INTRODUCTION

What is Apheresis?

Apheresis is a procedure by which fluid or cellular components are separated from the circulating blood either for the preparation of transfusion products (donor apheresis) or for the treatment of human diseases (therapeutic apheresis).

Donor apheresis is generally performed on healthy subjects, the duration tends to be short and side effects are rare, whereas patients undergoing therapeutic apheresis are frequently ill and may have complicating medical problems. Treatment often lasts longer and is usually repeated several times over the course of a few days.

The Apheresis Unit performs Therapeutic Plasma Exchange, Peripheral Blood Stem Cell Collection and Therapeutic Cytapheresis.

Staff Orientation

The Apheresis orientation is a guideline. Flexibility of procedures will be decided in accordance with the demand for specific procedures.

Length of Orientation

The length of time needed to cover the orientation program will be determined by the needs of the individual staff member. A minimum of 6 weeks is recommended for all orientees.

The new employee to Apheresis will not be in a position of independent practice until an adequate number of procedures have been performed under direct supervision and until the orientee has met proficiency standards and is comfortable with independently performing procedures.

Week end call duty will not be assumed by the orientee until after a minimum of 3 months orientation and/or the orientee has reached a comfort level satisfactory to the Apheresis Unit, the orientation assistant and the orientee.
APHERESIS UNIT ORIENTATION

Competency-Based Orientation
This CBO program consists of three components:

1. **Competency Statements**
   These are performance outcomes written as behavioral objectives. Competency statements answer the question "What does the Apheresis nurse need to do to competently perform in this setting?"

2. **Critical Behaviours**
   These are component parts of the broader competency statements and define the knowledge and skills necessary for competency achievement. Critical behaviours are also called criteria-referenced behaviours and resemble a criterion checklist.

1. **Learning Options**
   These are the educational methods offered to the orientee. Learning options in a CBO program are varied and flexible and are designed around the identified critical behaviours.

   With competency-based orientation the emphasis is on the attainment of competencies not on the instructional method.

   The orientee is given the opportunity to actually perform the outlined competencies with supervision and thus to safely and effectively care for the apheresis patient/donor.

   The critical behaviour checklist assures both orientee and orientation assistant that competent practice has been attained.

   This competency-based orientation incorporates both a formative and summative form of evaluation during the clinical orientation period. The formative evaluation occurs as an ongoing process and each clinical experience provides the orientee with regular feedback of his/her progress.

   The critical behaviours do not have to be achieved in any specific order or sequence, which allows for individual progression to master each competency requirement.

   Summative evaluation occurs at the end of the orientation when the orientee must safely and competently complete the experience (rated pass or fail) before being allowed to care for patients/donor, without an orientation assistant.

   Limitation of the CBO program is that the learning experiences involving actual patient care may not include all the necessary experiences that an orientee must complete. In situations where this has occurred, the orientation assistant may need to validate the orientees responses in a simulated setting.
ORIENTATION - GOALS AND OBJECTIVES

GOALS

1. To understand the meaning of Apheresis
   ♦ Types of procedures
   ♦ Category of diseases treated
   ♦ Trouble shooting
   ♦ Patient management

2. Philosophy of the Apheresis Unit
   ♦ Read Policy and Procedure Manual
   ♦ Schedule of hours of work
   ♦ On call service
   ♦ Medical coverage

OBJECTIVES

1. WEEK 1
   - Introduction to Unit and staff
   - Hours of work
   - Medical coverage
   - Types of diseases
   - Principles of Apheresis
   - Introduction
   - Practice set-up machine
   - Introduction anticoagulant and reactions
   - Patient management

2. WEEK 2

Orienteer will:
   - Initiate set up of apheresis system
   - Demonstrate understanding of ACDA and reactions to anticoagulant
   - Verbalize understanding of patient reactions and side effects of apheresis procedures
   - Practice venipuncture and be introduced to central lines used for apheresis procedures
   - Receive introduction to troubleshooting
3. WEEK 3

Orientee will:

- Independently set up apheresis system
- Verbalize understanding of citrate reactions and intervene to correct reactions if and when they occur
- Perform independent assessment of pre procedure
- Demonstrate understanding of central line catheter care including preparation of tray for on/off protocol, assessment of site dressing and patency of lines
- Recognize and check up on alarms. Be familiar with troubleshooting the cell separator

4. WEEK 4

Orientee will:

- Independent initiation and performance of procedure and termination of cell collection using the Cobe Spectra
- Independent assessment and management of apheresis patient
- Recognize and manage signs and symptoms of adverse reactions in patients
- Independent assessment of alarm conditions and ability to troubleshoot the Cobe Spectra
- Independent initiation and performance of catheter care and venipuncture
- Demonstrates understanding of the interaction between Apheresis and various other departments e.g. Blood Bank, Medical Day Unit, Bone Marrow Coordinator

