Educational Reference Manual

Core Emergency Medicine Training in Family Medicine Residency Programs

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Introduction

The document, "Educational Reference Manual: Core Emergency Medicine Training in Family Medicine Residency Programs" represents the products of four years of hard work by the many meritorious individuals. It is a compilation of contributions provided by educators in emergency medicine (EM) and family medicine (FM) as well as a smaller section from other fields of medicine. The names of these people appear in the authors' list.

This educational resource has been developed in order to provide all participants in the educational process of FM residency programs with consistent and simple-to-use tools. They reflect the work and commitment of EM educators in Canada to provide training that is consistent with the philosophy and vision of the College of Family Physicians of Canada (CFPC) in this domain. The current educational tools have been formatted along the four principles of FM and echo the view held by FM – EM educators that the practice and teaching of acute care medicine is inalienably linked to these guiding principles. The manual integrates EM education into a logical sequence, and it has been reviewed and accepted by the EM program directors and by key FM educators across Canada.
The use of terms such as "terminal and enabling objectives" and the addition of clinical situations represent an effort by the editors to provide language and an approach to content development that are consistent with current and accepted general medical education guidelines. Their use in the text does not suggest that these are mandated standards.

The manual should prove to be useful to many. The "Part 1: Terminal Objectives" are summarized into short 10 page document. This will assist program directors in planning and developing the education process for their programs. The "Part 2: Study Guide for Programs" are a compilation of clinical case presentations and series of "enabling objectives". The "Study Guides for Programs" will provide educators and residents with practical tools for the delivery of high-quality emergency medicine education.

The document is comprehensive yet minor omissions may have occurred. It does not replace standard textbooks for educational purposes.

Programs in Canada will have the latitude to adapt some of the content to their local specific needs. The task of attaining these objectives by individual residents should be looked at as a full two years of work-in-progress. Training takes place in urban and regional EDs, rural practices, during off-service rotations in other traditional hospital-based disciplines and in some instances in family physicians' offices. Portions of these reference materials can be reviewed throughout all rotations. The ultimate goal for programs should be that by the end of two years of comprehensive training, residents cover most if not all the material in this reference manual.

I.P.S
M.A.P.

PART 1:

TERMINAL OBJECTIVES

Principle No. 1: THE DOCTOR-PATIENT RELATIONSHIP

COMMUNICATION

The competent resident will demonstrate the ability to:

1. Establish a physician-patient relationship and to communicate effectively and compassionately with patients and their families.

ETHICS AND MEDICOLEGAL ASPECTS OF CARE

ETHICAL PROBLEMS

The competent resident will:

1. Understand ethical problems and suggest justifiable solutions.

MEDICOLEGAL PRINCIPLES

The competent resident will:

1. Demonstrate knowledge about patient confidentiality, informed consent, competence and substitute decision makers, about proper interaction with law enforcement agencies and about the role of the medical examiner's office..

Principle No. 2: THE FAMILY PHYSICIAN AS AN EFFECTIVE CLINICIAN

PRINCIPLES OF EMERGENCY MEDICINE

APPROACH TO THE EMERGENCY PATIENT

The competent resident will have an understanding and be able to demonstrate basic skills in:

1. Evaluating and initiating management in a patient presenting with an urgent or emergent problem.

ANAESTHESIA ANALGESIA AND PROCEDURAL SEDATION

TOPICAL, LOCAL AND REGIONAL ANESTHESIA

The competent resident will show the ability to:

1. Understand the use and role of topical and local anesthetic agents and to perform topical and local anesthesia.

ANALGESIA

The competent resident will:

1. Evaluate the various options and select an appropriate method of relieving pain for ED patients.

PROCEDURAL SEDATION

The competent resident will:

1. Have a working knowledge of the various options and be able to select a method of providing sedation and analgesia for ED patients undergoing painful or anxiety-provoking procedures.

RESUSCITATION

AIRWAY MANAGEMENT

The competent resident will demonstrate the ability to:

1. Recognize situations requiring emergency airway intervention.
2. Demonstrate basic airway management skills.
3. Perform an appropriate airway assessment.
4. Perform orotracheal intubations.
5. List potential alternatives to orotracheal intubations.

BREATHING

The competent resident will demonstrate the ability to:

1. Recognize and initiate management in a patient with acute respiratory distress.
2. List situations requiring assisted or controlled ventilation,
3. Manage ventilatory failure.

CIRCULATION

SHOCK

The competent resident will:

1. Demonstrate the ability to identify, classify and treat shock.

VASCULAR ACCESS FOR DRUGS, FLUIDS, AND INVASIVE MONITORING

The competent resident will:

1. Identify circumstances requiring vascular access or.
2. Obtain appropriate vascular access for drugs, fluids.

ECG INTERPRETATION AND DYSRHYTHMIAS

The competent resident will:

1. Exhibit basic skills in interpreting 12 lead electrocardiograms.
2. Have a working knowledge of the identification and initial management of common acute dysrhythmias.

SUDDEN DEATH

The competent resident will demonstrate the ability to:

1. Manage the patient in cardio-respiratory arrest.

DISABILITY

COMA AND ALTERED LEVEL OF CONSCIOUSNESS

The competent resident will demonstrate fundamental knowledge and skills in:

1. The assessment and management of the comatose patient.
2. The assessment and management of patients with altered level of consciousness.

PEDIATRIC RESUSCITATION

NEWBORN ASSESSMENT AND RESUSCITATION

The competent resident will demonstrate fundamental knowledge and skills in:

1. The assessment and resuscitation of the newborn.

RESUSCITATION OF INFANTS AND CHILDREN

The competent resident will demonstrate fundamental knowledge and skills in:

1. The recognition of the pediatric patient in need of resuscitative measures.
2. The basic assessment and management of the patient in need of resuscitation.

ADULT NON-TRAUMATIC PRESENTATIONS

The competent resident will:

1. Outline a simple, symptom-based physiological and anatomical initial approach and provide a basic differential diagnosis for most of the following non-traumatic adult presentations. The differential diagnosis should include the life threatening as well as some common disorders.
2. Elicit a history and perform a physical exam relevant to the conditions identified in the differential diagnosis of the presenting complaint.
3. Interpret the information obtained from the history and physical examination and suggest a focused differential diagnosis.
4. Plan investigations appropriate to the patient presentation.
5. Demonstrate a basic ability to interpret the results of the requested investigations.
6. Initiate stabilization and perform or arrange for definitive treatment in an appropriate and timely manner.

HEAD NECK AND NEURO PRESENTATIONS

Acute Loss of Vision
Dental Pain
Difficulty Swallowing

Diplopia
Ear pain
Epistaxis
Headache
Hearing Loss
HIV+ with Headache or CNS dysfunction in HIV+ individuals
Hemiplegia/Hemisensory Loss +/; Aphasia
Neck Pain
Painful Eye
Red Eye
Sore Throat
Stridor
Vertigo
Weakness including Paresis and Paralysis

CHEST PRESENTATIONS

Chest Pain
Cough
Dyspnea
HIV+ with Cough and/or dyspnea
Hemoptysis
Palpitations & Dysrhythmias
Wheezing

ABDOMINAL AND GI PRESENTATIONS

Abdominal Distension
Abdominal Pain: RUQ, Epigastric, LUQ, RLQ, LLQ, Flank, Anorectal, Generalized
Constipation
Diarrhea
Diarrhea in HIV+ patients
Dysphagia
GI Foreign Bodies
Hematemesis
Jaundice
Melena
Vomiting

GENITOURINARY PRESENTATIONS

Dysuria / Frequency
Flank Pain
Hematuria
Penile Discharge
Penile Lesion(s)
Priapism
Scrotal Pain
Urinary Catheter complications

Urinary Incontinence
Urinary Retention / Hesitancy

GYNECOLOGIC AND OBSTETRIC PRESENTATIONS

Emergency Contraception
Labor and ED Delivery
Pelvic Pain
Perineal lesions
Postpartum bleeding
Postpartum fever
Pregnant and Bleeding
Vaginal Bleeding
Vaginal Discharge
Vaginal FB
Vulvar lesions
Perineal lesions

MUSCULOSKELETAL AND EXTREMITY PRESENTATIONS

Monoarticular joint pain
Polyarticular joint pain
Myalgia
Back pain
Arm Pain
Leg pain
Swollen limb

DERMATOLOGIC PRESENTATIONS

Wheals
Purpura
Petechiae
Vesicles
Papules
Ulcers
Nodules
Pustules
Macules
Pruritis

PSYCHIATRIC PRESENTATIONS

Mood Disorders
Attempted Suicide
Anxiety and Panic
Psychosis and Thought Disorders
Behavioral Disorders
Personality Disorders

GENERAL PRESENTATIONS

Fever
Fever and/or Night Sweats in HIV+ patients
Generalized Weakness
Generalized edema
Coma
Altered Mental Status
Syncope
Convulsions
Weight Loss

PEDIATRIC NON-TRAUMATIC PRESENTATIONS

The competent resident will:

1. Outline a simple, symptom-based physiological and anatomical initial approach followed by basic differential diagnosis for most of the following non-traumatic pediatric presentations. The differential diagnosis should include the life threatening as well as some common disorders.
2. Elicit a history and perform a physical exam relevant to the conditions identified in the differential diagnosis of the presenting complaint.
3. Interpret the information obtained from the history and physical examination and suggest a focused differential diagnosis.
4. Plan investigations appropriate to the patient presentation.
5. Demonstrate a basic ability to interpret the results of the requested investigations.
6. Initiate stabilization and perform or arrange for definitive treatment in an appropriate and timely manner.

NEONATAL PRESENTATIONS

Jaundice
Convulsions
Apnea

HEAD NECK AND NEURO PRESENTATIONS

Earache
Headache
Red Eye
Sore Throat
Stridor

CHEST PRESENTATIONS

Chest Pain
Cough
Respiratory Distress
Dyspnea
Hemoptysis

Wheezing

ABDOMINAL AND GI PRESENTATIONS

Abdominal Pain
Constipation
Diarrhea
Hematemesis
Jaundice
Vomiting

GENITOURINARY PRESENTATIONS

Scrotal Pain
Hematuria
Dysuria / Frequency

MUSCULOSKELETAL AND EXTREMITY PRESENTATIONS

Limp
Painful joint

PSYCHIATRIC PRESENTATIONS

Depressed mood
Disruptive Behavior

GENERAL PRESENTATIONS

Fever and Irritability < Three Months
Fever >Three Months<Three Years
Fever and Rash
Rash
Lethargy
Syncope
Convulsions
Weakness
Inconsolable infant
Failure to Thrive

TRAUMATIC DISORDERS

APPROACH TO MULTIPLE TRAUMA

The competent resident will demonstrate a basic ability to:

1. Perform an initial assessment of the patient who has potentially sustained multiple traumas.
2. Set priorities for the stabilization and investigation of patients with multiple injuries.

PRINCIPLES OF SOFT TISSUE INJURIES

WOUND MANAGEMENT

The competent resident will:

1. Assess wounds and formulate a plan for wound management.
2. Demonstrate wound preparation, exploration and closure.
3. Identify immediate and delayed complications of soft tissue injuries and take appropriate preventative steps to decrease complications.
4. Manage and arrange appropriate follow up for simple and complicated wounds.

BURNS

The competent resident will demonstrate the ability to:

1. Provide initial management of burns.
2. Identify appropriate patients and arrange referral to specialty burn units.

MUSCULAR AND LIGAMENTOUS INJURIES

The competent resident will demonstrate ability to:

1. Identify and provide initial management of patients with crush injuries to the extremities.
2. Have a working knowledge of compartment syndromes, its consequences and recommendations for appropriate follow-up.
3. Identify and describe general management of ligament and tendon sprains

PRINCIPLES OF FRACTURE MANAGEMENT

The competent resident will demonstrate the ability to:

1. Describe a fracture using standard terminology.
2. List the complications associated with common fractures and their treatment.
3. Describe the principles of fracture healing.

SPECIAL CONSIDERATIONS IN PEDIATRIC TRAUMA

The competent resident will demonstrate the basic ability to:

1. Compare and contrast the management of adult and pediatric trauma.
2. Diagnose and provide appropriate initial management of common pediatric extremity injuries.

PRINCIPLES OF CASTING AND SPLINTING

The competent resident will:

1. Describe the basic principles of splinting and casting.
2. Demonstrate the application splints and casts.
3. Select the appropriate splinting technique for injuries to the extremities.

HEAD AND NECK TRAUMA

The competent resident will demonstrate the basic ability to:

1. Identify and initiate management of mild, moderate and severe brain injuries.
2. Identify and initiate management of injuries involving the face, jaw, and teeth.
3. Identify and manage chemical, blunt, superficial and penetrating injuries of the eye.
4. Identify and initiate management of blunt and penetrating injuries to the neck.

CHEST TRAUMA AND ABDOMINAL TRAUMA

The competent resident will demonstrate basic knowledge and skills in:

1. Identifying and managing common blunt and penetrating chest injuries.

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UPPER LIMB INJURIES

The competent resident will demonstrate the ability to:

1. Provide initial management of common upper limb injuries involving the shoulder, clavicle, humerus, elbow, forearm, wrist, and hand, with attention to identification and prevention of complications.
2. Provide for appropriate follow up and/or specialist consultation upper limb injuries.

PELVIC AND LOWER LIMB INJURIES

The competent resident will demonstrate the ability to:

1. Use evidence-based criteria for radiological investigation of the lower extremity.
2. Provide initial management of common lower limb injuries involving the pelvis, hip, thigh, knee, lower leg, ankle and foot, with attention to identification and prevention of complications.
3. Provide for appropriate follow up and/or specialist consultation lower limb and pelvic injuries.
4. Identify and appropriately management stress fractures of the lower limb

SPINAL INJURIES

CERVICAL SPINE INJURIES

The competent resident will:

1. Have a basic understanding of the mechanism of injury of the cervical spine.
2. Investigate suspected C-spine injuries using evidence-based decision rules.
3. Provide initial management of cervical spine injuries

THORACIC AND LUMBAR SPINAL INJURIES

The competent resident will:

1. Have a basic understanding of the mechanism of injury of the thoracic and lumbar spine.
2. Provide initial management of thoracic and lumbar spinal injuries.

3. Arrange appropriate referral and follow-up for thoracic and lumbar spinal injuries.

Principle No. 3: FAMILY MEDICINE IS COMMUNITY-BASED

EMERGENCY MEDICAL SERVICES

LOCAL EMS CARE

The competent resident will have a working knowledge of:

1. The key features and functioning of an EMS system.

REGIONAL TRAUMA CARE

The competent resident will have a working knowledge of:

1. The components of a regionalized trauma care system.

DISASTER MEDICINE

The competent resident will have a basic understanding of:

1. Prehospital and hospital response to disasters and mass-casualty incidents

ORGAN DONATION

The competent resident will:

1. Recognize situations for potential organ donation.
2. Identify the role for physicians in acute care setting in procuring organs for donation.

Principle No. 4: THE FAMILY PHYSICIAN IS A RESOURCE TO A DEFINED PRACTICE POPULATION

RESOURCE TO PATIENTS WITHIN AN EMERGENCY DEPARTMENT

TRIAGE AND ACUITY SCALES

The competent resident will be able to:

1. State the principles and goals of triage based on the use of a standardized ED triage instrument.

COMMUNITY RESOURCES

The competent resident will be able to:

1. Demonstrate knowledge of community resources available to ED patients, and understand how to access and utilize them.

CRISIS INTERVENTION

The competent resident will demonstrate the ability to:

1. Recognize those patients who are in crisis and appropriately manage their disposition.

ABUSE AND ASSAULT

The competent resident will have a working knowledge in how to:

1. Identify and manage incidences of child, adult and elderly abuse presenting to the ED
2. Successfully perform a history and physical examination of an abused male or female victim, including children and the elderly.

RESOURCE TO PATIENTS, EMERGENCY DEPARTMENT CARE PROVIDERS, AND ADMINISTRATORS

EVIDENCE-BASED EMERGENCY MEDICINE (EBEM)

The competent resident will have a basic understanding of:

1. The principles of EBEM as they pertain to daily acute care clinical practice.

PERSONAL AND PROFESSIONAL EFFECTIVENESS

PROFESSIONAL DEVELOPMENT

CONTINUING MEDICAL EDUCATION

The competent resident will know the fundamental principles of:

1. Continuing medical education.
2. An appropriate approach to maintaining skills and knowledge.

PERSONAL ISSUES

The competent resident will demonstrate the ability to:

1. Recognize and manage health issues related to emergency medicine work.

PART 2:

STUDY GUIDE FOR PROGRAMS

Principle No. 1: THE DOCTOR-PATIENT RELATIONSHIP

COMMUNICATION

Situation:
A family brings a 79-year old deaf elderly male to the Emergency Department (ED). They state that he is unable to cope at home.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Establish a physician-patient relationship and to communicate effectively and compassionately with patients and their families.

Enabling Objectives:
1. Demonstrate appropriate self-introduction, position and posture, and listening skills upon starting a patient encounter
2. Demonstrate courtesy and respect for patients.
3. Demonstrate knowledge of and sensitivity towards physical, mental, and cultural differences of patients and their families.
4. Be able to provide bad news to patients and or families with compassion.

ETHICS AND MEDICOLEGAL ASPECTS OF CARE

ETHICAL PROBLEMS

Situation:
A comatose 88-year-old, previously instutionalized, demented male presents in severe hypovolemic shock due to hemorrhage. His family is demanding that resuscitation be stopped and only comfort measures be taken. He carries no written documentation of his wishes.

Terminal Objectives:
The competent resident will:
1. Evaluate ethical problems and identify justifiable solutions.

Enabling Objectives:
1. Identify the principles used in ethical decision making

2. Define beneficence, nonmaleficence, confidentiality, & autonomy.
3. Apply ethical principles in the determination of an approach to any patient encounter.
4. Describe issues relevant to performing procedures on the recently dead.
5. Define medical futility.

MEDICOLEGAL PRINCIPLES

Situation:
An angry spouse is calling with a complaint about why his 45-year old wife was discharged from the ED after presenting with an overdose. He demands information about the encounter and states that she should have been "locked up" because she is "crazy".

Terminal Objectives:
The competent resident will:
1. Demonstrate knowledge about patient confidentiality, informed consent, competence and substitute decision makers, about proper interaction with law enforcement agencies and about the role of the medical examiner's office.
2. Understand of the elements of a successful civil litigation and malpractice claim.

Enabling Objectives:
1. Discuss the legal requirements of confidentiality and the limitations on confidentiality as well as the situations where the physician is require by the law to break patient confidentiality.
2. Identify the elements of a valid consent.
3. List the criteria that must be met before a patient may be considered incompetent and identify the parties who may be considered appropriate substitute decision makers for the patient.
4. Identify common mistakes contributing to adverse outcomes involving transfer of care.
5. Identify constrains imposed by the law in interacting with law enforcement agencies.
6. Identify the role of the medical examiner's office in the care of the newly deceased patient.

Principle No. 2: THE FAMILY PHYSICIAN AS AN EFFECTIVE CLINICIAN

PRINCIPLES OF EMERGENCY MEDICINE

APPROACH TO THE EMERGENCY PATIENT

Situation:
A 65-year-old woman presents with cough and fever.

Terminal Objectives:
The competent resident will have an understanding and be able to demonstrate basic skills in:
1. Evaluating and initiating management in a patient presenting with an urgent or emergent problem.

Enabling Objectives:
1. Elicit a history and perform a physical exam based on the patient's presenting complaint.
2. Interpret the information obtained from the history and physical examination and suggest a symptom-based physiological and anatomical approach followed by a focused differential diagnosis.
3. Identify conditions requiring immediate resuscitation or stabilization
4. Plan investigations appropriate to the patient presentation.
5. Demonstrate a basic ability to interpret the results of the requested investigations.
6. Initiate stabilization and perform or arrange for definitive treatment in an appropriate and timely manner.

ANAESTHESIA ANALGESIA AND PROCEDURAL SEDATION

TOPICAL, LOCAL AND REGIONAL ANESTHESIA

Situation:
A 43-year-old laborer presents with multiple small foreign bodies in his left hand requiring removal.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Use local anesthetics in topical and local blocks.

Enabling Objectives:

1. Have a basic knowledge of the classes of local anaesthetics.
2. Identify the maximum dose and adverse effects of lidocaine.
3. Describe an approach to manage someone with possible local anesthetic hypersensitivity.
4. Describe the indications for topical anesthesia.

ANALGESIA

Situation:
A 43-year-old man with a history of renal calculi presents with severe flank pain and hematuria.

Terminal Objectives:
The competent resident will:
1. Evaluate the various options and select an appropriate method of relieving pain for ED patients.

Enabling Objectives:
1. Compare and contrast pharmacologic properties of narcotic agents available for providing analgesia in the ED.
2. Compare and contrast pharmacologic properties of NSAIDS available for providing analgesia in the ED.
3. For analgesia in the ED, discuss the use (including indications, contraindications, route, strength, and side effects) of:
    a) acetaminophen
    b) ibuprofen
    c) ketorolac
    d) codeine
    e) oxycodone
    f) morphine
    g) meperidine
    h) hydromorphone
    i) fentanyl

PROCEDURAL SEDATION

Situations:
A frantic 4-year-old presents with a laceration to his penis following a minor straddle injury on his bike.

Terminal Objectives:
The competent resident will:
1. Have a working knowledge of the various options and be able to select a method of providing sedation and analgesia for ED patients undergoing painful or anxiety-provoking procedures.

Enabling Objectives:

1. Have a basic understanding of the use (including indications, contraindications, routes, and side effects) of the following agents used for procedural sedation :
   a) midazolam
   b) diazepam
   c) pentothal
   d) propofol
   e) ketamine
2. Discuss the indications for and contraindications to procedural sedation for adult and pediatric patients in the ED.
3. Discuss the risk assessment of the patient prior to performing procedural sedation.
4. Identify preparations necessary prior to performing procedural sedation.
5. Select a technique for procedural sedation in a patient.
6. Discuss the reversal of analgesic and sedative agents in the context of the ED and post procedural sedation.
7. Describe an appropriate level of recovery prior to patient discharge.

