SLOVENSKI STANDARD
SIST ENV 12612:2003

01-oktober-2003

Medicinska informatika ï Sporoḍ ila za izmenjavo administrativnih informacij o zdravstvenem varstvu

Medical informatics - Messages for the exchange of healthcare administrative information

Medizinische Informatik - Nachrichten für den Austausch administrativer Information im Gesundheitswesen

Informatique de santé - Messages pour l'échange d'informations d'ordre administratif dans le domaine de la santé

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35.240.80	Uporabniške rešitve IT v zdravstveni tehniki	IT applications in health care technology

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Medical informatics - Messages for the exchange of healthcare administrative information

Informatique de santé - Messages pour l'échange d'informations d'ordre administratif dans le domaine de la santé

Medizinische Informatik - Nachrichten für den Austausch administrativer Information im Gesundheitswesen

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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FOREWORD

This European Prestandard has been prepared by Technical Committee CEN/TC 251 "Medical Informatics", the secretariat of which is held by IBN.

The preparation of this European Prestandard was undertaken by Project Team 3-023 of CEN/TC 251 and covered by the European Commission under voucher M021/BC/CEN/93/17.10.1.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

INTRODUCTION

The increased use of data processing and telecommunications capabilities has made possible the interchange of information in machine readable and machine processable formats. As automated interchange of information in healthcare increases, it is essential to provide appropriate information interchange standards.

Computer systems are in use for the storage and processing of information in many healthcare organisations, including the offices of individual healthcare professionals such as doctors and nurses.

Electronic transfer of administrative data for identification and registration reduces the need for repeated manual data entry and the risk of transcription errors. Standards are required to facilitate the identification and registration since these processes are fundamental to the sharing of clinical and administrative information between healthcare professionals.

Implementation of this standard will therefore :

- facilitate the electronic transfer of requests for administrative data needed for the process of identification and registration in healthcare, sent from requesting healthcare parties to the healthcare parties that are able to provide the requesters with the information needed;

- facilitate the electronic transfer of administrative data to requesters and other healthcare parties;

- reduce the need for human intervention in information interchange between applications used by healthcare parties;

- minimise the time and effort required for the introduction of information interchange agreements;

- reduce the development effort required by suppliers to allow communication between a wide range of applications in this field;

- reduce (in consequence of the foregoing) the cost of information interchange between healthcare parties.

When implementing information exchange based upon this European Prestandard data protection and secrecy principles ought to be guaranteed at least at a level conforming with current legislation in force in the different CEN member countries. Security issues are outside the scope of this Prestandard.

The method by which this European Prestandard has been developed is based on the recommendations of the CEN Technical Report "Investigation of Syntaxes for Existing Interchange Formats to be used in Healthcare" (CR 1350:1993).

This document is intended for use by message developers. Its provisions are directly relevant to suppliers of computer systems for use in healthcare organisations such as hospitals, general practices, insurance companies, clinical departments and specialist clinics. Its provisions are also relevant to those planning, specifying, procuring or implementing information systems for use in healthcare organisations such as hospitals, general practices, clinical departments and specialist clinics.

The main normative provisions in this European Prestandard are expressed in clauses 4 and 5 and apply to the General Message Descriptions (GMDs), clause 7.

The symbols used in this European Prestandard have the meaning as defined in normative annex A for the purposes of this European Prestandard only. Informative annex B provides additional explanation about the General Message Descriptions and gives a number of example scenarios of message use.

A supplementary document to this pr-ENV, called "Generic EDIFACT message implementation guide", provides in its first chapters the method and conformance information on how the EDIFACT messages meet the requirements of the General Message Descriptions of the pr-ENV.

This supporting document contains message implementation guidelines for the Implementable Message Specifications (IMSs). They should be considered an essential component of the IMS providing a generic EDIFACT implementation specification for use in Europe.

Specifically these chapters cover :

– A general description of how the mapping from GMDs to EDIFACT is carried out.
– A structure table indicating how the defined IMSs meet the relationships defined in the GMDs.
– Data tables indicating how the defined IMSs support the objects and attributes of the GMDs

The supporting document is not a constituent part of this pr-ENV.

