



# SLOVENSKI STANDARD SIST EN ISO 27799:2017

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Nadomešča:  
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**Zdravstvena informatika - Upravljanje informacijske varnosti v zdravstvu z uporabo standarda ISO/IEC 27002 (ISO 27799:2016)**

Health informatics - Information security management in health using ISO/IEC 27002 (ISO 27799:2016)

Medizinische Informatik - Informationsmanagement im Gesundheitswesen bei Verwendung der ISO/IEC 27002 (ISO 27799:2016)

Informatique de santé - Management de la sécurité de l'information relative à la santé en utilisant l'ISO/IEC 27002 (ISO 27799:2016)

**Ta slovenski standard je istoveten z: EN ISO 27799:2016**

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35.030	Informacijska varnost	IT Security
35.240.80	Uporabniške rešitve IT v zdravstveni tehniki	IT applications in health care technology

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## Health informatics - Information security management in health using ISO/IEC 27002 (ISO 27799:2016)

Informatique de santé - Management de la sécurité de l'information relative à la santé en utilisant l'ISO/IEC 27002 (ISO 27799:2016)

Medizinische Informatik - Informationsmanagement im Gesundheitswesen bei Verwendung der ISO/IEC 27002 (ISO 27799:2016)

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<b>Contents</b>	<b>Page</b>
<b>European foreword.....</b>	<b>3</b>

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## European foreword

This document (EN ISO 27799:2016) has been prepared by Technical Committee ISO/TC 215 “Health informatics” in collaboration with Technical Committee CEN/TC 251 “Health informatics” the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

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*Informatique de santé — Management de la sécurité de l'information  
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# Contents

	Page
<b>Foreword</b> .....	<b>vii</b>
<b>Introduction</b> .....	<b>viii</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>2</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Structure of this International Standard</b> .....	<b>3</b>
<b>5 Information security policies</b> .....	<b>4</b>
5.1 Management direction for information security.....	4
5.1.1 Policies for information security.....	4
5.1.2 Review of the policies for information security.....	5
<b>6 Organization of information security</b> .....	<b>6</b>
6.1 Internal organization.....	6
6.1.1 Information security roles and responsibilities.....	6
6.1.2 Segregation of duties.....	7
6.1.3 Contact with authorities.....	7
6.1.4 Contact with special interest groups.....	7
6.1.5 Information security in project management.....	8
6.2 Mobile devices and teleworking.....	8
6.2.1 Mobile device policy.....	8
6.2.2 Teleworking.....	9
<b>7 Human resource security</b> .....	<b>9</b>
7.1 Prior to employment.....	9
7.1.1 Screening.....	9
7.1.2 Terms and conditions of employment.....	10
7.2 During employment.....	11
7.2.1 Management responsibilities.....	11
7.2.2 Information security awareness, education and training.....	11
7.2.3 Disciplinary process.....	11
7.3 Termination and change of employment.....	12
7.3.1 Termination or change of employment responsibilities.....	12
<b>8 Asset management</b> .....	<b>12</b>
8.1 Responsibility for assets.....	12
8.1.1 Inventory of assets.....	12
8.1.2 Ownership of assets.....	13
8.1.3 Acceptable use of assets.....	13
8.1.4 Return of assets.....	13
8.2 Information classification.....	14
8.2.1 Classification of information.....	14
8.2.2 Labelling of information.....	15
8.2.3 Handling of assets.....	15
8.3 Media handling.....	16
8.3.1 Management of removable media.....	16
8.3.2 Disposal of media.....	16
8.3.3 Physical media transfer.....	17
<b>9 Access control</b> .....	<b>17</b>
9.1 Business requirements of access control.....	17
9.1.1 Access control policy.....	17
9.1.2 Access to networks and network services.....	18
9.2 User access management.....	18
9.2.1 User registration and de-registration.....	18
9.2.2 User access provisioning.....	19

