PUBLIC HEALTH

NURSING PROTOCOL

Tennessee Department of Health
Bureau of Health Services
Patient Care Services
Revised 12/10

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PREFACE

The Public Health Nursing (PHN) protocol represents a detailed written set of instructions to guide medical management of our patients, thereby establishing a standard of care for the Public Health Nurse's practice. The PHN Protocol was developed, and is maintained, by the Public Health Nursing Practice Committee. These Protocols represent an enormous amount of work from a variety of nurses, physicians and other staff throughout the State. They have been reviewed by the State Medical Director, State Nursing Director, Regional Nursing Directors, Medical Services Evaluation Committee, and specific individuals that are involved in developing program guidelines that impact nursing practice.

The manual is divided into seven distinct sections. **Section I** includes those protocols related to **Emergency Management**. **Section II** includes those protocols related to **Family Planning. Section III** is the **General section** which addresses treatments for various conditions that are not included in the other distinct sections. This section also includes recommended periodicity schedules for maintenance of health for both adults and children. **Section IV** includes the **Immunization** protocols. **Section V** includes those protocols related to **Sexually Transmitted Diseases. Section VI** includes protocols related to **Disaster Preparedness and Bioterrorism.** Finally, an **Appendix** section **(section VII)**, includes additional program specific information and the **List of Standard Abbreviations.**

As always, we welcome your comments and suggestions with regards to additions, revisions, format changes etc. It is our goal to maintain an accurate, viable, and user friendly document.

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Assistant Public Health Nursing Director

Staff Support
PHN Practice Committee

PUBLIC HEALTH NURSING PROTOCOL AGREEMENT

Region _____

County/Site _____

This protocol has been jointly prepared by public health nurses and physicians and is approved for use by all licensed nurses. The health providers whose names are signed below agree that this protocol establishes the standard for public health nursing practice for those conditions included in the protocol. This protocol expires one year from the date of signatures. It shall be renewed, or revised, and signed annually and more frequently as deemed necessary.

Name	Date		
_____		_____	
		Regional Medical Director	Date
_____			
_____		_____	
		Regional Nursing Director	Date
_____			
_____		_____	
		County Health Officer	Date
_____			
_____		_____	
		County Nursing Supervisor	Date
_____			
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	

SECTION I:

EMERGENCY MANAGEMENT

1.010 – 1.160

ACUTE ASTHMA ATTACK

Subjective

History of:
- Current/past medications and efficacy
- Recent contact with irritant
- Previous asthma attack
- Acute or chronic infection

Symptoms may include:
- Severe wheezing, difficulty breathing, chest tightness, coughing
- Anxiety, apprehension and breathlessness

Objective

Use of the neck, chest, or abdominal muscles in breathing
Rapid pulse and respiration
Systolic blood pressure usually rises
Heavy perspiration
Prolonged expiration with expiratory and occasionally inspiratory wheezes
During severe distress, wheezing may be absent and breath sounds may be diminished and lip and fingernail cyanosis may be present

Assessment

Acute asthmatic attack

Plan

Call 911
Assure adequate airway - administer CPR if indicated
Question regarding most recent weight, medication use and allergies. Avoid Inhaler overuse.
Locate and use Emergency Kit
Keep patient's head/chest elevated
Administer aqueous epinephrine 1:1000, subcutaneously according to Emergency Drug Chart (**Note** - epinephrine should be given with caution to persons taking beta blockers); may repeat epinephrine dosage in 15-20 minutes if necessary
Observe closely for signs of Status Asthmaticus (cyanosis, confusion, and lethargy)
Reassure and calm patient

Administer oxygen, 4-6 liters per minute by nasal catheter or cannula, or 6-12 liters by mask
Transfer to hospital as soon as possible and send report of care given to receiving providers.
After transfer, document actions in patient record.

Reference

Mayo Clinic, Guide To Self -Care, Fifth Edition 2006
Ferri's Clinical Advisor 2008

ACUTE POISONING (9779)

SUBJECTIVE

History suggests:
- Ingestion of non-food substance
- Accidental or intentional ingestion of toxic amounts of a medication
- Ingestion was witnessed, or empty container found
- What, how much, and when swallowed?

OBJECTIVE

Symptoms may be absent if discovered soon after poisoning occurs
Abnormal odor to breath or clothes
Presence of burns on lips/tongue
Pain with, or difficulty in, swallowing
Central nervous system changes (e.g., convulsion, coma, dilated or pinpoint pupils)
Respiratory distress

ASSESSMENT

Poisoning or overdose

PLAN

Immediately contact physician or Poison Control Center
National Poison Control Hotline: 1-800-222-1222
Follow guidelines for emergency treatment as given per physician or Poison Control Center
Transfer patient to nearest medical provider or emergency care facility

Health Teaching:

Keep all potential poisons, household products, and medicines locked and out of reach of children
Keep medicines in child-resistant containers, and always replace cap after each use
Keep Poison Control Center and physician's phone numbers beside telephone
Do not store non-drinkable/non-edible substances in drink/food containers
Label all containers with contents

Referral Indicators:

All poisonings and overdoses

Follow-Up:

As suggested by consultant

ANAPHYLAXIS (9950)

SUBJECTIVE

History of:

Ingestion of medication or recent injection, often within minutes
Recent insect bite or sting
Food consumption
Previous allergic reaction

Symptoms may include:

Headache
Anxiety/feeling of impending doom
Difficult breathing/tightness in throat and chest, wheezing
Feeling faint
Localized or generalized pruritis
Swelling of hands, feet, face and tongue

OBJECTIVE

Weak, irregular, and rapid pulse (above 100 beats per minute)
Rapid and shallow respirations
Fall in blood pressure
Patient apprehensive and perspiring heavily
Lips, tongue, and eyelids are frequently swollen
Hives, rash, erythema present on the upper chest and face
Cyanosis of the lips and nail beds
Labored breathing and wheezing (wheezes are heard throughout chest)

ASSESSMENT

Anaphylactic reaction

PLAN

Initiate emergency response system
Assure adequate airway - administer CPR if indicated
Question regarding most recent weight
Administer aqueous epinephrine 1:1000 SUBCUTANEOUSLY according to Emergency Drug Chart (**Note - epinephrine should be given with caution to persons taking beta blockers**)
May repeat epinephrine dosage every 5-15 minutes, if necessary

Administer Benadryl IM according to Emergency Drug Chart (See page 3)
Observe closely for signs of continuing shock, airway obstruction, convulsions, and coma
Administer oxygen, 4-6 liters per minute by nasal catheter or cannula, or 6-12 liters by mask
Transport via ambulance as soon as possible and send report of care given

REFERENCES

Drug Interactions. Philip Hantsen 5th edition P. 32, 1985.
Bureau of Health Services Policy 8.4.a

EMERGENCY DRUG CHART

1. Aqueous Epinephrine (Adrenalin) = 0.01 ml./kg. SQ

WEIGHT		AQUEOUS EPINEPHRINE (ADRENALIN) 1:1000 SQ
kg	lb	
Less than 5.0	Less than 11	0.05 ml.
5.0 - 11.5	11 - 25	0.10 ml.
11.6 - 16.0	26 - 35	0.15 ml.
16.1 - 20.5	36 - 45	0.20 ml.
20.6 - 27.5	46 - 60	0.25 ml.
27.6 and greater	61 and greater	0.30 ml.

2. Diphenhydramine (Benadryl) = 1 mg./kg. IM

WEIGHT		DIPHENHYDRAMINE (prefilled syringes) 50 mg/ml IM
kg	lb	
Less than 5.0	Less than 11	Consult MD
5.0 - 9.0	11 - 20	Consult MD
9.1 - 11.5	21 - 25	12.5 mg = 0.25 ml.
11.6 - 16.0	26 - 35	15 mg = 0.30 ml.
16.1 - 18.5	36 - 40	17.5 mg = 0.35 ml.
18.6 - 20.5	41 - 45	20 mg = 0.40 ml.
20.6 - 23.0	46 - 50	22.5 mg = 0.45 ml.
23.1 - 27.5	51 - 60	25 mg = 0.50 ml.
27.6 - 34.5	61 - 75	30 mg = 0.60 ml.
34.6 - 39.0	76 - 85	35 mg = 0.70 ml.
39.1 - 45.5	86 - 100	40 mg = 0.80 ml.
Over 45.5	Over 100	50 mg = 1.00 ml.

WEIGHT CONVERSION:

1 kg = 2.2 lbs
1 lb = 0.45 kg

ANIMAL BITES
(EXCLUDING SNAKEBITES)

Subjective

Bitten or attacked by animal, often owned by victim
History to include:
- Species of biting animal; date and time of contact; circumstances of biting accident; whether provoked or not
- Location of affected area(s)
- Immunization history of patient; vaccination history of animal

Objective

Puncture wounds, lacerations, contusions, avulsions (torn skin)
Teeth bites that result in broken skin
Open scratches, cuts, or torn skin

Assessment

Animal bite (with or without possible exposure to rabies or other diseases spread through animal bites/scratches which include rat bite fever, tetanus, and cat scratch fever)

Plan

Wash the wound thoroughly with soap and water
Control bleeding
Apply antiseptic cream or ointment
Apply sterile dressing as needed
Assess need for tetanus prophylaxis and measures to control bacterial infection (refer to Tetanus Prophylaxis in Wound Management)
Consider exposure risk for rabies and need for immunoprophylaxis (refer to Rabies Vaccine, post-Exposure)
Advise confinement of animal until potential rabies exposure can be evaluated

Health Teaching:

- Stress importance of maintaining annual rabies vaccination for all family cats/dogs
- Avoid contact with certain wild animals, especially skunks, raccoons and bats
- Warn that the practice of capturing stray or wild animals and keeping as pets without a special permit from the Tennessee Wildlife Resource Agency is against the law

Referral Indicators:

All snake bites
Severe bites, bites over joints
Immunocompromized persons
Severe diabetic
Swelling, red streaks, redness, pus or severe pain in bite site

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006
Ferri's Clinical Advisor 2008

BURN - FIRST DEGREE

Subjective

Burn or contact with fire, steam, hot liquid, ultraviolet rays of sun, tanning bed or chemicals
Painful affected area
Assess for date and time of injury; location of affected area(s) and tetanus vaccine status

Objective

1st Degree - Erythema only
2nd Degree - Erythema with blister formation; peeling and weeping may or may not be present
3rd Degree - Areas that have charred or whitish appearance usually surrounded by erythema; areas of anesthesia may be present
4th Degree - Damage extends through subcutaneous tissue

Assessment

Burn - first degree

Plan

Assess vital signs, especially respiration
Determine extent of injury
Refer all 2nd degree, 3rd degree and 4th degree burns, or if there is face or neck burns, singed nasal hairs, darkened sputum, burn or carbon marks on the oral or nasal membranes, or if the burn occurred in an enclosed space

FIRST DEGREE BURN:

If on an upper extremity, remove jewelry
Immerse burn area in clean cold water or if unable to immerse burn site, cover with a clean cloth and soak with cold water or normal saline for 15-20 minutes
Cover with sterile gauze dressing
For pain relief:
Children - Acetaminophen, dosage according to weight
Adults - Ibuprofen 600 mg po every 6 hours PRN
Increase fluid intake
Treat sunburns with OTC aloe vera type lotion or cream; teach gradual sun exposure and use of sun screen for prevention
Teach signs and symptoms of infection
Can use silver sulfadiazine cream as first aid if not allergic

Provide record of last tetanus immunization for other than first degree burn
Advise and/or administer tetanus prophylaxis
Prophylactic Antibiotics for first degree burns not recommended

Referral Indicators:

Burns over large body area
Second, third, fourth degree burns
Suspected child abuse or neglect
Eye involvement
Chemical or electrical burns of uncertain severity

Follow-up:

Patient/parent will be asked to contact health provider if condition persists or worsens

References:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006
Ferri's Clinical Advisor 2008

CARDIAC EMERGENCIES

SUBJECTIVE

Symptoms may include:

- Chest pain (may or may not radiate to the left arm, neck, back or jaw), pressure in chest and/or shortness of breath
- Apprehension
- History of coronary artery disease
- Currently taking cardiac medicines

OBJECTIVE

Weak, irregular, rapid pulse, or no pulse
Cyanosis (nail beds, lips, etc)
Cold clammy skin
Fall in blood pressure, or no pressure
Labored respirations
May or may not have distended neck veins when patient is at 45° angle

ASSESSMENT

Coronary Artery Disease/Angina

PLAN

Initiate emergency response system
Check vital signs
Administer CPR if indicated
Use automatic external defibrillator (AED) if available and indicated
Give oxygen 4-6 liters/minute via mask, or nasal cannula
After determining that patient is not allergic to aspirin, give 325 mg non-enteric coated aspirin, crushing tablet and adding to water. **DO NOT ADMINISTER UNLESS PATIENT IS FULLY CONSCIOUS**
Observe closely for signs of continued decrease in blood pressure, arrhythmias, tachycardia or bradycardia
If patient has nitroglycerin medication, instruct to take prescribed dosage sublingually; one tablet q 5 minutes x 3; hold if systolic blood pressure is less than 100
Transport via ambulance as soon as possible and send report of care give

REFERENCES:

GIVING EMERGENCY CARE COMPETENTLY, Nursing Skills Books
"Cardiac arrest: When minutes count," Romaine Hart, RN
"Myocardial Infarction: How to alleviate pain and anxiety: Catherine C. Manzi, RN
TDH, Division of Emergency Medical Services, PARAMEDICAL PROTOCOL, "Symptomatic Chest Pain", H. Lynn Massingale, M.D., Oct. 1, 1991
Conn's Current Therapy, Edited by Robert E. Rakel, MD. W.B. Sanders Co., Philadelphia 1999. "Acute Myocardial Infarction" pp 324-329
American Heart Association Guidelines CPR ECC, 2010, September 2011
http://www.heart.org/idc/groups/heart-public/@wcm/@ecc/documents/downloadable/ucm_317350.pdf

EMERGENCY CHILDBIRTH (650)

SUBJECTIVE

Urge to push, bear down, or have a bowel movement
Warns that “baby is coming”
Reports "water broke"

OBJECTIVE

Contractions 2 minutes apart or less
Bulging perineum or crowning
Straining and pushing down with contractions

ASSESSMENT

Imminent birth

PLAN

Call for help and instruct someone to call 911 for ambulance
Reassure mother, provide for privacy, keep her informed of progress
Obtain pertinent medical and obstetrical history
Secure "Emergency Delivery Kit"

Allow delivery to progress spontaneously. Assist as follows:

Instruct mother to push with contractions and breathe between contractions

Support baby's head and body as delivery proceeds. Do not pull on baby. Suction baby's airway, both nose and mouth, with bulb syringe as soon as head is clear of birth canal (bulb should be in squeezed position before inserting).

Check for cord around neck. If present, gently bring the cord over the head or, if there is adequate slack in the cord, the cord may be pushed back over the shoulders. A tight cord around the neck will require clamping and cutting before the birth can be completed.

After the baby is born, hold infant with head in dependent position while suctioning oral pharynx again.

Immediately wipe the baby dry. Minimize heat loss. Wrap in dry blanket as soon as possible. Cover head.

While baby is the same level as the mother's vagina, after cord stops pulsating, clamp or tie umbilical cord approximately 6 inches from baby, place second clamp or tie approximately 2 inches closer to mother, and cut between clamps or ties. Work quickly. Have the baby wrapped in dry blanket(s) as soon as possible.

Stimulate cry by tapping soles of feet; if no spontaneous cry, begin resuscitation.

Assess Apgar score at 60 seconds and 5 minutes post-birth (see Apgar Scoring System chart on page 9A) Scores of 0-3 indicate need for immediate resuscitation. Scores of 4-6 indicate need for some resuscitative measures.

Again, wrap baby in dry blanket as quickly as possible, make sure head is covered to avoid excessive heat loss.

Allow baby to root or nurse at the breast/nipple. This will stimulate uterine contractions. Uterine contractions will encourage the delivery of the placenta and decrease blood loss.

Do not pull on the cord to force the delivery of the placenta. Let the placenta deliver spontaneously. The mother and infant may be transported with placenta undelivered. If placenta delivers prior to transport, massage fundus carefully as required for postpartum patients. Fundal massage produces a firm contracted uterus that minimizes blood loss. Place pad over vaginal opening, and take placenta to hospital.

Arrange transfer of mother and baby to hospital as quickly as possible.

Check and record mother’s vital signs, condition of uterine fundus, and amount/quality of lochia every 15 minutes until EMS arrives.

Record time and date of delivery, baby's Apgar score, and any other pertinent information.

Notify County or Regional Health Officer as appropriate.

APGAR SCORING SYSTEM (7685)

Points Given According to Status

Clinical Signs	**0 Points**	**1 point**	**2 points**	**1 min.**	**5 min.**
HEART RATE	Absent	Below 100	Over 100	_____	_____
RESPIRATORY EFFORT	Absent	Slow, irregular	Strong and regular with good cry	_____	_____
MUSCLE TONE	Flaccid	Some flexion of extremities	Active motion	_____	_____
REFLEX IRRITABILITY (tap sole of foot)	No response	Grimace	Vigorous cry Or active withdrawal of foot	_____	_____
COLOR	Blue pale	Body pink Limbs blue	Completely pink	_____	_____
			TOTAL APGAR SCORE	_____	_____

HEMORRHAGE/HEMORRHAGIC SHOCK

GENERAL INFORMATION

Hemorrhage refers to a significant loss of blood volume. Etiologies include trauma, ruptured aneurysm, gastrointestinal bleeding, injury to internal organs such as liver or spleen, or any vascular injury. Reproductive etiologies include ruptured ectopic pregnancy, postpartum hemorrhage, miscarriage, abruptio placenta, and placenta previa. Vaginal bleeding unrelated to pregnancy can be seen with coagulopathies, cervical infection, dysfunctional uterine bleeding, bleeding due to leiomyomata (fibroids), polyps endometrial hyperplasia or cancer, but rarely rises to the level of hemorrhage and shock. In cases of bleeding secondary to genital trauma, rape and/or abuse must be considered.

As blood loss increases shock may ensue due to loss of effective circulating blood volume and inadequate organ perfusion. Initially the body compensates for the loss. Decompensated shock occurs when there is a loss of circulating volume that overcomes the patient's physiologic percentage reserve. At this point, vital signs are altered.

SUBJECTIVE

Symptoms may include:

Thirst - DO NOT GIVE FOOD; sips of water may be given if person able to converse
Confusion, restlessness, anxiety
Possibly nauseated
Low abdominal pain or cramping and bleeding
Rape

Gather as much historical information as possible from patient, friends, or family

OBJECTIVE

Overt or occult bleeding
Decreasing level of consciousness
Decreasing blood pressure
Pulse becoming rapid, weak

ASSESSMENT

Hemorrhage, at risk for hemorrhagic shock

PLAN

Initiate emergency response system (Call EMT/ 911)
Monitor vital signs
Control a bleeding wound by direct pressure, pressure point pressure, or pressure bandage
Keep patient calm and in comfortable position
If supine and no fracture or spinal trauma, elevate legs
Prevent heat loss (cover with a blanket)
Provide high flow oxygen
Give report to EMT team upon arrival
Document the event per health department protocol

REFERENCES

Rosen and Barkin's 5-Minute Emergency Medical Consult
Tennessee Pre-hospital Protocols and Standing Orders, TN Emergency Medical Services, 2004

INSECT (NON SPIDER) BITES

Subjective

Skin that itches
Lump(s) on back of neck or other lymph node areas
Exposure to insects
Assess date and time of contact and location of affected area(s)

Objective

Assess respiration to rule out hoarseness or wheezing
Solitary, multiple, or profuse lesions; if numerous, may cause adenopathy
Limited, localized swelling and/or redness
Lesions appear as erythematous wheel if recent exposure

Assessment

Insect bite

Plan

Cool water compress to affected area(s)
Application of calamine lotion or a paste of baking soda and water
Application of topical OTC corticosteroid for control of persistent pruritis, 2-4 times daily
Recommend OTC oral antihistamine, such as diphenhydramine (Benadryl) if itching is extreme (according to package insert); warn regarding drowsiness effect of antihistamine therapy
Teach routine hygiene measures to prevent secondary infection, i.e., cut fingernails, keep hands and nails clean; keep the area clean and dry
Modify environment to prevent further exposure if applicable; consider use of insect repellents relative to level of risk
Observe for signs and symptoms of secondary infection, i.e., redness, drainage, fever, pain, spread of lesions
Educate regarding seasonal illness such as West Nile Virus

Referral Indicators:

Headache, confusion, light sensitivity
Severe inflammatory or systemic allergic (including respiratory difficulty) response (refer to emergency protocol)
Secondary infection with fever, lymphatic involvement
Necrosis of tissue
Suspected or known contact with poisonous insect or spider
Immunocompromised persons

Follow-up:

Patient/parent will be asked to contact health provider if condition persists or worsens

In severe reactions, desensitization and/or “emergency epinephrine” (epipen injector) availability can be advised

Reference

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006
Ferri’s Clinical Advisor 2008

LACERATION

Subjective

Cut, tear, scratch, scrape of skin surface
Pain
Assess date, time, and circumstances of injury; date of last tetanus vaccine

Objective

Open, torn wound in which only a few layers of tissue may be involved
Bleeding, edema, erythema

Assessment

Small superficial laceration

Plan

Control excessive bleeding by applying direct pressure over wound
Clean thoroughly with soap and warm water
Look for foreign body
Apply sterile dressing or Band-Aid if needed; apply antibiotic ointment
Give tetanus prophylaxis if indicated (refer to Tetanus Prophylaxis in Wound Management)

Health Teaching:

Discuss prevention of accidents and/or injuries
Advise regarding importance of infection prevention, i.e., keep wound clean and dry; antibiotic ointment, dressing changes as indicated; observe for redness, purulent drainage, fever, pain, significant/increasing soreness, and increased warmth
Discuss avoiding prolong use of iodine or peroxide as these may delay healing
Explain need for adequate tetanus prophylaxis
Discuss importance of adequate protein and vitamin C to promote wound healing

Referral Indicators:

Unable to control bleeding
Laceration of face
Wound extending into subcutaneous tissue and/or requiring sutures

Signs of infection
Foreign material or object embedded in wound
Gross contamination of object causing wound
Functional loss resulting from injury

Follow-up:

Patient/parent will be asked to contact health provider if wound does not heal, or signs of infection develop

Reference

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006

PUNCTURE WOUND

Subjective

History of recent injury
Assess the following:
- Date, time, and circumstances of injury (if animal- see Animal Bites)
- Type/source of object causing injury
- Date of last tetanus vaccine

Objective

Tissue damage involving several layers
Presence or absence of pain, bleeding, discharge, foreign body, edema and/or inflammation
Clean or dirty wound

Assessment

Puncture wound

Plan

Cleanse with soap and water. Keep soap out of puncture wound itself.
Use tweezers to remove splinter/foreign body if easily accessible; if deep, do not attempt removal
DO NOT attempt to remove splinter/foreign body in, or around, eye
Apply sterile dressing and thin layer of antibiotic ointment
Give tetanus prophylaxis if indicated (refer to Tetanus Prophylaxis in Wound Management page 109)
Teach signs and symptoms of infection

Referral Indicators:

Consult with nurse practitioner or physician if signs or symptoms of infection are present, or for possible removal of foreign body
Refer all eye injuries

Follow-up:

As recommended by provider
Return to clinic PRN

Reference

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006

RESPIRATORY EMERGENCY

SUBJECTIVE

Symptoms may include:

Difficulty breathing due to choking
Difficulty breathing with history of asthma
Difficulty breathing with unknown cause

History to establish cause:

Gather as much information as possible from patient, family/friends(s), or bystanders

Signs and symptoms
Allergies
Medications
Past medical history
Last meal
Events prior to episode

OBJECTIVE

Possible objective findings may include the following:

Wheezing
Stridor
Rhonchi and/or rales on auscultation
Difficulty speaking
Decreasing level of consciousness (alert to anxious to confused to lethargic to unconsciousness)
Cyanosis
Diaphoresis
Orthopnea
Respiratory rate >25/minute

ASSESSMENT

Respiratory distress of unknown cause
Respiratory distress due to foreign body obstruction
Respiratory distress due to a:

CV event as seen with, but not limited to, congestive heart failure, pulmonary embolus, dysrythmia, etc.
Pulmonary event as seen with, but not limited to, asthma, pneumonia, COPD, etc.
Neuromuscular event as seen with, but not limited to, Guillain-Barre syndrome
Toxic event as seen with, but not limited to, poisoning or drug overdose, anaphylactic or septic shock
Psychogenic event as seen in, but not limited to, anxiety disorders

PLAN

Initiate emergency response system (call EMS/911)
For foreign body obstruction ONLY, begin abdominal thrusts
Assure airway, breathing, circulation
Monitor vital signs
Observe mental status, level of distress, work of breathing, skin color
Allow conscious patient to assume a position of comfort for breathing (most likely sitting)
Give high flow oxygen
Rescue breathing if apnea ensues
CPR if needed
May administer aqueous epinephrine 1:1000 SUBCUTANEOUSLY according to Emergency Drug Chart (**Note - epinephrine should be given with caution to persons taking beta blockers or with severe hypertension**)
Give report to EMT team upon arrival
Document event per health department protocol

REFERENCES

Rosen and Barkin's 5-Minute Emergency Medicine Consult, 2003
Tennessee Pre-hospital Protocols and Standing Orders, TN Emergency Medical Services, 2004

SEIZURES

Subjective

History of:
- Previous seizures or "fits" or positive family history
- Ingestion of drugs or poisons
- Previous head trauma
- High fever - infections
- CNS congenital abnormalities or neonatal insult
- Recent alcohol cessation

Symptoms may include:
- Sensory or motor disturbances, “Aura”
- Nausea

Objective

Localized or generalized rhythmic muscle jerking, clenched jaws
Confusion, drowsiness (postictal state), unconsciousness;
Eyes rolled upward or to one side
Cyanosis of lips and nailbeds
Urinary and fecal incontinence, vomiting

Assessment

Seizure

Plan

DURING SEIZURE:
- Call 911
- Maintain an open airway by turning patient on side with head low; DO NOT try to pry clenched jaws apart; loosen clothing around neck
- Use oxygen if needed
- Place patient in a position to prevent injury; avoid physical restraint unless absolutely necessary to protect patient
- Note and record length of seizure and activity

AFTER SEIZURE:

Reorient patient and examine for associated injuries
Refer to medical facility for evaluation and further treatment as appropriate

Reference

Ferri's Clinical Advisor 2008

SHOCK

SUBJECTIVE

Symptoms may include:

Anxious
Sense of impending doom
Possibly difficulty breathing (seen with anaphylaxis)
Possibly itching (seen with anaphylaxis)
Possibly chest pain (seen with cardiogenic event)

History to establish cause:

An anaphylaxis or cardiogenic event is most likely cause in clinic setting

Hemorrhagic shock could be seen in clinic in women who are pregnant or postpartum (as might be seen with ruptured ectopic pregnancy, spontaneous incomplete miscarriage, abrupto placenta, placenta previa, or postpartum hemorrhage **(See Hemorrhage Protocol)**

Septic, neurogenic, and other hypovolemic shock are less likely to be a walk-in event in the health department setting though not impossible

Gather as much information as possible from patient, family/friend(s), or bystanders

Signs and symptoms
Allergies
Medications
Past medical history
Last meal
Events or treatments prior to episode

OBJECTIVE

Decreasing BP (systolic drops below 80-90 mm Hg or 20-30 mm Hg below normal baseline)
Pulse pressure narrows (systolic pressure minus diastolic is less than 30 mm Hg)
Rapid weak pulse
Altered level of consciousness
Cool, mottled extremities
Diaphoresis
Weak or absent peripheral pulses
Stridor, wheezing with anaphylaxis

ASSESSMENT

Shock (cardiac, hemorrhage, septic, unknown origin)

PLAN

Initiate emergency response system (call EMT/911)
Assure airway, breathing, and circulation
Monitor vital signs
Patient should lie down or if conscious and there are breathing difficulties, assume the position most comfortable for breathing (usually sitting)
Elevate feet if client is supine
Give high flow oxygen
Begin CPR if needed
Give report to EMT team upon arrival

REFERENCES

Rosen and Barkin's 5-Minute Emergency Medicine Consult, 2003
Tennessee Pre-hospital Protocols and Standing Orders, TN Emergency Medical Services, 2004

SYNCOPE/VASOVAGAL REACTION/COMMON FAINT

GENERAL INFORMATION

Syncope is a transient loss of consciousness and postural tone due to inadequate cerebral blood flow with prompt recovery that does not require resuscitation.

