NATO STANDARD

AMedP-1.1

MINIMUM REQUIREMENTS FOR BLOOD, BLOOD DONORS AND ASSOCIATED EQUIPMENT

Edition B, Version 1

JULY 2026

NORTH ATLANTIC TREATY ORGANIZATION

ALLIED MEDICAL PUBLICATION

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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

NATO STANDARDIZATION OFFICE (NSO)

NATO LETTER OF PROMULGATION

13 July 2026

1. The enclosed Allied Medical Publication AMedP-1.1, Edition B, Version 1, MINIMUM REQUIREMENTS FOR BLOOD, BLOOD DONORS AND ASSOCIATED EQUIPMENT, which has been approved by the Allies in the MILITARY COMMITTEE MEDICAL STANDARDIZATION BOARD (MCMedSB), is promulgated herewith. The agreement of Allies to use this publication is recorded in STANAG 2939.

2. AMedP-1.1, Edition B, Version 1, is effective upon receipt and supersedes AMedP-1.1, Edition A, Version 1, which shall be destroyed in accordance with the local procedure for the destruction of documents.

3. This NATO standardization document is issued by NATO. In case of reproduction, NATO is to be acknowledged. NATO does not charge any fee for its standardization documents at any stage, which are not intended to be sold. They can be retrieved from the NATO Standardization Documents Database (https://nso.nato.int/nso/) or through your national standardization authorities.

4. This publication shall be handled in accordance with C-M(2002)60.

Thierry Poulette
Major General, FRA (A)
Director, NATO Standardization Office

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RECORD OF RESERVATIONS

CHAPTER	RECORD OF RESERVATION BY NATIONS

Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Documents Database for the complete list of existing reservations.

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RECORD OF SPECIFIC RESERVATIONS

[nation]	[detail of reservation]
FIN	National legislation doesn't allow the use of other NATO nations blood and blood components by national forces. Also, the pretesting of donated blood is strictly managed by national legislation.
FRA	AMedP-1.1: - §1.4: France will not apply blood group identification on a solid medium (disc, plate). This information is considered unsafe (especially on an unknown unconscious casualty). SRD-1 to AMedP-1.1: - §5.5.3: France does not currently use a unique number for tubes. This measure will be implemented later (via the single patient file). - §5.6.2b: France will not apply the recommendation of a two-year validity for training. It retains a three-year validity and new training before each operational deployment. - §5.7.2: France will not apply this recommendation, the unique screening session number is considered of minor interest. - §5.8.3b and §5.8.3d: France does not have a unique number on screening tubes (this measure will be implemented later) and does not have a unique screening session number. - §6.4.4: Although the quality of platelet function is lower beyond 15 minutes of collection time, France will not systematically destroy the bag containing plasma and red blood cells. - §7.7.1: France will not apply the recommendation for temperature. Indeed, complete traceability of the storage temperature of each pouch on the field is not feasible. - §8.7c: France will apply this recommendation, but the teachings described are not delivered in transfusion training modules; they are part of clinical modules.
HRV	The Croatian Armed Forces accept the principles of this standardization document and the document will be implemented when the necessary organizational, material and financial requirements are met for its adoption. The reservations relate to national legislation regulating transfusion activities, blood collection and testing, and restrictions/prohibitions on cross-border transport of blood and blood products in the Republic of Croatia.

HUN	The documents contain very useful and timely recommendations, but the current HUN national regulations are not conformable to these. National regulation modifications are needed to the implementation.
TUR	Türkiye supports the principles introduced in AMedP-1.1 Edition B regarding operational blood management. Blood support to the Turkish Armed Forces is primarily provided through the national civilian blood system under the responsibility of the Ministry of Health, including the Turkish Red Crescent and Ministry of Health blood banks. On naval platforms providing Role-2 medical support, blood testing capability and limited blood storage facilities are available; however, these capabilities do not include operational blood collection from donors. Operational blood collection procedures described under Category 2 blood (including emergency donor pool establishment and emergency blood collection from donors) are not currently implemented within the Turkish Armed Forces due to limitations in national legislation regulating blood donation and transfusion activities. Therefore, implementation of these procedures requires prior approval and legal authorization by the Ministry of Health.

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CHAPTER 1

1.1. AIM

The aim of this agreement is to facilitate interoperability among NATO Forces through a Common Blood Concept, which includes:

- a regulatory framework to enable the provision of blood and blood components as near to the point of need as practicable; and

- to allow blood and blood components to be exchanged between NATO Forces, by introducing minimum requirements for blood donation, testing, processing, labelling, transport, storage, and traceability.

1.2. PARTICIPATING NATIONS AGREEMENT

Participating Nations agree:

- that blood and blood components used for transfusion by or in support of NATO will be collected, tested, processed, labelled, transported, stored, and tracked in compliance with the requirements described in this agreement;

- to adopt standardized equipment, in form, fit and function, to facilitate collection and transfusion of blood and blood components;

- to a mutual exchange of information on blood management processes and procedures; and

- to facilitate interoperability by agreeing that if blood and blood components are acceptable within the regulatory framework of the supplying nation and this document, they would be acceptable for use by NATO.

