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Health informatics — Workforce roles and capabilities for terminology and terminology services in healthcare (term workforce)

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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 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 of the voluntary nature of standards, 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 www.iso.org/iso/foreword.html.

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

Countries that began the adoption of Health Information and Communication Technology (HICT) products have reported shortfalls in the quantity and skills of the workforce in Health Information Technology (HIT), Health Information Management (HIM), and Health Informatics (HI).

This document addresses workforce needs when implementing terminology resources (products) in healthcare organizations and related supporting organizations, including regional, national, and international HICT programs.

The purpose of this document is to enable healthcare organizations and related supporting organizations that deploy HICT products to safely and effectively support semantic interoperability within systems and between systems locally, nationally, or globally. Semantic interoperability, the ability of computer systems to exchange data with unambiguous and shared meaning, is impacted by the generation, management and sharing of health-related data and information.

Implementation and operation of complex terminologies in healthcare organizations and related supporting organizations without proper knowledge and skills of personnel in those terminological resources is a contributing factor in the resulting failure to deliver expected care outcomes, in delays in Electronic Health Record (EHR) and Health Information Systems (HIS) implementations, and in some cases, in injury caused to patients. Employers need to be able to hire workers with confidence that they have the right skill set for the job.

This document specifies tasks associated with electronic capture, management, sharing, and use of health record content in EHR and HIS in the context of clinical care, business processes, and information governance activities in healthcare.

This document is targeted to stakeholders involved in HICT products development, deployment, and use. Specific value includes:

— **Healthcare organizations and HICT vendors**: Requirements and guidance for tasks and the skills for human resource staff to guide hiring of terminology standards personnel.

— **Professional associations**: Guidance for terminology skill requirements, training and certification of HIT, HIM, and Informatics professionals, as well as accreditation of terminology services programs.

— **Academia**: Guidance for (a) the overall curricula development to support semantic interoperability education under HIT, HIM, and informatics programs, and (b) terminology competencies to support course development.

— **eHealth**, HIM, HIT, Informatics professionals and others: Provide a mechanism to consistently and accurately indicate career pathways and skill expectations.

— **Consumers** (patients, clinicians, governments, society): Safe, quality information is available.

This document supports the deployment of semantic content standards developed by TC 215 in healthcare organizations and governmental entities involved in electronic information sharing using interoperable standards-based HICT products. It provides direction on workforce needs for deployment and operation of terminological resources as well as the roles, competencies and skills to support these needs. Consideration of a business case development and potential numbers needed (i.e. terminology workers) would also be helpful in determining workforce requirements.

It also supports the development of the TC 215 reference standards portfolio (an assembly of individual standards) for interoperable HICT solutions in specific health domains, by identifying specific content area(s) for which a qualified terminology services workforce is needed.

ISO 21298 also describes a number of roles in healthcare. It is possible that some staff with roles as described in ISO 22287 roles might also undertake roles as described in ISO 21298 roles, or there might be naming collisions.

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1 Scope

This document specifies the tasks, roles, and key skills, requirements and competencies for personnel involved in terminology services in healthcare organizations.

This document specifies

— terminology services in healthcare organizations including the selection, authoring, and deployment and use of terminology subsets and maps; developing and managing terminology management processes and health information management related policies; performing terminology business analysis; and supporting the adoption, planning, and deployment of terminologies,

— workforce needs to perform these services

— job roles in the healthcare organizations and related organizations responsible for performing terminology related tasks, and

NOTE Examples of these roles include terminologist, terminology standards developer/manager, mapping specialist, data conversion analyst, interface analyst, coding specialist, data developer/designer, data modeler, and content manager (including Clinical Documentation Improvement [CDI] specialist).

— skill and competency level requirements to safely and effectively undertake each task, taking into account the focus of the task from the perspectives of HICT, information management, information governance including information privacy and security, clinical practice, and healthcare decision making.

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:

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

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

3.1
adoption
act of taking up or following something

3.2
author
entity or set of entities that create and might modify an asset

3.3
classification
terminology which aggregates data at a prescribed level of abstraction for a particular domain

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