SFHHCS10
Determine compatibility of transfusion or transplantation products

Overview

This standard relates to the selection of blood, blood components and products and transplantation products to provide those suitable to meet an individual's clinical requirement for transfusion and/or transplantation This will involve investigations to determine compatibility and/or adverse reactions arising from the intended transfusion and/or transplantation. The standard covers investigations to confirm blood and/or their components for transfusion and the compatibility for organs and tissue for transplantation. Individuals will be assessed against this standard for the range of compatibility testing undertaken within their work practice and level of responsibility.

Users of this standard will need to ensure that practice reflects up to date information and policies.

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Performance criteria

You must be able to:

P1 the principles of blood group and cellular genetics relevant to transfusion and transplantation

P2 the principles of antigens and antibodies, their classification systems, the role of complement and their clinical significance in determining compatibility

P3 the principles of screening for and the techniques for antibody/antigen detection and identification

P4 the range of blood test samples required from patients and donors for compatibility testing

P5 the clinical impact of process delays and the importance of determining compatibility testing with the suitable degree of urgency for clinical need

P6 how the different levels of urgency for products can affect the testing protocols used within your work practice

P7 the type and causes of adverse reactions within transfusion and transplantation and the range of methods to detect incompatibility or pathogen reduction of the donation

P8 the importance of safe sample handling procedures and safeguarding against contamination of the test samples and the consequences of failing to do so

P9 the type and range of investigations for detecting the different classes of antibodies and antigens related to determining compatibility

P10 the underpinning principles of automated, semi-automated and manual techniques used for blood group systems and tissue typing and their application

P11 how to select the required number and type of investigations to generate answers to clinical request for transplantation or transfusion

P12 where appropriate, how to detect factors that cause in vivo immunological sensitisation, incompatibility or rejection reactions

P13 the protocols and procedures for dealing with non-conformance or variances in test results and/or equipment failure

P14 the importance of ensuring the requested product is safe for issue and the parameters used to assess this

P15 the methods and conditions of storage of the products and components

P16 the importance of an audit trail in transfusion and transplantation testing

P17 the current national legislation, guidelines, local policies and protocols which affect your work practice

P18 the policies and guidance that clarify your scope of practice, accountabilities and the working relationship between yourself and others

P19 work within your level of competence, responsibility and accountability

P20 apply appropriate health and safety measures, infection prevention and control and personal protective equipment to minimise the risks

associated with intended investigation

P21 seek advice and support from relevant others where a request or query is outside your level of responsibility

P22 confirm sample integrity and suitability for test and identify any special factors which may affect urgency and prioritisation

P23 minimise clinical impact of process delays by analysing with suitable degree of urgency for clinical need

P24 where the clinical need requires urgent transfusion, issue universal donor products or blood components according to local policy and protocols

P25 where appropriate, prepare relevant reagents and check operational performance of relevant equipment and resources

P26 test the samples according to protocol through application of correct procedures to avoid cross contamination

P27 interpret results with reference to controls and analyse the results for normal and abnormal responses

P28 check anomalous, adverse, incompatible or inconclusive results and undertake repeat or additional testing to detect the incompatible classes of antigens/antibodies

P29 where appropriate to the clinical need, retest previous incompatible samples against alternative donor products to achieve compatibility

P30 validate the compatible test results and inform the requester that the product/component is available for issue

P31 maintain full, accurate and legible records of the compatibility testing and store in the correct location in line with current legislation, guidelines, local policies and protocols

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Knowledge and understanding

You need to know and understand:

K1 your own level of competence, authority and specialist knowledge base related to determining the compatibility of transfusion and/or transplantation products

K2 the range of health and safety measures, infection prevention and the relevant protective controls and containment and their importance applicable to your work practice

K3 the principles of blood group and cellular genetics relevant to transfusion and transplantation

K4 the principles of antigens and antibodies, their classification systems, the role of complement and their clinical significance in determining compatibility

K5 the principles of screening for and the techniques for antibody/antigen detection and identification

K6 the range of blood test samples required from patients and donors for compatibility testing

K7 the clinical impact of process delays and the importance of determining compatibility testing with the suitable degree of urgency for clinical need

K8 how the different levels of urgency for products can affect the testing protocols used within your work practice

K9 the type and causes of adverse reactions within transfusion and transplantation and the range of methods to detect incompatibility or pathogen reduction of the donation

K10 the importance of safe sample handling procedures and safeguarding against contamination of the test samples and the consequences of failing to do so

K11 the type and range of investigations for detecting the different classes of antibodies and antigens related to determining compatibility

K12 the underpinning principles of automated, semi-automated and manual techniques used for blood group systems and tissue typing and their application

K13 how to select the required number and type of investigations to generate answers to clinical request for transplantation or transfusion

K14 where appropriate, how to detect factors that cause in vivo immunological sensitisation, incompatibility or rejection reactions

K15 the protocols and procedures for dealing with non-conformance or variances in test results and/or equipment failure

K16 the importance of ensuring the requested product is safe for issue and the parameters used to assess this

K17 the methods and conditions of storage of the products and components

K18 the importance of an audit trail in transfusion and transplantation testing

K19 the current national legislation, guidelines, local policies and protocols which affect your work practice

K20	the policies and guidance that clarify your scope of practice, accountabilities and the working relationship between yourself and others

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Additional Information

External Links

This standard links with the following dimension within the NHS Knowledge and Skills Framework (October 2004):

Dimension: HWB8 Biomedical investigation and intervention

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Suite	Healthcare Science
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