1. SCOPE

1.1 This European Prestandard specifies general administrative messages for electronic Information exchange between healthcare information systems

1.2 The messages defined in this European Prestandard provide for an identification framework for both administrative and non-administrative purposes

1.3 The messages identified in this European Prestandard pay especial attention to identification of both the individual and records pertaining to them and the registration of the individual on healthcare information systems

1.4 The messages identified in this European Prestandard, whilst containing information relating to responsibility for payment for healthcare delivery, do not cover resource usage and resource notification including billing/financial transactions nor the clinical aspects of health care delivery

1.5 The messages identified in this European Prestandard provide for the possibility to link existing personal data for administrative, medical/clinical , financial and other health care purposes

1.6 The provisions of this European Prestandard have been validated in the domain and for the purposes described above. Messages conforming to this European Prestandard may be considered by some user communities to meet their needs for purposes outside this scope. Use of the messages in these circumstances is not precluded by the scope

1.7 This European Prestandard is not applicable to the electronic interchange of clinical messages, such as the requesting or reporting of results for diagnostics tests

1.8 The messages defined in this European Prestandard provide an identification framework for patients that may be used within other healthcare messages. The use of these messages or parts thereof for such purpose is not precluded by the scope.

2. NORMATIVE REFERENCES

This European Prestandard incorporates by dated or undated reference, provisions from other publications. These normative references are cited in the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments and revisions of any of these publications apply to this European Prestandard only when incorporated in it by amendment and revision. For undated references the latest edition of the publication referred to applies.

CR 1350 :1993	Investigation of syntaxes for existing interchange formats to be used in Healthcare
ENV 1068 :1993	Medical Informatics - Healthcare information interchange -Registration of coding schemes
ENV 1613 :1994	Messages for exchange of laboratory information
ISO 639 : 1988	Symbols for languages, geographical areas and authorities
ISO 2382 : 1987	Information processing - Vocabulary Part 4 : Organisation of data
ISO 3166 : 1988	Codes for representation of names of countries
ISO 4217 : 1990	Codes for the representation of currencies and funds
ISO 5218 : 1977	Information interchange - Representation of human sexes
ISO 6523 : 1984	Data interchange - Structure for the identification of organisations
ISO 8601 : 1988	Data elements and interchange formats - Information interchange -Representation of dates and times
ISO 8824-1: 1993	Information technology - Open Systems Interconnection - Abstract Syntax Notation One (ASN.1)Part 1 : Specification of basic notation
ISO 8859 : 1987	Information Processing - Registration of graphics characters subrepertoires - Eight-bit single byte coded graphic character sets Part 1 : Latin No 1
ISO 9735 : 1988	Electronic data interchange for administration, commerce and transport (EDIFACT) - Application level syntax rules
ISO 9798:	Information technology - Security techniques - Entity authentication mechanisms - Part 1 : General model

3. DEFINITIONS

For the purposes of this standard, the following definitions (listed in alphabetical order) apply :

3.1 clinical information : Information about a patient, relevant to the health or treatment of that patient, that is recorded by or on behalf of a healthcare professional.

NOTE : Clinical information about a patient may include information about the patient's environment or about related people or animals where this is relevant.

[ENV 1613]

3.2 code meaning : Element within a coded set.

EXAMPLE : "Paris Charles-De-Gaulle" which is mapped on to the three-letter abbreviation "CDG" by the coding scheme for three-letter abbreviations of airport names.

[ENV 1068]

3.3 code value : Result of applying a coding scheme to a code meaning.

EXAMPLE : "CDG" as the representation of "Paris Charles-De-Gaulle" in the coding scheme for three-letter representations of airport names.

[ENV 1068]
[ISO 2382-1987], modified

3.4 coding scheme : Collection of rules that maps the elements of one set on to the elements of a second set.

[ENV 1068]
[ISO 2382-1987], modified

3.5 domain information model : Conceptual model describing common concepts and their relationships for communication parties required to facilitate exchange of information between these parties within a specific domain of healthcare.

NOTE : In this European Prestandard the abbreviation DIM is used.

[ENV 1613]

3.6 general message description : Subset of a domain information model prescribing the information content and semantic structure of a message used to meet one or more identified information interchange requirements.

NOTE 1: General message descriptions are independent of the syntax used for constructing an actual message. They provide statement of the information interchange requirements in a form that can be implemented using different syntaxes.

NOTE 2: In this European Prestandard the abbreviation GMD is used.

[ENV 1613]

3.7 healthcare administrative information : Information about a patient that is requested or required by a healthcare party to enable, finance or manage the provision of healthcare services to that subject.

3.8 healthcare coding scheme designator : Unique permanent identifier of a healthcare coding scheme registered for use in information interchange under the terms of the European Prestandard ENV 1068.

