Module A: Application of the Nursing Process in Caring for the Adult and Child with Common Health Problems of the Hematological System

1. Statement of Purpose

This module will provide an introduction to nursing considerations essential to the adult and child experiencing a dysfunction of the blood and blood-forming organs. An overview of the hematological system and its functions provide an understanding of the common disorders related to red blood cells, defects in hemostasis, and immunologic-deficiency disorders. Many of the hematological dysfunctions are inherited and chronic. Disorders may produce widespread systemic and structural responses in the body. Immediate and extended nursing interventions are planned to assist the patient and family cope with, and adjust to, the hematologic disorder or its complications.

2. Terminology
Hematologic system
Plasma proteins
  albumin
  globulin
  fibrinogen
Formed elements
  erythrocytes
  leukocytes
  thrombocytes
Hemopoietic organs
Reticuloendothelial system
Anemia
  iron deficiency anemia
  sickle cell anemia
  B-thalassemia (Cooley's anemia)
  aplastic anemia
  pernicious anemia
Hemostasis
  hemophilia
  von Willebrand disease
  idiopathic thrombocytopenic purpura (ITP)
Henoch-Schonlein purpura (HSP)
granulocytopenia
disseminated intravascular coagulation (DIC)
epistaxis
Immunodeficiency disorders
acquired immune deficiency disease (AIDS)
human immunodeficiency virus (HIV)
persons with AIDS (PWA)
severe combined immunodeficiency disease (SCID)
Wiskott-Aldrich syndrome
Lymphoma
Hodgkin's disease
non-Hodgkin's lymphoma (NHL)
Polycythemia vera
Multiple myeloma

3. Classroom Objectives
3.1
a. Identify the major functions of the formed elements of the blood and the mechanisms involved in normal coagulation.
b. Review the mechanisms involved in humoral (antibody) and cell-mediated immunity.
c. Discuss the pathophysiology, clinical manifestations, nursing interventions, and medical and surgical modalities for the patient with common disorders of the blood or blood-forming organs.
d. Identify the subjective data obtained during nursing assessment of the adult or child with hematological dysfunction.
e. Discuss the various anemias and contrast the etiology, clinical manifestations, and therapeutic management of each.
f. Identify common defects in hemostasis, the blood-clotting mechanisms, and the most common coagulation disorders.
g. Discuss the clinical manifestations, treatment modalities, and nursing interventions for the care of the patient with neoplastic disorders of the blood and blood-forming organs.
h. Review the functions of the immune system; the etiology and clinical manifestations of common disorders.
i. Identify congenital disorders of the blood and blood-forming organs, and discuss the nursing management for each.
j. Identify pharmacological agents which interfere with coagulation, and discuss the instructions given to the patient about the medication.
k. Discuss nursing care of the bone marrow donor or recipient.
l. Describe the preoperative and postoperative nursing care for the patient experiencing surgery due to a disorder of the
blood and blood-forming organs.

3.2 Learning Activities
   a. Know terminology.
   b. Review the anatomy and physiology of the hematological system.
   c. Discuss, in class, the role of the various components of the blood and blood-forming organs.
   d. Identify diagnostic studies common to the patient with disorders of the blood and blood-forming organs.
   e. Read current articles assigned.
   f. Review assigned audio-visual materials related to disorders of the hematological system.
   g. Complete assigned computer programs.

3.3 References
   a. Current textbooks
   b. Current Anatomy & Physiology Text

4. Clinical Objectives
   a. Complete a nursing plan of care for the adult and child with a hematological disorder. Include family, community, cultural, and psychosocial considerations.
   *** b. Develop a teaching plan for home care of a person with a dysfunction of the hematological system.
   *** c. Identify community resources available to assist in the care and management of a person with a hematological disorder.
   d. If possible, interview the family of a person with a hematological disorder to identify the psycho social impact and coping/support mechanisms of the family unit.
   e. Assess, plan, intervene and evaluate adult and child clients with common disorder of blood and blood forming organs.

   *** Teaching plans are not required of the VN student

5. Skills Laboratory Requirements
   a. Review I.M. injection technique.

   *** Not required of the VN student.