

# **External Quality Assessment of Transfusion Laboratory Practice**

## **Guidelines on Establishing an EQA Scheme in Blood Group Serology**



**World Health Organization  
Geneva**

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# Preface

Blood transfusion is an essential and life-saving support within the health care system, yet the safety of transfusion is not assured globally, particularly in countries with less developed health care systems. Threats associated with transfusion include:

- Inadequate supplies of blood and blood products to meet the needs of all patients requiring transfusion
- Risk of transfusion-transmitted infections
- Technical and clerical errors in the processing and testing of blood
- Inappropriate prescribing of blood and unnecessary transfusions
- Errors in the administration of blood and blood products.

The World Health Organization (WHO) advocates the following integrated strategy to national health authorities to promote the safety and accessibility of blood and reduce the risks associated with transfusion.

- 1 Establishment of a well-organized, nationally-coordinated blood transfusion service (BTS) that can provide adequate and timely supplies of safe blood for all patients when needed.
- 2 Collection of blood only from voluntary non-remunerated blood donors belonging to low-risk populations and selected using stringent criteria.
- 3 Quality-assured testing of all donated blood for transfusion-transmissible infections, including HIV, hepatitis viruses, syphilis and other infectious agents, blood groups and compatibility.
- 4 Reduction in unnecessary transfusions through the appropriate clinical use of blood and the safe administration of blood and blood products.
- 5 Implementation of effective quality systems, covering all aspects of BTS activities, including quality management, development and implementation of quality standards, effective documentation systems, training of all staff and regular quality assessment.

Through advocacy, training, materials development and technical support, WHO supports its Member States in implementing each element of this strategy for blood safety.

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## WHO QUALITY MANAGEMENT PROGRAMME

Recognizing that effective quality systems are required to ensure consistent quality and the safety of blood transfusion, WHO has established the Quality Management Programme (QMP) for blood transfusion services. The QMP is a major global initiative to support Member States in ensuring the overall safety of the transfusion process, from the recruitment of blood donors to the transfusion of blood and blood products and follow-up of the recipients. It was developed to support national capacity-building in the quality management of blood transfusion services and the implementation of quality systems. An Aide-Mémoire: *Quality Systems for Blood Safety* outlines the requirements for quality systems and Recommendations on *Establishing Quality Systems for Blood Transfusion Services* provide practical guidance in the establishment of quality systems.

Since the launch of the QMP in 2000, BTS directors and quality managers from over 100 countries have been trained in the basic principles of quality management for blood transfusion services. Initially conducted at regional and inter-regional levels, Quality Management Training (QMT) has cascaded to national and local levels, with follow-up and support from WHO, WHO Collaborating Centres and other centres of excellence designated as Regional Quality Training Centres. A QMT *Facilitator's Toolkit* provides a standardized curriculum and training materials to ensure consistency in teaching in all regions of the world.

## EXTERNAL QUALITY ASSESSMENT

The QMP also addresses quality assessment, an integral component of a quality system. External quality assessment (EQA) is an important, but very specific and specialized, part of the monitoring process. Formal EQA schemes provide regular, independent assessment of performance to identify problems and weaknesses with the objective of improving performance and ensuring blood safety. EQA schemes for blood transfusion safety focus primarily on blood group serology and testing for transfusion-transmissible infections.

WHO has established regional EQA schemes in blood group serology and virology to increase access by BTSs to reliable external quality assessment. As the number of participating laboratories increases, it is expected that more countries will wish to establish national EQA

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