NOTE: In this European Prestandard the abbreviation HCD is used.

[ENV 1068]

3.9 healthcare organisation : Organisation responsible for the direct or indirect provision of healthcare services to a patient, or involved in the provision of healthcare related services.

NOTE : A healthcare organisation may be used as a discrete entity or as a superstructure containing departments and sub-departments.

[ENV 1613]

3.10 healthcare party : Organisation or person responsible for the direct or indirect provision of healthcare to an individual, or involved in the provision of healthcare-related services.

[ENV 1613]

3.11 healthcare professional : Person who is entrusted with the direct or indirect provision of defined healthcare services to a patient or population of patients.

EXAMPLE : Primary care physician, dentist, nurse, social worker.

[ENV 1613]

3.12 healthcare service : Service provided with the intention of directly or indirectly improving the health of the people, populations or animals to whom it is provided.

[ENV 1613]

3.13 hierarchical general message description : A generalised message description presented as a nested hierarchy of related objects rather than as a network of inter-related objects.

3.14 identification : The process whereby an entity is proven as being claimed. [ISO 9798, ITSEC].

3.15 implementable message specification : Specification of a general message description in a particular message syntax.

NOTE : In this European Prestandard the abbreviation IMS is used.

[ENV 1613]

3.16 interchange format : Specification of a message type according to a given message syntax, covering the identification of the message type components, their arrangement, representation and interrelationships.

[ENV 1613]

3.17 message profile : Specification derived from an implementable message specification by selecting its optional elements, appropriate to the specific business requirements of the communicating parties.

[ENV 1613]

3.18 message syntax : System of rules and definitions specifying the basic component types of messages, their interrelationships and their arrangement.

[ENV 1613]

3.19 message type : An identified, named and structured set of functionally related information which fulfills a specific business purpose.

3.20 organisation : Unique framework of authority within which a person or persons act, or are designated to act towards some purpose.

NOTE : Groupings or subdivisions of an organisation may also be considered as organisations where there is need to identify them for information interchange.

[ISO 6523-1984]

3.21 patient : A person who is receiving or is registered to receive healthcare services.

3.22 problem domain : Field under consideration in the modelling process.

EXAMPLE : Information interchange in clinical chemistry.

[ENV 1613]

3.23 ABBREVIATIONS

The following abbreviations are used for the terms defined in this European Prestandard.

DIM Domain Information Model
GMD General Message Description
GP General Practitioner
HCD Healthcare Coding scheme Designator
H-GMD Hierarchical General Message Description
ICD International Code Description
IMS Implementable Message Specification

4. REQUIREMENTS

Messages for the exchange of healthcare administrative information within the scope of this standard shall enable electronic interchange of the semantic content defined in the GMDs in clause 7. These are based on the specifications of:

- the communication roles, messages defined in the standard, services supported by each communication role and message sequencing rules (section 5).
- the content of each type of message and relationships within it as shown in the general message description (GMD). Each GMD is a subset of the domain information model (DIM), specifying each item of information that may be used in the GMD and its support status (mandatory, optional, or depending on presence of other components). Hierarchical GMDs specify the order in which objects occur in a message (section 7).

Implementable message specifications (IMS) shall conform to the GMDs defined in this standard.

5. COMMUNICATION ROLES AND SUPPORTED SERVICES

5.1. General

This clause defines the communication roles compliant with the specifications of this European Prestandard when exchanging patient administrative information. It establishes the relationships between the communication roles and the General Message Descriptions, as well as the relationships amongst the General Message Descriptions (GMDs). Annex B (informative) provides a detailed explanation of the General Message Descriptions for each message and specifies scenarios based upon which the communication roles, the General Message Descriptions and the supported services are derived.

5.2. Communication roles

5.2.1 For each of the messages defined in this European Prestandard there are two key communication roles: the message originating role and the message receiving role. These roles are assumed by three types of healthcare party, administrative information originators, administrative information destinations and copy destinations. A copy destination is a party who is neither the originator of the patient administrative information nor the destination but who, for any reason, is nominated to receive a copy by the message originator.

5.2.2 A communicating party has a message destination role in relation to any message that they may receive in which they are nominated as a copy destination.

5.2.3 A single healthcare party may have different roles in relation to different types of messages. For example, a consultant in a hospital department may have an administrative information request originating role and a administrative information report destination role.

5.2.4 The four types of communication roles that can use the messages based upon the General Message Descriptions defined within the scope of this European Prestandard are:
- administrative information request originating roles;
- administrative information request receiving roles;
- administrative information report originating roles;
- administrative information report receiving roles.

