

**A Framework to Support
Nurses and Midwives
Making the Clinical Decision
and
Providing the Written Instruction
for Blood Component Transfusion**

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The representative from the Royal College of Midwives (RCM) was unable to attend the workshop however, a thank you is extended to Mervi Jokinen (RCM, Practice and Standards Development Adviser) for her advice and support.

The final content of this document has been reviewed by the Nursing Midwifery Council, Royal College of Nursing, Royal College of Midwives, UK Blood Services Forum, National Blood Transfusion Committee (England), Scottish Clinical Advisory Group, Regional Transfusion Committee (Northern Ireland) and the Welsh Clinical Advisory Group.

Executive Summary

This framework document was written following a multidisciplinary workshop set up in October 2008 to advise on the content. It is intended to provide clearly defined guidance, to those experienced nurses and midwives who wish to extend their role, to include making the clinical decision for blood component transfusion and providing the written instruction in a safe and appropriate manner. The framework has been developed as a response to the changing needs of the patient and in recognition that services to patients could be improved by using the untapped knowledge and expertise of experienced nurses and midwives. Many nurses and midwives work more closely with patients requiring blood transfusion than other health professionals, and are in a position to deliver the most appropriate care within a defined pathway. There are also advantages to the wider team of a nurse or midwife with advanced skills extending their role such as:

- stability for rotating teams
- acute assessment skills
- problem solving skills
- the ability to respond rapidly and initiate interventions to adverse events
- provision of leadership
- support to medical colleagues.

This document sets out guidance to provide high quality enhanced patient care around:

- patient selection, which should be governed by local needs
- selection criteria for nurses and midwives, to ensure the most appropriate care for patients
- indemnity issues, to protect patients as well as the nurse and midwife
- education and training, to support role development
- clinical governance procedures, which must be in place to support practice
- nurse and midwife, medical consultant and management responsibilities, to ensure clarity and delineation of roles, which must include supportive frameworks
- informed consent, to protect patients
- safe and appropriate practice, to be supported by national and local guidelines
- reviewing and monitoring practice, to ensure compliance with national and local guidelines as well as monitoring improvement to local services.

The lack of established education programmes from Higher Educational Establishment (HEI) has not hindered role development in other areas of practice therefore, suggestions are offered on how to support role development for nurses and midwives in blood transfusion. Overall this document supports service need development only where patient care is improved without compromising patient safety. It also recognises the importance of team working and of the medical contribution to the development of nursing roles.

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1. Introduction

This framework document is applicable to experienced registered nurses and midwives who wish to develop their role to include making the clinical decision and providing the written instruction for blood component transfusion (i.e. red cells, platelets, fresh frozen plasma and cryoprecipitate). The nurse or midwife undertaking this role will require the skills to assess a patient, take a history, make a clinical decision, understand the principles of consent, and also have the clinical knowledge and expertise to respond to adverse events in a timely manner. Therefore it is anticipated that this role development will be limited to experienced nurses and midwives who work in areas such as haematology, renal, high dependency and critical care. It is acknowledged that as with all specialist nurse and midwife led care, there may be circumstances where the patient has to be referred on to another professional for aspects of their care.

It is intended that this document will support and encourage an anticipatory and structured approach across the four UK countries (England, Scotland, Wales and Northern Ireland) to ensure that:

- role development is underpinned and supported by best available evidence
- role development is planned and implemented within appropriate legal boundaries and standards including the Nursing and Midwifery Council (NMC) regulatory framework
- a framework is in place that supports the registered nurse and midwife locally
- there are clearly defined terms of responsibility, accountability and authority, which are underpinned with appropriate resources, education, training, mentorship and supervision
- patient care is improved without compromising patient safety
- the decision to transfuse is made according to sound clinical indications and in accordance with appropriate guidelines and, there is no alternative available.

This framework reflects the consensus and recommendations from a multidisciplinary workshop held in Birmingham on 17th October 2008 to advise on the above issues. (See Appendix I for information on the workshop attendees).

2. Context of the Framework Document

Political policy over the last 20 years has emphasised the necessity to modernise the National Health Service (NHS) and ensure that services are organised and delivered around the needs of the patient (NAW 1999, DH 2000, DHSSPS 2003, DH 2004a, DH 2005, NAW 2006, SEHD 2006, DH 2008b). Issues such as an ageing population, reduction in junior doctor hours, more effective and efficient use of workforce skills and healthcare resources have had major implications for practice (Donaldson 2002, DH 2003, NAW 2005, DHSSPS 2005, SEHD 2005b, DH 2005). As a result extended roles for hospital-based nurses have been growing in number, and traditional demarcations between clinical roles have been broken down to allow healthcare professionals to work more flexibly for the benefit of patients. Role development however, should not be about replacing doctors but enabling nurses and midwives to use their knowledge and expertise to ensure that the patient is treated by the most appropriate practitioner (Strachan-Bennett 2006, NIPEC 2005).

