91W10
Advanced Individual Training Course

Clinical Handbook
Supportive Care 2

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TERMINAL LEARNING OBJECTIVE

Given a standard fully stocked M5 Bag or Combat Medic Vest System, given a casualty displaying seizure activity. No other injuries are identified. IAW *Emergency Care in the Streets*, *Prehospital Emergency Care*, *Trauma AIMS*

Types of seizure

Identify cause of seizure

(1) Failure to take prescribed anti seizure medication; most common cause of seizures in adults
(2) Trauma - may occur following head injury (Has the casualty fallen? Has casualty been hit in the head?)
(3) Congenital brain defect - most often seen in infants and children
(4) Infection - causes swelling or inflammation of the brain (meningitis or encephalitis)
(5) Fever - seen in children 6 months to 3 years of age usually with temperatures above 103 degrees; rarely in older children or adults
(6) Metabolic disorders - irregularities in body chemistry (diabetes/hypoglycemia)
(7) Drug toxicity - drug/alcohol use or abuse or withdrawal
(8) Brain tumor - may manifest as a seizure
(9) Previous trauma - scars on the brain from previous injuries
(10) Idiopathic - An idiopathic seizure is spontaneous. The cause of the seizure is unknown. It often starts in childhood.
(11) Hypoxia - lack of oxygen to the brain
(12) Hypertension - blood pressure is too high; seizures may be associated with cardiovascular accident (CVA)

Signs and symptoms

(1) Generalized seizures
  (a) Tonic-clonic seizure (grand mal seizure)
  "Tonic" is muscle tension (stiffness or rigidity).
  "Clonic" is the alternating contraction and relaxation of muscles in rapid succession.

    (i) May or may not be preceded by an aura
    (ii) Loss of consciousness occurs
    (iii) Characterized by tonic/clonic seizure activity throughout the entire body
    (iv) Lasts several minutes (1 to 3)
    (v) Following by a postictal phase (the patient is confused, drowsy, or unconscious)
    (vi) Type of seizure that most people associate with epilepsy and other seizure disorders
  (b) Absence seizure (petit mal seizure)
    (i) Demonstrates temporary loss of awareness to environment
    (ii) May appear to be daydreaming or staring into space
    (iii) Eyelids may flutter rapidly

(iv) The person may become unresponsive for a few seconds, then, immediately resume the task he was doing prior to the seizure. The Individual is completely unaware that anything unusual has happened.
(v) No tonic or clonic activity

(2) Partial seizures
(a) Simple partial seizure (also called Jacksonian seizure)
(i) Characterized by tonic and/or clonic movements in only one part of the body
(ii) No loss of consciousness
(iii) May progress to a generalized seizure
(b) Complex partial seizure (also called psychomotor or temporal lobe seizure)
(i) Usually preceded by an aura
(ii) No loss of consciousness
(iii) May be characterized by confusion, glassy stare, aimless movement, fidgeting, lip smacking, and chewing. The person may appear drunk or on drugs.
(iv) May progress to a generalized seizure

(3) Status epilepticus
(a) Two or more seizures without a period of consciousness between each seizure or a seizure lasting longer than 30 minutes
(i) Permanent CNS injury is more likely to occur the longer seizures are allowed to progress
(ii) Initiate treatment if continuous seizure activity lasting more than 10 minutes
(iii) The longer the seizure is allowed to continue the more difficult it will be to control
(iv) Tonic/chonic activity present; may cause long bone and spinal fractures
(v) Convulsive activity may gradually lessen over time – giving impression that seizures have been controlled
(vi) Correct diagnosis requires a high index of suspicion, a perceptive physician and sometimes an EEG
(b) Patient does not have time to breathe well or time to recover between seizures (hypoxia)
(c) True medical emergency - receives highest priority for triage and transport in mass casualty situations

Assess the casualty and overview of differential diagnosis

Report a detailed history of the seizure activity

(1) Physical description
(a) Gradual or abrupt onset

(b) Progression of motor activity
(c) Loss of bowel or bladder control
(d) Activity local or generalized
(e) Duration of the attack
(f) Ask patient if they have any recollection of the attack

(2) Clinical context of the seizure activity
  (a) Patient known epileptic
    (i) Missed doses of antiepileptic or recent alterations in medication
    (ii) Sleep deprivation
    (iii) Alcohol withdrawal
    (iv) Infection
    (v) Use of other drugs
  (b) No previous history of seizures
    (i) Symptoms that might suggest previous unwitnessed or unrecognized seizures
      * Blank or staring spells in school
      * Involuntary movements
      * Unexplained injures
      * Nocturnal tongue biting
      * Enuresis
    (ii) History of recent or remote head injury
    (iii) Persistent, severe, or sudden headache
    (iv) Concurrent pregnancy or recent delivery – possible eclampsia
    (v) History of metabolic derangement or electrolyte abnormalities, hypoxia, systemic illness (especially cancer), coagulopathy or anticoagulation, drug ingestion or withdrawal and alcohol use

General physical examination

Is directed toward discovering any injuries, especially to the head or spine, resulting from seizure.

(1) Possible fractures, sprains and bruises
(2) Tongue lacerations
(3) Assess for precipitating factors. Search for any systemic illness that may have caused the seizure.
(4) Assess vital signs, note temperature
(5) Assess blood glucose level, if equipment available
(6) Assess for motor system coordination, strength and tone
(7) Assess for slurred, very weak or hoarse speech
(8) Assess for jerky, uncoordinated, slumped or slow movements in posture and gait
(9) Assess for incontinence of bladder and bowel

Differential Diagnosis

Many episodic disturbances of neurologic function may be mistaken for seizures.

The following are several of the more important entities that should be considered.

Syncope

(a) Symptoms: may include some or all of the following: dizziness, diaphoresis, nausea, and "tunnel vision"
(b) Patient is usually aware they are going to faint
(c) Can describe onset of attack
(d) Cardiac Syncope may occur suddenly without any warning
(e) Injury or incontinence may occur

Pseudoseizures (extremely difficult to distinguish from true seizures)

(a) Pseudoseizures are psychiatric rather than neurogenic
(b) Associated with conversion disorder, panic disorder, psychosis, and impulse control disorder
(c) May occur in response to emotional upset
(d) Attack will occur with witnesses present
(e) Incontinence, injury, postictal confusion and lethargy are uncommon

Hyperventilation syndrome

(a) Gradual onset
(b) Shortness of breath, anxiety, and perioral numbness
(c) May progress to involuntary spasm or the extremities and even loss of consciousness

Migraines

(a) Similar to aura of partial seizures

Movement disorders

(a) Dystonia, chorea, myoclonic jerks, tremors, or tics may occur in a variety of neurologic conditions
(b) Consciousness is always preserved during movements
(d) Involuntary but can be suppressed by patient

Clinical features that help to distinguish seizures from other kinds of mimicking attacks include:

(a) Abrupt onset and termination
(b) Lack of recall
(c) Movements of behavior during the attack generally are purposeless or inappropriate
(d) Attack is followed by a period of postictal confusion and lethargy (except for petit mal or simple partial seizures)

Provide emergency medical care

Treatment

During a seizure

(a) Position the patient on the floor or the ground. Move the furniture with edges away from the patient (GOAL: prevent self-injury)

(b) DO NOT RESTRAIN the patient during a seizure

(c) DO NOT force anything into the patient's mouth

WARNING: Bite sticks have been bitten and swallowed resulting in an airway obstruction. Teeth and jaws have been broken due to forcing a tongue blade into the mouth. NEVER use fingers to keep the patient's teeth apart.

(d) Observe and record time of onset, duration, characteristics of the seizure, and if the patient was incontinent of stool or urine

CAUTION: If the casualty's teeth are clenched, do not attempt to forcibly open the casualty's jaw. Do not restrain the casualty's limbs during seizures.

After a seizure

(a) Maintain an open airway
- (i) Position casualty to maintain open airway
- (ii) Clear airway
- (iii) Insert airway device to assist with maintaining open airway, if needed
- (iv) Support and stabilize cervical spine, if suspected injury

(b) Turn patient on his side if no spinal trauma is suspected and suction his mouth as needed

(c) Administer high-flow oxygen. Use a non-rebreather mask if the patient is breathing on his own. Use BVM with reservoir to ventilate if patient is NOT breathing on his own.

(d) Monitor vital signs

(e) Protect the patient from embarrassment. Cover the patient if exposed or clothes are torn. Keep spectators away from area. If patient loses bladder/bowel control, clean and/or cover the patient as soon as possible.

(f) Establish and maintain intravenous access

(g) Administer IV fluids cautiously

Administer pharmacological interventions

(a) Valium
- (i) Therapeutic effects
  - * Suppress seizure activity in the motor cortex of the brain

* Generalized central nervous system depressant
* Muscle relaxant

(ii) Indications
* To treat grand mal seizures/status epilepticus/seizures lasting greater than 10 to 15 minutes

(iii) Contraindications
* Should not be given during pregnancy - exception may be seizures associated with eclampsia
* Should not be given to patients with hypotension/decreased systolic BP less than 90
* Should not be given to patients with respiratory depression. Respiration less than 10 per minute

(iv) Side effect
* Possible hypotension
* Depression in the level of consciousness

(v) Administration and dosage
* For grand mal seizures/status epilepticus give slow IV in titrated doses. Can be given intramuscular, rectally, or via endotracheal tube if needed. Start with 2.5 mg. Monitor vital signs. If vital signs are stable and patient is still seizing, give another 2.5 mg of Valium slow IV push. Continue until the seizures have stopped. Do not exceed total dosage of 10 mg.

