Safe Blood and Blood Products

Module 1

Safe Blood Donation
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Module 1

Safe Blood Donation
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Preface

Safe Blood and Blood Products

Safe Blood and Blood Products is a series of interactive learning materials developed by the World Health Organization (WHO). The materials have been designed for use in distance learning programmes in blood safety, although they can also be used for independent study or as resource materials in conventional training courses and in-service training programmes.

The learning materials have been produced for staff with responsibility for donor recruitment and retention, and for the collection, testing and issue of blood for transfusion. They comprise the following modules:

- Introductory Module: Guidelines and Principles for Safe Blood Transfusion Practice
- Module 1: Safe Blood Donation
- Module 2: Screening for HIV and Other Infectious Agents

The English edition was first published in 1993. French, Spanish, Russian, Chinese and Portuguese editions have since been produced and the materials have also been translated into a number of national languages.

This second, updated edition of the materials has been developed to reflect changes in transfusion medicine and laboratory technology since the publication of the first edition.

Distance learning in blood safety

Since the publication of Safe Blood and Blood Products, WHO has held a series of regional and sub-regional workshops for senior blood transfusion service personnel from over 100 countries on establishing national distance learning programmes in blood safety. Programmes have since been established in every region of the world, using the WHO learning materials.

Part of the follow-up to the workshops has been the production of Establishing a Distance Learning Programme in Blood Safety: A Guide for Programme Coordinators. This provides a practical guide to the planning, implementation and evaluation of a distance learning programme in blood safety.
**Other WHO learning materials**

*The Clinical Use of Blood* consists of an open learning module and pocket handbook which provide comprehensive guidance on transfusion and alternatives to transfusion in the areas of general medicine, obstetrics, paediatrics and neonatology, surgery and anaesthesia, trauma and acute surgery, and burns. They are designed to promote a reduction in unnecessary transfusions through the wider use of plasma substitutes and more effective prevention and treatment of the conditions that may make transfusion necessary.

WHO has also published recommendations on *Developing a National Policy and Guidelines on the Clinical Use of Blood* which encourage the use of the learning materials in education and training programmes to promote effective clinical decisions on transfusion.

Additional learning materials in the *Safe Blood and Blood Products* series that are available or in development by the WHO Department of Blood Safety and Clinical Technology (WHO/BCT) include:

- *Costing Blood Transfusion Services*
- *The Blood Cold Chain*
- *Blood Collection*
- *Blood Components Production*.

More detailed information on these materials and other documents and publications related to blood transfusion is available from WHO/BCT, which also issues regular reports on evaluations of the operational characteristics of many commercially available screening assays for transfusion-transmissible infections.

Information can be obtained from the BCT section of the WHO website at http://www.who.int/bct or by contacting WHO/BCT at WHO Headquarters or WHO Regional Offices.

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*Dr Jean C. Emmanuel*

**Director, Blood Safety and Clinical Technology**

*World Health Organization*
Introduction to Module 1

The purpose of this section is to introduce you to Module 1: Safe Blood Donation which focuses on ways of ensuring safe and adequate supplies of blood.

**LEARNING OBJECTIVES**

When you have completed this section, you should be able to:

1. Explain the purpose of Module 1.
2. Identify a personal “supporter” who can assist you throughout your work on this module.
3. Assess your current knowledge, skills and experience in relation to the objectives of this module.
4. Make a realistic Study Plan for your work on this module.
1.1 THE DISTANCE LEARNING MATERIALS

Module 1: Safe Blood Donation is part of the series of distance learning materials, Safe Blood and Blood Products, developed by the World Health Organization Blood Transfusion Safety team (WHO/BTS). These materials have been designed to provide access to training for staff working in blood transfusion services, hospital blood banks and public health laboratories who have limited opportunities to attend conventional training courses.

The other modules in this series are:

- Introductory Module: Guidelines and Principles for Safe Blood Transfusion Practice
- Module 2: Screening for HIV and Other Infectious Agents

You should already be familiar with the use of these distance learning materials from your work on the Introductory Module. If you have not yet read it, it is essential to do so before studying this module so that you understand how the programme is organized. In particular, make sure that you read Section 1 which explains the role of your trainer and supporter and how to use the learning materials, especially Section 1.2 on pages 5–8 which describes the following features of the modules:

- module objectives
- sections
- learning objectives
- activities
- action list and action plan
- summary
- self-assessment
- progress check
- glossary
- appendices
- offprints.

Using Module 1

You should find this module useful if you are a nurse–phlebotomist or a blood donor recruitment organizer working in a blood transfusion service, hospital blood bank or the national Red Cross or Red Crescent Society. You should also find it helpful if you are a member of the laboratory technical staff and are involved in any aspects of donor recruitment, donor screening and the collection of blood.

You may also find Module 1 of interest if you are a member of the medical or laboratory technical staff, such as a hospital medical superintendent or a senior technologist, and are responsible for training or supervising staff who are involved in any aspects of donor recruitment and blood collection. In this case, the module will offer basic refresher and updating.
material for your own use as well as a comprehensive resource that you can integrate into your own training programmes.

Some sections of this module may be more relevant to your own work than others. This will depend on where you work and what your job is. For example, you may work in a blood transfusion service that provides blood and blood products to all hospitals within easy reach and acts as a reference centre for those hospitals. If you mainly work in the laboratory, blood collection may be only a small part of your job. You are unlikely to be responsible for planning a donor education, motivation and recruitment campaign, as described in Section 4, or for screening donors, which is covered in Section 6.

Alternatively, you may work in a small hospital blood bank which provides blood only for patients in your own hospital. Although some hospital blood banks obtain blood from the national or regional transfusion service, others recruit their own donors and collect blood from them. In this case, you may be responsible for all aspects of donor recruitment, selection and bleeding in your locality.

The way in which this module will be most useful to you, therefore, depends on how much of your time you spend working with donors. You may decide to work through every section and attempt all the activities; alternatively, you may decide to complete only the sections that relate directly to your work and simply to read the remainder. Your trainer should highlight these areas when you plan your work on this module.

Module 1 may contain some material which is new to you. Take as much time as you need to read through each section and mark anything that you find difficult. Then go back to those parts and reread them until you feel sure that you are able to understand them. If you still find them complicated or are unable to complete some of the activities, seek help from your trainer, your supporter or another senior colleague. Don’t be afraid to ask for assistance – what you are learning is extremely important and will directly benefit the centre in which you work.

1.2 BEFORE YOU BEGIN THIS MODULE

You should already have completed the Introductory Module and may also have worked through other modules in this series of distance learning materials. During this period, you should have been in regular contact with your trainer. You should already have had an opportunity to discuss the work you will be undertaking on Module 1, but if this has not yet been possible, contact your trainer before you begin this module.

When you started working through the Introductory Module, you were asked to identify someone who would act as your personal “supporter”. You should have been able to find someone who was willing to meet with you regularly to discuss your progress and provide assistance and support, particularly when you were developing and implementing your Action Plan. You now need to choose a supporter for your work on this module – perhaps the same person or another senior colleague who has experience in donor recruitment and blood collection.
**ACTIVITY 1**

Think about the people with whom you work, particularly your supervisor and other senior colleagues, who could support you while you are working through Module 1. Identify one person whom you think would be willing to spend some time talking to you periodically about your work on this module and helping you with any problems that you might face. Remember that it is important to choose someone who is prepared to discuss your ideas about ways of improving the service and to assist you in planning and implementing any changes that you identify as being needed as a result of your work on this module.

Check that the person you have identified is prepared to help you. If you have chosen a different supporter from the person you selected for your work on the Introductory Module, explain how the learning programme operates and what the role of the supporter involves. Show this module to your supporter so that he or she becomes familiar with its content and approach. When you are preparing your Study Plan, arrange regular meetings to discuss your progress.

If you have any difficulty in finding a suitable supporter in your workplace, talk to your trainer who will help to find someone to support you.

Even though your supporter will be your main source of assistance, you will also find it helpful to discuss your work on this module with other colleagues, particularly those who are involved in donor recruitment and blood collection. In addition, you may find it useful to talk to people outside your own workplace, such as health education officers and staff from the Red Cross or Red Crescent Society and the national AIDS control programme. Blood donors themselves are an important source of information and ideas about how to develop effective strategies for recruiting and retaining voluntary non-remunerated donors so make use of all available opportunities to talk to them about ways in which your service might be improved.

1.3 **MODULE 1: SAFE BLOOD DONATION**

With the rapid increase in the number of people with transfusion-transmissible infections, and in particular the human immunodeficiency virus (HIV), an essential part of the global strategy to ensure supplies of safe blood is to select healthy donors with a low risk of transfusion-transmissible infections. Whatever your job, your role in this process is extremely important. This module is therefore designed to help you to develop the knowledge and skills needed to ensure that blood donation is safe, both for donors themselves and for the recipients of their blood. In particular, it focuses on ways of:

- reducing the proportion of unsafe blood that is collected
- building up a panel of voluntary non-remunerated donors
who are willing to give blood regularly, since these are the foundation of a safe blood supply.

Section 1: Introduction to Module 1 outlines the contents of the module and contains activities that are designed to help you to prepare for your work on it.

Section 2: Identifying Low-risk Donors examines the advantages and disadvantages of different types of blood donor and emphasizes the importance of voluntary non-remunerated donors for a safe and adequate blood supply. It also looks at risk behaviour and the transmission of HIV infection and explores ways of identifying sources of safe blood.

Section 3: Estimating Blood Requirements introduces three simple methods of calculating the amount of blood required to meet the needs of your locality.

Section 4: Donor Education, Motivation and Recruitment explores ways of improving the safety and adequacy of the blood supply by developing an appropriate education, motivation and recruitment campaign to attract voluntary non-remunerated donors.

Section 5: Organizing Donor Clinic Sessions deals with planning and organizing fixed and mobile donor clinics and with evaluating the effectiveness of blood donor sessions.

Section 6: Blood Donor Selection focuses on procedures for screening donors in order to ensure their own safety as well as the safety of the recipients of their blood, including predonation counselling, the medical history, the health check and donor deferral.

Section 7: The Care of Blood Donors looks at ways of ensuring that all donors receive a high standard of care before, during and after donating blood and that the experience of donation is safe, efficient and pleasant for them.

Section 8: Blood Donor Records considers the various types of donor record and their uses and asks you to explore ways of improving the effectiveness of record-keeping in your centre.

Section 9: Donor Retention and Recall focuses on ways of encouraging voluntary non-remunerated donors to give blood regularly.

Section 10: Action Plan is the final section in which you are asked to review all the ideas you have included in your Action List and to prepare an Action Plan as a basis for improving working practices in your blood collection centre. You will find the Action List for Module 1 on page 122.

The sections in this module follow a logical sequence in the establishment of an effective blood collection programme. However, depending on the stage of development of your own programme, you may prefer to study them in a different order and to focus initially on the sections that relate most directly to your current work. For example, if your blood bank still depends on family or family replacement donors rather than on voluntary non-remunerated donors, you may decide to leave Sections 4 and 9 on donor recruitment and retention until you have completed the other sections.
Before starting work on this module, therefore, you should identify any sections which cover tasks that are not undertaken in your centre or that you do not currently perform. Discuss them with your trainer before you draw up your Study Plan and decide on the most appropriate sequence for your study of this module.

### 1.4 MODULE OBJECTIVES

There are eight overall objectives for this module which specify what you should be able to do as a result of reading the text, answering the self-assessment questions, completing the activities and preparing your individual Action Plan.

When you have finished working through this module, you should be able to achieve the following objectives:

- **Section 2**
  Identify low-risk donor populations and explain the importance of encouraging potentially unsafe donors to self-exclude.

- **Section 3**
  Estimate the number of donors needed to meet the blood requirements of your locality.

- **Section 4**
  Develop an effective education, motivation and recruitment campaign to increase the number of voluntary non-remunerated blood donors.

- **Section 5**
  Plan and organize fixed and mobile donor clinic sessions.

- **Section 6**
  Develop and maintain effective donor selection procedures.

- **Section 7**
  Provide a high standard of care for donors before, during and after donation.

- **Section 8**
  Maintain an efficient donor record-keeping system.

- **Section 9**
  Develop an effective system for retaining regular voluntary non-remunerated donors.

### ACTIVITY 2

**Before you begin work on Section 2, you will find it helpful to assess your current level of knowledge, skill and experience in relation to the module objectives and to decide what you want to achieve by working through the module. Look carefully at the objectives and, for each one, decide whether you have:**

1. A high level of knowledge, skill and experience.
2. A reasonably good level of knowledge, skill and experience.
### Module objectives

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<th>Module objectives</th>
<th>Rating (1–4)</th>
<th>Comments</th>
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<tr>
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3 **Some knowledge, skill and experience.**

4 **Little or no knowledge, skill or experience.**

The objectives are repeated in the table above. Note down your rating (1, 2, 3 or 4) for each objective and add any comments you wish to make. Note any objectives that relate to areas of work that you do not currently undertake.

You have now identified the areas which will be mostly revision for you and the areas to which you need to pay particular attention. The module objectives are designed to help you to assess your own progress. When you reach the end of the module, you will be asked to look back at them to check whether you feel that you have achieved them. The most important question to ask yourself then is whether you feel that you can do your job better as a result of your work on this module. If you feel that you would like to improve your knowledge, understanding and skills
further, think carefully about the topics you would like to learn more about. Then talk to your supporter, supervisor or trainer about how you can achieve this.

1.5 PLANNING YOUR STUDY

Since you should already have completed the Introductory Module, you should be able to make a reasonable estimate of the amount of time that you will need to spend on Module 1. The activities are likely to be time-consuming, but remember that you will be able to complete most of them during the course of your normal work.

ACTIVITY 3

Look quickly at the other sections in this module to get an idea of the content, level and approach and to assess how much of the material is likely to be new to you. Also look at some of the activities to assess the kind of work that will be involved.

Try to estimate how much time you will need to study each section, including answering the self-assessment questions and completing the activities. Remember that you will also need to allocate time to meet with your supporter and trainer and to prepare your Action Plan. Then talk to your supervisor about the amount of time you could be allocated each week, or each month, for your work on Module 1.

Now fill in the Study Plan on page 9. Copy the ratings of your knowledge, skills and experience from Activity 2 as they are an indication of how much time you will need to spend on each section. Then add the dates by which you plan to complete each section, taking into account your current knowledge, skills and experience in relation to each module objective and the time you are likely to have available for study. When you have arranged dates for meetings or other contact with your trainer and supporter, add these to your Study Plan.

SUMMARY

1. Module 1 emphasizes the recruitment of regular, voluntary non-remunerated blood donors as the foundation of a safe and adequate supply of blood.
2. You should identify a personal supporter to provide ongoing support while you work through this module.
3. Before starting work on Module 1, you should review your knowledge, skills and experience in relation to the module objectives.
4. A realistic Study Plan will help you to organize your work on this module.
## STUDY PLAN

<table>
<thead>
<tr>
<th>Section</th>
<th>Rating (1 to 4)</th>
<th>Planned completion dates</th>
<th>Meeting dates</th>
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<tr>
<td><strong>Section 2</strong> Identifying Low-risk Donors</td>
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<td><strong>Section 3</strong> Estimating Blood Requirements</td>
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<td><strong>Section 10</strong> Action Plan</td>
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**Notes**
PROGRESS CHECK

Before moving on to Section 2, spend a few minutes thinking about whether you have achieved the learning objectives for Section 1. These were to:

1. Explain the purpose of Module 1.
2. Identify a personal “supporter” who can assist you throughout your work on this module.
3. Assess your current knowledge, skills and experience in relation to the objectives of this module.
4. Make a realistic Study Plan for your work on this module.

If you feel confident that you have understood everything, turn to Section 2. If you feel that you need more information about Module 1 or the learning programme as a whole, contact your trainer to discuss anything you are unsure about or talk to your supporter.
Identifying Low-risk Donors

The purpose of this section is to compare the advantages and disadvantages of different types of blood donor and to illustrate the importance of regular, voluntary, non-remunerated blood donors for a safe and adequate blood supply. In this section, you will look particularly at risk behaviour and the importance of encouraging self-exclusion and self-deferral by unsuitable donors.

**LEARNING OBJECTIVES**

When you have completed this section, you should be able to:

1. Estimate the proportion of different types of blood donor attending your donor clinics.
2. Identify the most common forms of risk behaviour in your locality.
3. Assess the prevalence of HIV among donors in different age groups in your locality.
4. Estimate the proportion of regular donors attending your donor clinics.
5. Review the approaches used in your centre to encourage self-exclusion, self-deferral or confidential unit exclusion by donors who are unsuitable to donate blood.
2.1 TYPES OF BLOOD DONOR

There are basically three types of blood donor. These are:

1. Family or family ‘replacement’ donors
2. Paid commercial or professional donors
3. Voluntary, non-remunerated (unpaid) donors

**Family or family replacement donors**

Replacement donation is a common practice in many countries. In this system, the blood needed by a patient is supplied by one or more donors from within the patient’s own family or community. In most cases, the patient’s family is requested to donate blood but, in some countries, it is compulsory for every patient to provide a specified number of donors on admission to hospital. Donors are not paid by the blood transfusion service or hospital blood bank, although they may sometimes be given money or another form of payment by the patient’s relatives.

There are two basic forms of this system. The first is where the family donates the same quantity of blood as that given to their relative. This blood is added to the general pool in the blood bank and is then used as required. The donor is not told the identity of the recipient of the blood.

A second variation is known as ‘directed donation’, where a donor specifically requests that their blood is given to a named patient, perhaps because of fears about the safety of blood from unknown donors. However, directed donations are strongly discouraged by WHO. In *Minimum Targets for Blood Transfusion Services* (WHO, 1989) it is clearly stated that:

> If family or “replacement” donors are used their donations should be to the transfusion service and not “directed” to named recipients. Care must be taken to ensure that this is not a hidden (remunerated) system.

**Advantages**

Family or family replacement donation can be useful because it helps to meet a need for blood where voluntary non-remunerated donors are not available. In addition, once replacement donors recognize that their blood has helped to save the life of their relative, they may be willing to become regular, voluntary donors so that other patients will also benefit in the future. Ways of establishing a panel of voluntary non-remunerated donors are covered in detail in later sections.

**Disadvantages**

Unfortunately, there are also disadvantages to the system of replacement donation.

1. Patients or their relatives are expected to find replacement donors. This puts additional responsibility and stress on them at a time when they are already under strain because of the patient’s illness.
2 There is pressure on members of the family unit to give blood, even when they may be unsuitable to do so, either because of their health status or because of the risk of transfusion-transmissible infection.

3 The blood given to patients will not necessarily be replaced in type or quantity. Where a transfusion is required for an adult, it is likely that several units of blood will be needed. A donation from one or two family members may not be sufficient to replace the blood used. As a result, the blood needs of the community may not be met adequately.

4 Relatives who cannot find suitable donors within the family unit – or who are unwilling to give blood – may seek donors who are prepared to give their blood for payment. We shall discuss the disadvantages of paid donors shortly.

Research undertaken in a number of countries has shown that blood from family or family replacement donors is found to be unsuitable more often than blood from unpaid voluntary donors. This is to be expected because people who give blood under pressure or for payment by the patient’s family are less likely to reveal any reasons why they may be unsuitable as donors. As a result, they present a potentially greater risk to the safety of the blood supply.

Where family or family replacement donors are used, therefore, it is essential to ensure that appropriate screening and selection procedures are always maintained, including:

1 Screening all donors before donation, in order to ensure that they meet the normal criteria set for low-risk donors (see Section 6).

2 Informing donors that their blood will be placed in the blood bank and will not necessarily be given to their relative or any other named patient.

3 Ensuring that the handling of family or family replacement donors is under the control of donor clinic or blood bank staff, not hospital or ward staff.

**Commercial or professional donors**

Commercial or professional donors receive money or other rewards (which can be exchanged for money) for the blood that they donate. They often give blood regularly and may even have a contract with a blood bank to supply blood for an agreed fee. Alternatively, they may sell their blood to more than one blood bank or approach patients’ families and try to sell their services as replacement donors.

Commercial or professional donors are usually motivated by what they will receive for their blood rather than by a wish to help other people. It may be possible, however, to persuade them to become voluntary non-remunerated donors, although it is always essential to ensure that they meet the national criteria for low-risk donors through careful screening.
Disadvantages
There are major disadvantages to paying donors for their blood.

1. Paying donors to give blood undermines the voluntary non-remunerated donation system which is the foundation of a safe blood supply.

2. Many commercial donors come from the poorer sectors of society where the need for money drives them to sell their blood. They may be in poor health, undernourished or at risk of transfusion-transmissible infections which would endanger the lives of the recipients of their blood.

3. Commercial donors may donate their blood more frequently than is recommended. This may have harmful effects on their own health, with the result that they may supply substandard units of blood which could either present a risk to the recipients or provide little or no benefit.

4. If donors are paid, it is usually necessary to charge patients for the blood they receive. Poor families may not be able to afford to pay for blood when they need it.

Voluntary non-remunerated donors
Voluntary non-remunerated donors are people who give blood, plasma or other blood components of their own free will and receive no money or other form of payment for it which could be considered a substitute for money, such as time off work except that reasonably needed for the donation and travel. Their primary motivation is to help unknown recipients and not to obtain any personal benefit.

The following items are not normally considered as payments or substitutes for money:

- small tokens of recognition or appreciation, such as badges or certificates, that have no commercial value
- reimbursement of the direct costs of travel that was specifically undertaken in order to donate blood
- light refreshment immediately before, during or after a donation.

Advantages
Voluntary non-remunerated blood donors have the following very important advantages over other types of donor.

1. Voluntary non-remunerated donors are not under pressure to give blood and are therefore more likely to meet the national criteria for low-risk donors.

2. They are more likely to be willing to donate blood regularly, which is important in maintaining adequate supplies of blood.

3. Regular donors are more likely to be free from transfusion-transmissible infections because they have been educated
about the importance of safe blood and are screened each time they attend to give blood.

4. They are more likely to respond to an appeal for blood donors during an emergency because they have already expressed a commitment to voluntary blood donation.

World Health Assembly Resolution 28.72 of 1975 urged Member States to:

Promote the development of national blood services based on the voluntary non-remunerated donation of blood.

This means that the target for every country should be to ensure that all blood donors are voluntary and non-remunerated. How far is your country from achieving this target? In the next activity, you will look at the proportion of different types of donor in your own locality.

**ACTIVITY 4**

Study the records of blood donors attending your blood transfusion centre or hospital blood bank over the past six months. In the table below, write down the number of each type of donor for this period.

Then calculate the percentage of each type of donor, as follows:

\[
\text{Number of replacement donors} \times 100 = \% \text{ of replacement donors} \\
\text{Total number of donors}
\]

Calculate the percentage of commercial donors and voluntary non-remunerated donors in the same way.

If you are unable to obtain this information, try to estimate the percentage of each type of donor from your own experience.

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<thead>
<tr>
<th>Type of donor</th>
<th>No.</th>
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<tr>
<td>Family or family replacement</td>
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<td>Commercial/professional</td>
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<td>Voluntary non-remunerated</td>
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</table>

Find out from your Ministry of Health what the national policy is on recruiting family or family replacement donors and commercial donors. Also try to find out the proportions of different types of donor in your country as a whole.
How safe do you think your blood supply is likely to be? Remember that the higher the proportion of family or family replacement donors or commercial donors, the greater the risk to the safety and adequacy of the blood supply.

There are two basic approaches to identifying safer donors which should always be used together:

- avoiding unsuitable donors, particularly individuals at risk of contracting any transfusion-transmissible infection
- recruiting regular, voluntary non-remunerated donors.

In blood transfusion practice, the term low-risk donors is commonly used to describe donors who have a low risk of contracting an infection that could be transmitted by blood transfusion. Remember, however, that careful screening of both donors and their blood is always essential, even with regular, voluntary non-remunerated donors.

Before examining these two approaches in detail, it is necessary to mention two other types of blood collection – therapeutic phlebotomy and preoperative donation – although these cannot strictly be called donations since their purpose is not to add to the national supply of blood.

Therapeutic phlebotomy

Therapeutic phlebotomy is the collection of blood from patients in order to improve their own health, usually because of a blood disorder leading to an abnormally high red cell count (haemoglobin level). Patients with such disorders do not qualify as being medically fit to be blood donors, even though their high haemoglobin level may be their only clinical problem. Blood from these patients is therefore not normally used for transfusion.

Autologous transfusion

The term autologous transfusion describes the transfusion of any blood component that was donated by the intended recipient.

Recipients who serve as their own donors receive the safest possible transfusion since the risks of transfusion-transmitted infection and alloimmunization are eliminated.

Autologous transfusion also provides benefits to a blood transfusion service or hospital blood bank because it ensures that blood is available for patients even where the supply of compatible blood is otherwise limited. Where units are not used for autologous transfusion, they can be added to the homologous supply, provided that the donor–patient meets the standard criteria for blood donors.

Wherever there are national guidelines on autologous transfusion, they should always be followed. If you are unaware of any guidelines in your country, contact the national blood transfusion service or the Ministry of Health to find out whether any are available.
2.2 IDENTIFYING UNSUITABLE DONORS

It is essential to be aware of the reasons why certain individuals may be unsuitable as blood donors because their blood may present a risk to the patients who receive it. These factors may include:

1. *Poor health and nutritional status of donors*
   Blood donation by people who are suffering from nutritional deficiency or other health problems poses a threat to their own health, as well as to that of the recipients of their blood. They may not meet minimum clinical criteria such as weight or haemoglobin level and may also be more likely to faint during or after the bleed. Where there is a high level of poor nutrition or other conditions leading to poor health in a given population, there will also be a high proportion of unsuitable donors. It may not be cost-effective to attempt to recruit donors from such populations.

2. *Non-voluntary donation*
   The ideal source of blood for a transfusion service is voluntary non-remunerated donors. Blood donation in institutions such as the army, the police and prisons is unlikely to be purely voluntary since donors may have been ordered to give blood. In the case of prisons, in particular, the possibility of receiving postdonation comforts may be an important incentive that detracts from true voluntary blood donation ethics. Individuals from such institutions may, however, be accepted as donors in a normal voluntary donor clinic provided that they fulfil the national criteria set for safe blood donation. Donors from prisons and other institutions may have higher levels of infectious disease markers in their communities. Careful donor screening and selection is therefore particularly important in these populations.

   In addition, the aim of a blood transfusion service should always be to recruit voluntary donors who give blood regularly. Personnel in institutions may not always be available because of their duties; for example, army or police personnel may be transferred to other areas.

3. *Blood donor risk behaviour*
   Certain social behaviour may expose donors to the risk of acquiring infections, such as HIV, which can then be transmitted to the recipients of their blood. Risk behaviour is particularly important because of the growing incidence of HIV and AIDS and we shall therefore consider it in detail.

**Transmission of HIV infection**

The transmission of HIV infection is covered more fully in Section 3 of Module 2: Screening for HIV and Other Infectious Agents. In brief, however, there are only three main routes of transmission of HIV infection:
1. Unprotected penetrative sexual contact with an infected person, either between men or between men and women.

2. Inoculation of infected blood through:
   - blood transfusion or the infusion of blood products
   - needlestick injuries
   - the reuse of contaminated needles, syringes or knives: for example, in injecting drug use, body-piercing, scarification, tattooing or blood rituals.

3. Transmission of infection from an infected mother to her child through:
   - infection of the developing fetus during pregnancy
   - infection of the infant at birth through cervical secretions containing the virus
   - breastfeeding.

**Risk behaviour**

Potential donors often do not realize how their own behaviour can increase their risk of contracting HIV or other transfusion-transmissible infections, so it is essential to educate them about the dangers, both to themselves and to anyone receiving their blood. The more sexual partners that a donor has, for example, the higher the risk that they will acquire a sexually-transmitted infection. Injecting drug use is a direct route of acquiring bloodborne infections, such as HIV, and is a major form of risk behaviour in some communities.

The most common types of risk behaviour include:

- having more than one sexual partner
- prostitution (commercial sex)
- homosexuality (men having sex with other men): in some countries, however, men who have sex with other men may not consider themselves to be homosexual if they are the active partner rather than the passive partner.
- bisexuality (men having sex with both men and women)
- injecting drug use
- skin scarification, tattooing and blood rituals
- being the sexual partner of anyone engaging in any form of risk behaviour.

Each country should define the criteria for identifying the lifestyles and behaviours that expose potential donors to the risk of acquiring transfusion-transmissible infections. This is important for two reasons:

1. To inform potential donors about the behaviour that would make them unsuitable to donate blood because of the risk of acquiring transfusion-transmissible infections and transmitting them to the recipients of their blood.
2 To assist donor clinic staff and health educators to develop strategies for identifying and deferring potential donors who may be at risk of transmitting transfusion-transmissible infections through their blood.

If you do not have copies of any national or local guidelines, contact your national blood transfusion service or national AIDS control programme for information since it is essential to know the criteria set in your country for defining risk behaviour.

**ACTIVITY 5**

Think about the types of risk behaviour that are common in your locality. Using the table below, tick the relevant boxes to identify the kinds of risk behaviour that:

- are common
- sometimes occur, perhaps amongst particular groups of people or in particular areas
- are rare.

<table>
<thead>
<tr>
<th>Risk behaviour</th>
<th>Common</th>
<th>Sometimes occurs</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than one sexual partner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prostitution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homosexuality (men having sex with men)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisexuality (men having sex with both men and women)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injecting drug use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin scarification/tattooing/blood rituals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual partner of above</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Then find out whether there is a similar pattern of risk behaviour in the rest of your country.

In order to complete this activity, you may need to consult your records and talk to your colleagues or perhaps to contact your local health education officer. You may also need to consult the Ministry of Health since your area may not be typical of your country as a whole.
If you live in a city, for example, injecting drug use may be more common than in rural areas.

You have now identified the most common forms of risk behaviour in your locality. This information will be important in helping you to identify donors who are at high risk for transfusion-transmissible infections and will indicate the issues that should always be covered thoroughly in the screening of donors (we shall focus on donor selection in Section 6). Information about risk factors should also be included in all donor education activities and in predonation counselling to discourage anyone who engages in any form of risk behaviour from donating blood.

**Effects of risk behaviour on blood safety**

It is very important to defer donors or to encourage them to self-exclude or self-defer—that is, to decide not to give blood—if they have engaged in any risk behaviour. This is because it is impossible to know whether they have recently acquired a transfusion-transmissible infection which laboratory tests may not yet be able to detect. We shall return to the issue of self-exclusion and self-deferral later in this section.

Look at Figure 1, below, which shows that there is a period of time between infection by HIV and the development of detectable antibodies. This is often referred to as the "window period." It is not possible to identify whether a person has been infected until the antibodies can be detected. Unlike tests for hepatitis B, routine HIV tests are based on the presence of detectable HIV antibody levels (anti-HIV), not antigen. (This is discussed in more detail in Section 3 of Module 2.)

The presence of detectable antibodies and therefore the exact duration of the "window period" varies with each individual. Some research papers report that antibodies are present as early as 14 days or more after infection while others indicate that they may not be present until 28 days or more after infection. This means that even if laboratory tests indicate that a donor is not infected by HIV, there is still a risk that the donor has recently contracted the virus and that it will be transmitted to the recipient of the blood. The risk to patients increases if donors are not properly informed about the "window period" and wrongly assume that their blood is safe because they have no clinical signs or symptoms of disease.

![Figure 1: The “window period”](image-url)
Identifying Low-Risk Donors

Tests are now available that can detect the HIV antigen during the HIV antibody “window period”. These tests are generally too expensive for use in most countries but, even if they were inexpensive and relatively accessible, they would not solve the problem of the “window period” completely. There will always be a time span between the contraction of an infection and the development of serologically detectable factors (antigen or antibody) of the infection.

### Seroprevalence

Studies of the epidemiology of HIV show the following general trends in seroprevalence which relate to sexual activity:

1. HIV seroprevalence is lower in people under the age of 20.
2. HIV seroprevalence is higher in the 20–45 year age group.
3. HIV seroprevalence is also lower in people above 45 years of age.

In theory, therefore, people in the age groups below 20 and above 45 years are safer than those in the 20–45 year age group and should be the main target groups for donor recruitment. In practice, blood is not normally taken from people below 18 years of age or above the age of 65. Remember, however, that people aged below 20 or more than 45 are not necessarily safe and that people between 20 and 45 years of age are not necessarily at risk. Even if particular age groups are targeted, therefore, it is essential to follow all normal donor screening and selection procedures, whatever the age of a donor.

It is vitally important for every centre that collects blood to try to identify safe donor groups by:

1. Assessing the seroprevalence of transfusion-transmissible infections among existing and past donors from different communities, work environments, and age and sex groups.
2. Assessing the epidemiological data for transfusion-transmissible infections produced by the Ministry of Health in order to identify relatively safe communities, work environments, age and sex groups from which to draw blood.

### Activity 6

Look at the table on page 22. In the top row, write the names of three different places where your service has collected blood during the last year. Choose places where a relatively large volume was collected.

Look at the records on the donor sessions that were held in these places during the last year. Then, for each location, find out:

- the total number of donors in each age group: under 20, between 20 and 45 years and over 45
SECTION 2

“the total number of donors in each age group who were found to be HIV-positive by laboratory screening tests.

Calculate the percentage of HIV-positive donors in each age group at each location, as follows:

\[
\frac{\text{Number of HIV-positive donors}}{\text{Total number of donors}} \times 100 = \% \text{ of HIV-positive donors}
\]

Which age groups in your locality have the highest HIV seroprevalence? What are your conclusions about the results?

Try to obtain some epidemiological data on transfusion-transmissible infections in your country from your Ministry of Health. Compare these data with the percentages you have just calculated and note down your observations.

What do the Ministry of Health data add to your own thoughts on identifying safer donor groups? Can you suggest any further data that your service should routinely collect and use to identify potentially safe sources of blood? If so, note your ideas down on your Action List.

