

# Electronic identification

## (Identyfikacja elektroniczna)

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**Abstract** – The authors have characterized the most important international and national legal regulations regarding the identification and authentication of entities and medical records in health care. Then they discussed the standard traditional identification which is understood as proof of identity using personal ID cards or ID cards in institutions. Electronic identification has also been presented, as a replacement of physical tools (cards) by electronic identifiers. This type of identification has been characterized from the point of view of the recipients, service providers, places providing health care and medical workers.

**Key words** - identification, authentication, legal acts, health care sector.

**Streszczenie** – Autorzy scharakteryzowali najważniejsze międzynarodowe i krajowe regulacje prawne dotyczące identyfikacji i uwierzytelniania podmiotów i dokumentacji medycznej w ochronie zdrowia. Następnie omówili standardową, tradycyjną identyfikację rozumianą jako potwierdzenie tożsamości przy użyciu dowodów osobistych lub kart identyfikacyjnych w instytucjach. Przedstawiono również elektroniczną identyfikację oznaczającą zastąpienie fizycznych narzędzi (kart) przez identyfikatory elektroniczne. Ten rodzaj identyfikacji został scharakteryzowany z punktu widzenia usługobiorców, usługodawców, miejsc udzielenia świadczenia opieki zdrowotnej i pracowników medycznych.

**Słowa kluczowe** - identyfikacja, uwierzytelnienie, akty prawne, sektor ochrony zdrowia.

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### Authors' contributions to the article:

- A. The idea and the planning of the study
- B. Gathering and listing data
- C. The data analysis and interpretation

D. Writing the article

E. Critical review of the article

F. Final approval of the article

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## I. INTERNATIONAL AND NATIONAL REGULATIONS CONCERNING IDENTIFICATION AND AUTHENTICATION OF ENTITIES AND MEDICAL RECORDS IN HEALTH CARE

International and national regulations concerning identification and authorisation of entities and medical records in health care are presented in Table 1 and 2.

Table 1. International and national regulations concerning identification and authorisation of entities and medical records in health care

No.	Title	Area
<b>International</b>		
1.	1. Regulation (EU) 2017/0003 of the European Parliament and of the Council concerning the respect for private life and the protection of personal data in electronic communications and repealing the Directive 2002/58/EC (Regulation on Privacy and Electronic Communications)	Protection of privacy, personal data
2.	2. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing the Directive 95/46/EC (General Data Protection Regulation)	Protection and processing of personal data
3.	Directive of the European Parliament and of the Council (EU) 2016/1148 of 6 July 2016 on measures for a high common level of security of network and information systems in the European Union	Cyber security of teleinformatic systems
4.	Regulation (EU) 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions on the internal market and repealing Directive 1999/93 / EC (eIDAS regulation - electronic identification and trust services)	Identification, authentication and trust services

Table 2. National legal regulations on the identification and authentication of entities and medical records in health care

No.	Title	Area
<b>National</b>		
1.	Act of 10 May 2018 on the protection of personal data (Journal of Laws 2018, item 1000)	Implementation of the EU regulation on the protection of personal data (RODO)
2.	Act of March 1, 2018 on amending certain acts in connection with the introduction of an e-prescription (Journal of Laws of 2018, item 697)	Operation of the electronic prescription
3.	* the Bill o the Act on the National Cybersecurity System (2018)	National cybersecurity strategies
4.	* The Bill on the Act amending certain acts in connection with the introduction of the Internet Patient Account (2018)	Access to medical information by the patient
5.	* The Bill of Regulation of the Minister of Health on the types of electronic medical records (2018)	Standards of electronic medical records
6.	Regulation of the Minister of Digitization of October 5, 2016 on detailed organizational and technical conditions that should be met by the ICT system used to authenticate users (Dz.U. 2016 poz. 1627) [Journal of Laws]	Operating conditions for authentication systems
7.	* The Bill on Act on amending the Act on Trust Services and Electronic Identification and Certain Other Acts (2018)	Operation of electronic identification and trust services
8.	The Regulation of the Minister of Health of 9 November 2015 on the types, scope and patterns of medical documentation and the manner of its processing (Journal of Laws 2015, item 2069)	Medical Record Documentation Standards and their processing
9.	The Act of 28 April 2011 on Information system in health care (Journal of Laws No. 113, item 657)	The functioning of the health information system
10.	The Act of 15 April 2011 about medical activity (Journal of Laws 2011 No. 112, item 654)	The functioning of entities performing medical activities
11.	The Act of 6 November 2008 on Patients' Rights and The Patients' Rights Ombudsman (Journal of Laws 2009 No. 52, item 417)	Patient safety in The Telehealth System and his medical documentation
12.	The Act of 17 February 2005 on computerization of the activities of entities performing public tasks (Journal of Laws of 2005 No. 64, item 565)	Security of systems in the public domain

\*draft law

The considerations were limited to four international acts and 12 Polish regulations. Some of the documents were in the form of projects, hence they did not yet have binding force, generally binding and the final versions are subject to change.

