

# ALL WALES POLICY



## All-Wales Policy and Procedure for Transfer of Blood and Blood Components between Hospitals

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## Introduction

This guidance for the emergency *ad hoc* transfer of blood with patients has been revised in response to recent changes in clinical practice, re-organisations of health services and legal requirements, including:

- ) The regulatory framework requiring a vein-to-vein audit trail between donor and recipient (EU directive 2002/98/EC; Blood Safety and Quality Regulations 2005 (as amended))
- ) Improvements in the transfusion process, especially in documentation and patient identification (Better Blood Transfusion initiatives)
- ) Changes in the clinical management of patients with major bleeding and increased centralisation of health services in formal clinical networks (“hub and spoke”) reducing need for transfer of blood with patients

This document seeks to standardise the procedure for the *ad hoc* transfer of blood and blood components between hospitals in the Welsh Blood Service region (supplying hospitals in S. Wales) and the Manchester region (supplying hospitals in N. Wales). Although it is intended as a guide that encompasses practices from all users, hospitals are encouraged, where appropriate, to add local protocols to the policy to complement, but not to detract from the practices outlined in this document. (Blood and components are referred to as blood unless specific components are discussed).

The Welsh Assembly Government’s Clinical Advisory Group, part of the Blood Advisory Structure, concluded that a compelling need to transfer blood would be rare in modern practice, though hospitals must undertake risk assessments to guide local practice. Two scenarios were considered to be an exception:

- ) Blood allocated to a specific patient who was actively bleeding and in whom the risk of transfer to a specialist unit was considered appropriate. Such patients would require a medical and/or nursing escort
- ) Special transfusion requirements for patients being transferred, such as complex phenotyped blood, irradiated blood or HLA matched platelets

This document does **not** cover:

- ) transfer of blood for a specific patient to a blood fridge located in a satellite hospital/unit of the dispatching hospital
- ) contingency planning for a blood shortage

## **Purpose**

The purpose of this guideline is to help ensure the following:

1. Blood is transferred in the appropriate clinical scenario
2. Blood is transported and packaged in accordance with validated procedures to ensure quality and safety
3. The transfer of blood is correctly documented to maintain proof of the cold chain of blood storage
4. Vein to vein traceability is maintained
5. The roles and responsibility of the dispatching and receiving hospitals are clearly defined
6. Transport of blood is optimally managed by transfer from one blood transfusion laboratory to another blood transfusion laboratory

## **Clinical Guidelines**

The following information has been provided by the surgical and anaesthetic representatives on the NHSBT Appropriate Use of Blood group.

### Changes in practice

There are several changes in clinical practice mitigating against the need to transfuse patients during transfer.

Experience within Vascular Surgery Networks has shown that survival following emergency surgery is improved by the transfer of patients to specialized units. The provision of specialist surgeons, anaesthetists, theatre teams and intensive care facilities outweigh early emergency surgery in peripheral hospitals. (The Vascular Society, 2007)

[www.vascularsociety.org.uk](http://www.vascularsociety.org.uk)

Recent changes in our knowledge of resuscitation favour permissive hypotension and rapid transfer, usually without medically qualified escorts. Blood transfusion is rarely used during transfer. Clear fluids are administered sparingly in 200ml boli to maintain consciousness or a palpable radial pulse regardless of the blood pressure, which is kept low to prevent further bleeding. (Stahel, PH *et al*, 2009)

Blood transfusion and component therapy administered in the dispatching hospital aims to render the patient stable enough for transfer. Surgical “first aid” such as packing liver lacerations has the same aim; if the patient remains unstable they are usually unfit for transfer and have a very low chance of survival. (Geeraedts *et al*, 2009)

Historically the purpose of transferring blood with the patient was to provide an immediate supply of blood to use during the definitive operation in the receiving hospital. Advances in laboratory practice have made this unnecessary except in rare situations.

