

Summary report on the

# **Experts' consultative meeting to develop the regional strategy on blood safety and self-sufficiency (2014–2018)**

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Amman, Jordan  
18–20 June 2014



**World Health  
Organization**

Regional Office for the Eastern Mediterranean

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## **1. Introduction**

An expert's consultative meeting to develop the regional strategy on blood safety and self-sufficiency (2014–2018) was held in Amman, Jordan, on 18–20 June 2014. The consultative meeting was attended by experts in transfusion medicine from countries of the Eastern Mediterranean Region (Afghanistan, Bahrain, Egypt, Islamic Republic of Iran, Jordan, Pakistan, Qatar, Saudi Arabia, Sudan, Tunisia, United Arab Emirates and Yemen), and other regions (Bhutan, Malaysia, Singapore), along with staff from WHO headquarters, the Regional Office for the Eastern Mediterranean, and WHO Pakistan.

The objectives of the meeting were to: provide an overview and validation of the status of national blood transfusion services in the Member States of the Eastern Mediterranean Region; discuss the role that partners, including major regional stakeholders, institutions and agencies, can play in improving blood safety and national systems in the countries of the Region; and develop the regional strategy on blood safety and self-sufficiency (2014–2018) with key strategic elements, action points and responsibilities.

Blood transfusions support complex medical and surgical procedures and are an essential component of health care systems contributing to improving the quality of, and saving, millions of lives every year. However, more than 30 years after the first World Health Assembly resolution (WHA28.72) to address blood safety, equitable access to safe blood and blood products, and their safe and rational use remain major challenges. Despite these challenges, demand for blood and blood products continues to grow globally due to the increasing longevity of peoples' lives and the increasingly sophisticated clinical procedures now available, with the result that national blood supplies are rarely sufficient to meet requirements. The health-related Millennium Development Goals of reducing child mortality, improving maternal health and combating diseases cannot be fully

achieved unless close and concerted efforts are paid to the availability of safe and adequate blood and blood products. Access to sufficient and secure supplies of safe blood and blood products, provided within a coordinated national blood service, is also a vital component in achieving the goal of universal health coverage.

The WHO strategy for blood safety and availability for improving patient health and saving lives, endorsed by the World Health Assembly, addresses five key areas: establishment of a well-organized, nationally-coordinated blood transfusion service; collection of blood from voluntary unpaid blood donors from low-risk populations; quality-assured testing for transfusion-transmissible infections, blood grouping and compatibility testing; safe and appropriate use of blood; and quality systems covering the entire transfusion process.

Universal access to safe blood transfusion requires the strengthening and monitoring of the implementation of key strategies to ensure access to a safe and sufficient blood supply through 100% voluntary blood donation and 100% quality-assured testing of donated blood. There is also need to optimize blood usage for patient health, develop quality systems in the transfusion chain, strengthen the workforce, keep pace with new developments and build effective partnerships.

In 2010, the World Health Assembly (WHA63.12) defined self-sufficiency in the supply of safe blood and blood products based on voluntary non-remunerated donation, and the security of that supply, as important national goals to prevent blood shortages. The resolution urged Member States “to take all necessary steps to establish, implement and support nationally-coordinated, efficiently-managed and sustainable blood and plasma programmes according to the availability of resources, with the aim of achieving self-sufficiency”.

Several countries in the Eastern Mediterranean Region face multiple hurdles in the availability of adequate and safe blood and blood products. Countries continue to face challenges with respect to their national policies, poor quality systems, insufficient blood supplies, increasing risks of transfusion-transmittable infections, and inappropriate clinical use of blood and blood products. It is thus critical that countries recognize the importance of blood transfusion and identify ways to integrate it into their health care systems as a cross-cutting service.

Each country needs to develop or review their strategic framework to achieve blood safety and self-sufficiency for the overall goal of universal health coverage, so that the focus is on the health needs of the patients and blood donors rather than on the blood products. Ensuring the provision of safe blood and blood products to the community requires political will, government commitment, administrative resolve and support in terms of resources, both human and financial.

The regional strategy on blood safety and self-sufficiency is being developed to address these issues with the overall goal that every country develops national systems that ensure an adequate, safe, secure and affordable supply of blood and blood products to meet patient needs.

The strategy provides a framework to assist countries in implementation of the WHO strategy for blood safety, increasing political commitment by policy-makers, educating consumers and monitoring progress using the indicators developed. It proposes support for countries in establishing national blood transfusion programmes and implementing action in accordance with their existing resources. The process of implementation also includes institutional capacity-building, through creating partnerships between multiple stakeholders, including government, academia, nongovernmental organizations and the private sector.

WHO will work closely with countries and provide technical support, in coordination with key partners, to ensure that blood safety and self-sufficiency occupies a prominent place in the national health plans of a country. WHO will collaborate with policy-makers to promote investment in national blood programmes to make them a cost-effective national resource.

Several challenges continue to face countries of the Region in achieving the objectives of safety, adequacy, quality and self-sufficiency in the availability of blood and blood products.

A situation analysis of the blood transfusion services conducted in 2014 found that national blood systems are fragmented and there continues to be a great shortage of blood and blood products, with demand far exceeding the available supply. Blood banks continue to operate under the umbrella of laboratory services in a few countries, with no independent authority. The number of voluntary non-remunerated blood donors is few and there is continued dependence on family and replacement donors. The quality testing of donated units is not guaranteed and inappropriate clinical use of blood and blood products continues.