1.3. GENERAL

The scope of this agreement covers blood and blood components regulated as, but not limited to, whole blood, red blood cells, plasma, cryoprecipitate and platelets stored fresh, refrigerated, frozen or dried.

1.4. ADMINISTRATIVE BLOOD GROUP IDENTIFICATION OF PERSONNEL

1. Blood group identification has administrative utility for planning and management of emergencies.

2. Advance typing of ABO blood group[1] can enable rapid identification of potential donors.

3. The ABO blood group of individuals should be clearly stamped on discs of indestructible material and/or identification (ID) card, and accuracy must be validated according to each Nation's assurance processes.

4. The ABO blood group shown on the identity disc and/or ID Card should not be routinely accepted as a substitute for blood typing of the donor or recipient but may have utility as a confirmatory check.

1.5. DETAILS OF EQUIPMENT TO BE USED

Blood transfusion equipment and consumables used on operations must be in accordance with applicable form, fit and function and the specifications in standards-related document (SRD)-1 to AMedP-1.1.

1.6. CATEGORIES OF BLOOD AND BLOOD COMPONENT

1. The following three categories relate to the system from which blood and blood components are sourced.

   a. **Category 1 blood**. Blood and blood components manufactured by NATO and PIAG[2] nations' licensed and/or registered blood establishments.

   b. **Category 2 blood**. Blood and blood components collected in an Area of Operations by NATO and PIAG nations in compliance with the related document.

   c. **Category 3 blood**. Blood and blood components not collected and processed by NATO or PIAG nations.

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[1] The ABO blood group system is the classification of human blood based on inherited properties of red blood cells as determined by the presence or absence of the antigens A and B, which are carried on the surface of the red cells. Persons may thus have type A, type B, type O, or type AB blood.

[2] PIAG - The Partner Interoperability Advocacy Group -PIAG- is an informal grouping of like minded nations established in 2015. The original seven signatories -Australia, Austria, Finland, Ireland, New Zealand, Sweden and Switzerland- represent their interests by advocating for interoperability between NATO. In the process of becoming NATO Allies, Finland and Sweden left PIAG in 2022, leaving the remaining five members -Australia, Austria, Ireland, New Zealand and Switzerland in charge.

2. Each category of blood and blood components has a different risk profile, which should be considered when planning operations. Considerations include: infection risk; clinical effectiveness; logistic constraints; and estimated operational requirement.

1.7. CHAIN OF RESPONSIBILITY

This section refers to the regulatory responsibility for the transfer of blood and blood components between Nations and/or Medical Treatment Facilities on Operations.

a. **Supplying Nation**. Overall assurance of blood and blood components from donation to final disposition remains the responsibility of the supplying Nation.

b. **Receiving Nation**. Nation in receipt of blood and blood components must provide sufficient information to demonstrate compliance with supplying Nation traceability and hemovigilance processes.

c. **Transport and Storage**. It is the responsibility of the Nation with custody of blood and blood components to ensure compliance with the standards relating to transport and storage.

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CHAPTER 2

2.1. CATEGORY 1 BLOOD: BLOOD AND BLOOD COMPONENTS MANUFACTURED BY NATO AND PIAG[3] NATIONS' LICENSED AND/OR REGISTERED BLOOD ESTABLISHMENTS (STANDARD) PROVISION

1. Blood and blood components collected, managed, and assured in NATO or PIAG Nations' licensed and/or registered blood establishments.

2. Acceptable standards within this category include those that meet or exceed those laid down by competent authorities of the respective NATO and PIAG Nations.

[3] PIAG - The Partner Interoperability Advocacy Group -PIAG- is an informal grouping of like minded nations established in 2015. The original seven signatories -Australia, Austria, Finland, Ireland, New Zealand, Sweden and Switzerland- represent their interests by advocating for interoperability between NATO. In the process of becoming NATO Allies, Finland and Sweden left PIAG in 2022, leaving the remaining five members -Australia, Austria, Ireland, New Zealand and Switzerland in charge.

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CHAPTER 3

3.1. CATEGORY 2 BLOOD: BLOOD COLLECTED ON OPERATIONS

1. Blood collected on operations describes blood and blood components donated and processed outside of licensed and/or registered blood establishments by NATO or PIAG forces, whether collected for an emergency or with the intent to store.

2. Category 2 blood is collected from a donor pool on operations, sometimes referred to as a 'walking blood bank'[4].

3.2. OPERATIONAL BLOOD COLLECTION

An operational blood collection may occur in either an emergency or for the purpose of storing for contingency. These are discreet capabilities and require different regulatory and governance processes and shall be described as follows.

a. **Emergency Blood Collection**. An emergency blood collection (EBC) describes the donation of blood or blood components with the intent to be transfused immediately to a known casualty.

b. **Contingency Blood Collection**. Contingency blood collection describes the process of collecting blood or blood components from donors with the intent of storage and subsequent issue. Whole blood is stored refrigerated, provided adequate blood storage infrastructure and assurance framework is available.

