

NHS Fife

Local Report ~ *July 2008*

# **Blood Transfusion**



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NHS Quality Improvement Scotland (NHS QIS) is committed to equality and diversity. We have assessed the performance assessment function for likely impact on the six equality groups defined by age, disability, gender, race, religion/belief and sexual orientation. For this equality and diversity impact assessment, please see our website ([www.nhshealthquality.org](http://www.nhshealthquality.org)). The full report in electronic or paper form is available on request from the NHS QIS Equality and Diversity Officer.

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# 1 Setting the scene

NHS Quality Improvement Scotland (NHS QIS) was set up by the Scottish Parliament in 2003 to take the lead in improving the quality of care and treatment delivered by NHSScotland. NHS QIS does this by setting standards and monitoring performance, and by providing NHSScotland with advice, guidance and support on effective clinical practice and service improvements.

The Scottish National Blood Transfusion Service (SNBTS) is responsible for collecting, processing, storing and supplying all blood and blood components in Scotland and NHS boards are responsible for ordering and managing their supplies in a safe and effective manner. The Scottish Executive introduced a programme of work to improve and support transfusion practice in Scotland and, as a consequence, NHS QIS appointed a project group to develop clinical standards for blood transfusion practices. The project group developed four standards, covering: core principles; clinical management – pre-transfusion; clinical management – hospital transfusion laboratory; and clinical management – blood and blood component collection, administration and monitoring. The Clinical Standards for Blood Transfusion were published in September 2006. These include details of the project group which set the standards and are available on request from NHS QIS or can be downloaded from the website ([www.nhshealthquality.org](http://www.nhshealthquality.org)).

## About this report

This report presents the findings from the peer review of **NHS Fife's** performance against the blood transfusion standards.

The review process has three key phases: preparation prior to the visit; the visit; and the report production and publication following the visit. (See flow chart in Appendix 2 for further detail.) During the visit, each multidisciplinary review team assesses performance using the categories 'met', 'not met' and 'not met (insufficient evidence)', as detailed below.

- **'Met'** applies where the evidence demonstrates the standard and/or criterion is being attained.
- **'Not met'** applies where the evidence demonstrates the standard and/or criterion is not being attained.
- **'Not met (insufficient evidence)'** applies where no evidence is available for the review team, or where the evidence available is insufficient to allow an assessment to be made.

A final category **'not applicable'** is used where a standard and/or criterion does not apply to the NHS board under review.

Each review team is led by an experienced reviewer, who is responsible for guiding the team in their work and ensuring that team members are in agreement about the assessment reached. Membership of the review team visiting **NHS Fife** on **1 April 2008** can be found in Appendix 3.

## 2 Summary of findings

### 2.1 Overview of local service provision

Fife is a relatively small region situated in east-central Scotland and has a population of around 358,858<sup>1</sup>. The majority of the population live in urban areas, of which Dunfermline, Glenrothes and Kirkcaldy are the largest in the region.

#### Local NHS system and services

Fife NHS Board is responsible for improving the health of the local population and for the delivery of the healthcare required. It provides strategic leadership and has responsibility for the efficient, effective and accountable performance of the NHS in Fife.

At the time of the review visit, NHS Fife provided acute, primary and maternity services throughout the NHS board area. Transfusion procedures are carried out in nine areas within NHS Fife: Victoria Hospital, Kirkcaldy; Forth Park Maternity Hospital, Kirkcaldy, which covers the maternity and neonatal units for Fife; Queen Margaret Hospital, Dunfermline; Adamson Hospital, Cupar; Cameron Hospital, Leven; St Andrews Memorial Hospital; Glenrothes Hospital; Whiteman's Brae Hospital, Kirkcaldy; and Stratheden Hospital, Cupar.

Further information about the local NHS system can be accessed via the website of NHS Fife ([www.show.scot.nhs.uk/fhb/index.htm](http://www.show.scot.nhs.uk/fhb/index.htm)).

NHS Fife's Victoria Hospital supplies blood and blood components to the primary care division across Fife. NHS Fife's blood bank laboratories are supplied with blood and blood components by Edinburgh & South East Scotland Blood Transfusion Service, based at the Royal Infirmary of Edinburgh.

In the 12 months prior to the review visit, approximately 15,591 red cell units were transfused within NHS Fife.

The NHSScotland Better Blood Transfusion Programme (BBTP) is supported by the transfusion practitioner who is assisted by the hospital transfusion team and link trainers.

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<sup>1</sup> General Register Office for Scotland. Mid-2006 Population Estimates Scotland: Population Estimates by Age and Sex and Administrative Area. First published on 26 April 2007. Revised 27 July 2007. Available from: <http://www.gro-scotland.gov.uk/files>

## 2.2 Summary of findings against the standards

A summary of the findings from the review is presented in this section. A detailed description of performance against the standards/criteria is included in Section 3.

### Core principles

NHS Fife has an established, active, hospital transfusion committee (HTC) that was formed in 1997. The HTC reports directly to the clinical governance steering group, whose chairman is also a member of the NHS Fife clinical governance committee. The HTC meet quarterly and includes membership from staff representatives from Queen Margaret Hospital, Victoria Hospital, and St Andrews Memorial Hospital. The review team encouraged the board to broaden its HTC membership by including representatives from paediatric services, other community hospitals and the SNBTS.