### Results of London and South East Regional Transfusion Committee Audit

Recent audit in the London and SE has shown that during a three month period, 425 units of blood were transferred in 113 patient episodes. Over 75% were not used for the intended patient and of these 56% were wasted largely due to inadequate packaging or temperature control. Only 2.7% patients were transfused en route [www.transfusionguidelines.co.uk](http://www.transfusionguidelines.co.uk)

### Results of North East Regional Transfusion Committee Audit

In terms of the fate of the units transferred only 5% were wasted. However, only 46% were transfused to the transferred patient with the balance of 49% being able to have the cold chain verified and subsequently accepted into hospital stock. Hospitals have reported that they would then need to re-crossmatch the units to allow issue by their own IT systems [www.transfusionguidelines.co.uk](http://www.transfusionguidelines.co.uk)

### Avoiding transfer of blood with patients

The receiving hospital is by definition a specialist centre with up to date transfusion laboratory facilities. The dispatching hospital will have cross-matched blood. The blood group and results of antibody screening can be communicated by fax or telephone to the receiving hospital laboratory, to provide a prior warning.

Preparation for anaesthesia and surgery in the recipient hospital provides a window of time for registration of the patient, fitting of identification bands and the provision of a blood sample for post transfer full blood count, biochemistry and cross-match.

If transfusion is required urgently in the receiving hospital O Rh D negative or type specific blood can be issued immediately and transfused.

It is recommended that provision of facilities for cell salvage (equipment and trained personnel) should be considered in tertiary centres receiving such patients and where appropriate, should be set up ready to receive the patient.

### **Recommendations**

**Transfer of blood or components with a patient is required in exceptional circumstances *only*. This should be reserved for patients who will need transfusing during the journey. Two units of blood should be sufficient.**

**The transfusion laboratory should coordinate the transfer of blood and ideally this will occur from laboratory to laboratory. Blood should never be transferred without the knowledge of the transfusion laboratory.**

## Principle

Blood and blood components are often transferred between hospitals in Wales. This may be to ensure efficient distribution of blood stocks, with a patient or for a specific patient at another hospital.

It is a legal requirement to ensure the audit trail is maintained when blood/blood components are transferred and to ensure that patient transfusion records within the laboratory information system are updated accordingly.

The cold chain is a temperature-controlled supply chain of storage and distribution activities which maintain a given temperature range. Insulated boxes containing cool packs, or other validated packaging materials, ensure that the optimum temperature is maintained for transport.

Records are kept of transport of blood and components in order to maintain an audit trail of the cold chain. The fate of individual units must be recorded by both the receiving and dispatching hospitals.

Transfusion laboratories that transport blood regularly to other hospitals, clinics and hospices should use their own validated method to pack the blood for transportation for transfer.

Not all laboratories pack blood for transport in exactly the same way. Even if the dispatching hospital's method is different to the receiving hospital's the information on the received paperwork should be accepted as valid i.e. the expiry time of the cold chain of the packaged blood and the intact seal on the transport box

Blood and Blood Components may be transferred for the following reasons:

1. Agreed transfer of stock between hospital transfusion laboratories
2. Transfer of blood "off site", issued for a specific patient, for transfusion
3. In **exceptional** circumstances, for patient transfer when blood allocated to a specific patient may be needed urgently en route

**In these circumstances the patient MUST be accompanied by a member of the clinical team from the dispatching hospital and the dispatching laboratory will coordinate the blood transfer**

**IN NO CIRCUMSTANCES should clinical staff take it upon themselves to pack and transfer blood components.**

## **Procedure for the dispatching hospital**

Prior to packaging the blood/components ensure suitable transport arrangements are in place.