Vasovagal reactions (referred to as common fainting) are autonomic nervous system responses to stressful, painful, fearful, or claustrophobic experiences.

Syncope may also be caused by cardiac disorders, cerebrovascular disorders, orthostatic hypotension, hypovolemia secondary to hemorrhage or dehydration, chronic diseases such as diabetes-related hypoglycemia or fasting for tests, and neurologic disorders such as transient ischemic attacks (TIAs).

SUBJECTIVE

Symptoms may include:

- Nausea
- Lightheadedness
- Roaring in ears sensation
- Dimming vision

History to establish cause:

Gather as much information as possible from patient, family/friend(s), or bystanders

- What was the person doing prior to the episode?
- What were the prodromal symptoms (i.e., nausea, lightheadedness etc.)?
- Are there any predisoposing factors (i.e., age, chronic disease, fasting, IUD insertion etc.)?
- Are there any precipitating factors (i.e., a painful or fearful procedure)?
- What did the passersby witness?
- Were there any signs of seizure?

OBJECTIVE

Diaphoresis
Loss of color (pale/ashen)
Loss of consciousness and postural tone

ASSESSMENT

Syncope – Possible Vasovagal Reaction

PLAN

Assure airway, breathing, circulation
Remove any inciting stimuli (stress, pain, fear etc.)
Elevate legs, loosen tight clothing such as a tie or belt
Monitor vital signs
When there is immediate recovery, review history and refer patients with any significant findings to a primary care provider
Give high flow oxygen if recovery is not immediate
Initiate emergency response (call EMT/911) if recovery is not complete within minutes
Continue to check vitals signs, assure airway, breathing, and circulation until EMT arrives
Give report to EMT team

REFERENCES

Current Medical Diagnosis and Treatment, 2000
Handbook of Signs and Symptoms, 2006
Rosen and Barkin's 5-Minute Emergency Medicine Consult, 2003
Tennessee Pre-hospital Protocols and Standing Orders, TN Emergency Medical Services, 2004

TICK BITE

Subjective

History of tick bite
Assess date and time of bite; age of victim; location of affected area(s); geographical site where contact with tick occurred; time of year when exposure occurred; recent outdoor exposure
History of systemic response (i.e., fever >100°; rash, headache, neck stiffness, confusion)

Objective

Tick embedded in skin
Presence or absence of edema, erythema, purulent drainage

Assessment

Embedded tick or recent history of tick removal

Plan

Tick removal:

Grasp tick with tweezers (or fingers, protected with gloves or tissue paper) as closely as possible to the point of attachment
Using steady traction, slowly and gently pull head of tick without crushing or leaving parts in skin
Wash tick down drain
Wash hands and tick attachment site with soap and water
Advise use of OTC antibiotic ointment at site of attachment

Health Teaching:

Avoidance of tick-infested areas is best prevention
If in tick infested area, clothing should cover arms and legs; DEET or permethria can be sprayed on clothing to prevent tick attachment, follow label precautions
Tick repellents used on exposed skin require repeated applications every 1-2 hours to be effective
If DEET is used, apply sparingly because seizures have been reported when it is used in young children (**Do Not** use in infants under 2 months of age)
Daily inspection of self and family members and prompt removal of any ticks
Note removal dates on calendar for future reference
Seek medical attention promptly if symptoms of Rocky Mountain Spotted Fever (RMSF), Lyme disease or Ehrlichiosis occur

Referral Indicators:

Unable to remove tick
Symptoms of Rocky Mountain Spotted Fever, Lyme disease or Ehrlichiosis (rash, fever, headache, neck stiffness)
Significant local infection

ROCKY MOUNTAIN SPOTTED FEVER

Incubation: Approximately 1week (range, 2-14 days), appears to be related to size of the inoculum
Symptoms: Sudden onset of fever, rash, initially erythematous and macular, later becoming maculopapular; and frequently petechial; first appears on wrists and ankles, spreading within hours to trunk; palms and soles usually involved; myalgia, toxicity, nausea and vomiting; symptoms can last 3 weeks and involve central nervous and other systems

LYME DISEASE

Incubation: 1-55 days (median, 11 days)
Symptoms: Erythema at site of tick bite beginning as red macule or papule 5-15 cm in diameter expanding to form large annular erythema; multiple secondary annular lesions, evanescent red blotches or circles, macular rash or urticaria, conjunctivitis, periorbital edema; fever, malaise, headache, mild neck stiffness and arthralgia; weeks to months later (if untreated) may weaken joints, eyes, cardiac, and nervous systems (7th cranial nerve palsies), aseptic meningitis; adverse pregnancy outcomes are associated with infection in pregnant women

EHRLICHIOSIS

Incubation: 5 to 10 days after a tick bite (median, 9 days)
Symptoms: Fever, leukopenia, rash appearing one week after onset is variable in appearance and location and seen in only approximately 40% of cases; headache, chills, malaise, myalgia, arthralgia, nausea, vomiting, anorexia and acute weight loss; diarrhea, abdominal pain, and change in mental status seen less frequently

References

2006 Red Book: Report of the Committee on Infectious Diseases, 27th Edition, Larry K. Pickering, MD, FAAP, Editor

SECTION II:
FAMILY PLANNING

2.010 – 2.170

ALL METHODS, INITIAL AND/OR ANNUAL FAMILY PLANNING VISIT

GENERAL INFORMATION

A physical exam is not necessary to begin most methods of contraception. Occasionally a woman may request a method of contraception when clinic staffing or circumstances may not allow for an exam on the same day as the clinic visit. The client may also request to delay or defer a physical examination. If this occurs, collect and review the medical history to assure no U.S. Medical Eligibility Criteria categories 3 or 4 exist. Consider a physician or APN consult for any category 2 findings. The Summary chart of U.S. Medical Eligibility Criteria for Contraceptive Use is found in the Family Planning reference section 2.170.

SUBJECTIVE FINDINGS

- The medical history is reviewed
- Complaints related to any previous or current use of the method or other complaints are noted

OBJECTIVE FINDINGS (Laboratory tests for FP clients are chosen as indicated by the method, or by client need. However, laboratory tests cannot exceed any established department or program screening or testing limits. Limitations on laboratory testing may be established to meet funding or other needs).

- Blood pressure
- Height and weight for BMI
- Physical examination[1] performed annually by examiner
- Hemoglobin or Hematocrit as indicated
- Pap smear in accordance with current Pap smear guidelines
- Sickle cell screening
- Syphilis serology
- Mantoux tuberculin test
- Pregnancy test
- Rubella titer
- Wet prep (examiner)
- HIV testing
- Urinalysis
- Gonorrhea and chlamydia screening

[1] If a TennCare child (under the age of 21) receives the major components of a Child Health/EPSDT exam through the health department's family planning clinic, she should also receive developmental screening and vision and hearing risk assessment/screening in order to complete the recommended AAP standards for preventive health care. REFER TO THE FAMILY PLANNING SECTION OF THE PTBMIS MANUAL FOR CORRECT CODING OF THIS TYPE VISIT.

REFER TO SCREENING CRITERIA FOR CHLAMYDIA AND GONORRHEA FOUND IN SECTION 2.170

PLAN OF CARE FOR A DEFERRED EXAM VISIT

The plan of care for a deferred exam visit is considered preliminary or temporary and can be established by the PHN. This preliminary or temporary plan of care must address the following:

- An explanation for the deferral.
- A comprehensive medical history for the initial client. The history must be negative for U.S. Medical Eligibility Criteria categories 3 and 4.
- The updated medical history for the annual client who needs new orders for her method but who has either missed her annual appointment or the clinic cannot provide the exam visit at this time. The history must be negative for U.S. Medical Eligibility Criteria categories 3 and 4. Consider a physician or APN consult for any category 2 findings and document appropriately. See the PTBMIS codes manual for the coding of this visit.
- For annual visits (or supply visits), consult for method side effects that have not responded to standard treatments (i.e., pill at bedtime for nausea), complications, or warning signs. Record consultant instructions in chart.
- Blood pressure measurement, weight, hemoglobin or hematocrit as indicated.
- Height for initial visit or annually for adolescents.
- Name, dosage, route, and frequency of the contraceptive chosen.
- The number of cycles given (up to 3 cycles).
- Informed consent form for an initial client or if giving the return client a new method.
- Necessary health teaching to use method correctly and consistently.
- Document health teaching/counseling on the table provided on the history form.
- Offer condoms for improved STD protection.
- Offer condoms and/or contraceptive foam or film for use as back-up protection against unintended pregnancy.
- Date of the exam appointment. In clinics with open access systems, chart the date the client is expected to return.

PLAN OF CARE FOR AN EXAM VISIT

An **ongoing plan of care** will be developed and signed at the **exam visit** by either the PHN with gyn skills, RN-ES, APN, or Physician (all referred to as "examiner"). The ongoing plan of care is developed in accordance with the protocol for the particular examiner (APN or physician). The ongoing plan of care written by the examiner must be reviewed by the PHN at each visit. Possible components of the ongoing plan of care can be found in The Family Planning Clinical Guidelines. The most current edition of Contraceptive Technology is also a good resource for the APN or physician plan of care.

HEALTH TEACHING

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 or 4 of the required topics at each visit until instruction in all required topics is completed. Topics do not need to be repeated unless the client request a review or the provider assesses that a review is needed. **Address client counseling at each visit and base counseling/education on client needs and program requirements.**

The REQUIRED TOPICS are listed below. Additional information may be found in the "Federal Program Guidelines for Project Grants for Family Planning Services, January 2001" or "Tennessee's Family Planning Clinical Guidelines January 2011, Visit Guidelines, Minimum Requirements". All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical record. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

Client Instruction sheets in English and Spanish are available in the appendix of Tennessee Family Planning Clinical Guidelines. For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee's Family Planning Clinical Guidelines. They are available in English and Spanish. Also use the teaching tool on the reverse side of the method-specific consent form. Other tools include DH 0015 and DH 0015S entitled, "Get the Facts About HPV"; DH 0018 and DH 0018S entitled "Family Planning is More Than You Think." A "print your own" brochure entitled "Welcome To Your County Health Department" is available in English and Spanish. Contact the regional family planning program administrator to obtain a copy of this pdf document for your use.

Required counseling/education topics:

- Purpose and sequence of clinic procedures including the return visit schedule
- Health Department services (can be given in writing)
- Importance of recommended tests and screenings
- Information necessary to be able to give informed consent
- Information about all contraceptive methods, including fertility awareness-based methods and abstinence, (can be given to the client in writing)
- Information necessary to be able to use the chosen contraceptive method correctly and consistently including how to discontinue the method, back-up methods, and ECPs
- Information necessary to be able to identify adverse reactions, common side effects and possible complications of the method selected and what to do in case any of these occur
- Education regarding safer sex, STDs and the importance of HIV/AIDS testing
- The importance of family involvement and how to recognize and resist sexual coercion (all adolescents on first visit)
- Self breast exam for females and self-testicular exam for males (can be given in writing).
- Emergency contraception (ECPs)
- Results of the history, physical examination, laboratory studies or instructions as to when test results will be available

- Emergency 24-hour telephone number and where emergency services can be obtained
- Appropriate referrals for additional services as needed
- Reproductive life planning.

Optional counseling topics:

- Nutrition
- High-risk sexual behaviors related to STDs
- Pap smear testing and cervical cancer
- Disease prevention and maintenance of health
- Instructions regarding calcium supplementation as a precaution against osteoporosis (adolescents and young adults, 1200-1500 mg day; adults aged 25-50, 1000 mg day; post menopausal women, 1000-1500 mg day)
- Instructions regarding folic acid supplementation (400 mcg daily)
- Instructions regarding the ABC's of HIV prevention
- Counseling regarding avoidance of tobacco products
- Counseling regarding the adverse effects of alcohol and drug abuse
- Domestic violence and personal safety
- General safety such as seat belts, driving safety, helmets, gun safety etc.
- Unintended pregnancy prevention and its value in maintaining individual, child and family health (Highly recommended)
- Basic female and male anatomy and physiology (can be given in writing)

REFERENCES

Contraceptive Technology, Robert A. Hatcher, M.D., et al., Twentieth Revised Edition, 2011.

"Family Planning Clinical Guidelines", Tennessee Department of Health, January 2011

"Program Guidelines for Project Grants for Family Planning Services," Office of Population Affairs, U.S. DHHS, Health Service, 2001

"Guide to Clinical Preventive Services", Report of the U.S. Preventive Services Task Force, Williams and Wilkins, Third edition, 2002

CERVICAL CANCER SCREENING

GENERAL INFORMATION

How Do We Screen For Cervical Cancer?

The Tennessee Department of Health screens women for cervical cancer using liquid-based Pap testing. While both the conventional Pap smear and the liquid-based Pap test are equally effective, LB eliminates the need for annual screening in women with a negative result.

Clients should be prepared for cervical cancer screening. They will need the following information:

- Avoid douching for 2 days before the examination
- Avoid putting **ANYTHING** into the vagina for 2 days before the exam
- Make appointment for Pap test 1-2 weeks after the end of menses
- Whenever possible, have abnormal vaginal secretions treated before a Pap test is scheduled

What is HPV Testing

Human papilloma virus (HPV) testing refers to the identification of high risk HPV strains that can become precursors to cervical cancer. HPV testing is a tool used to triage atypical squamous cells, undetermined significance (ASC-US). HPV testing is not appropriate for women ages 20 years and younger. Please see the appropriate section below and the associated algorithm.

Who and When Do We Screen For Cervical Cancer?

The Tennessee Department of Health has several programs and services that offer cervical cancer screening. Beginning at age 21, the Family Planning Program offers screening to women who come to the health department for contraception. The Breast and Cervical Cancer Program offers screening to women who are no longer of reproductive age and who met program criteria. When counties provide full service prenatal care to women, they offer cervical cancer screening during pregnancy. The Primary Care Service also offers screening to women.

For all programs and services, Cervical Cancer screening begins at age 21.

Within the Family Planning Program, cervical cancer screening can be delayed at the client's request or as might be necessary due to the clinic's schedule. In either case, the physical exam and Pap test can be delayed for 3-6 months. **Always document in the chart why the Pap test was delayed**.

The client, who comes to the health department with a history of abnormal Pap test results, will sign the appropriate release of information in order for the health department

to send for and receive these records. Pap management will reflect consideration of these records, and may include (but is not limited to) consult with the assigned health officer and referral for follow-up.

While cervical cancer screening may not be necessary at all Family Planning Program visits, this does not mean that a pelvic exam will not be necessary. Other components of the reproductive health exam must be completed including the breast exam with teaching regarding self exams; pelvic exam including the visual exam and bimanual exam for normal anatomy/absence of pathology; and infection check including appropriate screening for sexually transmitted infections. A blood test for human immunodeficiency virus (HIV) should be encouraged.

Women Age 20 and Younger

Women age 20 years and younger will not receive cervical cancer screening because they essentially do not develop cervical cancer. All abnormal cervical cells found in this age group are the result of human papilloma virus (HPV). This age group almost always clears HPV in 24 months. Therefore, this age group does not require cervical cancer screening or HPV testing. For young women in this age group with abnormal cervical cells found prior to January 2011 or those who are inadvertently Pap tested after January 2011, conservative observational management should be the mainstay of care. See the Pap algorithm that addresses this special situation.

Women age 20 years and younger who are TennCare participants and are receiving the major components of a Child Health/EPSDT exam through one of the health department's programs, should also receive the developmental, vision, and hearing screening in order to complete the recommended AAP standards for preventive health care.

Women Age 21 Years and Older

Women age 21 years and older are given a liquid-based Pap test for cervical cancer screening. When the results of this test are normal, the test is repeated every two years. When the results are ASC-H, LSIL, HSIL or greater abnormality, the client is referred for colposcopy. When the results of Pap test are ASC-US, an HPV test is reflexively run by the laboratory. HPV positive tests are scheduled for colposcopy. If the HPV test is negative, the client will return in one year for another liquid-based Pap test. If the one-year Pap is normal, she returns to testing every two years. If it is abnormal, she is referred to colposcopy. **Please see the appropriate algorithm for this age group**.

Women age 30 and older, who have had 3 consecutive (not to exceed 60 months) satisfactory and normal Pap tests (either conventional or liquid), will be tested every 3 years.

PROCEDURE

Subjective

The client reports to a program or service within the health department for a service that could include cervical cancer screening.

Objective

The client meets the screening criteria established by the health department.

Assessment

The client is appropriate for cervical cancer screening. The timing of her screening test is based upon either her age or the results of her last Pap test or both.

Plan

- Review the Pap history in the chart.
- Based on history, prepare the necessary materials for a Pap test or for no Pap.
- If no Pap, document why in the chart.
- Explain to the client how she will receive her Pap results if a Pap is to be collected. If no Pap is to be collected, explain why.
- Follow-up the Pap results as required (see section that follows Health Teaching).
- Provide reproductive health teaching.

HEALTH TEACHING

- Explain that nearly all sexually active individuals will be exposed to HPV sometime in their lifetime; 80% by age 50. Most women will have a natural immune response and clear the HPV on their own. Only a few at risk individuals will eventually develop cervical cancer from HPV exposure. This process takes many years. Therefore, cervical cancer screening must continue throughout a woman's life.
- Provide an overview of all sexually transmitted infections.
- Promote and instruct in the correct use of condoms.
- Review the risks associated with early onset of sexual intercourse (i.e., first sexual intercourse before the age of 18) including increased likelihood of exposure to STDs and the increased risk of teen pregnancy and unintended pregnancy. Both teen pregnancy and unintended pregnancy are associated with infant mortality and morbidity.
- Review the risks associated with having multiple sexual partners.
- Review the risks associated with having a sexual partner who has multiple partners.

- Review the risks associated with having numerous sexual partners in a lifetime (serial monogamy).
- Review the risks associated with having a sexual partner who has had numerous partners, through serial monogamy, over their lifetime.
- Review the risks associated with having sexual intercourse without a latex male condom or female condom.
- Note that sexual behaviors such as oral or anal sex are also at risk for STDs.
- Review the increased risk of cervical cancer in women who smoke cigarettes.
- Review the risk to daughters of women who took the hormone diethylstilbestrol (DES) during their pregnancies (for clients born before 1970, DES was used primarily to prevent repeat miscarriages.) These daughters are at greater risk for developing vaginal and cervical cancers.
- Review the HPV vaccine and how it may benefit women.

MINIMUM REQUIREMENTS FOR PAP TEST AND HPV FOLLOW-UP

Federal Title X Guidelines state, "a procedure must be established to allow for client notification and adequate follow-up of abnormal laboratory results." Pap test and HPV follow-up guidelines are to be used when clients have stated that they may be contacted by phone or at home. **Use the regional policy for notifying confidential clients**.

Abnormal Pap test and positive HPV tests are reviewed by the nurse-practitioner or physician. Follow-up orders are given to the assigned public health nurse(s) for follow-up and tracking. Recommendations by the pathologist are taken into consideration. Follow-up and tracking must comply with regional protocols and must be documented in the chart and/or in the electronic record (i.e., tracking).

Client Notification

A regional policy must be established for notification of "Negative for intraepithelial lesion or malignancy" or "negative for high-risk HPV".

For Pap test results indicating the presence of an organism or condition that the practitioner or physician wishes to address or treat (such as yeast, numerous red blood cells or shift in bacterial flora), a minimum of <u>two documented</u> attempts to contact the client are required.

For Pap test reports indicating atypical squamous cells of undetermined significance or greater, a minimum of <u>two documented</u> attempts to contact the client are required.

For Pap test or HPV reports indicating the need for referral to colposcopy, a minimum of <u>two documented</u> attempts to contact the client are required.

The sequence of attempts to contact the client proceeds as follows:

1. First attempt: Phone call, letter sent by first class mail, or direct contact during a clinic or home visit. Document attempt in the chart or the electronic record.

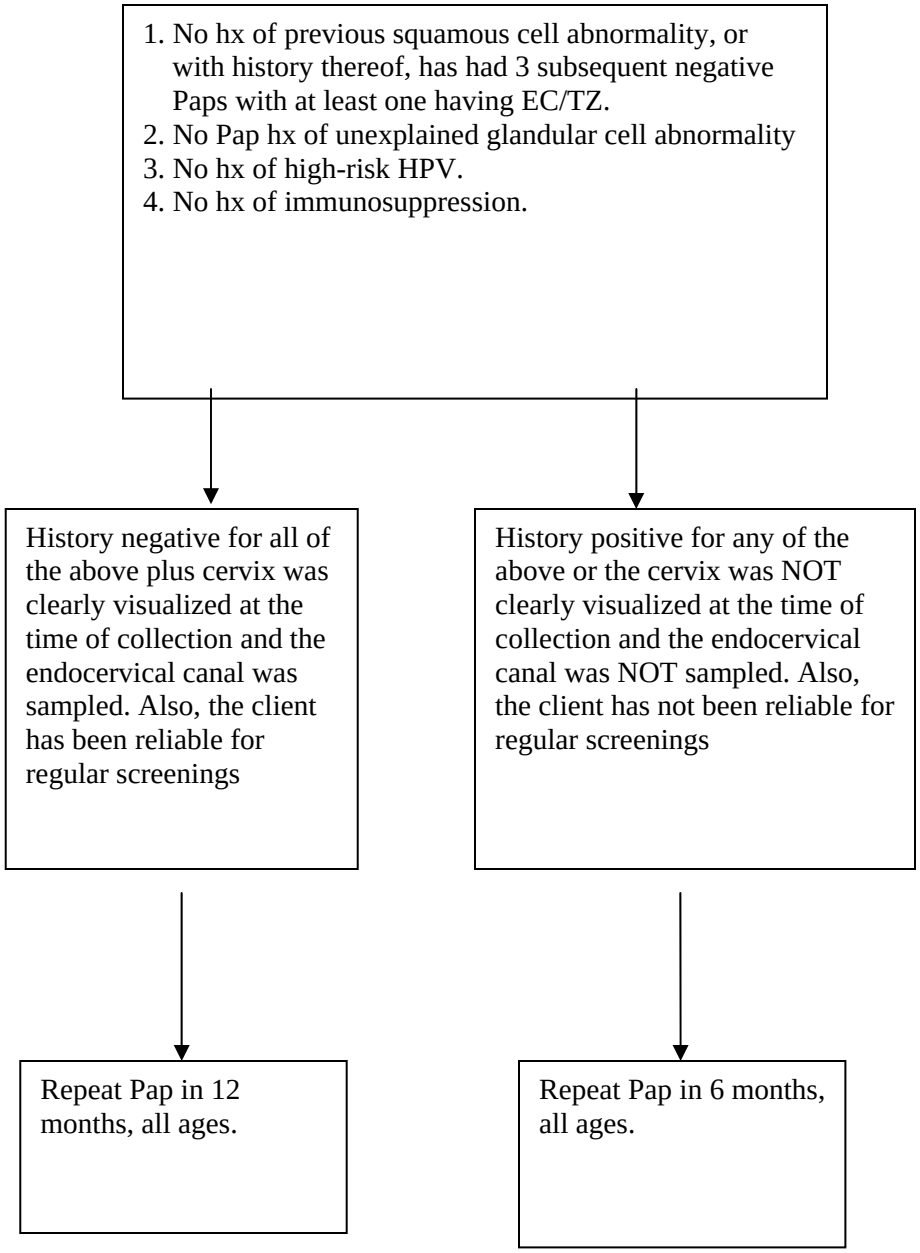
2. Second attempt: Registered letter or direct contact in clinic or by home visit. Document attempt in the chart or the electronic record.

3. Document all phone calls and letters in the chart or the electronic record. Regional policy determines the type of documentation related to the sending of the letters. Also regional policy determines whether further follow-up should occur if the client does not respond.

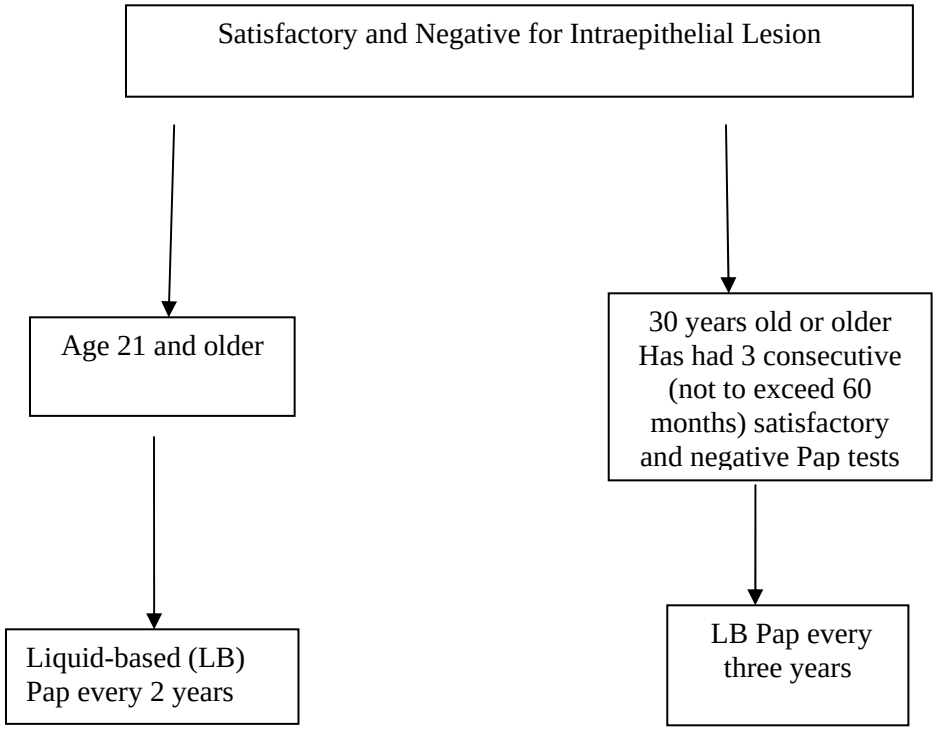
4. Clients with the epithelial cell abnormalities of atypical squamous cells cannot rule out high grade (ASC-H), high grade squamous intraepithelial lesion (HSIL), squamous cell carcinoma, atypical glandular cells, endocervical adenocarcinoma in situ, or any other malignant neoplasm are to be contacted **within 5 working days** from the receipt of the laboratory report or the call from laboratory. No minimum number of contacts can be established for these Pap findings. If the client cannot be contacted within the 5 working days, notify and seek direction from the assigned Health Officer. Every effort must be made to locate these clients including a home visit. Document all measures taken to make contact. Do not close the chart without Regional Office concurrence.

Within 6 weeks of the date the Pap test report or HPV test was reported by the laboratory, clinics should have an appropriate referral. Clinics are to document and facilitate any recommended follow-up. Clinics are not to coerce clients to undergo any consultation or procedure. However, clients must be informed of the possible consequences of failure to comply with recommended follow-up.