If you divide your results for Activity 6 further into new and regular donors for each age range, you may notice that the seroprevalence of HIV is higher in new donors in the 20–45 year age group than among regular donors. You may wish to try out this calculation. The reason for this may be that new donors often do not fully understand why some people are unsuitable to give blood or that they are donating under pressure, perhaps because they are family donors. On the other hand, they may donate blood to find out whether they are HIV-positive, particularly if there is no free and confidential HIV testing centre in the community.

Some countries have now introduced a policy under which donated blood from new adult donors is not transfused, even if it tests negative for all
transfusion-transmissible infections. Can you think why? There are two reasons for this.

The first reason is that the incidence of HIV is likely to be at least 10 times higher among new donors than regular donors. There is therefore a higher risk of a new, or once-only, donor being in the “window period” than a regular blood donor.

The second reason is that there may be a higher HIV seroprevalence among new donors than regular donors. There is therefore a higher risk that donated blood from a new donor may be in the “window period” and so may be potentially infectious, but undetectable by laboratory tests.

For both of these reasons, it is important to build up a panel of regular, voluntary non-remunerated blood donors.

2.3 REGULAR, VOLUNTARY NON-REMUNERATED DONORS

You have already considered the advantages of voluntary non-remunerated blood donors over other types of donor. Voluntary non-remunerated blood donors who give blood regularly are considered to be donors at the lowest risk of all because their blood is tested frequently and they are less likely to attend the donor clinic if they know that they have engaged in any risk behaviour. Since they donate blood regularly, they help to ensure that there is normally an adequate supply of blood, but they can also usually be relied on to donate blood in emergencies.

Blood transfusion services and hospital blood banks should therefore always encourage donors to become regular donors. It is internationally accepted that men can donate blood every three months and that women can donate every four months, without any ill-effects on their own health. Individuals who have given blood at least three times and who continue to donate at least twice a year (or whenever called on to do so) can be regarded as regular donors. Some centres use stricter criteria to define regular donors. They may, for example, require donors to give blood at least two or three times a year before they can be considered regular donors.

ACTIVITY 7

Study the records of blood donors attending your donor clinic over the past year. From these records, find out the number of regular donors who gave blood during this period: that is, the number of donors whose records show that they had donated three times previously and at least once during the last year. Then work out the percentage of regular donors, as follows:

\[
\frac{\text{Number of regular donors}}{\text{Total number of donors}} \times 100 = \% \text{ of regular donors}
\]

If you do not have this information, try to estimate the percentage of regular donors.
Do you think that sufficient numbers of regular donors attend your donor clinic to ensure a safe and adequate supply of blood?

Use the information that you have collected for Activities 4 and 7 as your baseline to measure future progress in developing a panel of regular, voluntary non-remunerated donors. We shall consider ways of recruiting and retaining regular voluntary non-remunerated donors in Sections 4 and 9.

### 2.4 DONOR SELF-EXCLUSION AND SELF-DEFERRAL

Encouraging donor self-exclusion and self-deferral is a very important part of recruiting donors whose blood is likely to be safe. **Self-exclusion** means that potential donors make the decision not to give blood because they recognize that their blood may be unsafe for the recipient as a result of risk behaviour or because of the state of their own health. **Self-deferral** means that they wait until the condition that makes them unsuitable has resolved.

Every transfusion service has a responsibility to educate existing donors and the general public, who are potential donors, about the importance of avoiding risk behaviour. It is also essential to train donor clinic staff to counsel donors about risk behaviour and to encourage them to self-exclude if they have engaged in any behaviour that may have exposed them to the risk of transfusion-transmissible infection.

Let us look in more detail at why it is very important to give clear explanations about risk behaviour to all existing and potential donors.

1. They may not understand what behaviour exposes them to possible infection. As a result, they may not realize the risks to their own health or that their blood could be dangerous for the patient who receives it.
2. They may not know that, if they engage in risk behaviour, they may transmit an infection to the recipient of their blood – even if they have no clinical evidence of infection.
3. They may come to donate blood because of pressure from other people, such as their family, friends or colleagues, even when they think that their blood may not be safe. For this reason, potential donors should be informed of the importance of circumventing or overcoming this pressure without telling anyone why they do not wish to give blood.

Potential donors are often reluctant to ask questions in public about why certain people should not give blood, so information about self-exclusion and self-deferral should be included in every talk and discussion and in all educational materials, as well as in predonation counselling. The information given should include:

- how people can contract infections that can be transmitted through blood
how to recognize the clinical symptoms of HIV/AIDS

- the significance of the ‘window period’ and why people who are at risk of contracting transfusion-transmissible infections should not give blood

- why people who already have a transfusion-transmissible infection should not give blood

- why people with other sexually transmitted diseases should not give blood

- why there is no risk to blood donors of infection by HIV or any other infectious disease through giving blood.

Blood transfusion staff must give uniform and consistent advice in order to avoid confusion among potential donors. Cooperation between different health agencies, including health educators and AIDS educators, will help to ensure that everyone is given the same message.

If you do not have any leaflets or posters available to educate donors about self-exclusion and self-deferral, try to find out whether any exist in your country. Materials of this kind may already have been produced by the national blood transfusion service, the national Red Cross or Red Crescent Society, the health education unit in the Ministry of Health or the national AIDS control programme. They should be able to supply you with copies that you can distribute to donors.

If no suitable educational materials are available in your country, you may be able to encourage one of these organizations to produce a leaflet or poster giving the relevant information. If this is not possible, talk to your senior colleagues about how you could develop some material for local use. Look at an example of a simple information leaflet for donors, Important Information about AIDS for Those Who Wish to Give Blood, produced by a blood transfusion service in Africa. You will find this in Appendix 1 on page 159 of the module. We shall consider the use of educational materials in Section 4 and will return to the subject of self-exclusion and self-deferral in Section 6.

Confidential unit exclusion

Some donors may be unwilling to self-exclude or self-defer, even if they know that their blood might be unsafe, because they do not want other people to know why they are reluctant to give blood. For example, if you are visiting a local factory to collect blood, some people may donate because their friends or their supervisors expect them to do so. They may be worried that, if they refuse, others may suspect that they are HIV-positive and will be hostile towards them. This is known as ‘peer group pressure’.

Because of this, it is important to give all donors the opportunity to tell clinic staff in confidence to remove and dispose of the blood they have donated. This is called confidential unit exclusion. Each service should have a policy on this which should be followed by all staff. Strict confidentiality must always be maintained when donors ask for unit exclusion.
**ACTIVITY 8**

What approaches are used in your centre to encourage self-exclusion, self-deferral and confidential unit exclusion, where appropriate?

Can you suggest any ways in which you could further encourage unsuitable donors not to give blood? If so, note your ideas on your Action List.

---

**SUMMARY**

1. Regular, voluntary, non-remunerated donors are safer than family or family replacement donors and commercial or professional donors.

2. People who give blood under pressure or for payment are less likely to reveal their unsuitability as donors. They are therefore a risk to the safety of the blood supply.

3. Potential donors may be unsuitable to give blood because:
   - they are in poor health
   - they are not giving blood voluntarily
   - their behaviour exposes them to the risk of transfusion-transmissible infections.

4. It is not possible to detect HIV antibodies during the “window period”.

5. HIV seroprevalence is generally higher in new donors than among regular donors.

6. Every blood transfusion service and hospital blood bank should be aware of national criteria for identifying low-risk donor groups and, therefore, potentially safe donors. They should concentrate on finding donors from among these groups by:
   - avoiding unsuitable donors
   - recruiting regular, voluntary non-remunerated donors.

7. Potential donors who have engaged in risk behaviour or who are in poor health should be encouraged to self-exclude or self-defer. Donor clinic staff should always provide opportunities for donors to ask for confidential unit exclusion. In such cases, strict confidentiality must always be maintained.

---

**SELF-ASSESSMENT**

1. What are the disadvantages of using paid commercial or professional donors?
2 Identify at least three types of behaviour that pose a risk to the safety of the blood supply.

3 In which age group is HIV seroprevalence generally higher?

**PROGRESS CHECK**

Before moving on to Section 3, spend a few minutes thinking about whether you have achieved the learning objectives for Section 2. These were to:

1 Estimate the proportion of different types of blood donor attending your donor clinics.

2 Identify the most common forms of risk behaviour in your locality.

3 Assess the prevalence of HIV amongst donors in different age groups in your locality.

4 Estimate the proportion of regular donors attending your donor clinics.

5 Review the approaches used in your centre to encourage self-exclusion, self-deferral or confidential unit exclusion by donors who are unsuitable to donate blood.

If you feel confident that you have understood everything in this section, turn to Section 3.

If you feel that you need to spend more time on this section, go back to the parts that are most unfamiliar or that you find difficult. You may find it helpful to talk to other people, such as your supporter or other senior colleagues, about anything you are still not sure about.
Estimating Blood Requirements

The purpose of this section is to help you to make reasonably accurate estimates of the amount of blood required for use by your blood transfusion service or hospital blood bank. It is important to know how much is likely to be needed so that you can plan blood collection systematically in order to avoid either an excess or a shortage of blood.

**LEARNING OBJECTIVES**

When you have completed this section, you should be able to:

1. Identify the main features of the geographical area served by your blood transfusion service or hospital blood bank, including the sites at which blood is collected and the hospitals to which it is distributed.

2. Review the system used in your blood bank to estimate the blood requirements of your locality.
3.1 YOUR LOCALITY

An efficient blood collection programme needs careful planning and you need a variety of information in order to calculate blood requirements, recruit adequate numbers of donors and collect blood in a cost-effective way. This includes a good knowledge of:

- the geographical area served by your blood transfusion service or hospital blood bank
- the population of this area
- the main population centres and the communication and transportation systems
- the locations at which blood is collected (including fixed clinics and places where mobile donor clinics are held, such as schools, colleges, factories, offices and community centres)
- the hospitals and health centres to which blood is distributed
- previous blood usage
- the number of acute hospital beds in your locality.

A good knowledge of the geographical area served by your centre is important since this will affect the way in which you work.

ACTIVITY 9

Obtain a recent map of your locality which shows towns, villages, roads and railway lines and any major geographical features such as rivers, lakes and forests. If you have difficulty finding one, try to draw a simple map using your knowledge of the area.

Mark your blood transfusion centre or hospital on the map and then mark the boundary of the area that your service covers.

Using a different coloured pen or pencil, mark the sites from which your centre has collected blood in the past three years, including places in which mobile donor clinic sessions have been held, such as schools, colleges, factories, offices and rural communities. Also identify any areas of relatively high population density from which blood is not collected.

With a third coloured pen or pencil, mark the hospitals and health centres to which your service has supplied blood or blood products in the last three years.

You should now have a map that shows the collection and distribution points of your service, the main centres of population and the road networks. Keep this map for use in Activity 10 and later activities.
3.2 METHODS OF ESTIMATING BLOOD REQUIREMENTS

In any blood transfusion service, it is important that the volume of blood collected balances the volume that needs to be issued. Not only are regular, voluntary non-remunerated blood donors the lowest-risk donors, they also help to ensure that an adequate supply of blood is always available. Using regular donors makes it possible to plan blood collection in a systematic way and to avoid the blood bank becoming either short of blood or overstocked.

How many units of blood will you need each week, each month and each year? This will obviously depend on the size of your transfusion service or blood bank, the size of the population it serves and the number of hospitals it supplies.

There are several methods of estimating the number of units of blood – and therefore the number of donors – needed to meet the blood requirements of a particular geographical area or hospital. None of them can be completely accurate, but they are an important basis for planning donor recruitment activities. However, before you look at three methods of estimating blood requirements, complete Activity 10 to find out the number of acute hospital beds in your locality.

ACTIVITY 10

Look back at the map you produced for Activity 9.

Find out the number of acute hospital beds at each site to which your blood bank supplies blood. Do not include beds used for the treatment of infectious disease, chronic sickness, mental illness and convalescence. Make sure that the information is up to date since the number of acute beds may change according to the staff and other resources available.

Add together the number of acute hospital beds at each site to obtain the total number of acute beds in your locality.

Method 1

The first method for calculating the volume of blood required is to assess the number of units of blood used in a specified period of time in a defined geographical area or population, or for a specific number of acute hospital beds. An analysis of blood usage on a weekly, monthly and annual basis gives an approximate indication of whether the demand for blood is constant, increasing or decreasing. It also indicates where there tends to be a greater or reduced demand at certain times of the year.

This information should be available from the senior laboratory staff member responsible for the issue of blood from the blood bank. Section 6 in Module 3 focuses in more detail on how to calculate blood requirements on the basis of previous blood usage. If you are responsible for managing stocks of blood and plasma, look at that section now.
Other factors may also need to be taken into account when analysing blood demand, including changes at a hospital, such as in the number of beds, the number of doctors or additional work being undertaken in new clinical areas. A shortage of medical staff, for example, may mean that a district hospital has to transfer all acute cases to the nearest hospital with adequate facilities. Other changes, such as the opening of a new hospital in a neighbouring district or region, may also affect the amount of blood required.

Social, political or economic changes necessitating the movement of people to another area may also have a direct effect on hospital admissions and blood usage. War, drought, earthquakes, floods and the expansion or loss of employment are examples of common causes of population migration. Can you think of any changes that have affected blood requirements in your area recently?

**Method 2**

A second method of estimating the number of units of blood needed to meet blood requirements can be used in countries with modern hospital services that are adequate to meet the needs of the population. In 1971, the World Health Organization suggested that 6.7 units of blood would be required each year per acute hospital bed.

*Example*

Using the figure of 6.7 units of blood used per acute hospital bed each year, the number of units of blood needed for a hospital with 50 acute beds can be calculated as follows:

\[
50 \times 6.7 = 335 \text{ units per year or approximately 7 units per week}
\]

In most countries, the policy is to bleed donors three or four times each year. This would mean that a minimum of 112 voluntary donors would be needed to meet the annual blood requirements of a 50-bed hospital if every donor attends three times. If the average number of donations from each donor is less than three a year, however, far more donors would be required.

**Method 3**

The third method can be used to estimate the number of units of blood needed to meet a country’s blood requirements over a period of one year. A figure of 2% of the country’s population is used to give the approximate number of units required. The same method can be used to calculate the blood requirements of individual regions or districts within the country.

*Example*

Using this method, 2% of the population of a country with 10 million people is 200 000 people. This is the approximate number of units of blood needed each year.

If each donor gives blood at least three times a year, a minimum of 67 000 donors will be required to meet the country’s needs. In practice, however, the number of donors needed would depend on how regularly and frequently each donor gives blood.
3.3 SELECTING A METHOD TO ESTIMATE BLOOD REQUIREMENTS

Method 1 may be the most practical approach to use in estimating blood requirements because it relies on actual figures rather than theoretical calculations. However, although it is usually the most accurate method, it can sometimes give a misleading result. This is because it is based on previous blood usage rather than previous blood requirements. Since there may not always have been sufficient supplies of blood available in comparison with the amount required, the estimate obtained by this method may be too low.

It is therefore sensible to use one of the other methods as well to confirm the blood requirements of the defined area. However, in order to identify the number of donors needed to provide the required number of units, it is also necessary to take the following factors into account.

1. It is impossible to predict how many of the donors called to attend a donor session will do so, even when the majority of them are registered voluntary donors who give blood regularly. Some transfusion services estimate that only around 50% will actually attend to donate blood. On this basis, a panel of regular donors should be at least twice as large as the total number of donors required.

2. Some donors who attend to give blood will be deferred on a temporary or permanent basis. The number of actual donations will therefore be smaller than the number of donors who attend.

3. After collection, some blood will be discarded following laboratory testing because it is unsuitable (for example, because it tests positive for infectious agents).

The assessment of blood requirements on a weekly, monthly and annual basis will therefore need to be adjusted accordingly. Can you think of any other factors that should be taken into account in your calculations of the number of donors that are needed?

Remember that it is also important to take into account the possibility of large-scale disasters or other emergencies that may require the supply of large quantities of blood. It is usually difficult to predict crises of this kind, but every blood bank has a responsibility to ensure that a clear plan for obtaining blood urgently is included in the local or national ‘disaster plan’. Every centre should try to keep reasonable stocks of blood to take care of the initial impact of such emergencies, although this may not be practical in smaller blood banks.

**ACTIVITY 11**

How adequate was the supply of blood in your blood bank during the last year? Note down your answers to the following questions:

1. What were the blood requirements of the hospital(s) your blood bank served in the last year?
2 How many units of blood were collected over the same period?

3 Was your blood bank able to supply all the blood needed by the hospitals and health centres that it serves?

You will have to check your records to find these figures. If you have any difficulty in obtaining this information, note down on your Action List what information you need to obtain and discuss it with your supervisor.

What method is used in your centre for estimating the number of units of blood that need to be collected each year? Comment on how accurate you think it is.

Using one of the three methods described above, estimate the total blood requirements for the current year. Compare your estimate with the figure calculated by your centre. Then check your result by using a second method. Do the answers differ by a large amount? If so, write down why you think this is the case.

If you feel that there is a need to improve the way in which your centre estimates its blood requirements, note your recommendations down on your Action List and discuss them with your supervisor.

SUMMARY

1 Every blood transfusion service or hospital blood bank should estimate the number of units of blood it is likely to need on a weekly, monthly and annual basis and plan ways of collecting sufficient blood to meet these requirements.

2 Establishing a panel of regular, voluntary non-remunerated donors makes it possible to plan blood collection in a systematic way and to avoid the blood bank becoming either short of blood or overstocked.

3 There are three basic methods for estimating blood requirements:
   - assessing past blood usage over a specified period of time in a defined geographical area or population, or for a specific number of acute hospital beds
   - multiplying the number of acute hospital beds by 6.7 to calculate the approximate number of units of blood required each year
   - calculating the number of people who constitute 2% of the population of a country or other defined geographical area in order to estimate the number of units of blood required each year.
SELF-ASSESSMENT

4 Using Method 2, work out how many units of blood are likely to be required each year for a hospital with 130 acute hospital beds.

5 What additional factors need to be taken into account when calculating the number of donors needed to provide the required number of units of blood?

PROGRESS CHECK

Before moving on to Section 4, spend a few minutes thinking about whether you have achieved the learning objectives for Section 3. These were to:

1 Identify the main features of the geographical area served by your blood transfusion service or hospital blood bank, including the sites at which blood is collected and the hospitals to which it is distributed.

2 Review the system used in your blood bank to estimate the blood requirements of your locality.

If you feel confident that you have understood everything in this section, turn to Section 4.

If you feel that you need to spend more time on this section, go back to the parts that are most unfamiliar or that you find difficult. You may find it helpful to talk to other people, such as your supporter or other senior colleagues, about anything you are still not sure about.
Donor Education, Motivation and Recruitment

The purpose of this section is to help you to develop an effective donor education, motivation and recruitment programme in order to build up a panel of regular, voluntary non-remunerated donors.

LEARNING OBJECTIVES

When you have completed this section, you should be able to:

1. Assess the information that people need before deciding to become blood donors.
2. Identify the resources needed to develop an effective donor education, motivation and recruitment campaign.
3. Make effective use of appropriate communication methods to educate the public and motivate them to become voluntary non-remunerated donors.
4. Assess the efficiency and effectiveness of your centre’s donor education, motivation and recruitment activities.
4.1 EDUCATING POTENTIAL BLOOD DONORS

As we have already seen, voluntary non-remunerated blood donors are considered safer than family or family replacement donors and, in particular, commercial or professional donors. Similarly, regular donors are safer than new or occasional donors because they should be well-informed, are committed to helping others and are regularly screened for transfusion-transmissible infections. Establishing a panel of regular, voluntary non-remunerated blood donors is therefore the most effective way of ensuring adequate supplies of safe blood on a continuing basis.

The practice of blood donation is relatively new in many countries, however, and people are often reluctant to give blood. Some do not realize how their blood could be used to save lives, while others are frightened of harming their own health. Many are unwilling to donate blood if they will not be paid for it or unless it is to be given to a member of their own family. Perhaps the most important reason is that most people have probably never been asked to donate blood. None of these people are likely to become voluntary non-remunerated donors unless they receive accurate information about why blood is needed and are given positive encouragement to donate blood.

Education is therefore an essential part of a donor recruitment strategy. Before people can be motivated to donate blood for the benefit of others, they must understand how they, as individuals, can play an important part in contributing to the health of the nation. There are three basic goals for a donor education, motivation and recruitment campaign.

1. To promote changes in the public’s knowledge, attitudes and beliefs so that they understand why blood donation is a vital, life-saving service to the community.
2. To promote changes in people’s behaviour so that they become willing to donate blood on a regular, voluntary basis, without payment.
3. To ensure that potential donors understand the importance of safe blood so that they do not donate blood if they are in poor health or at risk for transfusion-transmissible infections.

Information needs

In order to achieve these goals, it is important to start by identifying the information that people might need to encourage them to become donors.

Consider the following questions that are commonly asked:

- What is the purpose of blood in our bodies?
- Why do some people need emergency blood transfusions?
- What is my blood going to be used for?
- Are there any artificial alternatives to blood that can be given to patients?
- Who should or should not give blood? Why?
What will happen if I give blood? Will it hurt?

Will giving blood affect my health? Could I lose my strength? Could I catch AIDS as a result of giving blood?

What tests are made on blood? Why are they necessary?

Why do patients sometimes have to pay for blood, even if donors are not paid?

Why shouldn’t I be paid for giving blood?

**ACTIVITY 12**

Over the next few days, talk to at least 10 people whom you hope might become blood donors. Try to talk to a variety of people, such as senior school students, factory workers, community leaders and people from rural areas.

Make a list of all the questions that they ask you about blood donation. What are the most common questions?

You may find it helpful to discuss your findings with your colleagues to see whether they can identify any other questions that people often ask before deciding whether to become blood donors.

This activity should show you any serious gaps in knowledge that must be filled before people can be motivated to give blood. You will probably find that people with limited education have less knowledge and that even better educated people have varying levels of knowledge and understanding.

The information you collect in this activity should help you to identify the subjects that are poorly understood and therefore need to be emphasized in a donor education programme. It should also demonstrate that different people need different information. It is important to be aware of these differences when planning educational talks and materials so that they can be presented in an appropriate way.

If the concept of voluntary non-remunerated blood donation is not widely accepted in your country, it may be worth organizing a small study on why people do not readily give blood. For example, cultural or religious beliefs may influence people’s attitudes towards blood donation and it is important to address these when planning a donor education and communication strategy. Your centre will probably not be able to undertake a study itself, but it may be possible to obtain external assistance. University or college departments of social sciences or health education, for example, may be looking for suitable research projects for lecturers or students to undertake as part of their academic programme. It may also be possible to get assistance from staff or students involved in marketing, communications or journalism courses in planning the best approaches to the public, particularly where people think they ought to be paid for their blood.
4.2 RESOURCES

An investment in human and material resources for an effective donor education, motivation and recruitment campaign will produce the following long-term benefits for the service.

1. An adequate supply of blood, because of an increase in the number of voluntary non-remunerated donors who give blood regularly.
2. Safer blood, because regular, voluntary non-remunerated donors are well motivated, receive continuing education about risk behaviour and are regularly screened.

Since resources are usually limited, every education, motivation and recruitment campaign needs careful planning, as well as regular monitoring and evaluation of its effectiveness, to ensure that the resources available are being used in the most efficient and appropriate way. These resources include:

- staff and volunteers
- educational materials
- finance.

Staff and volunteers

A national or regional blood transfusion service may have a designated blood donor promotions officer or donor recruitment organizer who is responsible for organizing the donor education, motivation and recruitment programme. Other donor clinic staff, particularly nurses, will also play an important role.

In smaller centres and many hospital blood banks, there may not be anyone with full-time responsibility for donor education, motivation and recruitment. These functions may, therefore, have to be undertaken by donor clinic staff or senior laboratory technical staff who are able to devote only a small amount of time to them.

The responsibility for coordinating the education campaign should preferably be given to a member of staff who is, or has been, a blood donor and who has the following skills:

- an understanding of how to assess people’s needs for information and plan an appropriate response
- an ability to communicate effectively with people from all walks of life
- a good knowledge of health issues related to blood transfusion
- enthusiasm and the initiative to use all possible opportunities for promoting the message
- fluency in the local language
- patience, tact and empathy.
It is also important to draw on external sources of support such as other health workers, particularly health education officers who are used to planning and implementing education programmes.

In many countries, the national Red Cross or Red Crescent Society and other non-governmental organizations play a major role in the recruitment of voluntary blood donors and sometimes also in the collection of blood. They can offer a great deal of practical support at both national and local level. However, the head of the blood transfusion service or blood bank should ensure that all staff involved are appropriately trained so that there is no inconsistency in the information given to donors.

It is also important to promote the participation of individual volunteer motivators, such as community leaders, teachers, social workers, journalists and other influential people in the community. They should be encouraged to use their particular skills, experience, position and contacts to reach potential donors. For example, a head teacher may be willing to incorporate education about blood donation into the school curriculum or the leader of a community or religious group might organize a talk for members. Some communities and workplaces organize blood donation committees to run education campaigns to encourage new donors to come forward. These approaches can be particularly useful in long-term donor recruitment strategies. One of the most effective ways of attracting new donors is to involve existing donors in educational activities. People who take pride in being regular, voluntary non-remunerated donors act as ambassadors for the service and so every opportunity should be taken to encourage them to recruit more low-risk donors.

We have suggested a number of ways in which it is possible to draw on support from other organizations and from members of the community. However, even if much of the education campaign is delegated to other individuals or community support groups, including voluntary blood donor organizations, blood donation committees, the overall responsibility for the education of the public still remains with the transfusion service. In hospital blood banks, the responsibility lies with senior laboratory staff or the hospital superintendent. They must ensure that the information given is consistent and accurate by providing appropriate training and educational materials for everyone involved in donor recruitment.

**ACTIVITY 13**

Who is responsible for organizing donor education, motivation and recruitment in your centre? Which other staff are also involved?

List any other organizations or individuals, including volunteers, who take part in donor recruitment, such as the Red Cross or Red Crescent Society, health education officers or community workers.

What training is given to staff and volunteer donor promoters and educators at your centre? Find out whether they feel they need any further training. Can you suggest ways in which their training could be improved? Note your recommendations on your Action List.
Educational materials

Educational materials are an important part of a donor recruitment campaign. Materials such as leaflets and posters may have been produced by the national blood transfusion service, the national Red Cross or Red Crescent Society or the health education unit in the Ministry of Health.

If no suitable materials are available, however, it may be necessary to adapt existing ones or to prepare your own. We shall look at this in more detail in Section 4.3. Always remember, however, that any educational materials you produce may need to be approved by the relevant national authorities.

ACTIVITY 14

What educational materials and equipment do you have for use in donor education, motivation and recruitment? For example:

- leaflets
- posters
- films and videos
- blackboards
- flip charts
- overhead projector/slide projector.

Find out whether any materials have been produced by other organizations which might be suitable for use in your educational campaign. Try to obtain copies since you will be asked to review the materials available in your country when you reach Activity 17.

Finance

Even if assistance is available from volunteers who give their services free, a donor education, motivation and recruitment campaign requires the allocation of funds to cover:

- staff costs
- the cost of the preparation and distribution of educational materials
- the costs of holding meetings to educate the public, including transport and refreshments.

It is therefore important to try to find additional sources of funding from the community to supplement your service’s own resources. Charitable organizations such as the Rotary Club or Lions Club, or religious organizations may be willing to undertake fund-raising activities. Industrial or commercial companies may agree to support a programme because it will provide good publicity. Companies supplying blood banks with
equipment or consumables may also be willing to donate funding to assist in the expansion of the education programme. However, it is essential to follow local policy about accepting sponsorship from commercial companies in case it is seen to compromise the integrity of the service.

**ACTIVITY 15**

*How much did the education and recruitment of donors cost your centre during the last financial year? If you do not know, ask your supervisor or another senior member of staff for this information.*

*What financial support for the donor education, motivation and recruitment campaign did you receive from the community, including local businesses, during the last financial year?*

*Can you suggest any ways of increasing the level of financial support provided by the community? Note your recommendations on your Action List.*

### 4.3 COMMUNICATION METHODS

As you probably found in Activity 12, different audiences require different information about blood donation. It is important to identify the various sections of the community, their socioeconomic and cultural characteristics, their level of education and their access to other sources of information. This is necessary in order to choose appropriate communication methods in your efforts to promote positive attitudes towards blood donation. For example, the approach that is suitable when trying to motivate senior school or university students to become blood donors would not be suitable when working with adults in rural agricultural communities where there may be a relatively low level of literacy.

Whenever you are planning an educational activity, therefore, you first need to find out the answers to the following questions:

- What information is already available?
- Who do we want to educate?
- What do we want them to know and understand?
- How do we want them to respond?
- What should we tell them?
- Who can help us?
- How do we measure whether our communication has been effective?

You can then plan how to present the information so that it is appropriate for the people it is designed to reach. For example, the local language and cultures must be respected if an audience at a talk is to be receptive and motivated. You will therefore need to decide on the following issues:
Should the information be presented in oral or written form?

How will it be communicated? In a leaflet, poster, newspaper, through a public talk, on the radio or television?

What language should be used?

Who will prepare it?

How will it be pretested?

How much will it cost?

When should it be done?

Figure 2 shows some of the differences between presenting information orally (such as when giving a talk) and through written materials.

As you can see, each approach has particular strengths and weaknesses and, in practice, the two approaches can sometimes be combined. When giving a talk, for example, you can use posters or flip charts to illustrate

<table>
<thead>
<tr>
<th>Oral presentation</th>
<th>Written materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>The effectiveness of a talk does not depend on the literacy level of the audience.</td>
<td>The effectiveness of the materials is dependent on the literacy level of the audience.</td>
</tr>
<tr>
<td>The speaker can adjust the style and level of the talk to suit the particular audience.</td>
<td>Different materials can be produced to suit different literacy levels.</td>
</tr>
<tr>
<td>Immediate feedback on the message is possible through questions and discussion.</td>
<td>Readers cannot ask questions about anything they do not understand and no immediate feedback is possible.</td>
</tr>
<tr>
<td>The effectiveness of a talk partly depends on the skill of the speaker in speaking clearly in a logical sequence.</td>
<td>Once the materials have been written and produced, it is expensive to change them.</td>
</tr>
<tr>
<td>The audience may be influenced more by the appearance, confidence or sense of humour of the speaker than by the content.</td>
<td>The effectiveness of the materials depends on the skill of the writer.</td>
</tr>
<tr>
<td>Talks can usually reach only a relatively small number of people.</td>
<td>Written materials can reach a large number of people.</td>
</tr>
<tr>
<td>The audience may not remember everything that has been said if there are no written materials for them to take away and read later.</td>
<td>Readers can look at the materials whenever they want and refer back to them if they have forgotten anything. They can then pass them on to other people.</td>
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</table>
points that you want to make or leave some leaflets for the audience to read afterwards to reinforce what you have said.

Let us now look briefly at some of the channels of communication that can be used for educating and motivating the public about the need for blood donation.

**Predonation information and education talks**

Potential donors will rarely come to you. In most cases, you will have to go to them to begin the process of educating and motivating them to donate blood and to become regular donors. Predonation talks to individuals or groups are an effective method of communication. Unlike educational materials, which often depend for their effectiveness on the reader’s literacy level, they provide an opportunity for people to ask questions and for you to check whether they have understood what you are saying.

One of the most important functions of public talks is to educate potential donors about any reasons why they should not give blood, particularly because of poor health or risk behaviour which may expose them to transfusion-transmissible infections such as HIV, hepatitis B or syphilis. This serves the purpose of educating people about how to avoid infection, encourages unsafe donors to self-exclude and reinforces public confidence in the safety of the blood supply.

Educational talks and discussions can be held in a variety of places, such as:

- educational institutions, such as universities, colleges and high schools
- workplaces, such as government offices, factories and plantations
- community centres
- at meetings of religious organizations, women’s groups, voluntary community groups
- at donor clinics, as part of the donor screening process.

You can probably think of many additional places where talks can be given. For example, you could set up a blood donor recruitment stand near the entrance at a large public gathering, such as a sporting or musical event, and give leaflets to people as they come in. You could then talk informally to those who are interested in more information about becoming blood donors.

Educational talks should be carefully planned beforehand so that they are concise, informative and stimulating and the audience do not lose interest. Whenever you see other people giving talks, observe what makes them a good or poor speaker and learn from this. If you are inexperienced in giving talks, you may be able to get help from your local health education officer who can teach you how to increase your confidence and improve your performance. You may find the following guidelines helpful.
1 Identify a suitable place to give an educational talk and make appropriate arrangements to publicize the event well in advance.

2 Assess the likely knowledge and attitudes of the audience and the kind of information that you think they will need. You should already have gathered a great deal of useful information on this from your work on Activity 12.

3 Plan your talk. You will probably find it helpful to write down what you want to say or at least to make brief notes about the key points. Include all the information that you think this particular audience will want and put it into a logical order. Remember to emphasize the need for safe blood donors and why certain donor behaviour presents a risk to donors themselves as well as to the recipients of their blood.

4 If you are nervous about giving the talk, practise it in privacy until you feel more confident.

5 Obtain any visual aids that you could use to illustrate your talk.

6 Ask a local community leader or another public figure, preferably one who is a blood donor, to join you in speaking to people about the importance of blood donation and about his or her experiences as a donor. Blood donors are often effective recruiters of other donors so ask if there are any donors in the audience who would also be willing to share their experiences.

7 Encourage feedback and questions and distribute any educational materials that you have been able to obtain.

8 After the talk, spend a few minutes assessing how well it was received and identify any ways in which you could improve your technique in the future.

**ACTIVITY 16**

Do you give public talks? If so, how many public talks do you and your colleagues give each month? From looking at records and the map that you developed in Activity 9, can you identify any additional places where you could give a talk?

Use the guidelines above to help you prepare for your next talk and, most importantly, assess its effectiveness. How do you think you could improve your performance as a public speaker? For example, would you benefit from training in this area? Note your ideas down on your Action List.