THEORY


Audiovisual

- Anatomy of arm
- Venipuncture

Resource Articles

- Principles of Apheresis Technology. AA BB Standards of Practice
### Basic Skills/Knowledge Required:

<table>
<thead>
<tr>
<th>Skill</th>
<th>Resource/Approach</th>
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<tbody>
<tr>
<td>1. Assessment</td>
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<tr>
<td>a. Functional Health assessment through interview and obtaining a history.</td>
<td>Documentation Package</td>
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<tr>
<td>b. Can complete a physical assessment - multi functional</td>
<td>Physical assessments texts, videos, Texts - Hematology Disorders, Practice with preceptor</td>
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<tr>
<td>2. a. Intravenous Therapy</td>
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<tr>
<td>- Initiate peripheral IV</td>
<td>Policy and Procedure for Intravenous Therapies</td>
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<tr>
<td>- Discontinue peripheral IV</td>
<td>Learning Module for Central Lines</td>
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<td>- Central Line dressing change</td>
<td>Practice with preceptor</td>
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<td>- IV med administration</td>
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<tr>
<td>- Universal precautions</td>
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<tr>
<td>- Management and admin. of blood transfusion</td>
<td>Policy and Procedure for blood and blood products administration</td>
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<tr>
<td>- Management and admin of other blood products</td>
<td>Practice with preceptor</td>
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<tr>
<td>- X-match procedure</td>
<td>Learning Package</td>
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<tr>
<td>- Recognizes symptoms of transfusion reactions and complications</td>
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<td>- Use of universal precautions in handling blood and blood products and body fluids.</td>
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<tr>
<td>3. Obtaining Blood Specimen</td>
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<tr>
<td>- Complete venipuncture</td>
<td>Learning module for venipuncture and blood sampling or blood cultures</td>
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<tr>
<td>- Obtains routine specimens</td>
<td>Policy and procedures</td>
</tr>
<tr>
<td>- Care of injection site</td>
<td>Practice with preceptor</td>
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<tr>
<td>- Process specimens</td>
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<tr>
<td>- Obtain blood cultures</td>
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<td>4. Medication Administration</td>
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<tr>
<td>- Administers meds using unit med admin system</td>
<td>Policy and Procedures of med administration</td>
</tr>
<tr>
<td>- Administers oral, IM, S/C, IV, N/G, S/L, aerosol and topical meds</td>
<td>Practice with preceptor</td>
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<tr>
<td>5. CPR Intervention</td>
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- Current BLS-Certification  
- Knows roles of emergency response team  
- Knows emergency phone number  
- Management of emergency respiratory kit  
- Management of emergency drug box  
- Use and maintenance of emergency defibrillator cart  
- Knows defibrillator lead connections  
- Use of arrest record  
- Certification with CPR instructor  
- Policy and Procedure of CPR  
- Self-learning module for emergency drug box and maintenance of emergency defibrillator cart |

| 6. Unit and Unit Routines |  
| a. Equipment and Use |  
- O2 - Wall  
- Suction - Wall  
- Hand sealer  
- Weigh scale  
- Emergency Drug Box  
- Portable Drug Box  
- Portable cart with supplies for off site procedures  
- Scavenger hunt  
- Practice with preceptor |

| b. Admission/Discharge Information etc. |  
- New patient chart  
- Booking escort and transportation  
- Information package for nursing floors  
- Booking appointments  
- Liaison with physicians  
- Enter patient data in computer for payment of service  
- Transfusion service  
- Hematology rounds  
- Tissue bank  
- Policy in place  
- Practice with preceptor |
APHERESIS UNIT ORIENTATION

COMPETENCY BASED STATEMENTS

1. Demonstrate ability to assess patient/donor pre, during and post apheresis procedure.
2. Recognize and effectively treat patient/donor adverse reactions.
3. Safely transfuse blood components and manage fluid volumes while performing apheresis procedure.
4. Effectively establish and maintain peripheral vascular access.
5. Establish vascular access via central line for apheresis procedure.
6. Demonstrate the ability to install, prime, run and dismantle the cell separator system for an apheresis procedure.
7. Independent initiation, performance of procedure and termination of apheresis procedure using the cell separator system.
8. Independent assessment of alarm conditions and ability to troubleshoot the cell separator system in use.
9. Demonstrate the ability to co-ordinate an apheresis procedure at a physician's request.
10. Independent initiation, performance of and termination of an apheresis procedure, while providing prescribed medical care and nursing support to the patient/donor.
11. Demonstrate the ability to work collaboratively as a team member of the Apheresis Unit, and as a professional representative of your organization.