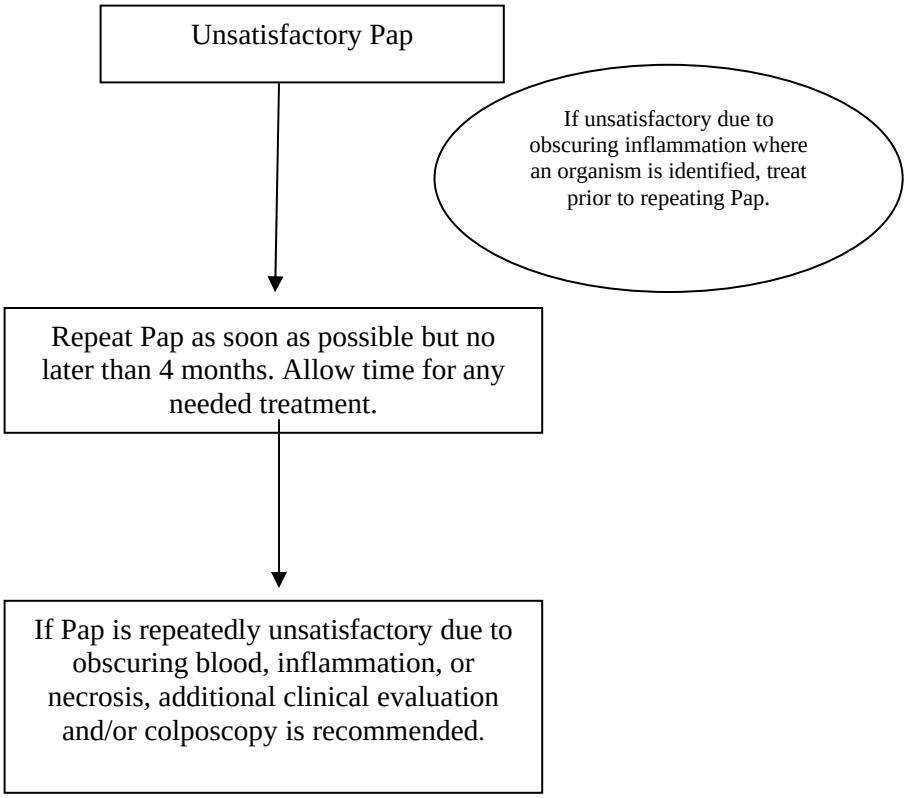
Management Guidelines for
Satisfactory Pap test
With No Endocervical/Transformation Zone Component (EC/TZ)



Management Guidelines for
Women with Satisfactory Pap Test



Management Guidelines for Women with Unsatisfactory Pap Test Results



Management Guidelines for
Women with Pap Negative for Intraepithelial Lesion
With Numerous Red Blood Cells, Inflammatory Cells,
Reactive/Inflammatory Epithelial Cells, Air-Drying
Or Other Factors

1. No hx of previous squamous cell abnormality, or with history thereof, has had 3 subsequent negative Paps with at least one having EC/TZ.
2. No Pap hx of unexplained glandular cell abnormality
3. No hx of high-risk HPV.
4. No hx of immunosuppression.
6. Provider has no other clinical reason for a 6 month repeat.

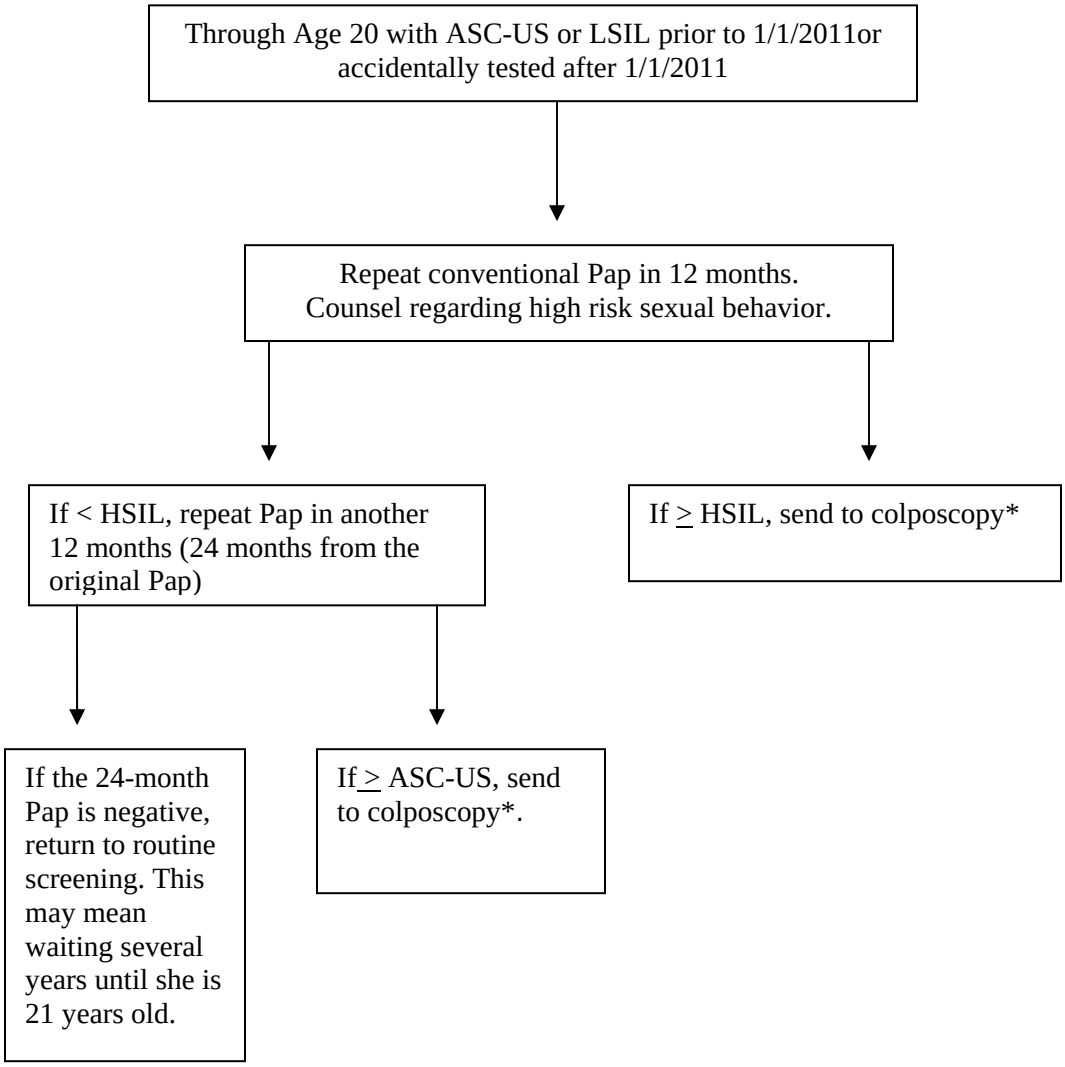
Has no history for all of the above and cervix was clearly visualized at the time of collection and the endocervical canal was sampled. Plus client returns for regular screenings and has several documented Pap tests in the chart.

Repeat Pap in 12 months all ages.

Has a history for any of the above or the provider has a clinical reason for a 6 month repeat Pap.

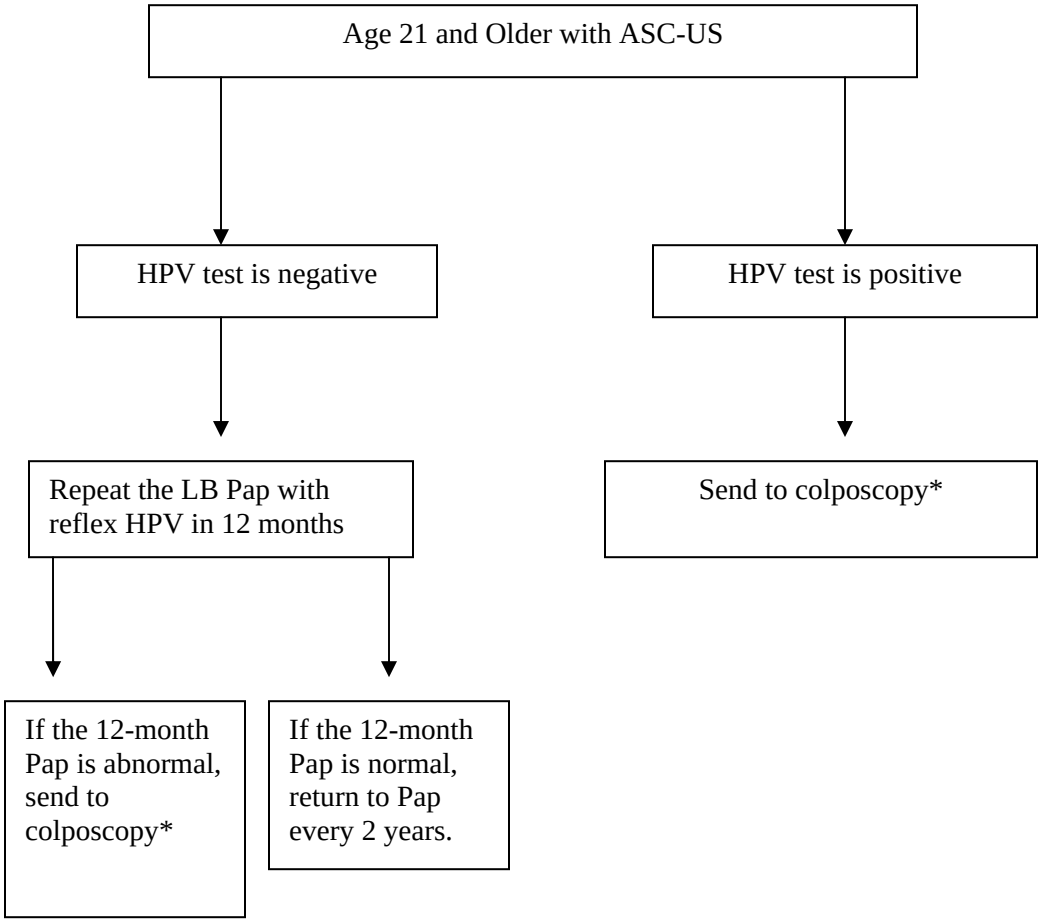
Repeat Pap in 6 months all ages.

Management of Women Through Age 20 Years with ASC-US or LSIL who were Already in Follow-up as of January 2011 or in Situations of Inadvertent Non-adherence to Guidelines as of January 2011



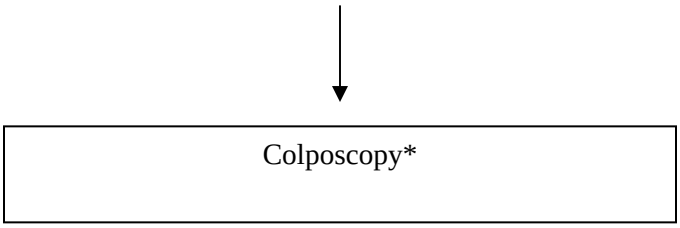
***** The goal in this age group is to avoid excisional treatment. The colposcopist may elect to repeat the colposcopy and Pap every 6 months for 24 months if no CIN 2 or 3 was found on the colposcopy. After colposcopy, management is directed by the colposcopist.

Management of Women Age 21 and Older with ASC-US
(Pap will be Liquid-based with Reflex HPV Test for ASC-US Results Only)

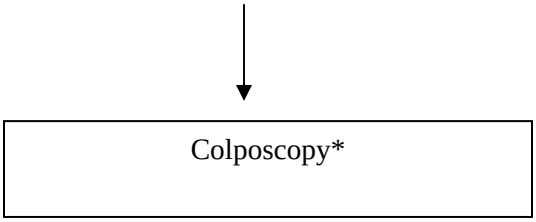


*After colposcopy, management is directed by the colposcopist

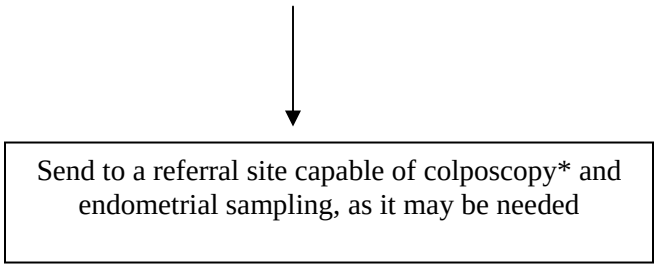
Management of Women HSIL or ASC-H, All Ages



Management of Women Age 21 and Older with LSIL including Women Who are Post Menopausal



Management of Women with Atypical Glandular Cells, All Ages



*After colposcopy, management is directed by the colposcopist.

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1. American College of Obstetricians and Gynecologists, ACOG Practice Bulletin, Number 109, December 2009.
2. American College of Obstetricians and Gynecologists, ACOG Committee Opinion, Number 463, August 2010
3. American College of Obstetricians and Gynecologists, ACOG Committee Opinion Number 330, April 2006
4. American Journal of Obstetrics and Gynecology, 2006 Consensus Guidelines for the Management of Women with Abnormal Cervical Cancer Screening Tests, October 2007, pages 346-355.
5. American College of Obstetricians and Gynecologists, ACOG Committee Opinion Number 300, October 2004.
6. American Journal of Clinical Pathology, Volume 118, No. 5, ASCCP Patient Guidelines – Pap Test Specimen Adequacy and Quality Indicators, pages 714-718.
7. CA A Cancer Journal for Clinicians, Volume 52, No. 6, American Cancer Society Guideline for the Early Detection of Cervical Neoplasia and Cancer, pages 342-362, November/December 2002.
8. Journal of the American Medical Association, Volume 287, No. 16, The Bethesda System, pages 2114-2119, April 24, 2002.
9. Journal of the American Medical Association, Volume 287, No. 16, 2001 Consensus Guidelines for the Management of Women with Cervical Cytological Abnormalities, pages 2120-2129, April 24, 2002.
10. U.S. Preventive Services Task Force, Screening for Cervical Cancer – Recommendations and Rational, www.ahrq.gov , January 2003.

COMBINED ORAL CONTRACEPTIVE PILLS

GENERAL INFORMATION

A physical exam is not necessary to begin oral contraceptives. While deferring the physical examination should not be routine, certain circumstances may exist which make it reasonable. It is essential that the PHN see General Information and Plan of Care for a Deferred Exam found in Protocol 2.010, "All Methods, Initial and/or Annual Family Planning Visit" before dispensing a method without a physical exam.

SUBJECTIVE FINDINGS

For method specific guidelines, including those for a deferred exam, refer to the Summary Chart of U. S. Medical Eligibility Criteria for Contraceptive Use in Family Planning Reference section 2.170.

U.S. Medical Eligibility Criteria category system:

1 = May provide method, no restrictions
2 = May provide method, as the advantages generally outweigh the risks. Consult with an APN or physician as needed and document appropriately
3 = May not provide method, proven risk usually outweigh the advantages
4 = Method may not be used

OBJECTIVE FINDINGS (Laboratory tests for FP clients are chosen as indicated by the method, or by client need. However, laboratory tests cannot exceed any established department or program screening or testing limits. Limitations on laboratory testing may be established to meet funding or other needs).

- Blood pressure
- Height and weight for BMI
- Physical examination[1] performed annually by examiner
- Hemoglobin or Hematocrit as indicated
- Pap smear in accordance with current Pap smear guidelines
- Sickle cell screening
- Syphilis serology
- Mantoux tuberculin test
- Pregnancy test

[1] If a TennCare child (under the age of 21) receives the major components of a Child Health/EPSDT exam through the health department's family planning clinic, she should also receive developmental screening and vision and hearing risk assessment/screening in order to complete the recommended AAP standards for preventive health care. REFER TO THE FAMILY PLANNING SECTION OF THE PTBMIS MANUAL FOR CORRECT CODING OF THIS TYPE VISIT.

- Rubella titer
- Wet prep (examiner)
- HIV testing
- Urinalysis
- Gonorrhea and chlamydia screening

REFER TO SCREENING CRITERIA FOR CHLAMYDIA AND GONORRHEA SECTION 2.170.

ASSESSMENT

Appropriate to begin or continue COCs either with or without the physical examination.

PLAN OF CARE FOR DEFERRED EXAM VISIT

The plan of care for a deferred exam visit is considered preliminary or temporary and can be established by the PHN. This preliminary or temporary plan of care must address the following:

- An explanation for the deferral.
- The medical history for the initial client, an updated medical history for the annual client who is deferring the exam, and an updated history for the supply client who is changing her method by deferred exam. The history must be negative for U.S. Medical Eligibility Criteria categories 3 and 4 to dispense without an exam. Consider a physician or APN consult for any category 2 findings and document appropriately.
- For annual visits (or re-supply visits), consult for side effects that have not responded to standard treatments (i.e., take COC pill at bedtime for nausea), complications, or warning signs. Record consult instruction in chart.
- Blood pressure measurement, weight, hemoglobin or hematocrit as indicated.
- Height for initial visit or annually for adolescents.
- Name, dosage, route, and frequency of the oral contraceptive chosen.
- The number of cycles given (up to 3 cycles).
- Informed consent form for an initial client or if giving the return client a new method.
- Document necessary health teaching to start and use method correctly and consistently. (The preferred method of starting OCPs is "Quick Start." See the Client Instruction Sheet available in English and Spanish found in the Appendix of the Family Planning Clinical Guidelines).
- Document necessary health teaching regarding emergency warning signs:
  - **A** Abdominal pain – severe (as might be seen with liver disease, gallbladder disease, ectopic pregnancy)
  - **C** Chest pain - severe, (cough, shortness of breath or sharp pain on inhalation as might be seen with heart attack or pulmonary embolism)
  - **H** Headache – severe, dizziness, weakness, or numbness, especially if one-sided (as might be seen with migraine or stroke especially with numbness or muscle weakness)
  - **E** Eye disturbances vision loss or blurring, also speech problems (as might be seen with retinopathy or stroke)
  - **S** Severe leg pain in calf or thigh (as might be seen with thrombophlebitis)

- Offer condoms for improved STD protection.
- Offer condoms and/or contraceptive foam or film for use as back-up protection against unintended pregnancy.
- Date of the exam appointment. In clinics with open access systems, chart the date the client is expected to return.

PLAN OF CARE FOR AN EXAM VISIT OR RESUPPLY VISIT

An **ongoing plan of care** will be developed and signed at the **exam visit** by either the PHN with gyn skills, RN-ES, APN or Physician (all referred to as "examiner"). The ongoing plan of care is developed in accordance with the protocol for the particular examiner. The ongoing plan of care written by the examiner must be reviewed and followed by the PHN at each visit. For re-supply visits, consult APN or physician for complications and warning signs. Also consult for side effects that have not responded to standard treatments. Record consultant instructions in the chart.

HEALTH TEACHING

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 or 4 of the required topics at each visit until instruction in all required topics is completed. Topics do not need to be repeated unless the client request a review or the provider assesses that a review is needed. **Address client counseling at each visit and base counseling/education on client needs and program requirements.**

For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee's Family Planning Clinical Guidelines. Also use the teaching tool on the reverse side of the method-specific consent form.

All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical record. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

There is a detailed list of the REQUIRED counseling/education topics in the Family Planning Program Clinical Guidelines, under Visit Guidelines. Other counseling topics are also detailed. A brief list of counseling/education topics is provided in the All Methods, Initial and/or Annual Family Planning Visit section of the PHN Protocol.

REFERENCES

Contraceptive Technology, Twentieth Revised Edition, Robert A. Hatcher, M.D., et al, 2011.

A Pocket Guide to Managing Contraception, Hatcher, R.A., Nelson, A.L., Zieman, M. et. al., Tiger, Georgia: Bridging the Gap Foundation, 2010.

"Family Planning Program Clinical Guidelines," Tennessee Department of Health, 2011.

Center for Disease Control and Prevention, U.S Medical Eligibility Criteria for Contraceptive Use, 2010, MMWR early release, Volume 59, May 28, 2010.

"Program Guidelines for Project Grants for Family Planning Services," Office of Population Affairs, U.S. Department of Health and Human Services, January 2001.

CONDOMS, SPONGE, AND SPERMICIDAL AGENTS

GENERAL INFORMATION

Male Condoms

There are three types of male condoms:

- Latex condom – a barrier to sperm and sexually transmitted infections
- Polyurethane condom – also a barrier to sperm and sexually transmitted infection
- Natural skin condom – a barrier to sperm ONLY

Female Condoms

There is one style of female condom sold under the trade name, FC2 Female Condom® by the Female Health Company (FHC). It is approved for both contraception and STD prevention.

Contraceptive Sponge

The Today Sponge® is the brand name of the contraceptive sponge currently available in the United States. The contraceptive sponge provides a spermicide and a polyurethane physical barrier to cover the cervix. The preservative in the Today Sponge® is metabisulfite. Persons with known allergy to sulfa drugs should not use the Today Sponge®.

Spermicides

Spermicides are also available over the counter and come in different formulations such as foam, gel, cream, film, suppository, or tablet. All are placed inside the vagina prior to sexual intercourse. Nonoxynol-9 is the active ingredient found in spermicides sold in the United States. Spermicides have been associated with vaginal irritation and microscopic ulceration that lead to easier transmission of HIV. **Clients at risk of HIV infection should never use a spermicide**.

SUBJECTIVE FINDINGS

A medical history is not required. If the client is participating in a visit with a nurse, collect a medical history.

CONTRAINDICATIONS

Male and female clients may receive a supply of condoms and/or spermicide without collecting or reviewing the medical history. However, when possible:

- Inquire about latex, polyurethane or spermicide allergy with condom or spermicide users.

- Sulfa allergy with sponge users.
- History of toxic shock syndrome for sponge users.
- Inquire and counsel about sexual behaviors that increase STD/HIV risks such as multiple partners either consecutively or concurrently, partners who are strangers to the client, a client who has a partner known to have other partners, or a client whose partner has sex with men.

CAUTION

Nonprescriptive methods of contraception containing the spermicide nonoxynol-9 can increase the risk of HIV transmission.

OBJECTIVE FINDINGS

Male and female clients may receive a supply of male or female condoms and/or spermicide and/or contraceptive sponge without a physical examination or laboratory testing.

ASSESSMENT

Appropriate for condom and/or spermicide use

PLAN

- Provide health teaching either face to face or in writing.
- Women will sign the consent for non-prescriptive method whether they are using a non-prescriptive as their method long term or short term (example, until they return for their implant or IUC).
- Provide requested method in adequate amount and include instruction for use and care.
- Re-supply visits are based on the client's request.
- Discuss, and if possible, provide emergency contraception with non-prescriptive barrier methods.
- Encourage consideration of a highly effective method of contraception.
- Discuss the benefits of planned pregnancy and the risks of unintended pregnancy.

HEALTH TEACHING:

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 or 4 of the required topics at each visit until instruction in all required topics is completed. Topics do not need to be repeated unless the client request a review or the provider assesses that a review is needed. **Address client counseling at each visit and base counseling/education on client needs and program requirements.**

For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee's Family Planning Clinical Guidelines. Also use the teaching tool on the reverse side of the method-specific consent form.

All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical record. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

There is a detailed list of the REQUIRED counseling/education topics in the Family Planning Program Clinical Guidelines, under Visit Guidelines. Other counseling topics are also detailed. A brief list of counseling/education topics is provided in the All Methods, Initial and/or Annual Family Planning Visit section of the PHN Protocol.

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"Family Planning Program Clinical Guidelines," Tennessee Department of Health, 2011.

Center for Disease Control and Prevention, U.S Medical Eligibility Criteria for Contraceptive Use, 2010, MMWR early release, Volume 59, May 28, 2010.

"Program Guidelines for Project Grants for Family Planning Services," Office of Population Affairs, U.S. Department of Health and Human Services, January 2001.

CONTRACEPTIVE PATCH

GENERAL INFORMATION

A physical exam is not necessary to begin the contraceptive patch. While deferring the physical examination should not be routine, certain circumstances may exist which make it reasonable. It is essential that the PHN see General Information and Plan of Care for a Deferred Exam found in Protocol 2.010, "All Methods, Initial and/or Annual Family Planning Visit" before dispensing a method without a physical exam.

See Family Planning Clinical Guidelines and the most current edition of Contraceptive Technology for method counseling details.

SUBJECTIVE FINDINGS

For method specific guidelines, including those for a deferred exam, refer to the Summary Chart of U.S. Medical Eligibility Criteria for Contraceptive use in Family Planning reference section 2.170.

U.S. Medical Eligibility Criteria category system:
1 = May provide method with no restrictions
2 = May provide method as the advantages generally outweigh the risks. Consult a physician or APN as necessary and document appropriately
3 = May not provide method, proven risk usually outweigh the advantages
4 = Method may not be used.

OBJECTIVE FINDINGS (Laboratory tests for FP clients are chosen as indicated by the method, or by client need. However, laboratory tests cannot exceed any established department or program screening or testing limits. Limitations on laboratory testing may be established to meet funding or other needs).

- Blood pressure
- Height and weight for BMI
- Physical examination[1] performed annually by examiner
- Hemoglobin or Hematocrit as indicated
- Pap smear in accordance with current Pap smear guidelines
- Sickle cell screening
- Syphilis serology
- Mantoux tuberculin test
- Pregnancy test

[1] If a TennCare child (under the age of 21) receives the major components of a Child Health/EPSDT exam through the health department's family planning clinic, she should also receive developmental screening and vision and hearing risk assessment/screening in order to complete the recommended AAP standards for preventive health care. REFER TO THE FAMILY PLANNING SECTION OF THE PTBMIS MANUAL FOR CORRECT CODING OF THIS TYPE VISIT.

- Rubella titer
- Wet prep (examiner)
- HIV testing
- Urinalysis
- Gonorrhea and chlamydia screening**.**

REFER TO SCREENING CRITERIA FOR CHLAMYDIA AND GONORRHEA SECTION 2.170.

ASSESSMENT

Appropriate to begin or continue the contraceptive patch either with or without the physical examination.

PLAN OF CARE FOR DEFERRED EXAM VISIT

The plan of care for a deferred exam visit is considered preliminary or temporary and can be established by the PHN. This preliminary or temporary plan of care must address the following:

- An explanation for the deferral.
- The medical history for the initial client, an updated medical history for the annual client who is deferring the exam, and an updated history for the supply client who is changing her method by deferred exam. The history must be negative for U.S. Medical Eligibility Criteria categories 3 and 4 to dispense without an exam. Consider a physician or APN consult for any category 2 findings and document appropriately.
- For annual visits (or re-supply visits), consult for side effects that have not responded to standard treatments (i.e., take COC pill at bedtime for nausea), complications, or warning signs. Record consult instruction in chart.
- Blood pressure measurement, weight, hemoglobin or hematocrit as indicated.
- Height for initial visit or annually for adolescents.
- Name, dosage, route, and frequency of the contraceptive chosen.
- The number of cycles given (up to 3 cycles).
- Informed consent form for an initial client or if giving the return client a new method.
- Document necessary health teaching to start and use method correctly and consistently. (See Client Instruction Sheet found in Appendix of Family Planning Clinical Guidelines available in English and Spanish).
- Document necessary health teaching regarding emergency warning signs:
  - **A** Abdominal pain – severe (as might be seen with liver disease, gallbladder disease, ectopic pregnancy)
  - **C** Chest pain - severe, (cough, shortness of breath or sharp pain on inhalation as might be seen with heart attack or pulmonary embolism)
  - **H** Headache - severe, dizziness, weakness, or numbness, especially if one-sided (as might be seen with migraine or stroke especially with numbness or muscle weakness)
  - **E** Eye disturbances vision loss or blurring, also speech problems (as might be seen with retinopathy or stroke)
  - **S** Severe leg pain in calf or thigh (as might be seen with thrombophlebitis)

- Offer condoms for improved STD protection.
- Offer condoms and/or contraceptive foam or film for use as back-up protection against unintended pregnancy.
- Date of the exam appointment. In clinics with open access systems, chart the date the client is expected to return

PLAN OF CARE FOR AN EXAM VISIT OR RESUPPLY VISIT

An **ongoing plan of care** will be developed and signed at the exam visit by either the PHN with gyn skills, RN-ES, APN or Physician (all referred to as "examiner"). The ongoing plan of care is developed in accordance with the protocol for the particular examiner. The ongoing plan of care written by the examiner must be reviewed and followed by the PHN at each visit. For re-supply visits, consult APN or physician for complications and warning signs. Also consult for side effects that have not responded to standard treatments. Record consultant instructions in chart

HEALTH TEACHING

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 or 4 of the required topics at each visit until instruction in all required topics is completed. Topics do not need to be repeated unless the client request a review or the provider assesses that a review is needed. **Address client counseling at each visit and base counseling/education on client needs and program requirements.**

For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee's Family Planning Clinical Guidelines. Also use the teaching tool on the reverse side of the method-specific consent form.

