First edition
2016-11-15

Health informatics — Categorial structures for representation of acupuncture —

Part 1: Acupuncture points

Informatique de santé — Structures catégoriques pour la représentation de l'acupuncture —

Partie 1: Points d'acupuncture

Reference number
ISO/TS 16843-1:2016(E)

AVA Documents
Document Sharing Hub
© ISO 2016

COPYRIGHT PROTECTED DOCUMENT

© ISO 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

© ISO 2016 – All rights reserved

Documents
Document Sharing Hub

Full document details: PD ISO/TS 16843-1:2016

Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **2**
3 Terms and definitions **2**
4 Categorial structure **8**
4.1 Outline 8
4.2 Characterizing categories 9
4.2.1 Point location 9
4.2.2 Clinical findings 10
4.2.3 Efficacy 10
4.3 Semantic links 10
4.3.1 identifies 10
4.3.2 locates 11
4.3.3 is_located_at 11
4.3.4 is_used_for_clinical_outcome_of 11
4.4 Additional links 11
5 Conformance **11**
5.1 Conformance principles 11
5.2 Conformity to this document 12
5.3 Supplemental recommendation 12
Annex A (normative) **Selected terms and definitions from ISO 17115:2007** **13**
Annex B (normative) **Selected terms and definitions from ISO 1087-1:2000** **19**
Annex C (normative) **Selected terms and definitions from ISO 16278:2016** **26**
Annex D (informative) **Sample diagrams of life force flow channel and acupuncture points** **30**
Bibliography **32**

© ISO 2016 – All rights reserved

Documents
Document Sharing Hub
Full document details: PD ISO/TS 16843-1:2016

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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

A list of all parts in the ISO 16843 series can be found on the ISO website.

© ISO 2016 – All rights reserved
Documents
Document Sharing Hub
Full document details: PD ISO/TS 16843-1:2016

Introduction

Acupuncture therapy originated from scrubbing or pressing sensitive areas on the body surface. Wood stick or stone was primarily used as a stimulation tool, then, in the course of improvement, needling was gradually developed. Today, those points or zones are used not only in acupuncture practices but also in other kinds of intervention such as acupressure, moxibustion, cupping, or classic massage. New acupuncture points, such as auricular points and oral acupuncture points, have also been discovered in diverse practice of acupuncture.

The practice of traditional medicine is still the subject of scientific criticism. However, it is well known that there is a certain amount of contemporary scientific papers or reports on the interventions using acupuncture points showing considerable therapeutic effects.

Thus in the last two decades, many clinical trials have been conducted to prove efficacy,[10][11] and a large number of research projects on the mechanism of acupuncture have been undertaken using modern scientific methodology. Among various medical domains and countries/regions, there can be found a lot of synonyms and polysemes[3][4][5] impeding meta-analysis, accurate information exchange, data processing and knowledge acquisition related to the principles and practice of acupuncture.

In order to solve these problems, it is essential to prepare definite concept system[2][3][4][5] for the representation of acupuncture points, with concept harmonization.[2] The resultant categorial structure will support the development of reliable terminological systems, information models and/or mapping among terminological resources.

It is notable that even in the countries with high GDP, only a small portion of the population can receive modern medicine service at will. Also, the WHO Western Pacific Regional Office reports that a high percentage of the population uses traditional medicine in the nations within the region.[23] These are the reasons why the WHO is trying to explore ways of collecting statistical data not only depending on modern medicine concepts but also the concepts of traditional medicines.

As expected, the accuracy of statistics is dependent upon consistent and agreed terms and definitions harmonized with the backbone of a concept system.[1][2][3][4][5]

For these two reasons, there is a strong need for common conceptual model regarding acupuncture points.

There are many different medical domains such as modern medicine, traditional Chinese medicine, Ayurveda and Thai medicine, and their concept systems also vary. If the concepts of each medical domain are represented in different conceptual models, it will be difficult to find the common elements among them. It means **mapping** or **semantic correspondence** among terminological resources will be costly and potentially error prone. In turn, such situation causes obstruction of knowledge management and acquisition.