### ***Blood Packaging and Final Documentation***

1. Locate the blood to be sent.
2. Complete the transfer document (appendix 1). The component detail section can be computer generated and attached. Make a copy of this documentation for your records and fax to the receiving hospital. Blood which may have been difficult to source should not be transferred with the patient as the figures cited show that a large proportion of this would be wasted – it is preferable to send the blood by taxi/courier directly to the receiving transfusion laboratory. Return the units to suitable storage conditions whilst preparing the transport box, packing materials and labels.
3. Immediately before sending, place the blood in the validated blood transport box appropriate for the number of units being transferred. Follow the local validated procedure for packaging and transport.
5. Place all the appropriate documentation in the transport box, retaining a copy of the transfer document.
6. Replace the box lid. Ensure label details are complete and label attached to box (appendix 2).
7. The box should be sealed by a method that identifies it has not been tampered with. The recommended method is a cable tie that alerts the user/laboratory, if removed or broken, that the cold chain has been broken.
8. Staff accompanying patients with transport boxes should be advised regarding the temperature control of blood and given a copy of appendices 3 and 4.

### ***Dispatch of Blood Components***

1. On dispatch of the blood, telephone the laboratory of the receiving hospital immediately to confirm dispatch and that their fax number is correct.
2. Confirm the following
  - Dispatching laboratory contact details.
  - Time of dispatch.
  - Mode of transport (courier or ambulance with the patient).
  - Estimated time of arrival.
  - Number and type of units.
  - Patient identification details and the ward or department (if known) expected to receive the patient.
  - Patient's blood group, any antibodies, special requirements and recent transfusion history.
  - Complete and fax a Shared Care Document if appropriate
3. Fax a copy of the transfer documentation to the receiving blood transfusion laboratory.

4. It is necessary for the dispatching hospital to record the final fate of the units. This may be –
  - Transfused to the patient.
  - Wasted due to breach of cold chain.
  - Put into receiving hospital's stock/transferred.
5. The receiving hospital must ensure that they can make this information available. The receiving hospital should record receipt, arrival time and final designation of component(s) on their own computer system, or on a paper record if the IT system does not allow for this.

### **Procedure for the receiving hospital**

The blood should be sent to the transfusion laboratory as soon as it arrives at the receiving hospital. The clinical area where the patient is being transferred to should be aware that they are required to send the transport box immediately on arrival to the transfusion laboratory to ensure proper process.

Further information for clinical staff is documented in Appendices 3 and 4.

Local policies should be in place to ensure that received blood is transferred to suitable storage facilities as soon as possible, taking note of the expiry time shown on the transport box.

1. On arrival, transfusion laboratory staff should check the integrity of the box, complete the transfer documentation and check the units are still under correct storage conditions.
2. Blood samples must be taken from the patient immediately and sent to the blood transfusion laboratory for testing.
3. Blood received must be entered on the LIMS and have their fate recorded as follows –
  - ) Disposed and the reason.
  - ) Not transfused but entered into stock.
  - ) Information regarding units that have been transfused *en route* should be transferred back to the dispatching laboratory
4. The receiving blood transfusion laboratory must ensure that all transferred units are accounted for.
5. For blood transferred with a patient, the receiving laboratory must inform the dispatching laboratory (preferably by Fax) of the fate of the units to enable update of records as above. This ensures the correct fate of the units is recorded at both hospitals.

### **Wrist Bands**



In those exceptional circumstances where the patient is to be transfused *en route* the patient identity wrist bands should be used to identify the patient pre-transfusion. Most receiving hospitals will re-register the patient and issue a second set of wrist bands. Communication between the clinical area and the laboratory is necessary to ensure that patient identification is managed in a safe and appropriate manner. A policy should be in place to minimise the risk of multiple hospital numbers and wherever possible the NHS number should be incorporated.

## References

British Committee for standards in Haematology (2009) *Guideline on the administration of blood components*, [www.bcsghguidelines.com](http://www.bcsghguidelines.com)

Department of Health, Statutory Instrument 2005/50 (as amended) *Blood Safety and Quality Regulations*

Geeraedts LM, Kaasjager HA, vanVugt AB, Frolke JP, (2009) Exsanguination in trauma: A review of diagnostics and treatment options, *Injury*, **40**, (1): 11-20

Stahel PF, Smith WR, Moore EE, (2009) Current trends in resuscitation strategy for the multiply injured patient, *Injury*, **40**, Suppl 4: S27-35