NHS Fife provided good evidence of multidisciplinary audit being carried out throughout the NHS board area. Audits can be proposed by any members of staff in NHS Fife. The HTC agrees what blood transfusion audits will be carried out and will appoint a working group of various staff who carry out the audit feedback findings and recommendations to the HTC for sign off and action. NHS Fife uses several methods of communication when disseminating audit findings to staff and stakeholders. The review team noted in particular the SHARE newsletter as a good communication tool which is circulated to all staff and ward areas across NHS Fife.

There is an established hospital transfusion team (HTT) that supports the HTC in promoting a training and education programme for staff involved in the hospital blood transfusion process. However, when the BBTP Level 1: Safe Transfusion Practice training programme was introduced, the board agreed that this would be led by the HTC, therefore, the HTT does not formally meet on a regular basis. The board recognised that a more active and formal approach was required for the HTT and, at the time of the review visit, staff reported that a schedule for future monthly HTT meetings was being developed. The transfusion practitioner provides updates to the HTC on BBTP progress.

NHS Fife has a standard operating procedure (SOP) which describes the procedures for recording and investigating serious adverse blood reactions and events. There is a computerised risk management reporting system (DATIX) in operation across the NHS board area. The review team commended the board for its robust incident reporting framework.

There are electronic blood stock management systems in place at Victoria Hospital and Queen Margaret Hospital, which provide an audit trail of all blood and blood component stock movement from the blood stock fridge to the return of the unit label to the laboratory. At the time of the review visit, Forth Park Maternity Hospital staff were using a paper system to monitor stock levels within its blood stock fridge, which is supplied by the blood bank laboratory at Victoria Hospital, however, staff reported that discussions were taking place to consider introducing the electronic tracking system to Forth Park Maternity Hospital. Electronic and paper copies of traceability documentation is maintained and securely stored for 30 years.

Staff engaged in the blood transfusion process within NHS Fife are trained to establish and maintain patient identification at every stage of the blood transfusion process. However, at the time of the review visit, identification documentation did not include patient gender as part of the minimum data set at every stage of the blood transfusion process. The review team encouraged the board to develop a robust patient identification policy to address the issue of recording gender as part of the minimum data set at every stage of the blood transfusion process and to develop a risk-assessed form of identification.

NHS Fife has adopted a red wristband system to alert staff to patients with special requirements, for example allergies or special circumstances. The wristband prompts staff to check the patient's medical records for further details. NHS Fife has also introduced a yellow wristband to alert staff to patients not wishing to receive a blood transfusion for religious reasons.

### **Clinical management – pre-transfusion**

NHS Fife staff reported that the blood and blood components clinical procedures manual outlines the procedure for staff to record discussions with patients on treatment options and alternatives to transfusion. While staff reported that discussions do take place, at the time of the review visit, there was no evidence available to confirm that detailed discussions with patients regarding transfusion are being documented. The introduction of a transfusion care pathway currently in development, will address this issue.

A wide range of leaflets are available in all major transfusion areas. The transfusion practitioner is responsible for ensuring all clinical areas have sufficient stock of leaflets and are informed of any updates to patient leaflets. Patient information leaflets can be downloaded and printed from the NHS Fife intranet.

In emergency situations, where pre-transfusion discussion is not possible, staff would endeavour to establish the identity of the patient through checking their personal belongings and making enquiries with accompanying relatives as to whether they have any treatment preferences.

Findings from a small transfusion documentation audit carried out in January 2008 at Victoria Hospital showed full compliance with prescriptions being signed by qualified practitioners across the NHS board area.

### **Clinical management – hospital transfusion laboratory**

Both blood bank laboratories within NHS Fife are accredited by the Clinical Pathology Association (UK) Ltd (CPA) and are compliant with the Medicines and Healthcare products Regulatory Agency (MHRA).

NHS Fife has a competency-based training assessment system in place at both laboratories and training records are maintained. All biomedical scientists (BMSs) are registered with the Health Professions Council.

Both NHS Fife blood bank laboratories have stock management systems in place. Blood stocks are shared between Victoria Hospital and Queen Margaret Hospitals to minimise wastage rates. Units of O RhD negative blood are rotated regularly and expiry dates are tracked. Blood wastage rates are reported to the HTC. The review team commended the board for its robust traceability system.

### **Clinical management – blood and blood component collection, administration and monitoring**

There was evidence of theory and practical training being undertaken across the NHS board area. The BBTP is delivered by the transfusion practitioner, supported by the HTT and link trainers. The review team commended the board on the high number of senior medical staff who had undertaken training, and the introduction of BBTP Level 1 training as part of the senior medical staff's annual performance development assessment system. However, challenges had been identified in the low number of staff participating in training across all staff groups. At the time of the review visit, staff reported that an education and training plan had been developed to address the current training needs of staff employed within NHS Fife.

Through audit, NHS Fife has identified challenges around recording the minimum data set requirements on blood transfusion documentation for patients. The review team encouraged the board to develop a robust positive patient identification policy to address this issue.

NHS Fife's blood and blood components clinical procedures manual describes the monitoring process for patients receiving a blood transfusion. However, findings from a small audit found that timings of observations were not being adhered to and there was inconsistency on where results of these observations were recorded. Staff reported that discussions were taking place around introducing a transfusion care pathway which would address these issues.

The review team commended NHS Fife for its robust incident reporting framework (DATIX) and procedures used to record and report near miss incidents and serious adverse blood reactions to Serious Hazards of Transfusion (SABRE) and Serious Hazards of Transfusion (SHOT).