(vi) Incompatibility
* Should not be mixed with any other drug

(b) 50% Dextrose (D50)

(i) Therapeutic effects
* Rapidly restores blood sugar level to normal level

(ii) Indications
* To treat suspected hypoglycemia
* To treat status epilepticus

(iii) Contraindications
* Intracranial hemorrhage
* Known stroke

(iv) Side effects
* Will cause tissue necrosis if it infiltrates

* May precipitate severe neurological symptoms in alcoholics (Wernieke's Encephalopathy)

(v) Administration and dosage

* 50 ml of 50% solution (25 gm) slow IV. Supplied in pre-filled syringes containing 50 ml of 50% solution.
* Determine serum glucose if possible prior to administering glucose

(c) Ativan (Lorazepam)

(i) Indications

* Anxiety disturbances or anxiety states: general anxiety disturbances panic disturbances phobic anxiety disturbances
* Adjustment disturbances with anxiety or stress reaction

(ii) Contraindications

* Assess patient periodically
* Safety and efficacy in children under the age of 12 has not been established

(iii) Dosages

* ADULT dose for anxiety is: 2mg - 3mg daily in 3 - 4 divided doses
* RANGE: 1mg - 6mg daily in divided doses
* ELDERLY/DEBILITATED PATIENTS: Initial dose of 1mg - 2mg/day in divided doses. Adjust as needed and tolerated.
* In elderly and/or debilitated patients and in those with serious respiratory or cardiovascular disease, a reduction in dosage is recommended
* In the case of local anesthesia and diagnostic procedures requiring patient co-operation, concomitant use of an analgesic is recommended.
* Ativan sl: Dosage of ativan sublingual should be individualized for maximum effect.

CAUTION: The soldier medic must be proficient and competent in drug administration. This includes knowledge of therapeutic effect, indications, contraindications, side effects, how supplied, administration, and dosage of the drugs.

(d) After the seizure activity is over, assess and treat any injuries suffered during the seizure

(e) Expect lethargy, partial consciousness, and disorientation
(f) If possible, try to determine how long the seizure lasted, what the patient did after the seizure, and what the patient was doing prior to the seizure

Transport considerations

Requirements

(a) Patient with a first time or new seizure
(b) Patient with a seizure that caused injury
(c) Patient with respiratory difficulty
(d) Status epilepticus patient - immediate transport

Maintain an open airway
Patient should be transported on his side while being given supplemental oxygen en route to the medical facility
Suction mouth as needed
Monitor vital signs while en route

Provide on-going management

Maintain the casualty on their side, if necessary
Monitor the casualty's airway
Monitor vital signs to include pulse oximetry, if available
Monitor neurological status

(1) Pupil response
(2) Glasgow coma scale
(a) Eye opening
(b) Verbal response
(c) Motor response

Place the casualty in a quiet, reassuring environment, if possible
Monitor IV fluids.
Reassess pharmacological interventions every 15-30 min.

CAUTION: Sudden, loud noises or bright light may cause another seizure

Document seizure activity

(1) Duration of the seizure
(2) Presence of cyanosis, breathing difficulty, or apnea
(3) Level of consciousness before, during and after the seizure
(4) Preceded by aura (ask the casualty)
(5) Muscles involved (type of motor activity)
(6) Incontinence of bladder or bowel
(7) Eye movement
(8) Previous history of seizures, head trauma, and/or drug or alcohol abuse

Evacuate the casualty by ground, if possible

TERMINAL LEARNING OBJECTIVE

Given a standard fully stocked M5 Bag or Combat Medic Vest System, with an obstetric kit. You encounter a pregnant female who is in labor. IAW *The Basic EMT Comprehensive Prehospital Patient Care*, *EMT Prehospital Care*

Stages of Labor

First stage

(1) Begins with the onset of regular contractions
   (a) Contraction time - the span of time from the beginning of a contraction of the uterus to when the uterus relaxes
   (b) Interval time - the span of time from start of one contraction to the start of the next contraction

(2) Rupture of amniotic sac

WARNING: "Meconium staining" - amniotic fluid that is greenish or brownish-yellow rather than clear, is an indication of possible fetal distress during labor.

(3) Appearance of bloody show

(4) Ends with the full dilation and effacement of the cervix

NOTE: In order for a vaginal delivery to occur, the cervix must both thin out (efface) to 100% and open up (dilate) to 10cm (3-4 inches).

WARNING: There is usually time to transport the patient before delivery during this phase.

Second stage

(1) Begins when the baby enters the birth canal

(2) Contractions become stronger

(3) Presenting part appears

(4) Ends with the birth of the baby

CAUTION: Transportation of the patient at this time should NOT BE CONSIDERED. Delivery is imminent.

Third stage

(1) Begins when delivery of baby is complete

(2) Ends with the delivery of the placenta and umbilical cord

Care for Normal Delivery Outside the Hospital

Evaluation of the mother

(1) Ask the mother the following questions

(a) How long have you been pregnant or expected due date?
(b) How long and how often she has been having contractions?
(c) If she has had any bleeding or bloody show?

(2) Check for signs and symptoms that indicate delivery will occur before transport is possible
(a) Head or other presenting part is visible (crowning)
(b) Mother tells you "The baby is coming", especially if she is a multiparous woman
(c) Mother feels as if she is having a bowel movement with increasing pressure in the vaginal area
(d) Mother feels the need to push
(e) Hospital is not accessible due to traffic or weather/disaster
(f) Transportation will not become available before anticipated time of delivery

(3) If delivery is eminent with crowning, contact medical officer for decision to commit to delivery on site. If delivery does not occur within 10 minutes, contact medical officer for permission to transport.

Predelivery preparation of the mother

(1) Ensure the mother's privacy
(2) Obtain and open emergency obstetric pack. This will provide all the sterile supplies needed for care of the mother and infant before and after delivery.
(3) In absence of an emergency obstetric pack medic should collect clean sheets and towels, heavy sting or cord (shoelaces) to tie the cord, a towel or plastic bag to wrap the placenta, and clean unused rubber gloves and eyewear
(4) Put on gloves, mask, gown, and goggles for infection control precaution if the conditions permit/as time allows
(5) Position the mother and prepare work space for both delivery and care of the newborn
(a) Position mother lying with knees drawn up and spread apart. Elevate the hips with a folded blanket or pillow.
(b) Create a sterile field around vaginal opening with sterile towels or paper barriers
(c) Have another individual monitoring the airway, render assistance if she should vomit, and provide emotional support

Assist in delivery of the baby

Encourage mother to breathe deeply through her mouth. She may feel better if she pants.

When the infant's head appears during crowning, place fingers on the bony part of skull and exert slight pressure to prevent an explosive delivery. Use caution to avoid "soft spot" (fontanelle.)

If the amniotic sac does not break, or has not broken, use a clamp or your finger to puncture the sac and push it away from the infant's head and mouth as they appear

As the infant's head is being born, determine if the umbilical cord is around the infant's neck

(a) If the umbilical cord is around the infant's neck, slip it over the shoulder or clamp, cut, and unwrap
(b) Umbilical cord must be clamped and cut if it is wrapped too tightly around the infant's neck

After the infant's head is born, support the head, suction the mouth first then the nostrils two or three times with a bulb syringe if available

CAUTION: Use caution to avoid contact with the back of the mouth.

(a) Squeeze the bulb syringe before placing it in the mouth or nose
(b) Slowly release with withdrawal
(c) Squeeze again to expel contents before reinserting

Continue to support the baby's head between contractions while waiting for the rest of the body to be delivered

WARNING: DO NOT pull on the baby's head to assist with the delivery.

As the feet are born, grasp the feet. Wipe blood and mucus from mouth and nose again.

Wrap the infant in a warm blanket and place on his side, with the head slightly lower than the trunk

WARNING: Keep infant warm to prevent hypothermia, which can occur quickly.

Keep infant level with vagina until the cord is cut

Have your partner monitor and complete initial care of the newborn

The infant must be breathing on its own before clamping and cutting the cord, palpate the cord with your fingers to make sure it is no longer pulsating

(a) Use clamps or umbilical tape found in the obstetric kit
(b) Apply the first clamp about 8 to 10 inches from the baby
(c) Place the second clamp 2 to 3 inches below the first, approximately 4 fingers width from infant
(d) Cut the cord between the clamps or knots using sterile surgical scissors

CAUTION: NEVER unclasp a cord once it has been cut, or attempt to adjust a clamp once it is in place.

Observe for delivery of the placenta while preparing mother and infant for transport

When the placenta is delivered, wrap it in a towel and put it in a plastic bag

Place sterile pad over vaginal opening, lower mother's legs, help her hold them together. Transport mother, infant, and placenta to hospital.

Record the birth

(a) Document exact time of birth on the run sheet
(b) Make a double-backed tape bracelet with the time of birth and the mother's full name. Apply to baby's wrist or ankle.

Caring for the newborn

Position, dry, wipe and wrap the newborn in a blanket and cover the head

(a) Place baby in a head-down position
(b) Repeat suctioning the mouth and nose as necessary

Assessment of infant - normal findings

(a) The APGAR score may be used to evaluate the newborn's condition. Perform as soon as the infant's born and 5 minutes later.
(b) Evaluating the adequacy of a newborn’s vital functions immediately after birth
(c) Five parameters: heart rate, respiratory effort, muscle tone, reflex irritability, and color
(d) Each parameter is given a score from 0 to 2
(e) Majority of infants are vigorous and have a total score of 7 to 10

Appearance - note the infant's color. Normal color is pink with some cyanosis of the extremities.

Pulse - determine the infant's pulse rate. The pulse rate should be greater than 100 per minute.

Grimace - evaluate the infant's response to an irritable stimulus. The infant should cry or react vigorously.

Activity - how much is the infant moving? Infant should have good motion in extremities.

Respiration effort (breathing) - the infant should be breathing within 30 seconds after birth (breathing normal or crying)

Stimulate newborn if not breathing

(a) A gentle vigorous rubbing of the baby's back should stimulate breathing, if that fails, snap your index finger against the sole of the feet

(b) DO NOT hold the baby upside down to slap its bottom

Resuscitation of the newborn - after assessment, if signs and symptoms require either cardiac or pulmonary resuscitation, perform the following steps when appropriate

(a) If breathing effort is shallow, slow, or absent, provide artificial ventilations
  (i) 40 to 60 per minute
  (ii) Reassess after 30 seconds
  (iii) If no improvement, continue artificial ventilation and reassessments

(b) If heart rate is less than 100 beats per minute, provide artificial ventilations
  (i) 40 to 60 per minute
  (ii) Reassess after 30 seconds
  (iii) If no improvement, continue artificial ventilation and reassessments

(c) If heart rate is less than 80 beats per minute and not responding to artificial ventilations, start chest compressions

(d) If heart rate is less than 60 beats per minute, start compressions and artificial ventilations
  (i) Chest compressions in the newborn should be delivered at a rate of 120 per minute, mid sternum
  (ii) Give compressions with two thumbs, fingers supporting the back, at a depth of 1/2 to 3/4 inch

CAUTION: This is for newborns only.