All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical chart. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

There is a detailed list of the REQUIRED counseling/education topics in the Family Planning Program Clinical Guidelines, under Visit Guidelines. Other counseling topics are also detailed A brief list of counseling/education topics is provided in the All Methods, Initial and/or Annual Family Planning Visit section of the PHN Protocol.

REFERENCES

Contraceptive Technology, Twentieth Revised Edition, Robert A. Hatcher, M.D., et al, 2011.

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Ortho Evra Package Insert, Ortho McNeil Pharmaceutical, Inc., November 2001.

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DIAPHRAGM

GENERAL INFORMATION

A diaphragm cannot be supplied by deferred exam because a fitting is required. As of August 2008, diaphragms by Ortho-McNeil Pharmaceuticals are made from silicone in the all-flex arcing spring style only. The size range has also changed. It is now available in sizes 65-80.

SUBJECTIVE FINDINGS

Collect medical history
Assess for allergy to spermicides

OBJECTIVE FINDINGS (Laboratory tests for FP clients are chosen as indicated by the method, or by client need. However, laboratory tests cannot exceed any established department or program screening or testing limits. Limitations on laboratory testing may be established to meet funding or other needs).

- Blood pressure
- Height and weight for BMI
- Physical examination[1] performed annually by examiner
- Hemoglobin or Hematocrit as indicated
- Pap smear in accordance with current Pap smear guidelines
- Sickle cell screening
- Syphilis serology
- Mantoux tuberculin test
- Pregnancy test
- Rubella titer
- Wet prep (examiner)
- HIV testing
- Urinalysis
- Gonorrhea and chlamydia screening

REFER TO SCREENING CRITERIA FOR CHLAMYDIA AND GONORRHEA FOUND IN SECTION 2.170.

PLAN OF CARE

[1] If a TennCare child (under the age of 21) receives the major components of a Child Health/EPSDT exam through the health department's family planning clinic, she should also receive developmental screening and vision and hearing risk assessment/screening in order to complete the recommended AAP standards for preventive health care. REFER TO THE FAMILY PLANNING SECTION OF THE PTBMIS MANUAL FOR CORRECT CODING OF THIS TYPE VISIT.

A plan of care will be developed and signed by either the PHN with gyn skills, RN-ES, APN, or Physician (all referred to as "examiner"). The plan of care is developed in accordance with the protocol for the particular examiner. The plan of care written by the examiner must be reviewed and followed by the PHN at each visit.

HEALTH TEACHING

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 to 4 of the required topics at each visit until instructions on all required topics are completed. Topics do not need to be repeated unless the client request a review or the provider assesses that a review is needed. **Address client counseling at each visit and base counseling/education on client needs and program requirements.**

For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee's Family Planning Clinical Guidelines. Also use the teaching tool on the reverse side of the method-specific consent form.

All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical chart. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

There is a detailed list of the REQUIRED counseling/education topics in the Family Planning Program Clinical Guidelines, under Visit Guidelines. Other counseling topics are also detailed. A brief list of counseling/education topics is provided in the All Methods, Initial and/or Annual Family Planning Visit section of the PHN Protocol.

REFERENCES

A Pocket Guide to Managing Contraception, Hatcher, R. A., Nelson, A.L., Zieman, M., et. al. Tiger, Georgia: Bridging the Gap Foundation, 2010
Contraceptive Technology, Twentieth Edition, Robert A. Hatcher, MD, et. al., 2011.
Family Planning Clinical Guidelines, Tennessee Department of Health, January 2011
Ortho Diaphragm, FDA approved product literature, August 2008.

PRIMARY DYSMENORRHEA

GENERAL INFORMATION

Primary dysmenorrhea is defined as painful menstruation that begins with or shortly after menarche. It is physiologic in nature due to either excessive secretion of prostaglandin by the endometrium or structural abnormality of the uterus. Studies of uterine contractions with primary dysmenorrhea reveal uterine pressures that are similar to those found during the second stage of labor.

Secondary dysmenorrhea begins later in life and is the result of having developed other physical factors. Endometriosis is an example of secondary dysmenorrhea. Both primary and secondary dysmenorrhea can be debilitating.

SUBJECTIVE FINDINGS

The client complains of one or more of the following symptoms just before and/or as her menstrual period begins:

- Lower abdominal cramping pain with onset of menstrual flow
- Pain radiating to the lower back or down inner thigh
- Nausea, vomiting, urinary frequency, and/or diarrhea during first 48 hours of menses
- Headache, dizziness, chills
- Weakness or fainting (symptoms of vasomotor instability)

OBJECTIVE FINDINGS

- Normal blood pressure
- Normal temperature
- Normal Hgb or Hct
- The client is within 1-2 years of having started her menstrual cycles

ASSESSMENT

Primary Dysmenorrhea

PLAN

1. At the earliest sign or symptom of menstruation or 1-2 days before the onset of menses begin the following:

    - IBUPROFEN 400 mg every 4 hours until relief not to exceed 3.2 g/day **OR**

- NAPROXEN SODIUM 220 mg tablets, 1-2 tablets as an initial dose, then 1 tablet every 8-12 hours as needed; not to exceed 5 tablets (1100mg) in a 24 hour period.

2. Discuss oral contraceptive use with the client and consult with the APN or MD if the client would like to begin COC to treat her primary dysmenorrhea. DMPA and the levonorgestrel-releasing IUD also decrease menstrual pain and menstrual flow. A consult would be necessary for these as well.

3. Other comfort measures:
   - Apply a warm heating pad to lower abdomen
   - Avoid constipation
   - Exercise regularly between menstrual cycles

Health Teaching:

- Review the signs and symptoms of toxic shock syndrome for tampon users.
- Young women who are menstruating are of reproductive age and will benefit from information regarding reproductive health and human sexuality. These can be offered at time convenient for the client and the staff.

Referral Indicators:

- Severe cramping unrelieved by OTC analgesics that persists beyond the first 2 days and/or increases in severity throughout menses.
- Dysmenorrhea with fever.
- Tampon users who develop sudden onset of high fever, chills, sunburn-like rash, hypertension, vomiting, and diarrhea should immediately remove the tampon and be referred for emergency medical treatment.
- Dysmenorrhea that begins later in life (years after menarche).

Follow-up:

- Patient will be asked to contact a health provider if no improvement in 48 hours.

REFERENCES

Contraceptive Technology, Twentieth Revised Edition, Robert A. Hatcher, M.D., et al, 2011.

EMERGENCY CONTRACEPTIVE PILLS (ECPs)

GENERAL INFORMATION

Emergency contraceptive pills may be provided to clients by deferred exam. It is essential that the PHN see General Information and Plan of Care for a Deferred Exam found in Protocol 2.010, "All Methods, Initial and/or Annual Family Planning Visit" before issuing a method without a physical exam.

All clinics must have plans in place to provide ECPs on site to clients who request them. All clinics must have plans in place to educate clients regarding the availability of ECPs.

The package label for ECPs recommends starting treatment within 72 hours of unprotected sexual intercourse, but they may be effective for up to 120 hours. An order is required from a physician or APN if patient is seeking treatment after 72 hours. **For progestin-only ECPs with two tablets, the tablets must be taken with the specified time period separating them. Taking them any other way requires an order from a physician or APN.**

ECPs following rape and sexual abuse

If a victim of rape or sexual abuse is underage, refer to *Health Services Administration (HSA) Policy Manual section 8.8* for direction regarding child abuse reporting. All citizens of Tennessee, including health care professionals, are required to report any suspicion of child abuse, including child sexual abuse. The Department of Children's Services (DCS) has established a central intake number: 1-877-237-0004 for reporting **SUSPECTED** child abuse or child sexual abuse. Tennessee citizens are required to report if they **suspect** child abuse or child sexual abuse. Refer to the DCS website: at www.tennessee.gov/youth for further information on the process for reporting suspected child abuse or child sexual abuse is described. The Child Protective Services section of the website provides the required reporting information. Clinics are discouraged from deciphering what is or is not child abuse or child sexual abuse. It is the responsibility of DCS to decide whether or not the reported suspicion warrants investigation under Tennessee's child abuse/child sexual abuse laws.

SUBJECTIVE FINDINGS

- Client reports unprotected sexual intercourse sometime within the previous 72-120 hours. Note that beyond 72 hours the PHN will need a consult with a physician or an APN in order to issue post 72 hours.
- Record last menstrual period if known.

Contraindications:

- A known established pregnancy (not that it is dangerous for the woman or the pregnancy, but because ECPs cannot prevent an established pregnancy)
- Undiagnosed abnormal vaginal bleeding
- Allergy to the product

Caution:

According to the American College of Obstetricians and Gynecologists, there have been no reports of major cardiovascular or neurological side effects associated with estrogen containing ECPs; nevertheless, it may be preferable to choose a progestin-only ECP for clients with a history of the following:

- Heart attack
- Stroke
- Thrombophlebitis
- Blood clot in the brain, leg, lung, or eye

Instruct client to watch for **DANGER SIGNS** ("ACHES") during the two weeks following the administration of ECPs:

A Abdominal pain – severe (as might be seen with liver disease, gallbladder disease, ectopic pregnancy)

C Chest pain - severe, (cough, shortness of breath or sharp pain on inhalation as might be seen with heart attack or pulmonary embolism)

H Headache - severe, dizziness, weakness, or numbness, especially if one-sided (as might be seen with migraine or stroke especially with numbness or muscle weakness)

E Eye disturbances vision loss or blurring, speech problems (as might be seen with retinopathy or stroke)

S Severe leg pain in calf or thigh (as might be seen with thrombophlebitis)

OBJECTIVE FINDINGS

- Client is already late for her menstrual period; advise a pregnancy test
- Client is not late for her menstrual period; no pregnancy test needed

ASSESSMENT

Client requests ECPs and has no contraindications

PLAN OF CARE FOR PHN

- Physical examination and pregnancy testing are not required.
- Provide ECPs and document in chart.
- Consult physician or APN before providing ECPs if unprotected sexual intercourse greater than 72 hours prior to visit.
- Offer Family Planning clinic services on same day or offer an appointment.
- Provide literature and counseling on contraceptive methods and the benefits of consistent use of a regular contraceptive method. Most methods can be supplied at time of ECP visit for immediate use after completion of the ECP regimen.

- Clients without contraindications to combined hormonal methods may be given 3-month supply of the method and an appointment to return for her family planning physical exam (see deferred exam protocol); the client begins her method the day after ECP regimen is completed and continues with her method, as if the ECP regimen had been the beginning of a new cycle. She should use a back-up method for the first seven days of her contraceptive method.
- Counsel and educate according to consent form; sign consent form. Only one consent form is needed in the chart for more than one request for ECPs.
- Encourage the client to eat or drink something with pills to prevent nausea and vomiting. Nausea and vomiting is very unusual with progestin-only ECPs. Most women taking progestin-only ECPs will not require an anti-emetic.
- Consult with APN or physician/local protocol for directives regarding care of client with emesis after taking ECP.
- Instruct client that nausea/emesis may occur with estrogen/progestin ECPs Instruct client on the availability of non-prescriptive anti-nausea treatment options including the following:

Choices of Non-prescriptive Anti-emetic Drugs	**Dose**	**Timing of Administration**
Meclizine hydrochloride (Dramamine Less Drowsy Formula®, Bonine®) [the only 24 hour choice]	One or two 25 mg tablets	1 hour before first ECP dose; repeat as needed in 24 hours
Diphenhydramine hydrochloride (Benadryl®)	One or two 25 mg tablets or capsules	1 hour before first ECP dose; repeat as needed every 4-6 hours (Max of 300 mg/day)
Dimenhydrinate (Dramamine Original®)	One to two 50 mg tablets or 4 to 8 teaspoons liquid	30 minutes to 1 hour before first ECP dose; repeat as needed every 4 -6 hours (Max of 400 mg/day)
Cyclizine hydrochloride (Marezine® - 50 mg tablets or Bonine for Kids® - 25 mg tablets)	One 50 mg tablet or two 25 mg tablets	30 minutes before the first ECP dose; repeat as needed every 4 -6 hours (Max of 200 mg/day)

Provide ECPs from one of the following regimens:

Brand Name	Pills per Dose Take 2 doses 12 hours apart	Ethinyl Estradiol per dose (mcg)	Levonorgestrel per dose (mg)[a]
Aviane®	5 orange pills	100	0.5
Cryselle®	4 white pills	120	0.6
Enpresse®	4 orange pills	120	0.5
Jolessa®	4 pink pills	120	0.6
Lessina®	5 pink pills	100	0.5
Levora®	4 white pills	120	0.6
Lo/Ovral®	4 white pills	120	0.6
LoSeasonique	5 orange pills	100	0.5
Low Ogestrel®	4 white pills	120	0.6
Lutera®	5 white pills	100	0.5
Lybrel	6 yellow pills	120	0.54
Nordette®	4 light orange pills	120	0.6
Ogestrel®	2 white pills	100	0.5
Portia®	4 pink pills	120	0.6
Quasense®	4 white pills	120	0.6
Seasonale®	4 pink pills	120	0.6
Seasonique®	4 light blue-green pills	120	0.6
Sronyx	5 white pills	100	0.5
Trivora®	4 pink pills	120	0.5
Dedicated Emergency Contraception products			
Next Choice®	1 pill, taken up to 72 hours after unprotected intercourse followed by a second pill 12 hours later	0	Levonorgestrel 0.75mg each tablet
Plan B One-step®	1 pill and only 1 dose up to 72 hours after unprotected intercourse	0	Levonorgestrel 1.5 mg
Ella® - requires prescription	1 pill, 1 dose, up to 120 hours after unprotected intercourse	0	Ulipristal acetate 30 mg

[a]The progestin in Cryselle®, Lo/Ovral®, Low-Ogestrel®, Ogestrel®, and Ovral® is norgestrelcontains two isomers, only one of which is bioactive.Therefore, 1.2 mg of norgestrel equals 0.6 mg of levonorgestrel..

HEALTH TEACHING:

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 or 4 of the required topics at each visit until instruction in all required topics is completed. Topics do not need to be repeated unless the client request a review or the provider assesses that a review is needed. **Address client counseling at each visit and base counseling/education on client needs and program requirements.**

For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee Family Planning Clinical Guidelines. Also use the teaching tool on the reverse side of the method-specific consent form.

All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical record. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

There is a detailed list of the required counseling/education topics in the Family Planning Program Clinical Guidelines, under Visit Guidelines. Other counseling topics are also detailed. A brief list of counseling/education topics is provided in the "All Methods, Initial and/or Annual Family Planning Visit" section of the PHN Protocol.

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American College of Obstetricians and Gynecologists (ACOG), "Emergency Contraception", ACOG Technical Bulletin, 69, December 2005.

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Tennessee Department of Health, Bureau of Health Services, Guidelines for the Use of Emergency Contraceptive Pills, Memorandum from Long, W., Hagstrom, R., & Major, M., to Regional Health Officers, Regional Nursing Directors, Regional and Agency Family Planning Administrators, November 8, 1994.

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Department of Health. "Family Planning Program Guidelines." http://hsaintranet.health.tn.gov/FamilyPlanning/2011%20Family%20Planning%20Clinical%20Guidelines%20January.pdf. January 2011.

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FERTILITY AWARENESS-BASED METHODS (FAM)

GENERAL INFORMATION

Fertility awareness-based methods can be provided by deferred exam if the nurse is confident in her ability to teach the method. Otherwise she should defer to the NP or physician.

There are five different types of fertility awareness-based methods. Couples may elect to use more than one of these at a time. The methods are:

Fertility Awareness-based Method	Synopsis
Ovulation Method	This ovulation method relies on assessment of the cervical mucus by look, touch, and by the feeling of wetness at the vulva.
Symptothermal Method	The symptothermal method is a method that combines observation of cervical mucous with basal body temperature (BBT).
Calendar Method	The calendar rhythm method requires that a woman keep a record of the length of 6-12 menstrual cycles. Subtract 11 from the longest cycle to find the last fertile day and 18 from the shortest cycle to find the first fertile day.
Standard Days Method	The standard days method is only for women whose menstrual cycles are 26 to 32 days long. To simplify this method, the client may use a specially designed, color-coded string of beads, brand name CycleBeads®.
Simple Observation Method	Until a woman can say, "I do not have vaginal secretions today and I did not have secretions yesterday", she must consider herself fertile.

For more detailed information, see Tennessee's Family Planning Clinical Guidelines and the most recent edition of Contraceptive Technology.

SUBJECTIVE FINDINGS

Collect and review medical history including obstetric and gynecologic history with emphasis on the menstrual cycle preferable for the previous 6-12 months.

OBJECTIVE FINDINGS (Laboratory tests for FP clients are chosen as indicated by the method, or by client need. However, laboratory tests cannot exceed any established department or program screening or testing limits. Limitations on laboratory testing may be established to meet funding or other needs).

- Blood pressure
- Height and weight for BMI
- Physical examination[1] performed annually by examiner

[1] **I**f a Tenncare child (under the age of 21) receives the major components of a Child Health/EPSDT exam through the health department's family planning clinic, she should also receive a developmental screening and vision and hearing risk assessment/screening in order to complete the recommended AAP standards for preventive health care. REFER TO THE FAMILY PLANNING SECTION OF THE PTBMIS MANUAL FOR CORRECT CODING OF THIS TYPE VISIT.

- Hemoglobin or Hematocrit as indicated
- Pap smear in accordance with current Pap smear guidelines
- Sickle cell screening
- Syphilis serology
- Mantoux tuberculin test
- Pregnancy test
- Rubella titer
- Wet prep (examiner)
- HIV testing
- Urinalysis
- Gonorrhea and chlamydia screening

REFER TO SCREENING CRITERIA FOR CHLAMYDIA AND GONORRHEA FOUND IN SECTION 2.170.

PLAN

The plan of care for a deferred exam visit is considered preliminary or temporary and can be established by the PHN. This preliminary or temporary plan of care must address the following:

- An explanation for the deferral.
- The medical history for the initial client and an updated medical history for the annual client.
- For annual visits (or re-supply visits), consult APN or physician for problems that have not responded to standard FAM counseling. Record consultant instructions in chart.
- Blood pressure measurement, hemoglobin or hematocrit as indicated.
- Name of the fertility awareness-based method chosen with summary of the instructions given for the particular method.
- Informed consent form for an initial client or if giving the return client a new method.
- Necessary health teaching to use method correctly and consistently.
- Document health teaching/counseling in chart.
- Offer condoms for improved STD protection
- Offer condoms and/or contraceptive foam or film for use as back-up protection against unintended pregnancy.
- Date of the exam appointment. In clinics with open access systems, chart the date the client is expected to return.

PLAN OF CARE FOR AN EXAM VISIT

An **ongoing plan of care** will be developed and signed at the **exam visit** by either the PHN with gyn skills, RN-ES, APN or Physician(all referred to as "examiner"). The ongoing plan of care is developed in accordance with the protocol for the particular examiner. The ongoing plan of care written by the examiner must be reviewed and followed by the PHN at each visit.

For re-supply visits, consult APN or physician for complications and warning signs. Also consult for side effects that have not responded to standard treatments. Record consultant instructions in chart.

HEALTH TEACHING

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 or 4 of the required topics at each visit until instruction in all required topics is completed. Topics do not need to be repeated unless the client request a review or the provider assesses that a review is needed. **Address client counseling at each visit and base counseling/education on client needs and program requirements.**

For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee's Family Planning Clinical Guidelines. Also use the teaching tool on the reverse side of the method-specific consent form.

All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical record. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

There is a detailed list of the REQUIRED counseling/education topics in the Family Planning Program Clinical Guidelines, under Visit Guidelines. Other counseling topics are also detailed. A brief list of counseling/education topics is provided in the All Methods, Initial and/or Annual Family Planning Visit section of the PHN Protocol.

REFERENCES

Contraceptive Technology, Robert A. Hatcher, M.D., et al., Twentieth Revised Edition, 2011.
"Family Planning Clinical Guidelines" Tennessee Department of Health, January 2011
A Pocket Guide to Managing Contraception, Hatcher, R.A., Nelson, A.L., Zieman, M. et. al., Tiger, Georgia: Bridging the Gap Foundation, 2010.
www.cyclebeads.com

INTRAUTERINE CONTRACEPTIVES (IUC)

GENERAL INFORMATION

All PHNs must be able to discuss the intrauterine contraceptives (IUC) option with clients, provide the client with written information on the safety and effectiveness of IUCs, and answer any questions the client may have. All PHNs must know how to make IUC referrals. IUCs cannot be provided by deferred exam.

Patient package inserts for either product is available on line at www.paraguard.com (scroll down and select Patient Information on the left side of the screen, only need to print pages 4-5) or www.mirena-us.com (scroll to the bottom of the page and select Patient Information, 4 page document.) Before making an IUC referral, review the patient package insert with the patient and provide her a copy. Advise her to take the patient package insert with her to the IUC referral visit. Document in the chart that the patient package insert was reviewed and given to the client.

Contraindications for IUCs:

- Active pelvic infection (including PID, endometritis, mucopurulent cervicitis, and pelvic tuberculosis)
- Known or suspected pregnancy
- Cervical or endometrial cancer
- Abnormal vaginal bleeding that has not been evaluated
- Severe uterine distortion (bicornuate uterus, cervical stenosis, or fibroids the severely distort the uterine cavity)
- Gestational trophoblastic neoplasia
- Wilson's disease or copper allergy (Paragard only)

SUBJECTIVE FINDINGS

Collect medical history

OBJECTIVE FINDINGS (Laboratory tests for FP clients are chosen as indicated by the method, or by client need. However, laboratory tests cannot exceed any established department or program screening or testing limits. Limitations on laboratory testing may be established to meet funding or other needs).

- Blood pressure
- Height and weight for BMI
- Physical examination performed annually by examiner
- Hemoglobin or Hematocrit as indicated
- Pap smear in accordance with current Pap smear guidelines

1 If a TennCare child (under the age of 21) receives the major components of a Child Health/EPSDT exam through the healthepartment's family planning clinic, she should also receive developmental screening and vision and hearing risk assessment/screening in order to complete the recommended AAP standards for preventive health care. REFER TO THE FAMILY PLANNING SECTION OF THE PTBMIS MANUAL FOR CORRECT CODING OF THIS TYPE VISIT.

- Sickle cell screening
- Syphilis serology
- Mantoux tuberculin test
- Pregnancy test
- Rubella titer
- Wet prep (examiner)
- HIV testing
- Urinalysis
- Gonorrhea and chlamydia screening

REFER TO SCREENING CRITERIA FOR CHLAMYDIA AND GONORRHEA SECTION 2.170.

ASSESSMENT

Possible candidate for IUC insertion/Candidate for IUC referral

PLAN

A plan of care will be developed and signed by either the PHN with gyn skills, , RN-ES, the APN or Physician (all referred to as "examiner"). Any "examiner" may perform the pre-insertion examination, but only those trained for the procedure may perform the insertion. The plan of care is developed in accordance with the protocol for the particular examiner. The plan of care written by the examiner must be reviewed and followed by the PHN at each visit.

INSTRUCTIONS

IUC insertion day instructions

- Provide written and oral instructions on the use of the IUC including name of the IUC, date of insertion number of years the device is effective.
- Perform pregnancy test
- Obtain informed consent prior to insertion. Use the patient package insert provided with the device (or online as noted above) and the teaching tool found on the reverse side of the method specific consent form.
- Oral NSAIDs may be recommended (at the discretion of the inserting provider) one hour prior to insertion and repeated as directed following insertion to minimize cramping and pain.
- Advise client to bring someone with her to the clinic to provide a ride home in case she experiences pain or nausea immediately after insertion.
- Paragard is effective against pregnancy immediately. If Mirena is not inserted within 7 days after the start of her menstral cycle, then instruct the patient to use another contraceptive method for 7 days.
- Do not insert anything into the vagina or have intercourse for 24 hours following insertion of the IUC.
- IUCs do not protect against STDs and HIV. Advise clients to use latex or polyurethane condoms to decrease the risks of STDs. Also, counsel the client to avoid high risk sexual behaviors including multiple partners and having a sexual partner with multiple partners.
- IUC users will need to check for the IUC string at the end of each menstrual cycle. After insertion, give the client the trimmed IUC strings to help her learn how they feel. She should report the absence

of or any changes in the length of the strings. She should report the presence of the plastic portion of the IUC if it is palpable at the cervical os.

- Schedule IUC follow-up appointment in 4-12 weeks or as recommended by the inserter.
- Encourage the client to call or come in for any questions or problems.

IUC insertion charting and tracking

- Document in chart that the patient package insert was reviewed with and given to the client.
- Record name of IUC, lot number, date of insertion, date for removal, and expiration date in the chart.
- If region uses a problem list, record "IUC surveillance" on problem list with insertion date as the date of onset.

IUC Warning Signs

All IUC clients must be counseled to report the signs of pelvic infection. These include:

- Malodor
- Fever (101$_o$F or more without obvious cause)
- Sudden severe abdominal or suprapubic pain
- Dyspareunia

Other **WARNING SIGNS** that IUC clients must report immediately include:

- Abdominal or pelvic pain (ectopic pregnancy)
- Prolonged or heavy bleeding/discharge/odor (infection)
- Painful sexual intercourse
- Fever or chills (infection)
- Any signs of pregnancy
- Exposure to gonorrhea/chlamydia/any STD
- Cannot feel string or can feel plastic
- Missed period or abnormal spotting or bleeding (infection or ectopic pregnancy)
- Flu-like illness (infection)

The following is a useful acronym for remember the IUC warning signs:

P Period late (pregnancy), abnormal spotting or bleeding
A Abdominal pain, pain with intercourse
I Infection exposure (any STD), abnormal discharge
N Not feeling well, fever, chills
S String missing, shorter or longer

HEALTH TEACHING

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 to 4 of the required topics at each visit until instruction in all required topics is completed. Topics do not need to be repeated unless the client request a review or the provider assesses that a review is needed. **Address client counseling at each visit and base counseling/education on client needs and program requirements.**

For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee's Family Planning Clinical Guidelines. Also use the teaching tool on the reverse side of the method-specific consent form.

All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical chart. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

There is a detailed list of the REQUIRED counseling/education topics in the Family Planning Program Clinical Guidelines, under Visit Guidelines. Other counseling topics are also detailed. A brief list of counseling/education topics is provided in the All Methods, Initial and/or Annual Family Planning Visit section of the PHN Protocol.

REFERENCES

American College of Obstetricians and Gynecologists, "Intrauterine Devices", Number 59, Jan 2005
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PREGNANCY TEST

GENERAL INFORMATION

Patients requesting pregnancy tests at the Health Department should be tested on that day and only deferred if absolutely necessary. Pregnancy testing must be performed according to the *Pregnancy Testing Guidelines* contained in the Family Planning Clinical Guidelines.