5.3. Communication roles, services and General Message Descriptions

5.3.1 Request for a unique identifier of a patient on a registration system.

5.3.1.1 The service that shall be supported by a communication party with a *message originating role* for a request for a unique identifier of a patient on a registration system shall be to:

– issue *requests for a unique identifier of a patient on a registration system* instances which comply with the appropriate General Message Description and which convey in a complete and exact way the information as intended by the originator and as to be understood by the receiver.

5.3.1.2 The services that shall be supported by a communication party with a *message receiving role* shall be to:

– receive *requests for a unique identifier for a patient on a registration system* instances which comply with the appropriate General Message Description and which allow the complete and exact understanding of the information as intended by the originator;

– if the receiver is an Administrative Information Destination, to issue a response of the type Patient Unique Identification Report as shown in Figure 1 below.

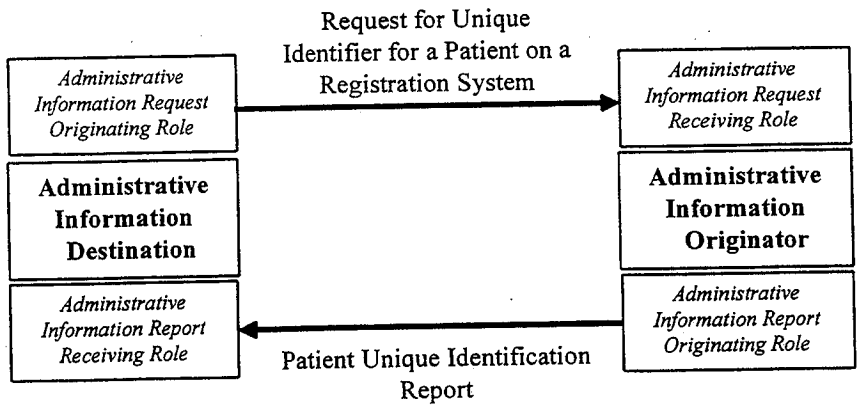

Figure 1. Request for and Report of Patient Unique Identifier on a Registration System

5.3.2 Request for Administrative Information of an Identified Patient

5.3.2.1 The service that shall be supported by a communication party with a *message originating role* for a request for administrative information of an identified patient shall be to:

– issue *requests for administrative information of an identified patient* instances which comply with the appropriate General Message Description and which convey in a complete and exact way the information as intended by the originator and as to be understood by the receiver.

5.3.2.2 The service that shall be supported by a communication party with a *message receiving role* shall be to:

– receive *requests for administrative information of an identified patient* instances which comply with the appropriate General Message Description and which allow the complete and exact understanding of the information as intended by the requester;

– if the receiver is an Administrative Information Provider, to issue a response of the type Patient Administrative Information Report as shown in Figure 2 below.

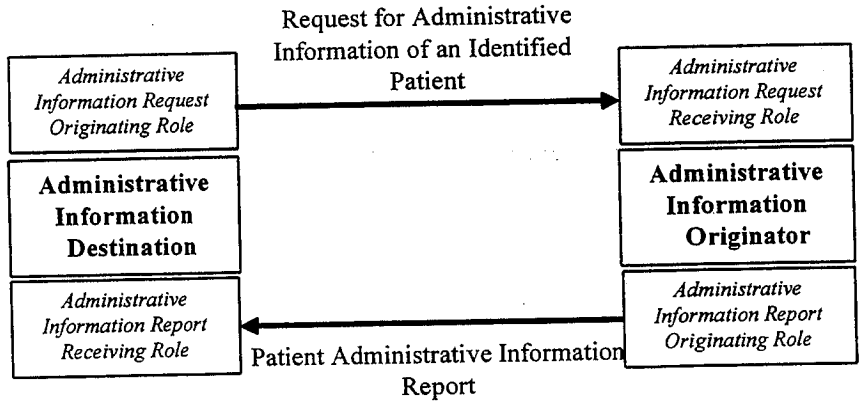

Figure 2. Request for and Report of Administrative Information of an Identified Patient

5.3.3 Request for Patient List for Given Selection Criteria

5.3.3.1 The service that shall be supported by a communication party with a *message originating role* for a request for a patient list for given selection criteria shall be to:

– issue *requests for patient list for given selection criteria* instances which comply with the appropriate General Message Description and which convey in a complete and exact way the information as intended by the originator and as to be understood by the receiver.