(e) Color - if the infant exhibits cyanosis of the face and/or torso with spontaneous breathing and adequate heart rate. Administer oxygen 10 to 15LPM using oxygen tubing held as close as possible, but not directly into the infant's face.

Delivering the placenta

The placenta is normally expelled within minutes after the baby is born. Never pull on the cord to facilitate delivery.

Save the placenta in a container and place it in a plastic bag, or wrap it in a towel or paper and bring it with the mother and baby to the hospital

Emergency care of mother post-delivery - place baby to mothers breast

Up to 500cc if blood loss is normal and well tolerated by the mother following delivery

The soldier medic must be aware of this loss so as not to cause undue psychological stress on him or the new mother

If there is excessive blood loss, massage the uterus

(a) Place fully extended fingers on lower abdomen above pubis and massage lightly with a circular motion over area

(b) If bleeding continues, check massage technique and transport immediately. Provide oxygen and perform ongoing assessment.

Regardless of estimated blood loss, if mother shows signs and symptoms of shock, treat as such and transport prior to uterine massage. Massage the uterine fundus en route to the hospital.

Monitor for complications during labor

Terms and definitions

Breech birth - delivery with the buttocks, feet, or knees appearing as the presenting part

Premature infant - an infant weighing less than 5.5 lbs. or born before the 37th week of gestation

Meconium - a greenish-black to light brown, material that collects in the intestine of a fetus and forms the first stool of a newborn

Abnormal deliveries of childbirth

Premature infants ("Preemie")

(a) Description
- (i) An infant weighing less than 5.5 lbs. or born before the 37th week of gestation
- (ii) Smaller and thinner than a full-term baby
- (iii) The proportion of the head to the body is greater than a full-term infant

(b) Treatment and transport - same as for normal births
- (i) Dry the baby thoroughly as soon as possible after birth
- (ii) Keep warm - absence of fully developed layer of fatty tissue allows rapid cooling and development of hypothermia
  - * Wrap completely, with face exposed
  - * Maintain temperature of room or ambulance at 90-100^{o}
- (iii) Keep mouth and nose clear of mucus by suctioning frequently
- (iv) Provide ventilations and/or chest compressions based upon the baby's pulse and respiratory effort (see Annex F)
- (v) Administer oxygen (humidified, if possible) by directing flow into an improvised tent over baby's face

(vi) Watch the umbilical cord for bleeding. Apply another clamp or tie closer to the abdomen to prevent excessive blood loss.
(vii) Prevent contamination. Wear a gown/mask. Keep bystanders at a distance.
(viii) Handle gently while providing all care
(ix) Inform hospital of premature delivery

Breech presentation

(a) Description
  (i) Presenting part is the buttocks or feet
  (ii) Most common abnormal delivery
(b) Treatment and transport
  (i) Initiate rapid transport upon recognition of a breech presentation
  (ii) Never attempt to deliver the baby by pulling on its legs
  (iii) Provide high concentrations of oxygen
  (iv) Place the mother in a head-down position with the pelvis elevated
  (v) If the body delivers, support buttocks and trunk and prevent an explosive delivery of the head
  (vi) After delivery, care for the newborn, cord, mother, and placenta as in normal delivery.

Prolapsed umbilical cord - a true emergency

(a) Description
  (i) Umbilical cord presents first
  (ii) Oxygen supply to baby is interrupted when the cord is squeezed between the vaginal wall and the presenting part
  (iii) Commonly seen with breech deliveries or small babies (premature births/multiple births)
(b) Treatment and transport
  (i) Perform initial assessment
  (ii) Place mother with her head down and elevate her hips with a blanket or pillow, this will lessen pressure on the birth canal
  (iii) Provide a high concentration of oxygen
  (iv) Gently push on the presenting part to keep pressure off cord, by inserting several fingers of your gloved hand into the vagina. Maintain this position until relieved by the physician at the medical treatment facility.
  (v) Check the cord for pulses and keep it warm with a towel moistened with sterile saline and wrapped again with a dry towel
  (vi) DO NOT attempt to push the cord back inside the mother
  (vii) Transport immediately to a medical facility

(viii) Have your partner obtain baseline vital signs, AMPLE history, and physical exam en route to the hospital, if possible

Limb presentation

(a) Description - arm or leg presents first
(b) Foot is the most common in a breach presentation
(c) Limb presentation cannot be delivered in the prehospital setting
(d) Treatment and transport
  (i) Place mother in a head down position with hips elevated
  (ii) Administer a high concentration of oxygen
  (iii) DO NOT attempt to place the limb back into the vagina
  (iv) Transport immediately to a medical facility

Multiple birth

(a) Description - more than one infant is being born (e.g., twins, triplets)
(b) Treatment and transport
  (i) Assist as in a single delivery
  (ii) Clamp and cut the cord of first baby
  (iii) Note time of first birth
  (iv) Assist with subsequent births, cut and clamp each cord. Note the time of each birth.
  (v) Make certain to identify each child and order of birth (1 and 2 or A and B)
  (vi) Provide care for each infant, mother, umbilical cord, and placenta as with a single delivery

Meconium staining

(a) Description
  (i) Greenish or brownish-yellow amniotic fluid. A result of fecal material released from the baby's bowels before birth.
  (ii) Occurs when the infant is distressed due to cord compression, trauma, or other complications while inside the amniotic sac

CAUTION: Appearance of meconium in amniotic fluid is a sign that the infant has a potentially serious problem. Aspiration of meconium by the infant during delivery can cause severe respiratory complications.

(b) Treatment and transport
  (i) Suction the baby's mouth, then nose BEFORE stimulating the baby to breathe. This is to avoid aspiration of amniotic fluid with meconium particles.

(ii) Continue to monitor the airway
(iii) Transport immediately
(iv) Notify hospital of the presence of meconium in the fluid

Predelivery Emergencies

Miscarriage/spontaneous abortion

Fetus and placenta may deliver before the 20th week of pregnancy

(a) Signs and symptoms
  (i) Moderate to severe vaginal bleeding
  (ii) Abnormal cramping
  (iii) Discharge of tissue, blood, and/or blood clots from the vagina
(b) Emergency care steps
  (i) Perform initial assessment
  (ii) Obtain AMPLE history and baseline vital signs
  (iii) Initiate and maintain IV with Normal Saline
  (iv) Treat for shock if indicated
  (v) Administer high concentration oxygen
  (vi) Place sanitary pad over the vagina. Save all used pads.
  (vii) Save all expelled tissue
  (viii) Provide emotional support
  (ix) Transport immediately

Ectopic Pregnancy

(a) 95% of all ectopic pregnancies occurs in a fallopian tube
(b) Usually referred to as a „tubal pregnancy“
(c) Most likely to occur when the fallopian tube is scarred from infection (PID) or previous abdominal/gynecological surgeries
(d) Signs and symptoms
  (i) Abdominal pain initially localized to one side or the other of the lower abdomen
  (ii) Initially pain is “crampy“ and intermittent in nature
  (iii) As pregnancy progresses, the fallopian tube ruptures and pain becomes constant and diffuse throughout the abdomen
  (iv) Patient may experience shoulder pain which suggests a large hemoperitoneum
  (v) Patient may or may not have vaginal bleeding
  (vi) Patient usually has a history of amenorrhea
(e) Emergency care and treatment
  (i) Maintain airway

(ii) Administer oxygen
(iii) Keep patient supine
(iv) Initiate a large bore IV and administer IV fluids
(v) Keep NPO (nothing by mouth)
(vi) Transport immediately to definitive care facility

Pre-eclampsia (toxemia of pregnancy)

(a) Signs and symptoms
  (i) Hypertension
  (ii) Proteinuria - protein in the urine
  (iii) Elevated blood pressure
  (iv) Excessive weight gain
  (v) Swelling (edema) of the face, hands, ankles, and feet
(b) Emergency care steps
  (i) Notify medical officer immediately
  (ii) Perform initial assessment
  (iii) Obtain SAMPLE history and baseline vital signs
  (iv) Treatment based on signs and symptoms
  (v) Transport patient on her left side

Eclampsia

(a) Signs and Symptoms
  (i) Headaches
  (ii) Visual disturbances
  (iii) Epigastric pain
  (iv) Massive swelling (edema) especially of the face and hands
  (v) Proteinuria (protein in the urine)
  (vi) Seizures - occurrence of seizures clearly marks transition of pre-eclampsia to eclampsia
(b) Emergency care and treatment
  (i) Position on left side. Keep patient quiet and in a darkened room, if possible
  (ii) Administer high flow oxygen
  (iii) Initiate and maintain intravenous line
  (iv) Transport to hospital as gently and quickly as possible
  (v) Anticipate seizure activity. Have suction readily available.
  (vi) Pharmacological interventions as directed by MD/PA

Ante partum Hemorrhage (bleeding before delivery)

(a) Three main causes
  (i) Abruptio placenta - premature separation of the placenta from the wall of the uterus during the last trimester of pregnancy. Patient will experience sudden onset of severe abdominal

pain with or without vaginal bleeding. Fetal movement/fetal heart tones are usually absent. The abdomen will be tender and the uterus rigid to palpation.

(ii) Placenta previa - painless vaginal bleeding. Usually bright red. Occurs as the cervix begins to dilate in preparation for delivery and the placenta covers all or part of the cervical canal. Fetal movement continues and fetal heart tones are audible. Uterus is soft and non-tender.

(iii) Uterine rupture - usually occurs during labor. Women at risk are multiparous or have had a previous c-section. Vaginal bleeding may or may not be present. Contractions will have lessened or stopped. Patient will exhibit obvious signs of shock.

(b) Emergency care and management

(i) Regardless of cause of third trimester bleeding, management and treatment are the same.