- Chlamydia and gonorrhea are STDs that can affect long term fertility and the health of any current pregnancy. Early detection and treatment can preserve fertility and improve pregnancy outcome.

  Tennessee STD Program standards regarding the chlamydia/gonorrhea test at the time of the pregnancy test are as follows:

  > **All women under age 30** reporting to clinic for a urine pregnancy test should be offered chlamydia and gonorrhea screening from their pregnancy test urine sample. Considering the sequelae that might occur in the mother and neonate if the infection persists, repeat testing is recommended 4 - 6 weeks after completion of therapy for all pregnant women to ensure therapeutic cure.

If the gonorrhea/chlamydia test is positive, refer to the treatment guidelines found in the PHN Protocol for Chlamydia and Gonorrhea and if needed, Partner Delivered Therapy for Chlamydia. Obtain informed consent and forward the record to the prenatal care provider. The prenatal care provider is responsible for the test of cure.

- AAP recommendations for prenatal education includes guidelines for the prevention of sleep related deaths. See “ABC’s of Safe Sleep” handout.

SUBJECTIVE FINDINGS

Date of LMP
History of unprotected coitus since LMP
Symptoms of pregnancy and date symptoms appeared:

- Breast tenderness
- Fatigue
- Nausea
- Urinary frequency

History of STDs
Current family planning method if any
Any over-the-counter and/or prescription drug use
Any alcohol use and/or substance abuse
Is she smoking cigarettes?
Does she want to be pregnant now?
When, if ever, would she like to be pregnant?

OBJECTIVE FINDINGS

Positive or negative pregnancy test

ASSESSMENT

Pregnancy test positive, pregnancy intended
Pregnancy test positive, pregnancy unintended
Pregnancy test negative, pregnancy desired
Pregnancy test negative, pregnancy not desired

PLAN OF CARE

- Inform client that pregnancy cannot be accurately diagnosed, nor gestational age determined, through laboratory testing alone. A diagnosis of pregnancy consists of a history, pregnancy test, and physical examination, including pelvic examination.
- Discuss test results clearly and objectively.
- Complete relevant forms and document counseling in chart.
- If pregnancy test is negative, repeat the pregnancy test if no menses in two weeks.
- Compile and keep current a county specific resource list for referrals.
- Inform the client that chlamydia and gonorrhea are STDs that can affect long term fertility and the health of any current pregnancy. Early detection and treatment can preserve fertility and improve pregnancy outcome.

If the pregnancy test is negative and pregnancy is not desired:

- Explore the client's feelings about the pregnancy test result.
- Discuss contraception.
- Discuss emergency contraception.
- Provide condoms.
- Offer the client a brochure on family planning program services and/or explain program services.
- If the client is an adolescent, encourage her to discuss contraceptive use with parent(s) or another responsible family member.
- If possible, admit the client to the family planning program that day, especially if she is an adolescent. If a clinic opening is not available that day, waive the physical exam and if there are no contraindications in her medical history, give 3 months supply of birth control method. Schedule a physical exam within 3 months. See PHN Protocol for the method of choice.
- Consider creating a tickler file (manual or PTBMIS) for at risk clients and follow-up as needed for an appropriate period of time (nursing judgment).

If the pregnancy test is negative and pregnancy is desired:

- Explore the client's feelings about the pregnancy test result.
- Discuss the menstrual cycle and fertile days.
- Provide pre-conception counseling including:
    - Nutrition and the importance of folic acid
    - The importance of dental care to good pregnancy outcomes
    - The impact of smoking during pregnancy and after pregnancy

  - The importance of early prenatal care
  - The impact of alcohol, medications, and substance abuse during pregnancy
  - The impact of sexually transmitted diseases on pregnancy
- Review services available at the local health department including WIC, presumptive eligibility for TennCare, and the HUGS home visiting program.
- Encourage an adolescent to discuss their desire for pregnancy with a parent or another responsible family member; explore why they want to be pregnant.
- Consider creating a tickler file (manual or PTBMIS) for the at-risk adolescent and follow-up as needed for an appropriate period of time (nursing judgment).

If the pregnancy test is positive and the pregnancy is desired:

- Discuss the importance of early prenatal care.
- Enroll eligible clients for presumptive eligibility for TennCare.
- Find a prenatal care resource if no private insurance and not TennCare eligible.
- Enroll eligible clients for WIC.
- Enroll eligible clients for HUGS.
- Review danger signs of pregnancy, including signs and symptoms of a threatened miscarriage or ectopic pregnancy:
  - Bleeding
  - Spotting
  - Lower abdominal pain
- Discuss prevention of sleep related deaths and SIDS. See "ABC's of Safe Sleep" handout included at the end of this protocol.
- Discuss nutrition, prenatal vitamins, and the importance of folic acid.
- Discuss the importance of dental care to good pregnancy outcomes.
- Make a dental referral.
- Discuss the impact of smoking during pregnancy and after pregnancy.
- Discuss the impact of alcohol, medications, and substance abuse during pregnancy.
- Discuss the impact of sexually transmitted diseases on pregnancy.

If the pregnancy test is positive and the pregnancy is not desired:

- Explore the client's feelings about the pregnancy test result.
- Inform client about all available options: parenting, adoption, termination. Then provide factual information, nondirective counseling, and review resources **on only those options requested by the patient**.
- All clients need the information regarding good health practices in pregnancy (listed under test positive/pregnancy desired) until their decision regarding the pregnancy is made. Give complete information as seems appropriate for the given client. Offer her the opportunity to return for further counseling; discuss the possibility of her bringing in her partner, a friend, or a family member.
- Encourage adolescents to speak with a parent or other responsible family member as soon as possible.
- Consider whether or not a mental health referral is needed.
- Consider creating a tickler file (manual or PTBMIS) for these at risk clients and follow-up for an appropriate period of time (nursing judgment).
- Make a HUGS referral if this pregnancy is continued.

Options Counseling Guide

Explore the client's feelings about the pregnancy. If the client is unsure of how to proceed with the pregnancy, it is the nurse's responsibility to inform the client about all available options. Then the nurse should offer factual information and nondirective counseling only on those options requested by the .client. Assist the client in identifying health, social, and economic consequences of each option discussed. Provide client with all necessary referrals.

Prenatal care and delivery

- Explain the system for prenatal care through Health Department (if offered).
- Explain the system for prenatal care in the private sector.
- Assess for Presumptive Eligibility for TennCare and enroll if eligible.
- Find a prenatal care resource if no private insurance and not TennCare eligible.
- Refer to HUGS home visiting program.
- Refer to WIC.
- Review danger signs of pregnancy, including signs and symptoms of a threatened miscarriage or ectopic pregnancy:
  - Bleeding
  - Spotting
  - Lower abdominal pain
- Discuss nutrition, prenatal vitamins, and the importance of folic acid.
- Discuss the importance of dental care to good pregnancy outcomes.
- Make a dental referral.
- Discuss the impact of smoking during pregnancy and after pregnancy.
- Discuss the impact of alcohol, medications, and substance abuse during pregnancy.
- Discuss the impact of sexually transmitted diseases on pregnancy.

Infant care

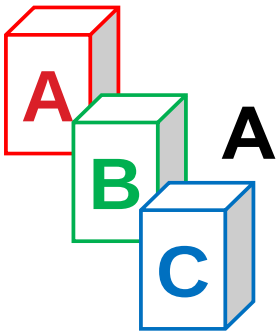
- Discuss day care needs if returning to school or employment.
- Explore family support system.
- Explore the daily needs of a newborn and its impact on lifestyle.
- Discuss ABC's of Safe Sleep. Encourage parents to share ABC's with all other caregivers of the newborn.

Foster Care or Adoption

- Refer to Department of Human Services.
- Refer to local private agencies.
- Offer to meet again to discuss further as questions may develop later.

Pregnancy termination

- Answer patient's questions. Avoid personal biases.
- Remember that abortion is a legal option.
- Remember that no state or federal funds are available.
- Have a list of providers available.
- Discuss the timetable for decision-making (obtaining pregnancy termination during the first trimester).
- Do not give specific facility brochures.
- Do not make appointments for the patient (the patient should be given sufficient information to make her own appointment).
- Do not provide transportation.



ABC's of Safe Sleep

Babies should sleep…

Alone

- Not with an adult, another child, or pets
- Not with pillows or stuffed toys
- Not with crib bumpers
- Room-sharing* is recommended

On their Back

- Not on their side
- Not on their stomach

In a Crib

- Not in an adult bed
- Not on a couch or sofa
- Not in a chair

*The American Academy of Pediatrics recommends having the infant sleep in the same room as the parent(s) on a separate sleep surface (crib or other similar surface). Evidence suggests that this arrangement decreases the risk of Sudden Infant Death Syndrome (SIDS) by up to 50%.

REFERENCES

Tennessee Department of Health, "Family Planning Clinical Guidelines", January 2011

U.S. Department of Health and Human Services, Public Health Service, Health Service Administration, Bureau of Community Health Services Program, *Program Guidelines For Project Grants For Family Planning*, 2001

U.S. Department of Health and Human Services, Public Health Service, Standards of Compliance for Abortion-Related Services in Family Planning Service Projects, *Federal Register* 58(23), February 5, 1993.

American Academy of Pediatrics, "AAP Expands Guidelines for Infant Sleep Safety and SIDS Risk Reduction. October 18, 2011.

PROGESTIN-ONLY IMPLANT(S)

GENERAL INFORMATION

In May of 2011, the FDA approved Nexplanon®, a contraceptive implant containing 68mg of etonogestrel to replace Implanon®, which is no longer being manufactuered. Once the Implanon supply currently available in each clinic or regional pharmacy has been depleted Nexplanon® will be the only progestin-only implant available. Nexplanon® is exactly the same as Implanon® except it contains barium sulfate making it radiopaque and it has a different applicator that makes subdermal insertion easier. Implanon® and Nexplanon® do not contain silicone or latex. The progestin-only implant is placed in the upper, inner aspect of the non-dominant arm by a health care provider who has received training in placement and removal from the manufacturer's training faculty.

All PHNs must be able to discuss progestin-only implant(s) option with clients, provide the client with written information on the safety and effectiveness of implants, and answer any questions the client may have. All PHNs must know how to make implant referrals. Implants cannot be provided by deferred exam. See Family Planning Clinical Guidelines, the package insert available on line, and the most current edition of Contraceptive Technology for method details.

Before making an implant referral, review the patient package insert (available on line at www.implanon-usa.com or www.nexplanon-usa.com) with the client and give it to her to read. Advise client to take the patient package insert with her to the implant referral visit.

Candidates for implant contraceptives include, but are not limited to:

- Women who want a 3 year contraceptive effect
- Women who are accepting of irregular menstruation
- Women who have no contraindications to the method

SUBJECTIVE FINDINGS

Collect medical history.

OBJECTIVE FINDINGS (Laboratory tests for FP clients are chosen as indicated by the method, or by client need. However, laboratory tests cannot exceed any established department or program screening or testing limits. Limitations on laboratory testing may be established to meet funding or other needs).

- Blood pressure
- Height and weight for BMI
- Physical examination[1] performed annually by examiner

[1] If a TennCare child (under the age of 21) receives the major components of a Child Health/EPSDT exam through the health department's family planning clinic, she should also receive developmental screening and vision and hearing risk assessment/screening in order to complete the recommended AAP standards for preventive health care. REFER TO THE FAMILY PLANNING SECTION OF THE PTBMIS MANUAL FOR CORRECT CODING FOR THIS TYPE VISIT.

- Hemoglobin or Hematocrit as indicated
- Pap smear in accordance with current Pap smear guidelines
- Sickle cell screening
- Syphilis serology
- Mantoux tuberculin test
- Pregnancy test
- Rubella titer
- Wet prep (examiner)
- HIV testing
- Urinalysis
- Gonorrhea and chlamydia screening

REFER TO SCREENING CRITERIA FOR CHLAMYDIA AND GONORRHEA SECTION 2.170

ASSESSMENT

Appropriate to refer for or to continue (annual or follow-up visit) the progestin-only implant.

PLAN

A plan of care will be developed and signed by either the PHN with gyn skills, RN-ES, the APN or Physician (all referred to as "examiner"). Any "examiner" may perform the pre-insertion examination, but only those trained for the procedure may perform the insertion. The plan of care is developed in accordance with the protocol for the particular examiner. The plan of care written by the examiner must be reviewed and followed by the PHN at each visit.

INSTRUCTIONS

- Obtain informed consent prior to placement of the implant.
- Pregnancy test required day of insertion.
- Document necessary health teaching to use method correctly and consistently.
- Record name of implant, lot number or other product ID number, placement site, date of placement, date for removal.
- Implants do not protect against STD's and HIV. Advise clients to use latex or polyurethane condoms to decrease the risks of STDs. Also counsel the client to avoid high risk sexual behaviors including multiple partners and having a sexual partner with multiple partners.
- If the region uses a Problem List, record Implant Surveillance on the list with date of insertion as the date of onset.
- Consult for problems with insertion site or other side effects or warning signs.
- Document necessary health teaching regarding the following emergency warning signs:

Warning signs: The following are NOT NORMAL and should be reported to the clinic or hospital at once:

- Heavy vaginal bleeding
- Severe painful headaches, vomiting, dizziness or fainting, numbness in arm or leg (possible stroke)
- Blurred, double, or loss of vision (clot in eye)
- Coughing up blood, chest pain, shortness of breath (possible clot in lung)
- Severe crushing chest pain (possible heart attack),

- Severe abdominal pain (possible ectopic pregnancy, ovarian cyst, gallbladder disease, or liver problems)
- Severe and persistent leg pain (possible clot in leg)
- Jaundice
- Breast lump
- Sadness, tiredness, lack of energy, weakness, difficulty sleeping (possible severe depression)
- Pregnancy symptoms
- Allergic reaction (rare)
- Severe depression
- Pain, pus, or bleeding at insertion site

HEALTH TEACHING:

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 or 4 of the required topics at each visit until instruction in all required topics is completed. Topics do not need to be repeated unless the client request a review or the provider assesses that a review is needed. **Address client counseling at each visit and base counseling/education on client needs and program requirements.**

For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee's Family Planning Clinical Guidelines. Also use the teaching tool on the reverse side of the method-specific consent form.

All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical chart. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

There is a detailed list of the REQUIRED counseling/education topics in the Family Planning Program Clinical Guidelines, under Visit Guidelines. Other counseling topics are also detailed A brief list of counseling/education topics is provided in the All Methods, Initial and/or Annual Family Planning Visit section of the PHN Protocol.

REFERENCES

Nexplanon® Physician and Patient Package insert, 2011
Implanon® Physician and Patient Package Insert, Organon USA, 2006.
Contraceptive Technology Hatcher, R. A., Trussell, J., Nelson, A. L., Cates, W.,Kowal, D., & Policar, M.,Twentieth Revised Edition, 2011, Irvington Publishers, Inc., New York, NY.
Pocket Guide To Managing Contraception, Hatcher, R. A., Nelson, A. L., Zieman, M., et. al., Tiger, Georgia: Bridging the Gap Foundation, 2010-2012.
Center for Disease Control and Prevention, US Medical Eligibility Criteria for Contraceptive Use, MMWR early release, Vol. 59, May 28, 2010.
Contraceptive Technology Update, "Bulletin: Single-rod contraceptive Implant Implanon gets Food & Drug Administration's OK", Vol. 27, No. 9, September 2006.
www.implanon-usa.com
www.nexplanon-usa.com

PROGESTIN-ONLY INJECTABLE CONTRACEPTION

GENERAL INFORMATION

A physical exam is not necessary to begin progestin-only injectable contraception. While deferring the physical examination should not be routine, certain circumstances may exist which make it reasonable. It is essential that the PHN see General Information and Plan of Care for a Deferred Exam found in Protocol 2.010, "All Methods, Initial and/or Annual Family Planning Visit" before dispensing a method without a physical exam.

Progestin-only injectable contraceptives come in different dosages and require different routes of administration. PHNs will follow the package insert instructions for the particular progestin-only injectable product.

SUBJECTIVE FINDINGS

For method specific guidelines, including those for a deferred exam, refer to the Summary Chart of U. S. Medical Eligibility Criteria for Contraceptive Use found in Family Planning Reference Section 2.170.

U.S. Medical Eligibility Criteria category system:
1 = May provide method, no restrictions
2 = May provide method, as the advantages generally outweigh the risk. Consult with a physician or APN as needed and document appropriately
3 = May not provide method proven risk usually outweigh the advantages
4 =-Method may not be used.

OBJECTIVE FINDINGS (Laboratory tests for FP clients are chosen <u>as indicated by the method, or by client need. However, laboratory tests cannot exceed any established department or program screening or testing limits. Limitations on laboratory testing may be established to meet funding or other needs)</u>.

- Blood pressure
- Height and weight for BMI
- Physical examination[1] performed annually by examiner
- Hemoglobin or Hematocrit as indicated
- Pap smear in accordance with current Pap smear guidelines
- Sickle cell screening

[1] If a TennCare child (under the age of 21) receives the major components of a Child Health/EPSDT exam through the health department's family planning clinic, she should also receive developmental screening and vision and hearing risk assessment/screening in order to complete the recommended AAP standards for preventive health care. REFER TO THE FAMILY PLANNING SECTION OF THE PTBMIS MANUAL FOR CORRECT CODING OF THIS TYPE VISIT.

- Syphilis serology
- Mantoux tuberculin test
- Pregnancy test
- Rubella titer
- Wet prep (examiner)
- HIV testing
- Urinalysis
- Gonorrhea and chlamydia screening

REFER TO SCREENING CRITERIA FOR CHLAMYDIA AND GONORRHEA FOUND IN SECTION 2.170.

ASSESSMENT

Appropriate to begin or continue the progestin-only injectable contraceptive either with or without the physical examination.

PLAN OF CARE FOR DEFERRED EXAM VISIT

The plan of care for a deferred exam visit is considered preliminary or temporary and can be established by the PHN. This preliminary or temporary plan of care must address the following:

- An explanation for the deferral.
- The medical history for the initial client, an updated medical history for the annual client who is deferring the exam, and an updated history for the supply client who is changing her method by deferred exam. The history must be negative for U.S. Medical Eligibility Criteria categories 3 and 4 to dispense without an exam. Consider a physician or APN consult for any category 2 findings and document appropriately.
- For annual visits (or re-supply visits), consult for progestin-only injectable side effects that have not responded to standard treatments, or complications, or warning signs. Record consultant instructions in chart.
- Blood pressure measurement, hemoglobin or hematocrit as indicated.
- Height for initial visit or annually for adolescents.
- Name, dosage, route, and frequency of the method.
- Informed consent form for an initial client or if giving the return client a new method.
- Document necessary health teaching to use method correctly and consistently.
- Document health teaching regarding emergency warning signs:
  - **A** Abdominal pain – severe (as might be seen with liver disease, gallbladder disease, ectopic pregnancy)
  - **C** Chest pain - severe, (cough, shortness of breath or sharp pain on inhalation as might be seen with heart attack or pulmonary embolism)
  - **H** Headache - severe, dizziness, weakness, or numbness, especially if one-sided(as might be seen with migraine or stroke especially with numbness or muscle weakness)

E Eye disturbances vision loss or blurring, also speech problems (as might be seen with retinopathy or stroke)

S Severe leg pain in calf or thigh (as might be seen with thrombophlebitis

- Offer condoms for improved STD protection.
- Offer condoms and/or contraceptive foam or film for use as back-up protection against unintended pregnancy.
- Date of the exam appointment. In clinics with open access systems, chart the date the client is expected to return.

How to administer progestin-only injectable contraception:

Depo medroxyprogesterone (DMPA) is an aqueous suspension of microcrystals. All DMPA products must be shaken vigorously immediately prior to administration or the crystals will leave suspension and clump in the needle. Also the nurse and client must never rub the injection site after administration as this will disrupt the crystals and can lead to method failure (i.e., pregnancy). Progestin-only injectable contraceptives come in different dosages and require different routes of administration (subcutaneous or intramuscular). Follow the package insert instructions for the particular progestin-only injectable product.

Administer progestin-only injectable contraception according to the following guidelines:

Initial injection

- During first five days of normal menstrual period
- Within 7 days of childbirth, if the client is not breastfeeding
- When milk supply is well established, if client is exclusively breastfeeding but not before one month postpartum
- "DMPA Now" - The DMPA Now strategy provides the initial injection the day of the office visit using the same algorithm used for late re-injection found in Managing Contraception for Your Pocket. Always include the client in this decision-making process.

Subsequent injection

- It is not harmful to a client to receive a re-injection as early as 10 weeks. However, some third party health insurance payors have restrictions regarding early re-injections. Therefore, clients who need early re-injection and who have third party payors, need to find out what their health insurance plan requires by asking at their pharmacy. Early re-injection is not harmful, but it is not cost effective.
- The package insert for Depo Provera 104 Subq® advises repeating injections every 12-14 weeks.
- The package insert for Depo Provera 150 IM® advises repeating injections every 11-13 weeks.
- If greater than the 13-week (or 14-week for sub q) interval, assess the client regarding unprotected intercourse. If the client has had unprotected intercourse, perform a pregnancy test. A two week wait and a second pregnancy test is NOT

the preferred approach UNLESS the client so chooses. Instead use the algorithm for late injections found in Managing Contraception for Your Pocket.

PLAN OF CARE FOR AN EXAM VISIT

An **ongoing plan of care** will be developed and signed at the **exam visit** by either the PHN with gyn skills, RN-ES, APN or Physician (all referred to as "examiner").The ongoing plan of care is developed in accordance with the protocol for the particular examiner. The ongoing plan of care written by the examiner must be reviewed and followed by the PHN at each visit.

HEALTH TEACHING

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 or 4 of the required topics at each visit until instruction in all required topics is completed. Always review past client counseling at each visit. Base current visit counseling/education on client needs and Program requirements.

For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee's Family Planning Clinical Guidelines. Also use the teaching tool on the reverse side of the method-specific consent form.

All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical record. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

There is a detailed list of the REQUIRED counseling/education topics in the Family Planning Program Clinical Guidelines, under Visit Guidelines. Other counseling topics are also detailed. A brief list of counseling/education topics is provided in the All Methods, Initial and/or Annual Family Planning Visit section of the PHN Protocol.

REFERENCES

Contraceptive Technology, Robert A. Hatcher, MD, et. al.,. Twentieth Revised Edition 2011.
Depo-Provera package Insert, Pfizer Pharmaceutical Company
Depo-subQ Provera 104 Package Insert, Pfizer Pharmaceutical Company
Pocket Guide To Managing Contraception, Hatcher, R. A., Nelson, A. L., Zieman, M., et. al., Tiger, Georgia: Bridging the Gap Foundation, 2010-12.
"Family Planning Clinical Guidelines, Tennessee Department of Health, January 2011
Center for Disease Control and Prevention, US Medical Eligibility Criteria for Contraceptive Use, MMWR Vol. 59, June 18, 2010.

PROGESTIN-ONLY PILLS (MINIPILL)

GENERAL INFORMATION

A physical exam is not necessary to begin progestin-only oral contraceptive pills (POPs). While deferring the physical examination should not be routine, certain circumstances may exist which make it reasonable. It is essential that the PHN see General Information and Plan of Care for a Deferred Exam found in Protocol 2.010, "All Methods, Initial and/or Annual Family Planning Visit" before dispensing a method without a physical exam.

SUBJECTIVE FINDINGS

For method specific guidelines, including those for a deferred exam, refer to the Summary Chart of U.S. Medical Eligibility Criteria for Contraceptive Use in Family Planning Reference section 2.170.

U.S. Medical Eligibility Criteria category system:

1 = May provide method, no restrictions
2 = May provide method, as the advantages generally outweigh the risks. Consult with a physician or APN as needed and document appropriately
3 = May not provide method, proven risk usually outweigh the advantages
4 = Method may not be used

OBJECTIVE FINDINGS (Laboratory tests for FP clients are chosen as indicated by the method, or by client need. However, laboratory tests cannot exceed any established department or program screening or testing limits. Limitations on laboratory testing may be established to meet funding or other needs).

- Blood pressure
- Height and weight for BMI
- Physical examination[1] performed annually by examiner
- Hemoglobin or Hematocrit as indicated
- Pap smear in accordance with current Pap smear guidelines
- Sickle cell screening
- Syphilis serology
- Mantoux tuberculin test
- Pregnancy test
- Rubella titer
- Wet prep (examiner)

[1] If a TennCare child (under the age of 21) receives the major components of a Child Health/EPSDT exam through the health department's family planning clinic, she should also receive developmental screening and vision and hearing risk assessment/screening, in order to complete the recommended AAP standards for preventive health care. REFER TO THE FAMILY PLANNING SECTION OF THE PTBMIS MANUAL FOR CORRECT CODING OF THIS TYPE VISIT.

- HIV testing
- Urinalysis
- Gonorrhea and chlamydia screening

REFER TO SCREENING CRITERIA FOR CHLAMYDIA AND GONORRHEA FOUND IN SECTION 2.170.

ASSESSMENT

Appropriate for Progestin Only Pills use with or without physical examination

PLAN OF CARE FOR DEFERRED EXAM VISIT

The plan of care for a deferred exam visit is considered preliminary or temporary and can be established by the PHN. This preliminary or temporary plan of care must address the following:

- An explanation for the deferral.
- The medical history for the initial client, an updated medical history for the annual client who is deferring the exam, and an updated history for the supply client who is changing her method by deferred exam. The history must be negative for U.S. Medical Eligibility Criteria categories 3 and 4 to dispense without an exam. Consider a physician or APN consult for any category 2 findings and document appropriately.
- For annual visits (or re-supply visits), consult for side effects that have not responded to standard treatments (i.e., take POP at bedtime for nausea), complications, or warning signs. Record consultant instructions in chart.
- Blood pressure measurement, hemoglobin or hematocrit as indicated.
- Name, dosage, route, and frequency of the progestin-only oral contraceptive chosen.
- The number of cycles given (up to 3 cycles).
- Informed consent form for an initial client or if giving the return client a new method.
- Document necessary health teaching to start and use method correctly and consistently. (The preferred method of starting POPs is "Quick Start." See the Client Instruction Sheet available in English and Spanish found in the Appendix of the Family Planning Clinical Guidelines).
- Document necessary health teaching regarding emergency warning signs:
  - **A** Abdominal pain – severe (as might be seen with liver disease, gallbladder disease, ectopic pregnancy)
  - **C** Chest pain - severe, (cough, shortness of breath or sharp pain on inhalation as might be seen with heart attack or pulmonary embolism)
  - **H** Headache - severe, dizziness, weakness, or numbness, especially if one-sided (as might be seen with migraine or stroke especially with numbness or muscle weakness)
  - **E** Eye disturbances vision loss or blurring, also speech problems (as might be seen with retinopathy or stroke)
  - **S** Severe leg pain in calf or thigh (as might be seen with thrombophlebitis)
- Offer condoms for improved STD protection.
- Offer condoms and/or contraceptive foam or film for use as back-up protection against unintended pregnancy.

- Date of the exam appointment. In clinics with open access systems, chart the date the client is expected to return.

PLAN OF CARE FOR AN EXAM VISIT

An **ongoing plan of care** will be developed and signed at the **exam visit** by either the PHN with gyn skills, RN-ES, APN or Physician (all referred to as "examiner"). The ongoing plan of care is developed in accordance with the protocol for the particular examiner. The ongoing plan of care written by the examiner must be reviewed by the PHN at each visit. For re-supply visits, consult APN or physician for complications and warning signs. Also consult for side effects that have not responded to standard treatments. Record consultant instructions in the chart.