## II. ELECTRONIC IDENTIFICATION

Identification can be understood as "the process of obtaining information from the declared identity (site) without taking into account the credibility of this information" [1]. Standard, traditional identification is understood as proof

of identity using identity cards or ID cards in institutions. Electronic identification means replacing physical tools (cards) with electronic identifiers [1].

In Poland, in the healthcare information system, four identifiers are distinguished, for "service recipients, service providers, places of providing health care and medical workers' (Article 17c (1)). For the recipient, otherwise the patient is a PESEL number or other identity documents. Service providers are divided into three groups. The first group are entities performing medical activities and their identifier is a code to create characters from the departmental identification code system specified by the Minister of Health. The second group are pharmacies whose individual code comes from the National Register of Permits for Keeping Public Pharmacies, Pharmacy Points and Register of Grants for Running Hospital Pharmacies and Company. The third group is the entities whose activity concerns the supply of medical devices and the identifier is the 9-digit REGON number. The identifier of the place of providing a medical service is separate for the entity performing medical activities, pharmacies and entities performing activities in the field of supplying medical devices, but the principle of creating an identifier is the same as with the general identifier of the recipient, the only difference is that the National Health Fund establishes an individual code for entities supplying medical devices/ equipment. There are still identifiers of medical staff, which are a number of right to practise profession or personal identification number. In case of missing of such ID, another permitted document can be used – passport [2]. Classification of identifiers (data assigned individually to the unit) in health department is presented on illustration no. 1.

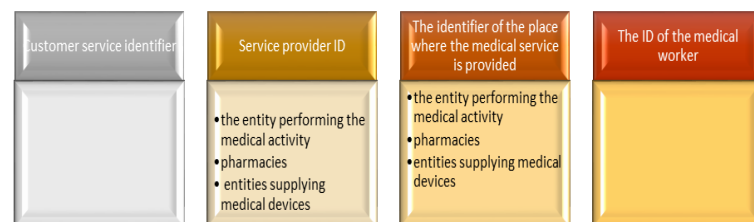


Figure 1. Identifiers in health department [2]

Usage of identifiers to confirm identity of natural or legal person takes place in the framework of electronic identification system. There can be highlighted four basic areas of

electronic identification system: entry to the system, management of means of electronic identification, authentication and management/organization [3].

#### 1. Entry to the system

In this area takes place registration to the system, verification of identity and assignment of user (natural or legal person) with mean of electronic identification.

#### 2. Management of means of electronic identification

Management of user's means of electronic identification involves activities and processes related with tools of identification, such as: activation, delivering, archiving, suspension, renewal etc.

#### 3. Authentication

The process of authentication is accompanied by adequate mechanisms, which are responsible for confirming identity in relation to trusting party (natural or legal person subject to electronic identification) using means of electronic identification.

#### 4. Management and organisation

For high efficiency of identification system's operation important is managing the risk, assurance of data security and application of the requirements and rules, which are to find in the developed ISO/IEC regulations. It is recommended to apply good practice (from other institutions of the local or the member states) and conducting registers for all levels of trust. Access to the servers and the system should be available only for the authorized workers. Moreover, essential is conducting a technical check (especially cryptographic materials), periodic audits for low external levels, for average, independent internal or external levels and for a high level only external audits [3].

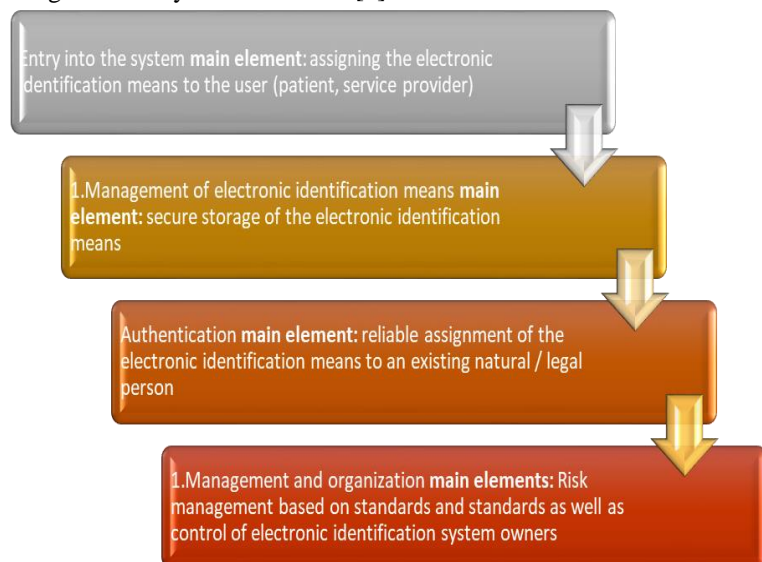


Figure 2. Basic areas of electronic identification system functioning (self-study)

A subject responsible for processing the data (name, surname, personal number PESEL, date of birth and others), persons possessing the assets of electronic identification is Minister of Digitization [4].

A national scheme of electronic identification consists of: national electronic identification hub and hubs used for authentication of persons in the transborder process. Within the scope of the hub there are working: electronic identification system, by which the assets of the electronic identification are being issued and teleinformatic systems making online services available. Electronic identification hub constitutes a central element of the electronic identification model. [4-6].

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