The Vascular Society (2007) *The Provision of Emergency Vascular Services*

## Appendix 1: Blood Component Transfer Form

### BLOOD COMPONENT TRANSFER DOCUMENT

This form must accompany units transferred between the named hospitals

**Blood components must only be transported in a validated container  
and in compliance with the Blood Safety and Quality Regulations (2005)**

Patient Name

NHS Number

Address

DOB

Gender

Enter below donation numbers and component type of all transferred units (or attach printout)

Unit 1: RBC / FFP / PLTS

Unit 2: RBC / FFP / PLTS



Unit 3: RBC / FFP / PLTS

Unit 4: RBC / FFP / PLTS



Special Requirements: Irradiated ☐ / CMV Negative ☐ / HLA Matched ☐

#### DISPATCHING HOSPITAL

..... (Hospital name)

*I confirm that the components listed above have been stored in accordance with National and Regulatory requirements before issue and that the transfusion laboratory on the recipient site was notified of transfer.*

***The components have been packed and sealed in a container that is validated for ..... Hours***

Date Packed .....

Time Packed .....

BMS Signature .....

#### Dispatching Hospital Contact Details

Tel No Direct: .....

Fax No .....

Hospital Switchboard ..... On call bleep: .....

#### RECEIVING HOSPITAL

..... (Hospital name)

The box was received

Sealed ☐

Opened ☐

*I confirm that the above components were / were not received in an appropriate condition and will be stored / disposed according to National and Regulatory requirements*

Date Received .....

Time Received .....

BMS Signature .....

#### Final Disposition (mark as appropriate)

Used *en-route*

Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Unit 4 ☐

Received to stock

Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Unit 4 ☐

Wasted

Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Unit 4 ☐

Return completed form to the Blood Transfusion Laboratory

## Appendix 2: Blood Box Label

To: *Insert receiving hospital name and address*

**DO NOT OPEN UNLESS IMMEDIATE TRANSFUSION OF THE PATIENT IS INDICATED**

**BLOOD**

**URGENT**  
For Immediate  
Delivery

The Blood / Components contained  
in this box were issued from the Blood  
Transfusion Laboratory at  
..... Hospital.  
If found please telephone  
..... immediately

**THIS BOX SHOULD BE TAKEN IMMEDIATELY ON ARRIVAL TO THE HOSPITAL  
TRANSFUSION LABORATORY**

<b>Issued by:</b> Signature of BMS		<b>Delivered by:</b> Signature of Porter / Driver	
PRINT NAME		PRINT NAME	
<b>Date:</b>	<b>Time:</b>	<b>Date:</b>	<b>Time:</b>
<b>Delivered to:</b> Signature		PRINT NAME	DESIGNATION:
<b>Date:</b>	<b>Time:</b>	<b>Time Removed from Transport box</b>	Unit 1: Unit 2: Unit 3: Unit 4:

**This transport box has been validated for the storage of blood components.**

**The contents of this box will be suitable for transfusion until:**

\_\_\_\_\_ : \_\_\_\_\_ hours

**Transport box opened / seal broken at: \_\_\_\_\_ : \_\_\_\_\_**

In compliance with the BSQR 2005, it is confirmed that the contents of this box have been  
stored securely in accordance with Guidelines for the Blood Transfusion Services in the U.K.

### DATALOGGER LABEL

**Please keep logger in box until last unit is removed**

Supplying Hospital.....

Time ..... Date.....