### 3 Detailed findings against the standards

#### Standard 1a: Core Principles

##### **Standard Statement**

*There are systems in place supporting clinical governance to ensure safe, effective and appropriate blood transfusion.*

##### **NHS Fife**

##### **Essential Criteria**

*1a.1: There is an established, active, multidisciplinary hospital transfusion committee (HTC) that has defined responsibilities and accountability to the chief executive/NHS board via the clinical governance structure.*

##### **STATUS: Met**

There is an established, active, multidisciplinary NHS Fife hospital transfusion committee (HTC) which was formed in 1997. The HTC committee meets quarterly, membership includes representatives from Victoria Hospital, Kirkcaldy; Queen Margaret Hospital, Dunfermline; and St Andrews Memorial Hospital. The review team noted that minutes submitted as evidence did not appear to include a representative from Scottish National Blood Transfusion Services (SNBTS). The board informed the review team that a representative from SNBTS had been invited to all HTC meetings. The review team encouraged the chair of the HTC to broaden membership of the group to include representatives from paediatric services, other community hospitals, and SNBTS to attend future HTC meetings. The HTC reports directly to the clinical governance steering group. The medical director for the operational division receives minutes from the HTC, he is a member of the NHS Fife clinical governance committee and chairman of the clinical governance steering group and is the main link with the HTC. The review team recommended the board update its organisation chart to define more clearly the reporting structure between the HTC, clinical governance and risk management groups.

*1a.2: The HTC has roles and responsibilities as outlined in MEL(1999)9 and HDL(2003)19. These include involvement in multi-professional audit, education and training, development and modification of guidelines and protocols, and involvement of stakeholders.*

##### **STATUS: Met**

Staff reported that an audit programme was in place which included the Scottish hip revision study, which was ongoing at the time of the review visit; national GI bleeding audit; NHS Fife wristband audit; an ongoing renal registry national audit; maximum surgical blood ordering system (MSBOS) review; and audit of crossmatch and transfusion practice for elective caesarean sections.

Audit activity is proposed by various members of staff. The HTC agrees a working group to lead the audit, outcomes from which are co-ordinated by the working group and proposals on ways forward are presented and discussed at the HTC. Following these discussions, appropriate actions are identified. The review team noted that several useful audits related to blood transfusion had been conducted and evidence of new practice implementation following outcomes from these audits was provided. For example an audit carried out in October 2004 to follow crossmatch and transfusion practice for elective caesarean sections at Forth Park Maternity Hospital, Kirkcaldy, revealed that women attending for planned caesarean sections were routinely having blood crossmatched in preparation for transfusion which indicated a diversion from agreed policy. As a result of the findings, a memo from the consultant obstetrician was circulated to appropriate staff members reiterating correct policy procedures. A re-audit of crossmatch and transfusion practice for elective caesarean sections at Forth Park Maternity Hospital carried out in March 2005, showed a significant improvement regarding adherence to policy, with crossmatches being performed only in appropriate circumstances.

Audit data are disseminated widely to relevant staff groups and stakeholders using various methods of communication, for example the SHARE newsletter, presentations and training. Electronic and hard copies of audit reports are available from the clinical effectiveness group. NHS Fife aims to have all policies posted onto the intranet in the near future for staff to access.

Changes to policies and protocols are undertaken by the NHS Fife policy group which disseminates the revised policies to relevant staff groups and stakeholders. All policies are ratified and disseminated in accordance with local guidance. The HTC is responsible for developing policies and protocols specific to blood transfusion. At the time of the review visit, the review team noted that a number of NHS Fife policies/procedures were overdue for review. Staff reported that a new policy template had been developed and was awaiting ratification by the policy group, which had resulted in the delay. Staff reported that all new policies are reviewed annually and advice from authors on the timings for reviewing existing policies would be sought. The review team encouraged the board to ensure that the ratification of the new policy template be carried out as a priority to ensure up-to-date policies were available to all NHS Fife staff.

The review team encouraged NHS Fife to generate a regular multidisciplinary audit programme and expand the participation of other specialties in audit. The role of the clinical effectiveness group in supporting audit work was noted as a strength for the board by the review team.

*1a.3: The HTC, in collaboration with the clinical governance committee, implements the NHSScotland Better Blood Transfusion Programme (BBTP).*

**STATUS: Met**

There is an established hospital transfusion team (HTT). Membership includes the transfusion practitioner, lead clinicians from Queen Margaret Hospital and Victoria Hospital and chief biomedical scientists (BMSs). A decision that the HTC leads the implementation of the Better Blood Transfusion Programme (BBTP) Level 1: Safe Transfusion Practice training programme was taken by the board on the introduction of BBTP. The transfusion practitioner attends HTC meetings and reports on all BBTP related work progress. Therefore, at present, the HTT group does not meet formally. The hospital transfusion practitioner, who undertakes staff training, meets weekly with individual HTT members to discuss and take forward any issues arising from HTC meetings. The HTT had identified the requirement to develop a more active group and plans are in progress to hold regular monthly HTT meetings. The review team encouraged the board to introduce a schedule for regular HTT monthly meetings.

The transfusion practitioner is responsible for BBTP Level 1 training throughout NHS Fife with the support of link trainers, some of whom were noted to no longer be practising. The review team was informed that a review of link trainers is to be carried out to reduce the number to a more manageable group.