Most people who speak well in public have had to learn how to give talks. If you find it difficult, always remember the importance of planning and practising your talk and then evaluating it so that you constantly learn from your own experience.
**Educational materials**

Written educational materials such as leaflets and posters are a vital part of a public education programme, but they are expensive and time-consuming to produce and should preferably be developed by people who have experience in this area. Wherever possible, always use materials that are already available, unless they are unsuitable for some of the audiences that you want to reach.

Even if you do not know of any suitable materials, it is worth spending time investigating whether any exist. As we have already suggested, the national blood transfusion service, the health education unit in the Ministry of Heath or the Red Cross or Red Crescent Society may have produced some. If none are available, you may be able to persuade one of these organizations to develop some.

You may decide, however, that you need to adapt some existing materials, perhaps by translating them into the language spoken in your area, or to produce some simple materials yourself, such as posters advertising a mobile donor clinic session. Always try to find someone who can help you to do this, such as the local health education officer. This is essential if you don’t have any experience in developing materials.

An important part of the planning process is to think carefully about how your materials will be distributed and used. There is no point in producing thousands of copies of a poster if it will be displayed only in a small number of places. Printing can be very expensive so it is essential to find a cost-effective means of reproduction and to find out in advance how much it will cost and whether sufficient money is available. Remember that any educational materials you produce may need to be approved by the relevant national authorities.

When preparing leaflets, the information should be presented clearly in a logical sequence and in simple language with attractive illustrations, if possible. You have already looked at an example of a simple leaflet for donors about AIDS in Appendix 1. Now look at another example, *Think You Can’t Afford to Give Blood?*, which was adapted by the Fiji Red Cross Society from a leaflet produced by the Australian Red Cross Society Blood Transfusion Service. You will find this in Appendix 2.

Leaflets should always be pretested, even if only with a small number of people. Choose a few people who know very little about blood donation and ask them whether the leaflet is clear and contains all the information they would need before deciding whether to give blood. Any changes required can then be made before the leaflet is finalized and distributed more widely. Wherever possible, a simple follow-up study should be carried out through interviews or discussion to check how effective the material is in conveying the desired message.

Posters are very useful because they are likely to be seen by a large number of people, particularly if they are displayed in popular public places or large offices, factories or colleges. They can be used to remind the public of the need for blood donors as well as to advertise the date, location and time of a public talk or blood collection session.

As with leaflets and other educational materials, it is preferable to use existing posters rather than to make your own. Unless you are very
experienced in communications, it is wise to leave it to the professionals. If you do decide to make a poster, make it as simple as possible since most people will not read detailed information in small print. It should, of course, be attractive and eye-catching with the important information appearing in large print.

**Activity 17**

*How effective are the educational materials that you use? Talk to some people who have seen them (both potential donors and colleagues) and find out whether they think they are:*

- relevant and informative
- interesting
- easy to understand.

*Ask them to rate each publication according to the following scale:*

1. Very poor
2. Poor
3. Fair
4. Good
5. Excellent

*Work out the average score in each category for each publication and write it on the table below. Then add up the total score for each publication. A total score of between 10 and 15 means that the publication is likely to be reasonably effective in giving people the information they need in order to decide whether to donate blood. A score of between 3 and 9 probably means that the material is unlikely to be successful in encouraging people to become donors.*

*Do you think that these materials serve their purpose of informing and motivating the public or are other materials needed? If you feel that it is necessary to develop some new materials or to adapt existing ones, discuss this with your supervisor.*

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<thead>
<tr>
<th>Publication</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tr>
<td>Relevant and informative</td>
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<td>Interesting</td>
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<td>Easy to understand</td>
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<td><strong>Total score</strong></td>
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List, note down your suggestions on how this might be achieved. Remember that it is difficult to develop new materials and it is usually best to adapt existing materials. Identify any local sources of assistance, such as the health education officer.

Press
Both the local and national press are important means of keeping the public informed about the daily need for voluntary blood donors and about where and when they can donate their blood. Newspapers are always looking for good stories and may be especially interested in writing about donors who have given a particularly large number of donations or about patients whose lives have been saved by blood transfusions. You could also ask your local newspaper to show appreciation of the valuable contribution that donors make to the community by publishing regular reports about the village, college, industry or office with the highest donation record.

If you do not have access to the press, you may be able to make some useful suggestions to national organizations such as the national blood transfusion service about how they can make more effective use of the media.

Radio and television
Radio and television provide an excellent opportunity for donor recruitment organizers to reach a large number of people with relatively little effort. In most countries, radio and television companies give high priority to public service broadcasting and are generally pleased to assist, particularly if there is an interesting story to report.

Occasional talks can be given on the radio or television to inform the general public of the daily need for blood and the importance of voluntary blood donors in helping to provide an effective hospital service – and in securing their own safety if ever they urgently need a blood transfusion themselves. Talks can be supported by brief radio and television spots to remind the public about the need for blood donors and where they can go to donate.

It is particularly important to use the radio or television to broadcast urgent appeals for new and regular donors to donate their blood when blood stocks are low, such as during public holidays or when an unexpectedly high volume of blood is required after a large-scale disaster.

Cinemas
Like television, the cinema provides a large captive audience, particularly of young people. National blood transfusion services may be able to obtain funding or sponsorship to make a short advertisement or film on the need for voluntary blood donation which gives information to potential donors on how and where to register.
ACTIVITY 18

Which of the communication methods described in this section does your centre use to educate and motivate people to give blood? Which methods are most effective? Do they achieve their objectives?

Think carefully about the following questions:

- How could the effectiveness of these methods be improved?
- What additional methods could you use to reach more potential donors?
- What assistance and support could you get from other organizations and individual volunteers?
- What training would people need?
- What resources would be required?

Discuss your ideas with your colleagues and note down your recommendations on your Action List.

Once an effective campaign has been established, it may generate its own momentum as the community becomes more aware of the importance of blood donation as a valuable humanitarian service and more donors talk about their own experiences.

The communication methods that you can use to educate and motivate potential donors will obviously depend on the nature of your job. If you work in a small hospital blood bank, blood donor recruitment will be only a part of your work. Obviously you will not be able to plan the same kind of educational campaign as a donor recruitment organizer in a national blood transfusion service. The important issue, however, is to plan how to make the most effective use of whatever resources are available to you.

4.4 MONITORING AND EVALUATION

It is essential to evaluate the effectiveness of any donor education, motivation and recruitment activities in order to ensure that the most efficient and cost-effective communication strategies are being used. To do this, it is first necessary to set some targets against which you can measure your success.

Records should be kept of all educational activities so that the effectiveness of different aspects of the education and recruitment campaign can be monitored. It is obviously also important to keep detailed records of all donors so that people who have agreed to donate blood when required can be contacted easily. It is difficult to operate a well-organized and regular supply of blood without a panel of regular donors. We shall look at record-keeping in detail in later sections, particularly in Section 8.

In simple terms, donor recruitment can be considered successful if an adequate supply of safe blood is always available. Some of the main
indicators of the effectiveness of a donor education, motivation and recruitment campaign are:

1. An increase in the number of communities involved in giving blood.
2. An increase in the total number of voluntary non-remunerated donors.
3. An increase in the number of donors who return to give blood a second or subsequent time.
4. An increase in the average number of donations per person per year (within acceptable limits of safety to the donor).
5. A decrease in the number of donors who have to be permanently excluded because of transfusion-transmissible infections.

**ACTIVITY 19**

Look at the main indicators of the effectiveness of a donor education, motivation and recruitment campaign in the table below. For each indicator, look at your centre’s records to assess the current situation and fill in the appropriate box with the number at the present time.

Then set some dates on which you will return to the table and review the situation (for example, every six months) to see whether there has been an improvement. Note these dates on your Action List and, on these dates, check whether there have been any significant changes.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Number at present</th>
<th>Number at review</th>
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<tbody>
<tr>
<td>1   An increase in the number of communities involved in giving blood</td>
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<td>1  2  3</td>
</tr>
<tr>
<td>2   An increase in the total number of voluntary non-remunerated donors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3   An increase in the number of donors who return to give blood a second or subsequent time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4   An increase in the average number of donations per person per year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5   A decrease in the number of donors who have to be permanently excluded because of transfusion-transmissible infections</td>
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</table>
Developing an effective donor education, motivation and recruitment campaign takes time, particularly where there is a replacement donor system and people are not familiar with the concept of voluntary non-remunerated blood donation. An essential part of assessing the effectiveness of donor education, motivation and recruitment activities is therefore to identify any reasons why people may be deterred from becoming donors. A number of factors are likely to be involved, including:

1. Inadequate communication about the importance of a continuing supply of blood for the health of the community and nation.
2. Fear of the donation process by people who might otherwise be willing to become donors.
3. Lack of support from community leaders, community organizations and influential people.
4. A poor image of the transfusion service or blood bank.
5. Unpleasant experiences of blood donation by previous donors.

When you review your findings from Activity 19 in a few months’ time, therefore, it will be important to assess the significance of these and other factors and to decide whether it is necessary to amend the donor education, motivation and recruitment strategy that has been developed. In Section 9, we shall focus on donor retention and recall as a further means of encouraging regular donation in order to maintain an adequate supply of safe blood.

**SUMMARY**

1. An awareness of the kind of information people need before deciding to donate blood is an important basis for donor education, motivation and recruitment activities.
2. Education about the need for safe blood is an essential part of a donor recruitment campaign.
3. Careful planning and adequate resources are needed for the development of an effective education, motivation and recruitment campaign.
4. Community organizations and individual volunteers can play an important role in recruiting potential blood donors, particularly well-informed donors who have had positive experiences of blood donation.
5. A variety of communication methods can be used to educate the public about blood donation. These include:
   - educational talks
   - educational materials, including leaflets and posters
   - the press
   - radio and television
   - cinema.
6 The effectiveness of the donor education, motivation and recruitment campaign should be monitored and evaluated on a regular basis.

**SELF-ASSESSMENT**

6 List three goals for a donor education, motivation and recruitment campaign.

7 What are the two long-term benefits to the blood transfusion service of an effective community education, motivation and recruitment campaign?

8 Why is it important to monitor and evaluate donor education, motivation and recruitment activities?

**PROGRESS CHECK**

Before moving on to Section 5, spend a few minutes thinking about whether you have achieved the learning objectives for Section 4. These were to:

1 Assess the information that people need before deciding to become blood donors.

2 Identify the resources needed to develop an effective donor education, motivation and recruitment campaign.

3 Make effective use of appropriate communication methods to educate the public and motivate them to become voluntary non-remunerated blood donors.

4 Assess the efficiency and effectiveness of your centre’s donor education, motivation and recruitment activities.

If you feel confident that you have understood everything in this section, turn to Section 5.

If you feel that you need to spend more time on this section, go back to the parts that are most unfamiliar or that you find difficult. You may find it helpful to talk to other people, such as your supporter or other senior colleagues, about anything you are still not sure about.
Organizing Donor Clinic Sessions

The purpose of this section is to assist you in planning and organizing donor clinic sessions, particularly mobile donor clinics, and evaluating their effectiveness.

**LEARNING OBJECTIVES**

When you have completed this section, you should be able to:

1. Identify suitable sites for mobile donor clinic sessions.
2. Plan and prepare for a mobile session to ensure that it operates efficiently.
3. Develop efficient procedures for calling up donors to fixed and mobile donor clinic sessions.
4. Ensure the safe, efficient preparation and use of blood collection packs.
5. Monitor and evaluate donor clinic sessions in order to improve their efficiency.
5.1 FIXED AND MOBILE DONOR CLINICS

Blood donor sessions can be organized and held:

1. In a blood transfusion centre, a hospital blood bank or a permanent location near the centre of the community where registered donors are called to attend. These types of blood collection session are usually referred to as fixed or static blood donor clinics.

2. At mobile blood donor clinics. This involves organizing a blood collection team that travels to schools, colleges, workplaces or community centres in large or remote communities where it is not convenient for people to attend fixed blood donor clinics.

Although these two kinds of clinic differ in some ways, it is most important that wherever donors go to give blood, they experience the same high level of courtesy, efficiency and care.

The responsibility for organizing both fixed and mobile blood donor clinics normally lies with the blood donor recruitment officer. In small hospital blood banks or regional blood transfusion services where there is no donor recruitment officer, a senior nurse or senior laboratory technician generally organizes blood collection sessions.

The bleeding and care of donors is usually the responsibility of the senior nurse in charge of the clinic.

A fixed donor clinic should attract a large number of donors if it is well sited and is close to the centre of town or in a community centre. Donors can come whenever it suits them and there is generally little peer group pressure placed on them to donate. It is normally easier to develop a panel of regular voluntary donors for a fixed clinic than for mobile clinics. If your fixed clinic attracts fewer donors than mobile sessions, however, it is important to identify the reasons for this so that you can find ways of improving the recruitment and retention of donors at the centre.

**ACTIVITY 20**

Look at your records to identify all the locations where mobile clinics have been held during the last year. If the information is available, note down how many units of blood were collected at each session. Then list the various locations in order of their effectiveness in terms of the amount of blood collected. If you have no records of this, use your experience to assess the effectiveness of each location.

Which locations appear to be the most successful? Do any mobile sessions result in a larger number of donations than at your fixed clinic? Why do you think there is a larger number of donations in some locations than in others? Note any particular factors you can think of that may have affected the amount of blood collected, such as how easy it is for donors to reach the venue, the weather conditions and special events, such as religious festivals.
Many hospital blood banks, especially those that use replacement donors, collect blood in or near the blood bank laboratory. However, there are several important reasons why blood should not be taken inside the laboratory.

1. It is important to try to provide donors with a pleasant experience in order to encourage them to give blood on a regular, voluntary, non-remunerated basis. This requires a safe and hygienic environment that cannot be provided in a laboratory containing equipment, chemicals and pathological material.

2. Privacy is essential during predonation counselling and while the donor’s medical history is being taken. This is unlikely to be possible in a laboratory.

3. Donors sometimes faint during or after giving blood and this could be very dangerous if it happens in the laboratory.

4. Donors require light refreshment after giving blood, but food and drink should not be allowed inside the laboratory.

Even in small hospitals where space is very limited, it should be possible to find a small room where blood can be collected safely. If donors are currently being bled in the laboratory in your hospital, it is important to discuss the problem with your supervisor or hospital administrator and to seek another place that can be used for collecting blood. You may like to note your suggestions on your Action List.

5.2 PLANNING A MOBILE DONOR SESSION

Mobile blood donor sessions enable the service to reach those donors who cannot come to a fixed clinic because the transfusion centre or blood bank is too far away. The size of a regular donor panel can be considerably increased through the use of mobile sessions.

Organizing a mobile clinic is more complicated than organizing a fixed clinic and the donor recruitment officer, or whoever else is responsible for this, must carefully plan every aspect of it in advance.

From your own experience, you know the kinds of resources that you need for a mobile session and those that you have available. A common problem in setting up a mobile clinic is finding the finance for a suitable vehicle and other items of equipment. However, it is often possible to obtain assistance from the Red Cross or Red Crescent Society, charitable organizations such as the Rotary Club or from religious and community groups. Organizations of this kind may consider this to be a worthwhile use of their funds in contributing to community health.

Selecting a venue

One of the most important tasks in planning mobile donor sessions is to select suitable venues that will be cost-effective because they are likely to result in good blood collection figures. It is the responsibility of the organizer to estimate how many people are likely to donate in each place and to assess how far it is worth travelling, taking into account the time and costs that will be involved. An estimate of the number of donors who
will attend will also help you to plan the allocation of donor clinic staff and the equipment and materials that must be taken.

It is therefore useful to keep a record of the locations where mobile sessions can be held, either on a routine basis or in an emergency, and to record information on the number of donations collected on each visit. This enables the suitability of the venue to be monitored so that the most cost-effective locations can be selected in the future. The record should also contain details of the people to be contacted and the special features of the venue, such as the facilities available and the preferred days and times for visits. Perhaps the simplest way of recording this information is to use individual cards for each venue and to file them in alphabetical order. An example is shown in Figure 3 below.

**VENUES AVAILABLE FOR MOBILE SESSIONS**

<table>
<thead>
<tr>
<th>Name of venue:</th>
<th>Address of venue:</th>
<th>Telephone no. (if known):</th>
<th>Contact/responsible officer at venue:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Record of sessions held**

<table>
<thead>
<tr>
<th>Date of visit</th>
<th>No. of donations received</th>
<th>Special features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Type of venue (e.g. factory, school)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 3: Example of record of venues available for mobile sessions**

**ACTIVITY 21**

Look back at the list you made in Activity 20 of the locations in which mobile sessions have been held during the last year and at the number of units of blood collected in each place. Identify the locations to which it is worth returning in the future for further mobile sessions because you could reasonably expect to collect an adequate number of units of blood.

If you don’t already keep a record of suitable locations for mobile clinics, such as in the example in Figure 3, record the relevant information for each of these locations.
Mobile sessions are usually held in schools, colleges, village halls, community centres, offices, factories and similar venues. Wherever possible, the donor recruitment organizer should inspect the venue to ensure that there is a supply of clean water, toilet facilities and good light in order to maintain standards of hygiene, health and safety. People are often reluctant to become blood donors because they are frightened of contracting an infection by giving blood. It is therefore important to make sure that the environment is clean and tidy so that, as soon as they enter, donors feel confident about the professionalism of the clinic staff and the safety of the environment and the procedures.

The organizer should also plan the layout for the blood collection session to ensure that donor screening can be undertaken in privacy and that there is sufficient space for the actual bleeding and for donors to recover after donating blood.

Appendix 3 contains further guidance on selecting a venue for a mobile session.

**Activity 22**

Look back at the map you produced in Activity 9. Identify an area that is not close to a fixed clinic and where no mobile clinics have been held before. Choose a location where you would expect to find a high proportion of low-risk donors and that has a reasonably high population density, such as a large village, a college or a factory.

Try to identify a site in this area that would be suitable for holding a mobile clinic, taking into account the number of potential donors, how easy it is to reach the venue and the facilities that might be available.

Find out who is in charge of this venue and contact them to ask whether they would be willing to host a mobile donor clinic and to arrange a convenient date. Try to arrange an informal visit to the site so that you can make an initial assessment of its suitability and meet the person in charge. Keep a record of your comments.

### 5.3 Donor Call-up

Where a panel of regular voluntary donors has been established and there is an efficient donor records system, it should be easy to identify donors who are due to give another donation and who therefore need to be contacted and asked to attend the clinic. However, it is important to avoid either an excess or a shortage of particular blood groups. The person responsible for recalling donors therefore also needs to find out from the medical director of the service or from the person in charge of the blood bank how many units of blood are required for each blood group. Estimating the number of units needed for each blood group is covered in Section 6 of Module 3. It is not possible to predict the blood groups of new donors, but the groups of existing donors are already known. This is a further reason why regular donors are preferable.
because it is possible to identify and recall those with the required blood groups to ensure that there is always the correct proportion of different blood groups in stock. We shall return to the subject of donor records in Section 8 and to donor retention and recall in Section 9.

Where there are insufficient voluntary donors available, it may be possible to contact replacement donors and persuade them to donate blood again. They may be willing to become regular voluntary donors because they realize that their blood has already saved the life of their relatives and they recognize the importance of stocks of blood always being available. Another approach is to introduce a policy where a relative of a regular donor does not have to find a replacement donor if they are admitted to hospital. Remember, however, that it is important to avoid putting pressure on families to provide donors as this may lead to them paying others to donate blood.

**Calling donors to fixed clinics**

When the number of donors required has been decided, they need to be invited to attend a donor session. Wherever possible, they should be contacted individually by letter or telephone, preferably giving them several days’ notice.

It is best to ask donors to attend at different times to avoid them all arriving together. This would put pressure on donor clinic staff and could cause delays, which might discourage donors from attending again. The senior nurse in charge of the clinic needs to be informed of the number of donors who have been called so that she can be prepared for them.

**Calling donors to mobile clinics**

When organizing a mobile clinic, it is essential to inform local people well in advance that a blood collection session will be held in their area. It is costly and time-consuming to organize mobile sessions and so every available opportunity must be taken to make it worthwhile. If only a few people know it is going to take place, it will be difficult to collect the required number of units of blood.

It is important to attract as many regular donors as possible, although it may be more difficult and costly to inform regular donors on an individual basis about mobile clinic sessions than about a fixed donor clinic. However, the majority of people attending a mobile session are likely to be new donors who decide to donate their blood on hearing that a mobile blood collection session is being held in their area. While it is obviously important to publicize the session in advance, information about the venue, date and time of the session may not be sufficient to attract the required number of new donors. It is usually necessary to give a talk or distribute some educational materials to create awareness of the need for low-risk blood donors. If it is not possible for the donor recruitment organizer to do this, perhaps because of a shortage of transport or because the distance to be travelled is too great, it is important to seek the assistance of other health workers or volunteers.

If the mobile team plans to visit a village or community centre, it is essential to contact community leaders in advance and to ask them to
tell people when the donor session will take place. Ask them to put up posters in prominent places so that as many people as possible will know the date, time and location of the mobile clinic. Always try to obtain the assistance of existing donors and other volunteers in encouraging their family, friends, colleagues and other members of the public to give blood. Depending on the resources available, it may be possible to use the local press, radio or television to inform people when a mobile session will be held in their area. Using a loudhailer can be effective in informing the community about the session.

If the mobile clinic is to visit a school, college, factory or a similar location, the principal or manager should be contacted well in advance in order to agree a suitable time and date for the donor session and for any predonation talks or other educational activities that may be organized. It will also allow sufficient time for information to be circulated about the session to all existing and potential donors. If the initial contact is made by telephone, always send a follow-up letter to confirm the arrangements and ensure that there is no confusion.

**ACTIVITY 23**

What approaches are used in your centre to inform potential donors and regular donors that a mobile session will be held in their area? Fill in the table below by ticking the methods that you use. Which methods do you find most effective?

Can you think of any ways of improving the system for publicizing mobile donor clinic sessions? Note them down on your Action List.

The next time you organize a mobile session, try to use an additional method that you have never used before and evaluate its effectiveness.

<table>
<thead>
<tr>
<th>Method</th>
<th>Often</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word of mouth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspapers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Television</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
After each mobile session, it is important to send a letter thanking the person in charge of the venue for their support. This will assist in building and maintaining a good relationship for future visits.

### 5.4 STAFF AND EQUIPMENT

The staff and equipment required to operate a mobile blood donor session will be similar to those for a fixed clinic, but obviously depends partly on the number of donors who are expected to attend, as well as on the resources available.

#### Donor clinic staff

The number of staff required will probably be similar to that in a fixed clinic, apart from a driver, although the rate at which donors arrive will to some extent determine the staffing pattern. If you have two hours available and you are expecting around 100 donors, you will obviously need more staff than if you are expecting 50 donors to attend the clinic over a period of eight hours. If the number of donors attending is likely to be low, the number of nurses or trained phlebotomists could be reduced.

The suggestions for staffing levels given in Figure 4 are for a session in which donor clinic staff expect to collect 50–60 units of blood in a period of four hours. They are simply guidelines, however, and you must use your own experience to decide how closely they match your own requirements.

### Figure 4: Suggested staff requirements for a mobile donor clinic

- 1 doctor or experienced senior nurse in charge
- 1 donor screening nurse
- 2 donor bleeding nurses or staff trained in phlebotomy
- 1 clerk/receptionist
- 1 driver/clerk

Laboratory technical staff should undertake donor screening or phlebotomy only where nurses are not available and if they have been adequately trained for these roles.

Donor assistants or volunteers may be used, under supervision, to carry out simple tasks such as preparing refreshments for donors.

### ACTIVITY 24

The next time you go on a mobile session, select three donors and record the total time that each person spends in the clinic. Note down:
whether there are significant differences in the time each person spends at the session
whether each donor is attended to promptly or has to wait for long periods
the stages at which donors have to wait and the reasons for any delays
whether donor clinic staff are able to spend sufficient time with each donor.

Note down any ways in which you think the organization of the session could have been improved. For example, were there sufficient staff? Was the venue suitable? Was there sufficient publicity to attract the anticipated number of donors? Note down your findings and recommendations on your Action List.

Equipment and materials
The most expensive item required for a mobile session is the vehicle. This needs to be large enough to carry staff and all the equipment needed, such as fold-up donor bleeding beds and equipment for keeping blood cold.

Apart from the vehicle, all the equipment and materials required will be the same as for a fixed donor clinic although some equipment, such as tables, chairs and perhaps even beds, may be available in the place where the mobile clinic is to be held. It is important to use local resources to your full advantage and to check what equipment is available in order to avoid transporting any unnecessary items. The quantities of the remaining equipment and materials required will depend on the number of staff and the number of donors who are expected to attend. Figure 5 suggests the equipment and materials that are required for a mobile clinic.

It is helpful to compile a checklist of all the equipment and materials required for mobile clinics. This can then be used before departing for each session to check that everything required is in the mobile clinic vehicle. It can also be used on return from the session to check that nothing is missing.

ACTIVITY 25
Do you use a checklist of equipment and materials required for mobile sessions? If so, compare it with the list in Figure 5 and make any additions or amendments that you feel are necessary.

If checklists are not yet used in your centre, draw up a checklist containing all the items of equipment and materials that are needed for mobile clinics and use it to check each item before departure and on return from each mobile session.
### Equipment and materials required for a mobile donor clinic

- A medium or large vehicle, ideally specially designed to carry staff and equipment
- Collapsible tables for the clerk/receptionist
- Donor information and education materials
- Screens to ensure privacy during donor selection
- Fold-up donor bleeding beds
- Chairs for staff and donors
- Donor enrolment and record forms
- Donor medical history forms/questionnaires
- Soap and hand towels
- Sphygmomanometers
- Stethoscopes
- Cotton wool swabs
- Antiseptic solution
- Capillaries and copper sulfate solution (\(\text{CuSO}_4\)) for male and female donors, or other means of checking the haemoglobin level, such as the WHO Haemoglobin Colour Scale or a battery-operated haemoglobinometer
- Box of lancets
- Donor weighing scales
- Height measure
- Tourniquets
- Donation reference number sets, one for each donor
- Blood collection tubes
- Blood bag pilot tube sealer and clips
- Blood collection bags
- Plasters or strips of sticky tape for holding the needle in position
- Small spring balances or scales for weighing the blood collected
- Tube strippers
- Forceps and scissors
- Container for the safe disposal of lancets and needles
- Blood mixers
- Disinfectant solution, such as hypochlorite solution, for cleaning spilt blood and cleaning equipment and furniture after the session
- Facilities for providing refreshments for donors
- Small battery-operated refrigerator or insulated cold boxes and ice-packs for filled blood bags
- Refreshments for donors
- First-aid kit.

### 5.5 TEMPORARY STORAGE OF COLLECTED BLOOD

An important part of organizing a blood donor session is making suitable arrangements for the preparation, temporary storage and transportation of the blood to the blood bank. Section 5 of the Introductory Module describes the blood cold chain, which is a system for storing and
transporting blood and and blood products in as safe a way as possible to maintain its functions. If you have not already done so, read this section now. Remember that there are two equally important parts in an efficient blood cold chain:

- people to organize and manage the storage and transportation of the blood
- equipment to store and transport the blood.

The cold chain should begin as soon as blood is collected. Donor clinic staff are responsible for ensuring that blood reaches the blood bank in a suitable condition by following the procedures that are designed to:

- maintain the viability and functions of the constituents of the blood
- prevent physical changes that may be detrimental to the constituents of the blood
- minimize bacterial contamination of the blood.

**Plastic blood collection bags**

The preservative solution in the blood bag contains anticoagulants to prevent the donor’s blood from clotting. It also contains nutrients for the blood cells. Blood bags should be stored at +2°C to +6°C in order to maintain the delicate biochemical balance required by the blood cells to sustain their viability and functions. This temperature range minimizes the growth of any bacterial contamination that may have entered the unit of blood during venepuncture.

**Handling sample containers and blood bags**

Sample containers and blood bags should be kept as cool as possible. Excessive heat or freezing may affect the preservative solutions which, in turn, affect the viability of the red cells. If glass or plastic sample containers are too hot or are frozen immediately before filling them with blood, **haemolysis** of the red cells may occur, which will affect the blood grouping and serology tests.

During collection, the blood should be mixed with the anticoagulant-preservative solution contained in the blood bag. Mixing should be frequent during the first minute of bleeding, with further mixing after approximately every 100 ml until the bag is full.

The amount of blood collected should be closely monitored by using a spring balance or blood donation scales. The total volume to be collected will depend on the type of pack used and on the procedures agreed locally. When you have collected the appropriate amount and filled the pilot tubes and sample containers, strip the tubing. This will mix the blood in the tubing with the blood in the pack so that it is all adequately anticoagulated. Dispose of the needle safely in a container for sharps. Recapping needles is dangerous and often leads to needlestick injuries to staff. If, before the venesection, you make a loose knot in the tubing to which the needle is attached, you can then tie it off at the end of the bag when the bleed is completed.

At this stage, always check that the donor records, the identification of the unit and the sample tubes match.

*haemolysis*: The breaking down of the red cell membrane which liberates the contents: haem and globin.
The blood packs should then immediately be put in a refrigerator or a precooled blood transport box. Sturdy, well-insulated cold boxes can maintain a temperature of +2°C to +6°C if they contain sufficient ice-packs; dry ice or supercooled ice should not be used. The ice should never be allowed to come into direct contact with the blood bags or sample containers since this may cause haemolysis of the red cells.

If possible, put a maximum/minimum thermometer inside the cold box so that the maximum and minimum temperatures reached inside the box can be recorded when the blood reaches the blood bank. The thermometer should not touch the ice-packs. If the temperature is outside the range of +2°C to +6°C, a decision will have to be taken about whether to discard or keep the blood. If there is no thermometer, the temperature has probably remained within this range if there is unmelted ice remaining in the box. See Section 5 of the Introductory Module for further details on the storage and transportation of blood.

**ACTIVITY 26**

What types of blood pack are used in your blood collection programme: single, double, triple, a combination of types or other types? If you use different types, which are the best? Why?

Note your answers to the following questions on the table below.

- What type of preservative solution (e.g. CPDA) is used?
- What volume of preservative solution is used?
- What volume of blood do you collect in each type of collection pack?
- What is the weight of an empty pack in grams?
- What is the weight of the pack when the allowed volume of blood is collected?
- At what temperature should the pack be stored when empty?

<table>
<thead>
<tr>
<th>Type of blood pack</th>
<th>Type of preservative solution</th>
<th>Volume of preservative solution</th>
<th>Volume of blood collected</th>
<th>Weight of an empty blood pack in grams</th>
<th>Weight of blood pack when allowed volume of blood is collected</th>
<th>Recommended storage temperature for empty blood packs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Double</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triple</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass bottles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other types</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Are the packs always used in accordance with the instructions provided by the manufacturers? If you can suggest any improvements to the way the packs are used, note them on your Action List.

**Glass collection bottles**

Some blood banks and transfusion services still use glass blood collection bottles rather than plastic blood collection bags that are recommended by WHO in *Guidelines for the Organization of a Blood Transfusion Service* (1992). The ability to reuse glass bottles has cost-saving advantages over disposable plastic blood collection packs, which are more expensive. However, these must be balanced against the problems that may be encountered with the use of glass bottles and the need to ensure that sufficient stocks of appropriately prepared bottles are always available.

There are a number of disadvantages to the use of glass bottles. They are relatively heavy and bulky to store compared with plastic bags which are very light and take up less room in storage, both when empty and when full.

The reuse of glass bottles involves the initial cleaning and sterilization of the bottles, the preparation and sterilization of the anticoagulant solution and its addition to the bottles, and the sealing of the prepared bottles ready for use. In addition, the blood collection sets also need to be cleaned, prepared and sterilized before reuse. It is clear that to use glass bottles successfully, a dedicated production area is required. This is unlikely to be available in an ordinary district hospital which should obtain prepared glass collection bottles and collection sets from a central production unit where high standards can be maintained.

**Potential problems in the use of glass bottles**

**Air embolism**

Air embolism is probably the most important problem that may be encountered when collecting blood into glass bottles. An air embolism can occur in the donor if the flow of blood into the collection bottle stops because the air vent has become blocked and the pressure builds up inside the bottle. When the pressure cuff is released, the pressure in the bottle becomes greater than that in the vein and air is forced back along the collection tube and into the donor’s arm.

There is no risk of embolism when using plastic blood bags because there is no air in the bag that could cause an embolism. The bag expands as the blood is collected and there is no pressure build-up inside it.

**Infection risk**

The collection set needs to be physically connected to the collection bottle. This creates an open system with the potential for contamination of the donated blood when the needle is inserted into the cap of the collection bottle.
The collection line and needle form an integral part of a plastic blood pack so the venepuncture itself is the only point at which the system is open. The risk of contamination is therefore greatly reduced.

Blood collected into glass bottles can undergo only limited processing and this also involves an open system with an increased risk of infection. Since plastic blood bags can be obtained in a number of different formats, the processing potential is much higher and a closed system is maintained at all times throughout processing.

5.6 MONITORING MOBILE DONOR SESSIONS

Wherever possible, the person responsible for organizing a mobile donor clinic should be present during the entire session to ensure that everything goes according to plan. They should also:

- encourage and reassure any donors who have any doubts or anxieties about giving blood
- attend to any donor problems
- ensure that good public relations are fostered by all staff
- thank local contacts for their support.

Each clinic session should be monitored in a systematic way so that any action required to improve the service can be identified. Using a donor session analysis form like that shown in Figure 6 on page 66 makes it easier to monitor:

- the effectiveness of the donor education, motivation and recruitment campaign, including the number of new and repeat donors out of the potential donor population and the number who were accepted
- the trends in the donor population, such as whether the number of new and repeat donors is increasing
- the cost-effectiveness of each venue used for mobile donor clinic sessions and whether it is worth returning to particular sites in the future, considering the suitability of the venue, the number of donors bled and the number of exclusions and deferrals
- the workload of the donor clinic staff, including whether there were too few or too many staff
- the performance of the donor clinic team and how efficiently they coped with the workload
- the adequacy of the equipment and materials available, including whether any additional materials were required or there was an excess of consumables
- the relationship between the mobile team and the person responsible for the venue at which the session took place.