RESUSCITATION

AIRWAY MANAGEMENT

Situation:
A 29-year old adult was "assaulted" and is unconscious with a hemotympanum and he has agonal respirations.

Terminal Objectives:
The competent resident will demonstrate the ability to:

1. Recognize situations requiring emergency airway intervention.
2. Demonstrate basic airway management skills.
3. Perform an appropriate airway assessment.
4. Perform orotracheal intubations.
5. List potential alternatives to orotracheal intubations.

BASIC AIRWAY MANAGEMENT

Situation:
A 38-year-old male presents with inability to speak and is coughing continuously while he is clutching his throat.

Enabling Objectives:

1. Demonstrate the ability to assess airway protection and patency.
2. Demonstrate basic maneuvers for maintaining a patent airway.
3. Describe the physical findings of a patient with an obstructed airway.
4. Demonstrate methods for dislodging a foreign body from the obstructed airway of both an adult and an infant.

5. Perform assisted and controlled ventilation with bag - valve - mask.
6. Have a basic understanding of the use of airway adjuncts in a patient with respiratory failure or arrest.
7. Describe possible measures to assist with the patient who is difficult to bag.

ENDOTRACHEAL INTUBATION

Situation:
A 44-year old man with partial thickness burns to over 40% of his body has stridor and is brought to the ED.

Enabling Objectives:
1. List the indications for endotracheal intubations in any situation.
2. Have a basic understanding of the contraindications for the use of paralytic agents to facilitate endotracheal intubation.
3. Have a basic understanding of the use (including indications, contraindications, dose, onset, duration, side effects) of medications used in the ED to facilitate intubations:
   a) succinylcholine
   b) pancuronium
   c) vecuronium
   d) rocuronium
4. Identify preparations necessary prior to performing endotracheal intubations
5. Demonstrate the ability to intubate a patient with an airway problem.
6. Describe methods for confirming appropriate endotracheal tube position.

APPROACH TO THE DIFFICULT AIRWAY

Situation:
A 42-year-old woman sustains a severe facial injury and the treating physician is unable to identify pharyngeal landmarks.

Enabling Objectives:
1. Describe the hallmarks of a patient with a difficult airway.
2. Have a basic knowledge of the equipment necessary for the management of a patient with an airway problem.
3. Describe three alternatives to oral endotracheal intubations for definitive airway control.
4. Have a basic understanding of the advantages, disadvantages and contraindications to the use of the following:
   a) laryngeal mask airway
   a) trans-tracheal jet ventilation
   b) cricothyroidotomy
   c) fiberoptic laryngoscopy
   d) lighted stylet devices

BREATHING

Situation:
A 17-year old teenager presents with a life-threatening asthma attack.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Recognize and initiate management in a patient who presents with acute respiratory distress.
2. List situations requiring assisted or controlled ventilation,
3. Manage ventilatory failure.

Enabling Objectives:
1. List the life-threatening causes of respiratory failure.
2. Demonstrate basic skills in the evaluation and immediate management of the patient with respiratory failure.
3. Outline the differences in presentation between upper airway obstruction and lower airway pathology causing respiratory distress.
4. Demonstrate the approach to the adult patient who is choking and the infant with an upper airway foreign body.
5. Demonstrate the basic ability to distinguish between pneumothorax, pleural effusion and consolidation based on physical examination findings.
6. Demonstrate basic knowledge in the interpretation of arterial blood gasses.

CIRCULATION

SHOCK

Situation:
A 43-year-old female presents with confusion, tachycardia, and hypotension.

Terminal Objectives:
The competent resident will:
1. Demonstrate the ability to identify, classify and treat shock.

Enabling Objectives:
1. Define and list a basic classification of shock.
2. Outline basic resuscitative measures used to stabilize patients developing shock.
3. Describe the pharmacotherapy and non-pharmacologic treatment of specific shock states.

VASCULAR ACCESS FOR DRUGS, FLUIDS, AND INVASIVE MONITORING

Situation:

A known 33 year-old injection drug user presents after a fall down 12 steps and is found to be febrile and hypotensive. Your staff finds it impossible to obtain peripheral IV access.

Terminal Objectives:
The competent resident will:
1. Identify circumstances requiring vascular access or.
2. Obtain appropriate vascular access for drugs, fluids.

Enabling Objectives:
1. Identify the various routes of vascular access for drugs and fluids.
2. Have a basic understanding of the indications and contraindications for peripheral and central venous access.
3. Discuss the technique involved in the placement internal jugular, subclavian and femoral central lines.
4. Demonstrate the ability to place a peripheral venous line.

ECG INTERPRETATION AND DYSRHYTHMIAS

Situation:
A 42-year-old male presents to the ED with "palpitations". He feels lightheaded and he has some pressure-like pain in his chest.

Terminal Objectives:
The competent resident will:
1. Exhibit basic skills in interpreting 12 lead electrocardiograms.
2. Have a working knowledge of the identification and initial management of common acute dysrhythmias.

Enabling Objectives:
1. Describe clinical features used to differentiate stable from unstable dysrhythmias.
2. Demonstrate the basic ability to recognize the following ECG patterns:
   a) acute ischemic changes
   b) acute anterior, inferior, lateral, posterior, right ventricular, evolving and old MIs
   c) evolving MI
   d) old MI
   e) first-degree, second-degree Type I, II, 2:1 and third-degree AV blocks
   f) complete and incomplete right and left bundle branch blocks
   g) sinus: pause, arrest and bradycardia
   h) atrial: flutter and fibrillation
   i) supraventricular tachycardias
   j) junctional: escape, accelerated escape and tachycardia
   k) ventricular: escape, accelerated escape, tachycardia (momo and polymorphic) and fibrillation.
   l) wide-complex tachycardias
   m) asystole.

3. Have a working knowledge of the initial treatment protocols for patients presenting with the above dysrhythmias including non pharmacological methods of controlling tachy and bradycardias.

SUDDEN DEATH

Situation:
A 54- year -old man is brought to the hospital by ambulance in cardiac arrest.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Manage the patient in cardio-respiratory arrest.

Enabling Objectives:
1. Compare and contrast adult and infant CPR. .
2. Demonstrate how to perform CPR in all age groups.
3. Define pulseless electrical activity
4. Demonstrate basic knowledge of the use of the following agents in cardiac arrest:
   a) fluid bolus
   b) epinephrine
   c) atropine
   d) bicarbonate
   e) calcium
   f) lidocaine
   g) procainamide
   h) amiodarone
   i) cardioversion
   j) defibrillation

DISABILITY

COMA AND ALTERED LEVEL OF CONSCIOUSNESS

Situation:
A 45- year- old man is found by his wife unconscious in the bathroom.

Terminal Objectives:
The competent resident will demonstrate fundamental knowledge and skills in:
1. The assessment and management of the comatose patient.
2. The assessment and management of patients with altered level of consciousness.

Enabling Objectives:
1. Define coma.
2. Classify the causes of coma.
3. Outline the initial evaluation of an unconscious patient.
4. Define the Glasgow Coma Scale.

5. Demonstrate basic knowledge in the management options of presumed elevated intracranial pressure.
6. Demonstrate basic knowledge in the management of status epilepticus in both adult and pediatric patients.

PEDIATRIC RESUSCITATION

NEWBORN ASSESSMENT AND RESUSCITATION

Situation:
A term delivery is about to occur in your ED.

Terminal Objectives:
The competent resident will demonstrate fundamental knowledge and skills in:
1. The assessment and resuscitation of the newborn.

Enabling Objectives:
1. Demonstrate basic skills in the initial assessment of the newborn and determine an Apgar score.
2. Demonstrate basic skills in performing bag-valve mask ventilation.
3. List the common essential causes of respiratory depression at birth.
4. Have a basic understanding of the immediate management of a depressed newborn.
5. List potential causes of cyanosis in the newborn.
6. Demonstrate basic skills in the initial management of a cyanotic newborn, including referral for specialized care.

RESUSCITATION OF INFANTS AND CHILDREN

Situation:
A 3-month-old baby is brought to the ED limp and cyanotic with a pulse of 30 beats per minute.

Terminal Objectives:
The competent resident will demonstrate fundamental knowledge and skills in:
1. The recognition of the pediatric patient in need of resuscitative measures.
2. The basic assessment and management of the patient in need of resuscitation.

Enabling Objectives:
1. State the ranges for a normal heart rate, blood pressure and respiratory rate by age.
2. Demonstrate basic skills in evaluating the pediatric airway.
3. Have a basic understanding of the differences between the adult, pediatric, and neonatal airways.
4. Describe the basic initial management of an obstructed airway in an infant and child.
5. Demonstrate how to choose an appropriate oral airway and mask for a pediatric patient.

6. Demonstrate an acceptable method of ventilating neonates, infants and children using a bag-valve- mask.
7. Have a basic understanding of the use (including indications, contraindications, dose, onset, duration, and side effects) of the following drugs used for the facilitation of pediatric intubations in the ED:
   a) succinylcholine
   b) pancuronium
   c) vecuronium
   d) rocuronium
   e) fentanyl
   f) midazolam
   g) propofol
   h) pentobarbital
   i) ketamine
   j) atropine
8. Demonstrate knowledge in calculating the correct endotracheal tube size.
9. Have a basic understanding of the indications for intraosseous, peripheral venous and central venous vascular access.
10. Demonstrate basic knowledge of the indications, contraindications, routes and doses of the following therapies:
    a) epinephrine,
    b) lidocaine,
    c) atropine,
    d) sodium bicarbonate,
    e) glucose,
    f) dopamine,
    g) calcium,
    h) furosemide,
    i) naloxone,
    j) adenosine,
    k) cardioversion.
    l) defibrillation.
11. List the important causes of cardiopulmonary arrest in children.
12. Have basic knowledge of the initial management of pediatric patients presenting with the following dysrhythmias:
    a) SVT
    b) bradycardia
    c) ventricular tachycardia and fibrillation
    d) asystole
    e) PEA

ADULT NON-TRAUMATIC PRESENTATIONS

Situation:

A 72-year-old male presents with a new onset of shortness of breath.

Terminal Objectives:

The competent resident will:

1. Outline a simple, symptom-based physiological and anatomical initial approach and provide a basic differential diagnosis for most of the following non-traumatic adult presentations. The differential diagnosis should include the life threatening as well as some common disorders.
2. Elicit a history and perform a physical exam relevant to the conditions identified in the differential diagnosis of the presenting complaint.
3. Interpret the information obtained from the history and physical examination and suggest a focused differential diagnosis.
4. Plan investigations appropriate to the patient presentation.
5. Demonstrate a basic ability to interpret the results of the requested investigations.
6. Initiate stabilization and perform or arrange for definitive treatment in an appropriate and timely manner.

HEAD NECK AND NEURO PRESENTATIONS

Acute Loss of Vision
Dental Pain
Difficulty Swallowing
Diplopia
Ear pain
Epistaxis
Headache
Hearing Loss
HIV+ with Headache or CNS dysfunction in HIV+ individuals
Hemiplegia/Hemisensory Loss +/; Aphasia
Neck Pain
Painful Eye
Red Eye
Sore Throat
Stridor
Vertigo
Weakness including Paresis and Paralysis

CHEST PRESENTATIONS

Chest Pain
Cough
Dyspnea
HIV+ with Cough and/or dyspnea
Hemoptysis
Palpitations & Dysrhythmias
Wheezing

ABDOMINAL AND GI PRESENTATIONS

Abdominal Distension
Abdominal Pain: RUQ, Epigastric, LUQ, RLQ, LLQ, Flank, Anorectal, Generalized
Constipation
Diarrhea
Diarrhea in HIV+ patients
Dysphagia
GI Foreign Bodies
Hematemesis
Jaundice
Melena
Vomiting

GENITOURINARY PRESENTATIONS

Dysuria / Frequency
Flank Pain
Hematuria
Penile Discharge
Penile Lesion(s)
Priapism
Scrotal Pain
Urinary Catheter complications
Urinary Incontinence
Urinary Retention / Hesitancy

GYNECOLOGIC AND OBSTETRIC PRESENTATIONS

Emergency Contraception
Labor and ED Delivery
Pelvic Pain
Perineal lesions
Postpartum bleeding
Postpartum fever
Pregnant and Bleeding
Vaginal Bleeding
Vaginal Discharge
Vaginal FB
Vulvar lesions
Perineal lesions

MUSCULOSKELETAL AND EXTREMITY PRESENTATIONS

Monoarticular joint pain
Polyarticular joint pain
Myalgia
Back pain
Arm Pain
Leg pain

Swollen limb

DERMATOLOGIC PRESENTATIONS

Wheals
Purpura
Petechiae
Vesicles
Papules
Ulcers
Nodules
Pustules
Macules
Pruritis

PSYCHIATRIC PRESENTATIONS

Mood Disorders
Attempted Suicide
Anxiety and Panic
Psychosis and Thought Disorders
Behavioral Disorders
Personality Disorders

GENERAL PRESENTATIONS

Fever
Fever and/or Night Sweats in HIV+ patients
Generalized Weakness
Generalized edema
Coma
Altered Mental Status
Syncope
Convulsions
Weight Loss

ADULT NON-TRAUMATIC DISORDERS

NEUROLOGICAL DISORDERS

Situation:
A 77-year old man is brought to the ED with new left sided weakness.

Enabling Objectives:
1. Perform a basic neurological examination.
2. For each step of the examination, describe the normal findings and have a basic understanding of potential abnormal findings based on the anatomic location of the abnormality.

3. Outline the initial resuscitation, basic diagnostic plan and initial management for each type of patient presentation.

MENINGITIS

Situation:
A 17-year-old girl presents with a fever and a headache. LP results show a CSF WBC count of 1200 $x10^6$/L.

Enabling Objectives:
1. Describe the typical presentations of viral and bacterial meningitis.
2. List the common infectious causes of meningitis.
3. Describe the physical findings and progression of disease of meningococcemia.
4. List the typical causes of meningitis in an immunocompromised patient.
5. Have a basic understanding of the typical CSF findings in bacterial and viral meningitis.
6. Identify an appropriate initial antibiotic therapy for previously healthy patients.

STROKE

Situation:
A 67-year-old woman presents with sudden loss of speech and weakness of her right arm.

Enabling Objectives:
1. Have a basic understanding of the typical anatomical deficits associated with an acute stroke involving the cortices and the brain stem.
2. List potential stroke mimics
3. List the risk factors for stroke
4. Define the terms transient ischemic attack (TIA) and reversible ischemic neurological deficit (RIND)
5. Have a working understanding of the investigation, medical treatment and disposition of a patient who presents with a TIA or RIND.
6. Demonstrate basic knowledge of the possible medical therapies for acute stroke.
7. Demonstrate basic knowledge of the non-pharmacologic measures useful to treat acute stroke.

CRANIAL NERVE DISORDERS

Situation:
A 45-year-old woman presents with a droopy right side of the mouth and inability to close completely the right eye.

Enabling Objectives:
1. Demonstrate basic knowledge of the typical presentation and initial management of the following conditions:
   a) Bell's palsy

b) Trigeminal neuralgia

SEIZURES

Situation:
A 52-year-old alcoholic presents with a grand-mal seizure

Enabling Objectives:
1. Describe the following types of seizures:
   a) Grand-mal
   b) Petit-mal
   c) Absence
   d) Jacksonian
2. Define status epilepticus.
3. Demonstrate basic knowledge of the possible medications, dose and route for the treatment of status epilepticus in order of use.
4. Describe the indications for admission of patients with seizures.
5. Demonstrate basic knowledge of the investigation, possible treatment and of the appropriate referral for a patient who presents after his/her first seizure.

SPINAL CORD & NERVE ROOT DISORDERS

Situation:
A 25-year-old laborer presents with acute back pain radiating down his left leg after lifting a large load.

Enabling Objectives:
1. Demonstrate basic knowledge of the difference between cerebral, cerebellar, upper and lower motor neuron disorders, and neuromuscular junction disorders.
2. Demonstrate a basic diagnostic approach to low back pain.
3. Demonstrate basic skills in the use of different maneuvers to elicit sciatic pain.
4. Have basic knowledge of the use of Diagnostic Imaging (DI) tests in the diagnosis of disc herniation.
5. Describe a basic initial treatment plan for a patient presenting to the emergency department with lower back pain.
6. Describe the clinical presentation of cauda equina syndrome.
7. Recognize the emergent need for treatment of cauda equina syndrome.
8. Have a basic knowledge of the typical history, physical findings, and initial management of each of the following:
   a) Cervical spinal stenosis
   b) Cervical disk protrusion
   c) Central cord syndrome
   d) Brown-Sequard syndrome
   e) Guillan-Barre syndrome
   f) Myasthenia gravis and myasthenic crisis
   g) Transverse myelitis

MIGRAINE

Situation:
A 34-year-old female with a past history of migraine headaches presents with her typical headache occurring at the time of her menstrual period.

Enabling Objectives:
1. Describe the typical presentation of migraine without aura, migraine with aura, and cluster headache.
2. Have basic knowledge of the medications used to treat acute migraine, including their mechanism of action, side effects and contraindications.
3. Be able to describe the typical presentation ad initial management of a patient with subarachnoid hemorrhage.

OPHTHALMOLOGIC DISORDERS

Situation:
A 22-year old rugby player complains of pain and blurry vision in the right eye after being hit in the eye during a game.

Enabling Objectives:
1. Demonstrate basic skills in the use of the slit lamp, tono-pen, and direct ophthalmoscope.
2. Demonstrate basic skills in the identification of normal and abnormal ocular anatomy

CONJUNCTIVITIS

Situation:
A 23-year-old contact lens wearer has a purulent eye discharge.

Enabling Objectives:
1. Demonstrate basic knowledge of the findings, workup and treatment of bacterial, viral and allergic conjunctivitis.
2. List the common bacterial and viral infectious agents found in neonatal and adult conjunctivitis.
3. Discuss the indications for referral to an Ophthalmologist.

IRITIS AND KERATITIS

Situation:
A 28-year-old welder complains of bilateral eye pain and photophobia 12 hours after welding. There are multiple punctate staining defects on his cornea.

Enabling Objectives:
1. List the differential diagnosis of both the patient presenting with a red, painful eye

2. Compare and contrast the clinical findings of iritis and keratitis.
3. Outline the initial basic management plan, including referral of the patient with iritis and keratitis.

OPTIC NEURITIS

Situation:
A 40-year-old woman has monocular vision loss that is slowly progressing over 3 weeks. Funduscopy reveals a swollen, pale optic disc.

Enabling Objectives:
1. Compare and contrast the clinical findings of anterior optic neuritis and retrobulbar neuritis.
2. Have basic knowledge of the medical management and referral of optic neuritis.

GLAUCOMA

Situation:
A 69-year-old elderly woman presents with 1 day of nausea, right eye ache and new cloudy vision.

Enabling Objectives:
1. Have basic knowledge of abnormal anatomical changes of both open-angle and angle closure glaucoma.
2. Demonstrate proficiency in the use of the tono-pen.
3. Have basic knowledge of the medications used in the management of acute glaucoma

PAPILLEDEMA

Situation:
A 30-year-old man presents with 5 days of nausea, headache, and intermittent blurred vision.

Enabling Objectives:
1. List a basic differential diagnosis of and explain the implications to the patient of papilledema.
2. Describe the ophthalmologic findings of papilledema.
3. Demonstrate the ability to initiate the timely referral of the patient papilledema.

RETINAL ARTERIAL AND VENOUS OCCLUSION

Situation:
A 75-year-old man with atrial fibrillation presents 1 hour after sudden painless loss of left eye vision.

Enabling Objectives:

1. Demonstrate basic knowledge of the findings of Central Retinal Arterial and Venous Occlusion (CRAO and CRVO).
2. Have a basic understanding of the common causes of both CRAO and CRVO.
3. Demonstrate the ability to initiate the timely referral of CRVO.

RETINAL DETATCHMENT

Situation:

A 53-year-old myopic librarian has spontaneously developed cloudy vision associated with flashes of lights in the left eye.

Enabling Objectives:
1. Describe the clinical findings of retinal detachment.
2. Demonstrate the ability to initiate the timely referral of the patient with retinal detachment.

ENT DISORDERS

ACUTE HEARING LOSS

Situation:
A 40-year-old man has acute hearing loss after 3 days of painful left ear discharge.

Enabling Objectives:
1. Be able to elicit the history of acute hearing loss and to describe the Rinne and Weber tests.
2. Display a basic understanding of the indications for DI tests such as CT scanning in this setting.
3. List a basic differential diagnosis of acute hearing loss.
4. Outline the approach to the initial management and appropriate referral of acute hearing loss.

ANTERIOR AND POSTERIOR EPISTAXIS

Situation:
A 78-year-old woman on antihypertensive therapy presents with right-sided epistaxis.

Enabling Objectives:
1. Describe the normal nasal anatomy.
2. Demonstrate a basic approach to evaluating epistaxis.
3. Demonstrate fundamental skills in the methods for controlling anterior epistaxis using silver nitrate, cautery, and different packing techniques.
4. Outline the basic outpatient management of anterior packing.
5. Describe the initial approach to controlling a posterior epistaxis.

6. Have a working knowledge the indications for laboratory investigation, ENT consultation, and hospitalization.

SINUSITIS

Situation:
A 33-year-old woman has 2 days of left cheek pain, fever and mucopurulent nasal discharge.

Enabling Objectives:
1. List the 6 nasal sinuses and their locations.
2. List the common causal organisms of sinusitis.
3. Demonstrate basic skills in the clinical exam and of a patient with sinusitis.
4. Demonstrate basic knowledge of the initial treatment plan and follow up of sinusitis.

ADULT EPIGLOTTITIS

Situation:
A 26-year-old man presents after 2 days of sore throat and fever with difficulty swallowing secretions and stridor while lying flat.

Enabling Objectives:
1. List the common pathogens causing adult epiglottitis.
2. Describe the clinical findings associated with adult epiglottitis.
3. Describe the management of epiglottitis including the indications for hospitalization and consultation with ENT.