HEALTH TEACHING

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 or 4 of the required topics at each visit until instruction in all required topics is completed. Topics do not need to be repeated unless the client request a review or the provider assesses that a review is needed. **Address client counseling at each visit and base counseling/education on client needs and program requirements.**

For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee's Family Planning Clinical Guidelines. Also use the teaching tool on the reverse side of the method-specific consent form.

All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical chart. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

There is a detailed list of the REQUIRED counseling/education topics in the Family Planning Program Clinical Guidelines, under Visit Guidelines. Other counseling topics are also detailed. A brief list of counseling/education topics is provided in the All Methods, Initial and/or Annual Family Planning Visit section of the PHN Protocol.

REFERENCES

Contraceptive Technology, Robert A. Hatcher, MD, et. al. Twentieth Revised Edition, 2011.
"Family Planning Clinical Guidelines", Tennessee Department of Health, January 2011.
A Pocket Guide to Managing Contraception, Hatcher, R. A., Nelson, A. L., Zieman, M., et. al., Tiger, Georgia: Bridging the Gap Foundation 2010-2012.
Center for Disease Control and Prevention, US Medical Eligibility Criteria for Contraceptive Use, MMWR, Vol. 59, June 18, 2010.

STERILIZATION

GENERAL INFORMATION

Sterilization is the surgical interruption, or closure, of pathways for sperm or ova, preventing fertilization. The method should be considered a permanent means of contraception. Although some surgical procedures to reverse both vasectomies and tubal ligations have been successful, none are guaranteed. Sterilization is the most popular method of contraception in the United States and worldwide. Sterilization provides highly effective, permanent methods of birth control for both sexes.

The Family Planning Clinical Guidelines includes a section with detail information on policy, federal sterilization requirements, selection criteria, sterilization consent forms, and general instructions.

Sterilization is a service that may be provided or arranged for with government funding. When Family Planning Program funds are used to provide sterilization, federal sterilization consent guidelines must be followed. Medicaid and TennCare also have the same requirements as Title X. In Tennessee, program funding for sterilization is limited. Clinic sites should keep a list of clients requesting sterilization through the state sterilization program, and prioritize applicants when funds for sterilization are available.

Indications include**:** Client desires permanent, low risk, highly effective contraceptive method.

Advantages of female sterilization (tubal ligation) include:

- One-time decision provides permanent fertility control
- Highly effective, convenient
- Cost effective
- Nothing to buy or remember
- Lack of significant long-term side effects
- No need for partner compliance
- No need to interrupt lovemaking
- Considered safe with low complication and morbidity rates
- Certain techniques can be performed immediately after pregnancy
- Can be performed while client is lactating
- Bilateral tubal ligation (BTL) is immediately effective
- Low long term risks and costs
- Privacy in choice of method

Advantages of male sterilization (vasectomy) include:

- One-time decision provides permanent fertility control
- Highly effective, convenient
- Considered safe with low complication and morbidity rates
- Cost effective (most cost effective of all contraceptive methods)
- Removal of contraceptive burden from the woman
- No need for partner compliance after post vasectomy sperm check is done to prove that no sperm remain in the reproductive tract
- No need to interrupt lovemaking
- Short recovery time
- Vasectomy is equally effective, simpler, safer, and much less expensive than BTL
- Privacy in choice of method

Disadvantages of female sterilization include**:**

- Inherent risks associated with any surgery, namely, infection, injury to other organs, hemorrhage, and complications of anesthesia
- Initial cost may be high
- Procedure to reverse sterilization is difficult, has limited success rates, is very expensive, and not covered by insurance
- Title X and Medicaid funding require a 30-day waiting period between the date of signature on consent form and day of surgery
- Provides no protection against HIV and other sexually transmitted infections
- Some clients may have regrets about having the procedure
- Menstrual irregularities, increased dysmenorrhea, and premenstrual syndrome are reported by some women following BTL (research thus far has been unable to support any pattern of identifiable changes)
- Possibility of ectopic pregnancy if method fails

Disadvantages of male sterilization include**:**

- Inherent risks associated with any surgery, namely, infection, injury to other organs, hemorrhage, and complications of anesthesia
- Initial cost may be high
- Some clients may have regrets about having the procedure
- Procedure to reverse sterilization is difficult, has limited success rates, is very expensive, and not covered by insurance
- Vasectomy is not immediately effective
- Title X funding requires a 30-day waiting period between the date of signature on consent form and day of surgery
- Possible post vasectomy complications can include hematoma formation, congestive epididymitis, and sperm granuloma

PLAN

- Current Family Planning client with current history and physical examination
- Discuss all available options of contraception
- Offer condoms, foam, or film for protection against STDs, if appropriate
- Provide written and oral instructions regarding various components of sterilization
- Obtain informed consent for sterilization
- Update immunizations, as indicated
- Obtain approval for sterilization via the appropriate process for region/agency
- Schedule appointment with provider for sterilization procedure
- Provide appropriate follow-up
- Return for recheck and/or for resolution of any complications

Health Teaching:

- Communicate the importance of following instructions and keeping all appointments as directed to complete the sterilization process
- Instruct client that sterilization does not protect against STDs and HIV
- Provide verbal and written information regarding possible danger signs following sterilization and the necessary steps in follow-up
- Refer to "All Methods, Initial and/or Annual Family Planning Visit" section 2.010 of PHN Protocol for additional teaching
- Instruct on 30 day waiting period

Referral Indicators after procedure:

- Side effects or complications to the sterilization procedure
- Pregnancy
- Client verbalizing feelings of regret about sterilization
- Client verbalizing sexual maladjustment

REFERENCES

1. U.S. Department of Health and Human Services, Office of Population Affairs, Office for Family Planning, Program Guidelines for Project Grants for Family Planning Services, Attachment C, January 2001.

QUICK REFERENCE TO STERILIZATIONS

1. Office of Population Affairs, Program Guidelines for Project Grants for Family Planning Services, January 2001

2. Family Planning Clinical Guidelines under Sterilization

   Federal Guidelines:
   - Minimum age is 21
   - Mentally incompetent/institutionalized individual may **not** be sterilized
   - Waiting period: 30 days between date of consent signed to date of surgery. Consent valid for up to 180 days only after date consent is signed
   - Decision not to be sterilized at any time will not result in withdrawal or withholding of state or federal benefits
   - Under no circumstances may a hysterectomy be performed using Title X dollars or as a part of Family Planning Program solely for purpose of rendering the individual unable to reproduce

   Selection Criteria
   - Family Planning Program client or partner of Family Planning client
   - Low income client
   - No clients with TennCare or insurance that covers sterilization: instead, refer client
   - Clients with method failure
   - Clients with medical contraindication to use of temporary methods
   - Older client
   - Clients who have had multiple pregnancies
   - Clients with other high risks
   - For female sterilization, priority should be given to those who will have an outpatient procedure, so that more clients can be served

   Possible contraindications:
   - Client has mental or emotional conditions that could interfere with informed consent
   - Client or couple feels they are not yet ready to assume the responsibility of parenthood
   - Client counts on reversing the operation in case of change of circumstances such as remarriage or death of children

3. Federal Sterilization Forms: Forms must be completed in compliance with regulations.

VAGINAL CONTRACEPTIVE RING

GENERAL INFORMATION

A physical exam is not necessary to begin the vaginal contraceptive ring. While deferring the physical examination should not be routine, certain circumstances may exist which make it reasonable. It is essential that the PHN see General Information and Plan of Care for a Deferred Exam found in Protocol 2.010, "All Methods, Initial and/or Annual Family Planning Visit" before dispensing a method without a physical exam.

See Family Planning Clinical Guidelines and the most current edition of Contraceptive Technology for method counseling details.

SUBJECTIVE FINDINGS

For method specific guidelines, including those for a deferred exam, refer to the Summary Chart of U.S. Medical Eligibility Criteria for Contraceptive use found in Family Planning Reference section 2.170.

U.S. Medical Eligibility Criteria category system:

1 = May provide method with no restrictions
2 = May provide method, as the advantages generally outweigh the risk. Consult with a physician or APN as needed and document appropriately
3 = May not provide method, proven risk usually outweigh the advantages
4 = Method may not be used.

OBJECTIVE FINDINGS (Laboratory tests for FP clients are chosen as indicated by the method, or by client need. However, laboratory tests cannot exceed any established department or program screening or testing limits. Limitations on laboratory testing may be established to meet funding or other needs).

- Blood pressure
- Height and weight for BMI
- Physical examination[1] performed annually by examiner
- Hemoglobin or Hematocrit as indicated
- Pap smear in accordance with current Pap smear guidelines
- Sickle cell screening
- Syphilis serology
- Mantoux tuberculin test

[1] If a TennCare child (under the age of 21) receives the major components of a Child Health/EPSDT exam through the health department's family planning clinic, she should also receive developmental screening and vision and hearing risk assessment/screening in order to complete the recommended AAP standards for preventive health care. REFER TO THE FAMILY PLANNING SECTION OF PTBMIS MANUAL FOR CORRECT CODING OF THIS TYPE VISIT.

- Pregnancy test
- Rubella titer
- Wet prep (examiner)
- HIV testing
- Urinalysis
- Gonorrhea and chlamydia screening

REFER TO SCREENING CRITERIA FOR CHLAMYDIA AND GONORRHEA FOUND IN SECTION 2.170.

ASSESSMENT

Appropriate to begin or continue the vaginal contraceptive ring either with or without the physical examination.

PLAN OF CARE FOR DEFERRED EXAM

The plan of care for a deferred exam visit is considered preliminary or temporary and can be established by the PHN. This preliminary or temporary plan of care must address the following:

- An explanation for the deferral.
- The medical history for the initial client, an updated medical history for the annual client who is deferring the exam, and an updated history for the supply client who is changing her method by deferred exam. The history must be negative for U.S. Medical Eligibility Criteria categories 3 and 4 to dispense without an exam. Consider a physician or APN consult for any category 2 findings and document appropriately.
- For annual visits (or re-supply visits), consult for side effects that have not responded to standard treatments (i.e., take COC pill at bedtime for nausea), complications, or warning signs. Record consult instruction in chart.
- Blood pressure measurement, weight, hemoglobin or hematocrit as indicated.
- Height for initial visit or annually for adolescents.
- Name, dosage, route, and frequency of the contraceptive chosen.
- The number of cycles given (up to 3 cycles).
- Informed consent form for an initial client or if giving the return client a new method.
- Document necessary health teaching to start and to use method correctly and consistently. (See Client Instruction Sheet available in English and Spanish found in the Appendix of the Family Planning Clinical Guidelines).
- Document necessary health teaching regarding emergency warning signs:
  - **A** Abdominal pain – severe (as might be seen with liver disease, gallbladder disease, ectopic pregnancy)
  - **C** Chest pain - severe, (cough, shortness of breath or sharp pain on inhalation as might be seen with heart attack or pulmonary embolism)
  - **H** Headache – severe, dizziness, weakness, or numbness, especially if one-sided (as might be seen with migraine or stroke especially with numbness or muscle weakness)

E Eye disturbances vision loss or blurring, also speech problems (as might be seen with retinopathy or stroke)

S Severe leg pain in calf or thigh (as might be seen with thrombophlebitis)

- Offer condoms for improved STD protection.
- Offer condoms and/or contraceptive foam or film for use as back-up protection against unintended pregnancy.
- Date of the exam appointment. In clinics with open access systems, chart the date the client is expected to return

PLAN OF CARE FOR AN EXAM VISIT OR RESUPPLY VISIT

An **ongoing plan of care** will be developed and signed at the **exam visit** by either the PHN with gyn skills, RN-ES, APN or Physician (all referred to as "examiner"). The ongoing plan of care is developed in accordance with the protocol for the particular examiner. The ongoing plan of care written by the examiner must be reviewed and followed by the PHN at each visit. For re-supply visits, consult APN or physician for complications and warning signs. Also consult for side effects that have not responded to standard treatments. Record consultant instructions in chart

HEALTH TEACHING

Through the Title X Program Guidelines, the federal Office of Population Affairs requires that counseling about certain topics occur with family planning clients. These required topics must be discussed with the client at least once during the time the client is under the care of the Family Planning Program. Ideally, the client will receive instruction on 3 or 4 of the required topics at each visit until instruction in all required topics is completed. Topics do not need to be repeated unless the client request a review or the provider assesses that a review is needed. **Address client counseling at each visit and base counseling/education on client needs and program requirements.**

For contraceptive method education and counseling, use the Client Instruction Sheet found in the current version of the Tennessee's Family Planning Clinical Guidelines. Also use the teaching tool on the reverse side of the method-specific consent form.

All providers must document education and counseling provided during each family planning visit on the table found on the history form in the medical chart. The expression, "counseling per protocol" is not adequate documentation for Title X education and counseling that should occur during initial, annual, supply and medical visits.

There is a detailed list of the REQUIRED counseling/education topics in the Family Planning Program Clinical Guidelines, under Visit Guidelines. Other counseling topics are also detailed. A brief list of counseling/education topics is provided in the All Methods, Initial and/or Annual Family Planning Visit section of the PHN Protocol.

REFERENCES

Contraceptive Technology, Twentieth Revised Edition, Robert A. Hatcher, M.D., et al, 2011.
Contraceptive Technology Update, "Draw the Circle Wide to Add Contraceptive Ring", Volume 26, Number 6, June 2005.
A Pocket Guide to Managing Contraception, Hatcher, R.A., Nelson, A.L., Zieman, M. et. al., Tiger, Georgia: Bridging the Gap Foundation, 2010-12.
"Family Planning Program Clinical Guidelines," Tennessee Department of Health, January 2011.
NuvaRing Package Insert, Organon, Inc., 2005.
"Program Guidelines for Project Grants for Family Planning Services," Office of Population Affairs, U.S. Department of Health and Human Services, January 2001.
Center for Disease Control and Prevention, US Medical Eligibility Criteria for Contraceptive Use, MMWR, Vol. 59, June 18, 2010.

FAMILY PLANNING REFERENCE MATERIAL

Screening Criteria for Chlamydia and Gonorrhea
Effective September 1, 2010

The screening criteria for chlamydia and gonorrhea are established by the Tennessee STD Program. The screening criteria for chlamydia and gonorrhea have been revised based on risk criteria, national recommendations, and availability of funds. The screening criteria for Family Planning in Tennessee are:

Family Planning:

- Screen at the routine initial/annual exam:
  - all clients less than age 26
  - all clients ages 26-29 who receive family planning services in a county with a chlamydia positivity rate of 3 percent or higher (*See below for these counties.).
- For clients ages 26 and over (regardless of county where family planning services are received), only screen the following:
  - a client being prepared for IUD insertion;
  - a client with documented NEW signs or symptoms;
  - a client named as a contact;
  - a client using drugs;
  - a client exchanging sex for money or drugs.
- Regardless of age, a female client who has been treated for a positive chlamydia test should be retested 3 months after treatment or whenever she next seeks medical care within the following 3-12 months regardless of whether the client believes her partner was treated.

The counties with positivity rates of 3 percent or higher are:

Northeast Region – Johnson and Unicoi
East Tennessee Region – Anderson, Jefferson, Campbell, Cocke, Grainger, Sevier
Southeast – Franklin and Marion
Upper Cumberland – Overton and Smith
Mid Cumberland – Sumner, Cheatham and Dickson
South Central – Giles, Lawrence and Marshall
West Tennessee – Chester, Crockett, Dyer, Fayette, Gibson, Hardeman, Haywood, Henry, Lake, Lauderdale, Obion, Tipton, and Weakley
Memphis/Shelby County – Health department clinics; Memphis Planned Parenthood
Nashville/Davidson
Knoxville/Knox
Jackson/Madison

Summary Chart of U.S. Medical Eligibility Criteria for Contraceptive Use

Key:	
1	No restriction (method can be used)
2	Advantages generally outweigh theoretical or proven risks
3	Theoretical or proven risks usually outweigh the advantages
4	Unacceptable health risk (method not to be used)

Updated June 2012. This summary sheet only contains a subset of the recommendations from the US MEC. For complete guidance, see: http://www.cdc.gov/reproductivehealth/unintendedpregnancy/USMEC.htm

Most contraceptive methods do not protect against sexually transmitted infections (STIs). Consistent and correct use of the male latex condom reduces the risk of STIs and HIV.

Condition	Sub-condition	Combined pill, patch, ring		Progestin-only pill		Injection		Implant		LNG--IUD		Copper-IUD	
		I	C	I	C	I	C	I	C	I	C	I	C
Age		Menarche to <40=1		Menarche to <18=1		Menarche to <18=2		Menarche to <18=1		Menarche to <20=2		Menarche to <20=2	
		≥40=2		18-45=1		18-45=1		18-45=1		≥20=1		≥20=1	
				>45=1		>45=2		>45=1					
Anatomic abnormalities	a) Distorted uterine cavity									4		4	
	b) Other abnormalities									2		2	
Anemias	a) Thalassemia	1		1		1		1		1		2	
	b) Sickle cell disease‡	2		1		1		1		1		2	
	c) Iron-deficiency anemia	1		1		1		1		1		2	
Benign ovarian tumors	(including cysts)	1		1		1		1		1		1	
Breast disease	a) Undiagnosed mass	2*		2*		2*		2*		2		1	
	b) Benign breast disease	1		1		1		1		1		1	
	c) Family history of cancer	1		1		1		1		1		1	
	d) Breast cancer‡												
	i) current	4		4		4		4		4		1	
	ii) past and no evidence of current disease for 5 years	3		3		3		3		3		1	
Breastfeeding (see also Postpartum)	a) < 1 month postpartum	3*		2*		2*		2*					
	b) 1 month or more postpartum	2*		1*		1*		1*					
Cervical cancer	Awaiting treatment	2		1		2		2		4	2	4	2
Cervical ectropion		1		1		1		1		1		1	
Cervical intraepithelial neoplasia		2		1		2		2		2		1	
Cirrhosis	a) Mild (compensated)	1		1		1		1		1		1	
	b) Severe‡ (decompensated)	4		3		3		3		3		1	
Deep venous thrombosis (DVT) /Pulmonary embolism (PE)	a) History of DVT/PE, not on anticoagulant therapy												
	i) higher risk for recurrent DVT/PE	4		2		2		2		2		1	
	ii) lower risk for recurrent DVT/PE	3		2		2		2		2		1	
	b) Acute DVT/PE	4		2		2		2		2		2	
	c) DVT/PE and established on anticoagulant therapy for at least 3 months												
	i) higher risk for recurrent DVT/PE	4*		2		2		2		2		2	
	ii) lower risk for recurrent DVT/PE	3*		2		2		2		2		2	
	d) Family history (first-degree relatives)	2		1		1		1		1		1	
	e) Major surgery												
	(i) with prolonged immobilization	4		2		2		2		2		1	
	(ii) without prolonged immobilization	2		1		1		1		1		1	
	f) Minor surgery without immobilization	1		1		1		1		1		1	
Depressive disorders		1*		1*		1*		1*		1*		1*	
Diabetes mellitus (DM)	a) History of gestational DM only	1		1		1		1		1		1	
	b) Non-vascular disease												

Condition	Sub-condition	Combined pill, patch, ring		Progestin-only pill		Injection		Implant		LNG--IUD		Copper-IUD	
		I	C	I	C	I	C	I	C	I	C	I	C
Diabetes mellitus (cont.)	(i) non-insulin dependent	2		2		2		2		2		1	
	(ii) insulin dependent‡	2		2		2		2		2		1	
	c) Nephropathy/ retinopathy/ neuropathy‡	3/4*		2		3		2		2		1	
	d) Other vascular disease or diabetes of >20 years' duration‡	3/4*		2		3		2		2		1	
Endometrial cancer‡		1		1		1		1		4	2	4	2
Endometrial hyperplasia		1		1		1		1		1		1	
Endometriosis		1		1		1		1		1		2	
Epilepsy‡	(see also Drug Interactions)	1*		1*		1*		1*		1		1	
Gallbladder disease	a) Symptomatic												
	(i) treated by cholecystectomy	2		2		2		2		2		1	
	(ii) medically treated	3		2		2		2		2		1	
	(iii) current	3		2		2		2		2		1	
	b) Asymptomatic	2		2		2		2		2		1	
Gestational trophoblastic disease	a) Decreasing or undetectable ß-hCG levels	1		1		1		1		3		3	
	b) Persistently elevated ß-hCG levels or malignant disease‡	1		1		1		1		4		4	
Headaches	a) Non-migrainous	1*	2*	1*	1*	1*	1*	1*	1*	1*	1*	1*	
	b) Migraine												
	i) without aura, age <35	2*	3*	1*	2*	2*	2*	2*	2*	2*	2*	1*	
	ii) without aura, age ≥35	3*	4*	1*	2*	2*	2*	2*	2*	2*	2*	1*	
	iii) with aura, any age	4*	4*	2*	3*	2*	3*	2*	3*	2*	3*	1*	
History of bariatric surgery‡	a) Restrictive procedures	1		1		1		1		1		1	
	b) Malabsorptive procedures	COCs: 3 P/R: 1		3		1		1		1		1	
History of cholestasis	a) Pregnancy-related	2		1		1		1		1		1	
	b) Past COC-related	3		2		2		2		2		1	
History of high blood pressure during pregnancy		2		1		1		1		1		1	
History of pelvic surgery		1		1		1		1		1		1	
HIV	High risk	1		1		1*		1		2	2	2	2
	HIV infected (see also Drug Interactions)‡	1*		1*		1*		1*		2	2	2	2
	AIDS (see also Drug Interactions) ‡	1*		1*		1*		1*		3	2*	3	2*
	Clinically well on therapy	If on treatment, see Drug Interactions								2	2	2	2
Hyperlipidemias		2/3*		2*		2*		2*		2*		1*	
Hypertension	a) Adequately controlled hypertension	3*		1*		2*		1*		1		1	
	b) Elevated blood pressure levels (properly taken measurements)												
	(i) systolic 140-159 or diastolic 90-99	3		1		2		1		1		1	
	(ii) systolic ≥160 or diastolic ≥100‡	4		2		3		2		2		1	
	c) Vascular disease	4		2		3		2		2		1	

Condition	Sub-condition	Combined pill, patch, ring		Progestin-only pill		Injection		Implant		LNG--IUD		Copper-IUD	
		I	C	I	C	I	C	I	C	I	C	I	C
Inflammatory bowel disease	(Ulcerative colitis, Crohn's disease)	2/3*		2		2		1		1		1	
Ischemic heart disease‡	Current and history of	4		2	3	3		2	3	2	3	1	
Liver tumors	a) Benign												
	i) Focal nodular hyperplasia	2		2		2		2		2		1	
	ii) Hepatocellular adenoma‡	4		3		3		3		3		1	
	b) Malignant‡	4		3		3		3		3		1	
Malaria		1		1		1		1		1		1	
Multiple risk factors for arterial cardiovascular disease	(such as older age, smoking, diabetes and hypertension)	3/4*		2*		3*		2*		2		1	
Obesity	a) ≥30 kg/m^2 body mass index (BMI)	2		1		1		1		1		1	
	b) Menarche to < 18 years and ≥ 30 kg/m^2 BMI	2		1		2		1		1		1	
Ovarian cancer‡		1		1		1		1		1		1	
Parity	a) Nulliparous	1		1		1		1		2		2	
	b) Parous	1		1		1		1		1		1	
Past ectopic pregnancy		1		2		1		1		1		1	
Pelvic inflammatory disease	a) Past, (assuming no current risk factors of STIs)												
	(i) with subsequent pregnancy	1		1		1		1		1	1	1	1
	(ii) without subsequent pregnancy	1		1		1		1		2	2	2	2
	b) Current	1		1		1		1		4	2*	4	2*
Peripartum cardiomyopathy‡	a) Normal or mildly impaired cardiac function												
	(i) < 6 months	4		1		1		1		2		2	
	(ii) ≥ 6 months	3		1		1		1		2		2	
	b) Moderately or severely impaired cardiac function	4		2		2		2		2		2	
Postabortion	a) First trimester	1*		1*		1*		1*		1*		1*	
	b) Second trimester	1*		1*		1*		1*		2		2	
	c) Immediately post-septic abortion	1*		1*		1*		1*		4		4	
Postpartum (see also Breastfeeding)	a) < 21 days	4		1		1		1					
	b) 21 days to 42 days												
	(i) with other risk factors for VTE	3*		1		1		1					
	(ii) without other risk factors for VTE	2		1		1		1					
	c) > 42 days	1		1		1		1					
Postpartum (in breastfeeding or non-breastfeeding women, including post-cesarean section)	a) < 10 minutes after delivery of the placenta									2		1	
	b) 10 minutes after delivery of the placenta to < 4 weeks									2		2	
	c) ≥ 4 weeks									1		1	
	d) Puerperal sepsis									4		4	
Pregnancy		NA*		NA*		NA*		NA*		4*		4*	
Rheumatoid arthritis	a) On immunosuppressive therapy	2		1		2/3*		1		2	1	2	1
	b) Not on immunosuppressive therapy	2		1		2		1		1		1	
Schistosomiasis	a) Uncomplicated	1		1		1		1		1		1	
	b) Fibrosis of the liver‡	1		1		1		1		1		1	
Severe dysmenorrhea		1		1		1		1		1		2	
Sexually transmitted infections (STIs)	a) Current purulent cervicitis or chlamydial infection or gonorrhea	1		1		1		1		4	2*	4	2*
	b) Other STIs (excluding HIV and hepatitis)	1		1		1		1		2	2	2	2

Condition	Sub-condition	Combined pill, patch, ring		Progestin-only pill		Injection		Implant		LNG--IUD		Copper-IUD	
		I	C	I	C	I	C	I	C	I	C	I	C
Sexually transmitted infections (cont.)	c) Vaginitis (including trichomonas vaginalis and bacterial vaginosis)	1		1		1		1		2	2	2	2
	d) Increased risk of STIs	1		1		1		1		2/3*	2	2/3*	2
Smoking	a) Age < 35	2		1		1		1		1		1	
	b) Age ≥ 35, < 15 cigarettes/day	3		1		1		1		1		1	
	c) Age ≥ 35, ≥15 cigarettes/day	4		1		1		1		1		1	
Solid organ transplantation‡	a) Complicated	4		2		2		2		3	2	3	2
	b) Uncomplicated	2*		2		2		2		2		2	
Stroke‡	History of cerebrovascular accident	4		2	3	3		2	3	2		1	
Superficial venous thrombosis	a) Varicose veins	1		1		1		1		1		1	
	b) Superficial thrombophlebitis	2		1		1		1		1		1	
Systemic lupus erythematosus‡	a) Positive (or unknown) antiphospholipid antibodies	4		3		3	3	3		3		1	1
	b) Severe thrombocytopenia	2		2		3	2	2		2*		3*	2*
	c) Immunosuppressive treatment	2		2		2	2	2		2		2	1
	d) None of the above	2		2		2	2	2		2		1	1
Thrombogenic mutations‡		4*		2*		2*		2*		2*		1*	
Thyroid disorders	Simple goiter/ hyperthyroid/hypothyroid	1		1		1		1		1		1	
Tuberculosis‡ (see also Drug Interactions)	a) Non-pelvic	1*		1*		1*		1*		1		1	
	b) Pelvic	1*		1*		1*		1*		4	3	4	3
Unexplained vaginal bleeding	(suspicious for serious condition) before evaluation	2*		2*		3*		3*		4*	2*	4*	2*
Uterine fibroids		1		1		1		1		2		2	
Valvular heart disease	a) Uncomplicated	2		1		1		1		1		1	
	b) Complicated‡	4		1		1		1		1		1	
Vaginal bleeding patterns	a) Irregular pattern without heavy bleeding	1		2		2		2		1	1	1	
	b) Heavy or prolonged bleeding	1*		2*		2*		2*		1*	2*	2*	
Viral hepatitis	a) Acute or flare	3/4*	2	1		1		1		1		1	
	b) Carrier/Chronic	1	1	1		1		1		1		1	
Drug Interactions													
Antiretroviral therapy	a) Nucleoside reverse transcriptase inhibitors	1*		1		1		1		2/3*	2*	2/3*	2*
	b) Non-nucleoside reverse transcriptase inhibitors	2*		2*		1		2*		2/3*	2*	2/3*	2*
	c) Ritonavir-boosted protease inhibitors	3*		3*		1		2*		2/3*	2*	2/3*	2*
Anticonvulsant therapy	a) Certain anticonvulsants (phenytoin, carbamazepine, barbiturates, primidone, topiramate, oxcarbazepine)	3*		3*		1		2*		1		1	
	b) Lamotrigine	3*		1		1		1		1		1	
Antimicrobial therapy	a) Broad spectrum antibiotics	1		1		1		1		1		1	
	b) Antifungals	1		1		1		1		1		1	
	c) Antiparasitics	1		1		1		1		1		1	
	d) Rifampicin or rifabutin therapy	3*		3*		1		2*		1		1	

I = initiation of contraceptive method; C = continuation of contraceptive method; NA = Not applicable

* Please see the complete guidance for a clarification to this classification: www.cdc.gov/reproductivehealth/unintendedpregnancy/USMEC.htm

‡ Condition that exposes a woman to increased risk as a result of unintended pregnancy.