Many experienced nurses and midwives work in clinical areas where blood is transfused on a regular basis. These nurses and midwives work more closely with their patients than other health professionals and they are in a position to deliver individualised care within the most appropriate pathway. Services to these patients could be improved by using this untapped knowledge and expertise (DHSPPS 2005, NAW 2006, DH 2006, SEHD 2006, DH 2008a). A collaborative project between NHS Blood and Transplant (NHSBT) and the Scottish National Blood Transfusion Service (SNBTS) was undertaken to investigate if it was feasible for nurses and midwives to prescribe blood components (Pirie and Green 2007). The initial project led to a detailed review of the 1968 Medicines Act, the amending regulations and the Blood Safety and Quality Regulations 2005 (SI 2005 no 50 and amending regulations) which was undertaken by the legal departments of the Medicines and Healthcare products Regulatory Authority (MHRA) and the Royal College of Nursing (RCN), and is summarised below:

Section 130, 1968 Medicines Act (DH 1968) has been amended by regulation 25 of the Blood Safety and Quality Regulations 2005 (SI 2005 no 50). The effect of this amendment was to exclude whole human blood and blood components from a legal definition of medicinal products and therefore cannot legally be prescribed by any practitioner. The term prescription legally relates only to medicines listed in the British National Formulary; for blood components it is a written instruction or authorisation to transfuse or administer.

In clinical practice there are a number of accepted terms that are widely used in relation to blood components e.g. ordering, requesting and prescribing. The legal opinion of the RCN, the MHRA makes it very clear that the term prescription legally relates only to medicinal products listed in the British National Formulary (BNF). Concerns were raised at the multidisciplinary workshop that changing terminology would be difficult and therefore it was suggested that no change should be made to the terminology. Further clarification was sought from the RCN legal department and NMC, who emphasised that it is critically important that this framework document is explicit, and the term 'written instruction' and not prescription should be used. (A glossary of terminology used in the document and in blood transfusion practice is provided in Appendix II).

There is no specific legislation, which requires a doctor to carry out the activity of writing the authorisation for blood components therefore there is no legal barrier to a nurse or midwife undertaking this activity, provided it is within their scope of practice and that they are appropriately trained and deemed competent. As nurses and midwives are key professionals in the delivery of health care, this is an opportunity to respond to an identified patient need, and change traditional ways of providing care (DHSSPS 2005, SEHD 2005a, DH 2008b). To support this practice development, there is evidence from non-medical prescribing that found that nurses were prescribing medicines appropriately in a wide range of clinical dimensions, and that patients and doctors now view non medical prescribing positively (Brooks et al 2001, Rodden 2001, Latter et al 2005). In addition the largest UK study conducted to date, identified that one of the many advantages of nurse specialist work is that they become expert in the medical treatment of the patient and develop and work to strict protocols and guidelines (RCN 2005).

3. Developing the Role of the Nurse and Midwife in Blood Transfusion

In responding to the changing needs of the patient, the need for inter-professional working becomes greater (SEHD 2005c, DH 2008b). It is acknowledged that for this role development to be successful, a high level of medical consultant support will be required. It is essential that all key stakeholders (nurse directors, medical consultants, nurse and midwife managers and laboratory managers) are consulted and that the service change is in the best interest of improving patient care.

3.1 Scope of nursing and midwifery practice

The Nursing and Midwifery Council (NMC) is the body responsible for setting professional standards and for registered nurses, midwives and specialist community public health nurses, the primary function being to protect the public. The NMC mandates that all registered nurses must be able to adjust their practice in response to changing circumstances and changing patient needs (NMC 2008). The registered nurse can develop their practice in accordance with their knowledge and competence; this includes maintaining their competence and ensuring they are appropriately prepared to take on new aspects to their roles. Registered nurses are also personally accountable for their own practice and they must only undertake practice and accept responsibility for those activities in which they are competent. Beyond these principles, the NMC does not place any conditions or restrictions on the practice of registered nurses.

The nurse undertaking the role of making the clinical decision for blood component transfusion and providing the written instruction, will be working at a level beyond initial registration, exercising an advanced level of knowledge, expertise, clinical reasoning and diagnostic skills. They will have a high level of professional autonomy and accountability to fulfil their role and responsibilities, working interdependently within a healthcare team. A current area of debate is whether 'Advanced Practice' should be regulated and whether there should be a recognised set of standards in order to ensure public protection (DH 2007). The NMC are involved in progressing this work, the Department of Health has set up a working group to examine these issues and is expected to report before the end of 2009 (DH 2006, DH2008). Table 1 provides an example of practice at a higher level.