PHARYNGEAL FOREIGN BODY

Situation:
A48-year-old food-and-wine critic has a foreign body sensation in her throat after eating a delicious salmon dinner.

Enabling Objectives:
1. Describe basic the normal anatomy of the pharynx and hypopharynx.
2. Have an understanding of the clinical findings associated with a pharyngeal foreign body.
3. Outline the indications for referral.

DENTAL DISORDERS

DENTAL AND PERIDONTAL DISEASE

Situation:
A 25-year-old female has localized tooth pain that is slowly increasing over 1 week.

Enabling Objectives:
1. Have basic knowledge of the pathophysiology of dental caries, abscess and gingivitis.
2. Outline the initial treatment and referral plan of dental caries, abscess and gingivitis.

LUDWIG'S ANGINA

Situation:
A 38-year-old man presents with difficulty swallowing and new stridor after 4 days of increasing right-sided tooth and jaw pain.

Enabling Objectives:
1. Have knowledge of the affected anatomical structures in Ludwig's Angina.
2. Describe the initial management including the treatment plan and the indications for referral and hospitalization.

CARDIOVASCULAR DISORDERS

ACUTE CORONARY SYNDROMES

Situation:
A 53-year-old male presents to the ED with retrosternal chest pressure ongoing for the last 90 minutes.

Enabling Objectives:
1. List the risk factors associated with coronary artery disease.
2. Discuss the pathophysiology of ischemic heart disease.
3. Outline the basic anatomy of the coronary arteries.
4. Identify common electrocardiographic injury patterns in acute myocardial infarction.
5. Demonstrate basic knowledge in the use of laboratory resources to assist in the diagnosis of acute ischemic heart disease.
6. Demonstrate knowledge of pharmacological adjunct therapeutic agents used in the treatment of acute (emergent) ischemic heart disease including; oxygen, nitrates, opioids, anti-platelet agents and anticoagulants.
7. Outline the initial management of the patient with an uncomplicated acute myocardial infarction.
8. List the indications and contraindications for the use of thrombolytic therapy and have an understanding of their pharmacological characteristics.
9. Outline the indications, contraindications, timelines for invasive interventions for the definitive management of acute myocardial infarctions
10. Define unstable angina and outline its management in the ED
11. Demonstrate the ability to initiate timely referral to CCU as indicated by patient and laboratory findings.

CONGESTIVE HEART FAILURE

Situation:
A 72-year-old female patient is brought to the ED with shortness of breath and inability to speak full sentences. Family members indicate that she has had worsening dyspnea with exertion and ankle swelling in the past several weeks. Her respiratory rate is 35/min

Enabling Objectives:
1. Discuss the basic clinical features of left and right sided congestive heart failure (CHF).
2. Demonstrate basic knowledge and skills in the initial treatment and stabilization of patients in acute and chronic CHF.

HYPERTENSIVE EMERGENCIES

Situation:
A 59-year-old male presents to the ED. He had headache and nausea before he became agitated and disoriented. His blood pressure on initial evaluation is 240/140 in both arms.

Enabling Objectives:
1. Define hypertensive emergencies and urgencies.
2. List the basic etiologies of hypertension.
3. Demonstrate basic knowledge of the pharmacologic agents used in acute hypertensive emergencies and urgencies.

PERICARDITIS, MYOCARDITIS AND ENDOCARDITIS

Situation:
A 35-year-old female presents to the ED with chest pain associated with a febrile illness. She has previously been diagnosed with Systemic Lupus Erythematosus.

Enabling Objectives:
1. Demonstrate basic knowledge of pericarditis with respect to clinical and, electrocardiographic findings and indications for referral.
2. Demonstrate basic knowledge of myocarditis with respect to clinical findings and indications for referral.
3. Demonstrate knowledge of bacterial endocarditis with respect to clinical findings, and indications for referral.

THORACIC AORTIC DISSECTION

Situation:
A 64 year-old man had sudden onset of mid-thoracic pain radiating to his back while watching TV.

Enabling Objectives:

1. Demonstrate basic knowledge of the typical presentation of a patient with an acute thoracic dissection
2. List the three most common findings of acute thoracic dissection on plain DI views of the chest.
3. Have basic knowledge of the medications used in the ED for managing a non-surgical acute thoracic aortic dissection.

THROMBOEMBOLIC DISORDERS

Situation:
A 46-year-old patient with history of acute leukemia presents with right sided pleuritic chest pain and shortness of breath.

Enabling Objectives:
1. List the risk factors for the development of DVT.
2. Describe the physical findings of DVT.
3. Have basic knowledge of the following diagnostic tests when investigating a patient with possible DVT.
   a) Latex agglutination or whole-blood d-dimer assay
   b) ELISA d-dimer
   c) Duplex compression ultrasonography
   d) Contrast venography
4. Have a working knowledge of the use of unfractionated heparin versus low molecular weight heparin in the treatment of acute DVT.
5. List the contraindications for outpatient management of DVT.
6. Have a working knowledge of the role of ABG's, EKG's, d-dimer assays amd advanced DI tests such as VQ scans, contrast-enhanced thoracic CT, and pulmonary angiography in the diagnosis of pulmonary emboli.
7. Demonstrate basic knowledge in the initial management and duration of treatment for a patient presenting with and acute DVT or PE.
8. Have basic knowledge of the clinical presentation, risk factors, basic investigation and initial management of acute arterial emboli.

RESPIRATORY DISORDERS

ASTHMA

Situation:
A 23-year-old male presents with sudden worsening of his asthma. He was intubated one month ago for a similar attack.

Enabling Objectives:
1. Display skills in prioritization and assessment of an acute exacerbation of asthma.
2. Demonstrate skills in initiating stabilization and treatment of an acute asthma exacerbation.

3. List indications for admission.
4. Have a working knowledge of the medications used in the treatment of asthma.
5. List appropriate discharge medications and instructions.

COPD

Situation:
A 74-year-old woman on home oxygen due to COPD presents with shortness of breath.

Enabling Objectives:
1. Display skills in prioritization and assessment of an acute exacerbation of COPD.
2. Demonstrate skills in initiating stabilization and treatment of the patient with COPD.
3. Demonstrate fundamental knowledge of the indications and options for ventilatory support of patients with COPD.
4. List basic indications for admission.
5. List appropriate discharge medications and instructions.

SPONTANEOUS PNEUMOTHORAX

Situation:
An 18-year old male presents with SOB that started spontaneously. DI views of the chest show a 30% pneumothorax.

Enabling Objectives:
1. List the risk factors for spontaneous pneumothorax
2. Describe the clinical findings of the patient with a pneumothorax.
3. Demonstrate fundamental knowledge of each of the following management options for treating pneumothorax:
   a) Observation only
   b) Chest tube insertion
   c) Thoracostomy catheter with Heimlich valve insertion

PNEUMONIA

Situation:
A 60-year-old female presents from home with fever, productive cough, and shortness of breath. Her DI views of the chest shows a LLL infiltrate.

Enabling Objectives:

1. Demonstrate basic knowledge of the typical causes of community-acquired pneumonia and of the appropriate empiric antibiotic therapy.
2. Demonstrate basic knowledge of the typical causes of nosocomial pneumonia and of the appropriate empiric antibiotic therapy.
3. List the admission criteria for a patient with pneumonia

LUNG CANCER

Situation:
A 48-year-old smoker presents with chronic cough and acute hemoptysis. DI views of his chest shows a mass in the left lung.

Enabling Objectives:
1. Demonstrate skills in the evaluation and initial management of the patient with hemoptysis.
2. Demonstrate skills in the evaluation and initial management of the patient with a pleural effusion.

ENDOCRINE AND METABOLIC DISORDERS

ENDOCRINE DISORDERS

Situations:
1. A 22-year-old diabetic female presents with vomiting, fever and a blood sugar of 35 mmol/L, with ketonuria.
2. An 84-year-old male presents from a nursing home with a decreased level of consciousness and a blood sugar of 64 mmol/L.
3. A 75-year-old female presents from home with a decreased level of consciousness, bradycardia, hypotension, and a temperature of 32^{o} C rectally.
4. A 32-year-old male presents with hypotension and decreased level of consciousness after a day of fever and chills.
5. A 46-year-old alcoholic has been unable to keep anything down for 2 days. She is tachycardic, hypotensive and has Kussmaul respirations.

Enabling Objectives:
1. Demonstrate knowledge of the initial management of the patient who presents with diabetic ketoacidosis.
2. Demonstrate knowledge of the initial management of the patient who presents with a nonketotic hyperosmolar state.
3. Demonstrate basic knowledge of the initial management of the patient who presents with alcoholic ketoacidosis.
4. Describe the signs and symptoms of hypoglycemia.
5. List admission criteria for hypoglycemia.
6. Demonstrate fundamental knowledge of the common presentation, laboratory abnormalities and initial treatment of the hypothyroid patient.
7. Demonstrate fundamental knowledge of the common presentation, laboratory abnormalities and initial treatment of the hyperthyroid patient, including thyroid storm.
8. Demonstrate fundamental knowledge of the common presentation, laboratory abnormalities and initial treatment of the patient with acute adrenal insufficiency.

9. Demonstrate fundamental knowledge of the common presentation, laboratory abnormalities and initial treatment of the patient with Cushing's syndrome.

METABOLIC DISORDERS

Situation:
1. A 34-year-old female presents with vomiting, fever and severe dehydration.
2. A 19-year-old female presents with a decreased level of consciousness and Kussmaul respirations.
3. A 45-year-old renal dialysis patient presents feeling very weak and ill. His ECG shows a junctional bradycardia and peaked T waves.
4. A 74-year-old male from a nursing home presents with ongoing seizures. His serum sodium is 112 mmol/L.
5. A 56-year-old female with breast cancer presents with bone pain, altered mental status and is markedly dehydrated. Her serum calcium is 4.7 mmol/L.

Enabling Objectives:
1. Demonstrate basic knowledge of the management of the patient who presents with hypokalemia.
2. Demonstrate basic knowledge of the management of the patient who presents with hyperkalemia.
3. Demonstrate basic skills in identifying respiratory acidosis, respiratory alkalosis, metabolic acidosis, and metabolic alkalosis given an arterial blood gas result.
4. Have a basic understanding of the common causes of respiratory acidosis, respiratory alkalosis, metabolic acidosis, and metabolic alkalosis.
5. Have a basic understanding of the common causes and initial management of hyponatremia.
6. Define SIADH.
7. Have a basic understanding of the common causes and initial management of hypernatremia.
8. Define diabetes insipidus.
9. Have a basic understanding of the common causes and initial management of hypocalcemia.
10. Have a basic understanding of the common causes and initial management of hypercalcemia.

ABDOMINAL AND GASTROINTESTINAL DISORDERS

GASTROINTESTINAL HAEMORRHAGE

Situations:
1. A 47-year-old male alcoholic presents with gross hematemesis.
2. A 76-year-old woman presents with left lower quadrant abdominal pain and red blood in her stools since the previous day.
3. A 55-year-old man presents with weight loss and black stools.

Enabling Objectives:
1. List the common causes of upper and lower gastrointestinal bleeding.
2. List the common clinical presentation of upper and lower gastrointestinal bleeding.
3. Have a basic understanding of the role of endoscopy for diagnostic and therapeutic purposes.
4. Have a basic understanding of the pharmacologic therapy used in patients with gastrointestinal bleeding.

SWALLOWED FOREIGN BODIES

Situations:
1. 63-year-old man complains of retrosternal chest pain and inability to swallow his own secretions after swallowing a bite of poorly chewed steak.
2. A 26-year-old schizophrenic patient is witnessed to have swallowed a handful of safety pins.

Enabling Objectives:
1. Describe the sites of foreign body impaction in adults.
2. Describe the clinical presentation of patients with an impacted foreign body in the esophagus.
3. Have a basic understanding of the role of imaging and endoscopy in impacted foreign bodies.
4. Have a basic understanding of the potential options for managing patients with
   a) impacted food bolus
   b) ingestion of sharp objects

PEPTIC ULCER DISEASE AND GASTRITIS

Situations:
A 47-year-old man presents with intermittent burning epigastric pain.

Enabling Objectives:
1. Have a basic understanding of the difference between peptic ulcer disease, gastritis, and dyspepsia.
2. List several risk factors for developing peptic ulcer disease.
3. Describe the clinical presentation of peptic ulcer disease and gastritis.
4. Have a basic understanding of the use of laboratory tests and DI for diagnosis
5. Have basic knowledge of the initial management of peptic ulcer disease.

APPENDICITIS

Situations:
1. A 22-year-old man presents with periumbilical abdominal pain which has now moved to the right lower quadrant.

2. A 75-year-old man presents with anorexia, nausea, vomiting and vague right sided abdominal pain.
3. A previously healthy 29-year-old woman who is 30 weeks pregnant complains of nausea, vomiting, and lower abdominal pain.

Enabling Objectives:

1. Describe the classic presentation of acute appendicitis and of a perforated appendix.
2. Define McBurney's point and demonstrate basic skills to elicit it and Rovsing, psoas, and obturator signs.
3. Have a basic understanding of the special considerations when evaluating the following patient populations for suspected appendicitis:
   a) elderly
   b) pregnant patients
4. Have a basic understanding of the use of blood and urine analysis in the diagnosis of acute appendicitis.
5. Demonstrate a basic knowledge of the use of the following DI studies as an adjunct to diagnosis:
   a) plain radiographs
   b) ultrasound
   c) CT scan
6. Outline the ED management of acute appendicitis.

INTESTINAL OBSTRUCTION

Situations:
1. A 56-year-old woman with a history of multiple abdominal surgeries complains of increasing abdominal distension and diffuse abdominal pain and vomiting.
2. A 70-year-old man with a history of weight loss and change in stool pattern presents with failure to thrive and inability to pass stool or flatus.

Enabling Objectives:

1. Define intestinal obstruction.
2. List the most common causes of small and large bowel obstructions.
3. Demonstrate basic knowledge of the clinical and DI findings of small and large bowel obstructions.
4. Display fundamental knowledge of the initial management of patients with bowel obstruction in the ED.
5. Display the ability to recognize the conditions that require urgent surgical intervention.

HERNIAS

Situations:
1. A 70-year-old man presents with right- sided groin swelling which is noticeable when he stands up or coughs.

2. A 2-month-old boy presents with irritability. On examination he has a firm mass at his umbilicus.

Enabling Objectives:
1. List the types of hernias.
2. Have a basic understanding of the potential complications of an incarcerated or strangulated hernia.
3. Display the ability to identify the situations in which urgent surgical intervention is required.

INFLAMMATORY BOWEL DISEASE

Situations:
1. A 19-year-old woman with Crohn's disease has had increased abdominal pain and frequent bloody stools over the past week.
2. A 22-year-old man with a family history of inflammatory bowel disease and colon cancer presents with painless rectal bleeding.

Enabling Objectives:
1. Demonstrate basic knowledge of the clinical and pathologic features of Crohn's disease and ulcerative colitis.
2. Demonstrate basic knowledge of the extraintestinal manifestations of inflammatory bowel disease.
3. Have a working knowledge of the management of patients with fulminant colitis including:
   a) correction of fluid and electrolyte balance
   b) bowel rest and intestinal decompression
   c) corticosteroid therapy
   d) antibiotic therapy
4. Demonstrate basic knowledge of the typical presentation, investigations and initial management of the following potential complications of inflammatory bowel disease that may be seen in the emergency department:
   a) perianal complications
   b) abscesses
   c) intestinal obstruction or perforation
   d) gastrointestinal bleeding
   e) toxic megacolon
   f) malabsorption/malnutrition
   g) intestinal neoplasm
5. Identify patients who require admission and/or referral.

ANORECTAL DISORDERS

Situations:
1. A 20-year-old woman with a history of constipation presents with painless rectal bleeding following a bowel movement.

2. An 18-year-old boy with a history of Crohn's disease presents with a tender mass in the anal region.
3. A mother brings her 2-year-old boy to the ED because he cries out in pain every time he has a bowel movement.

Enabling Objectives:
1. Demonstrate skills in the basic examination of the anorectal region.
2. Compare the clinical presentation of internal and external hemorrhoids.
3. List the risk factors for developing hemorrhoids.
4. Demonstrate basic knowledge of the outpatient management of hemorrhoids and list the indications for surgical referral and intervention
5. Outline the ED management of a simple perianal abscess.
6. Identify the most common location of anal fissures.
7. Demonstrate basic knowledge of the outpatient management of anal fissures.
8. Describe a technique to remove rectal foreign bodies in the ED.
9. Identify the situations in which surgical intervention is required for foreign body removal from the rectum.

GASTROENTERITIS

Situation:
A 21-year-old college student complains of diarrhea for the past 2 weeks since returning from a trip to Thailand.

Enabling Objectives:
1. Define acute and chronic diarrhea.
2. Have a basic understanding of the four basic pathophysiologic mechanisms that cause diarrhea.
3. Demonstrate skills in obtaining a basic history from a patient complaining of diarrhea.
4. List the most common infectious causes of diarrhea.
5. Have a fundamental knowledge of the laboratory tests available to the physician to evaluate the cause of diarrhea.
6. Identify and manage patients with dehydration.
7. Have a basic understanding of the indications for antibiotics and antimotility agents in the treatment of diarrhea.

CHOLELITHIASIS

Situations:
1. An obese 35-year-old woman presents with intermittent right upper quadrant pain.
2. A 51-year-old man presents with fever, abdominal pain, and jaundice.

Enabling Objectives:
1. List the different types of gallstones.
2. List the risk factors for gallstones.

3. Have basic knowledge of the typical clinical presentation of the biliary colic.
4. Have basic knowledge of the clinical presentation of the following complications of cholelithiasis:
   a) acute cholecystitis
   b) ascending cholangitis
   c) gallstone pancreatitis
5. Describe Murphy's sign.
6. Define Charcot's triad.
7. Have a working knowledge of the use of laboratory studies in diagnosing the above disorders with focus on liver enzyme and liver function tests.
8. Demonstrate fundamental knowledge of the use of DI such as ultrasound, CT scan, and HIDA in the diagnosis of biliary disease.
9. Demonstrate basic skills in the ED management of biliary colic.

HEPATIC DISORDERS AND HEPATIC FAILURE

Situations:
1. A 47-year-old woman who contracted hepatitis C from a blood transfusion 15 years ago now complains of a low-grade fever, sweats, and malaise.
2. A 52-year-old man with known alcoholic cirrhosis and ascities presents with lethargy and disorientation.
3. A healthy 35-year-old woman presents with increasing jaundice, malaise, and weight loss.
4. A 20-year-old woman who recently returned from a trip to Southeast Asia complains of fever, malaise, and vomiting.

Enabling Objectives:
1. Demonstrate skills in obtaining a history and performing a physical examination of a patient with liver disease.
2. Demonstrate fundamental knowledge of the causes of acute and chronic hepatitis.
3. Demonstrate fundamental knowledge of the laboratory tests to diagnose acute liver disease.
4. List the causes of cirrhosis.
5. Describe the clinical manifestations of cirrhosis.

ACUTE AND CHRONIC PANCREATITIS

Situations:
1. A 37-year-old woman with a history of gallstones presents with epigastric abdominal pain that radiates to her back.
2. A 55-year-old male alcoholic presents with vague abdominal pain, fever, and tachycardia.

Enabling Objectives:
1. List the most common causes of acute and chronic pancreatitis.
2. Describe the clinical presentation of acute pancreatitis.

3. Demonstrate fundamental knowledge of the use of laboratory and DI studies in this setting.
4. Demonstrate basic skills in the initial management of acute pancreatitis.

ABDOMINAL AORTIC ANEURYSM

Situations:
1. A 64-year-old man presents after a syncopal episode and now complains of severe abdominal pain radiating into his back.

Enabling Objectives:
1. Describe the most common clinical presentation of an abdominal aortic aneurysm.
2. Have a working knowledge of the role of DI of a patient with a suspected abdominal aortic aneurysm.
3. Demonstrate a fundamental understanding of the ED management of a patient with a ruptured abdominal aortic aneurysm.
4. Demonstrate a fundamental understanding of the management of a patient with an abdominal aortic aneurysm that was discovered incidentally in the ED.

URINARY TRACT DISORDERS

RENAL CALCULI

Situations:
1. A previously healthy 30-year-old man presents with acute onset of severe right flank pain.
2. A 55-year-old man with a history of kidney stones complains of severe abdominal pain radiating to his right testicle.

Enabling Objectives:
1. Describe the characteristic clinical features of renal colic.
2. Have a basic differential diagnosis of renal colic.
3. List the types of renal calculi according to composition.
4. Identify the most common sites of stone impaction within the urinary tract.
5. Have a basic understanding of DI such as plain X-ray, ultrasound, intravenous pyelogram, and CT scan in the diagnosis of urinary tract stones.
6. Demonstrate basic knowledge of the initial treatment of renal calculi.
7. List the indications for urgent urologic consultation and admission.

URINARY TRACT INFECTIONS

Situations:
1. A sexually active 20-year-old female presents with a 1-day history of dysuria and urinary frequency.

2. A 45-year-old diabetic female presents with nausea, vomiting, fever, chills, and left flank pain.

Enabling Objectives:
1. Demonstrate basic knowledge of the epidemiology of adult urinary tract infections.
2. Differentiate between uncomplicated and complicated urinary tract infections.
3. Define asymptomatic bacteriuria and state its significance during pregnancy.
4. Identify the most common organisms involved in adult urinary tract infections.
5. List alternative diagnoses for dysuria in men and women.
6. Have a working knowledge of the use of urinalysis, routine microscopy, and urine culture for diagnostic purposes.
7. Demonstrate basic skills in the recognition and the initial management of lower and upper tract infections including appropriate antibiotic therapy.
8. Identify the indications for admission.

ACUTE RENAL FAILURE

Situations:
1. A 28-year-old man is found unconscious on a park bench. He is known to be a drug abuser. His urine is grossly red, his potassium is 7.1, and his creatinine is 800.
2. A 75-year-old man with hypertension and congestive heart failure is transferred from a long-term care facility. He has not voided for 2 days. He is lethargic, short of breath, and confused.