Logger placed in box with component

Signature: \_\_\_\_\_

Time last unit removed

Signed

Date

**Please return to supplying Hospital**

**Blood Transfer Advice to Clinical Staff**

*Dispatching hospital to ensure that the following sheet is ATTACHED to the transfer box when blood is being transferred with a patient*

**THE BLOOD COMPONENTS IN THIS BOX HAVE BEEN PACKED ACCORDING TO STRICT TRANSFUSION LABORATORY GUIDELINES**

**During transfer:**

- If blood is required during the patient's journey please ensure that it is checked and transfused in accordance with local policy and National Guidance (BCSH, 2009)
- Please ensure the box remains sealed unless a unit is required for transfusion. Once opened the cold chain has been broken and all the units must be transfused within 4 hours
- If blood is removed for transfusion, please replace the lid
- Blood is suitable for transfusion within the timeframe stated on the paperwork attached to the box, provided the seal is unbroken

**On arrival:**

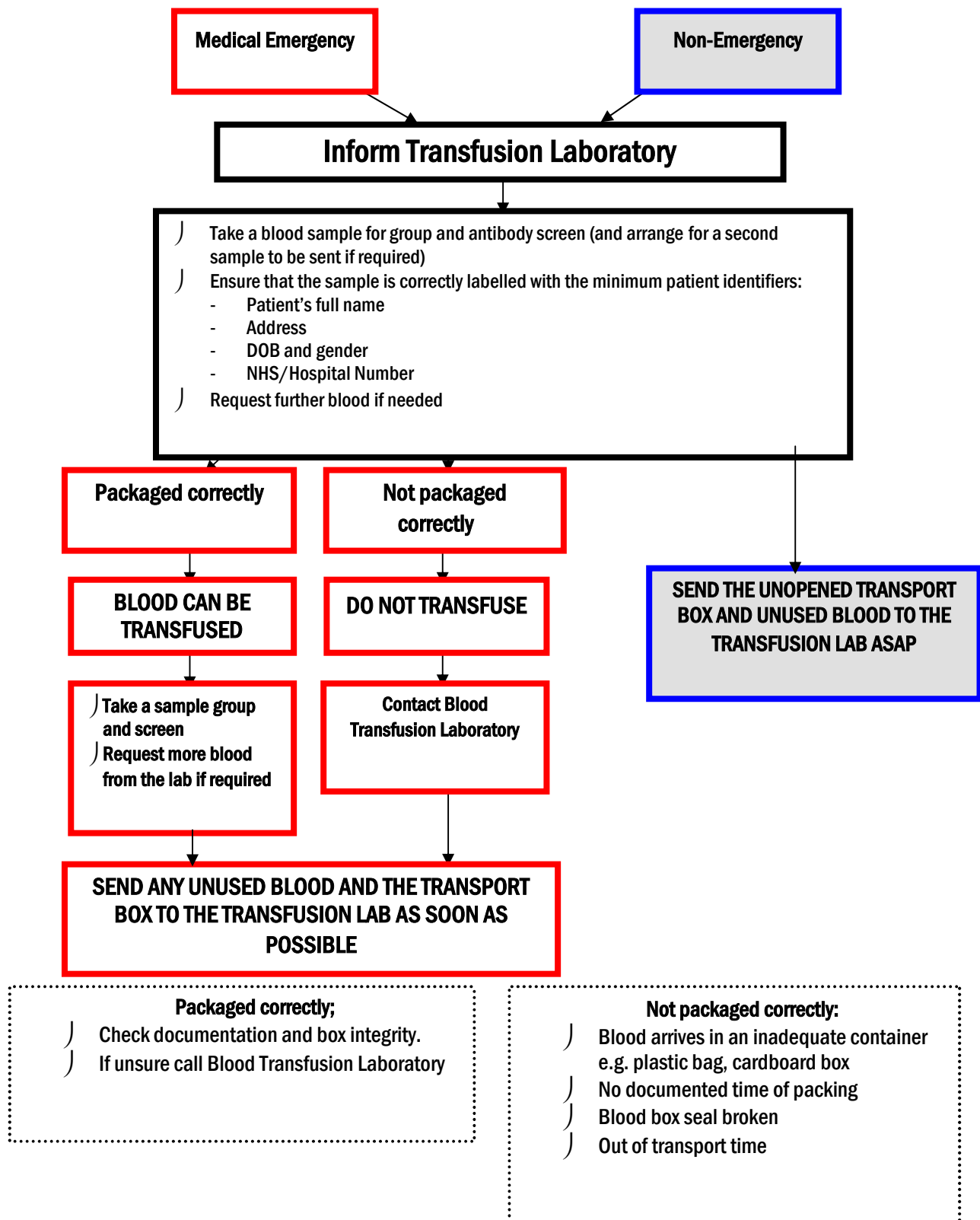
- When the patient arrives in the receiving clinical area, hand the blood box to the receiving member of clinical staff
- Please state how much blood, if any, was transfused during the journey and any adverse events noted
- Responsibility for the blood now lies with the receiving hospital in line with their local policy