(ii) Position on left side

(iii) Administer high flow oxygen

(iv) Initiate and maintain at least two large-bore IV's

(v) Treat for shock

(vi) Notify MD/PA Immediately

(vii) Evacuate/transport to definitive care facility

Trauma in pregnancy

(a) Three major causes

(i) Motor vehicle crashes

(ii) Falls

(iii) Penetrating injuries (i.e. gun shot wounds)

(b) Anatomic changes of pregnancy

(i) Compression of abdominal contents into upper abdomen results in a higher incidence of abdominal trauma in association with chest trauma

(ii) Bladder is displaced upward and forward so it is outside the pelvic cavity and is at increased risk for injury

(iii) The obviously enlarged uterus is at risk for injury/rupture

(c) Physiologic changes of pregnancy

(i) Vascular volume increases to support the perfusion of two circulations (patient and fetus)

(ii) Increase in cardiac output to pump increased volume - resting heart rate increases to 15-20 BPM's

(iii) Redistribution of blood volume with as much as a tenfold increase in blood flow to the pelvic region

(iv) Respiratory changes include an increased need for oxygen due to a higher basal metabolism - increased minute volume
(v) Tidal volume increases along with minute volume to rid the body of the increased CO2 from the patient and fetus
(vi) All of the physiologic changes make it difficult to assess for signs and symptoms of shock and to adequately ventilate the patient

(d) Emergency care and management
(i) Treat the mother first
(ii) Maintain adequate airway
(iii) Administer high flow 02 - oxygen needs are 10 - 20% higher than normal
(iv) Assist with ventilations as needed - remember to provide higher minute volume
(v) Control external bleeding
(vi) Position on left side - lying on the left side will shift the weight of gravid (pregnant) uterus off the vena cava. If immobilized on backboard, tilt board 30 degrees to the left.
(vii) Initiate and maintain IV
(viii) Transport/evacuate to definitive care facility

Identify additional gynecological emergencies

Ectopic pregnancy

(1) Assessment findings
(a) Acute abdominal pain
(b) Vaginal bleeding
(c) Rapid and weak pulse
(d) Low blood pressure
(2) Notify MD/PA
(3) Prepare for immediate transport
(4) Maintain ABC's
(5) Administer high flow 02
(6) Initiate and maintain IV with Normal Saline
(7) Reassess continuously

TERMINAL LEARNING OBJECTIVE

Given a patient medical record, immunization record, supplies, and equipment at Echelon II and below, provide soldier readiness processing for a company size element. Evaluate a patient who presents for an Ambulatory Medical Visit (Sick Call). Performed soldier readiness processing in support of unit deployment. Evaluated a patient who presents for an Ambulatory Medical Visit.

Screen medical records for accuracy and completeness

Primary goal of the medical screener is to provide timely, quality care for active duty personnel with minor medical conditions

(1) Do not function as independent providers
(2) Work under the direct supervision of a medical officer who is responsible for the care the medic provides

The following guidelines must be followed:

(1) The SOAP format must be used when evaluating a patient
(2) Consult with the supervising medical officer prior to the patient leaving the treatment facility
(3) Know your limitations and immediately refer to an MD/PA any patient with one of the following conditions:
    (a) Febrile illness with temperature exceeding 101° F
    (b) Acute distress such as, breathing difficulties, chest pain, acute abdominal pain, suspected fractures, lacerations, etc.
    (c) Altered mental status
    (d) Unexplained pulse above 120 per minute
    (e) Unexplained respiratory rate above 24 or less then 8 per minute
    (f) Diastolic blood pressure over 100 mm Hg systolic BP less than 90 mmHg

Soldier medic's responsibilities during medical screening procedures (sick call)

(1) Validate identification of soldier
(2) Gather sick slip and review
(3) Sign patient in and pull soldier's medical record (Initiate a replacement record if required)
(4) Complete vital signs and document on appropriate form (e.g. DA Form 5181, SF 600, and DD Form 689
(5) Check for medical profile(s) (temporary or permanent)
(6) Check Over 40 Physical (as required)
(7) Check for eyeglasses and protective mask inserts (as required)
(8) Check for DNA sample
(9) Check for Medical Warning Tags (DA Form 3365)
(10) Refer to medical authority as required
(11) Screen individual IAW APC, Algorithm-Directed Troop Medical Care, HSC Pam 40-7-21, for soldier's chief complaint

(12) Follow algorithm protocol for disposition and/or treatment and annotate on appropriate form
(13) Sign individual out of BAS and follow appropriate disposition after screened by medic or PA evaluation
(14) Clean and set up screening area for next individual reporting to sick call
(15) Secure medical record

Screen immunization records for accuracy and completeness

Screen immunization records

(1) Validate identification of soldier
(2) Ensure all immunizations are current on PHS 731 (Shot Record)
  (a) Refer to medical record if shot record is not available
  (b) Inquire regarding allergic reactions
  (c) Check for Medical Warning Tags
  (d) Refer to immunization site if immunizations are required
(3) Return immunization record to soldier
(4) Secure medical record

Shot Call

(1) Persons who administer vaccinations must be trained in:
  (a) Management of anaphylaxis
  (b) Immunization procedures
  (b) Proper use and maintenance of equipment
  (c) Indications and contraindications for each vaccine
  (d) Storage requirements
  (e) Management and reporting of adverse reactions
  (f) Immunization record maintenance
(2) Patients who report to shot call should be:
  (a) Screened for chronic/acute illness
  (b) Screened for pregnancy
  (c) Screened for medications that might interact with immunizations
  (d) Screened for allergies
  (e) Offer Tylenol to minimize local and systemic shot reactions
  (f) Observed for at least 20 minutes after administration for symptoms of anaphylaxis

Screen for personnel / administrative matters

S-1 personnel (administration) center will screen these records

Validate / inspect Identification Card (DD Form 2A)

Validate / inspect Geneva Conventions ID Card (DD Form 1934)(as required)

Refer for new card(s) as required

Check Identification tags (2 sets) for accuracy

Screen Dental Records

Review date of last dental examination
(1) Ensure Class 1 or 2
(2) Ensure Dental X-rays (Panorex) is present and up to date

Refer to Dental authority as required

Ask and record the following Medical History information on the prescribed form

Purpose of the Chronological Medical Record
(1) To improve communication among all those caring for the patient
(2) To display the assessment, problems and plans in an organized format to facilitate the care of the patient and for use in record review and quality control

Ask and record medical history information
(1) Identifying data
(2) Chief complaint:
  (a) Concise statement
  (b) Primary reason the patient seeks help
  (c) Use patient's own words
(3) Present illness:
  (a) State of health prior to onset of illness
  (b) Nature and circumstances of onset
  (c) Location and nature of pain or discomfort
  (d) Progression
  (e) Treatment received and its effect
(4) Past history:
  (a) Childhood diseases
  (b) Previous illnesses and injuries
  (c) Previous hospitalization and surgery
(5) Family history:
  (a) History of chronic illness
  (b) Familial illness (sickle cell)
(6) Social history:
  (a) Marital status
  (b) Occupational data
  (c) Habits (tobacco, alcohol, drugs)

Use the SOAP Note Format
(1) **S:** SUBJECTIVE DATA: what the patient tells you
(2) **O:** OBJECTIVE - physical findings and lab/ X-ray
(3) **A.:** ASSESSMENT - Your interpretation of the patient’s condition
(4) **P:** PLAN

Perform a patient examination

Determine what is wrong with the patient based on patient's own statements regarding his specific condition.

Determine the chief complaint based on the patient's own statements: Focused examination based on chief complaint

The S.O.A.P. (E. R.) method is the only accepted method of medical record entries for the military

(1) **S:** (subjective) - What the patient tells you
(2) **O:** (objective) - Physical findings of the exam
(3) **A:** (assessment) - Your interpretation of the patients condition
(4) **P:** (plan) - Includes the following
  (a) Therapeutic treatment: includes use of meds, use of bandages, etc.
  (b) Additional diagnostic procedures: any test that still might be needed
(5) **E:** (patient education) - special instructions, handouts, use of medications, side effects, etc.
(6) **R:** (return to clinic) - when and under what circumstances to return.

Components of the patient examination (SOAP note)

(1) Medical History - Gives you an idea of the patient's problem before you start physical exam
  (a) Biographic data
  (b) Chief complaint
    (i) This is the reason for the patients visit
    (ii) Use direct quotes from patient
    (iii) Avoid diagnostic terms
  (c) Observation: begins as soon as the patient walks through the door
  (d) Listening: listen carefully. This will help you get an accurate diagnosis of the problem
  (e) Open ended questions: help you to get more complete and accurate information
  (f) Provider obstacles: your attitude or predetermination may prevent you from making an accurate judgment
  (g) Patient obstacles: the patient has many obstacles to overcome. Patients must have confidence in you.
(2) History of present illness/injury (HPI)
  (a) Duration: when the illness/injury started
  (b) Character: use the patient's words to note character of pain
  (c) Location: have the patient explain, then have them point it out
  (d) Exacerbation or remission: what makes it better or worse and is it constant or does it vary in intensity
  (e) Positional pain: does the pain vary with the change of the patient's position.

(f) Medications/allergies: note any medications whether over the counter or not. Do the medications relate to the problem? Take note of the patient's allergies. **Do not rely on the patient's health record or SF 600.**

(g) Pertinent facts: facts that lead you to your diagnosis. Usually consist of classical signs and/or symptoms.