Enabling Objectives:
1. Define acute renal failure (ARF).
2. Demonstrate basic knowledge of the causes of ARF using the prerenal, renal, and postrenal classifications.
3. Have a working knowledge of the use of laboratory tests including urine and blood analysis for diagnosis.

EMERGENCIES IN RENAL FAILURE AND DIALYSIS PATIENTS

Situations:
1. A 35-year-old woman on peritoneal dialysis presents with a low grade fever, lethargy, and diffuse abdominal pain.
2. A 57-year-old male dialysis patient presents with increasing pain and swelling over his vascular access graft on his left arm.

Enabling Objectives:
1. Define end-stage renal disease (ESRD).
2. Describe the clinical features of uremia.
3. Have a basic understanding of the complications encountered in hemodialysis patients.
4. Have a basic understanding of the complications encountered in peritoneal dialysis patients.

HEMATURIA

Situations:
1. A 60-year-old male smoker presents to the ED with fatigue and weight loss has microscopic hematuria detected on a urine dipstick and microscopy.
2. A 25-year-old female presents with dysuria and gross hematuria.
3. A 17-year-old hockey player complains of blood in his urine after being crosschecked from behind during a game.

Enabling Objectives:
1. Define gross and microscopic hematuria.
2. Demonstrate basic knowledge of the most common causes of hematuria.
3. Have a working knowledge of the use of urinalysis and urine microscopy to identify the source of hematuria.
4. Have a basic understanding of the use of DI modalities such as IVP, ultrasound, CT scan for diagnosing the source of hematuria.
5. List the risk factors for bladder and renal carcinomas.
6. Identify which patients with hematuria may be followed up as an outpatient and which require admission.

OBSTETRIC AND GYNECOLOGIC DISORDERS

ECTOPIC PREGNANCY

Situation:
A 27-year-old female presents with acute onset of pelvic pain. She states she is 2 weeks late with her period, and her urine pregnancy test returns with a positive result.

Enabling Objectives:
1. Demonstrate the basic ability to estimate gestational age in any pregnant patient.
2. List a basic differential diagnosis of abdominal/pelvic pain in the first 20 weeks of pregnancy.
3. List the risk factors for ectopic pregnancy.
4. Have a working knowledge of the use quantitative B-HCG results and DI such as ultrasound to identify intrauterine and ectopic pregnancies.
5. Know the importance of maternal blood typing with any vaginal bleeding in pregnancy and know the appropriate dose of RhoGAM.
6. Initiate timely referral for patients with ectopic pregnancy.

VAGINAL BLEEDING IN THE FIRST 20 WEEKS OF PREGNANCY

Situation:
A 22-year-old G1P0 female presents at 9 weeks with vaginal spotting.

Enabling Objectives:

1. List a basic differential diagnosis and clinical features of causes of vaginal bleeding in the first 20 weeks of pregnancy including:
   a) various forms of miscarriage.
   b) gestational trophoblastic disease.
   c) ectopic pregnancy.
2. Demonstrate fundamental skills in the use history and physical examination to diagnose non-obstetrical causes of bleeding including:
   a) cervical cancer or polyps
   b) friable condyloma acuminata
   c) postcoital trauma
   d) hemorrhoids

VAGINAL BLEEDING IN THE SECOND 20 WEEKS OF PREGNANCY

Situation:
A G3P2 female presents at 31 weeks with cramping and spotting.

Enabling Objectives:

1. Demonstrate fundamental skills in the identification and the initial management obstetrical causes of bleeding including:
   a) placental abruption
   b) placenta previa
   c) uterine rupture
   d) vasa previa
2. Have a basic understanding of how the normal pregnancy physiologic changes influence the clinical ability to assess hemorrhagic shock.
3. Demonstrate basic skills in the assessment of fetal well being and viability.

PREECLAMPSIA AND ECLAMPSIA

Situation:
A 19-year-old 33 week pregnant female has a witnessed seizure and is brought into the ED by ambulance.

Enabling Objectives:

1. In the setting of pregnancy define: hypertension, transient hypertension, preeclampsia and eclampsia.
2. List risk factors for hypertension during pregnancy.
3. Demonstrate basic knowledge of the clinical and laboratory findings in severe preeclampsia.
4. Demonstrate a basic knowledge of the initial diagnostic and initial treatment modalities for a patient with severe preeclampsia or eclampsia.

5. Demonstrate a basic knowledge of the following medications:
   a) magnesium sulfate
   b) hydralazine
   c) labetalol
   d) benzodiazepines
6. Demonstrate timely and appropriate involvement of the indicated specialists (ICU, obstetrics)

EMERGENCY DELIVERY

Situation:
A 33-year old patient at full term is driven into the ambulance bay in full labor with delivery imminent.

Enabling Objectives:
1. Describe the immediate preparations for a delivery in the ED.
2. Demonstrate basic skills in the ED management of a patient in labor who presents with one of the following:
   a) placenta previa
   b) placental abruption
   c) fetal distress
   d) cord prolapse
   e) pre-term labor
3. Describe the maneuvers potentially useful in the management of a delivery complicated by shoulder dystocia.

POST-PARTUM EMERGENCIES

Situation:
A 26-year-old female presents 9 days after a spontaneous vaginal delivery with massive vaginal bleeding.

Enabling Objectives:
1. Define immediate and delayed post-partum hemorrhage (PPH)
2. Demonstrate a fundamental knowledge of the presentation and timing of various causes of post-partum hemorrhage:
   a) uterine atony.
   b) vaginal and cervical tears.
   c) retained products.
   d) placenta Accreta, Percreta, and Increta.
   e) uterine inversion.
   f) uterine rupture.
   g) coagulopathy.
3. Demonstrate a working knowledge of the interventions used to limit hemorrhage:
   a) oxytocin.
   b) methylergonovine maleate

c) removal of uterine clots.
d) manual removal of retained products.
e) correction of coagulopathies

4. Demonstrate basic skills in obtaining appropriate and timely consultations with appropriate specialists.
5. List a basic differential diagnosis of post-partum fever after vaginal and cesarian deliveries.
6. List the common pathogens causing post-partum endometritis.

GYNECOLOGIC DISORDERS

Situation:
A 25-year-old non-pregnant woman presents complains of dyspareunia and has vaginal discharge.

Enabling Objectives:
1. Demonstrate fundamental skills in diagnostic and initial therapeutic approach to a patient with post-menopausal vaginal bleeding.
2. State the current recommended treatment for
   a) pelvic inflammatory disease
   b) uncomplicated cervicitis or urethritis
   c) primary genital herpes
3. Describe the typical clinical presentation of ovarian torsion and its management.
4. Differentiate between the causes of vaginitis based on clinical findings and laboratory analysis, and describe appropriate treatment for each cause.

MALE GENITAL DISORDERS

URETHRITIS

Situation:
A 35-year-old male presents with dysuria and urethral discharge.

Enabling Objectives:
1. Define urethritis.
2. Differentiate between gonococcal and non-gonococcal urethritis.
3. Demonstrate fundamental knowledge of the use of urethral swabs for culture and staining for diagnosis.
4. Display skills in choosing the appropriate antibiotic therapy for urethritis.

PROSTATITIS

Situations:
1. A 42-year-old man presents with fever, chills, and dysuria. On rectal examination, his prostate is diffusely swollen and tender.

2. A 60-year-old man complains of chronic perineal pain, urinary urgency and frequency.

Enabling Objectives:
1. Define acute and chronic bacterial prostatitis.
2. Demonstrate fundamental knowledge of the use of cultures of prostatic secretions and urine for diagnosis.
3. Demonstrate a basic understanding of the initial management of acute and chronic bacterial prostatitis including choice of appropriate antibiotic therapy.
4. Define chronic nonbacterial prostatitis.

TESTICULAR TORSION AND EPIDIDYMITIS

Situations:
1. While playing soccer a 13-year-old boy develops an acutely painful and swollen left testicle.
2. A 27-year-old man presents with right scrotal and abdominal pain, which has gradually worsened over the past 3 days. He now has a fever.

Enabling Objectives:

1. Demonstrate fundamental knowledge of the conditions causing acute scrotal pain that are urologic emergencies.
2. Describe the clinical presentation of torsion of the appendix epididymitis and testis.
3. List the common pathogens most responsible for epididymitis.
4. Demonstrate fundamental knowledge of the role of DI such as duplex ultrasonography for diagnosing an acute scrotum.
5. Show skills in choosing the appropriate antibiotic and describe supportive therapy for patients with epididymitis.
6. Identify which patients with epididymitis require admission.

PHIMOSIS AND PARAPHIMOSIS

Situations:
1. A 3-year-old uncircumcised boy has not been able to urinate for 12 hours. His mother notices that his foreskin cannot be retracted.
2. A 30-year-old uncircumcised man complains that the tip of his penis is swollen and purple. His foreskin appears to be trapped behind the glans penis.

Enabling Objectives:
1. Define phimosis and paraphimosis.
2. Describe the risk factors for developing phimosis and paraphimosis.
3. Demonstrate fundamental knowledge of a technique to correct a phimosis and a paraphimosis.

PRIAPISM

Situations:
1. Following an intracavernosal injection of papaverine, a 60-year-old man presents 6 hours later with a persistent and painful erection.
2. An 11-year-old boy with sickle cell anemia presents with a painful erection.

Enabling Objectives:
1. Define priapism.
2. Identify causes of priapism.
3. Demonstrate fundamental knowledge of the medical management of priapism.
4. Demonstrate basic skills in obtaining appropriate and timely consultations with appropriate specialists.

MUSCULOSKELETAL DISORDERS (NONTRAUMATIC)

MONOARTICULAR ARTHRITIS

Situations:
1. A 25-year-old male presents with a hot swollen knee.
2. A 30-year-old intravenous drug abuser has acute pain and swelling of his left elbow.
3. A 40-year-old female has pain and redness of her first toe.

Enabling Objectives:

1. List a basic differential diagnosis of acute monoarticular arthritis.
2. Demonstrate fundamental skills in obtaining an essential history and physical exam needed to evaluate a hot joint.
3. Demonstrate basic skills in how to aspirate knee and ankle joints.
4. Demonstrate fundamental knowledge of the findings of arthrocentesis fluid that help differentiate crystal arthropathies, infective, and inflammatory disorders.
5. Define septic arthritis.
6. Describe the role of DI in monoarticular arthritis
7. List the most common pathogens associated with septic arthritis.
8. Demonstrate fundamental knowledge of the treatment of septic arthritis.
9. List the most common joints involved in crystal arthropathies.
10. Demonstrate fundamental knowledge of the treatment for crystal-induced synovitis.

POLYARTICULAR ARTHRITIS

Situations:
1. A 24-year-old woman complains of bilateral wrist pain and finger stiffness.
2. A 65-year-old man is complaining of achy joints worse in the morning.

Enabling Objectives:
1. Display fundamental knowledge of the natural history of rheumatoid arthritis.
2. List the most commonly affected joints in rheumatoid arthritis.

3. Demonstrate fundamental knowledge of the laboratory findings commonly associated with rheumatoid arthritis.
4. Demonstrate fundamental knowledge of the treatments available for rheumatoid arthritis.
5. Outline the signs and symptoms of osteoarthritis.
6. Describe the most likely joints affected by osteoarthritis.
7. Describe the typical pain view DI findings of osteoarthritis.
8. Demonstrate fundamental knowledge of the surgical and non-surgical options for treatment of osteoarthritis.

BONE DISORDERS

Situations:
1. A 55-year old diabetic with a chronic foot ulcer has increasing pain and worsening appearance of the ulcer.
2. A 72-year-old female develops severe spontaneous low back pain relieved by rest.

Enabling objectives:
1. Define osteomyelitis.
2. Demonstrate fundamental knowledge of the signs and symptoms of osteomyelitis.
3. List the organisms most likely to cause osteomyelitis.
4. Have a working knowledge of the use of blood work and DI to diagnose osteomyelitis.
5. Demonstrate fundamental knowledge of the treatment of osteomyelitis.
6. Define avascular necrosis.
7. List the sites most susceptible to avascular necrosis.
8. Demonstrate fundamental knowledge of the treatments for avascular necrosis.
9. Define osteochondrosis.
10. Describe typical DI findings of osteochondrosis.
11. Demonstrate fundamental knowledge of the management of osteochondrosis.
12. Define osteoporosis.
13. List the risk factors for developing osteoporosis.
14. Demonstrate fundamental knowledge of the treatment of osteoporosis and the indications for referral/admission.
15. Define Paget's disease.
16. Demonstrate fundamental knowledge of the typical sites of involvement of Paget's disease.
17. Demonstrate fundamental knowledge of the typical plain view DI appearance of Paget's disease.

SPINAL COLUMN DISORDERS

Situation:
A 34-year-old male presents to ED with severe low back pain.

Enabling Objectives:

1. Define ankylosing spondylitis.
2. Demonstrate fundamental knowledge of the associated findings of ankylosing spondylitis beyond sacroiliitis.
3. Demonstrate fundamental knowledge of the typical DI plain view findings of ankylosing spondylitis.
4. Display an understanding of the initial treatment approach for a patient with ankylosing spondylitis.
5. Define spondylolysis and spondylolisthesis.
6. Identify the most common vertebral level affected by spondylolisthesis.
7. Demonstrate fundamental knowledge of the characteristics of back pain associated with spondylolysis/spondylolisthesis.
8. Demonstrate a basic ability to outline the appropriate use of DI such as plain x-rays and CT scan in diagnosing spondylolysis/spondylolisthesis.
9. Display an understanding of the initial treatment of spondylolisthesis.

BONE TUMORS

Situation:
A 34-year-old woman with ovarian cancer has been diagnosed with bone metastases.

Enabling Objectives:
1. List the most common tumors that metastasize to bone.
2. List the most common bony sites involved in metastatic disease.
3. Demonstrate a basic understanding of the plain view DI findings that can differentiate between a malignant and benign bone tumor.
4. Demonstrate fundamental knowledge of the evaluation and initial management of a patient with a suspected neoplasm of the musculoskeletal system.

OVERUSE SYNDROMES (BURSITIS/TENDINITIS)

Situation:
A 22-year old swimmer has noted increasing pain in the shoulder and limited movement while training for competition.

Enabling Objectives:
1. Define bursitis.
2. List the common bursae affected.
3. Demonstrate fundamental knowledge of the treatment options for bursitis.
4. Describe the clinical presentation of tendinitis.
5. List the common areas affected by tendinitis
6. Demonstrate fundamental knowledge of the approach and treatment of specific overuse injuries including:
    a) tennis/golfer's elbow
    b) biceps tendinitis
    c) rotator cuff tendinitis
    d) deQuervain's disease

e) plantar fasciitis
f) shin splints
g) carpal tunnel syndrome

MUSCLE DISORDERS

Situation:
A 54-year-old female presents with difficulty walking and pain in her thighs.

Enabling Objectives:
1. List the early symptoms of a patient with muscular dystrophy.
2. Demonstrate fundamental knowledge of the prognosis of muscular dystrophy.
3. Define myositis.
4. Describe the clinical presentation of a patient with polymyositis.
5. Demonstrate fundamental knowledge of the typical laboratory features found in polymyositis.
6. Define the term myositis ossificans.
7. Demonstrate fundamental knowledge of the clinical features, and DI findings of a patient with myositis ossificans.
8. Demonstrate basic skills in obtaining appropriate and timely consultations with appropriate specialists for the above conditions.

DERMATOLOGIC DISORDERS

RASHES

Situation:
A 21-year-old female presents with a red itchy rash on her legs.

Enabling Objectives:
1. Display the ability to describe the appearance of a rash using appropriate terminology by defining the following:
   a) wheal
   b) purpura/petechia
   c) vesicle
   d) pustule
   e) macule
   f) papule
   g) ulcer
   h) nodule
2. Display a basic ability to recognize potentially life threatening illnesses that may present with rash:
   a) meningococcemia
   b) anaphylaxis
   c) toxic shock syndrome

d) toxic epidermic necrolysis
e) rocky mountain spotted fever
f) purpura fulminans

URTICARIA

Situation:
A 32-year-old male with known seafood allergy presents with a generalized wheals following accidental exposure to shrimp.

Enabling Objectives:
1. Describe the typical appearance of urticaria.
2. List common causes of urticaria- including infections, drugs, and foods.
3. Display a basic ability to recognize the severe allergic reaction and manage the patient with anaphylaxis (see Shock objectives).
4. Demonstrate basic skills in the ED treatment of urticaria.

HERPES ZOSTER

Situation:
A 60-year-old male complains of right-sided chest pain and rash.

Enabling Objectives:
1. Be able to describe the typical appearance of herpes zoster.
2. Identify the most common dermatomal areas of involvement.
3. Display fundamental knowledge of the medical therapy available for herpes zoster.

PEMPHIGUS VULGARIS

Situation:
A 45-year-old woman recently started on captopril has developed generalized blisters over her body.

Enabling Objectives:
1. Describe the clinical presentation of pemphigus vulgaris.
2. List the potential drugs that can induce pemphigus.
3. Display a basic ability to recognize the need for dermatologic consult and specialized wound care in pemphigus.

TOXIC EPIDERMAL NECROLYSIS (TEN)

Situation:
One day after starting cotrimoxazole for a UTI, a 48-year-old female presents with a fever, looks unwell and has a diffuse red, peeling rash.

Enabling Objectives:
1. Describe the clinical presentation of TEN.

2. List etiological factors associated with the development of TEN.
3. Display a basic ability to recognize the need for dermatologic consult in TEN.

PURPURA

Situation:
A 32-year-old asplenic male presents with a purpuric rash and high fever after being unwell for three days. His wife confirms that he had not had immunizations within the past 10 years.

Enabling Objectives:
1. Describe the physical appearance of purpura, petechia, and ecchymosis.
2. Display basic skills in eliciting components of a medical history essential in diagnosing a patient with purpura.
3. Display fundamental knowledge of the laboratory work up of a patient with purpura.
4. List the common causes of purpura**.**

ERYTHEMA NODOSUM

Situation:
A 27-year-old woman on oral contraceptives presents with malaise, fever and painful nodules over her shins.

Enabling Objectives:
1. Describe the typical presentation of erythema nodosum.
2. List the most common causes of erythema nodosum.
3. Display fundamental knowledge of the laboratory work up for erythema nodosum.
4. Display fundamental knowledge of the management of erythema nodosum

CONTACT DERMATITIS

Situation:
A group of 17-year old teens recently returned from a camping trip have all been exposed to poison ivy.

Enabling Objectives:
1. Distinguish between allergic versus irritant contact dermatitis.
2. List common allergens and irritants that can cause contact dermatitis.
3. Display fundamental knowledge of the treatment of contact dermatitis.

TINEA INFECTIONS

Situation:
A 70-year old man presents with macerated skin over his feet.

Enabling Objectives:

1. Classify fungal infections according to location and appearance:
   a) tinea capitis
   b) tinea corporis
   c) tinea cruris
   d) tinea pedis
   e) tinea unguium
   f) tinea versicolor
2. Display an understanding of the use of Wood's lamp, microscopy and fungal cultures in diagnosing tinea infections.
3. Display fundamental knowledge of the use of oral and topical antifungals in the treatment of tinea infections.

PITYRIASIS ROSEA

Situation:
A previously healthy 17-year-old boy presents with a generalized rash predominantly affecting his trunk.

Enabling Objectives:
1. Describe the "herald patch" and secondary eruption of pityriasis rosea.
2. Display fundamental knowledge of the treatment of pityriasis rosea.

TOXIC SHOCK SYNDROME (TSS)

Situation:
An 18-year-old girl presents with fever, a sunburn-like rash and weakness.

Enabling Objectives:
1. Define TSS.
2. Display fundamental knowledge of the laboratory abnormalities found in TSS.
3. Display fundamental knowledge of the treatment of TSS.

CELLULITIS

Situation:
A 34-year-old carpenter presents with redness and swelling of his wrist and forearm following an abrasion to his wrist.

Enabling Objectives:
1. Define cellulitis.
2. Describe the classical signs and symptoms of cellulitis.
3. List the most common organisms involved in cellulitis.
4. Display fundamental knowledge of the use of DI and laboratory studies in diagnosing cellulitis.
5. Display fundamental knowledge of the treatment of cellulitis.

ERYSIPELAS

Situation:
A 65-year-old male presents with an intensely red, warm, swollen cheek following a minor scratch of his face.

Enabling Objectives:
1. Define erysipelas and identify the causative agent.
2. Describe the typical appearance of erysipelas.
3. List the parts of the body usually affected by erysipelas.
4. Display fundamental knowledge of the treatment of erysipelas.

ABSCESS

Situation:
A 38-year old known intravenous drug abuser presents with a hardened, swollen area in his right antecubital fossa.

Enabling Objectives:
1. Define the terms abscess, furuncle, and carbuncle.
2. Demonstrate a basic ability to differentiate between abscesses according to location and their typical microbiology:
   a) Bartholin gland
   b) breast
   c) hidradenitis suppurativa
   d) pilonidal
   e) perirectal
3. Demonstrate a basic understanding of the use of needle aspiration, cultures, laboratory studies and DI in diagnosing abscesses.
4. Demonstrate a basic ability to recognize which abscesses are amenable to treatment in the ED, and those that should be referred to general surgery.

NECROTIZING FASCIITIS (NF) /MYONECROSIS

Situation:
A 55-year-old diabetic presents with fever, and rapidly spreading redness and pain in his left leg.

Enabling Objectives:
1. Define necrotizing fasciitis (NF).
2. List the most common organisms associated with NF.
3. Describe the typical historical and physical findings of a patient with NF.
4. Demonstrate a basic ability to recognize the need for emergency surgical exploration and debridement of NF.

MALIGNANT SKIN LESIONS

Situation:
A 75-year-old female presents with an enlarging fungating lesion on the side of her nose.

Enabling Objectives:
1. Describe the features of a potentially malignant skin lesion.
2. Demonstrate the ability to arrange for appropriate follow up for a patient with a suspected skin malignancy.