SECTION III: GENERAL

3.010 – 3.530

ACNE-

Subjective

Pimples, blackheads, whiteheads, bumps, "zits"

Objective

Open comedones (blackheads) and closed comedones (whiteheads), papules, pustules, nodulocystic lesions
Scars usually distributed on face, neck, upper chest, back, and shoulders
Skin and hair are often oily

Assessment

Acne (85% of those aged 12 to 24 have acne to some extent)

Plan

Wash gently with soap and hot water TID, rinse with cold water
Encourage to keep hands off face; especially refrain from squeezing or picking skin
Instruct to keep hair clean and off the face
Use waterbase cosmetics (or preferably none at all)
Apply OTC preparations of benzoyl peroxide cream (e.g., Clearasil), in a thin layer over entire area of involvement, not just on lesions; begin with once a day applications and after 3 days if no excess peeling or redness of skin, increase use to BID; reduce frequency if excessive dryness or irritation develops
Recommend NO dietary restrictions; eat a balanced diet
Teach precipitating factors which may cause exacerbations, (i.e., menses, oral contraceptives, emotional stress)
Counsel regarding danger of ACCUTANE use during pregnancy (high risk of malformations) and oral antibiotics if taking oral contraceptives (decreased effectiveness of oral contraceptives)

Referral Indicators:

Little or no response to treatment (topical antibiotics can be helpful in some cases)
Allergy or skin irritation from topical OTC medication
Extensive or widespread involvement
Secondary bacterial infections
Potential facial scarring if untreated

Follow-Up:

Patient/parent will be asked to contact health provider in 2 weeks if not resolved

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006
Ferri's Clinical Advisor 2008

ACUTE UPPER RESPIRATORY INFECTION (COMMON COLD)

Subjective

Sneezing, “stuffiness" of head
Malaise, fatigue
Sore throat, cough
Poor appetite
Low grade or no fever history

Objective

Congested nasal passages
Serous nasal discharge, moist and boggy nasal mucous membranes
Lung fields clear
Low grade fever may be present

Assessment

Upper respiratory infection (common cold)

Plan

Acetaminophen for pain or fever
May humidify the air (vaporizer or bathroom shower water) to relieve nasal and pharyngeal discomfort and cough; vaporizer should not be used if allergic to molds
Nasal congestion may be relieved as follows by normal saline nose drops. (1/4-1/2 teaspoon salt to 1 cup water) every 4 hours PRN; for infants to 2 years, recommend suction gently with infant syringe
OTC decongestant as appropriate and if not contraindicated (follow label directions)

Health Teaching:

Instruct patient to rest and force fluids
Teach proper hand washing technique, cover mouth while coughing, and tissue disposal to prevent spread of disease

Referral Indicators:

Purulent nasal discharge
Pharyngeal exudate and/or tender cervical nodes
Red and/or bulging tympanic membranes
Tender sinuses
Fever extending beyond 48 hours/antipyretic does not bring fever below 101° F
Infants 0-12 months with fever 100.5° F rectally
Infants < 2 months with significant symptoms, with or without fever
Children under 2 years if no improvement in 24 hours, or signs and symptoms worsen

Follow-Up:

Patient/parent will be asked to contact health provider if condition persist or worsen

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006

ASSESSMENT OF IRON INTAKE AND MANAGEMENT OF IRON DEFICIENCY ANEMIA

Background

Childhood Anemia

Childhood anemia is a very common diagnosis and usually occurs due to an inadequate amount of dietary iron. Adequate iron storage is necessary to prevent anemia, but is also essential for brain development. In order to prevent iron-deficiency anemia, infants should be drinking either breast milk or iron-fortified formula. Toddlers and older children should eat a balanced, iron-rich diet.

Although iron deficiency is the most common etiology, anemia in childhood can be caused by a variety of conditions that are either congenital or acquired. Types of congenital anemia include sickle cell disease or thalassemia; acquired anemia includes such diagnoses as leukemia, gastrointestinal bleeding, and hemolytic disease. Congenital and acquired anemia generally is not iron-responsive. If a child presents with a pre-diagnosed anemia that is NOT iron-deficient, he/she should be referred to his/her provider for further management.

Sickle cell anemia can be easily ruled out by checking the status of the newborn screening. If sickle cell anemia is strongly suspected and an asymptomatic infant's disease status is unknown, refer to his/her provider, and delay replacement iron regimen until the results are available.

Adult Anemia

Anemia in adults is most commonly due to iron deficiency. In contrast to iron deficiency in childhood, which is most commonly caused by deficient dietary intake, the major cause of iron deficiency anemia is blood loss, which can be overt (trauma, hematemesis, melena, menorrhagia, etc.) or occult (e.g. via the gastrointestinal tract). Iron deficiency can also result from dietary deficiencies or reduced gastrointestinal absorption; however, blood loss should first be ruled out by the patient's primary care physician as a cause of iron deficiency before nutritional deficiency or malabsorption is assumed as a diagnosis.

Anemia Screening Procedure

Anemia screening is performed by checking hemoglobin levels. **Confirm abnormal/low hemoglobin levels with a second test at the same or a new site.** Make sure the skin is clean and dry before puncture. Avoid any squeezing of the digit after puncture. After the diagnosis of anemia, iron deficiency anemia is confirmed by administering a therapeutic regimen of iron and demonstrating a rise in hemoglobin of $\geq$1 g/dL after 4 weeks. If an infant fails to respond to therapy, referral shall be made to a physician or nurse practitioner for further evaluation.

SUBJECTIVE

Dietary assessment

- Inadequate consumption of dietary iron
- Consumption of whole cow's milk or formula with low iron or no iron
- Children > age 1year: consumption of more than 24 ounces of milk daily

Menstrual history (if appropriate)

Patient reported history of gastrointestinal blood loss

Normal versus abnormal newborn state screen for sickle cell disease

Symptoms: Pallor, shortness of breath, tachycardia, decreased energy/fatigue/lethargy, dizziness

OBJECTIVE

Fatigued appearance

Pallor of skin and/or conjunctiva

Dyspnea

Tachycardia

Heart murmur

Abnormal/low hemoglobin (hgb), see chart below

Age	**Criteria for anemia (hemoglobin concentration in g/dL)**	
	Female	**Male**
6-12 months	<11.0	<11.0
1-2 years	<11.0	<11.0
2-5 years	<11.1	<11.1
5-8 years	<11.5	<11.5
8-12 years	<11.9	<11.9
12-15 years **(non-pregnant)**		
Nonsmoker	<11.8	<12.5
Smoke up to 1 pack/day	<12.1	<12.8
Smoke 1-2 packs/day	<12.3	<13.0
Smoke >2 packs/day	<12.5	<13.2
15-18 years **(non-pregnant)**		
Nonsmoker	<12.0	<13.3
Smoke up to 1 pack/day	<12.3	<13.6
Smoke 1-2 packs/day	<12.5	<13.8
Smoke >2 packs/day	<12.7	<14.0
>18 years **(non-pregnant)**		
Nonsmoker	<12.0	<13.5
Smoke up to 1 pack/day	<12.3	<13.8
Smoke 1-2 packs/day	<12.5	<14.0
Smoke >2 packs/day	<12.7	<14.2

Age	Criteria for anemia (hemoglobin concentration in g/dL)	
	Female	**Male**
PREGNANT: 1st Trimester		
Nonsmoker	<11.0	N/A
Smoke up to 1 pack/day	<11.3	N/A
Smoke 1-2 packs/day	<11.5	N/A
Smoke >2 packs/day	<11.7	N/A
PREGNANT: 2nd Trimester		
Nonsmoker	<10.5	N/A
Smoke up to 1 pack/day	<10.8	N/A
Smoke 1-2 packs/day	<11.0	N/A
Smoke >2 packs/day	<11.2	N/A
PREGNANT: 3rd Trimester		
Nonsmoker	<11.0	N/A
Smoke up to 1 pack/day	<11.3	N/A
Smoke 1-2 packs/day	<11.5	N/A
Smoke >2 packs/day	<11.7	N/A

ASSESMENT

Not at risk for iron depletion with normal hemoglobin

OR

At risk for iron depletion with normal hemoglobin

- Infant at risk: preterm, low birth weight, diet of non-iron fortified infant formula, introduction of cow's milk prior to 12 months of age, or breastfed infant who is receiving inadequate dietary iron after six months of age
- Toddler/child/adolescent at risk: consumption of more than 24 ounces of cow's milk daily, low dietary iron intake/picky eaters, previous history of iron deficiency

OR

Anemia, suspect iron-deficiency

PLAN

For those <u>not at risk for iron depletion</u> with a <u>normal hemoglobin</u>

Instruct in age appropriate diet high in iron

Certification for WIC if eligible

Educate regarding the importance of iron for both blood and brain development

For those at risk of iron depletion with a normal hemoglobin

Instruct in age appropriate diet high in iron

Issue age-appropriate multivitamin with iron or write prescription:

- Infant/toddler multivitamin with iron drops at dose of 1 ml daily **OR**
- Children's chewable multivitamin at dose of one tablet daily per manufacturer's directions
- **NOTE:** If multivitamins with iron are used in an infant who is not anemic, the daily dose should not exceed 15 mg elemental iron daily or 2 mg/kg/day. Most infant/toddler *multivitamin* with iron drops contain 10 mg elemental iron per milliliter. Most chewable multivitamins with iron for toddlers and older children/adolescents contain 15-18 mg elemental iron per tablet. These should be administered according to package instructions.

Give iron-related pamphlet

Certification for WIC if eligible

Educate regarding the importance of iron for both blood and brain development

For those with suspected iron deficiency anemia, see table below and refer to the Iron replacement Dosing Chart:

Age <6 months	**Age 6-12 Months**	**Age 1-3 Years**	**Age 3-12 Years**	**Age 12-18 Years**	**>18 Years**
Obtain dietary assessment Instruct to use breast milk or iron fortified formula Supplement with iron according to the dose based on body weight (see dosing chart) Refer to WIC if eligible	Obtain dietary assessment Instruct in adequate consumption of dietary iron Give iron-related pamphlet Refer to WIC if eligible Supplement with iron according to dose based on body weight (see dosing chart)	Obtain dietary assessment Instruct in adequate consumption of dietary iron Decrease milk if necessary to 16 ounces or less daily Give iron-related pamphlet Refer to WIC if eligible Supplement with iron according to dose based on body weight (see dosing chart)	Obtain dietary assessment Instruct in adequate consumption of dietary iron Decrease milk if necessary to 16 ounces or less daily Give iron-related pamphlet Refer to WIC if eligible (< 5 yrs.) Supplement with iron according to dose based on body weight (see dosing chart)	Obtain dietary assessment Instruct in adequate consumption of dietary iron Decrease milk if necessary to 16 ounces or less daily Give iron-related pamphlet Supplement with iron according to dose based on body weight (see dosing chart)	Evaluate for blood loss (history, physical, hemoccult) Consider referral to MD or NP Instruct in adequate consumption of dietary iron and Vitamin C Dispense Ferrous Sulfate ($FeSO_4$) 325mg by mouth three times per day.

Health Teaching

Oral iron may cause constipation and turn stool black

Establish regular time for drug administration

Iron drops may harmlessly coat the teeth

Oral iron may interfere with absorption of tetracycline
Vitamin C will enhance absorption
Iron absorption is inhibited by antacids, Vitamin E, eggs, coffee, tea, and milk
ORAL IRON IS A SERIOUS POTENTIAL POISON - Issue safely

Referral Indicators

Premature infant
Poor weight gain/abnormal growth pattern
Symptomatic anemia (see "objective" for list of possible symptoms)
Heart murmur present
Pregnancy
Pre-diagnosed anemia that is NOT iron-deficient
Sickle cell disease and other hemoglobinopathies
Symptoms of gastrointestinal bleeding (dark tarry stools, blood in toilet bowl or on toilet paper, large amounts of blood passed from the rectum, vomiting blood)
Special health needs that increase the risk of iron-deficiency (chronic infection, inflammatory disorders, chronic or acute blood loss, restricted diets, use of medications that interfere with iron absorption)
Parent needs further guidance/education (subjective evaluation by RN/RD)
Inadequate response to therapy

CRITICAL VALUES:

For ages <5: Refer immediately for hemoglobin of **8.5 or less** <u>or if the patient is symptomatic</u>

For ages 5 and up: Refer immediately for hemoglobin of **10 or less** <u>or if the patient is symptomatic</u>

*For all ages, if the patient is symptomatic, they should be referred to their primary care provider <u>immediately</u>

Follow-up

For individuals with normal hemoglobin or iron depletion with normal hemoglobin:

Screen for anemia at routine intervals during WIC visits and/or preventive care visits (EPSDT exams)

For individuals with suspected iron deficiency anemia:

Evaluate for compliance to dietary and iron therapy
Repeat hemoglobin in 4 weeks, confirm at least 1 g/dL increase in hemoglobin

- **If there less than a 1 g/dL increase in hemoglobin after 4 weeks of iron supplementation, confirm that the dose is appropriate, there is no dairy overconsumption, and that the patient is compliant. If there are no confounding factors and the hemoglobin has not gone up, refer to health care provide**r.

- **If there is at least 1g/dL increase in hemoglobin, continue iron supplementation for 8 weeks after hemoglobin confirmed normal.**

Refer to health care provider if compliant infant shows inadequate response to therapy or hemoglobin remains below normal range despite 6-8 weeks of iron supplementation.

Iron Replacement Dosing Chart

All treatment of iron deficiency anemia is two-fold, a diet high in iron rich foods and therapeutic regimens of iron.

If concentrated iron drops, elixir or tablets are used in an infant or child that is anemic, the dose should not exceed 6 mg/kg of elemental iron daily to a maximum of the standard adult dose. Replacement iron doses may be divided into two or three daily doses. Liquid concentrated iron preparations are generally accepted but may not be palatable. If a child refuses to take the prescribed preparation, another may be used as long as the daily dose of elemental iron remains consistent.

All doses referenced in this protocol and on the dosing chart refer to either:

- **Concentrated ferrous sulfate drops that contain 15 mg/1.0 ml elemental iron.**
  OR
- **Ferrous sulfate elixir that contain 44 mg/5.0 mL elemental iron.**
  OR
- **325 mg ferrous sulfate tablets that contain 65 mg elemental iron per tablet.**

Instruct the caregiver regarding measurement using calibrated, oral medication syringes. Doses in milliliters require a precise dropper or oral syringe with well-marked increments of 0.1 ml.

Maximizing the dose for body weight is very important.

Iron Replacement Dosing Chart

Weight		Dosing Script (Write This on Prescription)		
Lbs	**Kgs**	**IRON DROPS (15 mg / 1.0 ml)**	**ELIXIR (44 mg / 5.0 ml)**	**TABLETS (65 mg / tablet)**
10	4.5	10.2 mg elemental iron (0.7 ml) po bid		
11	5.0	11.3 mg elemental iron (0.8 ml) po bid		
12	5.5	12.3 mg elemental iron (0.8 ml) po bid		
13	5.9	13.3 mg elemental iron (0.9 ml) po bid		
14	6.4	14.3 mg elemental iron (1.0 ml) po bid		
15	6.8	15.3 mg elemental iron (1.0 ml) po bid		
16	7.3	16.4 mg elemental iron (1.1 ml) po bid		
17	7.7	17.4 mg elemental iron (1.2 ml) po bid		
18	8.2	18.4 mg elemental iron (1.2 ml) po bid		
19	8.6	19.4 mg elemental iron (1.3 ml) po bid		
20	9.1	20.5 mg elemental iron (1.4 ml) po bid		
21	9.5	21.5 mg elemental iron (1.4 ml) po bid		
22	10.0	22.5 mg elemental iron (1.5 ml) po bid		
23	10.5	23.5 mg elemental iron (1.6 ml) po bid		
24	10.9	24.5 mg elemental iron (1.6 ml) po bid		
25	11.4	25.6 mg elemental iron (1.7 ml) po bid		
26	11.8	26.6 mg elemental iron (1.8 ml) po bid		
27	12.3	27.6 mg elemental iron (1.8 ml) po bid		
28	12.7	28.6 mg elemental iron (1.9 ml) po bid		
29	13.2	29.7 mg elemental iron (2.0 ml) po bid		
30	13.6	30.7 mg elemental iron (2.0 ml) po bid		
31	14.1	31.7 mg elemental iron (2.1 ml) po bid		
32	14.5	32.7 mg elemental iron (2.2 ml) po bid		
33	15.0	33.8 mg elemental iron (2.3 ml) po bid	33.8 mg elemental iron (3.8 ml) po bid	
34	15.5	34.8 mg elemental iron (2.3 ml) po bid	34.8 mg elemental iron (4.0 ml) po bid	
35	15.9	35.8 mg elemental iron (2.4 ml) po bid	35.8 mg elemental iron (4.1 ml) po bid	
36	16.4	36.8 mg elemental iron (2.5 ml) po bid	36.8 mg elemental iron (4.2 ml) po bid	
37	16.8	37.8 mg elemental iron (2.5 ml) po bid	37.8 mg elemental iron (4.3 ml) po bid	
38	17.3	38.9 mg elemental iron (2.6 ml) po bid	38.9 mg elemental iron (4.4 ml) po bid	
39	17.7	39.9 mg elemental iron (2.7 ml) po bid	39.9 mg elemental iron (4.5 ml) po bid	
40	18.2	40.9 mg elemental iron (2.7 ml) po bid	40.9 mg elemental iron (4.6 ml) po bid	
41	18.6	41.9 mg elemental iron (2.8 ml) po bid	41.9 mg elemental iron (4.8 ml) po bid	
42	19.1	43.0 mg elemental iron (2.9 ml) po bid	43.0 mg elemental iron (4.9 ml) po bid	
43	19.5	44.0 mg elemental iron (2.9 ml) po bid	44.0 mg elemental iron (5.0 ml) po bid	
44	20.0		45.0 mg elemental iron (5.1 ml) po bid	

Weight		Dosing Script (Write This on Prescription)		
Lbs	**Kgs**	**IRON DROPS (15 mg / 1.0 ml)**	**ELIXIR (44 mg / 5.0 ml)**	**TABLETS (65 mg / tablet)**
45	20.5		46.0 mg elemental iron (5.2 ml) po bid	
46	20.9		47.0 mg elemental iron (5.3 ml) po bid	
47	21.4		48.1 mg elemental iron (5.5 ml) po bid	
48	21.8		49.1 mg elemental iron (5.6 ml) po bid	
49	22.3		50.1 mg elemental iron (5.7 ml) po bid	
50	22.7		51.1 mg elemental iron (5.8 ml) po bid	
51	23.2		52.2 mg elemental iron (5.9 ml) po bid	
52	23.6		53.2 mg elemental iron (6.0 ml) po bid	
53	24.1		54.2 mg elemental iron (6.2 ml) po bid	
54	24.5		55.2 mg elemental iron (6.3 ml) po bid	
55	25.0		56.3 mg elemental iron (6.4 ml) po bid	
56	25.5		57.3 mg elemental iron (6.5 ml) po bid	
57	25.9		58.3 mg elemental iron (6.6 ml) po bid	
58	26.4		59.3 mg elemental iron (6.7 ml) po bid	
59	26.8		60.3 mg elemental iron (6.9 ml) po bid	
60	27.3		61.4 mg elemental iron (7.0 ml) po bid	
61	27.7		62.4 mg elemental iron (7.1 ml) po bid	
62	28.2		63.4 mg elemental iron (7.2 ml) po bid	
63	28.6		64.4 mg elemental iron (7.3 ml) po bid	
64	29.1		65.5 mg elemental iron (7.4 ml) po bid	One tablet (65.0 mg elemental iron) po bid
65	29.5		66.5 mg elemental iron (7.6 ml) po bid	One tablet (65.0 mg elemental iron) po bid
66	30.0		67.5 mg elemental iron (7.7 ml) po bid	One tablet (65.0 mg elemental iron) po bid
67	30.5		68.5 mg elemental iron (7.8 ml) po bid	One tablet (65.0 mg elemental iron) po bid
68	30.9		69.5 mg elemental iron (7.9 ml) po bid	One tablet (65.0 mg elemental iron) po bid
69	31.4		70.6 mg elemental Iron (8.0 ml) po bid	One tablet (65.0 mg elemental iron) po bid
70	31.8		71.6 mg elemental iron (8.1 ml) po bid	One tablet (65.0 mg elemental iron) po bid
71	32.3		72.6 mg elemental iron (8.3 ml) po bid	One tablet (65.0 mg elemental iron) po bid
72	32.7		73.6 mg elemental iron (8.4 ml) po bid	One tablet (65.0 mg elemental iron) po bid
73	33.2		74.7 mg elemental iron (8.5 ml) po bid	One tablet (65.0 mg elemental iron) po bid
73 - 95	33.2 43.2		86.0 mg elemental iron (9.8 ml) po bid	One tablet (65.0 mg elemental iron) po bid
> 95	> 43.2		64.8 mg elemental iron (7.4 ml) po tid	One tablet (65.0 mg elemental iron) po tid

Writing a Prescription for Iron Replacement

Provider and Pharmacist Prescription Guidance

When writing a prescription for ferrous sulfate, the dosage should be based strictly on the exact weight of the child. Use the following format when writing prescriptions for iron replacement. This format will help to standardize the instructions given to pharmacists and should help minimize dosing errors if the pharmacy needs to provide the medication in another formulation.

For liquid iron preparations, write:	***Example:***
Ferrous sulfate drops (15mg elemental iron/1.0 mL) Sig (insert dosing script from dosing chart) #QS 1 month, 3 refills Or Ferrous sulfate elixir (44mg elemental iron/5.0 mL) Sig (insert dosing script from dosing chart) #QS 1 month, 3 refills	Ferrous sulfate drops (15 mg elemental iron/1.0 mL) Sig 10.2 mg elemental iron (0.7 mL) po bid #QS 1 month, 3 refills Or Ferrous sulfate elixir (44 mg elemental iron/5.0 mL) Sig 66 mg elemental iron (7.5 mL) po bid #QS 1 month, 3 refills
For iron tablets, write:	***Example:***
Iron tablets (65 mg elemental iron/tablet) Sig (insert dosing script based from dosing chart) #QS 1 month, 3 refills	Iron tablets (65 mg elemental iron/tablet) Sig one tablet (65 mg elemental iron) po tid #QS 1 month, 3 refills

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ASCARIASIS (ROUNDWORMS)

Subjective

History of passage of adult worm, round and pinkish-white, often no symptoms
May have symptoms of:

- Abdominal pain
- Nausea and vomiting
- Anorexia
- Weight loss
- Pica
- Persistent cough, fever, blood tinged sputum
- Choking

Objective

Laboratory confirmation of roundworm infestation from stool specimen, OR visual observation of roundworm in stool or vomitus; There is no useful blood test.

Assessment

Ascariasis (Roundworms)

Plan

Pyrantel Pamoate, 11mg base/kg, once daily for 3 consecutive days.

Pyrantel Dosing - Single Dose			
Weight		Chewable Tablets (250mg Pyrantel base/chewable tablet)	Suspension (50mg Pyrantel base/ml)
25 to 37 lbs	11 to 16 kg	1/2	2.5 ml
38 to 62 lbs	17 to 28 kg	1	5 ml
63 to 87 lbs	29 to 39 kg	1 & 1/2	7.5 ml
88 to 112 lbs	40 to 50 kg	2	10 ml
113 to 137 lbs	51 to 62 kg	2 & 1/2	12.5 ml
138 to 162 lbs	63 to 73 kg	3	15 ml
163 to 187 lbs	74 to 84 kg	3 & 1/2	17.5 ml
188 lbs or more	85 kg or more	4	20 ml

NOTE: DO NOT GIVE TO CHILDREN UNDER TWO YEARS OLD, PREGNANT OR POSSIBLY PREGNANT, OR BREAST-FEEDING WOMEN WITHOUT SPECIFIC AUTHORIZATION OF A PHYSICIAN
Family members submit specimen and treat as indicated

Health Teaching

Avoid contacting soil that may be contaminated
Sanitary disposal of diapers and feces; cleaning of toilet seat; attention to children's play areas
Wash hands before eating, preparing food, and after elimination; keep nails short
Discourage eating food that has been dropped on the floor, or is unwashed from the garden; wash, peel or cook raw fruits and vegetables before eating.

Referral Indicators
No response to treatment
Children under two years of age
Pregnant or breast-feeding women
Pulmonary involvement
Abdominal pain

Follow-Up

Patient/parent will be asked to contact health provider if reoccurrence of symptoms after second treatment

Reference

CDC.gov; Ascarius Infection; September 2012.
UpToDate.com; Pyrantel Pamoate: pediatric drug information; Septermber 2012.
Quartzpharmaceuticals.com; Pin-x-overview; September 2012.