Table 1 Nursing and Midwifery Council Definition (NMC 2005)

'Advanced nurse practitioners are highly experienced and educated members of the care team who are able to diagnose and treat your healthcare needs or refer patients to an appropriate specialist if needed'.

Advanced nurse practitioners are highly skilled nurses who can:

- take a comprehensive patient history
- carry out physical examinations
- use their expert knowledge and clinical judgment to identify the potential diagnosis
- refer patients for investigations where appropriate
- make a final diagnosis
- decide on and carry out treatment, including the prescribing of medicines, or refer patients to an appropriate specialist
- use their extensive practice experience to plan and provide skilled and competent care to meet patient's health and social care needs, involving other members of the health care team as appropriate
- ensure the provision of continuity of care including follow-up visits
- assess and evaluate, with patients, the effectiveness of the treatment and care provided and make changes as needed
- work independently, although often as part of a health care team
- provide leadership
- make sure that each patient's treatment and care is based on best practice

The role of the midwife, their function and scope of practice, was established in statute (UKCC 1998). Within the existing statutory framework there is considerable scope for flexibility in the interpretation and focus of the role. Currently midwives are required to refer clinical cases where there is deviation from normal, however, they are also expected to act in emergency situations and initiate interventions within their skills and competencies. The Royal College of Midwives (RCM) recognise that midwives must respond to the changing needs of the NHS and that there are midwives who extend their scope of practice e.g. within the high dependency environment or ventouse practitioners. Therefore there may be a few selected midwives who would benefit from gaining this competence. The RCM welcomes any expansion of the midwife's role that enhances their skills and expertise, if it makes midwifery care more accessible and responsive to women's needs and promotes seamless care (RCM 2006).

3.2 Patient selection

It was the consensus of the workshop that there are several patient groups who would benefit from having their blood transfusion requirements managed by a nurse or midwife. Each clinical team however, should determine local needs and whether the service change would improve care to the patient. Local guidelines must be in place that considers:

- which patient group e.g.
 - patients with chronic but stable disorders, well known to the practitioner
 - patients receiving treatment that necessitates routine transfusion e.g. chemotherapy
 - care being administered within a multi-disciplinary team approach e.g. Intensive care Unit (ITU), obstetric setting
- that the primary diagnosis for current episode of care has been made
- what circumstances the transfusion is taking place e.g. inpatient or on outpatient
- how to ensure the patient has been fully informed of the associated risks, benefits and alternatives to treatment.

3.3 Selection criteria for nurses and midwives

Criteria for admission to education programmes (e.g. Independent Nurse Prescribing programme, NMC 2006) or for study at an advanced level recommend that the individual nurse or midwife must:

- be a first level registered nurse or midwife
- have the support of line manager and clinical consultant
- must have at least 3 years post registration experience
- have at least 1 year working immediately preceding within the relevant clinical specialty
- manage a caseload of patients or work as part of a clinical team managing the patients needs
- have relevant first degree or equivalent in terms of prior learning at the appropriate level
- be deemed competent by their employer
- have an agreed medical supervisor to support learning in practice.

There was consensus within the multidisciplinary working group that the nurse or midwife does not have to be an Independent Non-Medical Prescriber, as concomitant drugs can be

supplied using a Patient Group Direction (PGD). However consideration should be given to attaining this qualification if it is deemed appropriate to their role, and their own personal development. There are currently approximately 9000 independent prescribers in the UK, and this number grows every year (RCN 2009).

For the majority of midwives medicinal products are supplied and administered under Midwives Exemptions (See Appendix III for an explanation of non-medical prescribing).

3.4 Indemnity issues

Legally, the concern is not whether a task or activity was carried out by a doctor, nurse or midwife (except where there are statutory requirements), it is whether the patient received care to an expected standard (Hunt and Wainwright 1994). Standards of conduct, performance and ethics for nurses and midwives (NMC 2008) and Midwives rules and standards (NMC 2004) state the nurse and midwife is accountable for their actions and omissions in practice and must always be able to justify decisions regardless of advice or directions from other professionals.

Currently nurses and midwives are covered for vicarious liability by their employer and it is recommended that the registered nurse and midwife advising, treating and caring for patients/clients, has additional professional indemnity insurance e.g. by means of membership of a professional organisation or trade union. The government however has produced a draft consultation document on the introduction of compulsory professional indemnity for nurses and midwives. The document proposes that indemnity cover from a professional organisation or trade union alone would no longer be sufficient, this proposal however is currently under review (Clews and Ford 2009).