## ISO 27799:2016(E)

9.2.3	Management of privileged access rights	19
9.2.4	Management of secret authentication information of users	20
9.2.5	Review of user access rights	20
9.2.6	Removal or adjustment of access rights	21
9.3	User responsibilities	21
9.3.1	Use of secret authentication information	21
9.4	System and application access control	22
9.4.1	Information access restriction	22
9.4.2	Secure log-on procedures	22
9.4.3	Password management system	22
9.4.4	Use of privileged utility programs	23
9.4.5	Access control to program source code	23
<b>10</b>	<b>Cryptography</b>	<b>23</b>
10.1	Cryptographic controls	23
10.1.1	Policy on the use of cryptographic controls	23
10.1.2	Key management	24
<b>11</b>	<b>Physical and environmental security</b>	<b>24</b>
11.1	Secure areas	24
11.1.1	Physical security perimeter	24
11.1.2	Physical entry controls	25
11.1.3	Securing offices, rooms and facilities	25
11.1.4	Protecting against external and environmental threats	25
11.1.5	Working in secure areas	25
11.1.6	Delivery and loading areas	25
11.2	Equipment	26
11.2.1	Equipment siting and protection	26
11.2.2	Supporting utilities	26
11.2.3	Cabling security	27
11.2.4	Equipment maintenance	27
11.2.5	Removal of assets	27
11.2.6	Security of equipment and assets off-premises	27
11.2.7	Secure disposal or reuse of equipment	28
11.2.8	Unattended user equipment	28
11.2.9	Clear desk and clear screen policy	28
<b>12</b>	<b>Operations security</b>	<b>29</b>
12.1	Operational procedures and responsibilities	29
12.1.1	Documented operating procedures	29
12.1.2	Change management	29
12.1.3	Capacity management	30
12.1.4	Separation of development, testing and operational environments	30
12.2	Protection from malware	30
12.2.1	Controls against malware	30
12.3	Backup	31
12.3.1	Information backup	31
12.4	Logging and monitoring	31
12.4.1	Event logging	31
12.4.2	Protection of log information	32
12.4.3	Administrator and operator logs	33
12.4.4	Clock synchronisation	34
12.5	Control of operational software	34
12.5.1	Installation of software on operational systems	34
12.6	Technical vulnerability management	34
12.6.1	Management of technical vulnerabilities	34
12.6.2	Restrictions on software installation	35
12.7	Information systems audit considerations	35
12.7.1	Information systems audit controls	35

<b>13</b>	<b>Communications security</b> .....	<b>35</b>
13.1	Network security management .....	35
13.1.1	Network controls .....	35
13.1.2	Security of network services .....	36
13.1.3	Segregation in networks .....	36
13.2	Information transfer .....	36
13.2.1	Information transfer policies and procedures .....	36
13.2.2	Agreements on information transfer .....	37
13.2.3	Electronic messaging .....	37
13.2.4	Confidentiality or non-disclosure agreements .....	38
<b>14</b>	<b>System acquisition, development and maintenance</b> .....	<b>38</b>
14.1	Security requirements of information systems .....	38
14.1.1	Information security requirements analysis and specification .....	38
14.1.2	Securing application services on public networks .....	40
14.1.3	Protecting application services transactions .....	40
14.2	Security in development and support processes .....	40
14.2.1	Secure development policy .....	40
14.2.2	System change control procedures .....	41
14.2.3	Technical review of applications after operating platform changes .....	41
14.2.4	Restrictions on changes to software packages .....	41
14.2.5	Secure system engineering principles .....	42
14.2.6	Secure development environment .....	42
14.2.7	Outsourced development .....	42
14.2.8	System security testing .....	42
14.2.9	System acceptance testing .....	43
14.3	Test data .....	43
14.3.1	Protection of test data .....	43
<b>15</b>	<b>Supplier relationships</b> .....	<b>43</b>
15.1	Information security in supplier relationships .....	43
15.1.1	Information security policy for supplier relationships .....	43
15.1.2	Addressing security within supplier agreements .....	44
15.1.3	Information and communication technology supply chain .....	44
15.2	Supplier service delivery management .....	44
15.2.1	Monitoring and review of supplier services .....	45
15.2.2	Managing changes to supplier services .....	45
<b>16</b>	<b>Information security incident management</b> .....	<b>45</b>
16.1	Management of information security incidents and improvements .....	45
16.1.1	Responsibilities and procedures .....	45
16.1.2	Reporting information security events .....	45
16.1.3	Reporting information security weaknesses .....	46
16.1.4	Assessment of and decision on information security events .....	47
16.1.5	Response to information security incidents .....	47
16.1.6	Learning from information security incidents .....	47
16.1.7	Collection of evidence .....	47
<b>17</b>	<b>Information security aspects of business continuity management</b> .....	<b>48</b>
17.1	Information security continuity .....	48
17.1.1	Planning information security continuity .....	48
17.1.2	Implementing information security continuity .....	49
17.1.3	Verify, review and evaluate information security continuity .....	49
17.2	Redundancies .....	49
17.2.1	Availability of information processing facilities .....	49
<b>18</b>	<b>Compliance</b> .....	<b>50</b>
18.1	Compliance with legal and contractual requirements .....	50
18.1.1	Identification of applicable legislation and contractual requirements .....	50
18.1.2	Intellectual property rights .....	50
18.1.3	Protection of records .....	50