If you do not have a computerized system, you would need to use large printed forms or a large ledger to record the information in Figure 6. Information on the number of donations received and any comments on the venue can then be transferred to the record of venues available for
### DONOR SESSION ANALYSIS FORM

<table>
<thead>
<tr>
<th>Date</th>
<th>Date of previous visit</th>
<th>Venue</th>
<th>Potential population</th>
<th>Repeat donors bled</th>
<th>New donors bled</th>
<th>Total bled</th>
<th>Total deferred</th>
<th>Venue suitability</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>% of total bled</td>
<td>% of total bled</td>
<td>% of total popul.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Temp.</th>
<th>Perm.</th>
<th>Venue suitability</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>% of total defer.</td>
<td>Poor</td>
<td>Good</td>
</tr>
</tbody>
</table>

*Figure 6: Example of a donor session analysis form*
ORGANIZING DONOR CLINIC SESSIONS

Key to Figure 6

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Date on which the mobile session was held</td>
</tr>
<tr>
<td>Date of previous visit</td>
<td>Date on which the last session was held at this venue</td>
</tr>
<tr>
<td>Venue</td>
<td>Name of the place where the mobile session was held</td>
</tr>
<tr>
<td>Potential population</td>
<td>Estimate of the total number of persons eligible to give blood</td>
</tr>
<tr>
<td>Repeat donors bled</td>
<td>Number of donors who had given blood before and the percentage of repeat donors among the total number of donors bled</td>
</tr>
<tr>
<td>New donors bled</td>
<td>Number of new donors and the percentage of new donors among the total number of donors bled</td>
</tr>
<tr>
<td>Total bled</td>
<td>Total number of new and repeat donors bled and the estimated percentage of the potential donor population</td>
</tr>
<tr>
<td>Total deferred</td>
<td>Number of donors not bled after screening</td>
</tr>
<tr>
<td>Temporary</td>
<td>Number of donors deferred temporarily</td>
</tr>
<tr>
<td>Permanent</td>
<td>Number of donors permanently excluded and the percentage of permanent exclusions among the total number of donors deferred</td>
</tr>
<tr>
<td>Venue suitability</td>
<td>Assessment of the suitability of the venue for future mobile sessions: e.g. hygiene/cleanliness, cooperation of owners of venue, facilities for confidential donor screening, number of donors bled, number of donors permanently excluded</td>
</tr>
<tr>
<td>Time: start–finish</td>
<td>Times when the bleeding session started and finished</td>
</tr>
<tr>
<td>Staff</td>
<td>Adequacy of the number of staff for the session</td>
</tr>
<tr>
<td>Professional</td>
<td>Number of professional staff at the session: doctors, nurses</td>
</tr>
<tr>
<td>Support</td>
<td>Number of support staff at the session: clerk/receptionist, driver, volunteer donor assistants</td>
</tr>
<tr>
<td>Comments</td>
<td>Any additional observations and comments from donors, staff, owners of the venue, etc.</td>
</tr>
<tr>
<td>Signature</td>
<td>Signature of member of staff completing the form after the session</td>
</tr>
</tbody>
</table>

Mobile sessions, shown in Figure 3 on page 55. You will then have a simple record of the value of each venue which can be used in planning future mobile sessions.

**ACTIVITY 27**

Does your centre use a donor session analysis form like that shown in Figure 6 to evaluate the effectiveness of mobile sessions? If so, does it include all the points included in the example? If you think your form could be improved, note down your ideas on your Action List.

If records of this kind are not kept in your centre, use Figure 6 to evaluate the performance of the next mobile session that you attend. Then design a form that will help you to record the outcomes of each donor session, adapting Figure 6 to your own situation.

**SUMMARY**

1. Mobile donor clinics enable the service to reach donors who cannot easily attend a fixed clinic.
2. Mobile donor sessions can considerably increase the number of regular voluntary non-remunerated donors.
3 Advance planning is essential for mobile clinics, particularly in:

- selecting a suitable venue
- publicizing the donor session
- calling up donors
- planning staff requirements
- organizing equipment and materials.

4 Plastic blood collection bags should be used wherever possible. If glass bottles are used, they should be obtained ready to use from a central supply unit where all the necessary production facilities are available.

5 Donor sessions should be evaluated systematically in order to ensure that they are efficient and cost-effective.

SELF-ASSESSMENT

9 Why should donors never be bled in the laboratory?
10 What are the two essential parts of the blood cold chain?
11 Name two potential problems in using glass blood collection bottles.

PROGRESS CHECK

Before moving on to Section 6, spend a few minutes thinking about whether you have achieved the learning objectives for Section 5. These were to:

1 Identify suitable sites for mobile donor clinic sessions.
2 Plan and prepare for a mobile session to ensure that it operates efficiently.
3 Develop efficient procedures for calling up donors to fixed and mobile donor clinic sessions.
4 Ensure the safe, efficient preparation and use of blood collection packs.
5 Monitor and evaluate donor clinic sessions in order to improve their efficiency.

If you feel confident that you have understood everything in this section, turn to Section 6.

If you feel that you need to spend more time on this section, go back to the parts that are most unfamiliar or that you find difficult. You may find it helpful to talk to other people, such as your supporter or other senior colleagues, about anything you are still not sure about.
Blood Donor Selection

The purpose of this section is to help you to review and improve the effectiveness of the donor selection procedures used in your centre. Every blood transfusion service or hospital blood bank has a responsibility to ensure that blood donation does not harm either the donor or the recipient of the blood. The purpose of donor selection is to identify any factors that might make an individual unsuitable as a donor, either temporarily or permanently. This section focuses on the three main parts of the donor selection process:

- predonation counselling
- the medical history
- the health check.

**LEARNING OBJECTIVES**

When you have completed this section, you should be able to:

1. Develop appropriate procedures for providing predonation counselling for donors.
2. Accurately record donors’ medical histories.
3. Carry out a basic health check of donors, within the limits of your training.
4. Recognize when temporary deferral or permanent exclusion is necessary and explain the reasons for deferral to donors who are unsuitable to give blood.
5. Undertake simple monitoring of the donor selection procedures used in your blood transfusion service or hospital blood bank.
6.1 PREDONATION COUNSELLING

The process of donor selection should begin even before donors come to give blood through an effective education programme that informs potential donors about health conditions or risk behaviour that would make them unsuitable to donate blood. However, donors may still be unaware of these factors, particularly if they are family or family replacement donors or commercial donors. Predonation counselling is therefore an essential part of donor selection because it enables donor clinic staff to:

- make a preliminary assessment of the donor’s state of health
- provide information about risk factors
- assess the donor’s understanding of risk factors
- offer the donor an opportunity to self-exclude or self-defer
- explain the procedures involved in blood donation and the reasons why they are undertaken, including the medical history, the basic health check, the venepuncture itself, postdonation care and the laboratory tests that are performed on all donors’ blood
- answer the donor’s questions and provide reassurance in cases of anxiety
- obtain the donor’s informed consent to donation and to the procedures that will be followed.

Donors often assume that because they feel healthy, they are healthy. This is not always the case. It is therefore vital to ensure that all donors understand why they should provide accurate and complete information about their health and any medication they may be using. They need to understand that if they do not give this information, they risk endangering their own health as well as that of the patients receiving their blood. In order to do this, donors need simple information on the physiology of blood, the causes of anaemia and the need for blood in different clinical situations. They must also be informed about diseases that could be transmitted by blood transfusion such as HIV, hepatitis viruses, syphilis, malaria and Chagas disease, and their signs and symptoms.

If donors understand why it is to their own benefit to give honest, accurate and complete information about their health, it will reassure them that their welfare is as important to the service as that of the recipients of their blood. If they do not believe that donor clinic staff are concerned about their health, they are less likely to become regular donors.

It is particularly important to explain to donors about the laboratory tests that will be performed on their blood and the reasons for them. They should also be told the meaning of a negative or positive result for an infectious disease and, if it is negative, how they can stay safe. This step is important because it prepares donors psychologically for a possible positive result. At the end of the predonation counselling, each donor must give informed consent to blood donation, clearly acknowledging the actions the blood centre may take following testing of the blood.
Risk behaviour

One of the most important parts of predonation counselling is to explain what risk behaviour is and why it is necessary to assess whether the donor is at risk for any transfusion-transmissible infections. It is particularly important to encourage self-exclusion by people such as sex workers, homosexual or bisexual men, injecting drug users, those who have unprotected sexual contact with anyone other than a regular partner, and the sexual contacts of any of these people.

Never assume that donors know what risk behaviour means. Sometimes a simple leaflet, such as the example given in Appendix 1, is sufficient to enable donors to understand why they may be at risk and the danger that this poses to anyone receiving their blood. However, an in-depth discussion is often needed, particularly with new donors. They may not understand the terms ‘homosexuality’, ‘prostitution’ or ‘injecting drug use’ or why having more than one sexual partner is risky. They may not know about the ‘window period’ for HIV or the signs and symptoms of infection. Always use simple language and check that they understand what you are saying.

In Activity 5 in Section 2, you identified the kinds of risk behaviour that are common or that sometimes occur in your community. It is important to ask donors whether they have ever engaged in any of these forms of risk behaviour or have been the sexual partner of someone who has. They may find it embarrassing, but you must try to get an honest reply. Always allow sufficient time for discussion and ensure that it takes place in privacy. Reassure donors that strict confidentiality will be maintained.

**ACTIVITY 28**

Write down the questions that you would ask donors to help them assess whether they have engaged in any risk behaviour and decide whether they should self-exclude.

Then ask other donor clinic staff whether there are any additional questions that they normally ask. If there are, note them down.

Discussion about risk behaviour provides an important opportunity to counsel donors about reducing the risk of contracting HIV and other infectious diseases. It also gives the opportunity to educate them about why signs of infection may not be evident in themselves or other people.

**ACTIVITY 29**

Draw up a checklist of all the issues and questions that need to be covered routinely during the predonation counselling of donors. Show this to other members of the donor clinic staff and add any further points that they suggest.

During the next few weeks, use this checklist as a basis for any predonation counselling that you undertake and assess its
effectiveness. Amend it, where necessary, and ask other staff also to use it in their predonation counselling.

### 6.2 THE MEDICAL HISTORY

If a donor appears to be healthy and there is no indication that they have engaged in any risk behaviour, the next step in the selection procedure is to take the medical history. Sometimes donor clinic staff simply ask donors about their health without writing down the information that they receive. However, recording a donor’s medical history at the time of donation is important for several reasons.

1. It provides information needed to decide whether to:
   - accept the donor
   - defer the donor temporarily
   - exclude the donor permanently.

2. It provides a permanent record of the donor’s health status. If the donor returns to give blood again in the future, the initial medical history provides baseline information that enables comparisons of their health status to be made. Changes in weight or blood pressure, for example, are significant markers in making a decision about whether to defer the donor or to proceed with collecting blood.

3. It enables staff to check on any previous deferrals and whether they were intended to be temporary (for example, because the donor had recently been vaccinated or was breastfeeding).

4. It enables staff to prevent donation if a donor presents when they have previously been excluded (for example, because of their medical history or because of risk behaviour).

5. It enables studies to be carried out on the reasons for temporary or permanent donor deferral. This enables the service to monitor the effectiveness of its education about self-exclusion and self-deferral.

6. It can be used to protect the service if a donor sustains an unexpected injury or ill-effects for which the service may be blamed. For this reason, the record of the donor’s medical history should always be signed by the donor as being correct.

**The medical history questionnaire**

The simplest way of taking a medical history is to fill in a standard medical history questionnaire for the donor each time they come to give blood. You will find an example of a medical history questionnaire in Appendix 4. Look at this now.
Using a standard questionnaire to record information about a donor’s medical history has four advantages:

1. It helps to ensure that the same information is collected systematically about each donor.
2. It should prevent donor clinic staff from forgetting to ask important questions.
3. It reminds donor clinic staff to look for clinical signs of ill-health while they are listening to what the donor is saying.
4. It makes it easier for donor clinic staff to decide whether to accept, temporarily defer or permanently exclude the donor because all the relevant information is presented in a standard format.

The medical history should be signed by both the donor and the person taking it, and the date added.

You have seen why it is important to take a written medical history. However, the medical history is of little value – and can be misleading – unless it is taken accurately. This means that, wherever possible, it should be taken by a doctor or a nurse rather than by other staff who have not been trained in recognizing the signs and symptoms of disease. This is particularly important when dealing with new donors. Doctors and nurses are trained to recognize clinical signs of ill-health and to know whether they should temporarily or permanently defer a donor or proceed to the next stage of the donor selection procedure. They are also used to asking questions that other people might find embarrassing.

Donors should not simply be given a medical history questionnaire and be asked to complete it by themselves. Most people do not understand medical terms and may be so eager to give blood that they do not recognize the significance of their answers for their own health. It is therefore important to explain these terms in simple words so that all donors can understand them and identify whether they have any of these conditions. Always check that the donor has understood the questions.

The medical history should be taken in a place where it is possible to ensure privacy since donors may not disclose important information if they are worried that other people may overhear what they are saying. Strict confidentiality must always be maintained about any information obtained. We shall look at the subject of confidentiality in more detail in Section 7.

We have emphasized that taking a medical history is a vital step in ensuring that blood donation does not harm:

- the donor
- the recipient of the donated blood.

Look at the medical history questionnaire in Appendix 4 again. You will see that it contains a number of questions about specific health conditions. The donor should always be asked these questions before donating blood. Some of these questions are designed to protect the health of the donor. The others are designed to protect the health of the recipient. Can you recognize the difference between them?
**ACTIVITY 30**

Study the example of a medical history questionnaire in Appendix 4. Identify the conditions listed that are concerned with the safety of the blood donor. Then identify the conditions listed that are concerned with the safety of the recipient of donated blood.

Don’t worry if you find this activity difficult at this stage. You will find the answers on the next three pages.

**The safety of the donor**

Table 1 below shows some of the conditions that would make it potentially unsafe for the health of the donor if they give blood.

<table>
<thead>
<tr>
<th>Table 1: Potential risks to the safety of the donor</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Low/high blood pressure</td>
</tr>
<tr>
<td>- Heart disease</td>
</tr>
<tr>
<td>- Dizziness</td>
</tr>
<tr>
<td>- Excessive nose bleeds</td>
</tr>
<tr>
<td>- Epilepsy</td>
</tr>
<tr>
<td>- Rheumatic fever</td>
</tr>
<tr>
<td>- Circulation problems</td>
</tr>
<tr>
<td>- Anaemia</td>
</tr>
<tr>
<td>- Diabetes</td>
</tr>
<tr>
<td>- Ulcers</td>
</tr>
<tr>
<td>- Kidney disease</td>
</tr>
<tr>
<td>- Pregnancy</td>
</tr>
<tr>
<td>- Breastfeeding</td>
</tr>
<tr>
<td>- Menstrual problems (excessive menstrual bleeding)</td>
</tr>
<tr>
<td>- Recent operation which may have incurred blood loss</td>
</tr>
</tbody>
</table>

**ACTIVITY 31**

For each of the conditions listed in Table 1, list the possible consequences for a donor who fails to acknowledge the condition. Check your answers by talking to a doctor or nurse in the transfusion service or hospital where you work.

Do you understand why the conditions listed in Table 1 would make it potentially unsafe for a donor to give blood? Ask for a full explanation of anything that you do not understand or did not know before.
The safety of the recipient

Table 2 shows some of the signs and symptoms in the donor that could make the donated blood potentially harmful to the health of the recipient.

Table 2: Potential risks to the health of the recipient

- Swollen glands
- Persistent cough
- Unexplained weight loss
- Shingles
- Night sweats/fever
- Brucellosis
- Skin rashes
- Sleeping sickness (trypanosomiasis)
- Sexually transmitted diseases (STD/VD)
- HIV/AIDS
- Prolonged diarrhoea
- Malaria (fever)
- Hepatitis/jaundice
- Lung disease
- Tuberculosis
- Asthma
- Thyroid disorder
- Cancer
- Recent history of medication
- Recent injections
- Recent vaccinations
- Recent operations
- Recent acupuncture
- Recent scarification
- Recent blood transfusion history
- Recent contact with infectious disease

**ACTIVITY 32**

For each of the conditions listed in Table 2, list the possible consequences for the recipient of the donated blood if the donor fails to acknowledge the condition. Check your answers by talking to a doctor or nurse in the transfusion service or hospital where you work.

Do you understand why the conditions listed in Table 2 would make it potentially unsafe for the recipient if the donor gives blood? Ask for a full explanation of anything that you do not understand or did not know before.
Remember the risks of the “window period” that we discussed in Section 2. It is very important to relate indications of risk behaviour to any symptoms mentioned by a donor. For example, someone reporting recent treatment for a sexually transmitted disease may actually be in the “window period” for HIV. Similarly, a donor who has recently been in a malaria endemic zone may be harbouring parasites.

**ACTIVITY 33**

Using Table 1 and Table 2 as a guide, identify the health conditions that are found in your country and that fit in the following two broad categories:

- health factors of importance to the safety of the donor
- health factors of importance to the safety of the recipient.

List them in their order of prevalence: that is, start with the most common, then the next most common and continue until you have listed the rarest.

You may be wondering ‘But where can I find this information?’ The Ministry of Health is the most important source of health information and you may be able to find out the answers from local Ministry of Health officials, particularly those dealing with epidemiology. If you have any difficulty, ask one of your senior colleagues for help. Although it may take you some time to get the answers, this is an important activity because it will highlight the conditions that everyone involved in donor selection must particularly look out for.

Training and experience in donor selection will increase your effectiveness in screening donors. However, it is essential to understand the importance of the medical history since you should now think about whether you can improve the donor medical history records that are kept in your centre.

**ACTIVITY 34**

In your centre, are records kept of donors’ responses to questions about their medical history? If they are, compare your system with the example of a donor medical history questionnaire in Appendix 4.

Can you suggest any ways in which the records in your centre could be improved? If you are not responsible for keeping these records yourself, discuss your ideas with the appropriate donor clinic staff. Note down your recommendations on your Action List.

If records of donors’ medical histories are not kept in your centre, talk to your colleagues and supervisor about whether a system could be introduced. Note down your recommendations on your Action List.
If you and your colleagues agree that medical history records need to be amended or introduced, it is important to ask a medical officer to review them carefully before they are used.

Remember that any donor clinic staff who complete medical history questionnaires or similar records must understand everything included in them. They must also ensure that all donors, particularly new donors, understand all the questions they are asked.

6.3 THE HEALTH CHECK

So far in this section, we have focused on collecting information from donors themselves about any health conditions or other factors that might either endanger their own health if they give blood or adversely affect the health of the recipients. As you have already seen, this should include:

- questioning donors to assess the likelihood of risk behaviour and counselling them to self-exclude, where appropriate
- interviewing donors to assess their health status, using a medical history questionnaire or a similar record
- identifying any drugs or medicines being used by donors and assessing their significance for the safety of blood donation.

As with all medical procedures, however, it is unwise for donor clinic staff to rely solely on what donors tell them because they may not realize that they have a particular health problem. It is important also to give each donor a health check before they donate blood in order to make a complete assessment of their health status.

The following assessments need to be made as part of the health check each time a donor comes to give blood:

- blood pressure
- pulse rate
- weight
- haemoglobin estimation
- weight and height parameters
- physical assessment of the donor for such symptoms as skin rashes and swollen glands, or needle marks that might indicate injecting drug use
- the time of the donor’s last meal. Not having had a meal in the last 12–24 hours may lead to a fainting attack.

An example of a simple format for recording the results of the health check on the donor’s personal record card is shown in Figure 7 on page 78.

The health check should be carried out only by staff trained in the clinical diagnosis of disease. Laboratory technical staff are not trained in
recognizing the signs and symptoms of disease and should not normally carry out the screening procedure unless they are adequately trained and supervised. They may, for example, carry out some of the simple assessments, such as measuring the donor’s weight, height and haemoglobin level, if they have received suitable training. Two examples of standard operating procedures are given in Appendix 5 which provide clear and detailed instructions on:

- the procedure for haemoglobin screening using the copper sulfate method
- the procedure for dealing with donors who fail the copper sulfate test.

If you are responsible for carrying out haemoglobin screening using the copper sulfate test, read Appendix 5 carefully to ensure that you follow the correct procedure.

In 2001, a new method of screening haemoglobin levels was introduced. Appendix 6 describes the WHO Haemoglobin Colour Scale, which is a simple and inexpensive clinical device that provides a reliable method for screening for the presence and severity of anaemia.

The physical assessment should ideally be made by a trained nurse or medical officer.

**ACTIVITY 35**

In your centre, who is responsible for undertaking the various assessments in the basic health check of donors? What training have they received?

Talk to your colleagues and identify any areas in relation to the screening of donors in which donor clinic staff feel they need more training. Add these to your Action List and discuss them with your supervisor or a senior medical or nursing colleague.
Even the most experienced staff find it helpful to use guidelines on the medical assessment of blood donors. An example of some guidelines is given in Appendix 7. Are any similar guidelines used in your blood transfusion centre or hospital blood bank?

**ACTIVITY 36**

Read the Guide to Medical Assessment of Blood Donors in Appendix 7 and compare it with any guidelines that are currently used in your centre. If you think that your guidelines need to be amended, note down your recommendations on your Action List and discuss them with your colleagues and senior medical staff.

If guidelines of this kind are not yet used in your centre, show Appendix 6 to other donor clinic staff who are responsible for screening donors and ask them whether they would find it useful as an aid in donor selection. Discuss with them any ways in which the guide might need to be adjusted before it could be used in your local situation. For example, it might need to be amended to take into account such factors as the average height and weight of the donor population or normal haemoglobin levels for adult males and females. Note down your recommendations on your Action List.

It is important for your centre to seek guidance from your local health authority or from the Ministry of Health in producing or adapting any guidelines for the medical assessment of donors. When they are completed, ensure that they are reviewed thoroughly and approved by a medical officer.

Each part of the donor selection process must be undertaken systematically and should never be rushed, even if other donors are waiting to give blood. An adequate number of appropriately trained staff is therefore necessary to ensure that sufficient time can be given to each donor. You may already have suggested in your response to Activity 24 that the number of trained staff available for blood collection in your centre is insufficient. If so, make a further note on your Action List to discuss with your supervisor any changes that may be required in order to ensure that donor selection is safe for everyone.

### 6.4 DONOR DEFERRAL

In this section, we have emphasized the importance of the medical history and the health check in identifying donors who should be excluded or deferred. Ideally, potential donors who are unsuitable will decide to self-exclude as a result of predonation information and counselling. However, it will always be necessary to defer some potential donors. Some may need to be deferred on a temporary basis only, but others may have to be asked not to come to blood donor sessions again. Always follow local or national guidelines when deferring donors.
When donors are deferred, whether on a temporary or permanent basis, they may become very anxious. There are six steps that should be followed when it is not possible to accept a donor.

1. Explain to them in a clear and sympathetic way why they are unsuitable to donate blood. They need to be told whether it is because:
   - giving blood may endanger their own health
   - the blood might be dangerous to the recipient, either because of the donor’s medical condition or because of the possible risk of infectious agents in the blood.

2. Reassure them. They may be frightened that their health is worse than it really is.

3. Explain whether the deferral is temporary or permanent. If it is temporary, tell them when it will be safe to donate blood and encourage them to return then.

4. Give them information about where they can go for further advice and support, if needed.

5. Where appropriate, refer them to an expert, such as a doctor or a counsellor, for follow-up.

6. Wherever possible, follow them up yourself to ensure that they are given an opportunity for further discussion about anything that they are concerned about.

### 6.5 Monitoring Donor Selection

Always remember that poor donor selection can endanger the health of both the donors themselves as well as the patients who receive their blood. For this reason, the effectiveness of donor selection should be continually monitored and evaluated to ensure that it is working as expected and is achieving its objective of ensuring safe and adequate supplies of blood. This is an essential part of your programme’s quality system.

It is difficult to measure the effectiveness of donor selection, however, if there is no systematic plan setting out the programme’s objectives and targets and how they will be achieved. The targets set for a donor selection programme are usually closely linked with the targets for a donor education, motivation and recruitment campaign, as follows.

1. An increase in the number of voluntary non-remunerated donors.

2. An increase in the number of voluntary non-remunerated donors who are willing to give blood regularly.

3. A reduction in the number of donors who have to be deferred temporarily.

4. A reduction in the number of donors who have to be permanently excluded.

5. A reduction in the number of donations that have to be rejected because they test positive for a transfusion-
transmissible infection, such as HIV. A reduction in the seroprevalence of infection in repeat donations is a particularly important indicator of the effectiveness of the donor education programme.

6 A balance between the amount of blood required and the amount of suitable blood that is collected.

As we have seen in earlier parts of this module, in order to achieve these targets, it is important to undertake the following activities:

1 Estimate the amount of blood that is likely to be required each week, month and year.

2 Develop an effective donor education, motivation and recruitment campaign to encourage more people to become regular, voluntary non-remunerated donors.

3 Create public awareness about the importance of safe blood and promote self-exclusion or self-deferral by people who might be unsuitable as donors.

4 Plan donor clinic sessions so that donors have sufficient time for questions and discussion.

5 Ensure that there is an adequate number of donor clinic staff to carry out each stage of the donor selection process thoroughly.

6 Provide appropriate training for all donor clinic staff to ensure that donor selection procedures are carried out efficiently.

7 Provide predonation counselling for all donors and encourage self-exclusion or self-deferral, where appropriate.

8 Develop a medical history questionnaire, or similar record, and ensure that donor clinic staff use it systematically.

9 Undertake a health check of all donors.

10 Ensure that privacy and confidentiality are maintained at all stages of the donor selection process.

**ACTIVITY 37**

What targets have been set for the donor selection programme in your centre? How do you plan to achieve them?

If there is no plan, discuss with colleagues the objectives and targets that you think are realistic for the next year in your donor selection programme. Note down your recommendations on your Action List. Keep a record of these so that you can measure the effectiveness of your donor selection programme against them in the future.

A useful way of recording information about donor selection is to complete a donor screening report at the end of every donor session. An example is shown in Figure 8 on page 82, with an explanation of each column on page 83. If this is used in conjunction with the donor session
## DONOR SCREENING REPORT

<table>
<thead>
<tr>
<th>Number deferred</th>
<th>Permanent</th>
<th>Temporary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venue</td>
<td>Date</td>
<td>Seen</td>
</tr>
</tbody>
</table>

*Figure 8: Donor screening report*
analysis form shown in Figure 6 on page 66, it should provide an accurate record of the clinic’s progress in achieving its targets.

**ACTIVITY 38**

*Is some form of donor screening record kept in your centre? Does it contain sufficient information to enable the effectiveness of the donor selection programme to be monitored? If you can suggest any ways in which it might be improved, note them down on your Action List. If no record of this kind is currently kept in your centre, talk to your supervisor about introducing one to assist you in monitoring your donor selection programme. Note down your ideas on what it should contain on your Action List.*

The issues we have dealt with in this section are the foundations of a safe and efficient transfusion service. Always remember that, without the donor, there can be no blood transfusion and therefore the donor’s welfare must receive the highest attention if the public is to be persuaded to give blood. In Section 7, we shall consider further ways of ensuring that blood donation is a positive experience for donors.

**SUMMARY**

1. During predonation counselling, donors should be given information about the blood donation process and the procedures to identify their suitability as donors. Donors should be encouraged to self-exclude or self-defer if they think they may be unsuitable.

2. A written record should be kept of the donor’s medical history at each donation, using a standard form, questionnaire or similar record.
3 The basic health check of donors should always be undertaken by qualified or suitably trained staff.

4 When donors are deferred, either temporarily or permanently, they should be given reassurance and an explanation for their deferral and, where appropriate, should be referred to other sources of advice and support.

5 Privacy and confidentiality should be maintained at all stages of the donor selection process.

6 Targets should be set for the donor selection programme, together with a plan for achieving them, in order to enable it to be monitored effectively.

**SELF-ASSESSMENT**

12 What are the three main parts of the donor selection process?

13 What are the advantages of using a medical history questionnaire?

**PROGRESS CHECK**

Before moving on to Section 7, spend a few minutes thinking about whether you have achieved the learning objectives for Section 6. These were to:

1 Develop appropriate procedures for providing predonation counselling for donors.

2 Accurately record donors’ medical histories.

3 Carry out a basic health check of donors, within the limits of your training.

4 Recognize when temporary deferral or permanent exclusion is necessary and explain the reasons for deferral to donors who are unsuitable to give blood.

5 Undertake simple monitoring of the donor selection procedures used in your blood transfusion service or hospital blood bank.

If you feel confident that you have understood everything in this section, turn to Section 7.

If you feel that you need to spend more time on this section, go back to the parts that are most unfamiliar or that you find difficult. You may find it helpful to talk to other people, such as your supporter or other senior colleagues, about anything you are still not sure about.
The Care of Blood Donors

The purpose of this section is to help you to ensure that all donors who come to give blood receive a high standard of care and that their experience of donation is safe, efficient and pleasant.

**LEARNING OBJECTIVES**

When you have completed this section, you should be able to:

1. Develop appropriate procedures to ensure that high standards of care are provided for all donors before, during and after donation,
3. Identify appropriate sources of expertise in counselling.
7.1 A PROFESSIONAL AND PLEASANT RECEPTION

The most important people at a blood donor session are the blood donors themselves. Without their blood, the service could not continue to operate. The conditions surrounding blood donation should therefore be as safe, pleasant and convenient as possible for donors. If they are not, a bad image of the service will be created. As word spreads, it will be more difficult to attract new voluntary non-remunerated donors and to retain existing donors.

It is essential that all staff involved in blood donor sessions are well trained in carrying out their particular tasks. Each blood transfusion service or blood bank should prepare its own guidelines or standard operating procedures (SOPs) covering all activities in the donor area. Section 4 in the Introductory Module discusses how to prepare SOPs and you have already seen examples of SOPs for haemoglobin estimation, using the copper sulfate method, in Appendix 5.

Staff should always be smart and clean in appearance and maintain a high standard of personal hygiene. They should have a pleasant manner and be capable of conversing freely with donors, particularly at the time of bleeding. Everyone involved in interviewing or counselling should develop a friendly and tactful approach that encourages donors to be honest and accurate in their answers to questions about their medical history so that an accurate assessment of their suitability can be made. The health check must always be handled professionally so that donors feel that they are in good hands.

It takes much time, effort and money to recruit voluntary blood donors successfully, but donors can be easily lost to the service by an act of carelessness or a lack of professionalism on the part of donor clinic staff before, during or after donation. Let us consider some common examples of unprofessional behaviour that may make the experience of blood donation unpleasant for donors.

Professional issues

- unhygienic or unsafe environment
- crowded room, with inadequate or uncomfortable seating in the waiting area
- long waiting times or unnecessary delays during the donation process
- lack of privacy during predonation counselling and other discussions
- inadequate explanation of the procedures involved in blood donation
- failure to discuss any adverse findings from the donor’s physical screening
- failure to explain the reasons for temporary or permanent deferral and their significance for the donor
- inadequate period of rest for donors after they have given blood
failure to provide refreshments for donors while they are resting after donating blood.

Staff attitudes and behaviour
- failure to welcome each donor on arrival at the clinic
- unprofessional image: for example, dirty or untidy clothing
- apparent lack of confidence, knowledge or skill among staff
- unfriendly or impolite behaviour
- lack of interest in the individual donor: for example, no acknowledgement of previous donations or not wanting to know the donor’s full name
- failure to reassure donors and put them at ease during predonation counselling, the medical assessment, the health check and the bleeding
- insensitivity to donors’ feelings, particularly those of fear or embarrassment
- indiscreet comments about donors, such as about the results of the current or previous health check, particularly when a donor is being excluded or deferred
- unwillingness to talk to donors while bleeding them
- chatting to other staff and ignoring donors
- impression of being bored
- failure to thank donors or to show other signs of appreciation.

ACTIVITY 39
During the next month, carefully observe the fixed and mobile donor clinics that you are involved in. List any factors that you think might contribute to an unpleasant experience for donors.

On each occasion, talk to some donors while they are resting after giving blood to find out what they think about the service provided and how they think it could be improved.

Also talk to other donor clinic staff about what improvements they think could be made. Note down your ideas on your Action List.

New and repeat donors
New donors generally have different expectations of the service from those of repeat donors, particularly those who donate regularly. When donors have never given blood before, they are usually nervous about what will happen, both during screening and while they are being bled, and need much more reassurance than repeat donors.
Repeat donors may still be nervous about being bled, and therefore also need reassurance, but they know what is going to happen to them. They should also be more aware of risk factors and should not need such detailed re-screening.

Look at Figure 9 below, which suggests some differences in the characteristics of new and repeat donors and how they should be handled. It is important that all donor clinic staff understand these differences. You can probably add others that you have noticed from your own experience.

New donors | Repeat donors
---|---
A potentially higher risk of transfusion-transmissible infection because they have never been screened before. | A lower risk of transfusion-transmissible infection because they have been screened at least once.
Their motivation to become a donor is unknown: it may be to help others, but may be to find out whether they are HIV positive. | Their motivation is already known from discussions at previous donations. They may be used to motivate others to give blood.
It is easier to deal with if they are seropositive because their blood has never been used. | It is more difficult to deal with if they are seropositive because their last donation may have been given when they were in the ‘window period’.
They need more reassurance about procedures, particularly about what to expect when being bled and about confidentiality. | They need less reassurance because they are familiar with the procedures.
Detailed predonation counselling is required. | Less predonation counselling is required.
More time is needed to complete records and other procedures. | Less time is required to complete records and other procedures.
Postdonation follow-up may be required if donor is seronegative to encourage safe behaviour. | Postdonation counselling may not be required if donor is seronegative. Where the donor has been deferred for any reason, careful counselling is required.
Greater appreciation needs to be shown to encourage them to return. | Appreciation by the service is no longer the main motivating factor. But it still needs to be shown to encourage continued donations.