HEMATOLOGIC DISORDERS

MICROCYTIC ANEMIA

Situation:
A 48-year-old female presents with increasing fatigue and mild dyspnea with exertion. A CBC reveals hemoglobin of 78 g/L and normal WBC and platelets. The MCV was microcytic at 69 fl. She is of Mediterranean descent and there is a family history of individuals requiring blood transfusions.

Enabling Objectives:
1. Display a fundamental understanding of the following characteristics or laboratory tests which can be used to distinguish thalassemia from iron deficiency anemia:
   a. Ethnic origin
   b. Hypersplenism
   c. MCV (mean cell volume) and RDW (red blood cell distribution width)
   d. Hemoglobin electrophoresis
2. Display a basic ability to define the following laboratory tests and discuss the expected results in regards to iron deficiency anemia:
   a. Serum iron
   b. Total iron-binding capacity (TIBC)
   c. Ferritin level
3. Display a fundamental understanding of the genetic basis, clinical manifestations, and laboratory diagnosis of β-thalassemia.
4. Display a fundamental understanding of the genetic basis, clinical manifestations, and laboratory diagnosis of α-thalassemia including:
   a. Silent carrier
   b. α-thalassemia trait
   c. Hemoglobin H
   d. Fetal Hydrops

HEMOLYTIC ANEMIA

Situation:
A 72-year-old gentleman with a known history of chronic lymphocytic leukemia (CLL) presents with weakness, jaundice and LUQ pain. He has splenomegaly and multiple

sites of lymphadenopathy. A CBC reveals a hemoglobin of 68 g/L, normal platelet count and an elevated WBC count of 30 x 10^9 /L with elevated lymphocytes at 21 x 10^9 /L.

Enabling Objectives:

1. Display a basic ability to discuss how anemia due to underproduction can distinguished from anemia due to increased destruction using the following laboratory tests:
   a) Reticulocyte count
   b) Haptoglobin
   c) Bilirubin
   d) Lactose dehydrogenase (LDH)
   e) Urinary or fecal urobilinogen
2. Define a list the most common causes of intravascular and extravascular hemolysis.
3. Display a basic knowledge of the use of the following laboratory tests in intravascular and extravascular hemolysis
   a) Peripheral blood smear
   b) Haptoglobin
   c) Coombs test

MEGALOBLASTIC ANEMIA

Situation:

A 58-year-old male presents with increasing fatigue, dyspnea with exertion and numbness and tingling in his feet and hands. A CBC reveals a hemoglobin of 100 g/L and an elevated MCV at 110 fl.

Enabling Objectives:

1. Define megaloblastic anemia.
2. Define macrocytosis.
3. List the causes of megaloblastic anemia.
4. List the causes of macrocytic anemia.
5. Display a basic ablitiy to use the following laboratory tests to differentiate between Vitamin B_{12} (cobalamin) and folate deficiency:
   d) Serum cobalamin
   e) Red cell folate
   f) Serum methylmalonic acid
   g) Total homocysteine
6. Define pernicious anemia
7. List the causes of cobalamin deficiency.
8. Describe the Schilling test.
9. Demonstrate fundamental knowledge of the neurological abnormalities that can be associated with cobalamin deficiency.
10. Demonstrate fundamental knowledge of the importance of initiating early treatment for cobalamin deficiency.

COMMON BLEEDING SYNDROMES

Situations:

1. A 17-year-old male with hemophilia A presents to the ED with an acutely swollen painful left knee for the third time in one month.
2. A 42-year-old male with known chronic cirrhosis secondary to alcohol presents to the ED with severe epistaxis.
3. A 54-year-old female presents to the ED with confusion, a low-grade fever, and petechiae. Initial laboratory data also reveals anemia, thrombocytopenia and an elevated creatinine.

Enabling Objectives:

1. Demonstrate a basic ability to define the coagulation deficiency, genetic inheritance, and clinical manifestations of the following disorders:
   a) Hemophilia A
   b) Hemophilia B
   c) Von Willebrand's disease
2. Display a fundamental knowledge of the treatments available for the above disorders.
3. Define the three mechanisms by which chronic liver disease can alter hemostasis.
4. Display a fundamental knowledge of the management of acute bleeding in chronic liver disease.
5. Display a fundamental knowledge of the etiologies and laboratory abnormalities of the following acquired coagulation disorders:
   a. Vitamin K deficiency
   b. Disseminated intravascular coagulation (DIC)
6. Define TTP.
7. Display a fundamental knowledge of the initial management of TTP.
8. List a basic differential diagnosis of thrombocytopenia.

SICKLE CELL DISEASE

Situation:

A 32-year-old African American female presents with an acutely painful and swollen left thigh following a collision with another player when playing soccer.

Enabling Objectives:

1. Display fundamental knowledge of the genetic abnormality and the populations at risk for sickle cell disease.
2. Display fundamental knowledge of the acute vaso-occlusive pain syndrome associated with sickle cell disease and its management.

TRANSFUSION THERAPY

Situation:

A 74-year-old male on chronic NSAID therapy for osteoarthritis presents to the ED with hematemesis and melena. Laboratory results indicate a hemoglobin level of 84 g/L. The patient is hesitant about receiving a blood transfusion.

Enabling Objectives:
1. Demonstrate fundamental knowledge of the role of red blood cell transfusion in acute blood loss.
2. Demonstrate fundamental knowledge of the infectious risks of red blood cell and plasma infusion for HIV, Hepatitis B, Hepatitis C, and HTLV.
3. Define a massive blood transfusion.
4. Demonstrate fundamental knowledge of the indications for red blood cell transfusion in chronic anemia.
5. Demonstrate fundamental knowledge of the indications for plasma and platelet transfusion.

ONCOLOGIC DISORDERS

FEBRILE NEUTROPENIA

Situation:
A 39-year-old female with breast cancer and axillary lymph node involvement completed her third cycle of chemotherapy 8 days ago. She now presents to the ED feeling generally unwell with chills, rigors and a temperature of 38.9°C.

Enabling Objectives:
1. Define febrile neutropenia.
2. List the principal causative organisms of a neutropenic fever.
3. Display a fundamental knowledge of the initial investigations in a patient with neutropenia and fever.
4. Display a basic knowledge of the treatment of febrile neutropenia.

HYPERCALCEMIA

Situation:
A 65-year-old female with breast cancer and metastases to the bone presents to the ED with confusion, nausea, vomiting, and constipation.

Enabling Objectives:
1. Define hypercalcemia.
2. List the causes of hypercalcemia.
3. List the signs and symptoms of hypercalcemia.
4. Display a fundamental knowledge of the necessary investigations and initial management of a patient presenting with hypercalcemia.

TUMOR LYSIS SYNDROME

Situation:
A 43-year-old male with acute lymphoblastic leukemia presents 4 days after his first chemotherapy treatment with complaints of abdominal and flank pain, nausea and vomiting, oliguria, hematuria, muscle cramps and spasms. On examination, he has hypertension, altered mental status, carpopedal spasms, CVA tenderness, ascites and a huge spleen.

Enabling Objectives:
1. Define tumor lysis syndrome.
2. List the signs and symptoms of hypocalcemia.
3. Display a fundamental knowledge of the management of tumor lysis syndrome.

SPINAL CORD COMPRESSION

Situation:
A 74-year-old male is brought to the ED with complaints of back pain and numbness and tingling of the lower extremities. He has a previous diagnosis of prostate cancer.

Enabling Objectives:
1. List the malignancies most commonly associated with spinal cord compression.
2. Display a basic ability to describe the common characteristics of the back pain associated with spinal cord compression.
3. Display a fundamental understanding of the use of the following DI used to investigate spinal cord compression:
    a. plain spine radiographs
    b. CT myelogram
    c. MRI
4. Display a fundamental knowledge of the management of spinal cord compression.

SUPERIOR VENA CAVA SYNDROME

Situation:
A 54-year-old male smoker presents with gradually increased dyspnea, a sensation of fullness of the head and facial puffiness.

Enabling Objectives:
1. Display a basic ability to describe the common signs and symptoms associated with superior vena cava syndrome.
2. List the most common malignant and benign causes of superior vena cava syndrome.
3. Display fundamental knowledge of the general treatment options for superior vena cava syndrome.

IMMUNE SYSTEM DISORDERS

HIV / AIDS RELATED ILLNESSES

Situations:
1. An HIV+ Injection Drug User presents with a headache that started yesterday and isn't resolving with increasing heroin use.
2. A 27-year-old gay male presents with a persistent cough that is worsening over the past 3 weeks.

Enabling Objectives
1. Display a basic ability to describe the use of the CD4 lymphocyte count in determining the degree of immunodeficiency in patients without prior AIDS-defining diseases, and list cutoffs below which prophylaxis for *Pneumocystis carinii* pneumonia (PCP) and *Mycobacterium avium* Complex (MAC) should be initiated.
   a) Describe the typical presentation of PCP.
2. Describe the typical presentation of Toxoplasmosis.
3. List the common causes of meningitis in the HIV+ patient.
4. Demonstrate fundamental knowledge of the appropriate CSF studies to be requested in HIV+ patients with suspected meningitis.
5. List possible opportunistic infections of the gastrointestinal tract.
6. Display a basic ability to describe the initial work-up of recent onset fevers or night sweats without focal symptoms or findings.

ALLERGY AND ANAPHYLAXIS

Situation:
A 27-year-old female with a history of peanut allergy presents with a pruritic rash after eating at a Thai restaurant.

Enabling Objectives
1. Define anaphylaxis and angioedema.
2. Display basic skills in the initial evaluation of a patient presenting with an allergic reaction.
3. Display fundamental knowledge of the therapies used in the treatment of mild and moderate allergic reactions.
4. Display fundamental knowledge of the treatment priorities and first-line pharmacologic therapy in the treatment of severe and allergic reactions and anaphylaxis.
5. Display fundamental knowledge of the disposition of a patient who has resolved after therapy for a:
   a) Mild or moderate allergic reaction
   b) Severe allergic reaction or anaphylaxis

PSYCHOBEHAVIORAL DISORDERS

PSYCHIATRIC DISORDERS

Situation:

Family members bring in a 43-year-old male to the ED after he threatened to kill his wife and then jump off a bridge.

Enabling Objectives:

1. Identify criteria for the diagnosis of mood disorders – major depression, bipolar disorder and dysthymic disorder.
2. Identify criteria for the diagnosis of anxiety disorders – panic, generalized anxiety, phobic disorders, posttraumatic stress and obsessive-compulsive disorders.
3. Identify criteria for somatoform disorders – conversion disorder, somatization disorder
4. Identify dissociative disorders – describe dissociative amnesia and dissociative fugue
5. Identify schizophrenia and other psychotic disorders – schizophreniform, brief psychotic and delusional disorders.
6. Recognize the presentation of factitious disorders.
7. Define malingering.
8. Define anorexia nervosa and bulimia.
9. Define adjustment disorder.
10. Define the three groups of personality disorders.

PSYCHOBEHAVIOURAL DISORDERS

EMERGENT INTERVENTION AND STABILIZATION

Situation:

Police bring in a 28-year-old injection drug user. He had been screaming, lashing out at neighbors for several hours and "assaulted" a police officer called to his apartment.

Enabling Objectives:

1. Explain techniques used by the physician to diffuse a potentially violent situation from escalating.
2. Understand the application of physical restraints and the appropriate time and sequence for removal.
3. Name three neuroleptic agents, indications for use, dosages, routes of administration, contraindications and major side effects in the management of agitated patients.
4. Name three benzodiazepine agents, indications for use, dosages, routes of administration, contraindications and major side effects in the management of agitated patients.
5. Compare and contrast dementia and delirium.
6. Perform the mental status exam and mini-mental status examinations
7. Recognize the presentation of substance intoxication and withdrawal.

PSYCHOTROPIC MEDICATIONS

Situation:

A 34-year-old schizophrenic presents with an inability to talk clearly, has an odd posture and complains bitterly of a sore neck

Enabling Objectives:

1. Describe the different classes of neuroleptic agents citing an example from each class, indications, contraindications, dosages and routes of administration and side effects.
2. Describe three different benzodiazepines, indications, contraindications, dosages and routes of administration and side effects.
3. Describe the different classes of antidepressants, their indications, contraindications, dosages and routes of administration and side effects.
4. Have a working knowledge of the mood stabilizing medications: lithium, carbamazepine, valproic acid including indications, contraindications, dosages, routes of administration and side effects.

CHILD AND ADOLESCENT PSYCHIATRY

Situation:
Angry and frustrated parents present with their 13 year-old son and state that they can't handle him any more because of his destructive beahiour.

Enabling Objectives:

1. Understand the causes for adolescent crisis; identify strategies for appropriate follow up or indications for admission.
2. Have an understanding of the common psychiatric disorders in children and adolescents that present to the emergency department:
   a) Oppositional defiant disorder
   b) Conduct disorder
   c) Attention Deficit Disorder
   d) Substance abuse
   e) Depression and suicide
   f) Anxiety
   g) Eating Disorders

PSYCHOTROPIC MEDICATIONS

Situation:
A 34-year-old schizophrenic presents with inability to talk clearly, has an odd posture and complains bitterly of a sore neck

Enabling Objectives:
1. List the main uses, typical side-effects and potential drug interactions of the following classes of medications:
   a) Neuroleptics
   b) Benzodiazepines
   c) Tricyclic antidepressants
   d) MAOI's

e) SSRI's
f) Atypical antidepressants
g) Mood stabilizers: lithium carbamazepine, valproic acid

TOXICOLOGIC DISORDERS

APPROACH AND MANAGEMENT OF THE POISONED PATIENT

Situation:
A 32- year old woman is brought to the hospital fo1lowing a drug overdose of an unknown substance.

Enabling Objectives:
1. Describe the initial assessment and resuscitation of the poisoned patient.
2. Explain the importance of collateral history as it applies to investigation and treatment of the poisoned patient.
3. State the role of the Poison Control Center.
4. Discuss the importance of initial vital signs in patient assessment and early management.
5. List the investigations that are appropriate for a general toxic exposure.
6. Discuss the importance of a baseline ECG in the evaluation of a poisoned patient.
7. Calculate an anion gap and an osmolar gap, and explain the significance of each.
8. Indicate the role of arterial blood gas measurement in the overdose situation.
9. Discuss the three aspects of decontamination: removal decreased absorption and enhanced elimination.
10. List the indications and contraindications for the use of; Ipecac, gastric lavage and aspiration, activated charcoal (AC), multiple-dose AC, whole-bowel irrigation and alkaline diuresis.
11. Outline simple preventative measures against voluntary and accidental poisonings.

TOXIDROMES

Situation:
A drowsy 15-year-old female presents to the ED after ingesting her grandmother's chronic pain medication.

Enabling Objectives:
1. Define the term "clinical toxidrome".
2. List the specific drugs or drug classes that can precipitate an anticholinergic toxicity.
3. List the specific drugs or drug classes that can precipitate a cholinergic toxicity.
4. Define the classic presentation of cholinergic toxicity represented by the pneumonic "SLUDGE".
5. List the specific drugs that can precipitate an opiate toxicity.
6. List the specific drugs or drug classes that can precipitate a sedative hypnotic toxicity.

7. List the specific drugs or drug classes that can precipitate a sympathomimetic toxicity.
8. List and compare the vital signs (BP, RR, HR), clinical presentation (pupils, integument and LOC) and the systemic manifestation (GI, GU, and CNS) of the above toxidromes.
9. Provide the appropriate medical management for these toxidromes and/or their physiologic sequelae.

ANTIDOTES AND ENHANCED ELIMINATION

Situation:
A 5- year-old male presents having consumed approximately half of a bottle of his mother's postnatal iron supplements.

Enabling Objectives:
1. Recognize the possibility that an antidote may be available for a poisoning
2. Recognize the role of the Poison Control Centre in this situation.
3. Have an understanding of the specific antidotes available for the following overdoses/syndromes:
    a. acetaminophen
    b. benzodiazepines
    c. beta-blockers
    d. calcium channel antagonists
    e. carbon monoxide
    f. cyanide
    g. digoxin
    h. ethylene glycol and methanol
    i. iron
    j. hydrofluoric acid
    k. organophosphates
    l. opiods
    m. anticoagulants
4. Have an understanding of the commonly encountered drugs or drug classes that are dialyzable and those to be eliminated via hemoperfusion (hemofiltration).
5. Outline the disposition of a patient requiring antidotes and enhanced elimination.

ENVIRONMENTAL EMERGENCIES

HEAT EMERGENCIES

Situation:
A 30-year-old woman has just run a marathon and collapsed at the finish line. She is brought to the ED confused with a temperature of 41 degrees Celsius.

Enabling Objectives:
1. Outline the factors predisposing people to heat illness.
2. Describe the clinical features of the minor heat illnesses including prickly heat, heat edema, heat syncope and heat cramps.
3. Discuss the options for cooling patients with heat illness.
4. Differentiate between heat stroke and heat exhaustion.

HYPOTHERMIA AND COLD INDUCED INJURIES

Situation:
A 4-year-old boy is brought to the ED unconscious. He was digging a tunnel in a snow bank and got stuck for over an hour.

Enabling Objectives:
1. Define hypothermia
2. List predisposing factors to hypothermia
3. Outline the clinical findings in hypothermia
4. Outline the general approach to the hypothermic patient
5. Describe various methods of rewarming.
6. Display a basic understanding of a management approach to hypothermic cardiac dysrhythmias and arrests

Situation:
A 44-year old alcoholic male is brought to the ED with swollen, painful feet after being found sleeping outside in the cold winter night.

Enabling Objectives:
1. Outline the differences between superficial and deep frost bites.
2. Outline the ED management of patients with superficial and deep frostbites.
3. Outline the potential complications of frostbite.

NEAR-DROWNINGS

Situation:
A 3-year-old boy is brought to the ED with decreased level of consciousness after he was found in the neighbor's pond.

Enabling Objectives:
1. Display a fundamental understanding of the pathophysiology of drowning.
2. List the basic factors affecting outcome in near drowning.

BITES AND STINGS

Situations:
1. A parent brings a 6-year-old boy into the ED. He was walking along a creek and was bitten by a stray dog.

2. A 22-year old comes into the ED with a swollen face. He states that he was stung repeatedly by hornets.

Enabling Objectives:
1. List the oral flora that can contaminate human, cat and dog bites, and list appropriate antibiotic therapy.
2. List the indications for acute rabies immunization, and the time frame it must be given to be effective after exposure.
3. Characterize the potential toxic and systemic reactions to Hymenoptera stings
4. Describe the symptoms and outline the basic management of an anaphylactic reaction.

PEDIATRIC NON-TRAUMATIC PRESENTATIONS

Situation:
Parents bring their 4-year-old boy to the ED with a complaint of abdominal pain.

Terminal Objectives:
The competent resident will:
1. Outline a simple, symptom-based physiological and anatomical initial approach followed by basic differential diagnosis for most of the following non-traumatic pediatric presentations. The differential diagnosis should include the life threatening as well as some common disorders.
2. Elicit a history and perform a physical exam relevant to the conditions identified in the differential diagnosis of the presenting complaint.
3. Interpret the information obtained from the history and physical examination and suggest a focused differential diagnosis.
4. Plan investigations appropriate to the patient presentation.
5. Demonstrate a basic ability to interpret the results of the requested investigations.
6. Initiate stabilization and perform or arrange for definitive treatment in an appropriate and timely manner.

NEONATAL PRESENTATIONS

Jaundice
Convulsions
Apnea

HEAD NECK AND NEURO PRESENTATIONS

Earache
Headache
Red Eye
Sore Throat
Stridor

CHEST PRESENTATIONS

Chest Pain
Cough
Respiratory Distress
Dyspnea
Hemoptysis
Wheezing

ABDOMINAL AND GI PRESENTATIONS

Abdominal Pain
Constipation
Diarrhea
Hematemesis
Jaundice
Vomiting

GENITOURINARY PRESENTATIONS

Scrotal Pain
Hematuria
Dysuria / Frequency

MUSCULOSKELETAL AND EXTREMITY PRESENTATIONS

Limp
Painful joint

PSYCHIATRIC PRESENTATIONS

Depressed mood
Disruptive Behavior

GENERAL PRESENTATIONS

Fever and Irritability < Three Months
Fever >Three Months<Three Years
Fever and Rash
Rash
Lethargy
Syncope
Convulsions
Weakness
Inconsolable infant
Failure to Thrive

PEDIATRIC NON-TRAUMATIC DISORDERS

NEONATAL DISORDERS

NEONATAL HYPERBILIRUBINEMIA

Situation:
A 5-day-old breast-fed infant presents with decreased feeds and marked jaundice. A heel-poke bilirubin returns as 424µmol/L

Enabling Objectives:
1. Elicit and interpret information from the history and physical examination to differentiate between the causes of jaundice.
2. Display a basic ability to plan and interpret the appropriate investigations used in the diagnosis of jaundice in the newborn.
3. Demonstrate fundamental knowledge of the treatment of jaundice in the newborn.

NEONATAL SEPSIS

Situation:
A 23-day-old baby presents after the mother noted an apneic spell lasting 30 seconds associated with the baby turning blue.

Enabling Objectives:
1. List the common presentation of neonatal sepsis.
2. Describe an appropriate workup for neonatal sepsis.
3. List the common organisms associated with neonatal sepsis and list appropriate empiric antibiotic therapy.

NECROTIZING ENTEROCOLITIS

Situation:
A 9-day-old baby born at 35 weeks presents with feeding intolerance and irritability followed by bloody stools.

Enabling Objectives:
1. List the signs and symptoms that are associated with necrotizing enterocolitis (NEC).
2. Describe the abdominal x-ray findings associated with NEC.
3. Demonstrate fundamental knowledge of the management of NEC.

HEAD NECK AND NEURO DISORDERS

EPIGLOTTITIS, BACTERIAL TRACHEITIS, AND CROUP

Situation:
1. A toxic-looking 2-year-old child presents with fever, drooling and stridor.
2. A non-toxic 3-year-old female presents with frequent barking cough and inspiratory stridor.

