Standards for Clinical Data Coding and Terminology

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Health Informatics and Smart health Department

Health Regulation Sector (2023)

INTRODUCTION

Health Regulation Sector (HRS) forms an integral part of Dubai Health Authority (DHA) and is mandated by DHA Law No. (14) of the year (2021) amending some clauses of law No. (6) of 2018 pertaining to the Dubai Health Authority (DHA), to undertake several functions including but not limited to:

- Developing regulation, policy, standards, guidelines to improve quality and patient safety and promote the growth and development of the health sector.
- Licensure and inspection of health facilities as well as healthcare professionals and ensuring compliance to best practice.
- Managing patient complaints and assuring patient and physician rights are upheld.
- Governing the use of narcotics, controlled and semi-controlled medications.
- Assuring management of health informatics, e-health and promoting innovation.

The Standards for Clinical Data Coding and Terminology aims to fulfil the following overarching DHA Strategic Priorities (2022-2026):

- Pioneering Human-centered health system to promote trust, safety, quality and care for patients and their families.
- Leading global efforts to combat epidemics and infectious diseases and prepare for disasters.
- Pioneering prevention efforts against non-communicable diseases.
- Become a global digital health hub.
- Foster healthcare education, research and innovation.

ACKNOWLEDGMENT

The Health Informatics and Smart Health Department (HISHD) developed this Standard in collaboration with Subject Matter Experts and would like to acknowledge and thank these health professionals for their dedication toward improving quality and safety of healthcare services in the Emirate of Dubai.

Health Regulation Sector

Dubai Health Authority

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The purpose of this document is to assure the use of proper and standardized medical codes and terminology in the Electronic Medical record (EMR) within the Health care facilities in the Emirate of Dubai. The standards have been developed to align with the evolving health information quality needs and international best practice. This standard includes the coding requirements for integrating with Nabidh HIE.

This document should be read in conjunction with the other health information governance

Documents released by DHA:

- Policy for Health Information Assets Management
- Health Data Quality Policy
- Health Data Classification Policy
- Policy for Health Data Protection and Confidentiality
- Subject of Care Rights
- Consent and Access Control
- Incident Management and Breach Notification policy
- Data Management and Quality Policy (Primary and Secondary Use)
- Health Information Audit Policy
- Identity Management Policy
- Authentication and Authorization policy

- Information Security standard
- Interoperability and Data Exchange Standards
- Technical and Operational Standards
- Artificial Intelligence Policy

DEFINITIONS

CDT: Current Dental Terminology (CDT) is a code set with descriptive terms developed and updated by the American Dental Association (ADA) for reporting dental services and procedures to dental benefits plans.

CPT-4: Current Procedural Terminology code set describes medical, surgical, and diagnostic (radiology imaging and lab) services and is designed to communicate uniform information about medical services and procedures among physicians, coders, patients, accreditation organizations, and payers for administrative, financial, and analytical purposes.

Health Information Exchange (HIE): is the electronic transmission of health data and information among health care facilities according to national standards. Electronic health information exchange (HIE) allows doctors, nurses, pharmacists, other health care providers and patients to appropriately access and securely share a patient's vital medical information electronically—improving the speed, quality, safety and cost of patient care.

ICD-10-CM: International Classification of Diseases, Tenth Revision, Clinical Modification is a system used by physicians and other healthcare providers to classify and code all diagnoses, symptoms and procedures recorded in conjunction with hospital care. It provides a level of detail that is necessary for diagnostic specificity and morbidity classification by Healthcare Provider Systems.

International Refined-DRG (IR-DRG): is a patient classification system which classifies patients accordingly to selected variables like principle diagnosis, secondary diagnosis, age, gender, procedures performed & other morbid conditions. The IR-DRG is designed to include both in-patient and out-patient care, but can be used for in-patient alone. It is based mainly on procedure codes instead of diagnosis codes and include three levels of severity of illness. This will provide further granularity to reimburse providers based on resource consumption variant in a specific IR-DRG group.

Level II of the HCPCS: is a standardized coding system that is used primarily to identify products, supplies, and services not included in the CPT codes, such as ambulance services and durable medical equipment, prosthetics, orthotics, and supplies.

NABIDH: A health information exchange platform by the Dubai Health Authority that connects public and private healthcare facilities in Dubai to securely exchange trusted health information.

RxNorm: provides normalized names for clinical drugs and links its names to many of the drug vocabularies commonly used in pharmacy management and drug interaction software, including those of First Databank, Micromedex, Multum, and Gold Standard Drug Database. By providing links between these vocabularies, RxNorm can mediate messages between systems not using the same software and vocabulary.

Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT): is a systematically organized computer-processable collection of medical terms providing codes, terms, synonyms and definitions used in clinical documentation and reporting. The primary purpose of SNOMED CT is to encode the meanings that are used in health information and to support the effective clinical recording of data with the aim of improving patient care, it includes clinical findings, symptoms, body structures, organisms and other etiologies, substances, pharmaceuticals, devices and specimens.

The Logical Observation Identifiers Names and Codes for Laboratorians (LOINC): is a common language (set of identifiers, names, and codes) for identifying health measurements, observations, and documents.

Universal Numbering System (Dental): The Universal Numbering System is a dental notation system for associating information to a specific tooth.

ABBREVIATIONS

CDA	:	Clinical Document Architecture
CDT	:	Current Dental Terminology
CPT-4	:	Current Procedural Terminology
DHA	:	Dubai health Authority
HCPCS	:	Healthcare Common procedure Coding System
HIE	:	Health Information Exchange
HISHD	:	Health Informatics and Smart health Department
HL7	:	Health Level Seven
HRS	:	Health Regulation Sector
ICD-10-CM	:	International Classification of Diseases, Tenth Revision, Clinical Modification
IR-DRG	:	International Refined-DRG

LOINC : The Logical Observation Identifiers Names and Codes for Laboratorians

NCIRD : National Center of Immunization and Respiratory Diseases

SNOMED CT : Systematized Nomenclature of Medicine Clinical Terms

UNS : Universal Numbering System (Dental)

1. BACKGROUND

The Standards for Clinical Data Coding and Terminology aims to fulfil health information requirements for health facilities to integrate with NABIDH Health Information Exchange (HIE); in order to position Dubai as a global medical destination by introducing a value-based, comprehensive, integrated and high-quality service delivery system.

2. SCOPE

2.1. All DHA licensed health facilities integrating with NABIDH.

3. PURPOSE

3.1. To ensure accurate and consistent patient information across different systems, by standardizing the Clinical Data Coding and Terminology in health sector in the Emirate of Dubai.

3.2. To ensure the efficient flow and exchange of health information in NABIDH; and warrant efficient data analysis due to unified coding.

3.3. To provide necessary NABIDH standards for implementing and managing HIE among DHA licensed healthcare providers in the Emirate of Dubai.

3.4. To support achieving better healthcare outcomes through facilitating data-driven decision-making process.

4. APPLICABILITY

4.1. DHA licensed healthcare professionals and health facilities accessing Nabidh HIE.

5. STANDARD ONE: STANDARDIZING THE CLINICAL DATA CODING AND TERMINOLOGY

5.1. All health facilities integrating with or accessing to Nabidh shall adhere to DHA regulations and the United Arab Emirates laws.

5.2. Licensed health facilities deciding to integrate with Nabidh shall inform Health Information and Smart Health Department (HISHD) by submitting an application to Nabidh@dha.gov.ae to obtain permission to initiate the Nabidh onboarding.

5.3. The health facility should use the following standardized nomenclatures and code sets to describe clinical problems, diagnosis, procedures, medications, and other Nabidh required datasets.

5.4. All Health Facilities must be in compliance with NABIDH published standards.

Standard	Name of the standard	Publisher	Category	Mandate
ICD 10-CM (Preferably version 2023, at least version 2021)	International Classification of Diseases, Clinical Modification	CMS & NCHS	Diagnosis/Disease Coding	Required
CPT 4 (Preferably version 2023, at least version 2021)	Current Procedural Terminology	AMA	Procedures - medical, surgical, and diagnostic services	Required
HCPCS Level II Preferably version 2023, at least version 2021)	Healthcare Common Procedure Coding System Level II	CMS & AMA	Supplies, Disposable and Consumables	Required
CDT (2023)	Current Dental Terminology	ADA	Dental procedures and nomenclature	Required
UNS (2022)	Universal Numbering System (Dental)	ADA	Observations to a specific tooth	Required
DDC	Dubai Drug Code	DHA	Drugs and related (medications)	Required
LOINC (2023)	Logical Observation Identifiers Names and Codes	RI	Laboratory and Clinical Observations	Required

LOINC CODE DEEDS (2023)	Logical Observation Identifiers Names and Codes	RI	Data Elements for Emergency Department Systems (DEEDS)	Required
CVX	Vaccination Code Set	NCIRD	Product used in a vaccination	Required
CDA	Clinical Document Architecture	HL7	The representation of clinical documents (such as discharge summaries and progress notes)	Optional
SNOMED CT (2023)	Systematized Nomenclature of Medicine Clinical Terms	IHSTDO	Clinical Terminology/ Chronic Problems/ Diagnosis/Procedures/ Allergies	Optional
RxNorm	"Normalized" notations for clinical drugs	NLM	Clinical drugs and drug delivery devices	Optional
IR-DRG v3.3	International payment standard	CMS	Hospital coding/ Inpatient hospital payment	Optional

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