**Figure 9: Characteristics of new and repeat donors**

**ACTIVITY 40**

*During the next few donor sessions that you are involved in, observe carefully how donor clinic staff deal with new and repeat donors.*

*Does your centre have a policy on the way that new and repeat donors are treated? Are there differences in the way that staff behave towards new and repeat donors, particularly regular donors?*

*Can you suggest any ways in which the treatment of new or repeat donors could be improved? Note your ideas down on your Action List.*
Remember that the way in which donors are treated will have a direct
effect on their willingness to give blood again and therefore on the
achievement of a safe and adequate supply of blood. If a new donor’s
first experience of being a blood donor is a bad one, they will probably
never come back again and may deter other potential donors. Even a
regular voluntary donor who has an unpleasant experience may be
unwilling to return. Every member of the donor clinic staff has a personal
responsibility to ensure that this does not happen.

7.2 CONFIDENTIALITY

Confidentiality is a vital part of a professional service. The information
provided by the donor is personal and is given solely to assist the service
in ensuring the safety of the blood supply. It should never be disclosed
to another person without that donor’s specific consent. If confidentiality
is not maintained, the trust between the donor and the service will be
broken.

Confidentiality is always necessary in relation to the following areas:

1. During donor screening and blood collection
   It is important to ensure that the donor clinic, whether
   fixed or mobile, is organized so that nobody else can hear
   what is being said in personal interviews between donors
   and clinic staff. Every member of staff has a professional
   responsibility not to talk about individual donors to other
   people. This applies equally whether they have been
   accepted or deferred.

2. Donor records
   Donor records contain information about the donor,
   including their personal details, their medical history, the
   results of the laboratory tests on their blood and whether
   they have been deferred. It is essential to keep records in
   a safe place where only authorized staff have access to
   them. Each blood centre has a professional responsibility
   to ensure the confidentiality of all donor records.

3. Consent
   Information about a donor should never be disclosed to
   other people, such as their family, colleagues or employers,
   without the written consent of that donor.

4. Published information
   Care should be taken when circulating or publishing
   information about your centre’s work: for example,
   statistics on the seroprevalence of infection in relation to
   a particular donor clinic site may result in that place
   becoming the subject of public ridicule or fear.

ACTIVITY 41

What do you think the effects of a breach of confidentiality might be
on your centre’s ability to maintain safe and adequate supplies of
blood?
Think back to any situations you have experienced in which confidentiality was broken. What happened as a result?

Some of the most common effects of not maintaining confidentiality are:

1. Donors are less likely to be truthful about their health status or risk behaviour during predonation counselling if they think that it may become public knowledge. This results in an increased risk to blood safety.
2. Low-risk donors may be unwilling to give blood again because they do not trust the service.
3. They may also discourage their family, friends, colleagues and other potential donors from giving blood.
4. Word may spread more widely about breaches of confidentiality, resulting in poor donor turnout and serious long-term effects on donor recruitment and retention.
5. A breach of confidentiality about a donor who has been deferred, perhaps about their risk behaviour or the results of screening tests on their blood, may lead to victimization by other people in the community.
6. A donor may take legal action against the centre if personal information is disclosed without his or her specific consent.

You may have identified additional harmful effects.

On the other hand, there are major benefits if the service maintains strict confidentiality.

**ACTIVITY 42**

Can you suggest some of the long-term benefits of maintaining confidentiality in relation to donors?

Some of the important benefits of maintaining confidentiality are:

1. Donors will be more likely to trust the service enough to respond honestly to questions about risk behaviour or their health status, resulting in a lower risk to blood safety.
2. Donors will be more likely to return to give blood in the future, which will help to ensure adequate supplies of blood.
3. This will also lead to greater blood safety because regular donors are safer donors.
4. Donors will be more likely to recruit other people to become donors.
5 Donor recruitment and retention will be more successful because the public will have confidence in the service.

Again, you may be able to think of additional benefits of maintaining confidentiality and thus increasing donors’ trust in the service.

What steps can be taken to ensure confidentiality?

1. In fixed and mobile sessions, the layout should be organized so that donors and staff are unable to hear what is being said by other donors.

2. No member of staff should reveal personal information about a donor to other people without the donor’s written consent.

3. Staff who collect blood from donors should not test the blood from those donors or handle the serology results.

4. Donors’ names should not appear on blood collection bags or samples. Instead, only numbers, alphanumeric codes or other identification codes should be used. Where it is necessary to inform a donor of the results of laboratory tests, only an authorized senior member of staff should be allowed to match the numbers on the blood bags or samples to the donor’s name.

5. Donor clinic staff or laboratory staff should not inform donors about the results of tests on their blood, particularly if they test seropositive for transfusion-transmissible infections. This should be undertaken by a medical officer, a counsellor or another authorized member of staff who has been trained in counselling.

**ACTIVITY 43**

What steps are currently taken in your centre to ensure donor confidentiality? Do you think they are adequate? You may find it helpful to talk to some donors and to other donor clinic staff about whether they think arrangements to ensure confidentiality could be improved, perhaps by further staff training or reorganizing the layout of the clinic to provide more privacy. Note your recommendations down on your Action List.

### 7.3 VENEPUNCTURE

Many transfusion services that have assessed donor anxieties have identified fear of ‘the needle’ and adverse reactions as major causes of an unwillingness to give blood or fainting during donation. In fact, some people are frightened of the very sight of a needle, even in a photograph.

Obviously anyone who performs a venepuncture must be skilled. If their technique is poor, the donor will suffer discomfort and may be unwilling
to give blood again. Donors may also discourage other potential donors by telling them about their own unpleasant experience. Every transfusion service or hospital blood bank should always ensure that clinic staff who perform venepunctures are adequately trained and that their performance is monitored. Appendix 8 provides guidance on how to perform a venepuncture.

**ACTIVITY 44**

*Read Appendix 8: Venepuncture. If you perform venepunctures, how confident are you about your ability to carry them out competently without causing discomfort to donors? Do you feel that you need further training in performing a venepuncture?*

*If you feel that you or other members of staff need more training, note this down on your Action List and discuss it with your supervisor.*

Sometimes poor venepuncture is not the fault of the staff performing it. It may be caused by a blunt needle in a poorly-designed blood pack or poor veins, for example. When blood packs are evaluated for suitability by your centre, therefore, it is important to assess the performance of the needle before an order is placed.

### 7.4 ADVERSE DONOR REACTIONS

Donors give their time and blood for the benefit of others and so it is important to show appreciation for this through appropriate care during and after donation.

Most donors tolerate giving blood very well, but occasionally adverse reactions may occur. The most common problems include:

- problems with blood flow
- haematoma
- accidental puncture of the artery
- mild reactions
- moderate reactions, such as fainting
- severe reactions, such as convulsions (uncommon)
- hyperventilation
- accidents.

All donor clinic staff should be trained to recognize and treat these reactions. This training should include first aid. Information on how to recognize and deal with adverse donor reactions is given in Appendix 9.

**ACTIVITY 45**

*Read Appendix 9: Adverse Donor Reactions. Do you feel confident about your ability to recognize and deal with adverse donor reactions?*
What training is provided to donor clinic staff in this area? Do you think that you need any further training?

If you feel that you or other members of staff need more training in dealing with adverse donor reactions, talk to your supervisor or supporter about making arrangements for an experienced doctor or senior nurse to provide appropriate training. Note this down on your Action List.

7.5 POSTDONATION CARE

Having completed the donation, a donor must be allowed to rest for a minimum of 20 minutes so that the body can adjust to the loss of blood. During this time, some liquid refreshment should be provided to replace lost body fluid, together with a light snack, if possible. A donor who feels faint or dizzy should be helped to lie down, with the legs raised to improve the blood supply to the head. Before leaving the clinic, the donor should be seen by a trained member of staff to ensure that they are feeling fit and have been cared for in an appropriate way.

It is important to ensure that donor clinic staff always give information to donors about how to look after themselves following donation by telling them that:

1. They should drink more fluids than usual during the four hours before and after donating blood.
2. They should keep the dressing on the venepuncture site for about 12 hours.
3. They should not consume excessive alcohol before the next meal.
4. If the venepuncture site bleeds, they should raise their arm and apply pressure until the bleeding stops. If it continues, they should contact the blood bank, a doctor or a nurse.
5. If they experience faintness or dizziness and the symptoms persist, they should contact the blood bank, a doctor or a nurse.
6. They should avoid strenuous exercise for 24 hours.

Any observations made about the venepuncture or adverse reactions should be recorded on the donor’s record card so that particular care can be taken at the next donation.

Always thank donors for giving blood before they leave. If your centre operates an appointments system, make an appointment for the next donation if the donor is willing to give blood regularly. This is normally three months later for men or four months later for women. Where donors have attended a mobile session, they should be informed about when the next mobile clinic will be held in their area and encouraged to attend it.
7.6 POSTDONATION NOTIFICATION AND COUNSELLING

Despite predonation information and counselling and careful donor screening, laboratory tests may reveal adverse results indicating the presence of a transfusion-transmissible infection such as HIV, hepatitis B or C, or syphilis in a donor’s blood. In such cases, the donor must not be bled again. The donor’s individual record card should be marked ‘permanently excluded’ so that they can be prevented from donating blood if they attend the donor clinic in the future. In order to maintain confidentiality, however, the specific reason for the exclusion should not be recorded on the donor’s card.

In many countries, donors are notified if laboratory tests reveal that they are unsuitable as donors. However, each transfusion service should have a clear policy to follow in such situations which is compatible with established health practices and is culturally acceptable. Maintaining strict confidentiality about HIV-positive donors must be part of the agreed policy in every blood centre.

Postdonation counselling of HIV-positive donors is important in order to prepare them for changes in their health condition and to help them to come to terms with the disease. They may need help in deciding what to tell their family, friends and colleagues and in planning a different lifestyle. They will also need to be informed about the dangers of transmitting the infection to other people and how to avoid this.

Some blood transfusion services are able to provide counselling for HIV-positive donors by employing a trained counsellor specifically for this purpose or by providing training in counselling skills for selected staff. This is more likely to be possible in countries with a low prevalence of HIV and AIDS.

In most countries, however, it is not feasible for transfusion services to provide counselling and it is more appropriate for HIV-positive donors to be counselled by trained counsellors in specialist institutions or organizations with adequate facilities. It is important that close, strong relationships are established between the transfusion service and organizations of this kind. Confidentiality must, of course, be maintained and information should not be given to another organization about an HIV-positive donor without that donor’s consent.

Some transfusion services provide counselling for new donors who test negative for infectious diseases in order to reinforce safe behaviour. Postdonation counselling of HIV-negative new donors is very useful in AIDS prevention and provides an opportunity to demonstrate that the service cares about their well-being and appreciates their willingness to donate blood. In most countries, however, there is no policy to provide routine postdonation counselling and it would generally not be feasible because of limited staff resources.

**ACTIVITY 46**

Is any counselling or other follow-up provided by your service for donors who test positive for HIV or any other infectious agents? Have staff been trained in counselling techniques?
Which other organizations in your country or area provide counselling and other follow-up for HIV-positive donors? How do you think you could strengthen your service’s relationship with them? Find out whether they or any other organizations could provide training in counselling skills.

If you do not know of any other organizations providing training in counselling, discuss with your supporter the best way of finding out this information, perhaps from the Ministry of Health. Note down any action you wish to take on your Action List.

If you would like more information on the counselling of donors, try to obtain a copy of Guidelines for Counselling about HIV Infection and Disease, published by WHO in 1990 (WHO AIDS Series No. 8). You should be able to obtain one from the World Health Representative in your country.

**SUMMARY**

1. Guidelines or standard operating procedures on all aspects of the care of donors should be prepared by each blood transfusion service or blood bank. These will help to maintain the consistently high standards expected by the blood donor public.

2. Donors must be cared for efficiently throughout the donation process. Every donor has the right to expect a professional and pleasant reception and high standards of care.

3. New and repeat donors have different expectations and needs. Donor clinic staff should be aware of these and respond accordingly.

4. Confidentiality is an essential part of donor care and is a prerequisite for blood safety and effective donor recruitment and retention.

5. Venepuncture should be performed only by staff who have been adequately trained for this task.

6. Donor clinic staff should be trained to recognize and deal with adverse donor reactions.

7. Appropriate care should be provided for all donors following donation, including informing them about their own postdonation care.

8. Postdonation counselling should be available to all donors who require it. Close links should be established with other organizations that can provide appropriate counselling.
**SELF-ASSESSMENT**

14 Name four areas in which confidentiality is always necessary.

15 Identify three problems sometimes experienced by donors during or after giving blood.

**PROGRESS CHECK**

Before moving on to Section 8, spend a few minutes thinking about whether you have achieved the learning objectives for Section 7. These were to:

1. Develop appropriate procedures to ensure that high standards of care are provided for all donors before, during and after donation.


3. Identify appropriate sources of expertise in counselling.

If you feel confident that you have understood everything in this section, turn to Section 8.

If you feel that you need to spend more time on this section, go back to the parts that are most unfamiliar or that you find difficult. You may find it helpful to talk to other people, such as your supporter or other senior colleagues, about anything you are still not sure about.
Blood Donor Records

The purpose of this section is to help you to establish an efficient system of record-keeping that will enable you to maintain confidentiality and develop a panel of regular, voluntary non-remunerated donors.

**LEARNING OBJECTIVES**

When you have completed this section, you should be able to:

1. Maintain an efficient record-keeping system to assist in the development of a panel of regular, voluntary non-remunerated blood donors.

2. Identify information from records that can be used for reporting purposes.
8.1 ESSENTIAL DONOR RECORDS

We have already briefly considered some of the records that are essential for an efficient donor clinic. In this section, we shall look in more detail at:

1. Personal donor enrolment card/medical history/health check.
2. Donor’s record of donations.
3. Donor clinic register.
4. Record of venues available for mobile sessions.
5. Donor session analysis form.
7. Regular donor panel register.
8. Register of donors with less common blood types.

Personal donor enrolment record
A personal donor enrolment record has four main components:

- personal details
- informed consent
- donor’s medical history
- record of the basic health check.

Where possible, all the relevant information should be recorded on one card. For simplicity, however, we shall look at each section separately.

Personal details
An example of the first part of the donor enrolment record, showing the donor’s personal details, is shown in Figure 10.

Let us examine this part of the donor enrolment record in detail in order to see why this information is important.

Surname and first names
The surname or family name of the donor is obviously essential, but it is also important to include the donor’s first and other names as well in order to distinguish between people with the same surnames or family names. Every society has large numbers of people with the same names, such as Singh, Lee or Smith.

Identity number
In some countries, every person has a national identity number. In such cases, it may be helpful to record this.

Sex
It is important to record the sex of the donor because of the biological differences between men and women, including desirable weight/height parameters, haemoglobin levels and blood volume, etc.
Date of birth
The date of birth should always be recorded rather than the donor’s age because, of course, the donor’s age will change each year.

Occupation
The occupation of most donors is not significant. However, donors who have certain kinds of jobs, such as sportsmen or pilots, should not be bled immediately before working. The donor’s occupation should therefore be recorded.

Address
Wherever possible, both the home and work addresses of the donor should be recorded, together with a telephone number where they can be contacted. This enables the service to contact the donor to request attendance at a clinic, whether on a routine or emergency basis, or to follow them up after donation, if necessary.

Race
Although not included in the example given in Figure 10, it may be important to record the donor’s race, particularly in countries where there are several different ethnic groups. The service may, for example, wish to take advantage of the differences in certain blood group frequencies when looking for a blood donor for a patient with an unusual antibody.

Informed consent
The second part of a donor enrolment record is the donor’s consent. An example of this part of the record is shown in Figure 11 on page 100.

Where the donor is registered with a doctor, the doctor’s name and address should be recorded in case of emergency or if information needs to be given through the doctor to the donor.

When this part of the donor enrolment form has been signed by the donor, it confirms that the donor clinic staff have fully explained the procedures involved in blood donation, including the clinical screening procedures,
Informed consent

The donation procedures and the tests carried out on my blood have been explained to me and I consent to this. I understand that I may be rejected as a blood donor if the results of any of these tests are positive.

Doctor ____________________________
Address ____________________________
Signed (donor) _______________________
Date ________________________________
Signed (witness) _____________________
Date ________________________________

the necessary laboratory tests and what the service will do if the donor has to be deferred temporarily or permanently.

The statement should be witnessed and signed by a member of the donor clinic staff.

Medical history

In Section 6, we looked at how to record the donor’s medical history. Look again at the example of a medical history questionnaire in Appendix 4. This provides important baseline information that is needed for future use in the clinical evaluation of the donor and should be kept with the donor’s enrolment card.

Basic health check

In Section 6, we stressed the need for baseline information about the donor’s health, including blood pressure, weight, height and haemoglobin levels. An example of a simple record of the basic health check is shown in Figure 7 on page 78. Look at this again now.

This information should be recorded at every donation so that the clinical significance of any changes can be assessed.

Donor’s record of donations

The donor enrolment record contains basic information that provides a permanent record of the donor’s personal details and health check. When a printed donor enrolment card is used rather than a computerized record, there may be room to record only a few donations. When the card is full, therefore, it is usual to create an additional card to record the donations by the donor. The record of donations card normally contains the donor’s personal details on one side, with space on the other side for recording donations. Record of donations cards are usually filed under the dates on which donors are due to give blood again, in alphabetical order. This makes it easier to know when donors need to be recalled. An example of a donor’s record of donations card is shown in Figure 12.
SIDE 1

RECORD OF DONATIONS

Name of donor: 

Contact addresses:

Home: 

Workplace: 

Blood group: 

I am aware of the tests done on my blood and hereby certify that, to the best of my knowledge, I have not engaged in risk behaviour as defined by the blood bank.

Signature of donor: 

SIDE 2

<table>
<thead>
<tr>
<th>Donation no.</th>
<th>Hb test</th>
<th>BP record</th>
<th>Date of bleed</th>
<th>Volume collected</th>
<th>Signature of donor to statement on Side 1</th>
<th>Signature of staff collecting blood</th>
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Figure 12: Example of a donor's record of donations
ACTIVITY 47

Compare the records that your service keeps with the various parts of a personal donor enrolment card and record of donations, as shown in Figures 7, 10, 11 and 12 and in Appendix 4. Are there any important differences?

Is there any additional information that you now feel should be included in your donor records? If there is, discuss this with your colleagues and supervisor and note down any recommendations on your Action List.

Donor clinic register

The donor clinic register is used to record further information about donors and about the blood they have donated. This serves as another permanent record of the donation, the venue of the blood collection session and the laboratory results. An example is given in Figure 13.

A blood collection pack should be identified by a number, an alphanumeric symbol or another code and not by the name of the donor. This is because the anonymity of the donor to the patient must always be maintained.

ACTIVITY 48

Compare the donor clinic register kept in your centre with the example shown in Figure 13.

Is there any additional information that you feel should be included in your records? If there is, discuss this with your colleagues and supervisor and note down your recommendations on the Action List.

Record of venues available for mobile sessions

As we saw in Section 5, it is useful to keep a record of venues used for mobile sessions, which contains details of people to be contacted, the special features of the venue and the number of donations collected on previous visits. The simplest way of recording this information is to use individual cards for each venue and to file them in alphabetical order. Look back at the example shown in Figure 3 on page 55.

Donor session analysis form

In Section 5, you looked at an example of a donor session analysis form that provides a record of the number of new and repeat donors attending donor clinic sessions, including the number that are accepted and the number that are deferred, either temporarily or permanently. It also includes sections for evaluating the suitability of the venue and the number of staff available. This serves a purpose in helping to monitor the effectiveness of the donor education, motivation and recruitment
# DONOR CLINIC REGISTER

<table>
<thead>
<tr>
<th>Name of donor</th>
<th>Donation number</th>
<th>Sex (M/F)</th>
<th>Race</th>
<th>Pack type</th>
<th>Previous donations (total)</th>
<th>Previous results</th>
<th>Checked results</th>
<th>Comments</th>
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</table>

Signature:

## Key to Figure 13

- **Date**: Date of session
- **Clinic staff**: Names of all staff attending the clinic, including the head of the team
- **Venue**: Location of the donor session
- **Name of donor**: Name of donor, including initials
- **Donation number**: A number or alphanumeric code allocated to the particular donation, which should not be used again for at least one year
- **Sex**: Male or female
- **Race**: To be included where there are different ethnic groups in the donor population
- **Pack type**: Blood pack used: e.g. single, dry, double, triple, quadruple
- **Previous donations (total)**: Number of donations previously given by this particular donor
- **Previous results**: ABO and Rh results from previous tests
- **Checked results**: ABO and Rh results from tests on this donation
- **Comments**: Any additional comments by donor clinic staff
- **Signature**: Signature of person completing the donor clinic register

*Figure 13: Example of a donor clinic register*
campaign, the cost-effectiveness of particular venues for donor clinics and the workload and efficiency of donor clinic staff. Look back at the example of a donor session analysis form in Figure 6 on page 66.

**Donor screening report**
As we saw in Section 6, a donor screening report that is used in conjunction with the donor session analysis form can be useful in monitoring the effectiveness of the donor selection programme. An example of a donor screening report was shown in Figure 8. Turn back to page 82 and look at it again.

**Confidentiality**
As we saw in Section 7, confidentiality of all donor records must always be maintained. Sections 2 and 4 of the Introductory Module outline ways of keeping records confidential. Look back at these sections now.

### 8.2 USING DONOR RECORDS
Accurate donor records benefit both the donors and the recipients of their blood and also contribute to the efficient operation of the blood collection programme. They are particularly important in developing a panel of regular, voluntary non-remunerated donors.

**Developing a panel of regular donors**
The personal donor enrolment record and record of donations can be used to do much more than simply record the donations made. They show the date of the donor’s last donation and therefore indicate when they should be recalled. Donors who have given blood more than three times and donate regularly, at least once a year, are regarded as regular donors.

Throughout this module we have stressed the importance of building a panel of regular donors because:

1. They are screened regularly and understand the importance of health and risk behaviour factors.
2. They have experience in giving blood and therefore can be dealt with more quickly in the clinic.
3. They are dependable and are usually willing to give blood in an emergency, as well as on a regular basis.
4. They provide the basic source of safe blood.

These donors are very valuable to the service and so it is important to compile a register of regular donors. A simple example of a regular donor panel register is shown in Figure 14. Note that a separate record should be kept for each blood group so that it will be easy to identify appropriate donors when particular blood groups are required.

It is important to try to ensure that the regular donor panel includes donors with different blood groups in approximately the same proportions as those of the blood groups in your total population.
Criteria for donors admitted as regular donors

A donor who meets the following criteria can be registered as a regular donor:

1. Has agreed to donate blood regularly: that is, at least twice a year and up to four times a year for men and three times a year for women.
2. Has donated blood in the last year, when called upon to do so.
3. Has not posed any problems during blood donation, such as fainting or having poor veins.
4. Is in a generally healthy state.
5. Can be easily contacted by the blood bank and can reach the blood bank without difficulty.

Using the regular donor panel register

The regular donor panel register can only be created from the records of donations. The register provides the blood bank with a list of regular donors. Each entry in the register includes the donor's name, contact addresses, telephone numbers, registration number, date of registration, and date removed. The register helps the blood bank keep track of regular donors and ensure a steady supply of blood.
dependable donors in each blood group. When donors with particular blood groups are needed, this list can be used in conjunction with the donors’ record of donations cards to ensure that only donors who are due to give blood again are called.

**ACTIVITY 49**

Is a regular donor panel register kept in your centre? If it is, compare it with the example shown in Figure 14. Can you suggest any additions or improvements that could be made to your register? If so, discuss your recommendations with your colleagues and supervisor and note them down on your Action List.

If a regular donor panel register is not kept in your centre, talk to your colleagues and supervisor about introducing one to assist in recalling donors. Note down on your Action List your recommendations on what it should contain.

**Developing a panel of donors with less common blood types**

It is important to maintain a record of donors with less common blood types so that if the need arises for a particular blood group, a suitable donor can be contacted quickly and easily. Rare blood types vary in different populations and each blood transfusion centre needs to identify which blood groups fall into this category. In some populations, for example, these may include O Rh negative, B Rh negative and AB Rh negative. Only people with less common blood types who are willing to be regular donors should be included on the rare donor panel.

The record of donations cards of donors with less common blood types should be filed under the specific blood type, in alphabetical order. Alternatively, the information can be recorded as shown in Figure 15 below.

<table>
<thead>
<tr>
<th>BLOOD TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of donor</td>
</tr>
<tr>
<td>Contact addresses</td>
</tr>
<tr>
<td>Telephone numbers</td>
</tr>
<tr>
<td>Date of last donation</td>
</tr>
</tbody>
</table>

*Figure 15: Example of a register of donors with less common blood types*
ACTIVITY 50

Find out from the national blood transfusion service about the proportions of different blood groups in the population in your country.

Examine your donor records and work out the proportions of different blood groups among the donations collected in your centre. How does this compare with the proportion of different blood groups in the population as a whole?

Classify each blood group amongst the donations received over the last six months according to whether there has been:

- an excess
- an adequate number
- a shortage.

Turn back to Activity 11 on pages 32–33 and decide whether the information you have now collected affects your estimates of blood requirements. How do you think you could increase the number of regular donors with less common blood types? Note down your recommendations on your Action List.

Does your system for recording donors with less common blood types enable you to identify and contact them easily? If you can suggest any improvements to your system, note them down on your Action List.

If you do not keep a record of donors with less common blood types, develop a simple system and discuss it with your colleagues and supervisor. Note down your ideas on your Action List.

Record of temporary donor deferrals

It may also be useful to keep a record of donors temporarily deferred by each donor clinic team, filed under the dates when they can be accepted again. This will help the clinic to contact the donors when it is safe for them to give blood again.

8.3 OTHER USES OF DONOR RECORDS

Keeping accurate donor records brings additional benefits to a blood transfusion service, particularly in relation to:

- donor incentives and rewards
- statistics
- the recipients of donated blood.

Donor incentives and awards

The record of donations is important in assessing which donors are due to receive incentives or awards given as a token of recognition and
appreciation by the transfusion service for the number of donations that they have given. Without accurate donor records, it is not possible to identify how many donations a particular donor has given and when an award should be made. As we shall see in Section 9, although incentives and awards should have no commercial value, they are usually appreciated by donors because they provide evidence of their humanitarian contribution to the health of the community. Donation awards to institutions such as colleges and factories that regularly host blood donation sessions should also be considered.

Statistics
Statistics provide a vital source of information for the service. They are the most accurate means of evaluating the effectiveness of donor education, recruitment and selection policies and in establishing a regular donor panel. The following statistics are particularly useful:

1. The number of donors who donate blood only once compared with the number of repeat and regular donors. This information can then be further broken down to show the cost-effectiveness of clinic sessions in different locations, different kinds of venue, different parts of the country and so on.

2. An analysis of laboratory results. From this information, transfusion-transmissible infections can be analysed in relation to the venues used for blood collection, the age groups and sex of donors, and so on. It should then be possible to identify the safest sources of donors.

3. The cost-effectiveness of arranging bleeds in different venues. It may not be worth continuing to go to venues where there is a high incidence of transfusion-transmissible infections or there is a particularly high proportion of the most common blood groups of which there are always adequate stocks in the blood bank.

4. An analysis of clinic consumables used, such as blood bags or donor refreshments, and the adequacy of staffing levels in relation to the number of donors.

5. The epidemiology of transfusion-transmissible infections in the donor population. The transfusion service can play a vital role in contributing to the health information system of the country.

Statistical information is vital for the effective functioning of any organization. If it is to be useful, however, it must be accurate and easily accessible. It is important to think carefully about which statistics are worth collecting and how to design information-gathering systems that are easy to use.

Recipients of donated blood
Donor records are very important in relation to the recipients of donated blood, for the following reasons:
1. If a patient with an unusual blood group antibody requires a transfusion of blood urgently and no supplies are in stock, accurate donor records will assist in identifying a donor whose blood lacks the corresponding antigen and is therefore compatible. The donor can then be contacted and asked to give blood on an emergency basis.

2. A donor may be in the ‘window period’ at the time of donation and test seropositive at the next donation. It is essential to be able to contact the doctor of the patient who received the blood from the earlier donation so that the necessary follow-up can be made.

3. If a patient claims to have been infected as a result of a blood transfusion, any donor whose blood has been used can be contacted and recalled for retesting in order to identify the source of infection.

**ACTIVITY 51**

Study the donor records kept in your centre. Make a list of the kinds of information that you could extract from these records if you were asked to prepare an annual report on your service’s donor clinics.

Compare this list with the areas of information that we have considered in this section. Are there any areas in which you would not be able to provide accurate information? Are there any areas in which you feel you need more information to help you plan how to organize blood collection in the future?

If so, make a note of what these areas are and think carefully about how you could improve the record-keeping system in your centre. Discuss your ideas with your supervisor and note your recommendations on your Action List.

**SUMMARY**

1. Accurate records of individual donors are required in order to develop a panel of regular, voluntary non-remunerated blood donors and donors with less common blood types.

2. The confidentiality of donor records must be maintained at all times.

3. Donor records are essential for monitoring the effectiveness of the blood collection programme, enabling regular donors to be identified and rewarded, providing statistical information and safeguarding the recipients of donated blood.
SELF-ASSESSMENT

16 List three kinds of records that are important in maintaining a safe and adequate supply of blood.

17 Why is it important to keep a register of donors with less common blood types?

PROGRESS CHECK

Before moving on to Section 9, spend a few minutes thinking about whether you have achieved the learning objectives for Section 8. These were to:

1 Maintain an efficient record-keeping system to assist in the development of a panel of regular, voluntary non-remunerated blood donors.

2 Identify information from records which can be used for reporting purposes.

If you feel confident that you have understood everything in this section, turn to Section 9.

If you feel that you need to spend more time on this section, go back to the parts that are most unfamiliar or that you find difficult. You may find it helpful to talk to other people, such as your supporter or other senior colleagues, about anything you are still not sure about.
Donor Retention and Recall

The purpose of this section is to help you to develop an effective system of donor retention and recall in order to maintain a panel of voluntary non-remunerated donors who give blood regularly.

**LEARNING OBJECTIVES**

When you have completed this section, you should be able to:

1. Use donor records to maintain an effective system of donor follow-up and recall.

2. Develop an appropriate public relations programme to improve donor retention.
9.1 ESSENTIALS OF DONOR RETENTION AND RECALL

We have repeatedly emphasized the importance of building up a panel of low-risk blood donors in order to ensure an adequate supply of safe blood. As you have seen, donors should ideally be:

- voluntary
- non-remunerated
- willing to donate blood regularly.

In Section 4, you explored ways of increasing the number of voluntary non-remunerated donors. How can you increase the number who give blood regularly? As you have probably recognized, almost everything that we have considered in this module contributes to the retention of low-risk donors, as follows.

1. Identifying low-risk donor populations, encouraging replacement donors to become regular, voluntary non-remunerated donors and promoting the self-exclusion or self-deferral of unsuitable donors (see Section 2).

2. Developing an effective donor education, motivation and recruitment campaign to encourage people to give blood regularly for the benefit of the community (see Section 4).

3. Ensuring the efficient organization of blood collection sessions in fixed and mobile donor clinics (see Section 5).

4. Maintaining a professional and efficient approach to donor screening and selection to ensure the safety of donors and the recipients of donated blood (see Section 6).

5. Providing high standards of care for donors to encourage them to donate on a regular basis (see Section 7).

6. Maintaining strict confidentiality at all times so that donors trust the service and the people who work in it (see Section 7).

7. Providing appropriate follow-up of donors, showing appreciation of their special contribution to health care in the community (see Section 7).

8. Maintaining accurate and comprehensive donor records to enable the service to follow-up and recall donors (see Sections 8 and 9).

9. Following-up lapsed donors to find out why they have not returned and taking any action necessary to encourage them to return (see Section 9).

9.2 BLOOD DONOR RECORDS

If donor recall and retention are to be effective, there is a need for meticulous donor record-keeping. Blood donor records were discussed in detail in Section 8 so here we shall simply consider the specific information you require if you are to recall a donor for future donations.
The most important records are the donor enrolment card and record of donations. For the purposes of donor retention and recall, the important parts of them are:

- personal details, including the donor’s name, work and home addresses and, if possible, telephone numbers, so that they can be contacted for follow-up or recall
- records of the donor’s medical history
- records of the assessments made during the health checks at previous donations.

The last two items are important because they will indicate whether a donor should be followed up, recalled to give future donations or requested not to donate again.

Probably the simplest way of recording – and retrieving – information about donors is to use a card system in which individual donor cards are filed under the dates when they are due to donate blood again, in alphabetical order. It should then be easy to locate the records of all the donors who are due to attend on the same day and to contact them with details of the date and time of the donor session. In cases of emergency, when blood stocks are low or there is an unexpected need for additional blood, the donors who are due to return shortly can be contacted and asked to attend. If the cards of donors with less common blood types are filed under their blood group or in a register, it should also be possible to identify them easily when the need arises for that group.

When developing a donor record system, remember that the number of donors will increase if your centre’s donor education, motivation and recruitment activities are successful. The record system should therefore be designed to accommodate an increase in the size of the donor panel.

As with all records, it is essential that donor records should be accurate and kept up to date. It is the responsibility of the senior nurse or donor recruitment organizer to ensure that this is done. Remember that blood donor records are strictly confidential and that no unauthorized person should have access to them.

In Section 5, we considered how to recall donors for fixed and mobile blood collection sessions. While it is always preferable to contact donors individually, the date, location and time of a donor clinic should be publicly advertised.

**Activity 52**

What type of donor recall system is used in your centre? How easy is it to identify and contact donors who are due to donate blood again?