(3) Another method to take a medical history is by using the key phrase "SAMPLE PQRST"

S: Symptoms
A: Allergies
M: Medicine taken
P: Past history of similar events
L: Last meal
E: Events leading up to illness or injury
P: Provocation/Position - what brought symptoms on, where is pain located
Q: Quality - sharp, dull, crushing etc.
R: Radiation - does pain travel
S: Severity/Symptoms Associated with - on scale of 1 to 10, what other symptoms occur
T: Timing/Triggers - occasional, constant, intermittent, only when I do this (Activities, food)

(4) Past History (PH)
(a) Other significant illnesses
(b) Prior admissions
(c) History of major trauma
(d) Surgery
(e) Childhood illnesses
(f) Neurological history

(5) Family History
(a) This is the pertinent history of diseases of the family within the patient's bloodline.
(b) Any disease traced through the family is important. If no history found, note it on SF600

(6) Social History (SH)
(a) Drugs, recreational
(b) ETOH
(c) Tobacco
(d) Over the counter medications

Disposition Plan

Treat illness or injury within prescribed "Ambulatory Patient Care" (HSC PAM 40-7-21) Algorithms

Definition of algorithm

A step by step procedure for solving a problem

Purposes

(1) Systematic approach to screening patients
(2) Guidance for minimally trained medical personnel to provide a logical conclusion when dealing with medical problems within the limits of his/her training

Algorithm Dispositions Category

(1) **PHYSICIAN STAT/Category I** - medical problem (**Emergency**) exist that may be life threatening
  (a) Requires immediate attention of a physician that can handle circumstance
  (b) Notify the physician assistant and the senior medic of a Category I patient if a physician is not present.
  (a) First aid should be initiated and ambulance transportation arranged if MTF is outside of hospital
(2) **PA STAT/Category II** - medical problem may exists that may develop into a life threatening condition if not evaluated on a priority basis by a physician, PA
(3) **PA TODAY/Category III** - medical condition exists which requires PA evaluation
  (a) Patient will be screened IAW APC-21 algorithm and then sent to PA
  (b) Physician or PA will make final disposition
(4) **SELF-CARE PROTOCOL/Category IV**--condition exists that can be taken care of by individual
  (a) Instructions and/or medications are offered to individual per algorithm protocol
  (b) Individual or screener may elect to override self-care protocol and have the patient seen by medical officer

NOTE: Overriding this protocol usually depends on appearance of individual or if medical problem is chronic and self-care has already been attempted without results.

(5) **HOSPITAL CLINIC REFERRAL/Category V** - medical condition exists that requires evaluation by a specialty clinic (e.g. podiatry, OB/GYN, allergy)
  (a) Medical officer at MTF must make referral
  (b) PA may want to attempt treatment care plan at MTF level if qualified personnel and resources are available

Steps in screening patient complaint

(1) Locate category of chief complaint in table of contents.
  (a) Category of complaint, EXAMPLE - **Ear, Nose, and Throat (ENT)** Complaints
  (b) Complaint, EXAMPLE - **sore Throat**
  (c) Number and page, EXAMPLE - **A-1**, **16**
(2) Review preceding page of algorithm prior to, during, and after patient screening
  (a) EXAMPLE - important information on the algorithm

(b) EXAMPLE - treatment protocol, for instructions and medications to provide patient after screening has been completed

(3) Begin with Block 1 of algorithm and follow arrows depending on patient's response
- (a) EXAMPLE - is there a history of recent throat or neck trauma?
- (b) EXAMPLE - if NO, (go to block 3)
- (c) EXAMPLE - can the patient touch chin to chest?
- (d) EXAMPLE - if NO, (go to block 4)
- (e) EXAMPLE - is temperature 100 F or higher, or is the patient unable to swallow? (Determine ability to swallow by observing the patient)
- (f) EXAMPLE - if NO, (Category III)

(4) If disposition is a Category IV, refer to preceding page for treatment protocol.
- (a) EXAMPLE **- Block 6**, Can the patient clear both ears?
- (b) EXAMPLE - if YES, (Category IV, Treatment Protocol A-1 (6)
- (c) Follow protocol for medication and patient instructions

(5) If disposition is an associated complaint, refer to complaint algorithm and begin at block 1 with new complaint.
- (a) EXAMPLE - **Block 6**, Can the patient clear both ears?
- (b) EXAMPLE - if NO, (Screen for Ear Pain, Discomfort, or Drainage, A-2).

(6) Refer to PA Today, Category III disposition if:
- (a) Complaint not on list
- (b) Patient has already tried the treatment protocol without relief
- (c) Patient will not accept treatment protocol

Information needed in the DD Form 689

(1) MTF personnel are responsible for making sure DD Form 689 blocks 1 through 9 are correctly filled out by a soldier prior to being evaluated by a screener

(2) MTF personnel may fill out a sick slip for a soldier if he is unable to due injury, illness, or reporting directly to the MTF in the event of an emergency

(3) All military forms will be filled out in black ink

(4) **Block 1** - box checked by individual that best fits remarks section (block 8)
- (a) Illness--acute or chronic, (e.g. common cold symptoms, athletes foot, nausea, vomiting, etc.)
- (b) Injury--acute (e.g. direct/indirect trauma within 24 to 48 hours)

(5) **Block 2** - date

(6) **Block 3** - name (e.g. complete last, first, middle initial, Doe, Johnny E.)

(7) **Block 4** - service number. SSN (e.g. complete 9 digits, 000-11-0000)

(8) **Block 5** - grade/rank (e.g. pay grade, E-1, etc.)

(9) **Block 6** - organization and Station (e.g. C Co. 232D Medical Battalion, Ft. Sam Houston, TX 78234)

(10) **Block 7** - in line of duty (e.g. yes/no depending on circumstances)
- (a) Company or unit commander ONLY fills out this block when injury occurs
- (b) Often left blank unless negligence is suspected (e.g. soldier was intoxicated at time of injury, or was not at his/her appointed place of duty at time of injury etc.)

(11) **Block 8** - remarks (e.g. sore throat and cough x4 days; right ankle pain, difficulty walking due to injury x24 hrs.)
- (a) Filled out by individual
- (b) Includes chief complaint (c/o). (e.g. sore throat; right ankle pain)
- (c) Associated illnesses/pain. (e.g. cough; difficulty walking)(d) How long? problem(s) have existed or when injury occurred. (e.g. x4 days; x24 Hrs)

(12) **Block 9** - signature of unit commander.
- (a) First line supervisor or person who is in charge of quarters (CQ) may sign for unit commander (per unit SOP)
- (b) Individual signing the sick call slip must be in individual's immediate chain of command

(13) **Block 10** - in line of duty (e.g. yes/no or left blank).

(14) **Block 11** - disposition of patient.

(15) **Block 12** - remarks (e.g. Quarters x24 Hrs, return in A.M. for follow up or Profiling e.g. no running or marching x5 days)
- (a) Remarks reflect box checked in block 11
- (b) Also indicates:
  - (i) Soldier's arrival time at MTF
  - (ii) Soldier's disposition
  - (iii) Time of release back to unit

(16) **Block 13**--signature of medical officer **ONLY**

(17) Disposition of DD Form 689
- (a) DD Form 689 is returned to individual after medical evaluation has been completed
- (b) Soldier returns original sick slip to first line supervisor or per unit SOP
- (c) Soldier keeps copy of sick slip if quarters or profile given

TERMINAL LEARNING OBJECTIVE

Given an order to deploy, ensure proper immunization and chemoprophylaxis IAW AR 40-562.

Personnel subject to immunizations and required shots

All active duty personnel are subject to immunizations

Specific Requirements

(1) Anthrax - not being administered at present
- (a) Dosage Schedule
  - (i) Full immunity requires six doses administered at 0, 2, and 4 weeks, and at 6, 12, and 18 months, to complete the primary series. This schedule is the only schedule approved by the FDA at this time. Annual boosters are required.
  - (ii) Doses of the vaccine should not be administered on a compressed or accelerated schedule (for example, shorter intervals between doses or more doses than required).
- (b) Medical exemptions can only be granted by a medical officer (MD/PA)
- (c) Adverse Events
  - (i) Localized injection site reactions-redness, pain
  - (ii) Serious adverse reactions are rare

(2) Cholera
- (a) Cholera vaccine is not administered routinely
- (b) Only administered to military personnel, upon travel or deployment to countries requiring cholera vaccination as a condition for entry
- (c) Adverse Events:
  - (i) Pain at injection site, mild systemic complaints, and temperature > 37.7 C
  - (ii) Local reaction may be accompanied by fever, malaise, and headache
  - (iii) Serious reactions, including neurologic reactions, after cholera vaccination are extremely rare

(3) Hepatitis A
- (a) Use Hepatitis A vaccine and immune globulin (IG) according to Army Command Immunization Program (ACIP) and Service - specific guidance
- (b) Adverse events: Rare

(4) Hepatitis B
- (a) Given to health care workers and soldiers PCSing to Korea.

(b) Adverse Events: Pain at injection site, mild systemic complaints, and temperature > 37.7 C

(5) Influenza
- (a) All active duty and reserve military personnel entering active duty for periods in excess of 30 days are immunized against influenza soon after entry on active duty
- (b) The vaccine is provided to all health care providers and others considered to be at high risk for influenza infection
- (c) Adverse Events: Local reactions, fever/malaise (common) severe allergic reactions, and neurological reactions (rare)

(6) Japanese B Encephalitis (JE)
- (a) Specific guidance on indication for use and schedule of immunization in military populations is provided by the each service
- (b) Adverse Events: Fever, headache, myalgias, malaise (common). General urticaria, angioedema, respiratory distress, and anaphylaxis (rare).

(7) Measles, Mumps, and Rubella (MMR)
- (a) Measles and rubella are administered to all recruits regardless of prior history
- (b) Mumps or MMR vaccine is administered to persons considered to be mumps susceptible. Written documentation of physician diagnosed mumps or a documented history of prior receipt of live virus mumps vaccine or MMR vaccine is adequate evidence of immunity.
- (c) Adverse Events: Low grade fever, parotitis, rash, pruritis (mild), deafness (rare)

(8) Meningococcus
- (a) Meningococcal vaccine is administered on a one-time basis to recruits.
- (b) Adverse Events-rare

(9) Plague
- (a) There are no requirements for routine immunization. Plague vaccine is administered to soldiers who are likely to be assigned to areas where the risk of endemic transmission or other exposure is high.
- (b) The addition of antibiotic prophylaxis is recommended for such situations.
- (c) Adverse Events: General malaise, headache, fever, mild lymphadenopathy, and/or erythema, and induration at the injection site

(10) Polio
- (a) A single dose of trivalent OPV is administered to all enlisted recruits. Officer candidates, ROTC cadets, and other Reserve Components on initial active duty for training receive a single dose of OPV unless prior booster immunization as an adult is documented.
- (c) Booster doses of OPV are not routinely administered
- (d) Adverse Events

(i) Paralytic poliomyelitis: more likely in immunodeficient persons, no procedure available for identifying persons at risk of paralytic disease (rare).