*1a.4: The HTC reviews all reports of adverse events and near miss incidents relating to blood transfusion and, in response, implements changes in practice where necessary.*

**STATUS: Met**

The NHS Fife incident management policy sets out a course of action which clearly details the procedures to be followed by staff to effectively record, investigate and manage adverse or near miss incidents across NHS Fife. All incidents are reported through a computerised risk management reporting system (DATIX). Staff complete a three part incident/near miss reporting form for all clinical and non-clinical incidents along with a traffic light grading matrix to determine the extent of the incident. Relevant coloured copies of the incident form are distributed in accordance with local policy. Red incidents are reported to NHS Fife risk management team for action, and changes in practice are implemented where appropriate. Lessons learned from incidents are shared with relevant staff and stakeholders via staff meetings, the SHARE newsletter and risk management conferences. The review team noted the NHS Fife's SHARE newsletter as particularly informative. Reports of serious adverse events or reactions and near miss incidents are also submitted to Serious Adverse Blood Reactions and Events (SABRE) and the Serious Hazards of Transfusion (SHOT) initiative.

The transfusion practitioner reviews all adverse events and near miss incidents at regular intervals through a filtering facility available in DATIX, which highlights specific incidents related to blood transfusion. The transfusion practitioner attends monthly quality assurance laboratory meetings to discuss all adverse events and near miss incidents relating to blood transfusion. Information relating to adverse events or incidents are collated by the transfusion practitioner, the chief BMS and laboratory quality assurance officer's. The transfusion practitioner reports this information to the HTC (adverse events and near miss incidents is a standing item on the HTC agenda).

## Standard 1b: Core Principles

### Standard Statement

*The NHS board has a system in place to ensure that every unit of blood component received into the hospital transfusion laboratory can be unmistakably traced to its recipient, or to its final fate if not transfused.*

### NHS Fife

### Essential Criterion

*1b.1: There is a validated system to ensure that evidence of unmistakable traceability is generated, stored and accessible for 30 years.*

### STATUS: Met

NHS Fife has a standard operating procedure (SOP) to provide staff with guidance on blood transfusion traceability. The blood bank laboratories in Victoria Hospital and Queen Margaret Hospital use the 'bag and tag' system which issues a traceability label from the pre-transfusion stage. The label is tracked throughout the journey of the blood unit until its return to the laboratory to confirm transfusion of the blood to the patient. The returned section of the traceability label is electronically scanned and the information securely stored both in paper and electronic form for the recommended period of 30 years. At present, Forth Park Maternity Hospital is using a paper-based system for monitoring stock levels within its blood fridge, however, the board are considering introducing the 'bag and tag' system into Forth Park Maternity Hospital.

The electronic (computerised) system used to store traceability information generates a daily report of unreturned traceability labels and follow-up action is taken by laboratory staff who contact the relevant wards to check the final fate of units within the timescales set out in the traceability flow chart.

The review team commended NHS Fife for its comprehensive traceability flow chart which is displayed in all relevant ward areas.

## Standard 1c: Core Principles

### Standard Statement

*There is a robust system in place to establish patient identification details and maintain this at every stage of the clinical transfusion process.*

NHS Fife

### Essential Criteria

*1c.1: The minimum identification data set (surname, forename, sex, date of birth and unique identification number, eg Community Health Index [CHI]) is used at every stage of the clinical transfusion process to positively identify the patient.*

### STATUS: Not met

At the time of the review visit, the minimum data set in use across NHS Fife included four of the recommended five identifiers (surname, forename, date of birth and a unique identification number). A recent wristband audit carried out in August 2007 confirmed that gender was not routinely recorded as part of the minimum data set. The omission of gender at each stage of the clinical transfusion process means that the board has narrowly failed to meet this standard criterion.

The findings from the wristband audit also showed that the Community Health Index (CHI) number was not always recorded on the wristband and, in these cases, the hospital number would be detailed. On occasions when patients were transferred from one hospital to another their wristband would contain several hospital numbers, which caused confusion for staff when recording minimum data set information. The board has identified this as an issue and staff reported that a decision to use the CHI number in future for positive patient identification recording had been agreed. One of the recommendations following the outcome of this audit is to develop an NHS Fife wide wristband/identification policy that will include specialist areas such as the special care nursery at Forth Park Maternity Hospital. The introduction of a board-wide positive patient identification policy will detail the use of the CHI number when recording the minimum data set for patients.

All staff involved in the blood transfusion process are required to undertake BBTP Level 1 training which includes reference to ensuring positive patient identification. However, the board had identified challenges regarding low uptake of staff training in the blood transfusion process. Across NHS Fife, the transfusion practitioner has implemented statutory monthly face-to-face blood transfusion training sessions for nursing staff. Staff reported that the consultant haematologist had been instrumental in providing blood transfusion training for senior medical staff and training now features on their annual performance development assessment process. There are a large number of link trainers in place across NHS Fife, some of whom are no longer practicing. The transfusion practitioner reported that a review of link trainers would be carried out to reduce the number to a more manageable group.

*1c.2: All patients must be identifiable at all times. Inpatients and day patients must wear an identification wristband. If the wristband becomes inaccessible for any reason, an alternative, risk-assessed form of identification is adopted immediately.*

**STATUS: Not met**

The NHS Fife blood and blood component clinical procedures manual states that patients receiving a blood transfusion must wear a wristband at all times. However, a wristband audit undertaken in August 2007 found a number of issues relating to positive patient identification and a small number of patients not wearing a wristband. Outcomes from this audit were discussed at the HTC and a working group was identified to lead investigations into resolving these issues which included information technology (IT) solutions for each of the three sites. At the time of the review visit, staff reported that they were nearing the end of their investigations and recommendations would be fed back to the next HTC meeting.

There is no formal alternative risk-assessed form of identification if the wristband becomes inaccessible for any reason. The review team recommended that the board develop a robust positive patient identification system that includes a risk-assessed alternative to wristbands.