Despite the availability of effective prevention strategies, hepatitis B (HBV) and hepatitis C (HCV) transmission continues at alarming rates (with an estimated 4.3 million persons infected with HBV and 800 000 persons with HCV each year) in countries of the Region, resulting in a high burden of disease and risk of transfusion-transmittable infections. The cost to treat patients with chronic HBV or HCV infection is estimated to be over US\$ 125 billion and is expected to increase over time as additional persons become infected.

Although most countries in the Region report high levels of screening for all three pathogens (HIV, HBV and HCV), national programmes frequently do not have accurate information on practices at the



community level. For example, in a survey of 324 blood banks in Pakistan, 97.82% of centres perform screening for HIV, and 100% screen for HBV and HCV, while syphilis and malaria screening is performed in only 63.95% of centres. Voluntary blood donors account for 15.4% of donors, while 84.6% are family replacement donors. In another small study of 25 blood banks in Pakistan, only 55% had the capacity to screen for HIV infection and 23% to screen for HCV infection; half of the facilities reported regularly utilizing paid donors and a high percentage of facilities reported using replacement donors.

In countries in situations of complex emergency, blood banks often experience problems with access to screening reagents and in the quality of laboratory services. Use of paid donors is common in many areas and studies of paid donors indicate a high prevalence of blood-borne pathogen infection. Problems with screening are highlighted by the relatively high percentage of patients with acute HBV or HCV infection reporting receipt of a transfusion in the six months prior to illness, suggesting that there is continued transmission due to transfusion of unscreened blood.

Thalassaemia is the most prevalent genetic blood disorder in Pakistan with a prevalence of 5–6%. The huge number of these patients is the primary reason for the growth of private sector blood transfusion centres in Pakistan, with thalassaemia patients forming the single largest group of clients of the blood transfusion service in the country. As an example of how economically crippling blood related diseases are, the national thalassemia prevention programme found that the burden of thalassaemia management in Pakistan is more than 4% of the current health-related expenditures of the government. The total expenditure on the management of thalassaemic children is enormously high, with an average annual cost of iron-chelation therapy, blood transfusion and other supportive therapy being US\$ 3000 per patient, when the average income in Pakistan is US\$ 100 per month.

Challenges in blood safety include systemic weaknesses, particularly in low-income and middle-income countries. Under-funded and inadequately staffed health systems negatively affect the development of an effective service. Despite promotion and advocacy, the increase in voluntary blood donation falls far short of the growing need of transfusion services. The situation is more acute in countries facing complex emergencies. The safety and availability of blood is particularly under threat among refugee populations and in situations where health systems have been weakened as a result of armed conflict, displacement of populations and other complex emergencies. In addition, there are gaps in adequate and sustainable financing, human resources, capacity, infrastructure, availability of reagents, kits, equipment and consumables, and procurement and supplies.

## **2. Conclusions**

The meeting reviewed the situation of blood transfusion services in the Region and how to develop a regional strategy that would strengthen national systems to ensure universal and equitable access to safe and quality blood and blood products and blood-related services at all levels. The way forward, time-specific targets and monitoring indicators for strengthening blood safety were also discussed.

The regional strategy for blood safety and self-sufficiency (2014–2018) presents a brief overview of the major issues and challenges faced by countries with respect to their blood transfusion services. It suggests ways of addressing these challenges and strengthening the national blood transfusion services.

The overall goal of the regional strategy is to provide guidance for countries in putting in place national systems that will enable and ensure access to supply of adequate, safe, secure and affordable blood and blood products to meet all patient needs. The regional strategy provides a framework to assist countries in implementing the global WHO strategy

for blood safety, and to ensure universal and equitable access to safe, quality and efficacious blood and blood products. To implement the strategy, national blood policies and plans, legislative and regulatory frameworks, and efficient delivery systems are needed. To this end, the regional strategy aims to support countries in establishing national policies and strategic plans, and to implement action in accordance with national health policies, strategies and resources.

The strategy aims to support Member States to develop country-specific objectives and desirable outcomes. It provides a framework to assist countries in identifying priority areas of work and implementing necessary interventions and activities in accordance with their national situation and available resources to ensure that: blood services are well-organized and blood supplies well-managed; blood donors' health and safety are safe-guarded; all patient blood needs are met on time and in adequate quantities; blood and blood products are safe, quality and clinically effective; and there is integration at all levels and across the national health care system.

The regional strategy addresses the leadership, governance, organization and management aspects needed for the development of national blood policies and strategic plans, as well as the legislative frameworks and regulatory oversight required, and the establishment of national advisory committees and focal points for blood transfusion services. It advocates for adequate resources, both human and financial, to sustain operations and the use of cost-effective tools to introduce the new technologies that are becoming increasingly critical to ensure quality and safety.

The regional strategy also emphasizes the need to put mechanisms in place to build a pool of voluntary non-remunerated blood donors and gradually phase out family/replacement donors. The importance of donor selection, recruitment, retention, deferral and follow-up is also detailed.

The regional strategy emphasizes the importance of having trained and competent human resources, appropriate physical infrastructure, procurement and supply management, monitoring and evaluation methodologies and reliable information management systems. It promotes quality, biosafety, occupational health, waste management, use of appropriate new technologies and the clinical use of blood and blood products.

The regional strategy also suggests examples of targets and indicators that countries can develop and outlines how WHO can assist countries in strengthening their national blood transfusion services.

### **3. Recommendations**

#### *WHO*

1. Finalize the regional strategy on blood safety and self-sufficiency for implementation in countries.
2. Organize an intercountry meeting for further discussion and agreement on the regional strategy.
3. Propose the regional strategy for inclusion on the agenda of the Regional Committee for the Eastern Mediterranean with a view to its adoption.
4. Provide advocacy and technical support to countries for the development and implementation of national policies and strategic plans on blood safety and self-sufficiency based on the regional strategy.

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