**ISO 27799:2016(E)**

18.1.4	Privacy and protection of personally identifiable information .....	51
18.1.5	Regulation of cryptographic controls .....	52
18.2	Information security reviews.....	52
18.2.1	Independent review of information security.....	52
18.2.2	Compliance with security policies and standards .....	52
18.2.3	Technical compliance review.....	53
<b>Annex A</b>	<b>(informative) Threats to health information security.....</b>	<b>54</b>
<b>Annex B</b>	<b>(informative) Practical action plan for implementing ISO/IEC 27002 in healthcare .....</b>	<b>59</b>
<b>Annex C</b>	<b>(informative) Checklist for conformance to ISO 27799.....</b>	<b>72</b>
<b>Bibliography</b>	.....	<b>98</b>

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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](http://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](http://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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 215, *Health informatics*.

This second edition cancels and replaces the first edition (ISO 27799:2008), which has been technically revised.

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## ISO 27799:2016(E)

## Introduction

This International Standard provides guidance to healthcare organizations and other custodians of personal health information on how best to protect the confidentiality, integrity and availability of such information. It is based upon and extends the general guidance provided by ISO/IEC 27002:2013 and addresses the special information security management needs of the health sector and its unique operating environments. While the protection and security of personal information is important to all individuals, corporations, institutions and governments, there are special requirements in the health sector that need to be met to ensure the confidentiality, integrity, auditability and availability of personal health information. This type of information is regarded by many as being among the most confidential of all types of personal information. Protecting this confidentiality is essential if the privacy of subjects of care is to be maintained. The integrity of health information is to be protected to ensure patient safety, and an important component of that protection is ensuring that the information's entire life cycle be fully auditable. The availability of health information is also critical to effective healthcare delivery. Health informatics systems is to meet unique demands to remain operational in the face of natural disasters, system failures and denial-of-service attacks. Protecting the confidentiality, integrity and availability of health information therefore requires health sector specific expertise.

Regardless of size, location and model of service delivery, all healthcare organizations need to have stringent controls in place to protect the health information entrusted to them. Yet many health professionals work as solo health providers or in small clinics that lack the dedicated IT resources to manage information security. Healthcare organizations therefore need clear, concise, and health-care-specific guidance on the selection and implementation of such controls. This International Standard is to be adaptable to the wide range of sizes, locations, and models of service delivery found in healthcare. Finally, with increasing electronic exchange of personal health information between health professionals (including use of wireless and Internet services), there is a clear benefit in adopting a common reference for information security management in healthcare.

ISO/IEC 27002 is already being used extensively for health informatics IT security management through the agency of national or regional guidelines in Australia, Canada, France, the Netherlands, New Zealand, South Africa, the United Kingdom and elsewhere. ISO 27799 draws upon the experience gained in these national endeavours in dealing with the security of personal health information and is intended as a companion document to ISO/IEC 27002. It is not intended to supplant the ISO/IEC 27000-series of standards. Rather, it is a complement to these more generic standards.

ISO 27799 applies ISO/IEC 27002 to the healthcare domain in a way that carefully considers the appropriate application of security controls for the purposes of protecting personal health information. These considerations have, in some cases, led the authors to conclude that application of certain ISO/IEC 27002 control objectives is essential if personal health information is to be adequately protected. ISO 27799 therefore places constraints upon the application of certain security controls specified in ISO/IEC 27002.

All of the security control objectives described in ISO/IEC 27002 are relevant to health informatics, but some controls require additional explanation in regard to how they can best be used to protect the confidentiality, integrity and availability of health information. There are also additional health sector specific requirements. This International Standard provides additional guidance in a format that persons responsible for health information security can readily understand and adopt.

In the health domain, it is possible for an organization (a hospital, say) to be certified using ISO/IEC 27001 without requiring certification against or even acknowledgement of ISO 27799. It is to be hoped, however, that as healthcare organizations strive to improve the security of personal health information, conformance with ISO 27799 as a stricter standard for healthcare will also become widespread.

### Objectives

Maintaining information confidentiality, availability, and integrity (including authenticity, accountability and auditability) are the overarching goals of information security. In healthcare, privacy of subjects of care depends upon maintaining the confidentiality of personal health information. To maintain

confidentiality, measures is also be taken to maintain the integrity of data, if for no other reason than that it is possible to corrupt the integrity of access control data, audit trails, and other system data in ways that allow breaches in confidentiality to take place or to go unnoticed. In addition, patient safety depends upon maintaining the integrity of personal health information, failure to do this can also result in illness, injury or even death. Likewise, a high level of availability is an especially important attribute of health systems, where treatment is often time-critical. Indeed, disasters that could lead to outages in other, non-health related, IT systems may be the very times when the information contained in health systems is most critically needed. Moreover, denial of service attacks against networked systems are increasingly common.

The controls discussed in this International Standard are those identified as appropriate in healthcare to protect confidentiality, integrity and availability of personal health information and to ensure that access to such information can be audited and accounted for. These controls help to prevent errors in medical practice that might ensue from failure to maintain the integrity of health information. In addition, they help to ensure that the continuity of medical services is maintained.

There are additional considerations that shape the goals of health information security. These includes the following:

- a) honouring legislative obligations as expressed in applicable data protection laws and regulations protecting a subject of care is right to privacy;<sup>1)</sup>
- b) maintaining established privacy and security best practices in health informatics;
- c) maintaining individual and organizational accountability among health organizations and health professionals;
- d) supporting the implementation of systematic risk management within health organizations;
- e) meeting the security needs identified in common healthcare situations;
- f) reducing operating costs by facilitating the increased use of technology in a safe, secure, and well managed manner that supports, but does not constrain current health activities;
- g) maintaining public trust in health organizations and the information systems these organizations rely upon;
- h) maintaining professional standards and ethics as established by health-related professional organizations (insofar as information security maintains the confidentiality and integrity of health information);
- i) operating electronic health information systems in an environment appropriately secured against threats;
- j) facilitating interoperability among health systems, since health information increasingly flows among organizations and across jurisdictional boundaries (especially as such interoperability enhances the proper handling of health information to ensure its continued confidentiality, integrity and availability).

#### Relation to information governance,<sup>2)</sup> corporate governance and clinical governance

While health organizations may differ in their positions on clinical governance and corporate governance, the importance of integrating and attending to information governance ought to be beyond debate as a vital support to both. As health organizations have become ever more critically dependent on information systems to support care delivery (e.g. by exploiting decision support technologies and trends towards “evidence based” rather than “experience based” healthcare), it has become evident that

1) In addition to legal obligations, a wealth of information is available on ethical obligations relating to health information, the code of ethics of the World Health Organization. These ethical obligations may also, in certain circumstances, impact health information security policy.

2) Note that in some countries, information governance is referred to as information assurance.