**Receiving Clinical Staff:**

- When the blood box is received, contact your Transfusion Laboratory immediately for instruction
- Follow additional guidance on attached flowchart

## Appendix 4

### ACTION FOR CLINICAL STAFF ON RECEIVING TRANSFERRED BLOOD COMPONENTS



## Appendix 5: Hospital Contact

ABERTAWE BRO MORGANWG	
<b>Morriston Hospital</b> Main switchboard 01792 702222 Transfusion Lab <b>01789 3054</b> Fax. No. 01792 703052	<b>Princess of Wales Hospital</b> Main switchboard 01656 752752 Transfusion Lab <b>01855 2343</b> Fax. No. 01656 655676
<b>Singleton Hospital</b> Main switchboard 01792 205666 Transfusion Lab <b>01883 5075</b> Fax. No. 01792 285470	<b>Neath Port Talbot hospital</b> Main switchboard 01639 862000 Transfusion Lab 01639 862367 Fax. No.
ANEURIN BEVAN	
<b>Royal Gwent Hospital</b> Main switchboard 01633 234234 Transfusion Lab <b>01738 4477</b> Fax. No. 01633 212076	<b>Caerphilly &amp; District Miners Hospital</b> Main Switchboard 02920 851811 Transfusion Lab. <b>01755 7250</b> Fax No. 02920 8072
<b>Nevill Hall Hospital</b> Main switchboard 01873 732732 Transfusion Lab <b>01736 2235</b> Fax. No. 01873 733048	
BETSI CADWALADR	
<b>Wrexham Maelor Hospital</b> Main Switchboard: 01978 291100 Transfusion Lab: <b>01814 5371</b> Fax. No. 01978 725631	<b>Ysbyty Gwynedd</b> Main Switchboard: 01248 384384 Transfusion Lab: <b>01746 4368</b> Fax. No. 01248 385399
<b>Ysbyty Glan Clwyd</b> Main Switchboard: 01745 583910 Transfusion Lab: <b>01815 4200</b> Fax. No. 01745 534016	
CARDIFF AND VALE	
<b>University Hospital of Wales</b> Main switchboard 02920 747747 Transfusion Lab <b>01872 2157</b> Fax. No. 02920 744677	<b>Llandough Hospital</b> Main switchboard 02920 711711 Transfusion Lab <b>01776 5389</b> Fax. No. 02920 715399
CWM TAF	
<b>Prince Charles Hospital</b> Main switchboard 01685 721721 Transfusion Lab <b>01854 8267</b> Fax.No. 01685 382587	<b>Royal Glamorgan Hospital</b> Main Switchboard: 01443 443443 Transfusion Lab: <b>01751 4366</b> Fax. No. 01443 443355
HYWEL DDA	
<b>Carmarthen Hospital</b> Main switchboard 01267 235151 Transfusion Lab <b>01827 2459</b> Fax. No. 01267 227790	<b>Bronglais Hospital</b> Main switchboard 01970 623131 Transfusion Lab <b>01822 5945</b> Fax. No. 01970 635923
<b>Prince Phillip Hospital</b> Main switchboard 01554 756567 Transfusion Lab <b>01824 3057</b> Fax. No. 01554 775569	<b>Withybush Hospital</b> Main switchboard 01437 764545 Transfusion Lab <b>01720 3230</b> Fax. No. 01437 772156

\* Telephone Numbers in Bold = WTHN Number