*1c.3: There is a system (eg distinctive wristbands) to alert qualified practitioners to patients who have specific transfusion requirements, including the wish to not be transfused.*

**STATUS: Met**

NHS Fife has introduced a red wristband system to alert qualified practitioners to refer to patient's medical notes for information regarding allergy or special circumstances and requirements. The board also uses a yellow wristband to identify patients who do not wish to be transfused for religious reasons, although it was noted that patients have the right to refuse to wear this should they not wish to do so.

*1c.4: For patients whose identity cannot be confirmed (eg unconscious patients or patients with communication difficulties), a minimum of gender and one unique identifier (eg accident and emergency number or CHI number) is essential for positive patient identification.*

**STATUS: Met**

The NHS Fife major haemorrhage protocol includes guidance for staff on how to manage unidentified patients admitted to the accident and emergency (A&E) department. The procedure notes a patient would be allocated a typenex number and recorded as 'unnamed male' or 'unnamed female' until the patient's identity is confirmed.

Guidelines are in place to assist staff when identifying patients with communication difficulties. Language Line 24-hour telephone translation services along with Fife community interpreting services are used across the NHS board area to support communication and establish positive patient identification details where appropriate.

## Standard 1d: Core Principles

### Standard Statement

*The NHS board has a strategy for management of blood shortages.*

### NHS Fife

### Essential Criterion

*1d.1: Emergency blood management arrangements (EBMA) are established as defined in HDL(2005)25.*

### STATUS: Met

NHS Fife has an established emergency blood management arrangements (EBMA) group. The roles and responsibilities of individual staff members are clearly defined in its terms of reference. Following discussions at the HTC, an action plan for managing EBMA was drafted and signed off by the HTC. The NHS Fife laboratory EBMA document provides guidance on procedures for staff in times of blood shortages.

## Standard 2a: Clinical Management – Pre-Transfusion

### Standard Statement

*The decision to transfuse is made following consideration of the potential risks and benefits of, and the alternatives to, transfusion. Where possible this is discussed between the clinician and patient (or their legal guardian) in advance of transfusion.*

### NHS Fife

### Essential Criteria

*2a.1: The patient's records contain evidence that the reason for transfusion of blood or blood components has been explained and discussed with the patient. This includes discussion of valid alternatives to transfusion and the option to refuse.*

### STATUS: Not met (insufficient evidence)

Staff are made aware through educational material and the NHS Fife blood and blood components clinical procedures manual of the importance of ensuring that patients' casenotes contain evidence that the reason for transfusion of blood and blood components has been discussed and includes valid alternatives to transfusion and the option to refuse. There is a patients/parents/guardian agreement form which includes a specific section to be ticked if blood transfusion is not to be undertaken. At the time of the review visit, staff assured the review team that discussions do take place, however, NHS Fife was unable to provide documented evidence to confirm compliance with this standard criterion. NHS Fife is addressing this issue through discussions regarding the development of a transfusion care pathway.

*2a.2: Leaflets explaining the risks and benefits of, and alternatives to, transfusion are readily available for patients who may require to be, or have been transfused.*

### STATUS: Met

NHS Fife reported that there is a high awareness of patient information leaflets among NHS Fife nursing staff. Information leaflets are available in all major blood transfusion areas. The transfusion practitioner distributes leaflets to all clinical areas. Ward staff are responsible for ensuring stock levels are monitored and supplies are requested from the transfusion practitioner. Leaflets are also available on the NHS Fife intranet.

At the time of the review visit, the transfusion practitioner reported that NHS Fife plans to introduce a new style of leaflet currently under development by SNBTS, whereby transfusion information leaflets will contain a removable sticker which, once given to the patient, will be attached to the patient's notes as evidence they have received the leaflet. The review team noted that the introduction of the new leaflet would strengthen the already well-developed leaflet distribution process across NHS Fife.

*2a.3: Where pre-transfusion discussion is not possible (eg in an emergency) there is a system, compatible with the patient's clinical needs, to investigate and act in accordance with the patient's treatment preferences. This includes compliance with an advance decision document.*

#### **STATUS: Met**

In emergency situations, for example when an unconscious patient is admitted to the A&E department, staff ensure that measures are taken to try and establish the identity of a patient by checking their personal belongings and asking any accompanying relatives or friends to confirm their identity and whether they have any treatment preferences.

The review team noted that NHS Fife has an operational policy 'non blood medical management – Jehovah's Witness' which states that a yellow wristband is offered to Jehovah's Witness patients as a means of alerting staff to ensure their religious beliefs are respected. The board encourages Jehovah's Witness patients to carry a signed advance directive and a copy of this is also placed in a prominent place in the medical notes.

Board staff reported that NHS Fife's blood transfusion training and education materials have been adapted to include information for staff on the management of advance directives. The training material also highlights the importance of ensuring patients receive post-transfusion information in situations where a pre-transfusion discussion had not been possible.

However, while the review team acknowledged the board's good practice of using yellow wristbands to alert staff to patient treatment preferences, it was further informed by board staff that in addition to yellow wristbands, a clear band with a yellow insert could also be used to identify patients of the Jehovah's Witness faith. The review team considered this practice to be potentially confusing for staff and would strongly recommend that staff follow the guidance as detailed in the board policy and use only one colour of yellow wristband.

*2a.4: When pre-transfusion discussion has not taken place, the reasons for transfusion (based on risks and benefits) are discussed with the patient and written information offered retrospectively.*

#### **STATUS: Not met (insufficient evidence)**

At the time of the review visit, staff reported that retrospective discussions following transfusion, and the recording of such discussions in patients notes, has been a challenge for the board. NHS Fife reported that with the introduction of a transfusion care pathway, currently under development, this will address the issue.

