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Health informatics — Introduction to Ayurveda informatics

National foreword

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Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
3.1 General terms 1
3.2 Characterizing categories 4
4 Semantic links **5**
4.1 isAppliedTo 5
4.2 hasCharacteristicOf 5
4.3 isA 5
4.4 includes 5
4.5 utilizes 5
4.6 resultsIn 6
5 Concept models **6**
5.1 Subject of healthcare 6
5.2 Ayurvedic analysis of a healthy subject of healthcare 6
5.3 Ayurvedic analysis of an unhealthy subject of healthcare 8
6 Road map for standardization in Ayurveda informatics **10**
Annex A (informative) **Fundamental principles of Ayurveda** **11**
Bibliography **21**

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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 document 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).

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This document was prepared by Technical Committee ISO/TC 215, *Health informatics*.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Ayurveda, the “science of life”, integrally incorporates the concepts of health and disease and aims not only at treating a patient but also at maintaining wellbeing of a healthy person by achieving homeostasis of the body, mind, and spirit; referred to as the holistic approach (see Annex A).

With an increase in lifestyle-related disorders, there is a worldwide resurgence of interest in Ayurveda and other holistic systems of healthcare, particularly with respect to the prevention and management of chronic and non- communicable diseases. Today, more than 110 WHO member states use herbal medicine and more than 90 WHO member states have reported use of Ayurveda. In most of these countries Ayurveda treatment is covered by insurance too.

The globalization of Ayurveda calls for standardization in terms of terminology; clinical examination; diagnosis; maintenance of health records; interventions in form of herbs, herbal/ herbo-mineral formulations, diet and lifestyle; pharmaceuticals as well as pharmacovigilance specific to Ayurveda.

Application of standardized informatics tools in Ayurveda is poised to bring robustness in clinical decision support systems, electronic health records, telemedicine, processing and storage of data, automation of time consuming, subjective and labour-intensive clinical examination involving multi-layered parameters, personalized medication, identification of herbs, processing of formulations, pharmacovigilance and even drug re-positioning.

This document shares the concept diagram of Ayurvedic diagnosis. Since prevention of disease and maintaining health is an important concept in Ayurveda, this document shares the concept diagram for Ayurvedic analysis of a healthy subject in addition to an unhealthy subject.

The potential uses for this categorial structure are to:

— facilitate the representation of Ayurvedic analysis of a subject using a standard core model in a manner suitable for computer processing;

— support developers of new terminology systems concerning Ayurvedic medicine systems;

— facilitate mapping and integration between Ayurvedic and other Traditional medicinal models;

— facilitate meta-data association, automatic processing of medicinal literature and texts on Ayurvedic medicine systems and integration of the same with Ayurveda based EHR systems.

The potential beneficiaries of this document include:

— developers of Ayurveda and other traditional medicine based diagnosis and analysis systems;

— developers of information systems for patient findings, Ayurvedic medicinal treatment and its efficacy;

— informaticians, analysts, researchers who would require common models of knowledge to facilitate analysis of data available on traditional medicine;

— developers of EHR systems, aiming on interoperability of biomedicine and traditional medicine based systems.

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Health informatics — Introduction to Ayurveda informatics

1 Scope

This document seeks to establish a baseline understanding of Ayurvedic medicine system. It introduces various elements and processes inherent and integral to Ayurvedic diagnosis and treatment. It establishes concept models for Ayurvedic analysis of a subject which can potentially form the basis of system models.

The following topics are out of scope of this document:

— concept models and categorial structures for the individual elements of the concept models proposed.

— individual Ayurvedic dosage forms or medicines or therapies.

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 terminology databases for use in standardization at the following addresses:

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

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

3.1 General terms

3.1.1
assessment of signs of disease
assessment of an observable indication of a disease, injury, or abnormal physiological state that can be detected during a physical examination, patient history taking, or a diagnostic procedure

3.1.2
assessment of symptoms of disease
assessment of the something out of the ordinary that is experienced by an individual or reported by a patient

3.1.3
Ayurveda
science of life where advantageous and disadvantageous, happy and unhappy states of life along with what is good and bad for life, its measurement and life itself are described

Note 1 to entry: Ayurveda deals with inter-individual variability for personalized and predictive medicine.

Note 2 to entry: Ayurveda emphasizes maintenance and promotion of health and prevention of diseases through various dietary and lifestyle regimens along with treatment of diseases through various therapeutic measures and medications.

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