Protecting the Blood Supply During Infectious Disease Outbreaks

Guidance for National Blood Services

World Health Organization

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Preface

This guidance document has been produced by WHO to assist blood services in the development of national plans to respond to any emerging infectious threats to the sufficiency or safety of the blood supply, whether from an existing infectious agent that is changing in incidence and spread, or from a newly identified infectious agent. It is intended that this document be followed to guide the national blood service through the process of planning how to respond in a timely, controlled and appropriate way to any specific infectious threat that may subsequently emerge. It is acknowledged that it is not only the blood supply that may be affected by such emerging infectious threats; in those countries undertaking transplantation, the supply of cell, tissues and organs may also be threatened. Increasingly, blood services are taking overall national responsibility for transplantation in their capacity as the organization responsible for the collection, processing, storage and supply of cells, tissues and organs. This approach is both sensible and appropriate, as the overall donor selection and screening processes are the same or very similar. This guidance document can therefore also be used to assist those bodies responsible for the provision of cells, tissues and organs to prepare for an emerging infectious threat.

In the preparation of the document, WHO has tried to ensure that it has included all of the elements that would need to be considered by blood services, providing some background rationale for their inclusion and guidance on different response options that may be available. Importantly, blood services must consider both the threat from transmission of an infectious agent via transfusion and the threat from infectious agents that may have no or a very low risk of transfusion transmission but may have public health consequences. Such consequences could include interruption to the blood supply because of a lack of donors, with a resultant reduction in component availability; whilst the demand for some blood components may reduce, demand for platelet components is more likely to remain at a constant level. The consequences of illness in the population could also include disruption of a wide range of support services and supply chains. Although the two main threats are different and have different outcomes, they are both critical to the functioning of the blood service.

The elements included are those for which a blood service would need to obtain the relevant data, local or otherwise relevant to the country, to be used to inform their own risk assessments of that particular infectious threat. However, it is not possible to predict the nature of every infectious threat to the blood supply, and it is therefore expected that blood services will review the elements in the document and assess their own situation, needs, capabilities and resources, together with any additional relevant country-specific factors, in the development of their own response plans.

It may be useful if, ahead of any emerging threat, blood services review these guidelines and consider using them to develop a template for a national plan. Such a template would include all of the key elements that a blood service would need to consider when planning a specific response, and would lead directly to a risk assessment and subsequently to a decision-making process. Specific data about any emerging infectious threat can be entered into the template as they become available, enabling decisions to be made as much as possible on the basis of available evidence.

The annexes contain additional information and other factors that may assist blood services in the development of their own plans. They include an assessment tool that can be used to determine the level of threat of an individual emerging infectious agent, and basic risk assessment frameworks that may help in identifying and assessing risks to the blood service in relation to both loss of donors and donations and risk of transmission of infection via transfusion. Understanding the level of risk then allows the appropriate response to be determined and, as and when necessary, implemented.

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