It is the responsibility of the individual registrant engaging in advanced practice to establish their insurance status and take appropriate action (Fullbrook 2007). In addition local policy must be in place that clearly outlines the scope of practice that each nurse and midwife must follow and the job description of the post holder must be amended to include any new responsibilities.

3.5 Education and training

Nurses and midwives undertaking role development must be supported in their practice by appropriate education and training. Currently there are no academic programmes specifically addressing blood transfusion practice for non-medical healthcare professionals available from Higher Education Institutions (HEI). In reality as the number of advanced nurse roles increase it will not be possible for HEIs to provide a specific course tailored for each role. Many of the knowledge and skills required for this role e.g. assessing a patient, taking a history, making a clinical decision, understanding the principles of consent, and also having the clinical knowledge and expertise to react to adverse events in a timely manner, are met in existing established courses.

There is evidence from the development of roles such as Primary Care Out-of-Hours, and Hospital at Night practitioners that educational needs can be addressed by identifying the competencies required, developing individual learning plans and accessing the relevant learning required for example in-house lectures, using relevant elearning courses or from

established courses (e.g. Patient Assessment Skills 5 day workshop, Acute, Life-threatening, Early Recognition and Treatment Course) and collating a portfolio of evidence (SEDH 2008, Boyden and Edwards 2007, Carberry 2006). Assessment of competency can be carried out by the expert in the particular topic however, final sign off of competence should rest with the medical consultant. Mentor support was identified as a pre-requisite to successful clinical learning and was also regarded as an effective way of fostering mutually respectful working relationships (Barton 2006).

To assist with this approach, NHS Warwickshire developed a supervisory learning log for Hospital at Night practitioners, which has a combination of both theoretical and practical component. The supervisory learning log with a portfolio of evidence allowed for flexible learning and provided a structured record of the individual's:

- learning requirements
- training received
- reflective practice
- assessment results
- development in clinical practice.

An Evaluation Criteria Scale was used to assess the candidate against national guidelines and local protocols, which were followed as a standardised benchmark for practical skills and theoretical knowledge.

This approach could be a model to support safe blood transfusion practice with a knowledge and skill base that is both competent and reproducible. In addition to providing common standards that could be used nationally, the learning log could also be transferred across traditional clinical boundaries. The learning log would ensure that:

- competences and the performance level required to make the clinical decision and write the instruction for blood component transfusion were clearly identified
- a robust training needs analysis was conducted before the individual learning plan is developed
- strategies for methods of education and training delivery, work based learning, assessment and supervision arrangements were agreed locally (local education providers can be contacted for advice on how to access courses to address the learning needs identified)
- there is an agreed strategy in place for maintaining and updating skills, knowledge and competence.

An example of the knowledge and competencies required for this role development are provided in Appendix IV.

It was the consensus of the workshop however, that there would be a requirement for the development of a specific education module in blood transfusion. It was suggested that the project management sponsors take a proposal to the UK Blood Transfusion Forum and/or the British Blood Transfusion Society (BBTS), to request funding and expertise required to build on the work started by the BBTS Professional Affairs and Educational Committee Specialist Certificate module.

4. Delivering the Service to the Patient

To achieve practice development the need for inter-professional working is essential.

4.1 Clinical governance

To deliver high quality and safe healthcare, clinical governance procedures and risk management strategies must be in place to ensure that:

- the patient is placed at the centre of all decisions about delivering care
- planning, development and implementation of change only happens in an atmosphere of collaboration between all members of the healthcare team, managers and directors
- there is a robust process for nurses and midwives wishing to undertake this role
- there is transparency of accountability for individuals and clinical teams for all aspects of service and clinical delivery
- there is a register of nurses and midwives undertaking this role within the organisation
- arrangements are in place for assessment of practice, monitoring and continuing professional development for all nurses and midwives undertaking this role
- a risk management plan is in place to ensure incident and near miss reporting and management.