It has been estimated that between 0,5 and 45 million concepts are needed to be adequately described[5] in acupuncture. There is no intention to specify conceptual models for each as international standards. Instead, the concepts with similarities have been harmonized at a high level in this document.[1][2][3][4][5]

With a categorial structure, the minimum elements for common descriptiveness, exchangeability, accountability, reproducibility, and verification necessary for representation of acupuncture points of various medical domains are defined.

Any specific characteristics needed in a specific medical domain should be specified in the projects of other technical committees and domestic or international organizations, along with their specific values or code systems.

© ISO 2016 – All rights reserved

Documents
Document Sharing Hub
Full document details: PD ISO/TS 16843-1:2016

Health informatics — Categorial structures for representation of acupuncture —

Part 1: Acupuncture points

1 Scope

This document specifies the **categorial structure** within the **subject field** of acupuncture by defining a set of **domain constraints** of **sanctioned characteristics** each composed of a **semantic link** and an applicable **characterizing category** in order to represent the **concept** of acupuncture point.

This document describes **sanctioned characteristics** with **semantic links** and **characterizing categories** for representation of acupuncture points. **Concepts** of acupuncture points are used in clinical practices for applying stimulation such as insertion, pricking, scratching, scrubbing, massaging or pressing with various kinds of needles, moxibustion, acupressure and cupping in various medical domains.

The potential uses for this conceptual framework are the following:

— provide a conceptual framework for the generation of **compositional concept representation** of acupuncture point;

— provide a core model to describe the structure of acupuncture point, and facilitate improved **semantic correspondence** with information models;

— facilitate the **mapping** and **semantic correspondence** between different terminological resources by proposing with a core specification of acupuncture point;

— support developers of new terminological systems concerning acupuncture point;

— support developers of new detailed content areas of existing terminological resources concerning acupuncture point to ensure conformance;

— facilitate the representation of acupuncture point in a manner suitable for computer processing;

— provide the monitoring system for adverse events and adverse reactions;

— provide the characterization of clinical research related to acupuncture point.

The target groups for this document are the following:

— developers of terminology systems acupuncture point;

— developers of information systems that require a structured framework of concepts to facilitate implementation and communication;

— informaticians, analysts and epidemiologists who require common models of knowledge to facilitate analysis of current and legacy data from one or more information systems;

— clinicians and coders to provide greater consistency in structure and organization when entering and retrieving data using one or more terminological resources;

— managers and administrative personnel in providing a benchmark by which to judge terminology and information system solutions: as to whether the potential options will deliver compatibility with legacy data and future proofing to emerging terminology products.

© ISO 2016 – All rights reserved

Documents
Document Sharing Hub

Full document details: PD ISO/TS 16843-1:2016

Topics considered outside the scope of this document include an exhaustive list of all possible **characterizing concepts** that could be used to describe acupuncture points.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

NOTE Additional background terms and definitions from ISO 17115, ISO 1087-1 and ISO 16278 are provided in Annex A, Annex B and Annex C, respectively.

3.1
stimulus
stimuli
something that can elicit or evoke a physiological and/or psychological response(s) in a living thing

EXAMPLE 1 Mechanical, thermal and optical stimuli such as stroke, scrub, press, prick, pinch, strike; warm, heat, cool, ice, flushing.

EXAMPLE 2 Smell, taste, sound, light, vestibular sense, and somatic sense (touch, pressure, pain, and temperature).

Note 1 to entry: Included under the threshold to be recognized.

Note 2 to entry: Can be “noxious” or “invasive”.

3.2
stimulation
application of a *stimulus/stimuli* (3.1) to a targeted *acupuncture point* (3.7) with the intention of medical diagnosis or care

3.3
stimulating tool
medical device or part(s) of the human body of a practitioner used to apply *stimulus* (3.1)

Note 1 to entry: Usually determines modality of sensation.

Note 2 to entry: Some *values* (3.30) for a stimulating tool are described, but not limited to, References [21] to [23].

3.4
acupuncture
acupuncture therapy
remedial procedure of somatic stimulation to *acupuncture point* (3.7)

EXAMPLE 1 A round-pointed needle is used for massaging;a spoon needle is used for pressing.

EXAMPLE 2 Pricking, scratching, scrubbing/massaging, or pressing on a particular area of the body surface with a needle is also called acupuncture.