3.3. EMERGENCY DONOR POOL

1. Blood donations must be voluntary, and all blood donors should be assessed as fit to donate. Donors pre-screened in accordance with National standards and those set in related documents are described as an Emergency Donor Pool (EDP).

2. If no pre-screened (EDP) donors are available, non-pre-screened donors may be considered following application of the field screening questionnaire and blood grouping as outlined in related documents. Donations from non-pre-screened donors will confer greater risk to donor and recipient and should only be utilized when all other options have been exhausted.

[4] The term walking blood bank is not preferred, as it has different definitions across the alliance, involving different elements of the process from screening, blood donation, through to transfusion.

3.4. TRAINING AND COMPETENCY

1. A minimum curriculum for the training of individuals with responsibility for, and for those conducting all elements of operational blood collection is stated in the standard related document.

2. Individuals responsible for the authorization and management of blood collected on operations must be assessed by their Nation as competent.

3. Individuals associated with the process of collection, testing and transfusion of blood and blood components must be assessed by their Nation as competent.

3.5. PROCEDURES AND HAEMOVIGILANCE

1. Consistent and considered procedures must be in place to lower the risk to the donor and recipient to as low as reasonably practicable. Processes and systems must be considered to assure collection, storage, transport and transfusion.

2. All Nations should meet minimum standards with respect to documentation of blood and blood components and strive to meet their national standards with respect to traceability and hemovigilance.

CHAPTER 4

4.1. CATEGORY 3 BLOOD: BLOOD AND BLOOD COMPONENTS NOT COLLECTED OR PROCESSED BY NATO OR PIAG NATIONS

1. Category 3 blood and blood components have been collected, managed, and assured according to processes that do not align with either category 1 or category 2. Therefore, NATO cannot assure the quality of blood and blood components in this category.

2. A risk assessment of category 3 blood supply must be undertaken if being utilized. Examples of risk considerations are included in the related document.

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CHAPTER 5

5.1. BLOOD SUPPLY RISK ASSESMENT

1. Collection and transfusion of all blood and blood components is associated with risk to donor and recipient. Risk increases with the austerity of the environment, urgency, and inexperience of the practitioner.

2. Any blood supply risk must be balanced against the likely harm of withholding transfusion from a patient(s). Each member Nation must have protocols that inform decisions for individual patients made by appropriately qualified personnel.

3. ABO[5] incompatibility is a serious risk that can be immediately fatal. Inappropriate handling of blood may pose a risk that can also cause serious or life-threatening complications.

4. Risk of infection to the recipient can be reduced, but not eliminated, by donor selection and testing prior to donation, or testing of donated blood. No system can fully eliminate the risk of transfusion transmitted infection (TTI).

5. Category 1 blood and blood components are likely to be associated with the lowest risk of TTI. However, operational and clinical circumstances may require the use of category 2 or 3 blood and blood components as the risk may be lower than inability to transfuse.

6. Any individuals transfused with either categories 2 or 3 blood should have proactive follow-up for potential TTI. If possible, testing for TTI should be performed retrospectively on a sample from the transfused unit or from the donor at the time of donation.

7. Medical planners must consider the quantity and type of casualties likely to require blood, logistics of supply, storage solutions, testing capability, competency of deploying personnel and the risk associated with each blood category when planning an operation and selecting a course of action.

[5] The ABO blood group system is the classification of human blood based on inherited properties of red blood cells as determined by the presence or absence of the antigens A and B, which are carried on the surface of the red cells. Persons may thus have type A, type B, type O, or type AB blood.

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Annex A

RELATED DOCUMENTS

ISBT code 128	Internationally approved blood labelling system
MONARCH code	French blood labelling system
Eurocode IBLS	Eurocode International blood labelling system
CFR Title 21	United States Code of Federal Regulations, Title 21: Parts 200-299 and 600-799
AABB STANDARDS	Standards for Blood Banks and Transfusion Services in the current edition
BSQR	Blood Standards and Quality Regulations, UK
Canadian standards	Health Canada Guidance document: blood regulations Health Canada
Council of Europe	Blood Supply Contingency and Emergency Plan (B-SCEP). Edited by European Directorate for the Quality of Medicines & HealthCare (EDQM).
Council of Europe	Guide to the Preparation, Use and Quality Assurance of Blood Components, in the current edition. Edited by European Directorate for the Quality of Medicines & HealthCare (EDQM).
Directive 2002/98/CE	Standards of Quality and Safety for the Collection, Testing, Processing, Storage and Distribution of Human Blood and Blood Components
European Union	Regulation on standards of quality and safety for substances of human origin (SoHO) intended for human application

AMedP-1.1(B)(1)