Talk to other donor clinic staff about any ways in which this system could be improved. Note down your recommendations on your Action List.
9.3 POSTDONATION FOLLOW-UP

Section 7 considered how to care for donors in a way that will encourage them to return regularly. Always remember the importance of:

1. A professional and pleasant reception for the donor.
2. An awareness of the donor’s needs for reassurance.
3. The maintenance of confidentiality.
4. Appropriate predonation and postdonation counselling and, if necessary, follow-up.
5. Skilled venepuncture.
6. Appropriate postdonation care.
7. Appreciation of the donor’s willingness to give blood.

All aspects of donor care play an important part in donor retention. Unpaid voluntary blood donors will only return if they receive a favourable impression of the service and feel needed, important and appreciated.

The follow-up of blood donors is also an important aspect of donor care. While some donors may need to be informed about their health status, it is rarely possible to routinely follow up all donors on an individual basis. Nevertheless, where it is appropriate and feasible, sensitive follow-up will help to demonstrate the service’s appreciation of its donors.

Medical follow-up

The medical follow-up of donors may be necessary if they are deferred on medical grounds or because laboratory tests show that they are carrying a transfusion-transmissible infection.

Medical grounds

There are many reasons why donors may be temporarily or permanently deferred on medical grounds; for example, they may be on medication such as antibiotics or suffer from anaemia or heart disease. If the deferral is temporary, it is important to indicate when they may return to give blood and, if possible, to make an appointment for them to return after an appropriate period of time. Appendix 7, Guide to Medical Assessment of Blood Donors, indicates the length of time for which donors suffering from various conditions should be deferred.

Wherever possible, the donor recruitment organizer or donor clinic staff should try to find time to follow up these donors and ensure that they have understood any advice given and are receiving proper medical attention, if required. If they have been deferred temporarily, they should be contacted when they are eligible to donate blood again in order to remind them to attend the donor clinic where their health condition will be reassessed.

Transfusion-transmissible infections

As we saw in Section 7.6, it may be necessary to follow up a donor if the laboratory tests on the donated blood show evidence of markers for a transfusion-transmissible infection, such as HIV or hepatitis B.
In the case of HIV infection, it is essential to develop a policy on how to inform donors that they are HIV-positive and to ensure that all staff follow the policy. Wherever possible, the donor should be told the results on a face-to-face basis. The person responsible for this should be well trained in counselling skills and should always refer the donor to other sources of advice and support, such as a counselling service or their own doctor.

It is more difficult to maintain confidentiality if a donor is informed of the results by post because other people may see the letter. A donor who is illiterate, for example, would have to ask someone else to read the letter. It is also difficult to check whether the donor has clearly understood the information because there will be no feedback and there is less opportunity to provide advice on referral.

**Lapsed donors**

Inevitably, some donors will not return to give more blood. Since they have been sufficiently motivated in the past to donate blood, it is important to know why they have failed to attend again. In some cases, there may be a simple reason; for example:

- they may have been temporarily deferred and have forgotten that they are due to donate blood: they therefore need to be contacted to remind them that they are now eligible to donate blood again
- they may not have known about mobile blood donor sessions held in their area and may simply need information about when and where they will be held in the future.

Some donors will have to be classified as *lapsed donors* – donors who, after making one or more donations, do not return despite being requested to do so. Donors may lapse for a variety of reasons, some of which may be beyond the control of the transfusion service or blood bank. However, it is important to know why they have not returned so that appropriate action can be taken, if necessary; for example:

- they may have decided not to return because they recognize that they are at risk of transmitting an infectious agent
- they may have moved to another area or have become ill: their records therefore need to be brought up to date
- they may have had an unpleasant experience the last time they donated blood: they may be willing to return if they are reassured that action has been taken to ensure that this will not happen again
- they may have heard inaccurate rumours that it is possible to become infected with HIV by giving blood: the education campaign would therefore need to focus even more strongly on giving the public accurate information about the safety of blood donation.

Information of this kind is essential if the service is to monitor the performance of its donor clinic and promotions staff. It is clearly wasteful of time and resources to continue recalling donors who are unwilling to give blood again, and so a simple and practical system is needed to
identify lapsed donors and to follow them up to find out why they have dropped out. All contacts with donors should therefore be recorded so that it is possible to classify those who have truly lapsed.

**Activity 53**

What action is taken in your service to follow up lapsed donors? What are the most common reasons why donors do not continue to give blood?

Talk to your colleagues about any ways in which the system for following up donors could be improved. Also discuss whether there are any actions that could be taken to reduce the number of lapsed donors. Add your recommendations to your Action List.

### 9.4 Public Relations

Public relations activities are an important form of follow-up which help to strengthen the bond between the service and donors by reinforcing donors’ awareness of how important they are and how their continuing support is needed. Ideally, individual written notes of appreciation would be sent to every donor following donation. Most services do not have the time or money to do this, but there are a number of public relations activities that you could undertake to maintain donors’ motivation and encourage them to become regular donors.

1. Inform donors of their blood group. Most donors want to know this and it can also be a useful recruitment exercise because their family and friends may also want to find out what their own blood group is.

2. Provide donors with a record of their donations. At the time of the first donation, give the donor a small record card or booklet that shows the donor’s name, address and ABO and RhD type. At each subsequent donation, a further record can be added.

3. Provide small tokens of appreciation for achieving certain numbers of donations. Donors usually enjoy receiving them, particularly if they are given with as much publicity as possible. Such tokens should be inexpensive and of no commercial value, but something that donors will value. Some services, for example, give badges or certificates or, if they consent, include donors’ names in public notices of thanks.

The decision about what awards to give will depend on their availability, the costs involved and the extent to which they would be appreciated by donors. Many centres give small awards after the following donations:
DONOR RETENTION AND RECALL

- 3rd donation
- 5th donation
- 10th donation
- 25th donation
- 50th donation
- 75th donation
- 100th donation
- 100+ donation

Notice that the awards tend to be given more frequently up to the tenth donation. This is because it is more difficult to motivate new donors to continue than those who have been donors for many years. Remember, though, that awards must never have any commercial value as this might undermine the concept of voluntary non-remunerated blood donation.

4 Use the press, radio and television to promote the blood collection programme and express appreciation of donors who have given blood, while reminding them of the need for regular donations.

5 Arrange for donors to visit the service so that they can see how the blood is tested, processed and stored. Ensure that there is time for discussion so that they can ask questions and express any concerns they may have about blood donation or transfusion.

6 Encourage donors to recruit other donors, using every opportunity to provide them with up-to-date information so that they can keep abreast of changes. Make sure that supplies of leaflets on such subjects as HIV infection and AIDS are available for donors to read while they are waiting to donate blood or are resting afterwards. Encourage them to take the literature away with them and to show it to other people.

ACTIVITY 54

What public relations activities does your centre use to follow up donors in order to show your appreciation and motivate them to continue giving blood?

Think about any additional activities that it might be possible for your service to introduce, such as inexpensive tokens for regular donors as a mark of appreciation.

Note down your ideas on your Action List and discuss them with your colleagues and supervisor.
SUMMARY

1. Effective systems for donor retention and recall are essential in building up a panel of regular, voluntary non-remunerated blood donors.

2. A system for postdonation follow-up and care needs to be established to encourage donors to remain on the regular donor panel.

3. Efforts should be made to contact lapsed donors to identify whether they have been discouraged by any deficiencies in the service.

4. Public relations activities are an important means of showing appreciation of donors and motivating them to give blood regularly.

SELF-ASSESSMENT

18. What are the three parts of a donor’s records that are required in order to recall the donor?

PROGRESS CHECK

Before moving on to Section 10, spend a few minutes thinking about whether you have achieved the learning objectives for Section 9. These were to:

1. Use donor records to maintain an effective system of donor follow-up and recall.

2. Develop an appropriate public relations programme to improve donor retention.

If you feel confident that you have understood everything in this section, turn to Section 10.

If you feel that you need to spend more time on this section, go back to the parts that are most unfamiliar or that you find difficult. You may find it helpful to talk to other people, such as your supporter or other senior colleagues, about anything you are still not sure about.
This final section focuses on the Action List you have been building up as you have worked through this module. You have probably identified a number of improvements that you think could be made in your blood collection programme and it is now time to identify priorities and begin putting your ideas into action.

**LEARNING OBJECTIVES**

When you have completed this section, you should be able to:

1. Reassess your knowledge and skills in relation to the module objectives now that you have completed Module 1.
2. Review your Action List, identifying improvements that you can implement and those that will require action by others.
3. Prepare and implement a realistic Action Plan to introduce changes that will improve the quality of your blood collection programme.
10.1 REVIEWING YOUR PROGRESS

Before you start making your Action Plan, think carefully about the module objectives and the progress you have made since you started working through this module.

ACTIVITY 55

Complete the table below. You will notice that it is the same as the one you filled in for Activity 2. Use it to review the knowledge you have gained and the skills you have developed as a result of your work on this module. Have you changed your rating in relation to each module objective?

You should have made some identifiable progress in each area covered by this module. If there is anything you still do not feel confident about, however, re-read the appropriate section and then discuss any remaining problems with your supporter or trainer before continuing with your Action Plan.

<table>
<thead>
<tr>
<th>Module objective</th>
<th>Rating (1–4)</th>
<th>Comments</th>
</tr>
</thead>
</table>
| **Section 2**
Identify low-risk donor populations and explain the importance of encouraging potentially unsafe donors to self-exclude. |              |          |
| **Section 3**
Estimate the number of donors needed to meet the blood requirements of your locality. |              |          |
| **Section 4**
Develop an effective education, motivation and recruitment campaign to increase the number of voluntary non-remunerated donors. |              |          |
| **Section 5**
Plan and organize fixed and mobile donor clinic sessions. |              |          |
| **Section 6**
Develop and maintain effective donor selection procedures. |              |          |
| **Section 7**
Provide a high standard of care for donors before, during and after donation. |              |          |
| **Section 8**
Maintain an efficient donor record-keeping system. |              |          |
| **Section 9**
Develop an effective system for retaining regular voluntary non-remunerated donors. |              |          |
10.2 MAKING YOUR ACTION PLAN

The Action Plan provides you with an opportunity to make practical improvements in your own workplace, within any financial, resource or staffing constraints that exist. As you worked through this module, you have been noting down your ideas on the Action List on page 122. You should have listed the number of the activity in Column 1 and noted your ideas for improvement in Column 2. You should also have discussed your ideas with your supporter.

You may have tried out some of your ideas already, but some may require more time and effort and so it is important to identify priorities. You may not be in a position to put all your ideas into action yourself and it may be necessary to convince other members of staff to take the actions that you have identified as being both necessary and feasible.

**ACTIVITY 56**

Look carefully at all the suggestions for improvements that you have written down on your Action List. Mark those where you have not yet been able to take any action. Then divide them into two categories:

1. **Actions that you can take.** Choose those that you think are most important and put them in order of priority. Note them down in Column 1 of the Action Plan on page 123. In Column 2, briefly summarize the action that you plan to take. In Column 3, note down the results that you would expect after taking this action.

2. **Actions that others could take.** Note them down in Column 1 of the Action Plan on page 123. In Column 2, write down the name of the person who would be responsible for making the changes that you are recommending and, in Column 3, summarize the results that you would expect.

Then show your plan to your supervisor and supporter and discuss it with them. Your ideas for improvement may need to be modified as a result of these discussions. Other senior staff may also need to be consulted before your Action Plan can be agreed. You should also discuss it with your trainer at this stage.

When you have reached agreement about the actions you are going to take, set a date by which you hope to complete each of them and note this in Column 4. Also use Column 4 to set a date by which you expect the completion of any actions taken by others.

Your Action Plan is now ready.

10.3 IMPLEMENTING YOUR ACTION PLAN

You should now begin to implement your Action Plan along the lines agreed with your supervisor and supporter. It will probably take you
## ACTION LIST

<table>
<thead>
<tr>
<th>Activity number</th>
<th>Ideas for improvement</th>
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<tbody>
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several weeks or months to put your all plans into action and you may need more time than you expected. In fact, you will probably start the next module in the programme before you are able to complete everything. You may also find that some of your ideas for improvement are more difficult to put into action than you expected and you may need to revise some of your plans if they are too ambitious or are not working as well as you hoped. However, if you have thought carefully about how you could apply what you have learned from this module and have discussed your ideas with the appropriate people, you should be able to put most of them into practice. You may even find that there are some unexpected benefits. If you have any problems during this time, talk to your supporter or supervisor and ask them for any assistance you need. You should also give them regular reports on your progress.

**ACTIVITY 57**

Once you have completed each action you included in your Action Plan, note down the date in Column 5 and the final results in Column 6. Then review the implementation of your Action Plan by comparing the actual results with the results that you expected. Also compare the planned completion dates with the actual completion dates. Discuss the outcomes with your supporter and supervisor.

Identify any further actions required to ensure the implementation of the improvements you have identified as being necessary.

Over the next few months, monitor the effectiveness of any changes you have been able to introduce and be prepared to make any further changes or take any follow-up action needed to ensure that they continue to lead to improved quality in your programme.

As you work through the remainder of the learning programme, you will be asked to complete an Action List and Action Plan for each module. This approach can be applied to almost any situation and you may decide to use it in other areas of your work to improve the quality of the service that you provide.

**PROGRESS CHECK**

Now that you have completed this module, spend some time thinking about whether you have achieved the learning objectives for this section. These were to:

1. Reassess your knowledge and skills in relation to the module objectives now that you have completed Module 1.
2. Review your Action List, identifying improvements that you can implement and those that will require action by others.
3. Prepare and implement a realistic Action Plan to introduce changes that will improve the quality of your blood collection programme.
Activity Checklists and Answers

SECTION 1

Activity 1

Purpose
To identify a personal ‘supporter’ for your work on Module 1.

Checklist
You should have:

- Identified senior colleagues in your workplace who can provide assistance to you as you work through this module
- Selected one particular person, ideally your supervisor, to be your supporter and checked that he or she is willing to assist you
- Explained how the learning programme operates and what the role of the supporter involves
- Agreed how frequently you will meet to discuss your work on this module
- Showed Module 1 to your supporter
- Informed your trainer about who your supporter is
- Asked your trainer for assistance if you had any difficulty in finding a supporter in your workplace.

Activity 2

Purpose
To assess your knowledge, skills and experience in relation to the module objectives before you start work on Module 1.
Checklist
You should have:

- Looked carefully at the module objectives and, for each one, assessed your current knowledge, skills and experience, using the rating 1, 2, 3 or 4
- Completed the table on page 8
- Added any further comments you wish to make, such as any module objectives that relate to areas of work that you do not undertake.

Activity 3

Purpose
To make a realistic Study Plan for your work on Module 1.

Checklist
You should have:

- Quickly looked at other sections of the module to get an idea of its content, level and approach and assessed how much of the material is likely to be new to you
- Estimated how much time you will need to study each section, including completing the activities and answering the self-assessment questions
- Discussed with your supervisor how much time can be allocated for study on a regular basis
- Completed the Study Plan on page 9, adding the dates by which you plan to complete each section and the dates of meetings with your trainer and supporter.

SECTION 2

Activity 4

Purpose
To review the types of blood donor recruited by your transfusion centre or blood bank.

Checklist
You should have:

- Studied the records in your transfusion centre or blood bank to identify the number of family or family replacement donors, commercial donors and voluntary non-remunerated donors who attended in the past six months
- Noted the number of each type of donor on the table on page 15
Calculated or estimated the percentage of each type of donor in relation to the total number of donors and added this to the table

Found out the national policy on recruiting family or family replacement donors and commercial donors

Found out the proportion of different types of donor in your country as a whole.

**Activity 5**

**Purpose**

To identify the most common forms of risk behaviour in your locality and country.

**Checklist**

You should have:

- Identified the forms of risk behaviour in your locality that:
  - are common
  - sometimes occur
  - are rare

- Completed the table on page 19

-Consulted colleagues, records, your local health education officer or Ministry of Health to identify the patterns of risk behaviour in the rest of your country and compared them with your local situation.

**Activity 6**

**Purpose**

To identify the HIV seroprevalence among different age groups in your donor population.

**Checklist**

You should have:

- Selected three places in which blood has been collected in the last year

- For each location:
  - found out the total number of donors in each age group: under 20, 20–45 and over 45
  - found out the total number of donors in each age group who were found to be HIV-positive by laboratory tests on their blood
  - calculated the percentage of HIV-positive donors in each age group at each location
- Identified the age groups that have the highest HIV seroprevalence in your locality
- Obtained epidemiological data on transfusion-transmissible infections in your country from the Ministry of Health
- Compared these data with your data on your own locality
- Noted your observations and conclusions about identifying safer donor groups in your locality
- Suggested any further data that your service should routinely collect in order to identify potentially safe sources of blood and noted your ideas on your Action List.

**Activity 7**

**Purpose**
To identify the proportion of regular donors contributing to your blood collection programme.

**Checklist**
You should have:
- Found out the number of regular donors who gave blood during the past year
- Calculated or estimated the percentage of regular donors in relation to the total number of donors
- Commented on whether sufficient numbers of regular donors attend your donor clinic to ensure a safe and adequate supply of blood.

**Activity 8**

**Purpose**
To review the procedures used in your centre to encourage self-exclusion, self-deferral and confidential unit exclusion.

**Checklist**
You should have:
- Noted down the procedures used in your centre to encourage self-exclusion, self-deferral and confidential unit exclusion, where appropriate
- Suggested any ways in which unsuitable donors could be further encouraged not to give blood, and noted your ideas on your Action List.
SECTION 3

Activity 9

Purpose
To identify the main geographical features of the area served by your blood transfusion service or blood bank, including the blood collection and distribution points.

Checklist
You should have:

- Obtained or drawn a map of your locality and marked on it:
  - your transfusion centre or hospital and the boundary of the area that it serves
  - the sites from which blood has been collected in the past three years
  - areas of relatively high population density from which blood has not been collected
  - the hospitals and health centres to which blood has been supplied in the past three years.

Activity 10

Purpose
To identify the total number of acute hospital beds in your locality.

Checklist
You should have:

- Noted down the number of acute hospital beds at each site to which blood is supplied by your blood bank
- Noted down the total number of acute hospital beds in your locality.

Activity 11

Purpose
To review the procedures used in your blood bank to estimate blood requirements.

Checklist
You should have:

- Found out the blood requirements of the hospitals served by your blood bank during the past year
ACTIVITY CHECKLISTS AND ANSWERS

- Found out how many units of blood were collected during the past year
- Noted whether your blood bank was able to supply all the blood required during the past year
- Noted on your Action List any information that you found difficult to obtain and discussed it with your supervisor
- Noted the method used in your centre to estimate blood requirements and commented on how accurate it is
- Selected a method to estimate total blood requirements for the current year and compared it with the figure calculated by your centre
- Used a second method to check your result and commented on any differences in the answers
- Noted down on your Action List your recommendations on any ways of improving the method used to calculate your centre’s blood requirements, and discussed them with your supervisor.

SECTION 4

Activity 12

Purpose
To assess the information that people need before deciding to become blood donors.

Checklist
You should have:

- Talked to at least 10 people who are potential blood donors
- Made a list of all the questions that these people asked about blood donation
- Identified the questions that were most commonly asked
- Added to the list any additional questions suggested by your colleagues.

Activity 13

Purpose
To review staff and volunteer involvement in your donor education, motivation and recruitment programme and to identify any training needs.

Checklist
You should have:
Noted who is responsible for organizing your donor education, motivation and recruitment programme

Noted the other staff involved in donor education, motivation and recruitment

Listed all other organizations and individuals, including volunteers, who take part in donor education, motivation and recruitment

Noted the training provided for staff and volunteers

Identified any further training required and noted down on your Action List any ways in which training could be improved.

**Activity 14**

**Purpose**
To identify the educational materials and equipment available for use in your donor education, motivation and recruitment programme.

**Checklist**
You should have:

- Listed all the materials and equipment available
- Identified any suitable materials produced by other organizations
- Obtained copies of suitable educational materials.

**Activity 15**

**Purpose**
To consider ways of increasing financial support for your donor education, motivation and recruitment programme.

**Checklist**
You should have:

- Found out the cost of your donor education, motivation and recruitment programme in the past financial year
- Identified sources of financial support from the community during the past year
- Suggested ways of increasing the level of financial support from the community and noted your ideas on your Action List.

**Activity 16**

**Purpose**
To increase your effectiveness in public speaking.
Checklist
You should have:

- Noted the number of public talks that you and your colleagues give each month
- Identified any additional places that would be suitable for giving a talk
- Used the guidelines on page 44 to prepare for your next talk and to assess its effectiveness
- Identified any ways in which you could improve your performance as a public speaker and noted down your ideas on your Action List.

Activity 17

Purpose
To review the effectiveness of the educational materials used in your donor education, motivation and recruitment programme.

Checklist
You should have:

- Shown the educational materials used in your programme to colleagues and potential donors and asked them to rate each publication on a scale of 1–5 according to whether they are:
  - relevant and informative
  - interesting
  - easy to understand
- Calculated the average score in each category for each publication
- Written these average scores in the table on page 46 and calculated the total score for each publication
- Assessed how effective each publication is likely to be in informing and motivating the public to become blood donors
- Talked to your supervisor or supporter if you feel there is a need to develop new materials or adapt existing materials and, on your Action List, noted down your ideas on how this might be achieved
- Identified any local sources of assistance in developing materials.

Activity 18

Purpose
To review the communication methods used in your donor education, motivation and recruitment programme.
Checklist
You should have:

- Noted all the communication methods used by your centre and assessed their effectiveness
- Suggested ways of increasing the effectiveness of these communication methods
- Identified any additional methods that could be used to reach more potential donors
- Identified the assistance and support that you may be able to obtain from other organizations and individual volunteers
- Identified any further training needs in relation to communication methods
- Identified the resources that would be required to expand the range of communication methods used
- Discussed your ideas with your colleagues and noted down your recommendations on your Action List.

ACTIVITY 19

Purpose
To assess the effectiveness of your donor education, motivation and recruitment programme.

Checklist
You should have:

- Used your records to identify the current situation in relation to:
  - the number of communities involved in giving blood
  - the total number of voluntary non-remunerated donors
  - the number of donors who return to give blood a second or subsequent time
  - the average number of donations per person per year
  - the number of donors who have to be permanently excluded because of evidence of transfusion-transmissible infections
- Recorded the number in the column ‘Number at present’
- Set dates on which you will review the situation and noted them on your Action List
- On the planned dates, identified whether there have been any significant changes in relation to these indicators.
Activity 20

Purpose
To identify factors that may affect the success of a donor clinic session.

Checklist
You should have:

- Listed all the locations where mobile donor clinics have been held in the past year and noted the number of units of blood collected at each session
- Identified the sites that appear to have been the most successful in terms of the amount of blood collected
- Noted any mobile donor sessions that resulted in a larger number of donations than at your fixed clinic
- Suggested any reasons for variations in the amount of blood collected at different locations
- Identified any particular factors that may have influenced the amount of blood collected at different locations or at different sessions at the same location.

Activity 21

Purpose
To assess the most effective locations for mobile donor clinics.

Checklist
You should have:

- Reviewed the list you made in Activity 20 and identified the locations to which it is worth returning in the future for further mobile sessions
- Developed a record of suitable venues available for mobile sessions.

Activity 22

Purpose
To select a suitable new location for a mobile donor session.

Checklist
You should have:

- Used the map you produced in Activity 9 to identify a suitable location for holding a mobile donor clinic which is:
— not close to a fixed clinic and has not been used for a mobile clinic before
— likely to have a high proportion of low-risk donors
— in an area of reasonably high population density
— relatively easy for both the mobile team and sufficient numbers of potential donors to reach
— likely to have suitable facilities

- Contacted the person in charge of the venue to find out whether they would be willing to host a mobile clinic and to arrange a convenient date
- If possible, made an informal visit to assess the suitability of the venue and recorded the outcomes of this visit.

Activity 23

Purpose
To review the procedures used to publicize mobile donor clinic sessions.

Checklist
You should have:

- Used the table on page 58 to note down the methods used in your centre to inform potential donors and regular donors about mobile donor sessions in their area
- Noted the methods that you find to be most effective
- Suggested ways of improving the system for publicizing mobile sessions and noted them down on your Action List
- Used an additional method to publicize the next mobile session and evaluated its effectiveness.

Activity 24

Purpose
To review the effectiveness of the organization of a mobile donor session and, in particular, the adequacy of the number of staff available.

Checklist
You should have:

- Selected three donors attending a mobile session and recorded the amount of time that each person spent in the clinic
- Noted whether there were significant differences in the time that each of these three donors spent at the session
- Noted whether donors were attended to promptly or had to wait, and identified the reasons for any delays at various stages of the donation process
■ Observed the amount of time that staff spent with donors
■ Noted any ways in which the organization of the session could have been improved in relation to:
  — the number of staff present
  — the suitability of the venue
  — the publicity about the session
■ Noted your findings and recommendations on your Action List.

Activity 25

Purpose
To develop an efficient system for monitoring the use of equipment and materials required for mobile donor clinics.

Checklist
You should have:

■ Compared the list on page 61 with any checklist of equipment and materials used in your centre and made any additions or amendments, where needed
■ Developed a checklist of equipment and materials, if one is not yet used in your centre, and used it to check each item before departure and on return from each mobile session.

Activity 26

Purpose
To ensure the correct use of blood collection packs in your donor clinics.

Checklist
You should have:

■ Noted the types of blood collection pack used in your donor clinics and commented on why you find some types more suitable than others
■ Completed the table on page 63 for each type of blood pack used in your centre
■ Noted any differences between your procedures for using different types of blood packs and the manufacturers’ instructions
■ Identified any improvements required in the use of blood packs and noted down your recommendations on your Action List.
Activity 27

Purpose
To monitor the effectiveness of mobile donor clinic sessions.

Checklist
You should have:

- Compared the example of a donor session analysis form in Figure 6 on page 66 with any similar record used in your own centre
- Identified any ways in which your own record might be improved and noted down your ideas on your Action List
- Used Figure 6 to evaluate the performance of the next mobile session that you attended, if records of this kind are not yet kept in your centre
- Designed a donor session analysis form, adapting Figure 6 to your own situation.

Activity 28

Purpose
To review the questions used in your donor clinic to promote self-exclusion, where appropriate.

Checklist
You should have:

- Listed the questions that you ask donors to help them assess whether they have engaged in any risk behaviour and should therefore self-exclude
- Added any further questions that other donor clinic staff normally ask donors.

Activity 29

Purpose
To develop a systematic approach to predonation counselling.

Checklist
You should have:

- Developed a checklist of issues and questions that need to be covered routinely in predonation counselling
- Added any further suggestions from other donor clinic staff to the checklist
Used the checklist as a basis for predonation counselling and reviewed its effectiveness, amending it where appropriate.

Asked other donor clinic staff to use the checklist in predonation counselling.

**Activity 30**

*Purpose*

To identify medical conditions that may affect the safety of a donor or the recipient of donated blood.

*Checklist*

You should have:

- Studied the example of a medical history questionnaire in Appendix 4
- Identified the conditions in Appendix 4 that are concerned with the safety of the donor
- Identified the conditions in Appendix 4 that are concerned with the safety of the recipient.

**Activity 31**

*Purpose*

To understand the potential consequences for a donor who fails to acknowledge specific medical conditions.

*Checklist*

You should have:

- Listed the possible consequences for a donor who fails to acknowledge each of the conditions in Table 1
- Checked your answers with a doctor or nurse
- Asked for a full explanation of anything you did not understand or did not know before.

**ACTIVITY 32**

*Purpose*

To understand the potential consequences for the recipient of donated blood if a donor fails to acknowledge specific medical conditions.

*Checklist*

You should have:

- Listed the possible consequences for the recipient of blood from a donor who fails to acknowledge each of the conditions in Table 2
■ Checked your answers with a doctor or nurse
■ Asked for a full explanation of anything you did not understand or did not know before.

Activity 33

Purpose
To identify the health conditions in your country that are of importance to the safety of donors or the recipients of donated blood.

Checklist
You should have:

■ Identified the health conditions in your country that are of importance for the safety of the donor and listed them in order of their prevalence
■ Identified the health conditions found in your country that are of importance for the safety of the recipients of donated blood and listed them in order of their prevalence.

Activity 34

Purpose
To review the system used in your centre for recording donors’ medical histories.

Checklist
You should have:

■ Compared the records kept of donors’ responses to questions about their medical history with the questionnaire in Appendix 4
■ Suggested any ways in which your records of donors’ medical histories might be improved, discussed them with other donor clinic staff and noted down your recommendations on your Action List
■ Talked to your colleagues and supervisor about introducing a system for recording donors’ medical histories, if none exists at present, and noted down your recommendations on your Action List.

Activity 35

Purpose
To review the training provided for donor clinic staff responsible for undertaking the health check of donors.

Checklist
You should have:
- Identified the members of staff who undertake the various assessments in the health check of donors
- Noted the training they have received
- Talked to your colleagues about any further training needed to enable them to undertake donor screening safely and efficiently
- Noted your recommendations on training needs on your Action List and discussed them with your supervisor or a senior medical or nursing colleague.

**Activity 36**

**Purpose**
To develop guidelines on the medical assessment of donors.

**Checklist**

You should have:

- Read the *Guide to Medical Assessment of Donors* in Appendix 6 and compared it with any guidelines used in your donor clinic
- Identified any amendments that you think should be made to your guidelines, noted your recommendations on your Action List and discussed them with your colleagues and senior medical staff
- Asked other donor clinic staff whether they would find the *Guide to Medical Assessment of Donors* a useful aid to donor selection, if no guidelines are currently used in your centre
- Talked to colleagues to identify any areas of the guide that might need amendment before it could be used in your own donor selection programme and noted your recommendations on your Action List
- Consulted your local health authority or the Ministry of Health and ensured that any guidelines that are produced or adapted are reviewed and approved by a medical officer before use.

**Activity 37**

**Purpose**
To develop appropriate targets and a plan for your donor selection programme.

**Checklist**

You should have:
Identified the targets set for your donor selection programme and the plan that has been made to achieve them

If there is no plan, discussed possible objectives and targets for next year with your colleagues and noted down your recommendations on your Action List.

Kept a record of them to enable you to measure future progress in developing an effective donor selection programme.

Activity 38

Purpose
To review the system used to monitor the effectiveness of your donor selection programme.

Checklist
You should have:

- Reviewed any donor screening record currently used in your centre.
- Identified any ways in which it might be improved to enable the effectiveness of the donor selection programme to be monitored and noted your recommendations on your Action List.
- Talked to your supervisor about introducing a donor screening record, if none is kept at present.
- Noted on your Action List your ideas on what a donor screening record should contain.

SECTION 7

Activity 39

Purpose
To ensure that blood donation is, as far as possible, a pleasant experience for donors attending your donor clinics.

Checklist
You should have:

- Observed your fixed and mobile donor clinics over a period of a month to identify any factors that may contribute to an unpleasant experience for donors.
- Talked to donors to find out any ways in which they think the service could be improved.
Talked to other donor clinic staff about any improvements that they think could be made
Noted down your recommendations on your Action List.

**Activity 40**

**Purpose**
To ensure that new and repeat donors are treated appropriately.

**Checklist**
You should have:

- Observed whether there are any differences in the way that donor clinic staff treat new and repeat donors
- Found out whether your centre has a policy on the way that new and repeat donors should be treated
- Suggested any ways in which the treatment of new and repeat donors could be improved and noted down your recommendations on your Action List.

**Activity 41**

**Purpose**
To identify the potential consequences of a breach of confidentiality.

**Checklist**
You should have:

- Identified any possible effects of a breach of confidentiality on your centre’s ability to maintain safe and adequate supplies of blood
- Noted the consequences of any situations in which you know that a breach of confidentiality occurred.

**Activity 42**

**Purpose**
To identify the benefits of maintaining confidentiality.

**Checklist**
You should have:

- Identified the long-term benefits of maintaining confidentiality in relation to donors.

**Activity 43**

**Purpose**
To review the procedures used in your centre to maintain confidentiality.
Checklist
You should have:

- Noted all the steps currently taken in your centre to maintain confidentiality and commented on whether they are adequate
- Asked donor clinic staff and donors for their suggestions on how arrangements to ensure confidentiality could be improved
- Noted down your recommendations on your Action List.

Activity 44

Purpose
To review the training provided for staff who perform venepunctures.

Checklist
You should have:

- Read Appendix 7: Venepuncture
- Identified any further training that you need in order to perform a venepuncture competently
- Identified any further training that other donor clinic staff need in order to perform a venepuncture competently
- Noted down your recommendations on your Action List and discussed them with your supervisor.

Activity 45

Purpose
To review the training provided for donor clinic staff in dealing with adverse donor reactions.

Checklist
You should have:

- Read Appendix 8: Adverse Donor Reactions
- Noted the training that is provided for donor clinic staff in dealing with adverse donor reactions
- Identified any further training that you need in order to recognize and deal with adverse donor reactions
- Identified any further training that other donor clinic staff need in order to recognize and deal with adverse donor reactions
- Noted down your recommendations on your Action List and talked to your supervisor or supporter about making arrangements for an experienced doctor or senior nurse to provide appropriate training, where necessary.
Activity 46

Purpose
To identify and strengthen relationships with organizations providing counselling and follow-up services for HIV-positive donors.

Checklist
You should have:

- Noted any counselling or follow-up provided by your service for donors who test positive for HIV or any other infectious diseases
- Identified any training provided for staff in counselling techniques
- Identified any other organizations providing counselling or follow-up for HIV positive donors
- Suggested practical ways to strengthen relationships with these organizations
- Identified any organizations that could provide training in counselling techniques
- Noted down your recommendations for further action on your Action List.

SECTION 8

Activity 47

Purpose
To develop an efficient donor record-keeping system in your centre.