## Standard 2b: Clinical Management – Pre-Transfusion

### Standard Statement

*Positive patient identification at the time of sampling and the use of a minimum identification data set on samples and request forms is essential for pre-transfusion testing and blood component requests.*

NHS Fife

### Essential Criterion

*2b.1: Blood samples for transfusion purposes are obtained and labelled in accordance with local protocols, which are based on national guidelines.*

### STATUS: Not met

Blood samples are labelled in accordance with local protocols. However, these guidelines do not include gender as part of the minimum data set and, therefore, the review team agreed the board cannot meet this standard criterion. It was acknowledged that positive patient identification will be addressed in the new positive patient identification policy and the implementation of the proposed transfusion care pathway.

## Standard 2c: Clinical Management – Pre-Transfusion

### Standard Statement

*Blood and blood component prescribing is the responsibility of a qualified practitioner.*

### NHS Fife

### Essential Criteria

*2c.1: All prescriptions for blood and blood components are signed by a qualified practitioner.*

### STATUS: Met

The NHS Fife blood and blood components clinical procedures manual states that blood and blood components can be prescribed on a blood transfusion prescription form or an intravenous fluid prescription chart. Local policy also states all prescriptions must be signed by a medical officer. A small nursing transfusion documentation audit carried out in Victoria Hospital showed 100% compliance with this standard criterion.

The review team encouraged the board to carry out a similar audit across its other sites.

*2c.2: Blood and blood component prescriptions specify: blood component to be administered; number of units (millilitres in paediatric patients) to be transfused; duration of transfusion; any special requirements; and any special instructions.*

### STATUS: Not met

The review team acknowledged that the board had undertaken a small blood transfusion prescribing audit in January 2008 which confirmed that the blood and blood component prescriptions specified: the blood component to be administered; the number of units to be infused; the duration of transfusion; any special instructions; and special requirements.

Blood components were noted to be prescribed on both the blood transfusion prescription form and the intravenous fluid prescription chart. However, staff reported that the board is considering using the intravenous fluid prescription chart solely for blood transfusion prescribing.

While the review team recognised that the prescription forms used across NHS Fife did contain all essential prescribing requirements, the audit confirmed that not all prescriptions documented the duration of transfusion and, therefore, considered the board not to be fully compliant with this standard criterion. Results of the audit findings will be presented to the HTC for consideration and action.

## Standard 3a: Clinical Management – Hospital Transfusion Laboratory

### Standard Statement

*Laboratory operations comply with current regulatory requirements.*

### NHS Fife

### Essential Criteria

*3a.1: All transfusion laboratories within the NHS board are accredited by Clinical Pathology Accreditation (UK) Ltd (CPA) or equivalent and are compliant with the Medicines and Healthcare products Regulatory Agency (MHRA) requirements.*

### STATUS: Met

NHS Fife has two blood bank laboratories. Both hospital blood bank laboratories are accredited with Clinical Pathology Accreditation (UK) Ltd (CPA) and are also fully compliant with the Medicines and Healthcare products Regulatory Agency (MHRA) requirements.

*3a.2: Competency-based training and assessment systems are in place and training records are maintained.*

### STATUS: Met

Robust departmental training plans are in place for laboratory staff. All laboratory staff are registered with OrasGold™ online recording and assessment system. There are five computers which have been set up and are available to laboratory staff for online training.

The laboratory manager, together with assistance from the quality assurance officer, is responsible for ensuring that all blood bank laboratory staff receive competency-based training and assessment in line with CPA requirements. Training records, which include competency levels, are documented and maintained by individual laboratory staff members. All qualified BMSs are registered with the Health Professions Council and are committed to continuing professional development that provides a range of learning activities which health professionals maintain and develop throughout their career to ensure that they retain their capacity to practise safely, effectively and legally within their evolving scope of practice.

## Standard 3b: Clinical Management – Hospital Transfusion Laboratory

### Standard Statement

*Procedures are in place to optimise blood use and minimise wastage.*

NHS Fife

### Essential Criteria

*3b.1: Protocols endorsed by the HTC are in place, including but not limited to: the maximum surgical blood ordering schedule (MSBOS); massive blood loss; major incidents; and emergency blood management arrangements.*

**STATUS: Met**

Evidence submitted for the review visit detailed that the following protocols were in place: MSBOS; massive blood loss; major incidents; and EBMA.

*3b.2: There is a stock management system to eliminate excess inventory and reduce waste, supported by an information technology (IT) system.*

**STATUS: Met**

There are stock management systems in place at Victoria Hospital, Queen Margaret Hospital and Forth Park Maternity Hospital. Blood and blood component stocks are shared between both blood bank laboratories to help minimise wastage, and daily stock checks ensure the best use of blood and blood components. Protocols for the emergency issue of O RhD negative red cells are also in place and stocks of specialist blood, if unused, are rotated into normal stock for appropriate use. Throughout NHS Fife, stocks of O RhD negative blood are rotated regularly and expiry dates tracked.

There is an IT system in place that supports blood stock management and provides a full audit trail of all blood stock electronically scanned onto the system. Wastage rates are discussed at HTC meetings. The review team commended NHS Fife for its robust traceability system and its traceability flow chart available in all relevant ward areas.