(11) Rabies
- (a) Preexposure Series. Rabies vaccine is administered to personnel with a high risk of exposure (animal handlers; certain laboratory, field, and security personnel; and personnel frequently exposed to potentially rabid animals in a nonoccupational or recreational setting).
- (b) Post exposure Series. Rabies vaccine and rabies immune globulin (RIG) administration will be coordinated with appropriate medical authorities following current ACIP recommendations.
- (c) Adverse Events: Anaphylaxis (rare)

(12) Smallpox
- (a) This vaccine is administered only under the authority of the Immunization Program for Biological Warfare Defense
- (b) Adverse events: Person can become infected with the smallpox virus.

(13) Tetanus-Diphtheria
- (a) A primary series of tetanus-diphtheria (Td) toxoid is initiated for all recruits lacking a reliable history of prior immunization. Individuals with previous history of Td immunization receive a booster dose upon entry to active duty and every 5-10 years thereafter.
- (b) Adverse events
  - (i) Local reactions (erythema, induration)
  - (ii) Nodule at injection site
  - (iii) Fever and systemic symptoms uncommon

(14) Typhoid
- (a) Typhoid vaccine is administered to alert forces and personnel deploying to endemic areas. Either oral or intramuscular vaccine is used.
- (b) Adverse Events
  - (i) Local reactions maybe accompanied by fever, malaise, and headache (common)
  - (ii) Nausea
  - (iii) Abdominal cramps
  - (iv) Vomiting
  - (v) Skin rash
  - (vi) Urticaria

(15) Yellow Fever
- (a) Yellow fever immunization is required for all alert forces, active duty personnel or Reserve Components traveling to yellow fever endemic areas.
- (b) Adverse events:
  - (i) Mild headache, myalgia, low grade fever, other minor symptoms

(ii) Immediate hypersensitivity reactions: rash, urticaria, and asthma. Uncommon and occur periodically among people with a history of egg allergies

Chemoprophylactic Requirements

(1) Command medical officers review indications for use and potential adverse effects of specific chemoprophylactic medications prior to use. Current ACIP(Advisory Committee on Immunization Practices) or Control of Communicable Disease Manual recommendations and consultation with the relevant preventive medicine authority are followed for the use of chemoprophylactic agents for the following diseases which have historically been shown to be of military significance:
(a) Influenza
(b) Meningococcal disease
(c) Leptospirosis
(d) Plague
(e) Scrub typhus
(f) Traveler's diarrhea

Malaria

(1) Comprehensive malaria prevention counseling includes mosquito avoidance and personal protective measures (clothing, repellents, bednetting, etc.). Chemoprophylaxis is provided to military and civilian personnel considered to be at risk of contracting malaria. Specific chemoprophylactic regimens are determined by each of the services based on degree and length of exposure and the prevalence of drug resistance strains of Plasmodia in the area(s) of travel.

Group A Streptococcal Disease

(1) Each service develops policies for surveillance and prophylaxis of streptococcal disease at recruit centers

Pre-administration Screening

Medical record screening

(1) What immunizations are required for this individual?
(a) Routine immunizations are identified in AR 40-562 and local policy
(b) Additional requirements specific for deployment:
(i) Based on disease prevalence in specific geographic regions

(ii) Determined by Preventive Medicine using Federal, Department of Defense, and other relevant sources of information

(2) Current immunization status:
- (a) What has been given?
- (b) When?
- (c) Initial series completed?
- (d) Are boosters current?

(3) What immunizations are needed, if any, to meet current update/deployment requirements?

(4) If pre-deployment, is there time to administer all required vaccine series/boosters before date of departure? If not, is an exception to policy needed?

(5) Does the medical record reflect any contraindications for immunization?

Patient screening

(1) It is **YOUR** responsibility to ask the patient about allergies, pregnancy, or current illness **BEFORE** administering the vaccine

(2) Refer patients with any risk factors to the medical officer for disposition

Vaccine Handling, Administrative, and Patient Care Procedures

Vaccine handling

(1) Pre-immunization
- (a) Check expiration date/time
- (b) Evaluate for potential mishandling or contamination
  - (i) Proper storage temperature
    - * Refrigerated vaccines - 35.6 to 46.4^{o} F
    - * Frozen vaccines - 0 to 5^{0} F or as directed by manufacturer.
  - (ii) Evidence of bacterial growth
  - (iii) Color change/clarity of solution

(2) Post-immunization
- (i) Store partially used vials at proper temperature
- (ii) All live virus vaccine containers should be handled as infectious waste and disposed in biohazard containers to be burned, boiled, or autoclaved, follow local SOP.

Administrative procedures

(1) Pre-immunization
- (a) Screen medical record

(b) Select correct equipment (needles and syringes) for immunizations to be administered
(c) Document vaccine lot number and other identifying information as required by local SOP

(2) Post-immunization
(a) Document all vaccines given in patient medical record (SF 601) IAW local SOP
(b) Record immunizations in individual shot record (PHS 731)
(c) Record any reactions or side effects

Patient care procedures

(1) Pre-immunization
(a) Ask about contraindications for immunization (allergies, pregnancy, illness etc.)
(b) Implement appropriate infection control procedures
(c) Explain procedure to patient
(d) Position patient and administer required immunizations

(2) Post-immunization
(a) Inform patient when he is to return for next injection in series/booster
(b) Instruct patient to wait in facility for observation for 20 minutes (or IAW local SOP)
(c) Assure patient is evaluated during and at end of designated waiting period for signs of an adverse reaction

Reactions and possible side effects

Vaccine components can cause allergic reactions in some recipients

Prior to the administration of any immunizing agents, determine if the individual has previously shown any adverse reactions to a specific agent or vaccine component

Vaccine components that can cause reactions include:

(1) Vaccine antigen (a substance that causes the formation of an antibody)
(2) Animal proteins
(3) Antibiotics (e.g., penicillin or penicillin derivatives)
(4) Preservatives (e.g., thimerosal, a mercurial compound)
(5) Stabilizers

The most common animal protein allergen is egg protein

Vaccination during pregnancy

(1) Ideally, all immunizations should precede pregnancy.
(2) Live virus vaccines are contraindicated (Yellow fever, MMR, OPV)

(3) Refer pregnant soldiers to medical officer for disposition.
(4) Breast-feeding - Refer soldier to the medical officer (MD, PA) for disposition

Vaccination with significant illness

(1) Persons should not be vaccinated if they have moderate or severe febrile illness (usually 101o F or higher, per local SOP)
(2) Persons should be vaccinated as soon as they recover from the acute phase of the illness
(3) Minor illnesses, such as diarrhea, mild upper-respiratory infection with or without low-grade fever, or other low-grade febrile illness are not contraindicated to vaccination

HIV positive status – due to compromised immune system, vaccines should not be administered to any patient who has tested positive for HIV, unless specifically ordered by the attending physician with knowledge of the diagnosis

Multiple vaccines

(1) Contraindicated Combinations/Cautions
  (a) Do not administer cholera, plague, and/or typhoid vaccines together unless deploying immediately
  (b) Multiple live virus vaccines may be given the same day. IF THEY ARE NOT GIVEN THE SAME DAY, they must be separated by 30 days. Live virus vaccines are: oral polio, yellow fever, measles, mumps, rubella, and adenovirus.
  (c) Gamma globulin (immune serum globulin) and MMR must be given at least 14 days apart; if closer together, MMR may be partially or completely ineffective in protecting against disease. If closer administration is unavoidable, MMR must be repeated after three months. Gamma globulin administration does not reduce effectiveness of inactivated vaccines.
  (d) A PPD TB test and live vaccines may be given the same day. IF NOT GIVEN THE SAME DAY, the TB test must be deferred for 6 weeks after the live vaccine is given, to prevent a false negative result from the TB test.
(2) No more than one vaccine should be administered in any one anatomical site.

Documentation

DHHS Form PHS 731 is prepared for each member of the Armed Forces and for nonmilitary personnel.

(1) Valid certificates of immunization for international travel and quarantine purposes.

(2) Remains in the custody of the individual who is responsible for its safekeeping and for keeping it in his or her possession when performing international travel.
(3) Entries based on prior official records have the following statement added: "Transcribed from official U.S. Department of Defense records."
(4) Obtained through normal publication supply channels. The DOD Immunization Stamp is available through medical supply channels.

National vaccine injury compensation program

(1) Information is recorded on PHS Form 731, medical record and on the clinic log or equivalent computer data base. Information includes, name, sponsor's SSN, date of administration, type of vaccine, manufacturer, lot number, and the name, address, and title of person administering the vaccine.
(2) In addition, all health care providers who administer any vaccine containing diphtheria, tetanus, pertussis, measles, mumps, rubella, or polio to either children or adults must provide a copy of the most recent relevant vaccine information materials provided by the DHHS

Issuance of DHHS Form PHS 731 to Military Personnel

(1) At the time of initial immunization of a person entering military services, DHHS Form PH 731 and SF 601, Health Records-Immunization Records, are initiated as outlined below. Written statements from civilian physicians attesting to immunization with approved vaccines, and providing dates and dosages, are accepted as evidence of immunization. Such information is transcribed to official records. Immunizations are recorded on the cited forms, and the forms are maintained as follows.
(2) Army, Navy, and Marine Corps. SF 601 is prepared in accordance with AR 40-66, Medical Records and Quality Assurance Administration, And Chapter 16, NAVMED P-107, Manual of the Medical Department, U.S. Navy. When prepared, SF 601 and DHHS Form 731 contain the SSN as identifying data

Issuance of DHHS Form PHS 731 to Nonmilitary Personnel

(1) At the time of initial immunization of nonmilitary personnel, entries are made on DHHS Form PHS 731, which is retained by the individual. All subsequent immunizations are recorded on this form which can be presented as an official record of immunizations received. In addition to DHHS Form PHS 731, SF 601 (Army, Navy and Marine Corps) or SF 600 (Air Force) is prepared and permanently maintained for each individual. Individuals preparing the DHHS Form PHS 731 and SF 601(600) ensure appropriate entries are recorded on both forms and both forms are current and agree with one another.

TERMINAL LEARNING OBJECTIVE

Given the appropriate equipment and guidance, you will be able to collect specimens for diagnostic testing

General principles for throat culture and sputum collection

Throat culture

(1) A sample of both the mucus and the secretions from the back of the throat is obtained on a cotton tipped applicator and applied to a slide or culture medium, which is then incubated in the laboratory to determine what organism if any is present.