Enabling Objectives:
1. Describe the epidemiology of epiglottitis.
2. Describe the epidemiology of croup.
3. Describe the clinical manifestations of epiglottitis, bacterial tracheitis and croup.
4. Discuss the typical etiologic agents and initiate appropriate antibiotic therapy (if any) for epiglottitis, bacterial tracheitis, and croup.
5. Demonstrate basic skills in the management approach to the patient with suspected epiglottitis.
6. Demonstrate basic skills in the management approach to patients with croup
7. List the indications for hospitalization and consultation for croup.

PHARYNGITIS AND STOMATITIS

Situation:
A 6-year-old girl presents with painful vesicles around her mouth and intra-orally.

Enabling Objectives:
1. Differentiate between viral pharyngitis and Group A Beta-hemolytic Streptococcal (GABHS) based on history and physical findings.
2. Describe the typical appearance of an oral mucosal and dermal herpetic rash.
3. List the pathogen(s) involved in ulcerative stomatitis.
4. Demonstrate fundamental knowledge of the treatment options and the use of antivirals in herpes simplex infections.

RETROPHARYNGEAL AND PERITONSILLAR ABSCESS

Situation:
A 12-year-old child presents with fever, sore throat and inability to swallow solid food.

Enabling Objectives:
1. Describe the physical findings of a retropharyngeal abscess.
2. Describe the physical findings of a peritonsillar abscess.
3. List the etiologic agents and initiate appropriate antibiotic therapy for peritonsillar and retropharyngeal abscesses.

OTITIS MEDIA AND EXTERNA

Situation:
A 15-year old teenage swimmer presents with left otalgia and crusting of the ear canal.

Enabling Objectives:
1. Compare and contrast the clinical findings of OM and OE.
2. List and contrast the predisposing factors and causal pathogens of OM and OE.
3. Discuss the possible complications of OM.
4. Outline the treatment plan of OM and OE.

5. Discuss the indications for referral to ENT.

PRESEPTAL AND ORBITAL CELLULITIS

Situation:
A 14-year old teenager presents with nontraumatic swelling and redness of the soft tissues around her left eye associated with fever and malaise.

Enabling Objectives:
1. Distinguish between preseptal and orbital cellulitis based on the clinical findings.
2. Demonstrate fundamental knowledge of the appropriate investigation and initial management of orbital cellulitis.

V-P SHUNT MALFUNCTION

Situation:
A 2-year-old child with developmental delay and a history of hydrocephalus presents with the patient's mother who states that he is acting in a manner similar to the last time he had a blocked shunt.

Enabling Objectives:
1. Demonstrate a fundamental knowledge of the clinical progression of a patient with a blocked V-P shunt and increasing intracranial pressure.
2. Describe the usual location of a V-P shunt.
3. Outline the ED management of this problem

MENINGITIS

Situation:
A 15-year-old female presents with a flu-like illness including vomiting and fever, and is found to have a stiff neck and looks toxic on physical examination.

Enabling Objectives:
1. Describe the early and late findings on clinical assessment of infants with meningitis, and also with older children.
2. List the indications, contraindications, and appropriate timing for performing lumbar puncture in suspected meningitis.
3. Demonstrate the ability to perform lumbar puncture
4. Demonstrate fundamental knowledge of the appropriate CSF and blood investigations and DI in the workup of suspected meningitis.
5. List the typical CSF findings with bacterial meningitis.
6. List the common bacterial pathogens and appropriate empiric therapy for the following age groups with meningitis:
    a) Neonates
    b) Infants one to three months old
    c) Children 3 months to 6 years old.

d) Over 6 years old

FEBRILE SEIZURES

Situation:
A 16-month old child presents after having a witnessed tonic-clonic seizure lasting 15 seconds at home. The child had URI symptoms and a fever that began the previous day.

Enabling Objectives:
1. Define febrile seizures
2. List the conditions that should be ruled out in patients presenting with febrile seizures.
3. Demonstrate fundamental knowledge of the appropriate immediate investigations required in a first presentation of a seizure associated with fever.

EPILEPSY

Situation:
A 6-year-old male with a known seizure disorder presents by EMS after he had three tonic/clonic seizures at school within a one-hour period.

Enabling Objectives:
1. List the important historical points in the assessment of a patient with a first seizure, and with a past history of seizures.
2. Demonstrate fundamental knowledge of the initial investigations appropriate when investigating a person with a first afebrile seizure.

PULMONARY DISORDERS

ASTHMA

Situation:
A 9-year-old male presents with rapid onset and worsening of his asthma despite frequent use of his bronchodilator inhaler earlier in the day. He was hospitalized for his asthma one month ago for a similar attack.

Enabling Objectives:
1. Display a basic ability to outline an appropriate assessment of an acute exacerbation of asthma and treatment priorities.
2. Demonstrate a fundamental understanding of indications for admission.
3. Display a basic ability to arrange appropriate discharge medications, instructions for parents, and follow-up plans.

PNEUMONIA

Situation:

A mother brings in her 3-year-old daughter from day care. The girl presents with fever, tachypnea, productive cough and increased irritability. Her plain views of the chest on DI reveals a LLL infiltrate.

Enabling Objectives:
1. List the typical viral and bacterial causes of pneumonia for the following age groups: birth to 1 month, 1 month to 3 months, 3 months to 5 years, and 5 years to 19 years.
2. List appropriate empiric antibiotic therapy for pneumonia in the following age groups: birth to 1 month, 1 month to 3 months, 3 months to 5 years, and greater than 5 years.
3. Demonstrate a fundamental knowledge of the appropriate diagnostic workups for children with a suspected pneumonia.
4. Demonstrate a basic understanding of the criteria for admission for pediatric pneumonia patients.

BRONCHIOLITIS

Situation:
A 5-month-old male is brought in by his parents with a 2-day history of low-grade fever, runny nose, and decreased appetite. He presents now with tachypnea and increased work of breathing.

Enabling Objectives:
1. Demonstrate basic skills in the appropriate assessment of a case of bronchiolitis.
2. Display a fundamental knowledge of initial management of the patient with bronchiolitis.
3. List the most common etiologic agents of bronchiolitis.
4. Demonstrate a basic understanding of the criteria for admission of patients with bronchiolitis.
5. Demonstrate a basic understanding of the appropriate discharge instructions

PERTUSSIS

Situation:
A 6-month-old female presents with a 2-day history of intermittent coughing spells followed by post-tussive emesis and occasional, brief cyanosis. The child is brought in by her mother who runs a daycare centre.

Enabling Objectives:
1. Describe the clinical stages of pertussis.
2. Demonstrate basic skills in the appropriate assessment of a patient with pertussis.
3. Display fundamental knowledge of the management of a patient with pertussis.

FOREIGN BODY INHALATION

Situation:

A previously well 4 year-old-male attended a birthday party where he played with, marbles. He presents with sudden onset stridor and coughing after playing with marbles.

Enabling Objectives:
1. Demonstrate fundamental skills in the appropriate clinical and DI assessment of a stable patient with partial airway obstruction.
2. Display fundamental knowledge of the appropriate emergent management of a patient that presents with acute partial airway obstruction.

CYSTIC FIBROSIS

Situations:
1. A Caucasian 2-month-old male presents with failure to thrive and persistent respiratory and gastrointestinal problems.
2. A 10-year-old male with known cystic fibrosis presents with a 5-day history of progressively worsening dyspnea, cough, and scant hemoptysis.

Enabling Objectives:
1. Define cystic fibrosis.
2. Demonstrate fundamental knowledge of the possible pulmonary and non-pulmonary complications of cystic fibrosis.
3. Demonstrate fundamental knowledge of the typical laboratory and DI abnormalities found in patients with cystic fibrosis.

CARDIOVASCULAR DISORDERS

CONGESTIVE HEART FAILURE

Situations:
1. An afebrile 5-month-old female presents with sudden onset tachypnea, tachycardia, and lethargy.
2. A 13-year-old male with known myocarditis presents with severe dyspnea.

Enabling Objectives:
1. Describe the clinical features of congestive heart failure in infants and older children.
2. Demonstrate basic knowledge of the therapeutic agents used to treat congestive heart failure in children and older children.
3. Display fundamental knowledge of the appropriate diagnostic tests and DI findings for a patient in acute congestive heart failure.

RHEUMATIC FEVER

Situation:
A 9-year-old male who had an episode of streptococcal infection of the throat 2 weeks ago presents now with multiple joint pain, fever, rash, and dyspnea.

Enabling Objectives:
1. List the Jones Criteria for the diagnosis of initial attack of rheumatic fever.
2. Demonstrate a fundamental understanding of the typical clinical course of rheumatic fever.
3. Demonstrate a fundamental understanding of the diagnostic tests required for the investigation of a patient with suspected rheumatic fever.
4. Demonstrate a fundamental understanding of the management of a patient with acute rheumatic fever.

CONGENITAL HEART DISEASE

Situations:
1. A 2-year-old male with Down's syndrome and a known atrial septal defect presents with rapid onset dyspnea.
2. A 6-week-old female with known Tetralogy of Fallot presents with central cyanosis.

Enabling Objectives:
1. Define Tetralogy of Fallot
2. Demonstrate a basic ability to describe the clinical features and the management of a pediatric patient with acute central cyanosis secondary to Tetralogy of Fallot.

ABDOMINAL AND GI DISORDERS

APPENDICITIS

Situations:
1. A 2-year-old boy presents with periumbilical abdominal pain which has now moved to the right lower quadrant.
2. A toxic looking 1-year-old girl presents with anorexia and vomiting with a mass in the right lower quadrant.

Enabling Objectives:
1. Demonstrate the basic ability to distinguish the presentations of acute appendicitis in a child less than 2-years-old and a child greater than 2-years-old.
2. Describe the classic presentation of acute appendicitis and of a perforated appendix.
3. Define McBurney's point and demonstrate basic skills to elicit Rovsing, psoas, and obturator signs.
4. Have a basic understanding of the use of blood and urine analysis in the diagnosis of acute appendicitis.
5. Demonstrate a basic knowledge of the use of the following DI studies as an adjunct to diagnosis:
   a) plain radiographs
   b) ultrasound
   c) CT scan
6. Outline the basic ED management of acute appendicitis.

Situation:
A 2-year-old girl presents with vomiting, diarrhea and fever which she has had for the past 24 hours.

Enabling Objectives:
1. Describe the common causes for vomiting and diarrhea in the following groups:
   a) Infant.
   b) Child.
   c) Adolescent
2. List the conditions that should be ruled out in children presenting with vomiting and diarrhea.
3. Define acute and chronic diarrhea.
4. Have a fundamental knowledge of the laboratory tests available to the physician to evaluate the cause of diarrhea.
5. Identify and manage patients with dehydration
6. Demonstrate fundamental knowledge of the typical discharge instructions to a parent whose child has gastroenteritis.

DEHYDRATION

Situation:
A 6-year-old boy, who has had 48 hours of diarrhea, has sunken eyes, dry mucus membranes and tachycardia at rest.

Enabling Objectives:
1. State the clinical differences between mild, moderate and severe dehydration in children.
2. Demonstrate basic skills in the management of acid-base and electrolyte imbalances that can co-exist with dehydration.
3. Calculate the total fluid requirements in children including deficit correction, ongoing loss replacement and maintenance rates.

PYLORIC STENOSIS

Situation:
A 14-day-old infant presents with a history of increasing frequency of non-bilious emesis and weight loss.

Enabling Objectives:
1. Define pyloric stenosis.
2. Describe the typical age range presenting with pyloric stenosis.
3. Demonstrate fundamental knowledge of signs and symptoms of pyloric stenosis.
4. Display fundamental knowledge of the initial management and definitive treatment of infants with pyloric stenosis in the ED.

MALROTATION WITH AND WITHOUT VOLVULUS

Situation:
A toxic-looking 21-day-old presents with bilious emesis and a rigid and distended abdomen.

Enabling Objectives
1. Describe the clinical manifestations of malrotation with and without volvulus.
2. Describe the DI findings associated with malrotation with and without volvulus.
3. Demonstrate a basic ability to identify the situations in which urgent surgical intervention is required.

INTUSSUSCEPTION

Situation:
A 2-year-old boy presents with progressively frequent, episodic bouts of severe abdominal pain.

Enabling Objectives:
1. Define intussusception and its usual anatomic origin.
2. List the most common presentation of intussusception.
3. Describe the physical findings and DI features of intussusception.
4. Display fundamental knowledge of the initial management and definitive treatment of infants with intussusception.

SWALLOWED FOREIGN BODIES

Situation:
A 2-year-old girl is suspected to have swallowed a large coin.

Enabling Objectives:
1. Identify the most common foreign bodies ingested by children.
2. Describe the clinical presentation of patients with an impacted foreign body in the esophagus.
3. Display fundamental knowledge of the role of DI for diagnosis and prognosis.
4. Display fundamental knowledge of the potential options for managing patients with
   a) Coin ingestion
   b) Button battery ingestion
   c) Ingestion of sharp objects

INCARCERATED HERNIA

Situation:
A 2-month-old boy presents with poor feeding and irritability. On examination he has a firm mass at his groin.

Enabling Objectives:
1. List the types of hernias.
2. Have a basic understanding of the potential complications of an incarcerated or strangulated hernia.
3. Display the basic ability to recognize the situations in which specialist referral is required.

GASTROINTESTINAL HAEMORRHAGE

Situations:
1. A 1-month-old boy is noted to have a small amount of bright red blood in his diaper after a hard bowel movement.
2. A toxic-looking 1-year-old girl presents with severe abdominal pain and blood per rectum. There is a horizontal sausage-like mass on examination of her abdomen.
3. A 5-year-old boy presents with streaks of bright red blood after repeatedly vomiting.

Enabling Objectives:
1. List the common causes of upper and lower gastrointestinal bleeding in the following age groups:
   a) Under 2-months
   b) Under 2-years
   c) Over 2-years
2. Demonstrate the basic ability to describe the appropriate investigation and initial management and of gastrointestinal bleeding in children.
3. Display the basic ability to recognize the situations in which specialist referral is required.

GENITOURINARY DISORDERS

TESTICULAR TORSION

Situation:
During a long jump competition, a 13-year-old boy developed an acutely painful and swollen right testicle.

Enabling Objectives:
1. Demonstrate fundamental knowledge of the conditions causing acute scrotal pain that are urologic emergencies.
2. Describe the clinical presentation of torsion of the appendix epididymitis and testis.
3. Demonstrate fundamental knowledge of the role of duplex ultrasonography for diagnosing an acute scrotum.

URINARY TRACT INFECTIONS

Situations:

1. A sexually active 16-year-old male presents with a 1-day history of dysuria and urinary frequency.
2. A 6-year-old boy is found to have a positive urine culture.
3. A 3-year-old girl presents with nausea, vomiting, fever, and abdominal pain.

Enabling Objectives:
1. Describe the risk factors for developing urinary tract infections (UTIs) in children.
2. Identify the most common organisms involved in pediatric UTIs.
3. Describe the common presentations of pediatric UTIs.
4. Display fundamental knowledge of the use of urinalysis, routine microscopy, and urine culture for diagnostic purposes.
5. Display a fundamental knowledge of the initial investigation of children with their first UTIs.
6. Demonstrate basic skills in the recognition and the initial management of lower and upper tract infections including appropriate antibiotic therapy.
7. Identify the indications for admission.

MUSCULOSKELETAL AND EXTREMITY DISORDERS

TRANSIENT SYNOVITIS OF THE HIP

Situation:
A well looking 5-year-old boy began limping because of right hip pain this morning.

Enabling Objectives:
1. List the basic differential diagnosis in a child presenting with antalgic gait.
2. Have a working knowledge of the clinical presentation, laboratory and DI investigations (if any) that may be appropriate to help confirm or rule out the possible diagnoses.
3. Have a fundamental knowledge of the indications for hospitalization and consultation for pediatric painful hip.
4. Display a basic ability to describe the typical discharge instructions to a parent whose child has a painful hip that is not caused by a serious illness.

SEPTIC ARTHRITIS/OSTEOMYELITIS

Situation:
A 2-year-old girl presents with a fever and refuses to walk. Exam reveals a hot, red left knee.

Enabling Objectives:
1. Describe the essential history and physical exam needed to evaluate a hot joint.
2. List the most common joints involved in septic arthritis in children.
3. List the common organisms associated with septic arthritis in the following groups:
   a) Neonate (0-2 months)
   b) Infant (2-36 months)

c) Child
4. Discuss the possible complications of an unrecognized septic joint.
5. Demonstrate basic knowledge of the DI studies used to confirm the diagnosis of septic arthritis.
6. Demonstrate basic skills in how to aspirate a knee joint.
7. Have a working knowledge of the use of blood work and diagnostic imaging to diagnose osteomyelitis.
8. Demonstrate fundamental knowledge of the treatment of osteomyelitis and septic arthritis.

OSGOOD-SCHLATTER SYNDROME

Situation:
A 14-year-old boy presents with a tender lump over the tibial tubercle of his right leg.

Enabling Objectives:
1. Define Osgood-Schlatter Syndrome.
2. Demonstrate fundamental knowledge of the initial investigation and basic management of Osgood-Schlatter Syndrome.

CONGENITAL DISLOCATION OF THE HIP

Situation:
A 7-day old female neonate is suspected to have a dislocated hip.

Enabling Objectives:
1. Demonstrate a basic understanding of the clinical presentation, physical exam and DI abnormalities associated with congenital dislocation of the hip

LEGG-CALVE PERTHES DISEASE

Situation:
A well-looking 6-year-old boy presents with episodic limping for the last 4 months. He now refuses to go and play outside.

Enabling Objectives:
1. Define Legg-Calve-Perthes disease.
2. Display fundamental knowledge of the initial management and referral of Legg - Calve-Perthes disease.

SLIPPED CAPITAL FEMORAL EPIPHYSIS

Situation:
A 13-year-old boy presents with severe right hip pain and inability to weight bear. His mother explains that he had been complaining of episodic right hip pain for the last 6 weeks.

Enabling Objectives:
1. Define slipped capital femoral epiphysis.
2. Display fundamental knowledge of the initial management and referral of slipped capital femoral epiphysis.

RADIAL HEAD SUBLUXATION (NURSEMAID'S ELBOW)

Situation:
A 2-year-old girl presents refusing to use her left arm after slipping on ice while holding her father's hand.

Enabling Objectives:
1. Describe the mechanism of injury a of a nursemaid's elbow.
2. Describe the typical arm position found when examining a patient with nursemaid's elbow.
3. Demonstrate an understanding of the method to reduce a nursemaid's elbow.

RHEUMATOLOGIC DISORDERS

JUVENILE RHEUMATOID ARTHRITIS (JRA)

Situations:
1. A well-looking 2-year-old girl is noted to have painless swelling of her right knee.
2. An 8-year-old boy complains of right hip and left knee pain and is progressively having difficulty keeping up to the other kids in gym class.
3. A 12-year-old girl is complaining of severe pain in both hands and feet worse in the morning.
4. An ill-looking 14-year-old girl presents with a 4 week history of spiking fevers and chills, associated with arthralgias and rash.

Enabling Objectives:
1. List the 3 broad clinical categories of JRA.
2. List a basic differential diagnosis of children with JRA.
3. Display the basic ability to initiate timely referral of the patient with JRA.

HENOCH-SCHÖNLEIN PURPURA

Situation:
A 7-year-old boy presents with hematuria and abdominal pain. The child had URTI symptoms and a fever 1-week ago.

Enabling Objectives:
1. Define Henoch-Schönlein Purpura (HSP).
2. Display a basic understanding of the laboratory of the laboratory tests used to confirm HSP.

3. Display a basic understanding of the indications for hospitalization and consultation for a child that presents with HSP.

KAWASAKI DISEASE

Situation:
A 2-year-old boy presents with fever, bilateral conjunctivitis and rash including the palm of his hands.

Enabling Objectives:
1. Define Kawasaki disease.
2. Display a basic understanding of the laboratory of the laboratory tests used to confirm Kawasaki disease.
3. Display a basic understanding of the indications for hospitalization and consultation for a child that presents with Kawasaki disease.

INFECTIOUS DISEASES

PEDIATRIC EXANTHEMS

Situations:
1. A 5 month-old afebrile female presents with a maculopapular rash after 3 days of a high fever and fussiness.
2. A 6-year-old boy presents with a fine pink rash starting on his face and neck which progressed to his trunk over one day. He had complaints of a fever and a sore throat for one day prior to the rash developing.

Enabling Objectives:
1. Display a basic ability to distinguish between the following communicable diseases associated with a rash based on the incubation period, characteristics of the rash, duration of the rash, and associated symptoms:
   a) Chickenpox
   b) Erythema Infectiosum (Fifth disease)
   c) Measles
   d) Mononucleosis
   e) Pityriasis rosea
   f) Roseola Infantum
   g) Rubella
   h) Scarlet fever
2. Outline the important community health implications and appropriate parental advice when dealing with cases of:
   a) Chickenpox
   b) Measles
   c) Rubella

MUMPS

Situation:
A 5 year-old presents with obvious bilateral pre-auricular swelling and pain in the area.

Enabling Objectives:
1. Describe the clinical presentation and available methods of confirming the diagnosis for patients with mumps.
2. Discuss the community health recommendations for patients with mumps.

FEVER AND NEUTROPENIA

Situation:
A 7 year-old female presents to the ED with cough, fever and has total alopecia. Her parents confirm that she is receiving chemotherapy for Acute Lymphoblastic Leukemia. Her temperature at the triage desk is 38.6°C.

Enabling Objectives:
1. Demonstrate basic knowledge of the initial investigations appropriate for a non-toxic appearing febrile patient known to be neutropenic.
2. Demonstrate basic knowledge of the initial investigations appropriate for a toxic-appearing febrile patient known to be neutropenic.
3. Display a fundamental knowledge of the appropriate empiric antibiotic therapy for febrile neutropenia.

ENDOCRINE DISORDERS

DIABETES MELLITUS/HYPOGLYCEMIA

Situations:
1. A 12-year-old female presents with extreme thirst, vomiting, polyuria and a blood sugar of 25 mmol/L.
2. A 12-month-old boy presents with ravenous hunger, jitteriness and altered personality with a blood sugar of 2.1 mmol/L.