*3b.3: In collaboration with clinical specialties, laboratory staff participate in audit of transfusion issues.*

**STATUS: Met**

There was good evidence of NHS Fife's involvement in multidisciplinary local and national audit projects. Feedback on audit findings is provided to all appropriate staff groups using various methods of communication. Hospital blood bank laboratory staff assist the transfusion practitioner with clinical and self-audit activity.

## Standard 4a: Clinical Management – Blood and Blood Component Collection, Administration and Monitoring

### Standard Statement

*Positive patient identification is performed against the blood component and any accompanying documentation at every stage of the clinical transfusion process.*

NHS Fife

### Essential Criteria

*4a.1: Only staff who have completed the BBTP continuing education programme (or equivalent) appropriate to their role can participate in the clinical transfusion process.*

### STATUS: Not met

The review team was informed that all new staff receive appropriate BBTP Level 1 training for their role in the blood transfusion process as part of their induction. Staff are encouraged to complete blood transfusion training using the OrasGold™ online recording and assessment system, and the learn blood transfusion website ([www.learnbloodtransfusion.org.uk](http://www.learnbloodtransfusion.org.uk)) which forms part of the theoretical competency assessment. Monthly elearning drop in sessions have been introduced by the transfusion practitioner for all staff. Newly appointed porters shadow existing porters until they are able to demonstrate competency in the collection and movement of blood. Face-to-face training sessions specific to the phlebotomist's role in the transfusion process are provided by the transfusion practitioner. BBTP Level 1 training is compulsory for all foundation year one (FY1) junior doctors as it is a requirement of the General Medical Council (GMC) registration.

Staff reported that the consultant haematologist had been instrumental in blood transfusion training for senior medical staff. Figures to date show more than half of NHS Fife's consultants have completed face-to-face BBTP Level 1 training, the review team commended the board on its training figures for senior medical staff and the inclusion of blood transfusion training in senior medical staff's annual appraisal development system. However, significant challenges have been identified in the low number of staff participating in training across other staff groups. A training and education action plan has been developed to address these challenges. At present, there is no formal NHS Fife process to prohibit staff participating in the blood transfusion process if they are not trained. At the time of the review visit, staff reported that discussions for the introduction of a process which prevents untrained staff from participating in the transfusion process had taken place, and changes to the blood and blood components clinical procedure manual may be required when it is reviewed to reflect this process.

NHS Fife is participating in the national BBTP pilot for the Trainers and Assessors Accreditation Programme (TAAP) and associated competency tools. NHS Fife plans

to implement competency assessment following the recommendations from the TAAP pilot.

*4a.2: The minimum identification data set is recorded on all transfusion documentation (see standard criterion 1c.1).*

**STATUS: Not met**

Board staff reported that a small nursing transfusion documentation audit carried out in January 2008 confirmed that gender was not being recorded as part of the minimum data set on all blood transfusion documentation. Discussions are in progress to develop a transfusion care pathway which will address this issue.

## Standard 4b: Clinical Management – Blood and Blood Component Collection, Administration and Monitoring

### Standard Statement

*Patients are monitored for any adverse events or reactions during and after the transfusion process as clinically indicated.*

#### NHS Fife

#### Essential Criteria

*4b.1: Patients are monitored according to hospital transfusion policy and any untoward events (including suspected adverse reactions) are immediately clinically managed and promptly reported to the HTL.*

#### STATUS: Not met

Staff reported that patients receiving a blood transfusion have their pulse, temperature and blood pressure recorded prior to transfusion. The patient's temperature and pulse would be recorded 15 and then 30 minutes after the start of each unit of blood component, and thereafter, pulse, temperature and blood pressure would be recorded hourly until the end of the transfusion as detailed in local protocols. Any signs of transfusion reactions are reported immediately and managed in accordance with local guidelines. However, a small nursing transfusion documentation audit carried out in January 2008 concluded that there was a lack of consistency where observations were being recorded and the timings of the observations. NHS Fife is considering introducing a blood transfusion care pathway to address these issues. Recording patient observations will also be addressed at staff training sessions.

The review team encouraged the board to progress with the introduction of a transfusion care pathway which would provide staff with an adequate documentation system for recording individual transfusion episodes, and also ensure that staff involved in the blood transfusion process receive appropriate training.

*4b.2: Serious adverse events and near miss incidents are reported on the clinical incident reporting system in accordance with local protocols.*

#### STATUS: Met

Adverse clinical events and near miss incidents are recorded on the DATIX adverse incident management system. The system ensures that appropriate follow-up action is taken using root cause analysis methodology. Investigations are carried out by laboratory staff, medical staff, nursing staff and the transfusion practitioner. Incidents are discussed at monthly haematology and blood transfusion quality assurance meetings and laboratory committee meetings, and information is fed back

to the HTC. The review team commended NHS Fife for its robust incident reporting framework.

*4b.3: Reports of serious adverse events or reactions and near miss incidents are submitted to Serious Adverse Blood Reactions and Events (SABRE) and the Serious Hazards of Transfusion (SHOT) initiative by the relevant staff.*

**STATUS: Met**

There are designated individuals in both blood bank laboratories who are responsible for reporting serious adverse events or reactions and near miss incidents to SABRE and the SHOT initiative.