© ISO 2016 – All rights reserved
Documents
Document Sharing Hub
Full document details: PD ISO/TS 16843-1:2016

3.5
acupuncture needle
needle used for *acupuncture* (3.4); as *stimulating tool* (3.3)

EXAMPLE The nine types of classical needles (filiform needle, shear needle, round-pointed needle, spoon needle, lance needle, round-sharp needle, stiletto needle, long needle and big needle), stone needle, round-pointed wood stick.

3.6
anatomical zone
anatomical entity characterized by specific features and/or uses

EXAMPLE 1 Location of the *Hégǔ* (合谷) is the anatomical zone "on the dorsum of the hand, between the first and second metacarpal bones, in the middle of the second metacarpal bone on the radial side" and is palpated with a *detecting technique* (3.12) with the findings such as concavity, tenderness and so on.

EXAMPLE 2 In Nogier's Auricular acupuncture treatment, location of the ovary and testicular points is "slightly above the supratragic notch, on the inside of the ascending helix."[15]

EXAMPLE 3 Location of the Y-point of the large intestine is the anatomical zone "in the angle formed by the temple hairline and the upper edge of the zygomatic arch."[15]

EXAMPLE 4 When an anatomical zone of tenderness is found on the back through palpitating with *detecting technique* (3.12), if it is not a *named point* (3.8), it is an *anonymous point* (3.9).

Note 1 to entry: Not only sensory organ but also other material physical anatomical entity can be an anatomical zone.

Note 2 to entry: This term is only applied to traditional medicine.

3.7
acupuncture point
anatomical zone (3.6) to which *stimulus* (3.1) is applied with the intention to induce reaction(s) for diagnosis or therapy

EXAMPLE When the location of *Hégǔ* (合谷) is palpated with the finding of concavity, heat stimuli is applied to the surface of the point as acupuncture point.

Note 1 to entry: The acupuncture point is often restricted to be applied only with appropriate *stimulation* (3.2) because of its characteristics.

[SOURCE: ISO 16278:2016]

3.8
named point
named acupuncture point
acupuncture point (3.7) that has a designation or *designation to point* (3.19)

3.9
anonymous point
anonymous acupuncture point
acupuncture point (3.7) that has no designation for it

3.10
anatomical landmark
anatomical landmark for acupuncture
reference location on the body surface used to identify an *acupuncture point* (3.7)

EXAMPLE 1 In auricular acupuncture treatment, anthelix, tragus are often used as anatomical landmark.

EXAMPLE 2 In oral acupuncture treatment, each tooth is used as anatomical landmark.

© ISO 2016 – All rights reserved

Documents
Document Sharing Hub
Full document details: PD ISO/TS 16843-1:2016

3.11
measuring system
measuring system for acupuncture
traditional measuring method for somatometry in *acupuncture* (3.4)

EXAMPLE 1 In traditional "Chinese medicine", proportional bone (skeletal) cun, finger cun, and finger breadth.

EXAMPLE 2 In Ayurveda, anguli, or anguli parimana.

3.12
detecting technique
anatomical zone detecting technique
the technique to find an *anatomical zone* (3.6) point which is appropriate for applying *stimulation* (3.2)

EXAMPLE Inspection, palpation, and electric conductivity test.

3.13
related anatomy
anatomical structure near an *acupuncture point* (3.7)

Note 1 to entry: Related anatomy includes both *regional anatomy* (3.14) and *layered anatomy* (3.15).

3.14
regional anatomy
three-dimensional shape of an *anatomical structure* near an *acupuncture point* (3.7)

3.15
layered anatomy
anatomical structure from a certain body surface to stimulation site, with the *value* (3.30) of *spatial* dimension set to "0"

3.16
stereotactic restriction
specification of a body position and/or posture in order to permit an appropriate *approach* (3.17) for keeping away non-targeted material physical anatomical entities

3.17
approach
approach to acupuncture site
appropriate track of *stimulation* (3.2) to reach a stimulation site with *stereotactic restriction* (3.16)

Note 1 to entry: Approach is determined by *stereotactic restriction* (3.16), as well as by the direction and the lean of the *stimulating tool* (3.3) and by the depth of *stimulation* (3.2) for reaching a stimulation site.