Enabling Objectives:
1. Demonstrate the ability to elicit a basic history in the assessment of a patient with diabetes.
2. Describe the basic investigations and initial management of diabetic ketoacidosis.
3. Demonstrate an ability to identify the need for admission in children presenting with diabetic ketoacidosis.
4. Describe common presentation of hypoglycemia.
5. List a basic differential diagnosis of hypoglycemia.
6. Describe the basic investigations and initial management of hypoglycemia.
7. Demonstrate an ability to identify the need for admission for hypoglycemia.

ADRENAL INSUFFICIENCY

Situations:
1. A 10-day-old neonate who was born through a complicated delivery presents with hypoglycemia with fasting.
2. A weak looking 6-year-old boy presents with nausea, vomiting and syncopal episodes. His uncle was recently diagnosed with tuberculosis.

Enabling Objectives:
1. List the common causes of adrenal insufficiency in infancy and childhood.
2. State the common presentation of the child with acute adrenal insufficiency.
3. Show skills in initiating timely referral of the patient with adrenal insufficiency.

DERMATOLOGIC DISORDERS

PEDICULOSIS

Situation:
A 6-year-old boy presents with an itchy scalp.

Enabling Objectives:
1. Describe the typical presentation of head lice.
2. Discuss the etiology, transmission, and characteristic appearance of head lice.
3. Discuss the pharmacologic and environmental management of pediculosis.

SCABIES

Situation:
A 14-year-old girl presents with an intensely red, puritic rash that is disturbing her sleep.

Enabling Objectives:
1. Identify the causative agent of scabies.
2. Describe the typical appearance of scabies.
3. Outline the treatment of scabies.

STAPHYLOCOCCAL SCALDED SKIN SYNDROME (SSSS)

Situation:
An 8-year-old girl presents following the spontaneous eruption of a diffuse tender rash which has turned into bullae.

Enabling Objectives:
1. Define SSSS.
2. List a basic differential diagnosis of a patient with SSSS.

3. Display a basic understanding of the initial treatment and the indications for hospitalization for children presenting with SSSS.

IMPETIGO

Situation:
A 3-year-old boy presents with an open sore under his nose that is oozing a honey-colored crust.

Enabling Objectives:
1. Define impetigo.
2. Describe the classical signs and symptoms of impetigo.
3. List the most common organisms involved in impetigo.
4. Have an understanding of the treatment of impetigo.

ATOPIC DERMATITIS

Situation:
1. A 3-month-old male with a family history of allergies presents with a dry red rash on his cheeks.
2. A 6-year-old girl presents with a pruritic eruption of her antecubital fossae and wrists.

Enabling Objectives:
1. Define atopic dermatitis.
2. List a basic differential diagnosis of eczematous lesions.
3. Distinguish between allergic versus irritant contact dermatitis.
4. Display fundamental knowledge of the treatment of atopic dermatitis.

CANDIDA

Situation:
A 2-week old neonate presents with a diaper rash.

Enabling Objectives:
1. Describe the typical appearance of candidal diaper rash.
2. Describe the typical appearance of oral candidasis in a neonate.
3. Display basic skills in the management of candidal infections in neonates.

CHILD AND ADOLESCENT PSYCHIATRY

Situation:
Angry and frustrated parents present with their 13-year-old son's beahviour state that they can't handle him and aren't willing to take him home.

Enabling Objectives:

1. Define and list causes for adolescent crisis.
2. Describe common psychiatric disorders in children and adolescents that present to the ED:
   a) Oppositional defiant disorder
   b) Conduct disorder
   c) Attention Deficit Disorder
   d) Substance abuse
   e) Depression and suicide
   f) Anxiety
   g) Eating Disorders
3. Identify the role of social services in the ED for the care of children and adolescents.

TRAUMATIC DISORDERS

APPROACH TO MULTIPLE TRAUMA

Situation:
A 31-year-old man presents with injuries to his head, chest and pelvis following a fall from a rooftop.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Perform an initial assessment of the patient who has potentially sustained multiple traumas.
2. Set priorities for the initial stabilization and investigation of patients with multiple injuries.

Enabling Objectives:
1. State the components of the primary survey of the trauma patient.
2. Describe a history appropriate for the multiple trauma patient.
3. State the components of the secondary survey of the trauma patient.
4. List the immediate life and limb threatening injuries that may occur to each of the following regions of the body:
   a. Head
   b. Neck
   c. Thorax
   d. Abdomen
   e. Pelvis
   f. Extremities
5. State the priorities in the initial management of the patient who has sustained multiple traumas.

PRINCIPLES OF SOFT TISSUE INJURIES

WOUND MANAGEMENT

Situation:
A 16-year-old female presents with a laceration to her left forearm.

Terminal Objectives:
The competent resident will:
1. Assess wounds and formulate a plan for wound management.
2. Demonstrate wound preparation, exploration and closure.
3. Identify immediate and delayed complications of soft tissue injuries.
4. Manage and arrange appropriate follow up for simple and complicated wounds.

Enabling Objectives:
1. Select an appropriate suture material, method of closure, and timing of suture removal for full thickness skin lacerations involving the following body regions:
   a) Face
   b) Eyelid
   c) Scalp
   d) Trunk
   e) Extensor surfaces of elbows and knees
   f) Hand and fingers
   g) Other areas of the extremities
2. Demonstrate the following wound closure techniques:
   a) Simple interrupted sutures
   b) Vertical mattress sutures
   c) Horizontal mattress sutures
   d) Layered closures
3. Demonstrate the technique for draining a superficial abscess.
4. State the tetanus immunization schedule for wound care.
5. Perform an appropriate assessment, initiate management, and arrange follow up for the following:
   a) Needle stick injuries
   b) Foreign bodies
   c) Penetrating injuries of the extremities
   d) Wound hematomas
   e) Superficial infections
   f) High-pressure injection injuries

BURNS

Situation:
A 21-year-old cook presents with a burn to her right hand and forearm after submerging her hand in hot oil.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Identify and provide initial management of burns.
2. Identify appropriate patients for referral to specialty burn units.

Enabling Objectives:

1. Define the appearance and depth of injury associated with:
   a) First degree burns
   b) Superficial second degree burns
   c) Deep second degree burns
   d) Third degree burns
   e) Fourth degree burns
2. Calculate the percent of body surface area burned using standardized estimates for adults and children.
3. Describe the outpatient management of first and second degree burns.
4. List the indications for referral burn unit referral for adults and for children.
5. Discuss the fluid management of the severely burned patient.
6. List the locations that may require an escharotomy.
7. Describe the indications for debridement of a burn.
8. Describe the typical appearance of electrical burns.
9. Describe the approach to management of:
   a) Thermal burns
   b) Electrical burns
   c) Alkali burns
   d) Acid burns

MUSCULAR AND LIGAMENTOUS INJURIES

Situation:

A 44-year-old male presents with a displaced tibial fracture and has increasing pain in his limb.

Terminal Objectives:

The competent resident will demonstrate ability to:

4. Identify and provide initial management of patients with crush injuries to the extremities.
5. Have a working knowledge of compartment syndromes, its consequences and recommendations for appropriate follow-up.
6. Identify and describe general management of ligament and tendon sprains

Enabling Objectives:

1. Describe the clinical features associated with crush injury.
2. Have a basic understanding of complications of extremity crush injuries.
3. Define rhabdomyolysis, and describe the basic initial management.
4. Have a basic knowledge of limb compartment anatomy .
5. Describe the basic pathophysiology of compartment syndromes.
6. Identify the clinical features of compartment syndrome.
7. List a basic approach to the investigation of a suspected compartment syndrome.

8. Demonstrate a basic understanding of the principles of treatment of compartment syndrome.
9. Define sprains according to the various degrees of ligament injury.
10. Describe the general treatment of sprains.

PRINCIPLES OF FRACTURE MANAGEMENT

Situation:
A 26-year-old carpenter presents with a deformed forearm after a large post fell on it.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Describe a fracture using standard terminology.
2. List the complications associated with fractures and their treatment, and describe approaches to minimize the frequency and degree of severity of complications.
3. Describe the principles of fracture healing.

Enabling Objectives:
1. Define the following terms with relation to bone injuries:
   a) Fracture
   b) Open vs. Closed
   c) Transverse
   d) Oblique
   e) Spiral
   f) Comminuted
   g) Displacement
   h) Alignment
   i) Angulation
   j) Impaction
   k) Distraction
   l) Rotation
   m) Valgus
   n) Varus
   o) Complete vs. Incomplete
   p) Greenstick
   q) Avulsion
   r) Pathologic
   s) Torus
   t) Epiphysis
   u) Metaphysis
   v) Diaphysis
2. Describe fractures using orthopedic terminology, including exact anatomic location, type of fracture line, relationship of fracture fragments, and presence of any articular surface involvement.

3. Describe the clinical appearance and general ED management of closed and open fractures.
4. Describe the clinical features of vascular compromise of an injured extremity.
5. Describe the clinical features of neurologic compromise of an injured extremity.
6. Define fat embolism syndrome.
7. Define avascular necrosis of bone.
8. Describe the complications of fracture immobilization
9. Describe the basic stages of fracture healing.

SPECIAL CONSIDERATIONS IN PEDIATRIC TRAUMA

Situation:
A 6-year-old boy rides his bicycle onto a busy street and is struck by a passing motorist.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Compare and contrast the management of adult and pediatric trauma.
2. Diagnose and provide appropriate initial management of pediatric extremity injuries.

Enabling Objectives:
1. Have a basic understanding of the following special considerations of trauma in the pediatric population
   a) Vital signs
   b) Heat loss
   c) C-spine control
   d) Fluid resuscitation
   e) Intravenous access
   f) Use of the Broselow tape
2. Demonstrate basic knowledge of pediatric skeletal anatomy and development.
3. Describe the 5 types of Salter Harris epiphyseal injuries.
4. Describe circumstances where comparison views of the opposite limb may be useful.
5. Describe the relative strength of ligaments to that of growth plates in children.

PRINCIPLES OF CASTING AND SPLINTING

Situation:
A 55-year-old woman presents with an injured right wrist after a fall.

Terminal Objectives:
The competent resident will:
1. Describe the basic principles of splinting and casting.
2. Demonstrate the application splints and casts.
3. Select the appropriate splinting technique for injuries to the extremities.

Enabling Objectives:

1. List the indications and contraindications for immobilizing an injured extremity with a splint or cast.
2. List the advantages and disadvantages of using plaster vs. fiberglass in casting and splinting.
3. List the potential complications of casts.
4. Demonstrate the proper application of the following commonly applied casts:
   a) Forearm cast
   b) Above-elbow forearm cast
   c) Sugar-tong splint
   d) Thumb spica cast
   e) Below-knee cast
   f) Above-knee cast
5. Demonstrate the appropriate positioning for immobilizing the joints of the hand and wrist.
6. Discuss the indications for, and demonstrate the proper application of the following commonly applied splints and immobilization techniques:
   a) Half-ring leg traction splint
   b) Knee-immobilization splint
   c) Buck's traction
   d) Back slab splints of the lower and upper limbs
   e) Triangular arm sling
   f) Sling and swathe
   g) Velpeau bandage
   h) Wrist and hand gutter splints
   i) Aluminum finger splints
   j) Buddy-taping of digits

HEAD AND NECK TRAUMA

Situation:

A 19-year-old female arrives by EMS following an MVC with a Glasgow Coma Scale (GCS) of 8 and signs of facial trauma.

Terminal Objectives:

The competent resident will demonstrate the ability to:

1. Identify and initiate appropriate management of mild, moderate and severe brain injuries.
2. Identify and initiate appropriate management of injuries involving the face, jaw, and teeth.
3. Identify and manage chemical, blunt, superficial and penetrating injuries of the eye.
4. Identify and initiate appropriate management of blunt and penetrating injuries to the neck.

BRAIN TRAUMA

Situation:
A 44-year-old obtunded man was found face down on the street, without a helmet, next to his bicycle. He smells of alcohol.

Enabling Objectives:
1. Demonstrate the ability to define and calculate the Glasgow Coma Scale (GCS).
2. Describe the management of the neck when intubating a patient with presumed c-spine injuries.
3. List the agents to be used and avoided in the RSI of head injuries.
4. Identify the indications for CT in head injuries
5. Define mild, moderate and severe brain injury.
6. Identify and provide initial management of the common injury patterns: epidural, subdural and subarachnoid hemorrhage, diffuse axonal injury, and skull fractures.
7. Identify the limitations of the complete physical examination in the head injured patient.
8. Indicate the relationshipe of ICP and MAP in maintaining CPP
9. Define the Cushing Reflex.
10. Define concussions of grades 1 through 3, and give the recommendations on return to physical activity.

FACIAL TRAUMA

Situation:
A 19-year-old "intoxicated" male drove his car into a tree. He was not wearing his seatbelt, and smashed his face on the windshield. He has diffuse swelling of his face.

Enabling Objectives
1. Describe the basic bony anatomy of the face and orbit.
2. Discuss the importance of obtaining historical information regarding vision, facial numbness and dental occlusion.
3. Have a working understanding of the normal bony landmarks on each of the following DI views:
    a) Waters or occipital-mental view
    b) Posterior-anterior or Caldwell view
    c) Cross-table or upright lateral view
    d) Submental-vertex or zygomatic arch view
    e) Towne view
4. Demonstrate basic skills in the examination technique used to identify LeFort I, II, and III facial fractures.
5. Have a basic knowledge of the clinical findings, DI findings and intial management of the following facial injuries:
    a) Frontal Bone and Frontal Sinus fractures
    b) Naso-Ethmoidal-Orbital (NEO) injuries
    c) Orbital floor fractures

d) Nasal fractures
e) Tripod fractures
f) Zygomatic arch fracture

6. Describe the basic clinical examination including to assess for mandibular injury
7. List two DI views available to assess for mandibular injury.
8. Describe the basic initial management for undisplaced, displaced and open mandibular fractures.

EYE TRAUMA

Situations:

1. A 22-year old janitor has bleach splashed into his eyes 20 minutes ago.
2. A 50-year old greens keeper has painful right eye movements after being hit in the face with a golf ball.
3. A 36-year-old worker has right eye pain after grinding metal.

Enabling Objectives:

1. Contrast between acid and alkali burns to the eye.
2. Describe the immediate initial management of a chemical eye injury, and the subsequent pH testing to ensure that treatment is adequate.
3. Discuss the approach to the initial evaluation and management of blunt orbital trauma.
4. Discuss the approach to the initial evaluation and management of penetrating orbital trauma.
5. Discuss the physical findings and management of hyphaema, traumatic iritis, lens dislocation, global rupture, vitreous hemorrhage, and retinal detachment.
6. Outline the clinical findings of orbital disruption.
7. Demonstrate basic skills in the use of slit lamp and fluorescein staining in evaluating an eye injury.
8. List the indications for DI in the case of suspected intraocular foreign bodies.
9. Discuss the initial management and appropriate referral of a penetrating eye injury.
10. Outline the initial management of corneal foreign bodies or abrasions.
11. Have basic knowledge of the complications of corneal trauma.

DENTAL TRAUMA

Situation:

A 25-year-old male was struck in the mouth by a hockey puck. One tooth is missing and another is broken off.

Enabling Objectives:

1. Describe the 4-quadrant naming system used by dentists to describe specific teeth.
2. Have a basic understanding of the appropriate initial management of avulsion of primary teeth and secondary (permanent) teeth.

NECK TRAUMA

Situations:
1. An 18-year-old man presents with a stab wound to the neck.
2. A 23-year-old woman presents with an upper chest bullet wound.
3. A 40-year-old man in a MVC was thrown against steering wheel and presents with bruising over his neck.

Enabling Objectives:
1. Identify the basic important anatomical structures of the neck.
2. Describe the following anatomical classifications of the neck and the important structures in each region.
   a) Anterior and posterior triangles
   b) Zones I, II, and III
3. Recognize the signs and symptoms of airway compromise after neck trauma.
4. Identify clinically insignificant injuries versus injuries requiring immediate surgical consultation.
5. Have a basic understanding of the indications, contraindications, and limitations of the following possible DI tests in the setting of blunt and penetrating neck trauma
   a) Plain radiographs
   b) Laryngoscopy
   c) Bronchoscopy
   d) CT
   e) Angiography
   f) Esophagram or esophagoscopy

CHEST TRAUMA

Situation:
1. A 60-year-old man not wearing a seatbelt was involved in a high speed MVC.
2. A 20-year-old man presents with a stab wound to his chest.

Terminal Objectives:
The competent resident will demonstrate basic knowledge and skills in:
1. Identifying and managing blunt and penetrating chest injuries.

Enabling Objectives:
1. List the immediate life-threatening injuries that should be identified during the primary survey of the chest.
2. Describe the clinical findings and basic initial management of the following thoracic injuries:
   a) Tension pneumothorax
   b) Pericardial tamponade
   c) Massive hemothorax
   d) Open pneumothorax

e) Flail Chest
f) Diaphragmatic rupture
g) Rib fractures
h) Sternal fractures
i) Pulmonary contusion
j) Pneumothorax
k) Pneumomediastinum
l) Tracheobronchial injury
m) Esophageal injury

3. Describe the indications and contraindications to performing:
   a) Needle thoracentesis
   b) Chest tube insertion
   c) Pericardiocentesis
   d) Emergency thoracotomy
4. Demonstrate basic skills in performing:
   a) Needle thoracocentesis
   b) Chest tube insertion

ABDOMINAL TRAUMA

Situation:

1. A 30-year-old male was involved in a high speed MVC.
2. A 16-year-old female was "assaulted" with kicks to the abdomen.
3. A 20-year-old male presents with a gun shot wound to the lower thorax.

Terminal Objectives:

The competent resident will demonstrate basic knowledge and skills in:

1. Identifying and managing blunt and penetrating abdominal injuries.

Enabling Objectives:

1. Identify the 'surgical abdomen.'
2. Have a basic understanding of the indications for emergent laparotomy.
3. Identify the structures that are commonly injured with blunt abdominal trauma.
4. Have a basic understanding of the role of the following clinical and DI investigations in blunt traumatic injuries:
   a) Diagnostic peritoneal lavage
   b) Computed tomography
   c) The "F.A.S.T." ultrasound at the bedside
   d) Formal abdominal ultrasound
5. Have a basic understanding of the role of the following clinical and DI diagnostic procedures in penetrating abdominal stab wounds:
   a) Exploration of stab wound
   b) Diagnostic peritoneal lavage
   c) Computed tomography
   d) The "F.A.S.T." ultrasound at the bedside

e) Formal abdominal ultrasound
6. Demonstrate the technique for the insertion of a nasogastric tube.
7. List the retroperitoneal structures that may be injured in abdominal trauma.
8. Have a basic understanding of the clinical and laboratory findings associated with renal and upper urinary tract injuries.
9. Describe the physical findings of a urethral injury in a trauma patient and its significance.
10. Demonstrate the technique for the insertion of a urinary catheter.
11. Have a basic understanding of the disposition of a stable patient with potential abdominal injury but no significant injury found after initial evaluation in the ED.

SHOULDER INJURIES

Situation:
A 32-year-old male presents after falling onto his right shoulder while skiing.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Identify and provide initial management of common shoulder and clavicle injuries with attention to identification and prevention of complications.
2. Provide appropriate follow up and/or specialist consultation for shoulder and clavicular injuries.

Enabling Objectives:
1. Demonstrate basic knowledge of the clinical anatomy and neuroanatomy of the shoulder.
2. Have a working knowledge of the typical mechanism, clinical findings, DI appearance, relevant classification (if any), initial management and indications for emergent referral of the following disorders:
   a) Clavicle fractures
   b) Acromioclavicular sprains grades I, II, and III
   c) Anterior glenohumeral dislocations
   d) Inferior glenohumeral dislocations
   e) Scapular fractures
   f) Rotator cuff impingement injuries
   g) Subacromial bursitis
   h) Rotator cuff tendinitis.
3. Have a working knowledge of the typical mechanism, clinical findings, DI appearance, initial stabilization and appropriate timing of referral for the following injuries:
   a) Sternoclavicular dislocation.
   b) Glenoid fracture.
   c) Glenohumeral fracture-dislocation
   d) Brachial plexus injury

UPPER ARM AND ELBOW INJURIES

Situation:
A 21-year-old gymnast presents after hyperextending her elbow.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Manage common humerus and elbow injuries.
2. Provide appropriate follow up and/or specialist consultation for humerus and elbow injuries.

Enabling Objectives:
1. Demonstrate a basic knowledge of the clinical anatomy of the elbow and upper arm.
2. Have a working knowledge of the typical mechanism, clinical findings, DI appearance, relevant classification (if any), initial management and indications for emergent referral of the following disorders:
   a) Impacted humeral neck fractures
   b) Midshaft humeral fractures
   c) Biceps rupture
   d) Elbow dislocations
   e) Radial head fractures
   f) Pediatric radial head subluxations
   g) Lateral epicondylitis
   h) Medial epicondylitis
2. Have a working knowledge of the typical mechanism, clinical findings, DI appearance, initial stabilization and appropriate timing of referral for the following injuries:
   a) Supracondylar humeral fractures in children and adults.
   b) Olecranon fractures
   c) Humeral condyle fractures
   d) Triceps rupture

FOREARM INJURIES

Situation:
A 27-year-old male presents after being hit in the forearm by a hockey stick.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Manage common radius and ulna injuries.
2. Provide appropriate follow up and/or specialist consultation for radius and ulna injuries.

Enabling Objectives:
1. Have basic knowledge of the clinical anatomy of the lower arm.