4.2 Nurse and midwife responsibilities

The responsibilities of the individual nurse or midwife are to:

- explore the potential for role development with their clinical team and other key stakeholders (line manager, Director of Nursing or supervisor of midwives, medical consultant and hospital blood transfusion laboratory manager), to ensure that service development is appropriate
- ensure that the patient's journey is improved through role development
- work in partnership with line manager and medical consultant to develop a full proposal and business case
- identify personal learning needs and develop a learning plan
- submit the full proposal including the learning plan to their employer for agreement
- undertake the preparation necessary for role development
- demonstrate ability, knowledge and competence to undertake the role to the same standard as the professional previously responsible for the role
- provide documented evidence to support knowledge and competence e.g. portfolio of learning
- be responsible for maintaining and updating knowledge and skills
- participate in ongoing performance development and review to verify knowledge and competence
- participate in clinical audit
- receive ongoing clinical supervision, complete annual appraisal and develop a personal development plan
- be aware of the scope of their role
- undertake appropriate preparation for role development prior to independent practice and assessed as competent
- undertake regular reflection and self assessment of practice.

The nurse or midwife must maintain a record of the adjustment to their scope of clinical practice in their personal portfolio. As a minimum, this record must contain the following:

- a copy of the written notification to the line manager
- evidence demonstrating how the necessary knowledge underpinning the change to clinical practice was achieved
- a copy of the competency standard statements used to assess knowledge and skill in preparation for role.

4.3 Management responsibilities

The responsibilities of management are to:

- ensure that a partnership approach with key stakeholders is used when developing proposal for role development
- assist with identifying the financial and human resources required to support full implementation
- agree who will undertake supervised practice and mentorship role
- advise staff regarding indemnity issues and regulatory frameworks
- ensure that robust risk assessments are undertaken to guarantee patient safety
- ensure the nurse or midwife undertakes and completes the education and training required
- support the nurse or midwife to work within agreed role boundaries
- amend the individual's job description to reflect role change
- establish appropriate clinical governance processes
- support and advise the nurse or midwife on strategies for evaluation of role development
- carry out regular performance review with the nurse or midwife to verify knowledge and competence, linked to annual appraisal and the personal development plan.

4.4 Medical Consultant responsibilities

The responsibilities of the clinician are to:

- work in partnership to identify a suitable patient group
- work in partnership to develop a proposal for service change
- work in partnership to develop a local policy which reflects the requirements of field of practice
- agree support and mentorship role
- support and advise the nurse or midwife on strategies for evaluation of blood transfusion practice, focusing on appropriate and safe use of blood.

4.5 Consent for transfusion

- The nurse or midwife must obtain valid consent for treatment in accordance with the local policy and national guidance (RCN 2006, DH 2001) to ensure that: the patient or guardian are fully informed of the need for transfusion, the risks and benefits, and are given the opportunity to ask questions
- the patient has been provided with an information leaflet for blood transfusion
- the decision and reason for transfusion is documented in the patient case notes.

Local hospital policies must also address patients who are unable to give consent e.g. patients in the ITU setting (NMC 2006, MCA 2007) and patients who refuse treatment or have advance directives. The issue of consent for blood transfusion is currently being considered by the Advisory Committee on the Safety of Blood, Tissues and Organs (SaBTO).

4.6 Supporting safe and appropriate practice

Clinical decision making for blood transfusion has received great attention over the last decade, and it was the consensus of the working group that nurses and midwives are supported with local guidelines and protocols. The nurse and midwife must be aware that guidelines support healthcare professionals in their clinical decision making, however, they do not replace their knowledge and skills.

It is the responsibility of the clinical team, nurse and midwife to ensure that:

- local clinical guidelines for blood transfusion in their field of practice are developed and ratified according to hospital policy
- local guidelines and protocols are developed based on national guidelines and best evidence available
- algorithms are used if appropriate
- the patient only receives blood component therapy if it is appropriate
- the patient is monitored for side effects/ reactions and prompt action is taken when necessary
- documentation and record keeping is complete and audited at regular intervals.

4.7 Reviewing and monitoring practice

The nurse or midwife who acquires skills that have been traditionally undertaken by a doctor must have an evaluation strategy built into the proposal for service development. This will assist with the process of continuous quality improvement, ensuring that the service fits patients' needs.

The clinical team, nurse and midwife must ensure that:

- the impact of role development is assessed using appropriate audit and/or research methods linked to outcomes
- details of when and how the role will be audited and evaluated is agreed
- there is a dissemination strategy in place to ensure that evidence as it emerges is available to all key stakeholders
- blood transfusion practice is audited against hospital policy and national guidelines, focusing on appropriate and safe use of blood
- the nurse or midwife's role development must be discussed at performance appraisal/review with the line manager.

5. Conclusion and Next Steps

The work undertaken in Modernising Medical Careers (DH 2004b) and Modernising Nursing Careers (DH 2006) has provided an opportunity to look at different ways of providing a safe, efficient, appropriate and high quality service to patients. It is about working in partnership to ensure that it is the right person with the right skills doing the right job at the right time, every time.