3.18
medical domain
specific concept of a generic concept of various medical systems

Note 1 to entry: Modern medicine or biomedicine is also a type of medical domain.

EXAMPLE Modern medicine, Ayurveda, traditional African medicine, traditional Australian (Aboriginal), traditional Canadian, Chinese or traditional Chinese (TCM), traditional Japanese (Kampo), traditional Korean, Mongolian, New Zealand (Maori), Thailand, Tibetan, or Vietnamese, and so on.

3.19
designation of point
term and/or code that denote(s) acupuncture point concept

EXAMPLE 1 The deepest point in the concave of a foot sole is designated by both the term *Yǒngquán* (湧泉) and the code "KI 1" in a *terminological resource* (3.33) of the World Health Organization (WHO).[6] On the other hand, in marma therapy of Ayurveda, the same point/area is designated by the term *Talahridaya* (of foot).[22]

© ISO 2016 – All rights reserved
Documents
Document Sharing Hub
Full document details: PD ISO/TS 16843-1:2016

EXAMPLE 2 In Yamamoto New Scalp Acupuncture, the point ventral to the mastoid apex immediately behind the earlobe is designated by the code "G1".[15][24]

EXAMPLE 3 In Ayurveda, the centre of the palm of the hands is designated by the term *Talahridaya* (of hand).[22]

EXAMPLE 4 In Nogier's Auricular acupuncture treatment system, some of the points are named after corresponding organ such as ACTH.[15]

EXAMPLE 5 The point of *Shuǐgōu* (水溝) has an alternative location; different locations are used in Japan and China.

Note 1 to entry: Some points only have either term or code.

Note 2 to entry: In clinical practices, anonymous areas are often used for acupuncture therapy called *Ashi point*<TCM>(阿是穴).

Note 3 to entry: In order to avoid confusion arising from polysemy, the class of designation of point include *medical domain* (3.18) as attribute.

3.20
applicable therapy
applicable therapies for acupuncture points
therapies or types of intervention suitable for application to an *acupuncture point* (3.7)

EXAMPLE 1 Needling, moxibustion, acupressure, oil massage, aromatherapy; asana, meditation.

EXAMPLE 2 *Tàiyuān* (太淵) is applied with its applicable therapy of needling, moxibustion, and acupressure. *Wàihuáijiān* (外踝尖) is usually inhibited from insertion of needle.

Note 1 to entry: Applicable therapy or intervention varies according to *medical domains* (3.18) because of their different theories.

3.21
biomedical specifics
observed biomedical findings and/or driven response by a given *stimulation* (3.2) to a certain *acupuncture point* (3.7)

EXAMPLE Change in blood pressure, brain wave.

3.22
life force specifics
characteristics and features of a *life force* (3.23) at a certain point location

EXAMPLE Life force specifics are described as life force flow, its *channel* (3.24), connection to *life force flow* (3.25), *connection via life force flow* (3.26), *feature in force flow* (3.27) and *viscus and bowel* (3.28).

3.23
life force
basic element that constitutes the universe and produces everything and sustains life activities

Note 1 to entry: One of the fundamental beliefs of traditional philosophies, life force is the basic element and life-sustaining force. The movements or changes or transformations of life force produces everything including the human body, and sustains life activity.

Note 2 to entry: Life force tends to refer to multiple aspects, the element itself, nutritive substances and its functional activities, organs and their functions and activities. In addition, life force can refer to one of its subcategories. In other words, the term that represents life force tends to have polysemes.

EXAMPLE 1 In ancient Chinese medicine, *Qi*: Qi, *Blood*<TCM>, *Fluid*<TCM>.

EXAMPLE 2 In Ayurveda, *Prana*; *Vata*, *Pitta*, *Kapha*.

EXAMPLE 3 In traditional Thai medicine, *Lhom*, or *Lhom Pran*.

EXAMPLE 4 In traditional Tibetan medicine, *rLung*.