2. Describe the typical mechanism, clinical findings, DI appearance, relevant classification (if any), initial management and the indications for emergent referral for the following disorders:
   a) Nightstick ulnar fractures
   b) Pediatric diaphyseal radial and ulnar fractures
3. Outline the typical mechanism, clinical findings, DI appearance, initial stabilization and appropriate timing of referral for the following injuries:
   a) Monteggia fracture-dislocations
   b) Galeazzi fracture-dislocations
   c) Adult midshaft radius +/- ulna fractures

WRIST AND HAND INJURIES

Situation:
A 50-year-old female presents to ED after falling on an outstretched hand and DI reveals a scapholunate distance of 6 mm.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Have a working knowledge of all structures of the wrist and hand and demonstrate skills in a basic examination of these structures.
2. Identify and provide initial management of common wrist and hand injuries.
3. Provide appropriate follow up and/or specialist consultation for wrist and hand injuries.

WRIST AND HAND EXAMINATION

Situation:
A 17-year-old skateboarder complains of pain in his hand after a fall on an outstretched hand (FOOSH injury). He was not wearing wrist guards, and has a tender wrist and "anatomic snuffbox".

Enabling Objectives
1. Have a working knowledge of the bony and ligamentous structures of the wrist joint.
2. List the carpal bones of the hand, and identify their relative location.
3. Have a working knowledge of locations of all major arteries and nerves of the wrist and hand
4. Demonstrate basic skills in the examination of the intrinsic muscles of the hand.
5. Demonstrate a basic sensory examination of the hand.
6. Have a basic understanding of location of each flexor and extensor tendon.
7. Demonstrate a basic examination of each flexor and extensor tendon of the wrist and hand.

FRACTURES

Enabling Objectives:

1. Describe the typical mechanism, clinical findings, DI appearance, relevant classification (if any), initial management and indications for emergent referral for the following disorders:
   a. Colles' fractures
   b. Barton's fractures
   c. Ulnar styloid fractures
   d. Undisplaced scaphoid fractures
   e. Chip fractures of the triquetrum
2. Outline the typical mechanism, clinical findings, DI appearance, initial stabilization and appropriate timing of referral for the following injuries:
   a. Smith's fractures
   b. Displaced scaphoid fractures
   c. Bennett fractures
   d. Hamate hook fractures
   e. Scapholunate dislocation
   f. Perilunate dislocation
   g. Lunate dislocation
   h. Radioulnar dislocation
   i. Triangular Fibrocartilage disruption

TENDON INJURIES

Situation:
A 45-year-old male states he grabbed a knife in self-defense, sustaining a laceration to the volar aspect of his right hand transversely across the palm.

Enabling Objectives:
1. Demonstrate knowledge of typical post-treatment rehabilitation and complications of flexor tendon injuries.
2. Describe basic examination findings mandating ED exploration of wounds.
3. Describe the appropriate follow-up and rehabilitation of extensor tendon injuries.

HAND INFECTIONS

Situation:
A 28-year-old male presents 18 hours after sustaining lacerations and puncture wounds to his right hand after striking someone in the mouth.

Enabling Objectives:
1. Demonstrate skills in the basic examination of the injured hand.
2. Demonstrate basic knowledge of the typical pathogens and appropriate surgical and antibiotic treatment of the various trauma - related infections of the hand including:
   a) Cellulitis
   b) Lymphangitis
   c) Superficial abscesses
   d) Paronychia

e) Felon
f) Flexor tenosynovitis
g) Deep space infection
h) Infectious arthritis
i) Human bites
j) Cat bites
k) Dog bites

METACARPAL AND FINGER INJURIES

Situation:
A 25-year-old male presents to the ED with a swollen right hand after a night of fighting.

Enabling Objectives:
1. Have a working knowledge of the typical mechanism, clinical findings, DI appearance, relevant classification (if any), initial management and indications for emergent referral of the following disorders:
   a) Skier's thumb (Gamekeeper's thumb)
   b) Fifth metacarpal neck fractures
   c) Metacarpal-phalangeal joint dislocations
   d) Interphalangeal joint dislocations
   e) Undisplaced phalangeal fractures
   f) Partial nail avulsion
   g) Lacerations of nail bed
   h) Open fractures of the distal phalanx.
   i) Amputations of the fingers and thumb.
   j) High-pressure injection injuries of the hand or fingers
2. Have a working knowledge of the typical mechanism, clinical findings, DI appearance and appropriate timing of referral for the following injuries:
   a) Oblique metacarpal fractures
   b) Mallet finger
   c) Central slip injuries and boutonniere deformity
   d) Open fractures of the proximal or middle phalanges.

PELVIC INJURIES

Situation:
A 55-year-old male presents to the ED after an MVC with an unstable pelvic injury.

Terminal Objectives:
The competent resident will demonstrate the ability to:

1. Identify and provide initial management of common injuries of the pelvis.
2. Provide appropriate follow up and/or specialist consultation for injuries of the pelvis.

Enabling Objectives:

1. Have a working knowledge of the clinical anatomy and neuroanatomy of the pelvis.
2. Have a working knowledge of the typical mechanism, clinical findings, DI appearance, relevant classification (if any), initial management and indications for emergent referral of the following disorders:
   a) Pelvic wing fractures
   b) Isolated pubic ramus fractures
   c) Coccyx fractures
   d) Pelvic avulsion fracture
3. Have a working knowledge of the typical mechanism, clinical findings, DI appearance, initial stabilization and appropriate timing of referral for the following injuries:
   a) Acetabular fractures.
   b) Open book fractures
   c) Lateral compression fractures
   d) Straddle fractures
   e) Vertical shear fractures
4. Discuss the effects of a pelvic fracture on abdominal examination findings.
5. Demonstrate basic skills in providing external stabilization of unstable pelvic fractures with the use of a towel.
6. Describe the role of angiography and embolization in hemorrhage due to pelvic fractures.

HIP AND THIGH INJURIES

Situation:

A 76-year-old female presents after falling on ice. She can no longer weight bear on her left leg.

Terminal Objectives:

The competent resident will demonstrate the basic ability to:

1. Identify and provide initial management of common injuries of the hip and thigh.
2. Provide appropriate follow up and/or specialist consultation for injuries of the hip and thigh.

Enabling Objectives:

1. Have a working knowledge of the clinical and DI anatomy of the hip and femur.
2. Have a working knowledge of the typical mechanism, clinical findings, DI appearance, relevant classification (if any), initial management and indications for emergent referral for the following disorders:
   a) Avulsion fractures of the greater trochanter
   b) Posterior dislocation of a total hip prosthesis
   c) Hamstring strains
   d) Hip adductor strains
   e) Undisplaced stress fractures of the femoral neck

3. Outline the typical mechanism, clinical findings, DI appearance, initial stabilization and appropriate timing of referral for the following injuries:
    a) Posterior dislocation of the hip
    b) Anterior dislocation of the hip
    c) Femoral neck fractures – Garden I through IV
    d) Intertrochanteric fractures
    e) Greater trochanteric fractures
    f) Subtrochanteric fractures
    g) Femoral shaft fractures
    h) Quadriceps tendon rupture
    i) Avulsion fracture of the lesser trochanter
    j) Femoral condyle fractures

KNEE INJURIES

Situation:
A 19-year-old male presents with a swollen left knee after being tackled during a football game.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Identify and provide initial management of common injuries of the knee.
2. Provide appropriate follow up and/or specialist consultation for injuries of the knee.

Enabling Objectives:
1. Have a working knowledge of the bony and ligamentous structures of the knee and their function.
2. Have a working knowledge of the locations the major arteries and nerves crossing the knee joint.
3. Demonstrate basic skills in examination maneuvers to identify joint effusions, ligament injuries, meniscal injuries, tendon injuries and neurovascular injuries.
4. Discuss the criteria of the Ottawa rules for DI evaluation of knees.
5. Have a working knowledge of the typical mechanism, clinical findings, DI appearance, relevant classification (if any), initial management and indications for emergent referral for the following disorders:
    a) Patellar dislocation
    b) Undisplaced patellar fracture
    c) Undisplaced tibial tuberosity fractures
    d) Collateral ligament sprains: 1° and 2°
    e) Incomplete anterior cruciate ligament (ACL) and posterior cruciate ligament (PCL) sprains
    f) Meniscal injury
    g) Patellar tendonitis
6. Outline the typical mechanism, clinical findings, DI appearance, initial stabilization, early complications, and appropriate timing of referral for the following injuries:
    a) Displaced patellar fractures

b) Displaced tibial tuberosity fractures
c) Patellar tendon ruptures
d) Knee joint dislocations
e) Acute ACL tears
f) Locked knee
g) Tibial spine fractures
h) Tibial plateau fractures

LOWER LEG INJURIES

Situation:
A 22-year-old female presents with deformity of her distal tibia after falling off her horse.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Identify and provide initial management of common injuries of the lower leg.
2. Provide appropriate follow up and/or specialist consultation for injuries of the lower leg.

Enabling Objectives:
1. Have a basic understanding of the typical mechanism, clinical findings, DI appearance, relevant classification (if any), initial management, indications for emergent referral for the following disorders:
   a) Proximal fibular fractures
   b) Fibular shaft fractures
   c) Gastrocnemius Strain
   d) Shin splints
2. Have a basic understanding of the typical mechanism, clinical findings, DI appearance, initial stabilization and appropriate timing of referral for the following injuries:
   a) Tibial shaft fractures
   b) Tibiofibular fractures
   c) Maisonneuve's fracture

ANKLE INJURIES

Situation:
A 24-year-old male presents after rolling over on his ankle while walking down stairs.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Identify and provide initial management of common injuries of the ankle.
2. Use evidence-based criteria for DI investigation of the ankle.
3. Provide appropriate follow up and/or specialist consultation for injuries of the ankle.

Enabling Objectives:

1. Have a basic understanding of the ligamentous and bony structures that maintain integrity of the ankle mortise and subtalar joints.
2. Discuss the criteria of the Ottawa rules for DI investigation of the ankle.
3. Outline the principles of unilateral vs bilateral injury of ankle structures and any displacement of the ankle mortise in assessing ankle injuries for instability.
4. Have a basic understanding of the typical mechanism, clinical findings, DI appearance, relevant classification (if any), initial management and indications for emergent referral for the following disorders:
   a) Isolated lateral collateral ligament sprain
   b) Isolated deltoid ligament sprain
   c) Lateral malleolar fracture distal to the tibiotalar joint
   d) Lateral malleolar fracture at the level of the tibiotalar joint
   e) Undisplaced isolated posterior malleolar fractures involving less than 25% of the joint surface
5. Have a basic understanding of the typical mechanism, clinical findings, DI appearance, initial stabilization and appropriate timing of referral for the following injuries:
   a) Lateral malleolar fractures proximal to the tibiotalar joint
   b) Tibiotalar dislocation or fracture-dislocation
   c) Bimalleolar or trimalleolar fractures
   d) Pilon fractures
   e) Displaced or large posterior malleolar fractures
   f) Osteochondral fractures of the talar dome
   g) Achilles tendon rupture

FOOT INJURIES

Situation:
A 40-year-old construction worker presents with a painful foot and inability to weight bare after falling six meters.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Identify and provide initial management of common injuries of the foot.
2. Provide appropriate follow up and/or specialist consultation for injuries of the ankle.

Enabling Objectives:
1. Demonstrate basic knowledge of the anatomy of the foot.
2. Have a basic understanding of the typical mechanism, clinical findings, DI appearance, relevant classification (if any), initial management and indications for emergent referral for the following disorders:
   a) Nondisplaced extraarticular calcaneal fractures
   b) Extraarticular navicular fractures
   c) Nondisplaced second through fifth metatarsal shaft fractures
   d) Extraarticular or minimally displaced 5^{th} metatarsal tuberosity fractures
   e) Phalangeal fractures

f) Metatarsophalangeal and interphalangeal dislocations
g) Puncture wounds to the sole of the foot

3. Have a basic understanding of the typical mechanism, clinical findings, DI appearance, initial stabilization and appropriate timing of referral for the following injuries:
   a) Calcaneal fractures
   b) Talar fractures
   c) Subtalar dislocations
   d) Intraarticular navicular fractures
   e) Lisfranc fractures and dislocations
   f) Displaced 5th metatarsal tuberosity fractures
   g) 5th Metatarsal diaphyseal fractures (Jones fractures)

STRESS FRACTURES

Situation:
A 28-year old marathon runner has been having increasing pain in her foot while training.

Terminal Objectives:
The competent resident will have basic working knowledge of the:
1. Management stress fractures of the lower limb

Enabling Objectives:
1. Describe the etiology for the development of stress fractures.
1. List the most common sites of stress fractures of the lower limb.
2. Describe the initial investigation of suspected stress fractures.
3. Have basic knowledge of the treatment of the common stress fractures of the lower limb.

SPINAL INJURIES

CERVICAL SPINE INJURIES

Situation:
A 54-year-old man presents after falling 10 meters from a ladder. He arrives immobilized on a cervical spine board with a cervical collar in place, and complains of severe neck pain and paralysis of both legs.

Terminal Objectives:
The competent resident will:
1. Have a basic understanding of the mechanism of injury of the cervical spine.
2. Investigate suspected C-spine injuries using evidence-based decision rules.
3. Provide initial management of cervical spine injuries

Enabling Objectives:

1. Demonstrate basic knowledge of the anatomy and DI anatomy of the cervical spine.
2. Demonstrate basic knowledge of the motor deficits and sensory levels associated with each level of C-spine cord injury.
3. Demonstrate a basic clinical examination of a patient with potential cervical spine or cord injury.
4. Using an evidence-based decision rule, list the criteria for deciding not to order C-spine DI in neck injuries.
5. Demonstrate the proper technique of immobilizing potential C-spine injuries, including methods of transferring and rolling patients
6. Demonstrate basic skills evaluating C spine DI images in trauma patients.
7. Demonstrate basic knowledge of the general classification of cervical spine fractures and dislocations.

THORACIC AND LUMBAR SPINAL INJURIES

Situation:
A 77-year old woman had a minor fall down the stairs and now has acute onset of back pain.

Terminal Objectives:
The competent resident will:
1. Have a basic understanding of the mechanism of injury of the thoracic and lumbar spine.
2. Provide initial management of thoracic and lumbar spinal injuries.
3. Arrange appropriate referral and follow-up for thoracic and lumbar spinal injuries.

Enabling Objectives:
1. Demonstrate basic knowledge of the anatomy and DI anatomy, of the thoracic and lumbar spine.
2. Demonstrate basic knowledge of the motor deficits and sensory levels associated with each level of thoracic and lumbar cord injury.
3. Review the risk factors for compression fractures in the elderly.
4. Demonstrate a basic clinical examination of a patient with potential thoracic and lumbar spine or cord injury.
5. Demonstrate basic knowledge in evaluating thoracic and lumbar spine DI images in trauma patients.
6. Identify thoracic and lumbar fractures that are unstable.
7. Discuss the medical treatment of compression fractures.

Principle No. 3: FAMILY MEDICINE IS COMMUNITY-BASED

EMERGENCY MEDICAL SERVICES

LOCAL EMS CARE

Situation:
A new physician arrives in a small city of 20,000 people. Local community representatives appeal to him to help upgrade the BLS system to a more "advanced" ALS system.

Terminal Objectives:
The competent resident will have a working knowledge of:
1. The key features and functioning of an EMS system.

Enabling Objectives:
1. Display a basic understanding of the response phases in prehospital care.
2. Display an understanding of the differences between rural and urban EMS systems.
3. Have a basic understanding of the medical interventions that each level of EMS provider may perform.

REGIONAL TRAUMA CARE

Situation:
1. A physician is working in a town of 3000 people that is 75 kilometers away from a large urban center. A single vehicle rollover has occurred, and she is attending to a single patient who has multisystem trauma.
2. A 34-year-old male sustains a head injury (GCS8) with lateralizing signs and a flail chest after a fall. He requires air evacuation to a trauma hospital 1 hour away.

Terminal Objectives:
The competent resident will have a basic understanding of:
1. The components of a regionalized trauma care system.

Enabling Objectives:
1. Display a basic ability to recognize the features of high-risk trauma.
2. Display a basic understanding of he steps necessary to prepare the patient for ground or air transport.
3. Describe the advantages and disadvantages of air or ground transport.

DISASTER MEDICINE

Situation:
A physician is working in a town. A car/bus accident has occurred and a total of 26 people are injured. Resources: 2 major (trauma) hospitals 30 minutes away, 2 smaller hospitals 20 and 45 minutes away.

Terminal Objectives:
The competent resident will have a basic understanding of:
1. Prehospital and hospital response to disasters and mass-casualty incidents

Enabling Objectives:
1. Define a disaster and a mass-casualty incident.
2. Have a basic understanding of the facilities, organizations and agencies that should be involved in disaster planning
3. Describe the four-color ED triage categories.

ORGAN DONATION

Situation:
A 17-year-old motorcyclist was brought to the ED following a high-velocity collision with a transport trailer. He has a persisting GCS of 3 following resuscitation. His CT shows massive intracranial bleeding. His parents arrive in the ED after he has been admitted to the ICU.

Terminal Objectives:
The competent resident will:
1. Recognize situations for potential organ donation.
2. Identify the role for physician in the acute care setting in procuring organs for donation.

Enabling Objectives:
The competent resident will demonstrate the ability to:
1. Display basic knowledge of the tissues and organs that may be donated for transplantation purposes.
2. Facilitate the decision making process for next of kin by providing information in a supportive, respectful manner.

Principle No. 4: THE FAMILY PHYSICIAN IS A RESOURCE TO A DEFINED PRACTICE POPULATION

RESOURCE TO PATIENTS WITHIN AN EMERGENCY DEPARTMENT

TRIAGE AND ACUITY SCALES

Situation:
A 52-year-old man comes to the triage desk complaining of central chest pain for the last hour. He is systemically well and thinks he has "heartburn". Immediately following him is a 19-year-old female who presents with complaints of lower abdominal pain.

Terminal Objectives:
The competent resident will be able to:
1. State the principles and goals of triage based on the use of a standardized ED triage instrument.

Enabling Objectives:
1. Describe the types of illnesses falling into triage categories I-V in the Canadian Triage and Assessment Scale.
2. Understand the time objectives related to distinct triage levels.
3. Appreciate the nuances of triage in a pediatric and rural setting.
4. Conduct the investigation and management concomitantly of a number of ill and injured patients at any given time.

COMMUNITY RESOURCES

Situation:
1. An elderly male presents with his 74-year old wife who is subsequently treated in the ED for her medical problems. She is weak but well enough to be discharged with appropriate community support and follow-up. She has been the primary care provider for him, and he is unsure how he will look after himself or her.
2. A father brings a 2-year-old to the ED. The child has eaten leaves from a decorative plant.

Terminal Objectives:
The competent resident will be able to:
1. Demonstrate knowledge of community resources available to ED patients, and understand how to access and utilize them.

Enabling Objectives:
1. List the resources available in their community for the ongoing care of patients that are not admitted into an acute care institution.
2. Demonstrate skills in initiating and choosing follow-up care with the patient's family physician or appropriate specialist.
3. Demonstrate skills in arranging care for patient's home or non-acute facilities.
4. Demonstrate skills in consulting Social Services.
5. Have a working knowledge on accessing and using regional poison control centers.

CRISIS INTERVENTION

Situation:
A 32-year-old female presents with her 2 children and states she wants to leave her alcoholic and verbally abusive husband but she does not know what to do.

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Recognize those patients who are in crisis and appropriately manage their disposition.

Enabling Objectives:
1. Understand the principles of crisis intervention and techniques for management.
2. List available resources to the patient whom is in crisis.

ABUSE AND ASSAULT

Situation:
An upset mother brings in her 4-year-old daughter and states that the daughter told her that her uncle was touching her "down there".

Terminal Objectives:
The competent resident will demonstrate the ability to:
1. Identify and manage incidences of child, adult and elderly abuse presenting to the ED
2. Successfully perform a history and physical examination of an abused male or female victim, including children and the elderly.

Enabling Objectives:
1. Elicit and interpret the historical features, symptoms and signs of physical and emotional abuse or neglect.
2. Identify specific injuries that are suggestive or characteristic of non-accidental trauma.
3. Describe typical patterns of trauma on a child due to physical assault.
4. Know how to report cases of suspected child abuse to the appropriate agencies.
5. Describe useful techniques that will enable a physician to perform a sexual assault examination on a child.

6. List the components of a sexual assault examination.
7. List treatments for prophylaxis of pregnancy, STD transmission, Hepatitis B, and HIV transmission.
8. Demonstrate a basic ability to identify the indicators of domestic abuse and manage these patients.
9. Demonstrate a basic ability to identify indicators of elder abuse and manage these patients.

RESOURCE TO PATIENTS, EMERGENCY DEPARTMENT CARE PROVIDERS, AND ADMINISTRATORS

EVIDENCE-BASED EMERGENCY MEDICINE (EBEM)

Situations:
1. A controversy regarding patient management (either in terms of diagnosis, therapy or prognosis) arises during a clinical shift.
2. A letter arrives from the diagnostic imaging department chastising a physician on the inappropriate use of a diagnostic test i.e. helical CT in the evaluation of flank pain.
3. A regional health board audit of emergency patients with pneumonia reveals that the admission rate is twice the provincial average; an action plan to reduce the problem is requested.

Terminal Objectives:

The competent resident will have a basic understanding of:
1. The principles of EBEM as they pertain to daily acute care clinical practice.

Enabling Objectives:
1. Demonstrate a basic ability to locate relevant scientific literature.
2. Demonstrate a basic ability to use critical appraisal skills to draw sound conclusions that may be incorporated into clinical practice.

PERSONAL AND PROFESSIONAL EFFECTIVENESS

PROFESSIONAL DEVELOPMENT

CONTINUING MEDICAL EDUCATION

Terminal Objectives:
The competent resident will know the fundamental principles of:
1. Continuing medical education.
2. An appropriate approach to maintaining skills and knowledge.

Enabling Objectives:

1. Define continuing medical education.
2. Describe several formats available as continuing medical education endeavors.

Terminal Objectives:

The competent resident will demonstrate the ability to:

1. Recognize and manage health issues related to emergency medicine and shift work.

Enabling Objectives:

1. Identify basic issues in stress management
2. List tactics available to the physician to effectively manage the work stress related to his/her crisis involvement.
3. Identify physicians at risk for substance abuse
4. Identify physicians at risk for work addiction