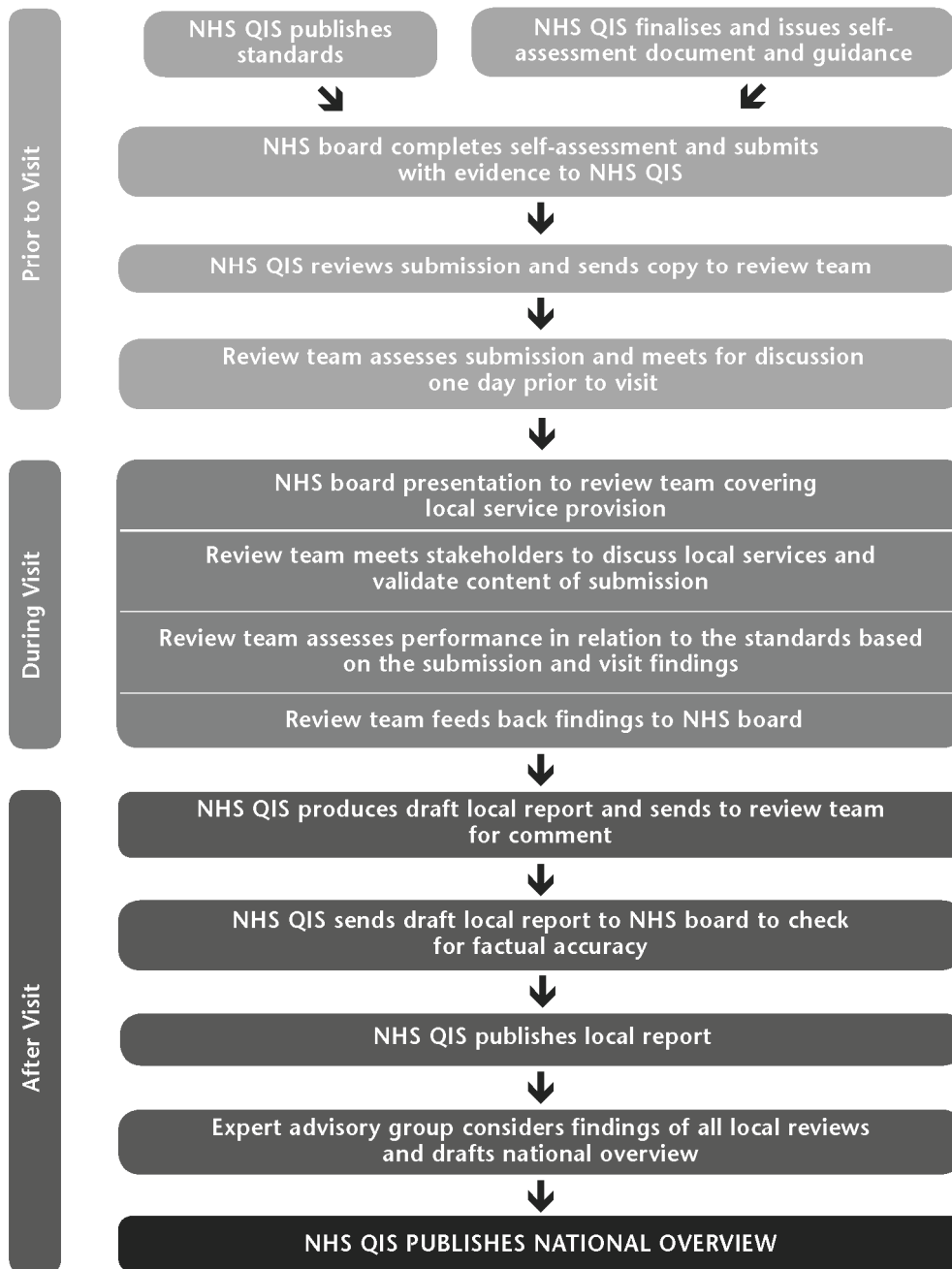
## Appendix 1 – Glossary of abbreviations

### Abbreviation

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<b>A&amp;E</b>	accident and emergency
<b>BBTP</b>	Better Blood Transfusion Programme
<b>BCSH</b>	British Committee for Standards in Haematology
<b>BMS</b>	biomedical scientist
<b>CHI</b>	Community Health Index
<b>CPA</b>	Clinical Pathology Accreditation (UK) Ltd
<b>EBMA</b>	emergency blood management arrangements
<b>FY1</b>	foundation year one
<b>GMC</b>	General Medical Council
<b>HTC</b>	hospital transfusion committee
<b>HTL</b>	hospital transfusion laboratory
<b>HTT</b>	hospital transfusion team
<b>IT</b>	information technology
<b>MHRA</b>	Medicines and Healthcare products Regulatory Agency
<b>MSBOS</b>	maximum surgical blood ordering schedule
<b>NHS QIS</b>	NHS Quality Improvement Scotland
<b>SABRE</b>	Serious Adverse Blood Reactions and Events
<b>SHOT</b>	Serious Hazards of Transfusion
<b>SNBTS</b>	Scottish National Blood Transfusion Service
<b>SOP</b>	standard operating procedure
<b>TAAP</b>	Trainers and Assessors Accreditation Programme

## Appendix 2 – Review process



## Appendix 3 – Details of review visit

The review visit to NHS Fife was conducted on 1 April 2008.

### Review team members

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**Miss Kirsteen Eydmann (Observer)**

Project Officer

During the visit, members of the review team met with consultant and nursing staff, blood bank laboratory staff, transfusion practitioners and support staff from across the NHS board area.

The composition of each team varies, and members have no connection with the NHS board they are reviewing. Both of these factors facilitate the sharing of good practice across NHSScotland, and ensure that each review team assesses performance against the standards rather than make comparisons between one NHS board and another. The team remit does not include reviewing the work of individual healthcare professionals, variations in practice (and potential quality) within a service will be encountered and subsequently reported.



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