(2) Drug sensitivity determinations may also be done to determine which drug is most effective against a particular organism. This test also determines which drugs the organism is resistant to.

(3) A culture may be done within a matter of hours to rule out the presence of the streptococcus organism. This test does not rule out any other organism. The quick strep test is done in cases of suspected strep infection, so that antibiotic therapy can be initiated.

Sputum specimens

(1) Reasons for cytology study
- (a) Study cells that may be malignant
- (b) Determine organisms causing infection
- (c) Identify blood or pus in the sputum

Collection implications

(1) Sputum is best obtained in the morning, before breakfast, after secretions have accumulated in the respiratory tract during the night

(2) Usually, specimens are collected on 3 successive days

(3) Best to have the patient brush their teeth and rinse their mouth so saliva and oral debris do not contaminate the specimen

(4) Patient should be taught that sputum is matter ejected from the lower respiratory tract through the mouth and that saliva is an unsatisfactory specimen.

(5) Patient should be instructed to inhale deeply and cough deeply on exhalation. About a teaspoon of sputum is needed for a specimen.

(6) Sputum should be coughed directly into a sterile specimen container that is then covered with a sterile lid, properly labeled, and sent to the laboratory

(7) A note should be charted in the patient's record about the character of the sputum, including amount, appearance, and odor

(8) Explain to patient that if sputum cannot be obtained, an induced sputum specimen may be required

NOTE: Precautions should be taken in the care and disposal of sputum. Gloves and a mask should be worn and hands washed after contact with sputum. All tissues are discarded as contaminated material.

Stool specimens

General principles

(1) Reason - stool specimen yields information about the patient related to the functioning of the gastrointestinal system and its accessory organs (See C191W026, Treat Gastrointestinal Symptoms)
(2) Explain the reason for the test to the patient
(3) The best time of day to collect a stool specimen is soon after breakfast
(4) Patient should be instructed that a stool specimen is to be saved
(5) Patient should be instructed to notify the soldier medic as soon as there is an urge to defecate
(6) Give the bedpan to the patient when they are ready
(7) Use tongue blades and wear gloves when transferring the stool specimen to the specimen cup
(8) Some specimens must be kept warm to keep any parasites alive until the specimen is examined in the laboratory
(9) Always label the specimen container with the patient's name, SSN and all pertinent information
(10) Always send an appropriate lab slip with the container

Guaiac test

(1) Purpose - to ascertain the presence of occult blood that is not visible
(2) Each method of testing has a specific procedure that must be followed in order to obtain accurate results (i.e. food restrictions and number of days to collect smear)
(3) Manufacturer's instructions or hospital procedure manual should be consulted for specifics

Urine specimens

General principles

(1) Urinalysis is the laboratory examination of a urine specimen. Analysis of the urine is a common way of securing data about a person's health state.
(2) The soldier medic is responsible for instructing the patient about urine collection techniques or for obtaining specimen from the patient
(3) A cooperative patient can be instructed to put specimen into a clean or, in some instances, a sterile container. Care should be taken that the outside of the container is not contaminated.

NOTE: Precautions similar to those when handling blood are appropriate with all body fluids.

Mid-stream (clean-catch)

(1) Reason for obtaining a mid-stream:

(a) Obtain a sample that has been in the bladder an extended period of time
(b) Provide accurate information of the function of the kidneys the presents of pathogenic organisms, and the excretion of electrolytes that are normally use for normal body functions (i.e., potassium)

(2) Patient voids a little urine, which is discarded; the specimen is collected during mid-stream, and the last urine in the bladder is also discarded

(3) Procedure
(a) Wear gloves
(b) For the female
(i) Spread the labia well, and keep them apart until the specimen is obtained.
(ii) Clean the area at the external meatus with sterile gauze or cotton balls and antiseptic soap and water.
* Move the gauze or cotton balls from the meatus toward the anus
* Use one piece of gauze or one cotton ball for each stroke
(iii) Have the patient void about 30 cc then discard this urine
(iv) Position the sterile specimen container near but not touching the meatus and ask them to void forcibly if she is lying down. This prevents collecting a specimen that has dribbled down across the perineal area.
(c) For the male
(i) Retract the foreskin to expose the glans penis in the uncircumcised male patient
(ii) Clean the area of the external meatus with sterile gauze or cotton balls and antiseptic soap and water
* Move gauze or cotton ball in a circular manner at the meatus, and move down the shaft of the penis a few inches
* Use one piece of gauze or one cotton ball for each stroke
(iii) Have the patient void about 30 cc then discard this urine
(iv) Have patient void directly into the sterile container
(v) Have patient stop before he empties bladder
(vi) Return foreskin to its normal position to prevent swelling and irritation of the glans penis

NOTE: With male patients, a sterile urinal may be used if unable to urinate into cup. With female patients, a sterile bedpan may be used if unable to urinate into cup.

(d) Label specimen container appropriately and send specimen to the laboratory

Blood cultures are used to identify a disease-causing organism especially in patients who spike temperatures for unknown reasons

Procedure

(1) Explain the reason for the procedure to the patient
(2) Gather all supplies and equipment and bring to the patient's bedside
(3) Make the patient as comfortable as possible in bed
(4) If patient is uncooperative or disoriented you may need assistance
(5) Clean the tops of all bottles with a betadine solution
(6) Attach the needle to the syringe
(7) Apply the tourniquet
(8) Don gloves and clean the drawing site with a betadine solution
(9) Wash hands
(10) Draw at least 10 cc of blood from the patient (5 cc's is needed for each bottle)
(11) Loosen the tourniquet
(12) Remove the syringe and needle while applying pressure to the site
(13) Replace the needle on the syringe with another sterile needle
(14) Inject 5 cc of blood into anaerobic bottle and do <u>not</u> allow air to enter the bottle
(15) Replace the needle on the syringe with another sterile needle
(16) Inject 5 cc of blood in the aerobic bottle and while the needle is still in the bottle, disconnect it from the syringe so that air enters the aerobic bottle, if IAW local SOP.
(17) Gently mix the blood with the solution in both bottles
(18) Label both bottles with patient identifying information and type of culture, ie, aerobic or anaerobic
(19) Prepare lab slip and take slips and specimens to the lab immediately
(20) Place a band aid over the patient's venipuncture site

TERMINAL LEARNING OBJECTIVE

Obtain a blood specimen while maintaining aseptic technique and without causing injury to the patient.

General Considerations

Terms and definitions

(1) Venipuncture - the transcutaneous puncture of a vein to withdraw a specimen of blood, start an IV or instill a medication
(2) Palpate - to feel or to examine by hand
(3) Antecubital fossa - hollow or depressed area at the bend of the elbow
(4) Anticoagulant - substance that prevents or delays clotting of the blood
(5) Hematoma - swelling or mass of blood confined to an organ, tissue, or space and caused by a break in a blood vessel

Veins used for drawing blood

(1) Median cubital vein - first choice, well supported, least apt to roll
(2) Cephalic vein - second choice
(3) Basilic vein - third choice, often the most prominent vein, but it tends to roll easily and makes venipuncture difficult

Steps and Procedures to Perform a Venipuncture

CAUTION: Universal precautions for this task will include hand washing and gloves.

CAUTION: Strict adherence to the sharps policy and the use of sharps containers will be utilized during this hands on exercise.

Verify the request to obtain a blood specimen. Check the physician's orders
Select the proper blood specimen tube for the test to be performed. Check local laboratory SOP

(1) The type of blood tube needed will depend on the specific test to be performed
(2) For some tests, an anticoagulant or other additives are present in the tube
(3) Rubber stoppers of the tubes are color-coded for different tests

Prepare label(s)

(1) Stamp label with patient's addressograph plate. If there is no plate, write name, organization, social security number, prefix code, ward or clinic, facility, and date.
(2) Apply to specimen tube

Perform a patient care hand wash/don gloves
Gather equipment

(1) Constricting band
(2) Vacutainer sleeve/holder
(3) Sterile disposable double-ended needle

(a) Single specimen vacutainer needle
(b) Multiple samples - a rubber sheath covers the shaft of the needle. It is pushed up when the blood tube is inserted onto the needle then slips back over the needle holder while tubes are being changed to prevent blood from dripping into holder

(4) Betadine or alcohol wipe or sponge

CAUTION: Always ask the patient if he/she has an allergy to iodine or Betadine before applying.

(5) Protective pad (chux)
(6) Sterile 2 x 2-inch gauze sponge(s)
(7) Band-Aid

Assemble vacutainer and needle

(1) Put short end of needle into threaded hole in vacutainer
(2) Screw tightly using clockwise motion

Insert rubber stoppered end of the specimen tube into vacutainer holder and advance the tube until it is even with the guideline

CAUTION: If the tube is pushed beyond the guideline, the vacuum may released and blood will not be pulled into the tube.

Identify patient

Explain the procedure and purpose for collecting the blood specimen to the patient

CAUTION: Ask patient about allergies (i.e., iodine or alcohol).

Position the patient - sitting or lying

CAUTION: Never attempt to draw blood from a standing patient.

Position protective pad under patient's extended elbow and forearm

Expose area for venipuncture

(1) Roll garment above the elbow
(2) Extend patient's arm with palm up

Select vein for venipuncture - Palpate and select one of the most prominent veins in antecubital fossa

CAUTION: You may need to apply the constricting band at this point for venipuncture site selection.

Prepare sponges for use

(1) Open the betadine or alcohol and 2 x 2 gauze sponge packages
(2) Place them within easy reach (still in the packages)

Apply constricting band with enough pressure to stop venous return without stopping the arterial flow. A radial pulse should be felt

(1) Wrap latex tubing around limb about 2 inches above venipuncture site
(2) Stretch tubing slightly and hold with one end longer than the other
(3) Loop longer end and draw under shorter end so tails are away from site
(4) If a commercial band is used, wrap it around limb as in step 14a and secure by overlapping Velcro ends.
(5) Instruct patient to clench and unclench his fist several times and then hold clenched fist to trap blood in veins and distend them.

CAUTION: Avoid veins that are infected, injured, irritated, or have an IV running distally.