Checklist
You should have:

- Compared your donor records with the parts of the donor enrolment card and record of donations shown in Figures 7, 10, 11, 12 and in Appendix 4
- Noted any important differences between them
- Identified any additional information that you think should be included in your donor records and discussed this with your colleagues and supervisor
- Noted down your recommendations on your Action List.

Activity 48

Purpose
To develop a suitable donor clinic register.
Checklist
You should have:

- Compared your donor clinic register with the example shown in Figure 13
- Identified any additional information that you think should be included in your donor clinic register
- Discussed this with your colleagues and supervisor
- Noted down your recommendations on your Action List.

Activity 49

Purpose
To maintain an accurate register of regular donors.

Checklist
You should have:

- Compared the example of a regular donor panel register shown in Figure 14 with your system for recording regular donors
- Identified any additions or improvements that could be made to your regular donor panel register
- Discussed them with your colleagues and supervisor and noted them on your Action List
- Talked to your colleagues and supervisor about introducing a regular donor panel register, if one is not currently kept in your centre
- Noted down on your Action List your recommendations on what it should contain.

Activity 50

Purpose
To maintain a register of donors with less common blood types.

Checklist
You should have:

- Found out the proportions of different blood groups in your country’s population
- Worked out the proportions of different blood groups among the donations collected in your centre and compared this with the proportion nationally
- Classified each blood group of the donations from the past six months according to whether there has been an excess, an adequate number or a shortage
Noted any changes that need to be made to the estimate of blood requirements that you made in Activity 11

- Suggested ways of increasing donations from donors with less common blood types and noted down your recommendations on your Action List
- Reviewed your system for recording donors with less common blood types and noted your suggestions for improving the system on your Action List.
- Developed a simple system for recording donors with less common blood types, if no record is kept at present, discussed your ideas with your colleagues and supervisor and noted your recommendations on your Action List.

**Activity 51**

**Purpose**
To review the effectiveness of your centre’s record-keeping system.

**Checklist**
You should have:

- Listed the kinds of information that you can currently extract from your records for reporting purposes.
- Compared this with the records discussed in Section 8 and identified any areas in which accurate information is not available or is insufficient to assist in future planning for the blood collection programme.
- Talked to your supervisor about ways of improving your record-keeping system and noted your recommendations on your Action List.

**SECTION 9**

**Activity 52**

**Purpose**
To review the effectiveness of your centre’s system for recalling donors.

**Checklist**
You should have:

- Noted down the system used in your centre to recall donors and commented on how easy it is to identify and contact donors who are due to donate blood again.
- Talked to other donor clinic staff about ways in which this system could be improved.
- Noted down your recommendations on your Action List.
Activity 53

**Purpose**
To reduce the number of lapsed donors.

**Checklist**
You should have:
- Noted down the action taken by your centre to follow up lapsed donors
- Listed the most common reasons why donors do not continue to give blood
- Talked to your colleagues about ways of improving the follow-up system and reducing the number of lapsed donors.
- Noted down your recommendations on your Action List.

Activity 54

**Purpose**
To strengthen your centre’s public relations activities in order to retain regular donors.

**Checklist**
You should have:
- Noted down any public relation activities currently undertaken by your centre to show your appreciation of donors and motivate them to continue to give blood
- Identified any additional activities that could be introduced in order to demonstrate appreciation of regular donors
- Noted down your ideas on your Action List and discussed them with your colleagues and supervisor.

### SECTION 10

Activity 55

**Purpose**
To assess the progress you have made through your work on Module 1.

**Checklist**
You should have:
- Assessed your knowledge, skills and experience in relation to each of the module objectives now that you have reached the end of the module
- Completed the table on page 120
- Identified any areas in which you still do not feel fully confident about your knowledge or skills
- Reread the appropriate sections of the module and discussed any remaining problems with your supporter or trainer before continuing with your Action Plan.

**Activity 56**

**Purpose**
To plan how to implement the improvements that you have identified as being necessary to ensure quality in your blood collection programme.

**Checklist**
You should have:

- Looked at all the suggestions for improvements that you have included on your Action List and marked those where you have not yet been able to take any action
- Divided them into two categories:
  - Actions that you can take
  - Actions that others could take
- Identified priorities for action
- Filled in your Action Plan, as follows:
  - Column 1: the improvements you have identified as being necessary
  - Column 2: the action you plan to take or the name of the person who would be responsible for taking action
  - Column 3: the results you would expect as a result of implementing your planned actions
- Discussed your plan with your supervisor, supporter, trainer and any other appropriate senior staff
- Modified your plan, where necessary
- Filled in Column 4 with the dates by which you hope each planned action will be completed.

**Activity 57**

**Purpose**
To review the implementation of your Action Plan and identify any follow-up action required.

**Checklist**
You should have:
- Filled in Column 5 with the dates on which you completed each planned action and compared them with the planned completion dates
- Summarized the results of your planned action in Column 6 and compared them with the results you had expected
- Discussed the outcomes with your supporter
- Discussed the outcomes with your supervisor
- Identified any further actions required to ensure the implementation of the improvements you identified as being necessary
- Monitored the effectiveness of the changes you have been able to introduce
- Identified any further changes or follow-up action required.
Answers to Self-assessment Questions

SECTION 2

1 The disadvantages of using paid commercial or professional donors are that:

- paying donors undermines the voluntary non-remunerated donation system which is the foundation of a safe blood supply
- commercial donors may be unhealthy, undernourished or at risk of transfusion-transmissible infections which endanger the lives of recipients of their blood
- they may donate blood more frequently than recommended and supply substandard units of blood which are a risk to the recipient or give little or no benefit
- where donors are paid, it is usually necessary to charge patients for the blood they receive, which poor families may not be able to afford.

2 Behaviour that poses a risk to the safety of the blood supply includes:

- having more than one sexual partner
- prostitution
- homosexuality
- bisexuality
- injecting drug use
- skin scarification, tattooing and blood rituals
- being the sexual partner of anyone engaging in any form of risk behaviour.

3 HIV seroprevalence is generally higher in the 20–45 year age group.
SECTION 3

4  A hospital with 130 acute beds is likely to need 871 units of blood each year, or approximately 17 each week.

5  When calculating the number of donors needed to provide the required number of units of blood, it is important to take into account the following factors:
   - the number of donors who attend a donor session is generally much lower than the number requested to attend
   - the number of donations collected will be smaller than the number of donors who attend because some donors will be deferred, either temporarily or permanently
   - some blood will be discarded after laboratory testing because it is unsuitable for issue
   - unexpected emergencies may arise in which large quantities of blood are required.

SECTION 4

6  The goals for a donor education, motivation and recruitment campaign should be to:
   - promote changes in the public’s knowledge, attitudes and beliefs so that they understand the importance of blood donation
   - promote changes in people’s behaviour so that they become willing to donate blood on a regular voluntary basis
   - ensure that potential donors understand the importance of safe blood so that they do not donate blood if they are in poor health or at risk for transfusion-transmissible infections.

7  The two long-term benefits of an effective donor education, motivation and recruitment campaign are:
   - an adequate supply of blood because of an increase in the number of regular, voluntary non-remunerated donors
   - safer blood, because regular, voluntary non-remunerated donors are well motivated, receive continuing education about risk behaviour and are regularly screened.

8  It is important to monitor and evaluate donor education, motivation and recruitment activities in order to ensure that the most efficient and cost-effective communication strategies are being used.
SECTION 5

9  Donors should never be bled in the laboratory because:
   - bleeding should take place in a safe and hygienic environment where the experience of blood donation is as pleasant as possible for donors
   - privacy is essential during donor screening and this is unlikely to be possible in a laboratory
   - it could be very dangerous if a donor faints in the laboratory
   - donors require refreshment after giving blood but food and drink are not allowed inside the laboratory.

10 The two essential parts of the cold chain are:
   - people to organize and manage the storage and transportation of blood
   - equipment to store and transport blood.

11 Two potential problems in the use of glass blood collection bottles are:
   - air embolism
   - risk of infection.

SECTION 6

12 The three main parts of the donor selection process are:
   - predonation counselling
   - the medical history
   - the health check.

13 The advantages of using a standard medical history questionnaire are that:
   - the same information is collected systematically about each donor
   - donor clinic staff do not forget to ask important questions
   - it reminds donor staff to observe for clinical signs of ill-health
   - all the relevant information needed to make a decision on whether to accept or defer the donor is presented in a standard format.

SECTION 7

14 Confidentiality is always necessary in the following areas:
   - during donor selection and blood collection
15 Problems sometimes experienced by donors during or after giving blood include:
- problems with blood flow
- haematoma
- accidental puncture of the artery
- mild reactions
- moderate reactions, such as fainting
- severe reactions, such as convulsions
- hyperventilation
- accidents.

SECTION 8

16 Records that are required to maintain a safe and adequate supply of blood include:
- donor’s personal enrolment record/medical history/health check
- donor’s record of donations
- donor clinic register
- record of venues available for mobile sessions
- donor session analysis form
- donor screening report
- regular donor panel register
- register of donors with less common blood types
- temporary donor deferral record.

17 It is important to keep a register of donors with less common blood types so that, if the need arises for a particular blood group, a suitable donor can be contacted quickly and easily.

SECTION 9

18 The three parts of a donor’s records that are required in order to recall the donor are:
- the donor’s personal details, including name, work and home addresses and, if possible, telephone numbers
- the donor’s medical history
- the assessments made during the health check at previous donations.
Glossary

**Air embolism**
Obstruction of a blood vessel caused by air entering the circulatory system.

**Alloimmunization**
The immune response in which an antibody is produced when a body meets a foreign antigen.

**Autologous transfusion**
The transfusion of any blood component that was donated by the intended recipient.

**Commercial or professional donor**
A donor who gives blood in return for money or other form of payment.

**Confidential unit exclusion**
The removal and disposal of a unit of blood after donation at the request of the donor.

**Directed donation**
A donation that is given specifically for transfusion to a named patient.

**Epidemiology**
The study of the occurrence, distribution and spread of infection and disease in the population.

**Family or family replacement donor**
A donor who gives blood when it is required by a member of the donor’s family or community.

**Haemolysis**
The breaking down of the red cell membrane, which liberates the contents: haem and globin.

**Incidence**
The proportion of a specific population becoming newly infected by an infectious agent within a certain period of time.
**Infectious disease markers**
The detectable signs of infection appearing in the bloodstream during or following infection.

**Lapsed donor**
A voluntary non-remunerated donor who, after making one or more donations, does not return to give blood, despite being requested to do so.

**Low-risk donor**
The term commonly used in blood transfusion practice to describe a donor who is at low risk for transfusion-transmissible infections.

**Regular donor**
A donor who has given blood at least three times and who donates blood at least once a year.

**Risk behaviour**
Behaviour that exposes a person to the risk of acquiring transfusion-transmissible infections.

**Self-deferral**
The decision by a potential donor to wait until a condition that makes them unsuitable has resolved.

**Self-exclusion**
The decision by a potential donor not to give blood because they have engaged in risk behaviour or because of the state of their own health.

**Seroprevalence**
The proportion of a specific population infected with the infectious agent at any particular time.

**Therapeutic phlebotomy**
The collection of blood from patients in order to improve their own health.

**Transfusion-transmissible infection**
An infection that is capable of being transmitted by blood transfusion.

**Voluntary non-remunerated donor**
A donor who gives blood, plasma or other blood components freely and voluntarily, without receiving payment in the form of money or a substitute for money.

**Window period**
The period between infection by HIV and the development of detectable antibodies.
IMPORTANT INFORMATION ABOUT AIDS for those who wish to give blood

WHAT IS AIDS?
AIDS is a disease that destroys the body’s ability to protect itself against infections and other illnesses. It is caused by HIV, a virus that lives in blood and other body fluids. You can therefore get HIV infection if blood containing the virus enters your bloodstream. You can also get HIV infection by having sex with someone who has HIV. This is particularly true if you have had a sexual contact that has resulted in your contracting a sexually-transmitted disease (STD). More information about HIV and AIDS and how to protect yourself from getting the disease can be obtained from your doctor or your nearest health clinic.

IS THERE ANY RISK OF CATCHING HIV FROM BLOOD DONATION?
There is absolutely no risk to blood donors giving blood at any blood donor clinic. All the materials used for collecting blood are sterile and are used only once, so HIV or any other disease cannot be caught from giving blood.

WHAT TESTS ARE DONE ON DONATED BLOOD TO ENSURE THAT IT IS SAFE FOR TRANSFUSION?
The laboratory does tests for HIV, syphilis (an STD) and hepatitis B. The tests are the same as those used anywhere in the world. However, these tests may not show the early stages of infection. So people who may have been exposed to HIV infection must not donate blood. If the results of a test are positive, a donor is informed only if he or she requests this. People who think that they may have been infected by HIV must not use the blood transfusion service as a place to find out whether they are infected. This could be very dangerous to the patient who receives their blood.

WHO SHOULD GIVE BLOOD?
Please remember blood is required in order to save lives. Only healthy people who are not at risk from HIV and other transmissible infections should donate blood. If all the people in this category give blood regularly, our country will have sufficient supplies of blood which will greatly assist in saving lives.

WHO SHOULD NOT GIVE BLOOD?
Blood should not be given by people who have had a sexually transmitted disease or who are at risk of contracting HIV, including those with many sexual partners, homosexuals, prostitutes and injecting drug users. It should also not be given by anybody who has had sexual contact with anyone in these categories.

Blood transfusion services have a very high respect for people who give their blood to save a life. We are confident that nobody would knowingly donate blood if they thought that they could possibly transmit HIV and cause the recipient of the blood to develop AIDS.

Blood is required daily. Give blood and save a life with your safe blood. Your support is appreciated.
1. “You wouldn’t want my blood because I’m common old ‘O’ group.”

Every type of blood is important. Because group O is the most common type, it is also the most needed. Often group O is particularly valuable because in some cases it can be used when other groups are not available. All blood types are required – remember the rarest type is the type that’s not available when you need it.

2. “I’m too old.”

Age requirement for donors: 16-65 years, and if you’re in good health you can keep on donating right up until your 65th birthday.

3. “Oh, but I’m anaemic.”

People may be anaemic, and it’s the Blood Bank’s job to ensure blood is not taken from these people. So there’s a simple test performed at each donation: a small drop of blood is taken from the donor’s finger and in about 15 seconds we’ll be able to determine your haemoglobin (iron) level.

4. “I’m scared about giving blood.”

Everyone feels a bit like that for the first time, but really there’s nothing to it. In fact, there are hundreds of donors who have given 40 to 70 donations. You don’t have to be a superman or superwoman to give blood: it really is a simple procedure.

5. “You wouldn’t want my blood. I’ve had hepatitis.”

We do a test for hepatitis on each donation, and even if we find the presence of hepatitis in your blood it often can be valuable helping to make vaccine against hepatitis.

6. “I haven’t enough blood to spare.”

The average adult has about 8 pints of blood, and doctors agree that healthy people can give blood quite regularly. A donation is less than a pint (450 ml) and donors may give this safely four times a year. Your body keeps on discarding and replenishing blood all the time whether you donate or not, so this amount is quickly replaced.

7. “No-one has ever asked me to donate.”

Consider yourself invited. Your blood is the most precious gift you can give. It can mean life itself for a sick child, an accident victim or for someone facing surgery.

8. “It’s too inconvenient and I’m too busy.”

The Blood Bank tries to make it as convenient as possible to donate. The Mobile Unit visits many offices, factories and schools. Even the busiest people make time to give blood. When you stop to think of all the good your blood can do, we believe you might decide you are not too busy after all to spare less than four hours each year.

READ ON — there are about 20 common excuses for not giving blood.
10 “I’m not heavy enough.”
If you weigh 55 kg or more you will have enough blood to donate.

11 “I hate needles.”
To ensure that the blood giving process is not painful, local anaesthetic is applied to the skin. You then feel no pain giving your blood and there is no need to watch the procedure.

12 “I’ll only give in an emergency.”
Emergencies happen every minute of the day. For each patient requiring a blood transfusion it is an emergency: the patient could die if the blood is not available.

13 “But it will make me weak.”
The volume of blood is replaced quite quickly. In fact, by the time you leave the Blood Bank your body has commenced replacing the blood you have given. After just a few hours the total volume will be back to normal and in the meantime you should experience no discomfort and you are able to go about your normal duties.

14 “I intend to, but I never get around to it.”
Come today there’s no need for an appointment. You will feel really good having made up your mind to come. Call at the Blood Bank, CWM Hospital, Suva between 8am-4.30pm any working day. For further details, phone 313444 extension 468.

15 “I’ve done my bit. I gave donations many years ago.”
Thank you for giving blood at the time. We’ll still have your records and we want you to know that you really are needed now. There are just so many good uses for your donations. Each year as medical science and surgery advance, more blood is used and each year more donors must be found to meet the spiralling demand for blood.

16 “I gave overseas and was paid for it.”
Here blood donations are regarded as unique gifts and a priceless natural resource. In other places blood has become a marketable commodity and experience in these places indicates that the payment of donors and the consequent sale of blood to patients has resulted in enormous health risks. In Fiji every unit of blood provided by the Blood Bank is given voluntarily by a donor. The donor is not paid, nor is the recipient charged for the blood concerned. Blood is FREE.

17 “There’s too much alcohol in my blood.”
So long as there’s a drop of blood in the alcohol, the Blood Bank can use your donations... but being sober does help!

18 “If you give once, you have to keep giving.”
Giving blood will not cause you to produce blood at a greater rate. You will not be forced to give blood regularly, because a blood donation is no different from a bleeding nose, a menstrual period, or a cut finger in its effect on blood production.

19 “But I play sport.”
So you’re healthy and that’s one very good reason for making a donation. Your donation of blood will not affect your sporting performance and it will certainly help someone else who needs your donation to stay alive.

20 “I might catch AIDS by giving blood.”
Blood donors cannot catch AIDS or any other infection by giving blood. All the equipment used for collecting blood is sterile and is used only once.
APPENDIX 3

Essentials for the Mobile Donor Clinic

PREMISES
The premises used for mobile donor sessions may often be the only local venue available, but they must be of sufficient size, suitable construction and in an appropriate location to allow proper operation. They must be clean and maintained in accordance with accepted rules of hygiene.

The designated person in charge of the blood collection team should always be provided with a written plan of action appropriate to each venue. This can be used as a checklist on arrival to make sure that conditions are acceptable. If the venue is being shared, care must be taken to avoid disturbing any other activities.

SPACE REQUIREMENTS
The space required will obviously depend on the number of staff and donors and the rate at which donors arrive. The following activities should be kept in mind when accepting a venue.

1. Registration of donors and all other necessary information processing. Wherever possible, there should be easy access to a telephone, preferably within the venue.

2. Predonation counselling, the medical history and the health check to determine donors’ fitness to donate blood. Facilities should be available for confidential discussions between donors and donor clinic staff.

3. Withdrawal of blood from donors without risk of contamination or errors.

4. The social and medical care of donors, including those who suffer adverse reactions. Sufficient seating should be provided for donors and staff, with allowance made for possible queues during busy periods.

5. Storage of equipment, reagents and disposables.

6. Access to an adequate electrical supply for any onboard refrigerator in the sessional vehicle, and for all electrical equipment used during the session.

HEALTH AND SAFETY
Health and safety factors should be taken into account when selecting venues for mobile donor clinic sessions. In particular, the following points should be kept in mind.

1. The venue should be as close as possible to the centre of population being served. It should be possible for the sessional vehicle to park close to the access doors in order to facilitate the unloading of equipment. The ground to be covered by staff carrying equipment into the building should be even and well lit. If possible, the space to be used should not require the carrying of equipment up or down stairs. A similar safe approach to the building should be ensured for donors, with car-parking space available where possible. Notices should be displayed directing donors to the appropriate entrance to the building and to the room being used.

2. The furniture and equipment should be arranged within the available space to minimize crowding (with the increased possibility of mistakes or accidents), enabling privacy and adequate supervision to be maintained and ensuring a smooth and logical work-flow.

3. Fire exits should be unobstructed and operational. All donor session staff must be aware of the location of fire exits and fire extinguishers.
4 There should be adequate lighting for all the required activities. Wherever possible, there should be provision for the use of emergency lighting in the event of a power cut.

5 It may not be possible for the mobile team to control the temperature, but every effort should be made to ensure that the space does not become too hot, too cold or stuffy. If possible, subsidiary cooling fans or heating should be carried on sessional vehicles, and used as necessary.

6 Facilities for providing refreshments for donors and staff should be separate from other activities, wherever possible. Every effort should be made to ensure that equipment used in this area does not pose a safety hazard.

7 Toilet facilities for male and female donors and staff should be available. Separate washing facilities are desirable for staff involved in ‘clean’ procedures.

8 Adequate facilities should be available for the safe disposal of waste at mobile sessions. Sharps and solid waste should be collected in suitable containers for return to the blood transfusion centre or blood bank and for subsequent safe disposal.

9 The premises should be free from vermin.
## Appendix 4

### Example of medical history questionnaire

I fully understand that any incorrect statement or concealment may be to the detriment of my health or the health of the patient who receives the blood donated by me.

**Do you suffer or have you suffered from:**

- Lung disease
- Persistent cough
- Anaemia
- Low/high blood pressure
- Diabetes
- Unexplained weight loss
- Swollen glands
- Night sweats/fever
- Brucellosis
- Tuberculosis
- Heart disease
- Nose bleeds (excessive)
- Ulcers
- Kidney disease
- Epilepsy
- Skin rashes
- Sleeping sickness
- Asthma
- Rheumatic fever
- Circulation problems
- STD/VD
- HIV/AIDS
- Prolonged diarrhoea
- Thyroid disorder
- Cancer
- Malaria
- Hepatitis/jaundice

**Are you taking or have you taken any medicines:**

- Aspirin
- Injections
- Antibiotics
- Vaccinations
- Steroids

**Have you had any operations?**

- Minor
- Major

**Have you had any?**

- Acupuncture
- Scarifications
- Blood transfusion

**Have you been in contact with any infectious disease?**

**Females only:**

- Are you pregnant or have you been pregnant within the last 6 months?
- Are you breastfeeding?
- Do you have any menstrual problems (excessive menstrual bleeding)?

### Donor's Signature ___________________________ Date ___________________________

### Sister's Signature ___________________________ Date ___________________________

### Accept/Defer/Reject
Examples of Standard Operating Procedures

STANDARD OPERATING PROCEDURE SOP/BTS/CLN/001/01
Donor haemoglobin screening using the copper sulfate method

<table>
<thead>
<tr>
<th>This SOP replaces</th>
<th>Quality Manager</th>
<th>Date effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 PURPOSE
To define the procedure for the haemoglobin screening of blood donors using the copper sulfate method on blood obtained from a fingerprick.

2 RESPONSIBILITIES
All BTS teams and clinic staff
All trained and authorized BTS teams and clinic staff can use this SOP.

Head of Collection
Head of Collection must resolve any:
- problems with the process
- difficulties using the SOP.

3 RESTRICTIONS
This SOP must not be used by unauthorized teams or clinic staff or by any non-teams or clinic staff.
Only venous blood obtained from a fingerprick is to be used for donor haemoglobin screening.

4 DEFINITIONS
Copper sulfate solution – female
Copper sulfate solution prepared with a specific gravity of 1.053 to screen a haemoglobin level of 12.5 g/dl or above.

Copper sulfate solution – male
Copper sulfate solution prepared with a specific gravity of 1.055 to screen a haemoglobin level of 13.5 g/dl or above.

5 ITEMS REQUIRED
Prepared copper sulfate solutions
Sterile plain capillary tubes
Sterile disposable lancets or automated fingerprick device with disposable lancets
Finger cleansing solution (0.5% hibitane in 70% alcohol)
Sterile cotton wool swabs OR disposable sterile antiseptic skin wipes
Documents:
- Dealing with donors who fail the copper sulfate screening test (SOP/BTS/CLN/002/01).

Uncontrolled document unless printed on “Controlled Paper”

Author: John Smith df: SOPHbScr.rtf Date: 01/06/01 Page: 1 of 2
6 PROCEDURE

Prior to any procedure the donor must be fully aware of what is going to happen to them.

6.1 Explain briefly to the donor what is going to happen and why.

6.2 Performing the fingerprick

6.2a Select the finger on which to perform the fingerprick: usually the first or second finger.

6.2b Clean the skin with the area with the cleansing solution or disposable skin wipe and allow to dry.

6.2c Using either a lancet or an automated device, perform the fingerprick.

6.2d Wipe away the first drop of blood.

6.2e Collect the next drop of blood in the capillary tube as it forms by placing one end in the drop of blood. Collect about 2 cm of blood in the capillary.

6.2f Keep the capillary horizontal and place a finger over the top end.

6.2g Place a small sterile cotton wool swab on the puncture site and ask the donor to hold this in place for a few minutes.

6.3 Performing the copper sulfate test

6.3a Uncap the appropriate bottle of copper sulfate solution: male or female.

6.3b Hold the capillary tube about 1 cm above the surface of the liquid, remove the finger from the top of the tube and allow one drop to form and fall into the copper sulfate solution. Do not force the drop to form or shake the tube to release the drop.

6.3c Watch the drop of blood in the copper sulfate solution and note whether it sinks to the bottom or floats.

6.3d If the drop of blood falls through the solution within 15 seconds, the donor has passed the copper sulfate screen.

6.3e If the drop hesitates before falling, does not sink at all or rises in the solution, repeat the screen. If the same result is obtained, the donor has failed the copper sulfate haemoglobin test and needs further investigation: SOP/BTS/CLN/002/01 (Dealing with donors who fail the copper sulfate screening test).

6.3f Record the test result on the donor record card.

6.3g If the donor has failed the copper sulfate, test explain to the donor what is to happen next (SOP/BTS/CLN/002/01).
1 PURPOSE
To define the procedure for dealing with blood donors who fail the copper sulfate screening test.

2 RESPONSIBILITIES
All BTS teams and clinic staff
All trained and authorized BTS teams and clinic staff can use this SOP.

Head of Collection
Head of Collection must resolve any:
- problems with the process
- difficulties using the SOP.

3 RESTRICTIONS
This SOP must not be used by unauthorised Teams or Clinic staff or by any non-teams or clinic staff.
This SOP is to be applied only to those donors who fail the copper sulfate screening test.

4 DEFINITIONS
Failed copper sulfate test
The drop of blood does not cleanly and rapidly sink in copper sulfate solution of the appropriate specific gravity for that donor.

5 ITEMS REQUIRED
5 ml syringe and needle
EDTA sample tube
Sphygmomanometer or tourniquet
Skin cleansing solution
Sterile cotton wool swabs
Documentation:
- Failed haemoglobin report (FRM/BTS/CLN/002)
- Selecting a vein for venepuncture (SOP/BTS/CLN/003/01)
- Cleansing of skin prior to venepuncture (SOP/BTS/CLN/004/01)
- Venepuncture using the “bevel up” technique (SOP/BTS/CLN/005/01).

6 PROCEDURE
In order to identify and treat anaemic donors, and to identify failures of the copper sulphate test itself, the haemoglobin level of donors who fail the copper sulfate test is measured. Depending on the result, a full blood count is carried out using a properly collected venous sample.
6.1 Label an EDTA sample tube with the donor’s name, identification number and the date bled.

6.2 Apply the sphygmomanometer cuff to the upper arm and inflate to a pressure of 50 mm OR apply a tourniquet to restrict the veins in the upper arm.

6.3 Select a vein for venepuncture (SOP/BTS/CLN/003/01).

6.4 Prepare the skin for venepuncture (SOP/BTS/CLN/004/01).

6.5 Aseptically attach the needle to the syringe and perform the venepuncture using ‘bevel up’ technique (SOP/BTS/CLN/005/01).

6.6 Draw 4–5 ml of blood into the syringe.

6.7 Remove the needle and introduce the blood from the syringe into the EDTA tube. Mix the blood by gentle, repeated inversion. NB: Repeat the inversion at least 10 times to ensure that the anticoagulant has dissolved fully. Do not shake the tube.

6.8 Complete a “Failed haemoglobin report” (FRM/BTS/CLN/002) for each donor and package it together with the matching sample.

6.9 Send the sample and paperwork to the donation testing laboratory at the BTS for haematological investigation.
WHO Haemoglobin Colour Scale

The Haemoglobin Colour Scale is a simple, reliable and inexpensive clinical device developed by the World Health Organization to screen for the presence and severity of anaemia. It enables an accurate estimation of haemoglobin levels in blood to be made through a comparison of the colour of a drop of blood with predetermined shades of red.

Unlike earlier methods, the Haemoglobin Colour Scale has been developed using computerized spectrometric analysis to identify colours that can accurately match shades of haemoglobin at different concentrations when used with special absorbent test-strip papers.

The Scale comprises a small card containing a standardized set of shades of red representing a range of haemoglobin values (4 g/dl, 6 g/dl, 8 g/dl, 10 g/dl, 12 g/dl and 14 g/dl respectively).

How does it work?
The device is simple to use, but must be carried out according to the instructions and using the test-strips provided.

1. Place a drop of blood on the test-strip provided.
2. Wait about 30 seconds.
3. Compare the blood stain with the shades of red in the Scale to find the best colour match:
   - Keep the test-strip close to the back of the Scale
   - Avoid direct sunlight
   - Avoid marked shade
   - Avoid your own shadow or any other shadow

4. If the blood stain matches one of the shades of red exactly, record the haemoglobin value. If the colour lies between two shades, record the mid-value. If in doubt between two shades, record the lower value.

5. Discard the test-strip after use.

Validation
The Haemoglobin Colour Scale is accurate to within 1 g/dl when used according to the instructions and using the test-strips supplied in the kit. Extensive testing and field trials have been carried out on the performance of the Scale and have confirmed its reliability when used correctly. Using a photometric method as a reference, the Scale was shown to be more reliable than copper sulfate, the tests giving 2.4% and 5.4% false readings respectively.

Availability
The Starter Kit with approved test-strips for 1000 tests costs about US$20. This works out at about 2¢ per test – less than a copper sulfate test. The cost per test falls with each purchase of refills.

Information on suppliers of the WHO Haemoglobin Colour Scale is available from:

World Health Organization
Blood Safety and Clinical Technology
CH-1211 Geneva 27, Switzerland
Fax: +41 22 791 4836.
E-mail: hbcolourscale@who.int
Guide to medical assessment of blood donors

Only people who have a negative medical history and appear to be healthy and free of disease may be accepted as donors. Persons with features indicative of ill-health or previous disease may only be accepted at the discretion of a medical officer of the blood transfusion service. Similarly, persons identified with patterns of risk behaviour should not donate blood.

1 QUANTITATIVE SELECTION CRITERIA

Age
Any healthy adult between 18 and 60 years of age, both included, may become a blood donor. Donors who have donated blood regularly prior to the age of 60 may continue to donate up to 65 years. Donors over 65 years may only donate with their doctor’s consent. New donors over 60 years may only donate with their doctor’s consent.

Some countries may consider reducing the age of first donation to 16, provided that donors conform to the physical and haematological criteria required for those aged 18 years and that appropriate consent is obtained.

Weight
Minimum weight: 50 kg or 110 lb.

The volume of blood to be donated should not exceed 13% of the circulating blood volume. Donors who weigh more than 50 kg and who comply with the weight/height requirements can safely donate 450 ml of blood. Donors who do not comply with the weight/height requirements but weigh between 45 and 50 kg can donate 350 ml into suitable blood bags of blood as this does not exceed 13% of their circulating blood volume.

Unexplained loss of weight of a significant degree excludes the donor. Overweight can be a cause of deferral due to inaccessible veins in the antecubital fossa.

Frequency of donations
- Females: every 4 months
- Males: every 3 months.

This interval may be reduced at the discretion of the medical director, but is never less than 10 weeks in cases of O Rhesus positive and O Rhesus negative.

Haemoglobin (copper sulfate)
Using copper sulfate method:
- Females: 12.5 g/dl
- Males: 13.5 g/dl.

Blood pressure
- Minimum: 90/50
- Diastolic under 30 years: 90 mmHg
- Diastolic over 30 years: <100 mmHg.

Food
First-time donors should have something to eat before donating blood, preferably within the previous four hours. Well-established donors who have frequently donated on an empty stomach can be accepted. All other donors can be provided with tea, coffee, orange juice or a cola drink and biscuits prior to or after donating.

Hazardous occupations
If possible, people in hazardous occupations should donate when off duty or when they have finished work for the day: e.g. pilots, workers on scaffolding, firemen, train drivers, etc.

Sporting activities
Donating blood does not have any physically harmful effects on the donor, but may reduce the person’s maximum athletic performance. Regular short-distance runners should not run on the day of donation.

Long-distance runners and persons preparing for a marathon or other significant races should not donate at all during the period of intensive training.

Donors who undertake ordinary diving for pleasure are acceptable, but deep-sea divers and saturation divers should be deferred. Mountaineers should
not donate on the day of climbing and should not climb for one week after donation. The following table of desirable weights for men and women according to height and frames is based on typical figures for European populations. Contact your Ministry of Health to obtain suitable figures for your country.