This framework document is an attempt to have an anticipatory and structured UK approach, providing guidance for NHS Boards/ Trusts wishing to implement nurse or midwife authorising of blood components. This practice development is relatively new, and in the majority of hospitals the infrastructure and organisational culture will lag behind this new way of working. To provide the support needed to make the role successful, more work will need to be done by many stakeholders to take forward the suggestions set out in this document. All stakeholders are encouraged to work in partnership by:

1. The development of common competency standards to support safe blood transfusion practice, which could be used nationally and also, be transferable across traditional clinical boundaries.
2. A pilot evaluation within each UK country so that we can learn from, and be informed by the work and experience of others.

It became clear during investigation that it would be unlikely that any HEI would be able to provide a specific education module tailored for this area of blood transfusion practice. To take forward the development of a supervisory learning log with competency standards, consideration should be given to tapping into the expertise within the British Blood Transfusion Society, as a distance learning Certificate in Transfusion Practice Science for nurses and Transfusion Practitioners has already been developed.

Disclaimer

Whilst the information in this Framework document is believed to reflect current best clinical practice, neither authors nor publisher can accept any legal responsibility for any errors or omissions.

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Appendix I Workshop Attendees

Name	Title	Representing
Dr Susan Atkinson	Consultant Anaesthetist	Haemovigilance Services Northern Ireland
Claire Atterbury	CNS in Haematology and Transfusion	Queen Elizabeth Hospital King's Lynn, Norfolk
Anna Bartholomew	Transfusion Practitioner	Wansbeck General Hospital Ashington
Janine Beddow	Transfusion Coordinator	British Blood Transfusion Society
Dr Ann Benton	Consultant Haematologist	Better Blood Transfusion Team, Wales Welsh Clinical Advisory Group
Fiona Peniston-Bird	Consultant in Non-Medical Prescribing Development	www.nmprescribing.co.uk
Liz Bishop	Nurse Consultant Haematology	Guys and St Thomas Hospital
Dr John Bleasdale	Chair Hospital Transfusion Committee	Sandwell and West Birmingham NHS Trust, City Hospital
Dr Adrian Coplestone	Consultant Haematologist	National Blood Transfusion Committee - England
Prof Molly Courtenay	Reader in Prescribing and Medicines Management	University of Reading Association of Nurse Prescribing
Fiona Culley	Lead for Non-Medical Prescribing	Nursing and Midwifery Council (NMC)
Kirsty Dalrymple	Transfusion Practitioner	Victoria Hospital, Kirkcaldy
Sandra Gray	Programme Director/Nurse Consultant	Project management sponsor (SNBTS)
Sylvia Hennem	Practitioner of Transfusion	British Committee for Standards in Haematology (BCSH)
Catherine Howell	Chief Nurse Patient Services	Project management sponsor (NHSBT)
Tina Ivel	Transfusion Practitioner	Transfusion Practitioners, Northern Region
Dr Jane Keidan	Consultant Haematologist	Queen Elizabeth Hospital, King's Lynn, Norfolk
Kate Khair	Haematology Nurse	British Society of Haematology Nursing
Denise Kirby	Advanced Neonatal Nurse Practitioner	New Cross Hospital, Wolverhampton
Elizabeth Lardner	Haematology Nurse Specialist	Wales Haematology Nurses Group
Sylvia Lees	Chief Biomedical Scientist	Transfusion Lab Managers Forum, Wales
Jill Martin	Charge Nurse Haematology	Queen Margaret Hospital, Dunfermline
David Mold	Operations Manager	Serious Hazards of Transfusion (SHOT)
Hilary Morgan	Blood Transfusion Nurse Practitioner	Worcestershire Royal Hospital, Worcester
Shirley Murray	Regional Coordinator	Haemovigilance Services Northern Ireland
Linda Patterson	Vascular Nurse Practitioner	Ayr Hospital, Ayr Scotland
Dr Megan Rowley	Consultant Haematologist	Consultant Haematologists NHSBT

Name	Title	Representing
Sue Sharp	Clinical Nurse Specialist Oncology	Worcestershire Acute Hospitals MHS Trust, Worcester
Joanne Tonkin	Nurse Consultant Haematology	Colchester General Hospital
Sandra Turner	Clinical Nurse Specialist	New Cross Hospital, Wolverhampton
Tracy Ward	Transfusion Nurse	Royal College of Nursing (RCN) UK wide
Dr Jean White	Nursing Officer	Department for Public Health and Health Professions Welsh Assembly Government
Melanie Wood	Haematology Nurse Specialist	Wansbeck General Hospital, Ashington