© ISO 2016 – All rights reserved

Documents
Document Sharing Hub
Full document details: PD ISO/TS 16843-1:2016

Note 3 to entry: In ancient Chinese medicine, *Qi*: *Qi*, *Blood*<TCM>, *Fluid*<TCM>. In this *context* (3.29), both of them are not blood or water in modern medicine/science meaning, rather, they are produced or transformed from *Qi* and have each ideological function. The same can be said in other traditional medicines, in greater or lesser.

3.24
life force flow channel
channel
ideological channels within/around the human body in which the *life force* (3.23) travels

Note 1 to entry: One of the fundamental beliefs of traditional philosophies is that these ideological channels in which a *life force* (3.23) travels within/around the human body forming networks together and can also connect *viscera and bowels* (3.28) in the *context* (3.29) of traditional medicines based on holism.

EXAMPLE 1 In ancient Chinese medicine, *Meridians*<TCM>, *Collaterals*<TCM>, *Vessels*<TCM>, *Divergences*<TCM>. *Cutaneous Regions*<TCM> and *Sinews*<TCM> are occasionally associated with each other, but it is regarded that *Sinews*<TCM> are not connected to *Viscera*<TCM> and *Bowels*<TCM>.

EXAMPLE 2 In Ayurveda, *Nadi*, *Srotas*.

EXAMPLE 3 In traditional Tibetan medicine, *Tsa*.

EXAMPLE 4 In traditional Thai medicine, *Sen*, or *Sen sib* (*Sen sip*).

Note 2 to entry: The terms listed in EXAMPLE 1 designate superordinate concept according to channel, so, there are terms for subordinate concepts, e.g. *Lung Meridian* (*Shǒu Tàiyīn Fèijīng*; 手 太陰 肺経), *Conception Vessel* (*Rènmài*; 任脈) and so on.

Note 3 to entry: Life force flow can be regarded to have normal flow direction along a channel.

3.25
connection to life force flow
ideological connection between an *acupuncture point* (3.7) and the corresponding *life force flow channels* (3.24)

Note 1 to entry: One of the fundamental beliefs of traditional philosophies in the *context* (3.29) of traditional medicines based on holism.

EXAMPLE 1 In ancient Chinese medicine, *Tàiyuān* (太淵) connects to *Lung Meridian*<TCM>, then also to *Lung*<TCM> and *Middle Energizer*<TCM>. See also 3.26 and D.1.

EXAMPLE 2 In Ayurveda, *Guda* connects to *Alambusha Nadi*. See D.2.

3.26
correspondent to life force flow
ideological correspondence between an *acupuncture point* (3.7) and *viscera and bowels* (3.28) by life force flow

Note 1 to entry: One of the fundamental beliefs of traditional philosophies in the *context* (3.29) of traditional medicines based on holism.

EXAMPLE 1 In ancient Chinese medicine, the *Lung Meridian*<TCM> has 11 acupuncture points: The first point is the *Zhōngfǔ* (中府), the second one is the *Yúnmén* (雲門), the seventh is *Lièquē* (列缺), the ninth is *Tàiyuān* (太淵), and the eleventh is *Shǎoshāng* (少商). All these connect via the *Meridian*<TCM> to the *Lung*<TCM> and the *Middle Energizer* <TCM>. *Lung Meridian*<TCM> terminates at *Shǎoshāng* (少商) but *Qi* flows to the next *channel* (3.24), the *Large Intestine Meridian*<TCM>. See D.1.

EXAMPLE 2 At *Lièquē* (列缺), the *Lung Median*<TCM> connects to the *Conception Vessel*<TCM>. The life force of the *Vessel*<TCM> converges to the *Tàiyuān* (太淵), which is one of eight influential points.

EXAMPLE 3 In Ayurveda, *Yashasvati Nadi* originates from the *Muladhara* (*Root Chakra*) and goes up to the *Manipura* (*Naval Chakra*) where it diverges to the right hand and foot. The *Nadi* then radiates from the centre of the right hand and right foot to the five fingers and toes, ending in the right thumb and big toe. See D.2.

EXAMPLE 4 *Talahridaya*, *Muladhara*, *Manipura* also connect to *Kshipra*. See D.2.

© ISO 2016 – All rights reserved
Documents
Document Sharing Hub
Full document details: PD ISO/TS 16843-1:2016