### EXAMPLES OF IDEAL WEIGHT/HEIGHT PARAMETERS (EUROPEAN DONOR POPULATIONS)

#### Desirable weights for men, according to height and frame, ages 25 years and over

<table>
<thead>
<tr>
<th>Height in shoes</th>
<th>Small frame</th>
<th>Medium frame</th>
<th>Large frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feet</td>
<td>Metres</td>
<td>Pounds</td>
<td>Kilograms</td>
</tr>
<tr>
<td>5' 3&quot;</td>
<td>1.600</td>
<td>115–123</td>
<td>52–56</td>
</tr>
<tr>
<td>5' 8&quot;</td>
<td>1.727</td>
<td>132–141</td>
<td>60–64</td>
</tr>
<tr>
<td>5' 10&quot;</td>
<td>1.778</td>
<td>140–150</td>
<td>64–68</td>
</tr>
<tr>
<td>5' 11&quot;</td>
<td>1.803</td>
<td>144–154</td>
<td>65–70</td>
</tr>
<tr>
<td>6' 0&quot;</td>
<td>1.829</td>
<td>148–158</td>
<td>67–72</td>
</tr>
<tr>
<td>6' 4&quot;</td>
<td>1.930</td>
<td>164–175</td>
<td>75–80</td>
</tr>
</tbody>
</table>

#### Desirable weights for women, according to height and frame, ages 25 years and over

<table>
<thead>
<tr>
<th>Height in shoes</th>
<th>Small frame</th>
<th>Medium frame</th>
<th>Large frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feet</td>
<td>Metres</td>
<td>Pounds</td>
<td>Kilograms</td>
</tr>
<tr>
<td>5' 0&quot;</td>
<td>1.523</td>
<td>96–104</td>
<td>44–47</td>
</tr>
<tr>
<td>5' 2&quot;</td>
<td>1.575</td>
<td>102–110</td>
<td>46–50</td>
</tr>
<tr>
<td>5' 7&quot;</td>
<td>1.702</td>
<td>118–127</td>
<td>54–58</td>
</tr>
<tr>
<td>5' 9&quot;</td>
<td>1.753</td>
<td>126–135</td>
<td>57–61</td>
</tr>
<tr>
<td>5' 11&quot;</td>
<td>1.803</td>
<td>134–144</td>
<td>61–65</td>
</tr>
</tbody>
</table>
## MEDICAL HISTORY SELECTION CRITERIA (GUIDELINE EXAMPLES ONLY)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Acceptability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abortion</td>
<td>Acceptable after 6 months</td>
</tr>
<tr>
<td>Acne</td>
<td>Acceptable if lesions are not active or infected</td>
</tr>
<tr>
<td></td>
<td>Isotretinoin: defer until 1 month after last dose</td>
</tr>
<tr>
<td></td>
<td>Retin A cream: defer for 6 months</td>
</tr>
<tr>
<td></td>
<td>Etretinate: permanently defer</td>
</tr>
<tr>
<td>Acupuncture</td>
<td>Unregistered doctor: defer for 6 months</td>
</tr>
<tr>
<td></td>
<td>Registered doctor: defer for 3 months</td>
</tr>
<tr>
<td></td>
<td>Body-piercing, tattoos, scarification: defer for 6 months</td>
</tr>
<tr>
<td>AIDS/HIV</td>
<td>1. No person in a risk group should donate blood: i.e.</td>
</tr>
<tr>
<td></td>
<td>- male homosexuals or bisexuals</td>
</tr>
<tr>
<td></td>
<td>- injecting drug users</td>
</tr>
<tr>
<td></td>
<td>- Prostitutes</td>
</tr>
<tr>
<td></td>
<td>- any sexual contact with the above</td>
</tr>
<tr>
<td></td>
<td>- any person who is HIV positive</td>
</tr>
<tr>
<td></td>
<td>- any person with a history of hepatitis B or C</td>
</tr>
<tr>
<td></td>
<td>- any person with a history of syphilis</td>
</tr>
<tr>
<td></td>
<td>2. Every donor is assessed or asked questions about the signs and symptoms of</td>
</tr>
<tr>
<td></td>
<td>AIDS/HIV infection and any disease related to it:</td>
</tr>
<tr>
<td></td>
<td>- swollen glands</td>
</tr>
<tr>
<td></td>
<td>- night sweats/fever</td>
</tr>
<tr>
<td></td>
<td>- prolonged diarrhoea</td>
</tr>
<tr>
<td></td>
<td>- shingles</td>
</tr>
<tr>
<td></td>
<td>- persistent cough</td>
</tr>
<tr>
<td></td>
<td>- skin rashes/lesions</td>
</tr>
<tr>
<td></td>
<td>- unexplained weight loss</td>
</tr>
<tr>
<td>Alcoholism</td>
<td>Acceptable when sober. Unfit when intoxicated (for assessment after interview/history)</td>
</tr>
<tr>
<td>Allergies</td>
<td>Severe allergy: permanently unfit</td>
</tr>
<tr>
<td></td>
<td>Seasonal allergy: may be bled during symptom-free period</td>
</tr>
<tr>
<td></td>
<td>Defer if on steroids or desensitization injections</td>
</tr>
<tr>
<td>Anaemia</td>
<td>Only iron deficiency anaemia is acceptable after treatment</td>
</tr>
<tr>
<td></td>
<td>All other causes: permanently unfit</td>
</tr>
<tr>
<td>Anaesthesia</td>
<td>See Surgery</td>
</tr>
<tr>
<td>Angina pectoris</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Arthritis</td>
<td>Acceptable unless acute or refer to Medical Officer</td>
</tr>
<tr>
<td>Asthma</td>
<td>Acceptable between attacks if not on a course of steroid therapy. If on drugs, refer to Medical Officer</td>
</tr>
<tr>
<td>Biopsy</td>
<td>Acceptable if benign and healed</td>
</tr>
<tr>
<td>Blood diseases</td>
<td>Permanently unfit, except for iron deficiency anaemia</td>
</tr>
<tr>
<td>Blood transfusion</td>
<td>Acceptable 1 year after treatment if no other contraindications</td>
</tr>
<tr>
<td>(including human plasma-</td>
<td>(including human plasma-derived medicinal products)</td>
</tr>
<tr>
<td>derived medicinal products)</td>
<td></td>
</tr>
<tr>
<td>Boils</td>
<td>Acceptable after 3 weeks</td>
</tr>
<tr>
<td>Brain injury</td>
<td>Permanent brain injury: permanently unfit</td>
</tr>
<tr>
<td>Bronchitis (acute)</td>
<td>Acceptable 1 month after recovery</td>
</tr>
<tr>
<td>Brucellosis (undulant fever)</td>
<td>Acceptable 1 year after recovery as serum donor only</td>
</tr>
</tbody>
</table>
### Medical history selection criteria (guideline examples only)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Acceptability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burns (minor)</td>
<td>Acceptable, if no sepsis</td>
</tr>
<tr>
<td>Cancer</td>
<td>Acceptable after 5 years if no recurrence, with letter from doctor</td>
</tr>
<tr>
<td>Cerebrovascular disease</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Chagas disease</td>
<td>Local criteria to be defined</td>
</tr>
<tr>
<td>Chest pains/shortness of breath on exertion</td>
<td>Defer until fit, with letter from doctor</td>
</tr>
<tr>
<td>Chickenpox</td>
<td>Acceptable after recovery, minimum 3 weeks; as serum donor for plasma fractionation, 3 weeks – 3 months after attack</td>
</tr>
<tr>
<td>Chickenpox contact</td>
<td>Acceptable if donor has previously suffered from chickenpox; otherwise, defer for 3 weeks</td>
</tr>
<tr>
<td>Cholecystitis</td>
<td>Acceptable after recovery</td>
</tr>
<tr>
<td>Colitis (ulcerative)</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Common cold</td>
<td>Defer if donor has a temperature</td>
</tr>
<tr>
<td>Concussion</td>
<td>Acceptable 3 months after recovery or refer to Medical Officer</td>
</tr>
<tr>
<td>Convulsions as adult</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Coronary artery disease</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Cystitis</td>
<td>Acceptable 3 weeks after recovery</td>
</tr>
<tr>
<td>Dengue fever</td>
<td>Acceptable 1 month after recovery or contact</td>
</tr>
<tr>
<td>Dermatitis (eczema, psoriasis)</td>
<td>Acceptable when quiescent, if venepuncture site clear, not on systemic treatment and no indication of HIV/AIDS</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Diet-controlled: acceptable with letter from doctor</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>Acceptable 3 months after recovery</td>
</tr>
<tr>
<td>Diverticulitis</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Dysentery (amoebic)</td>
<td>Acceptable 1 month after recovery</td>
</tr>
<tr>
<td>Dysentery (bacillary)</td>
<td>Acceptable 1 month after recovery</td>
</tr>
<tr>
<td>Embolism</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Emphysema</td>
<td>Permanently unfit, unless with letter from own doctor</td>
</tr>
<tr>
<td>Encephalitis</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Fainting</td>
<td>Permanently unfit after 3 consecutive faints</td>
</tr>
<tr>
<td>Fracture</td>
<td>Minor fractures: acceptable after 3 months e.g. crack fracture, closed reduction of ankle/wrist</td>
</tr>
<tr>
<td>Gall stones</td>
<td>Acceptable after recovery</td>
</tr>
<tr>
<td>Gastroenteritis</td>
<td>Acceptable after 1 month</td>
</tr>
<tr>
<td>German measles</td>
<td>Acceptable 3 weeks after recovery</td>
</tr>
<tr>
<td>Glandular fever</td>
<td>Acceptable 6 months after recovery</td>
</tr>
</tbody>
</table>
## Medical history selection criteria (guideline examples only)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Acceptability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glaucoma</td>
<td>Acceptable after treatment</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>unfit; acceptable 1 year after treatment if complete cure and no risk activities for 3 years</td>
</tr>
<tr>
<td>Gout</td>
<td>Acceptable if quiescent and not on systemic treatment</td>
</tr>
<tr>
<td>Haematuria</td>
<td>Acceptable after recovery, depending on the cause</td>
</tr>
<tr>
<td>Haemochromatosis</td>
<td>unfit, but may be accepted by medical officer for therapeutic bleeding on written authority from own doctor</td>
</tr>
<tr>
<td>Haemorrhoids</td>
<td>Acceptable if asymptomatic</td>
</tr>
<tr>
<td></td>
<td>Haemorrhoid injection: acceptable after 1 month</td>
</tr>
<tr>
<td>Hay fever</td>
<td>Acceptable during symptom-free period</td>
</tr>
<tr>
<td>Head injury</td>
<td>Acceptable 3 months after recovery</td>
</tr>
<tr>
<td>Heart disease</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Hepatitis A contact (household)</td>
<td>Acceptable after 6 months</td>
</tr>
<tr>
<td>Hepatitis B infection</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>Hepatitis C infection</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>Herpes (cold sores)</td>
<td>Unacceptable until all lesions have healed; acceptable when donor has completed treatment and completely healed, provided no history of other sexually-transmitted disease</td>
</tr>
<tr>
<td>HIV</td>
<td>See AIDS/HIV</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Defer or refer to own doctor</td>
</tr>
<tr>
<td>Hyperthyroidism</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>Hypotension</td>
<td>Acceptable minimum 90/50 mmHg; if lower, defer</td>
</tr>
<tr>
<td>Hypothyroidism</td>
<td>unfit</td>
</tr>
<tr>
<td>Infectious mononucleosis</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Influenza</td>
<td>Acceptable after recovery</td>
</tr>
<tr>
<td>Injecting drug use</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>Malaria</td>
<td>National policies to be followed in malaria-free parts of the world.</td>
</tr>
<tr>
<td></td>
<td>In non-endemic areas, all donors should be questioned as to whether they have visited a malaria area within the previous 0–21 days.</td>
</tr>
<tr>
<td></td>
<td>i) If they have, defer until 3 weeks after their return if they did not take any prophylaxis</td>
</tr>
<tr>
<td></td>
<td>ii) If they have, and did contract malaria, defer for 6 months after they have received a full course of the recommended treatment and have been clinically symptom-free of malaria</td>
</tr>
<tr>
<td>Malaria</td>
<td>Local criteria to be followed in endemic areas</td>
</tr>
<tr>
<td></td>
<td>Measles acceptable after recovery, minimum 3 weeks</td>
</tr>
<tr>
<td>Measles contact</td>
<td>Acceptable if donor has previously suffered from measles; otherwise defer for 3 weeks</td>
</tr>
<tr>
<td>Menière disease</td>
<td>Acceptable, if symptom-free</td>
</tr>
<tr>
<td>Meningitis</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Menstruation</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Migraine</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Condition</td>
<td>Acceptability</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Multiple sclerosis (disseminated)</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Mumps</td>
<td>Acceptable after recovery, minimum 3 weeks</td>
</tr>
<tr>
<td>Mumps contact</td>
<td>Acceptable if donor has previously suffered from mumps; otherwise, defer for 3 weeks</td>
</tr>
<tr>
<td>Nephritis (acute)</td>
<td>Acceptable 6 months after recovery (includes kidney stones)</td>
</tr>
<tr>
<td>Nephritis (chronic)</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Osteomyelitis</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Pancreatitis</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Peptic ulcer</td>
<td>Acceptable if no haemorrhage for 6 months, provided only on diet or antacids</td>
</tr>
<tr>
<td>Peritonitis</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Phlebitis</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>Acceptable 6 months after recovery, but check underlying disease; unacceptable if possibility of malignancy</td>
</tr>
<tr>
<td>Pneumothorax</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Poliomyelitis</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Polycythemia vera</td>
<td>Acceptable for therapeutic bleeding only on written authority from own doctor</td>
</tr>
<tr>
<td>Porphyria</td>
<td>To bring a letter from own doctor</td>
</tr>
<tr>
<td>Pregnancy (breastfeeding)</td>
<td>Acceptable 6 months after delivery or 1 year if breastfeeding</td>
</tr>
<tr>
<td>Psychiatric disorder</td>
<td>Unfit or refer to Medical Officer</td>
</tr>
<tr>
<td>Pyelitis</td>
<td>Acceptable 3 months after recovery</td>
</tr>
<tr>
<td>Raynaud disease</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Renal colic</td>
<td>Acceptable when symptom-free</td>
</tr>
<tr>
<td>Respiratory infection (upper)</td>
<td>Acceptable 3 weeks after recovery</td>
</tr>
<tr>
<td>Rheumatic fever</td>
<td>Acceptable only after consultation with Medical Officer</td>
</tr>
<tr>
<td>Rheumatism</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Rubella</td>
<td>Acceptable after recovery, minimum 3 weeks</td>
</tr>
<tr>
<td>Rubella contact</td>
<td>Acceptable after 3 weeks</td>
</tr>
<tr>
<td>Sarcoïdosis</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Scabies</td>
<td>Acceptable when symptom-free</td>
</tr>
<tr>
<td>Scarlet fever</td>
<td>Acceptable after 3 weeks</td>
</tr>
<tr>
<td>Schistosomiasis</td>
<td>Acceptable 1 month after treatment</td>
</tr>
<tr>
<td>Septicaemia</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Shingles</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>Skin disease</td>
<td>Acceptable when quiescent, venepuncture site clear, not on systemic treatment and no relation with HIV/AIDS</td>
</tr>
<tr>
<td>Sleeping sickness</td>
<td>Acceptable after 3 weeks after recovery</td>
</tr>
<tr>
<td>Snake bite</td>
<td>Acceptable after recovery, minimum 6 months</td>
</tr>
<tr>
<td>Condition</td>
<td>Acceptability</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Stab injuries</td>
<td>Acceptable after 6 months</td>
</tr>
<tr>
<td>Surgery</td>
<td>Exclude the following:</td>
</tr>
<tr>
<td></td>
<td>- Any cardiac surgery</td>
</tr>
<tr>
<td></td>
<td>- Total gastrectomy</td>
</tr>
<tr>
<td></td>
<td>- Splenectomy, except post-trauma</td>
</tr>
<tr>
<td></td>
<td>- Nephrectomy, except post-trauma</td>
</tr>
<tr>
<td></td>
<td>Defer for 3 months after the following minor surgery:</td>
</tr>
<tr>
<td></td>
<td>- appendicectomy</td>
</tr>
<tr>
<td></td>
<td>- closed reduction of small fractures e.g. ankle/wrist</td>
</tr>
<tr>
<td></td>
<td>- haemorrhoidectomy</td>
</tr>
<tr>
<td></td>
<td>- hernia repair</td>
</tr>
<tr>
<td></td>
<td>- lumpectomy (breast)</td>
</tr>
<tr>
<td></td>
<td>- stripping of varicose veins</td>
</tr>
<tr>
<td></td>
<td>- tonsillectomy</td>
</tr>
<tr>
<td></td>
<td>Defer 6 months after the following major surgery:</td>
</tr>
<tr>
<td></td>
<td>- circumcision in adults (tribal customary)</td>
</tr>
<tr>
<td></td>
<td>- cholecystectomy</td>
</tr>
<tr>
<td></td>
<td>- craniotomy/neurosurgical procedures, provided no neurological sequelae</td>
</tr>
<tr>
<td></td>
<td>- hysterectomy</td>
</tr>
<tr>
<td></td>
<td>- laminectomy/spinal fusion</td>
</tr>
<tr>
<td></td>
<td>- laparotomy – vagotomy pyloroplasty</td>
</tr>
<tr>
<td></td>
<td>- major trauma due to road traffic accidents</td>
</tr>
<tr>
<td></td>
<td>- thyroidectomy</td>
</tr>
<tr>
<td></td>
<td>- any surgery requiring blood transfusion</td>
</tr>
<tr>
<td>Minor procedures:</td>
<td>These will depend on nature of procedure and should be left to the discretion of the clinic sister</td>
</tr>
<tr>
<td></td>
<td>- general anaesthetic: defer 1 week</td>
</tr>
<tr>
<td></td>
<td>- dental operations under local anaesthetic: 72 hours</td>
</tr>
<tr>
<td></td>
<td>- dental operations under general anaesthetic: 1 month</td>
</tr>
<tr>
<td>Syphilis</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>Tetanus</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Thrombophlebitis</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Thyrotoxicosis</td>
<td>Permanently unfit</td>
</tr>
<tr>
<td>Tick bite fever</td>
<td>Acceptable 2 months after recovery</td>
</tr>
<tr>
<td>Tonsillitis</td>
<td>Acceptable after recovery</td>
</tr>
<tr>
<td>Toxoplasmosis</td>
<td>Acceptable after recovery</td>
</tr>
<tr>
<td>Trypanosomiasis</td>
<td>Acceptable after 3 months</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>Acceptable 5 years after recovery, provided no relation with HIV/AIDS</td>
</tr>
<tr>
<td>Typhoid</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Typhoid contact</td>
<td>Acceptable after 1 month</td>
</tr>
<tr>
<td>Typhus</td>
<td>Acceptable 6 months after recovery</td>
</tr>
<tr>
<td>Underweight</td>
<td>Unfit</td>
</tr>
<tr>
<td>Undulant fever</td>
<td>Acceptable after one year as a serum donor</td>
</tr>
</tbody>
</table>
Venepuncture

PREPARATION

Blood should be drawn from a large, firm vein in an area that is free from skin lesions.

Procedure

1. Inspect both of the donor’s arms to select the better one.
2. Ask the donor to remove any tight-fitting sleeved clothing, if possible, or to roll up loose sleeves.

APPLYING THE SPHYGMOMANOMETER

Procedure

1. Gently apply the deflated sphygmomanometer cuff around the donor’s upper arm, approximately 6 cm above the elbow. The rubber tubing and hand bulb should be at the top.
   The anaeroid gauge should register 0 before inflation.
2. Inflate the cuff and record the blood pressure on the donor’s card.
3. Talk to the donor while waiting for a medical officer, nurse or other trained member of staff to come and perform the venepuncture.

SELECTING A VEIN

The area should be free from skin lesions or evidence of infection. Veins in the antecubital fossa should be used and no more than one venepuncture should be performed on each arm.

Selection of an adequate vein ensures a “clean” venepuncture, rapid withdrawal and donor comfort. Always give an adequate explanation of the procedure to maintain the donor’s trust and respect.

The vein selected should have sufficient diameter, be turgid and have adequate tissue support for the retention of the venepuncture needle throughout the entire procedure for the withdrawal of blood. The most obvious visible vein is not necessarily the most suitable one, as superficial veins are often too narrow.

Procedure

1. Greet the donor and, during the process of selecting a vein, ask the following questions to identify any potential problems:
   - Have you donated blood before?
   - Are you keeping well? Are you attending the doctor or on any medication?
   - Have you had any problems when donating blood in the past?
2. Inflate the sphygmomanometer cuff to 80/100 mmHg.
3. Ask the donor to clench and release his or her hand several times and then to make and maintain a clenched fist.
4. Examine and palpate the turgid veins in the antecubital fossa and select the vein.
5. Check the donor’s record card where relevant information from previous donations should have been recorded: e.g. “Felt faint after donation”.

PREPARING THE SKIN

Once blood is outside the body, it can serve as an ideal medium for bacterial growth. Blood cannot be sterilized without destroying many of its components. It is therefore important to prevent contamination at the time of blood withdrawal. Skin preparation before phlebotomy deserves the attention usually devoted to a minor surgical procedure.

There are distinct groups of microorganisms present in the skin causing contamination: normal
flora and ‘hidden’ bacteria which are harboured in main follicles and sebaceous glands.

The skin can never be made free of ‘hidden’ bacteria and therefore cannot be made sterile. It can only be made surgically clean.

There is no way to prepare a completely aseptic site for venepuncture, but surgical cleanliness can be achieved to provide maximum assurance of a sterile unit of blood.

Procedure
1. Starting at the intended site of venepuncture, clean the antecubital fossa, using an enlarging concentric circular pattern. The area should be 10 cm x 10 cm. Prepared swabs containing 70% isopropanol alcohol are commonly used. (See Section 7 of the Introductory Module on the preparation of basic solutions and the Appendix for a standard operating procedure for the preparation of an antiseptic solution for donor arm cleansing.)

2. Allow this to dry on the prepared arm. If possible, do not touch the site of venepuncture following skin preparation, unless your fingers are surgically clean.

VENEPUNCTURE

The venepuncture requires a smooth, clean entry with the needle. Swiftly pierce the skin, with the needle held at an angle of approximately 45°. For the second thrust, lower the needle until it is almost parallel to the skin before carefully entering the vein.

Procedure
1. Check that the sphygmomanometer pressure is still at 80 mmHg or above and that the cubital vein is engorged.

2. Clamp the donor tubing just by the needle guard, using a pair of artery forceps.

3. A local anaesthetic injection of 1% lidocaine (0.3 ml) may be given subcutaneously at the intended site of skin puncture approximately 1 cm below and to the side of the intended vein entry.

4. Remove the needle guard.

5. Place your free hand well below the prepared area in order to pull the skin taut over the puncture site.

6. Holding the needle at a 45° angle, aim it carefully through the local anaesthetic ‘bump’ and puncture the skin with a quick thrust.

7. Lower the angle of the needle 10–15° and, with a steady thrust, advance the needle to pierce the vessel wall.

8. Remove the occluding forceps and, depending on the local anatomical layout of the venous system, advance the needle 1–2 cm inside the lumen of the vein. Blood should now flow freely into the pack.

9. Reduce the sphygmomanometer pressure to 40–50 mmHg.

10. Secure the needle with two pieces of tape.

11. Cover the venepuncture site with a sterile gauze swab.

12. Ask the donor if the arm feels comfortable. Also ask the donor not to twist or turn the arm and to make a fist and release it every 10 seconds in order to encourage a better flow.

13. If the session is not too busy, remain to talk to the donor. Before leaving the donor, always check that there is a donor assistant looking after him or her.

FILLING THE BLOOD PACK

The volume of blood to be collected will depend on the weight of the donor and the type and size of the blood pack used. National or local guidelines should always be followed.

The filling of the blood container should be monitored, using a spring balance or blood donor
scales. A filled unit must not be obtained at the expense of donor comfort or safety.

**Note:** Before using a spring balance or scales, it is important to ensure that the actual weight of a full blood pack is known and marked on the balance or scale. This can easily be done by filling an unused pack with water to the volume required. Take note of its weight and mark it on the scales or balance so that when that weight is reached when collecting blood, the donation can be stopped.

**Procedure**

1. Mix the blood with the anticoagulant. In the absence of an automatic shaker or rocking device, take special care to thoroughly agitate the blood with the anticoagulant in the primary bag by gently lift-tilting the bag during the first minute and then at least three times while the bag is filling. Do not knead or squeeze the blood bag. Proper mixing will prevent clot formation and keep red cell injury to a minimum.

2. When the appropriate amount has been collected, clamp the tubing with two sets of artery forceps and cut between the forceps. Tie off or seal the tubing to the blood bag and strip the tubing to mix the blood with the anticoagulant in the pack.

3. Release the forceps attached to the needle tubing to allow blood to flow into the pilot tubes and sample containers. Ask the donor to relax his or her fist.

4. Gently remove the needle and apply a sterile swab and pressure to the venepuncture site. Dispose of the needle safely in a puncture-proof container that is kept specially for the disposal of ‘sharps’.

5. Check that the donation numbers or codes on the blood pack match those on the sample tubes and the donor’s card.

6. Ensure that the venepuncture site is not bleeding and apply a dressing.

7. Thank the donor and escort him or her to the resting area.
APPENDIX 9

Adverse donor reactions

PROBLEMS WITH BLOOD FLOW

Occasionally, venepuncture is unsuccessful or the vein may develop spasm after venepuncture so that blood flow is not maintained.

If this happens:

1. Do not try to probe around in the vein, as this can result in a haematoma and discomfort for the donor.
2. Remove the needle and discard the pack as it will be contaminated.
3. Never resite the needle in the same arm.
4. Reassure the donor, giving a full explanation for the unsuccessful venepuncture in order to retain their confidence, and apologize.

If the donor consents, a further venepuncture on the other arm may be attempted, provided that a suitable vein is located. No more than a total of 450 ml of blood should be withdrawn from both sides.

If there is a failure to maintain a blood flow during the collection, the person who has performed the venepuncture should be informed immediately.

Slowing of the flow rate may be due to:

- reduced cuff pressure: check that cuff pressure has been maintained
- occlusion of the lumen of the needle by the vein wall: rotating the needle may help
- positioning of the lumen of the needle on a valve within the vein: try to re-establish the flow by withdrawing the needle gently or even by slight rotation of the needle.

Before doing any of these things:

1. Explain that there is a problem with the blood flow and ask whether the donor is experiencing any discomfort.
2. Remove the swab and check that there is no haematoma present.
3. If there are no other apparent problems, proceed with adjusting the needle.
4. Avoid excessive manipulation of the needle or squeezing the donor tubing as small clots may form which will then be released into the circulation.

A failure to re-establish a blood flow will result in a partial collection. This should be marked on the donor’s record card and the donor should be given an explanation and apology. If the collection is too slow, the donation should be discontinued. This should be recorded on the donor’s record card.

HAEMATOMA

Haematoma can be prevented by good venepuncture technique and application of adequate pressure following donation.

If a haematoma is noted:

1. Stop the donation.
2. Apply firm pressure until the venepuncture site stops oozing blood.
3. Apply an anti-inflammatory cream in a circular motion over the area and cover it with a small plaster or swab dressing. Then apply a pressure bandage.
4. Reassure the donor, explaining what has happened and the reason for the bruise, and then apologize.
5. Ask the donor to keep the dressing on for 24 hours and the bandage for 2–4 hours. If they feel that it is too tight and stopping their circulation, it should be loosened.
6. Tell the donor that they can use their arm normally, but should not lift any heavy objects. Also tell them that they can take painkillers.
for moderate discomfort, but that if the area becomes unduly painful they should contact the transfusion centre or their own doctor.

7 Record details of the haematoma on the donor’s record card.

ACCIDENTAL PUNCTURE OF THE ARTERY

This is an uncommon complication of blood donation, but you should be able to recognize it immediately by a very fast flow of bright red blood.

If accidental puncture of the artery occurs:

1 Discontinue the donation immediately and apply hard pressure to the puncture site immediately after the withdrawal of the needle. Raise the limb above heart level.

2 Maintain pressure for a minimum of 15 minutes.

3 When the bleeding has stopped, apply a pressure bandage and tell the donor to keep this on for 4–6 hours.

4 Reassure the donor, giving a full explanation of what has happened, and apologize.

5 Record the appropriate information on the donor’s record card.

6 Do not allow the donor to leave until they are feeling well and after the most senior member of the donor clinic staff has discharged them.

7 If you suspect that tissue bleeding may still be continuing, refer the donor to the nearest hospital or health centre. If the donor lives near the donor clinic, ask them to come back for assessment the following day.

MILD, MODERATE OR SEVERE REACTIONS

Most people can tolerate the withdrawal of 450 ml of blood without any ill-effects. Others experience reactions ranging in severity from a feeling of ‘uneasiness’ to obvious shock-like symptoms, fainting or even generalized convulsions. These reactions can occur at any time – during the donor selection process, during donation, in the resting or refreshment area or even hours following a donation.

There is a psychological element to most reactions, so a friendly, cheerful atmosphere at the session can often reduce donor anxiety and perhaps prevent any adverse reactions. Donor reactions do sometimes occur, however, and can be categorized as follows:

Mild: vasovagal symptoms without loss of consciousness.

Moderate: a progression of symptoms associated with a mild donor reaction, resulting in unconsciousness.

Severe: any of the above, accompanied by convulsions (uncommon).

Mild donor reactions

The signs of mild donor reactions include:

- anxiety
- increased respiration
- rapid pulse
- pallor and mild sweating
- dizziness/continuous yawning
- nausea/vomiting.

When mild donor reactions occur:

1 Discontinue the donation.

2 Raise both of the donor’s legs and lower the head to improve the blood supply.

3 Loosen or remove tight clothing.

4 Keep the donor cool by opening windows or switching on a fan.

5 Have a suitable receptacle available at the bedside in case the donor vomits.

6 Allow a sufficient rest period.

7 Offer a cool drink.

8 Once the donor has recovered, assist them from the bed to the
refreshment area where another cool drink should be given.

9 Reassure and talk to the donor throughout all these stages. Explain that this type of reaction is common and does not mean that they are now physically ‘unwell’.

10 Record the reaction on the donor’s record card.

11 Advise the donor that, if symptoms persist, they should report to the blood bank or consult a doctor or nurse.

12 Ensure that the donor is fully recovered before leaving the session and has been seen by a trained member of staff.

**Moderate donor reactions**

The signs of moderate donor reactions include:

- loss of consciousness (fainting)
- repeated periods of unconsciousness
- a slow pulse, which may be difficult to feel because of poor volume
- shallow respiration.

When moderate donor reactions occur:

1 Discontinue the donation.

2 Raise both of the donor’s legs and lower the head.

3 Ensure that the donor is examined by a medical officer or senior nurse.

4 Loosen or remove tight clothing.

5 Keep the donor cool by opening windows or switching on a fan.

6 Have a suitable receptacle available at the bedside in case the donor vomits.

7 Check the pulse rate regularly. The appearance of the donor and the pulse rate are a good guide to the donor’s condition.

8 If possible, remove the donor to another room for privacy and to prevent other donors from seeing what is happening.

9 If there is no other room available, put screens around the donor.

10 Ensure that someone remains with the donor.

11 Reassure and talk to the donor throughout all these stages. It may be necessary to advise the donor not to donate in future.

12 Record the reaction on the donor’s record card.

13 Ensure that the donor rests for some time and is fully recovered before leaving.

14 Advise the donor that if symptoms persist, they should contact their doctor or the nearest hospital.

15 Ensure that the donor is discharged by a senior member of staff.

16 Where feasible, arrange transport home for the donor.

**Severe donor reactions**

A faint may be accompanied by convulsions. Convulsions may be preceded by all the signs and symptoms of a vasovagal attack or they may occur without warning. Convulsions vary in severity from loss of consciousness accompanied by a slight twitching of extremities to a grand mal type seizure with incontinence of urine or faeces. A medical officer or trained nurse must be called immediately.

Faints are common, but convulsions are very uncommon. If the correct procedure for donor screening has been carried out through the medical history and health check, convulsions should not occur. Most convulsions stop within a few minutes, but they are often very upsetting for other donors, so staff not actively involved in looking after a convulsing donor should distract and reassure other donors.

When generalized convulsions occur:

1 Turn the donor to a lateral position to maintain a clear airway.

2 Gently restrain the donor to prevent any injury.

3 Put screens around the donor to maintain privacy.
4 Check the pulse rate frequently.
5 Ensure that the donor is examined by a medical officer or senior nurse.
6 Loosen tight clothing.
7 Keep the donor cool by opening windows or switching on a fan.
8 If a convulsion lasts longer than five minutes, this is a medical emergency and a medical officer must be in attendance. Diazepam may be given intravenously under the direction of the medical officer. Intramuscular diazepam is ineffective in these circumstances.
9 Reassure the donor and explain what has happened.
10 Tactfully advise the donor not to donate blood again.
11 Record the incident:
   - on the donor’s record card
   - in the clinic incident book.
12 Recheck the donor’s medical history and record of the predonation health check to identify whether there were any indications that a convulsion might occur.
13 Advise the donor that they should contact their doctor or the nearest hospital.
14 Ensure that the donor rests for some time and is fully recovered before leaving the session.
15 Ensure that the donor is discharged by a medical officer or a very senior member of staff.
16 Inform the donor’s own doctor about the incident.
17 Arrange transport home for the donor when fully recovered and ensure that they are escorted or arrange for their transfer to hospital.

**HYPERVENTILATION**

Hyperventilation is a rapid overbreathing that lowers the carbon dioxide content of blood. In turn, this leads to muscle spasms. Talking to the donor to reassure them and relieve anxiety should prevent hyperventilation. If hyperventilation occurs:

1 Instruct the donor to breathe quietly and slowly, but not deeply.
2 If this fails to relieve muscle spasms, instruct the donor to rebreathe the expired air into a paper bag.
3 Explain what is happening and reassure the donor.

**ACCIDENTS**

There may be a risk of injury to the head or body if a donor faints and falls.

When head injuries or other injuries requiring medical attention occur:

1 Always ensure that the donor is examined by a medical officer or senior nurse.
2 If there is any doubt about the donor’s condition, arrange for their transfer to hospital with a doctor or qualified nurse as escort.
3 Record the incident:
   - on the donor’s record card
   - on an accident form (this should also be filled in if a member of staff is involved in an accident)
   - in the clinic incident book.

If the injury is of a minor nature:

1 Ensure that the donor rests for some time and is fully recovered before leaving, unless transfer to hospital has been arranged.
2 Ensure that the donor is discharged by a senior member of staff who should decide whether the donor’s own doctor should be informed.
3 Advise the donor that if they feel unwell, they should contact their doctor or the nearest hospital.