Appendix II Glossary

BCSH	British Committee for Standards in Haematology
Blood components	Blood components are: <ul style="list-style-type: none">- Red blood cells- Platelets- Fresh Frozen Plasma (FFP)- Cryoprecipitate- White cells
Blood products	Any therapeutic product derived from plasma (Blood Safety & Quality Regulations SI 2005/50). These are <ul style="list-style-type: none">- Human Albumin Solution,- The various clotting Factor concentrates- Anti-D- Therapeutic immunoglobulins
BNF	British National Formulary Provides up-to-date guidance on prescribing, dispensing and administering medicines
BSH	British Society of Haematology
Clinical decision making	In this context, refers to the assessment of the individual patient's requirement for a blood component transfusion
Concomitant	Occurring simultaneously, as when 2 or more treatments are used at the same time
EPO	A glycoprotein hormone that controls erythropoiesis, or red blood cell production
MHRA	Medicines & Healthcare products Regularity Agency
NBTC	National Blood Transfusion Committee
NMC	Nursing & Midwifery Council
NPSA	National Patient Safety Agency
Ordering or requesting	Refers to the mechanism whereby the order is communicated to the hospital transfusion laboratory to prepare and issue the component for administration
Patient	A patient is a individual who receives medical attention, care, or treatment by a physician or other healthcare professional
Plasma derivative	Plasma proteins prepared from pooled human plasma under pharmaceutical manufacturing conditions (coagulation factors, immunoglobulin, albumin)
Prescription	Constitutes the legal instruction to administer a medicinal product listed in the British National Formulary
SABRE	Serious Adverse Blood Reactions and Events. The MHRA, UK Competent Authority for blood safety reporting system
SaBTO	Advisory Committee on the Safety of Blood, Tissues and Organs
SHOT	Serious Hazards of Transfusion. UK wide haemovigilance reporting system for the serious sequelae of blood transfusion
Written instruction	The written order for authorising the blood component to be transfused
Ventouse practitioner	A specially trained midwife who has extended her practice to assist women who are tiring at the end of labour and/or if a baby's heart rate is giving cause for concern. They provide a service that formerly was only available from a doctor. A ventouse cup is a soft suction cup, which is applied to a baby's head, and gently pulled as the mother pushes, to assist the baby being born.

Appendix III Further Information on Prescribing

Independent Nurse Prescribers

Nurses who have completed the appropriate training can prescribe any licensed medicine for any medical condition within their competence including some controlled drugs.

Supplementary Prescribing

This is still utilised in some departments across the UK however, it has largely been superseded by Independent Nurse Prescribing. Supplementary prescribing involves a voluntary partnership between an independent prescriber (who must be a doctor or dentist) and a supplementary prescriber (a trained nurse, midwife or pharmacist who has completed the relevant training programme) to implement an agreed patient-specific Clinical Management Plan with the patient's agreement. There is no legal restriction on the clinical conditions but NHS employers should write their own policies and this potentially might restrict choice of medication.

Patient Group Directions

Patient Group Directions (PGDs) constitute a legal framework, which allows certain health care professionals to supply and administer medicines to groups of patients that fit the criteria laid out in the PGD. The healthcare practitioners using the PGDs are individually named and are required to ensure that they follow appropriate professional standards and codes of conduct. Unlike nurse and pharmacist prescribing, healthcare professionals entitled to work with a PGD require no additional formal qualification, however, organisations have a responsibility to ensure that only fully competent, trained health care professionals use PGDs.

There are still instances when the development of a PGD is the most appropriate way to meet the needs of patients. This need is likely to remain although it is expected to diminish with the further development of independent nurse prescribers.

(DH 2008).

For further information please see the Department of Health website

http://www.dh.gov.uk/en/Healthcare/Medicinespharmacyandindustry/Prescriptions/TheNon-MedicalPrescribingProgramme/Nurseprescribing/DH_4123003

Midwives Exemptions (Is distinct from non medical prescribing)

Midwives exemptions permits all qualified and registered midwives to supply and/or administer all pharmacy and general sales list medicines and medicines listed in Schedule 5, Part I and III of the Prescription Only Midwives (Human Use) Order 1997 on registration. A Patient Group Direction is not necessary for midwives to be able to supply and/or administer these medicines.