Palpate selected vein
(1) Palpate along length of vein with index finger up and down 1 or 2 inches from selected site in both directions so size and direction of vein can be determined.
(2) Vein should feel like a spongy tube
Clean the skin - moving alcohol/betadine wipe in a circular motion away from selected venipuncture site.

CAUTION: Do not repalpate the vein after cleansing the skin.

Prepare to puncture vein
(1) Remove protective cover from needle
(2) Position needle in line with vein and grasp patient's arm below entry point with free hand
(3) Place thumb of free hand 1 inch below entry site and pull skin taut toward hand
Puncture vein
(1) Align needle, bevel up, with the vein and pierce skin at 15 to 30 degree angle
(2) Decrease angle until almost parallel to skin surface, then pierce vein wall
  (a) A faint "give" will be felt when the vein is entered, and blood will appear in the needle
  (b) If venipuncture is unsuccessful, pull needle back slightly (not above the skin surface), and redirect needle toward vein and try again

CAUTION: If needle is withdrawn above skin surface, do not attempt venipuncture again with the same needle.

  (c) If still unsuccessful
    (i) Release the constricting band
    (ii) Place 2 x 2 gauze sponge over site
    (iii) Quickly withdraw the needle and instruct the patient to elevate arm slightly and keeping the arm fully extended apply pressure to the site for 2 to 3 minutes.

(iv) Notify supervisor before attempting another venipuncture

Collect the specimen

(1) Single specimen
- (a) Hold vacutainer unit and needle steady with dominant hand. Collection tube is positioned against, but not through, the needle
- (b) Place index and middle fingers of other hand behind flange of vacutainer
- (c) Push the tube as far forward as possible with thumb of nondominant hand without causing excessive movement
- (d) Instruct patient to relax and unclench fist after blood has started flowing
- (e) Release the constricting band by pulling on long end of looped tubing or releasing Velcro fastener with the non dominant hand
- (f) When tube is about two-thirds full of blood or blood stops, grasp tube firmly and remove tubes
- (g) Prepare to withdraw needle

(2) Multiple specimens
- (a) Follow same steps for collecting single specimen
- (b) Remove first tube from vacutainer sleeve without dislodging needle position
- (c) Insert second tube into vacutainer sleeve. Push tube as far forward as possible without causing excessive movement.
- (d) Repeat these procedures until the desired number of tubes are filled or blood stops flowing
- (e) Release the constricting band by pulling on long end of looped tubing or releasing Velcro fastener with the non dominant hand.

CAUTION: DO NOT withdraw the needle before the constricting band is released because of potential for heavy blood loss and/or hematoma formation.

- (f) After the last tube is about two-thirds full of blood or blood stops, grasp tube firmly and remove tubes
- (g) Place 2 x 2-inch sponge lightly over venipuncture site
- (h) Withdraw the needle smoothly and quickly. Immediately apply pressure to the site with the 2 x 2-inch sponge, keeping patient's arm fully extended.
- (i) Instruct the patient to elevate arm slightly and keeping the arm fully extended, apply firm manual pressure for 2 to 3 minutes. If the patient is unable to do this for himself, you must do it for him.

If specimen tube contains an anticoagulant or other additive, gently invert tube several times to mix with blood

Apply a band aid to the venipuncture site after the bleeding has stopped

CAUTION: Dispose of needle into sharps container as soon as possible or IAW local protocol. DO NOT unscrew needle from sleeve with hands. DO NOT recap needle.

Provide for patient's comfort and safety

(1) Remove protective pad
(2) Roll down patient's sleeve
(3) Reposition patient and raise side rails if patient is in a bed

Dispose of equipment

(1) Remove all the equipment from area
(2) Dispose of used supplies
(3) Store reusable equipment and dispose of needle IAW local SOP
(4) Remove gloves and wash hands

Administrative duties:

(1) Check and complete laboratory form IAW local SOP
(2) Apply prepared label(s) to specimen tube(s)
(3) Document procedure IAW local SOP

Appendix A
Specimen Collection
Competency Skill Sheets

D Stick

Soldiers Name: _____ SSN: _____ CO: _____ TM: _____

Start: _____ Stop: _____ Initial Evaluator: _____
Start: _____ Stop: _____ Retest Evaluator: _____
Start: _____ Stop: _____ Final Evaluator: _____

		1st	2nd	3rd
a.	Gathers equipment.	P / F	P / F	P / F
b.	Identifies patient and explains procedure to patient.	P / F	P / F	P / F
c.	Performs patient care handwash.	P / F	P / F	P / F
d.	Dons gloves.	P / F	P / F	P / F
e.	Removes cap from lancet using sterile technique.	P / F	P / F	P / F
f.	Selects site on patient's fingertip.	P / F	P / F	P / F
g.	Wipes selected site with alcohol swab.	P / F	P / F	P / F
h.	Asks patient to hold arm at side for 30 seconds.	P / F	P / F	P / F
i.	Gently squeezes patient's fingertip with thumb of same hand.	P / F	P / F	P / F
j.	Hold lancing device and places trigger platform of lancing device on same side of finger and presses.	P / F	P / F	P / F
k.	Squeezes finger in a downward motion, wiping off first drop of blood.	P / F	P / F	P / F
l.	While holding strip level, touch drop of blood to test pad.	P / F	P / F	P / F
m.	Begin recommended timing. After 60 seconds, blot blood off test strip into appropriate site on meter. Wait for numeric readout.	P / F	P / F	P / F
n.	Discards lancet into a sharps container.	P / F	P / F	P / F
o.	Removes gloves and discards.	P / F	P / F	P / F
p.	Documents procedure.	P / F	P / F	P / F

Instructor Comments:

Dip UA

Soldiers Name: _____ SSN: _____ CO: _____ TM: _____
Start: _____ Stop: _____ Initial Evaluator: _____
Start: _____ Stop: _____ Retest Evaluator: _____
Start: _____ Stop: _____ Final Evaluator: _____

		1st	2nd	3rd
a.	Instructs patient to collect a mid-stream catch UA.	P / F	P / F	P / F
b.	Verbalizes that UA testing must be performed within 1 hour of collection.	P / F	P / F	P / F
c.	Dons clean gloves.	P / F	P / F	P / F
d.	Thoroughly mixes specimen and records color and turbidity.	P / F	P / F	P / F
e.	Removes 1 UA strip from bottle and replaces cap.	P / F	P / F	P / F
f.	Completely immerses reagent areas of the strip and removes immediately. While removing, runs the edge of the strip against the rim of the urine container to remove excess urine.	P / F	P / F	P / F
g.	Holds the strip in a horizontal position to prevent mixing of chemicals from adjacent reagent areas.	P / F	P / F	P / F
h.	Compares test areas to corresponding color chart on the bottle label at the times specified. Holds strip close to color blocks and matches carefully.	P / F	P / F	P / F
i.	Documents results.	P / F	P / F	P / F

Instructor Comments:

Clean Catch UA

Soldiers Name: _____ SSN: _____ CO: _____ TM: _____

Start: _____ Stop: _____ Initial Evaluator: _____
Start: _____ Stop: _____ Retest Evaluator: _____
Start: _____ Stop: _____ Final Evaluator: _____

		1st	2nd	3rd
a.	Collects supplies.	P / F	P / F	P / F
b.	Identifies patient.	P / F	P / F	P / F
c.	Explains procedure to patient and ensures that the patient understands how to perform the procedure if patient is able to perform him/herself.	P / F	P / F	P / F
d.	If patient is unable to perform procedure by him/herself: (1) Washes hands and dons clean gloves. (2) Cleans perineum from anterior to posterior with antiseptic solution. Separation the labia on a female patient. Retracts foreskin on an uncircumcised male. Uses each cotton ball saturated with antiseptic solution one time only. (3) Request that patient void about 20ml, then places the sterile specimen container so that the sides of the labia of the female do not touch. Without stopping the flow, have the patient void a small amount into the specimen cup and then finish voiding into the toilet. (4) Secures lid on container (5) Cleans and returns seat collection, if applicable	P / F	P / F	P / F
e.	Labels specimen.	P / F	P / F	P / F
f.	Documents procedure.	P / F	P / F	P / F

Instructor Comments:

Appendix B
Blood Culture
Competency Skill Sheets

Culture

Soldiers Name: _____ SSN: _____ CO: _____ TM: _____

Start: _____ Stop: _____ Initial Evaluator: _____
Start: _____ Stop: _____ Retest Evaluator: _____
Start: _____ Stop: _____ Final Evaluator: _____

		1st	2nd	3rd
a.	Identifies patient and explains the procedure to the patient. Identifies any patient allergies to betadine or medications.	P / F	P / F	P / F
b.	Gathers equipment.	P / F	P / F	P / F
c.	Performs a patient care handwash.	P / F	P / F	P / F
d.	Cleans the tops of all bottles with a betadine solution.	P / F	P / F	P / F
e.	Dons clean gloves.	P / F	P / F	P / F
f.	Attaches needle to the syringe.	P / F	P / F	P / F
g.	Applies tourniquet to patient's arm and cleans site with a betadine solution.	P / F	P / F	P / F
h.	Draws at least 10cc from patient (5cc for each bottle).	P / F	P / F	P / F
i.	Loosens tourniquet and removes syringe and needle while applying pressure to the site.	P / F	P / F	P / F
j.	Replaces the needle on the syringe with another sterile needle without contaminating the equipment or sticking him/herself.	P / F	P / F	P / F
k.	Injects 5 cc of blood into the anaerobic bottle and does not allow air to enter the bottle.	P / F	P / F	P / F
l.	Replaces the needle on the syringe with another sterile needle without contaminating the equipment or sticking him/herself.	P / F	P / F	P / F
m.	Injects 5cc of blood into the aerobic bottle and while the needle is still in the bottle, disconnects it from the syringe so that air enters the aerobic bottle.	P / F	P / F	P / F
n.	Gently mixes the blood with the solution in both bottles.	P / F	P / F	P / F
o.	Removes gloves and discards.	P / F	P / F	P / F
p.	Labels both bottles with patient information and type of culture.	P / F	P / F	P / F
q.	Documents procedure.	P / F	P / F	P / F

Instructor Comments: