

**NATO STANDARD**

**AMedP-5.2**

**STANDARDS FOR DATA  
INTERCHANGE BETWEEN HEALTH  
INFORMATION SYSTEMS**

**Edition A Version 1**

**AUGUST 2018**



**NORTH ATLANTIC TREATY ORGANIZATION**

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**NATO LETTER OF PROMULGATION**

29 August 2018

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## CHAPTER 1 GENERAL INFORMATION

### 1.1 AIM

The aim of this publication is to standardize the technical and nomenclature standards to be used for the electronic exchange of personal medical data and medical information between the deployable Military Health Information Systems (MHIS) of NATO members. This publication does not direct what standards are to be used within national systems, but mandates that these systems must have the ability to transfer data to other national or NATO systems using the standards in Annex A.

### 1.2 AGREEMENT

Participating nations agree to implement the standards for data interchange included herein for communication with their national system and health technology in order to achieve interoperability for the electronic exchange of health information between nations supporting multinational, combined and joint operations.

### 1.3 TERMS AND DEFINITIONS

#### 1.3.1 Interoperability

Interoperability is the capability to communicate, execute programs, or transfer data among various functional units in a manner that requires the user to have little or no knowledge of the unique characteristics of those units. Health information enables systems to work together within and across national and organizational boundaries in order to advance the effective delivery of healthcare for individuals and communities.

#### 1.3.2 Clinical Encounter

The term "Clinical Encounter" describes:

- (1) An instance of direct provider/practitioner to patient interaction, regardless of the setting, between a patient and a practitioner vested with responsibility for diagnosing, evaluating or treating the patient's condition.
- (2) A contact between a patient and a practitioner who has responsibility for assessing and treating the patient at a given contact, exercising independent judgment.

### 1.4 GENERAL

Many of the NATO nations have automated their medical information in order to improve the quality of health care and reduce medical errors. Currently the transfer of personal medical data between nations, for the purpose of providing direct patient care or the transfer of medical information to the NATO commander, is difficult due to variability in National and military health data, semantics, and technical information system architectures.

Recent NATO and other coalition operations have emphasized the requirement for nations to exchange personal medical data in electronic format in order to support the provision of the best possible patient care. Improving communication among care providers through use of information technology systems allows clinicians to access all relevant patient information more quickly, no matter where that information is stored. Additionally, it can facilitate the complicated coordination required when patients are transferred from one care setting to another. The adoption of common technical and nomenclature standards is required to ensure that health information technology systems can meet operational, technical, and security requirements for the exchange of personal medical data.

Accordingly, a set of international health standards was reviewed and evaluated in reference to appropriateness for the management of text-based, image-based, video conferencing, and automated medical equipment data exchanges between NATO nations, and between the nations and appropriate NATO Command levels.

## **1.5 DETAILS OF THE AGREEMENT**

The standards for data interchange between systems provide a minimum level of standardization that will facilitate secure, reliable, accurate and timely exchange of personal medical data information between nations and within and between NATO member's medical facilities, as well as medical information between the nations and relevant NATO command levels. General guidelines and standards are described in Annex A.

## **1.6 PROTECTION OF PROPRIETARY RIGHTS**

There are proprietary rights associated with the use of International Standards Organization (ISO) or SDO standards. If used these proprietary rights must be respected.

## **1.7 IMPLEMENTATION OF THE AGREEMENT**

This AMedP is implemented when a nation fulfils its obligations under the STANAG, as described in its ratification reply.

**ANNEX A HEALTH INFORMATION STANDARDS TO BE USED WITHIN NATO  
MULTINATIONAL OPERATIONS**

This annex identifies the minimum standards for interchange between systems that NATO nations agree to use in order to achieve interoperability for the electronic exchange of health information.

	Technical Domain	Standard(s) To Be Used (as appropriate)
1	Imaging <ul style="list-style-type: none"> <li>• Dentistry (X-Ray)</li> <li>• ECG</li> <li>• Endoscopic pictures</li> <li>• Microscopic pictures</li> <li>• Nuclear Medicine</li> <li>• Radiology (X-Ray)</li> <li>• Ultrasound</li> <li>• Clinical pictures (not described elsewhere)</li> </ul>	DICOM <a href="http://dicom.nema.org/">http://dicom.nema.org/</a> DICOM DICOM DICOM / JPEG <a href="https://jpeg.org/">https://jpeg.org/</a> DICOM DICOM DICOM JPEG
2	Messaging (for example) <ul style="list-style-type: none"> <li>• Order Entry</li> <li>• Scheduling</li> <li>• Patient Administration</li> <li>• Patient Care</li> </ul>	Health Level 7 (HL7) <a href="https://www.hl7.org/">https://www.hl7.org/</a>
3	Laboratory Result including <ul style="list-style-type: none"> <li>• Names</li> <li>• Content</li> <li>• Data</li> </ul>	Health Level 7 (HL7) LOINC <a href="http://loinc.org/">http://loinc.org/</a> ELINCS <a href="http://www.chcf.org/projects/2009/elincs">http://www.chcf.org/projects/2009/elincs</a>
4	Medications <ul style="list-style-type: none"> <li>• Clinical Drug Template</li> <li>• Dosage Form</li> <li>• Ingredient</li> <li>• Package Name/Code</li> <li>• Product Name/Code</li> <li>• Drug Classification</li> </ul>	Anatomical Therapeutic Chemical (ATC) Classification System Codes <a href="http://www.who.int/classifications/atcddd/en/">http://www.who.int/classifications/atcddd/en/</a>

	<b>Technical Domain</b>	<b>Standard(s) To Be Used (as appropriate)</b>
5	Interventions/Procedures	ICD-10 <a href="http://www.who.int/classifications/icd/en/">http://www.who.int/classifications/icd/en/</a>
6	Immunizations	Health Level 7 (HL7) <ul style="list-style-type: none"> <li>• Clinical vaccine formulation (CVX) <a href="http://www.va.gov/TRM/StandardPage.asp?tid=6353">http://www.va.gov/TRM/StandardPage.asp?tid=6353</a></li> <li>• Manufacturer (MVX) <a href="http://www.va.gov/TRM/StandardPage.asp?tid=6354">http://www.va.gov/TRM/StandardPage.asp?tid=6354</a></li> </ul>
7	Patient Demographics Clinical Encounters Population Health Data	Health Level 7 (HL7) <a href="https://www.hl7.org/">https://www.hl7.org/</a>
8	Diagnosis/Problem Lists	ICD-10
9	Multimedia	Not yet defined
10	Text-Based Reports, including History and Physical	Health Level 7 (HL7) Clinical Document Architecture (CDA) <a href="http://iehr.eu/knowledge/what-is-hl7-cda/">http://iehr.eu/knowledge/what-is-hl7-cda/</a>
11	Personal Health Monitoring	Health Level 7 (HL7) IEEE <a href="https://standards.ieee.org/findstds/standard/healthcare_it.html">https://standards.ieee.org/findstds/standard/healthcare_it.html</a>



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