Appendix IV Example of Educational Requirements

Understanding of	Knowledge and Competencies
Patient assessment and clinical decision making <ul style="list-style-type: none"> - how to take a patient history - accounting for co morbidity - consent issues - Prescribing of concomitant drugs 	<ul style="list-style-type: none"> - Understands the requirement to accurately document all actions and conversations with the patient including taking verbal consent - Ability to make appropriate referral if the patient refuses blood transfusion or has an advanced directive - Ability to take a medical history - Ability to link the clinical picture with the interpretation of blood results - Ability to make appropriate decision using the best available evidence and local transfusion guidelines - Understands how to explain the risks and benefits of transfusion and available alternatives - Ability to consider the appropriateness of alternatives to blood component transfusion i.e. Intravenous iron - Know to provide patient information leaflets - Can assess the patient is fit for a transfusion. i.e. take account of co morbidities, day case or inpatient - Knows which concomitant drugs may be required
Interpreting blood results	<ul style="list-style-type: none"> - Understands normal and abnormal haematology and biochemistry blood values - Ability to interpret results and initiate treatment - Know if more tests and/or further evaluation is required
Writing the instruction to transfuse the blood component	<ul style="list-style-type: none"> - Understands that the written instruction includes: <ul style="list-style-type: none"> - the length of time the transfusion is to take place - the number of units - paediatric use volume to be transfused in mLs calculated in terms of mLs/kg body weight - the route of administration - concomitant drugs that need to be administered - Can discuss the incompatibility of blood with other infusion fluids/IV drugs
Anatomy and physiology of blood	<ul style="list-style-type: none"> - Understands the structure, growth and function of <ul style="list-style-type: none"> - Red cells - White cells - Platelets - Plasma
Constituents of blood components	<ul style="list-style-type: none"> - Visit local blood component processing centre - Gain insight into the production from whole blood of <ul style="list-style-type: none"> - Red cells - White cells - Platelets - Plasma - Has knowledge of <ul style="list-style-type: none"> - Storage - Safe handling - Temperature control/cold chain requirements
Understanding of anaemia	<ul style="list-style-type: none"> - Can define the types of anaemia - Understands physiological processes for iron deficiency anaemia - Knows when to refer patients for further investigation and treatment - Knows how to order appropriate investigations - Understands the different types of iron therapies - Understands the use of EPO
Pre-transfusion testing process	<ul style="list-style-type: none"> - Has understanding of the <ul style="list-style-type: none"> - pre transfusion sampling process - sample labelling requirements - BCSH guidelines for pre transfusion testing - time limits surrounding the validity of samples in storage - the laboratory processes for pre transfusion testing including how long testing takes

Understanding of	Knowledge and Competencies
Indications for the use of blood components - Appropriate use of blood components - Alternatives to blood components	<ul style="list-style-type: none"> - Can define the indications for use of blood components - Can make the decision for transfusion within best available evidence and local guidelines - Knows the alternatives to consider if appropriate - Knows when to consult with haematologist with responsibility for transfusion as required
Special transfusion requirements	<ul style="list-style-type: none"> - Can define which patient groups will have special blood requirements and why - Understands the reasons why its important to have a process in place to prevent these patients receiving the wrong blood
Risks and adverse events associated with transfusion and how to deal with them	<ul style="list-style-type: none"> - Understands the risks of transfusion and describe what to do in an emergency situation for: <ul style="list-style-type: none"> - Transfusion transmitted bacterial and viral infections - Transfusion Related Acute Lung Injury (TRALI) - Acute haemolytic transfusion reaction - Wrong blood to wrong patient - Fluid overload - Anaphylaxis - Understands the principles of iron overload management
Transfusion guidelines and protocols	<ul style="list-style-type: none"> - Can demonstrate knowledge and understanding of: <ul style="list-style-type: none"> - SABRE/SHOT - HSC Better Blood Transfusion 1998/224, 2002/009, 2007/001 - BCSH guidelines - Blood Safety and Quality Regulations SI 2005/50, including traceability requirements - Patient information leaflets
Legal responsibilities - Record keeping	<ul style="list-style-type: none"> - Has knowledge and understanding of NMC Standards of conduct, performance and ethics (2008) - Can explain why the reason for transfusion should be recorded in the patient notes - Can explain why all actions must be documented
Ordering blood components	<ul style="list-style-type: none"> - Has knowledge of local guidelines for ordering of blood components and be aware that the laboratory require the following details: <ul style="list-style-type: none"> - Full name of patient - When the patient is to be transfused - How many units and any special transfusion requirements - Where the patient is to be transfused
Administration process	<ul style="list-style-type: none"> - Has knowledge of the transfusion process for the patient - Can describe the principles of patient identification - Can describe the procedure for checking the patient and blood component prior to transfusion - Knows only to collect the blood component when the patient has patent IV access - Can describe the procedure for monitoring the transfused patient - Understands the legal requirements for traceability - Has undertaken and is competent in the NPSA competency requirements for blood transfusion