BLOOD PRESSURE, ELEVATED
ADULTS 18 YEARS OF AGE AND OLDER

GENERAL INFORMATION

Classification of blood pressure is based on the average of two or more properly measured, seated BP readings on each of two or more clinic visits:

Normal	systolic = <120	diastolic = <80
Prehypertension	systolic = 120-139	diastolic = 80-89
Hypertension, Stage 1	systolic = 140-159	diastolic = 90-99
Hypertension, Stage 2	systolic = ≥160	diastolic = ≥100

Accuracy in blood pressure measurement is dependent on the following:

- Persons should be seated quietly for at least 5 minutes in a chair, with feet on the floor, and arm supported at heart level
- An appropriate sized cuff should be used (cuff bladder encircling at least 80 percent of the arm)
- Equipment should be properly calibrated
- At least two measurements should be made
- The right arm is preferred in repeated measures of BP to provide consistency and comparison with standard tables; it is also important because of the possibility of coarctation of the aorta, which might lead to false (low) readings in the left arm

Risk factors for hypertension include the following:

- Specific lifestyle factors (alcohol use, tobacco use, excess dietary sodium, lack of exercise, stress)
- Medical conditions (obesity, sleep apnea, diabetes, kidney disease, hormonal disorders, thyroid or parathyroid disease, preeclampsia during pregnancy)
- Certain medications (oral contraceptives, steroids, nonsteroidal anti-inflammatory drugs, decongestants, diet pills, antidepressants)
- Age (35 and older)
- Gender (men, post menopausal women)
- Genetic factors (family history of hypertension, stroke, heart attack, heart disease, kidney disease, or diabetes)
- Race (Afro-Americans are at higher risk)

PLAN

Obtain history, weight, height, urine dipstick, and blood pressure

Use a cuff appropriate to the size of the adult's upper arm – BP using auscultation is preferred

Have adult sit quietly for 5 minutes with feet and back supported

Check BP using the right arm

BLOOD PRESSURE, ELEVATED ADULTS 18 YEARS OF AGE AND OLDER
(Continued)

If BP is < 120/80, the BP is normal
If BP is 120-139/80-89, patient is prehypertensive and life style modifications should be strongly encouraged
If BP is ≥140/90, repeat BP within one week
If BP continues to be elevated on the second visit, check BP again within one week
If the third BP check is still elevated and the average of the 3 BPs is ≥ 140/90, **REFER**

Blood Pressure Screening Table for Persons 18 Years and Older (Non-Pregnant)

CATEGORIES	READINGS*		FOLLOW-UP RECOMMENDATIONS
	Systolic	Diastolic	
Normal	Less than 120	AND Less than 80	• Recheck in 2 years • Encourage healthy lifestyle
Prehypertension	120-139	OR 80-89	• Recommend lifestyle modifications • Recheck in one year • If under MD/NP care, urge to keep doctor's appointments and follow instructions
Hypertension Stage 1	140-159	OR 90-99	• Recheck within one week • If still elevated, recheck within one week • If still elevated and average of the 3 BPs is ≥140/90, refer for medical evaluation • If under MD/NP care, refer for reevaluation
Hypertension Stage 2	160 or greater	OR 100 or greater	• Refer for prompt medical evaluation • If under MD/NP care, refer for prompt reevaluation
	180 or greater	OR 120 or greater	• Refer immediately • If under MD/NP care, refer for immediate reevaluation

*Based on the average of two or more readings taken at each of two or more visits. When systolic and diastolic pressures fall into different categories, the higher category should be used to classify the individual's blood pressure

Health Teaching

Encourage healthy lifestyles for all individuals
Emphasize lifestyle modifications for all patient with prehypertension and hypertension in order to reduce blood pressure, enhance antihypertensive drug efficacy, and decrease cardiovascular risk
Components of lifestyle modifications include weight reductions, DASH eating plan, dietary sodium reduction, aerobic physical activity, and moderation of alcohol consumption

Modification	Recommendation
Weight Reduction	Maintain normal body weight (BMI 18.5-24.9)
DASH eating plan*	Adopt a diet rich in fruits, vegetables, and lowfat dairy products with reduced content of saturated and total fat
Dietary sodium reduction	Reduce dietary sodium intake to ≤100 mmol per day (2.4 g sodium or 6 g sodium chloride
Aerobic physical activity	Regular aerobic physical activity (e.g., brisk walking) at least 30 minutes per day, most days of the week
Moderation of alcohol consumption	Men: limit to ≤2 drinks** per day Women and lighter weight persons: limit to ≤1 drink* per day

* Dietary Approaches to Stop Hypertension (DASH)
**1 drink = ½ oz or 15 ml ethanol (e.g., 12 oz beer, 5 0z wine, 1.5 oz 80-proof whiskey)

Referral Indicators

Symptoms of elevated BP (headache, blurred vision, vertigo, chest pain, edema, nausea and vomiting, and alteration in consciousness)
BP ≥140/90 (average of 3 BP readings)

REFERENCE

The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of high Blood Pressure, US Department of Health and Human Services, National Institutes of Health, National Heart, Lung and Blood Institute, National High Blood Pressure Education Program, December 2003

BLOOD PRESSURE, ELEVATED
CHILDREN 1-17 YEARS OF AGE

GENERAL INFORMATION

Based on the Fourth Report of the Joint National Committee on the Prevention, Detection, Evaluation, and Treatment of Hypertension in Children and Adolescents, the following definitions are provided:

Normal BP in children is defined as an average systolic and diastolic BP ≤90th percentile for gender, age and height

Hypertension in children is defined as an average systolic BP and/or diastolic BP that is ≥ 95th percentile for gender, age, and height on ≥ 3 separate occasions

Prehypertension in children is defined as an average systolic BP or diastolic BP that are ≥ 90th percentile but <95th percentile or a BP that exceeds 120/80 mmHg even if below the 90th percentile

In order to achieve an accurate blood pressure reading, it is recommended that:

The child be free of stimulant drugs or food AND

Have been sitting quietly for 5 minutes AND

Be seated with his or her back supported, feet on the floor, and right arm supported, cubital fossa at heart level

The right arm is preferred in repeated measures of BP for consistency and comparison with standard tables; it is also important because of the possibility of coarctation of the aorta, which might lead to false (low) readings in the left arm

PLAN

Obtain the child's height and age

Use a cuff appropriate to the size of the child's upper arm – BP using auscultation is preferred

Have child sit quietly for 5 minutes with feet and back supported

Check BP of any child over 3 years of age using the right arm

If BP is ≤ 90th percentile, the BP is normal

If the BP is > 5 mm Hg above the 99th percentile, REFER PROMPTLY

If the patient is symptomatic, REFER IMMEDIATELY

If automatic BP cuff is used and the child is found to have elevated BP ≥ 90th percentile, repeat BP using auscultation after sitting quietly for 5 minutes

If BP found to be elevated (≥ 95th percentile) based on systolic and diastolic reading, age, gender and height (using attached chart), repeat BP in one week

If BP continues to be elevated on the second visit, check BP again in one week

If the third BP check is still elevated and the average of the 3 BPs is ≥ 95th percentile,

REFER

Using the BP Chart

1. Obtain height and age of child
2. Measure and record BP
3. Find correct gender chart
4. Find the child's age on the left side of the chart, follow the age row horizontally across the table to the intersection of the line for the height percentile (vertical column)
5. Find the 50th, 90th, and 99th percentiles for systolic and diastolic BP in the right columns

BP < 90th percentile	= Normal
BP between the 90th and 95th	= Prehypertensive
BP > 95th percentile X 3 checks	= May Be Hypertensive
BP > 99th percentile + 5 mm Hg	= Probably Hypertensive

Health Teaching

Counsel the child on prevention and health related life-styles such as:
- Weight reduction
- Increased physical activity
- Dietary modification such as decreased sugar, salt, and an increase in fresh fruits and vegetables, regular meals, and a healthy breakfast

If Prehypertensive counsel regarding the need for BP recheck in 6 months

Referral Indicators

BP > 99th percentile + 5 mm Hg (PROMPTLY, if symptomatic IMMEDIATE)
Average of 3 BP > 95th percentile
Symptoms of elevated BP (i.e. headache, blurred vision, vertigo, chest pain, edema, nausea and vomiting, and alteration in consciousness)

REFERENCE

The Fourth Report on the Diagnosis, Evaluation, and treatment of High Blood Pressure in Children and Adolescents, U.S. Department of Health and Human Services, National Institutes of Health, National Heart, Lung, and Blood Institute, May 2005

The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of high Blood Pressure, US Department of Health and Human Services, National Institutes of Health, National Heart, Lung and Blood Institute, National High Blood Pressure Education Program, December 2003

Blood Pressure, Elevated Children 1-17 years of age
(Continued)

Blood Pressure Levels for BOYS by Age and Height Percentile

Age (Year)	BP Percentile ↓	Systolic BP (mmHg) ← Percentile of Height →							Diastolic BP (mmHg) ← Percentile of Height →						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
1	50th	80	81	83	85	87	88	89	34	35	36	37	38	39	39
	90th	94	95	97	99	100	102	103	49	50	51	52	53	53	51
	95th	98	99	101	103	104	106	106	54	54	55	56	57	58	58
	99th	105	106	108	110	112	113	114	61	62	63	64	65	66	66
2	50th	84	85	87	88	90	92	39	39	40	41	42	43	44	44
	90th	97	99	100	102	104	105	106	54	55	56	57	58	58	59
	95th	101	102	104	106	108	109	110	59	59	60	61	62	63	63
	99th	109	110	111	113	115	117	117	66	67	68	69	70	71	71
3	50th	86	87	89	91	93	94	95	44	44	45	46	47	48	48
	90th	100	101	103	105	107	108	109	59	59	60	61	62	63	63
	95th	104	405	407	109	110	112	113	63	63	64	65	66	67	67
	99th	111	112	114	116	118	119	120	71	71	72	73	74	75	75
4	50th	88	89	91	93	95	96	97	47	48	49	50	51	51	52
	90th	102	103	105	107	109	110	111	62	63	64	65	66	66	67
	95th	106	107	109	111	112	114	115	66	67	68	69	70	71	71
	99th	113	114	116	118	120	121	122	74	75	76	76	78	78	79
5	50th	90	91	93	95	96	98	98	50	51	52	53	54	55	55
	90th	104	105	106	108	110	111	112	65	66	67	68	69	69	70
	95th	108	109	110	112	114	115	116	69	70	71	72	73	74	74
	99th	115	116	118	120	121	123	123	77	78	79	80	81	81	82
6	50th	91	92	94	96	98	99	100	53	53	54	55	56	57	57
	90th	105	106	108	110	111	113	113	68	68	69	70	71	72	72
	95th	109	110	112	114	115	117	117	72	72	73	74	75	76	76
	99th	116	117	119	121	123	124	125	80	80	81	82	83	814	84
7	50th	92	94	95	97	99	100	101	55	55	56	57	58	59	59
	90th	106	107	109	111	113	114	115	70	70	71	72	73	74	74
	95th	110	111	113	115	117	118	119	74	74	75	76	77	78	78
	99th	117	118	120	122	124	125	126	82	82	83	84	85	86	86
8	50th	94	95	97	99	100	102	102	56	57	58	59	60	60	61
	90th	107	109	110	112	114	115	116	71	72	72	73	74	75	76
	95th	111	112	114	116	118	119	120	75	76	77	78	79	79	80
	99th	119	120	122	123	125	127	127	83	84	85	86	87	87	88
9	50th	95	96	98	100	102	103	104	57	58	59	60	61	61	62
	90th	106	110	112	114	115	117	118	72	73	74	75	76	76	77
	95th	113	114	116	118	119	121	121	76	77	78	79	80	81	81
	99th	120	121	123	125	127	128	129	84	85	86	87	88	88	89
10	50th	97	98	100	102	103	105	106	58	59	60	61	61	62	63
	90th	111	112	114	115	117	119	119	73	73	74	75	76	77	78
	95th	115	116	117	119	121	122	123	77	78	79	80	81	81	82
	99th	122	123	125	127	128	130	130	85	86	86	88	88	89	90

Blood Pressure, Elevated Children 1-17 years of age
(Continued)

Blood Pressure Levels for BOYS by Age and Height Percentile (Continued)

Age (Year)	BP Percentile ↓	Systolic BP (mmHg) ← Percentile of Height →							Diastolic BP (mmHg) ← Percentile of Height →						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
11	50th	99	100	102	104	105	107	107	59	59	60	61	62	63	63
	90th	113	114	115	117	119	120	121	74	74	75	76	77	78	78
	95th	117	118	119	121	123	124	125	78	78	79	80	81	82	82
	99th	124	125	127	129	130	132	132	86	86	87	88	89	90	90
12	50th	101	102	104	106	108	109	110	59	60	61	62	63	63	64
	90th	115	116	118	120	121	123	123	74	75	75	76	77	78	79
	95th	119	120	122	123	125	127	127	78	79	80	81	82	82	83
	99th	126	127	129	131	133	134	135	86	87	88	89	90	90	91
13	50th	104	105	106	108	110	111	112	60	60	61	62	63	64	64
	90th	117	118	120	122	124	125	126	75	75	76	77	78	79	79
	95th	121	122	124	126	128	129	130	79	79	80	81	82	83	83
	99th	128	130	131	133	135	136	137	87	87	88	89	90	91	91
14	50th	106	107	109	111	113	114	115	60	61	62	63	64	65	65
	90th	120	121	123	125	126	128	128	75	76	77	78	79	79	80
	95th	124	125	127	128	130	132	132	80	80	81	82	83	84	84
	99th	131	132	134	136	138	139	140	87	88	89	90	91	92	92
15	50th	109	110	112	113	115	117	117	61	62	63	64	65	66	66
	90th	122	124	125	127	129	130	131	76	77	78	79	80	80	81
	95th	126	127	129	131	133	134	135	81	81	82	83	84	85	85
	99th	134	135	136	138	140	142	142	88	89	90	91	92	93	93
16	50th	111	112	114	116	118	119	120	63	63	34	65	66	67	67
	90th	125	126	128	130	131	133	134	78	78	79	80	81	82	82
	95th	129	130	132	134	135	137	137	82	83	83	84	85	86	87
	99th	136	137	139	141	143	144	145	90	90	91	92	93	94	94
17	50th	114	115	116	118	120	121	122	65	66	66	67	68	69	70
	90th	127	128	130	132	134	135	136	80	80	81	82	83	84	84
	95th	131	132	134	136	138	139	140	84	85	86	87	87	88	89
	99th	139	140	141	143	145	146	147	92	93	93	94	95	96	97

Blood pressure tables taken from the Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents

BP standards based on sex, age, and height provide a precise classification of BP according to body size

Blood Pressure, Elevated Children 1-17 years of age
(Continued)

Blood Pressure Levels for GIRLS by Age and Height Percentile

Age (Year)	BP Percentile ↓	Systolic BP (mmHg) ← Percentile of Height →							Diastolic BP (mmHg) ← Percentile of Height →						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
1	50th	83	84	85	86	88	89	90	38	39	39	40	41	41	42
	90th	97	97	98	100	101	102	103	52	53	53	54	55	55	56
	95th	100	101	102	104	105	106	107	56	57	57	58	59	59	60
	99th	108	108	109	111	112	113	114	64	64	65	65	66	67	67
2	50th	85	85	87	88	89	91	91	43	44	44	45	46	46	47
	90th	98	99	100	101	103	104	105	57	58	58	59	60	61	61
	95th	102	103	104	105	107	108	109	61	62	62	63	64	65	65
	99th	109	110	111	112	114	115	116	69	69	70	70	71	72	72
3	50th	86	87	88	89	91	92	93	47	48	48	49	50	50	51
	90th	100	100	102	103	104	106	106	61	62	62	63	64	64	65
	95th	104	104	105	107	108	109	110	65	66	66	67	68	68	69
	99th	111	111	113	114	115	116	117	73	73	74	74	75	76	76
4	50th	88	88	90	91	92	94	94	50	50	51	52	52	53	54
	90th	101	102	103	104	106	107	108	64	64	65	66	67	67	68
	95th	105	406	107	108	110	111	112	68	68	69	70	71	71	72
	99th	112	113	114	115	117	118	119	76	76	76	77	78	79	79
5	50th	89	90	91	93	94	95	96	52	53	53	54	55	55	56
	90th	103	103	105	106	107	109	109	66	67	67	68	69	69	70
	95th	107	107	107	110	111	112	113	70	71	71	72	73	73	74
	99th	114	114	116	117	118	120	120	78	78	79	79	80	81	81
6	50th	91	92	93	94	96	97	98	54	54	55	56	56	57	58
	90th	104	105	106	108	109	110	111	68	68	69	70	70	71	72
	95th	108	109	110	111	113	114	115	72	72	73	74	74	75	76
	99th	115	116	117	119	120	121	122	80	80	80	81	82	83	83
7	50th	93	93	95	96	97	99	99	55	56	56	57	58	58	59
	90th	106	107	108	109	111	112	113	69	70	70	71	72	72	73
	95th	110	111	112	113	115	116	116	73	74	74	75	76	76	77
	99th	117	118	119	120	122	123	124	81	81	82	82	83	84	84
8	50th	95	95	96	96	99	100	101	57	57	57	58	59	60	60
	90th	108	109	110	111	113	114	114	71	71	71	72	73	74	74
	95th	112	112	114	115	116	118	118	75	75	75	76	77	78	78
	99th	119	120	121	122	123	125	125	82	82	83	83	84	85	86
9	50th	96	97	98	100	101	102	103	58	58	58	59	60	61	61
	90th	110	110	112	113	114	116	116	72	72	72	73	74	75	75
	95th	114	114	115	117	118	119	120	76	76	76	77	78	79	79
	99th	121	121	123	124	125	127	127	83	83	84	81	85	86	87
10	50th	98	99	100	102	103	104	105	59	59	59	60	61	62	62
	90th	112	112	114	115	116	118	118	73	73	73	74	75	76	76
	95th	116	116	117	119	120	121	122	77	77	77	78	79	80	80
	99th	123	123	125	126	127	129	129	84	84	85	86	86	87	88

Blood Pressure Levels for GIRLS by Age and Height Percentile (Continued)

Age (Year)	BP Percentile ↓	Systolic BP (mmHg) ← Percentile of Height →							Diastolic BP (mmHg) ← Percentile of Height →						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
11	50th	100	101	102	103	105	106	107	60	60	60	61	62	63	63
	90th	114	114	116	117	118	119	120	74	74	74	75	76	77	77
	95th	118	118	119	121	122	123	124	78	78	78	79	80	81	81
	99th	125	125	126	128	129	130	131	85	85	86	87	87	88	89
12	50th	102	103	104	105	107	108	109	61	61	61	62	63	64	64
	90th	116	116	117	119	120	121	122	75	75	75	76	77	78	78
	95th	119	120	121	123	124	125	126	79	79	79	80	81	82	82
	99th	127	127	128	130	131	132	133	86	86	87	88	88	89	90
13	50th	104	105	106	107	109	110	110	62	62	62	63	64	65	66
	90th	117	118	119	121	122	123	124	76	76	76	77	78	79	79
	95th	121	122	123	124	126	127	128	80	80	80	81	82	83	83
	99th	128	129	130	132	133	134	135	87	87	88	89	89	90	91
14	50th	106	106	107	109	110	111	112	63	63	63	64	65	66	66
	90th	119	120	121	122	124	125	125	77	77	77	78	79	80	80
	95th	123	123	125	126	127	129	129	81	81	81	82	83	84	84
	99th	130	131	132	133	135	136	136	88	88	89	90	90	91	92
15	50th	107	108	109	110	111	113	113	64	64	64	65	66	67	67
	90th	120	121	122	123	125	126	127	78	78	78	79	80	81	81
	95th	124	125	126	127	129	130	131	82	82	82	83	84	85	85
	99th	131	132	133	134	136	137	138	89	89	90	91	91	92	93
16	50th	108	108	110	111	112	114	114	64	64	65	66	66	67	68
	90th	121	122	123	124	126	127	128	78	78	79	80	81	81	82
	95th	125	126	127	128	130	131	132	82	82	83	84	85	85	86
	99th	1323	133	134	135	137	138	139	90	90	90	91	92	93	93
17	50th	108	109	110	111	113	114	115	64	65	65	66	67	67	68
	90th	122	122	123	125	126	127	128	78	79	79	80	81	81	82
	95th	125	126	127	129	130	131	132	82	83	83	84	85	85	86
	99th	133	133	134	136	137	138	139	90	90	91	91	92	93	93

Blood pressure tables taken from the Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents

BP standards based on sex, age, and height provide a precise classification of BP according to body size

CERUMEN, IMPACTED
(EAR WAX)

Subjective

Ear feels plugged
Diminished hearing
Itching may be present
History is negative for:
- Ear drainage
- Perforation of ear drum(s)
- Ear pain
- Ear surgery, e.g., “tubes”

Objective

Hardened and packed cerumen
Tympanic membrane not visible

Assessment

Impacted cerumen

Plan

Hearing assessment according to age
Recommend softening ear wax with the following warmed to body temperature:
- Use 5-6 drops of glycerin or mineral oil in each ear b.i.d. or t.i.d. for 7 days or recommend Debrox Drops 5-10 drops twice daily for 3-4 days
- Parent or guardian should be instructed in proper manipulation of ear lobe and cartilage to facilitate drops flowing into the ear

Discourage the use of anything smaller than the finger tip for cleaning the ear canal, (i.e., Q-tips, bobby pins, toothpicks, match sticks, twigs or straw)

Referral Indicators:

Earaches, ear pain
Ear drainage
Perforation of tympanic membrane
Impacted cerumen that fails to respond to above management
Impaired hearing or delayed and/or impaired speech
Children less than 2 years of age
Febrile (100.4° F rectally or greater)

Follow-Up:

Inspect the ears with an otoscope 2-4 days after treatment

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006

CHIGGERS
(DEMATOPHILIS PENTRANS)

Subjective

Intense itching and red raised wheels which increase in size and intensity over time
History of exposure to grasses and shrubs that may have harbored the mites

Objective

Red raised wheels found especially in body creases and at edges of clothing
R/O insect bites/stings, scabies, varicella
Excoriations and 2° infections

Assessment

Chigger Bites

Plan

Ice water compresses or gentle ice massage may help with itching
May obtain relief through application of OTC hydrocortisone preparation
If bites are extensive, an oral antihistamine may be beneficial

Health Teaching:

Avoid scratching to reduce risk of secondary bacterial infection
Future skin contact with the mites can be avoided by wearing long-sleeved shirts, long pants, and boots, and taping the clothing at the ankles, wrists, and waist, and using an insect repellent such as DEET
DEET **should be avoided** in infants under 2 months of age (follow label directions)
Wash clothing immediately after exposure
Shower well with soap after outdoors exposure

Referral Indicators:

Localized infection

Follow-Up:

Usually not necessary

Reference:

Medline Plus Medical Encyclopedia, “Chiggers” 10/17/06.
http://www.nlm.nih.gov/medlineplus/ency/article/001333.htm

CHOLESTEROL RISK ASSESSMENT (Child Health/EPSDT)

GENERAL INFORMATION

The following children are at **high risk** for developing coronary heart disease:

Children whose parent(s) have a total blood cholesterol level ≥ 240 mg/dL

Children whose parents or grandparents have had a documented myocardial infarction, positive coronary angiogram, or cerebrovascular or peripheral vascular disease before the age of fifty-five (55)

Children and adolescents with several risk factors for future coronary vascular disease (e.g., smoking, hypertension, physical inactivity, obesity, or diabetes mellitus), or whose family history cannot be ascertained (e.g., adopted, early parent death)

Assessment (see Plan for assessment questions):

"High risk cholesterol" assessment will be completed on all children two years of age and older who receive EPSDT services in local health departments

This assessment will be updated annually unless the cholesterol level has already been determined and a plan for treatment is in effect

PLAN

If the child is receiving a well child or an EPSDT exam, and is two years of age and older, assess the potential of being at high risk for elevated cholesterol levels by asking the following questions:

Is there a history of heart disease, heart attack or stroke with the child's parents or grandparents before these individuals turned fifty-five (55) years of age?

If the answer is **YES** -

Assess that it is a true diagnosis by asking questions regarding lab work, hospitalization and/or surgeries pertaining to the diagnosis

If the answer is still **YES** and the diagnosis is likely -

Counsel (nurse/nutritionist) regarding good eating habits and making good food choices (decreasing fat intake and increasing their diets with more grain products, fruits, vegetables, low-fat milk, beans, lean meat, poultry and fish)

Document history and plan of action in the patient's chart

Refer the child to their PCP for evaluation

Do you know if the child's mother or father has a high cholesterol level over 240 mg/dL?

If the answer is **YES** -

Discuss child's existing risk factors and the value of referring to the PCP for cholesterol evaluation

Counsel (nurse/nutritionist) regarding good eating habits and making good food choices (decreasing fat intake and increasing their diets with more grain products, fruits, vegetables, low-fat milk, beans, lean meat, poultry and fish)
Document history and plan of action in the patient's chart

If the answer to both questions is **NO**:
Counsel (nurse/nutritionist) regarding good eating habits and making good food choices (decreasing fat intake and increasing their diets with more grain products, fruits, vegetables, low-fat milk, beans, lean meat, poultry and fish)
Document "cholesterol assessment negative and counseled regarding good nutrition"

If the nurse is **UNABLE TO OBTAIN A HISTORY**:
Counsel (nurse/nutritionist) regarding good eating habits and making good food choices (decreasing fat intake and increasing their diets with more grain products, fruits, vegetables, low-fat milk, beans, lean meat, poultry and fish)
Encourage the child's parent to discuss with PCP the need for cholesterol screening
Document "Unable to obtain a cholesterol history; counseled parents regarding cholesterol evaluation and good eating habits "

If the child has **RISK FACTORS** and/or the **CHOLESTEROL HISTORY IS NOT OBTAINABLE:**
Document risk factors and/or cholesterol history not available
Counsel the family regarding risk factors and/or refer to the PCP for cholesterol evaluation
Counsel (nurse/nutritionist) regarding good eating habits and making good food choices (decreasing fat intake and increasing their diets with more grain products, fruits, vegetables, low-fat milk, beans, lean meat, poultry and fish)
Document plan of action in the patient's record

NOTE: If the patient does not have a PCP or the Health Department is the PCP consult with or refer to physician and/or nurse clinician for evaluation according to Physician/Nurse Clinician protocols

CONSTIPATION, ACUTE, CHILD

Subjective

Malaise, headache, abdominal cramping
History of hard, dry, stools; may be history of fecal soiling in older child
History of infrequent passage of stools relative to the individual's usual habit
Pain and/or straining at defecation; reluctance to sit on toilet
Stool streaked with blood
Diet and medication history

Objective

Signs of dehydration
Anal fissure or evidence of irritation
Mild abdominal distention with or without palpable firm mass
Stool streaked with bright blood

Assessment

Acute childhood constipation

Plan

Encourage defecation when urge presents
Adjust diet to allow for adequate fluid and carbohydrate intake:
- Young infants - Offer water 1-3 times daily between feedings; reduce intake of formula, if excessive
- Older infants - increase fluid intake; increase amounts of pureed fruits in the diet, especially prunes and plums; the amount needed will vary with individual infants
- Older children - Increase fluid intake; add prunes, apricots, and figs to the daily diet; include high-residue substances such as bran, whole wheat, oatmeal, and green leafy vegetables in daily diet

Discourage use of suppositories, laxatives, or enemas unless specifically ordered by physician
For minor anal irritation, advise warm sitz baths and use of petroleum jelly or ointment
For older child, support for feet when toileting

NOTE: HONEY SHOULD NOT BE USED AS OSMOTIC AGENT DUE TO DANGER OF BOTULISM

Referral Indicators:

Persistent, severe, or recurrent abdominal pain
Persistent fecal soiling
Persistent constipation despite adequate dietary intake
Vomiting, dehydration, fever
Severe breakdown of skin around anus
Blood streaked stool

Follow-Up:

Patient/parent will be asked to contact health provider if not resolved in 48-72 hours

Reference

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006

CONSTIPATION, ADULT

Subjective

Symptoms may include:
- Headache, indigestion, nausea, fatigue; abdominal pain, spasm, or discomfort; gas pain and flatulence
- Abnormal color and/or odor of feces; quantity of stool less than normal
- Decreased appetite; anorexia
- Frequency of defecation less than normal, or less than every third day
- Hard formed stool; strains at stool; feels pressure in rectum

Diet and medication history

Objective

Bowel sounds diminished
Palpable mass in left lower quadrant
Distended abdomen

Assessment

Constipation

Plan

Health Teaching:

Activity - increase daily activity level (example: walking 30-40 minutes daily)
Elimination patterns - set aside 30 minutes, preferably after breakfast, for defecation; pay attention to urge to defecate; instruct against habitual use of enemas and laxatives; avoid straining, ensure privacy, minimize distractions
Hydration - drink 6 glasses of water daily in addition to any other beverage
Nutrition - increase intake of fruit (raisins, dried apricots and plums), raw vegetables, broccoli, bran cereals, and whole-grain breads; consider use of unprocessed wheat bran (6 teaspoons a day) in cereal or liquids
Medication - select one or more of the following as appropriate:
- *Bulk* - Metamucil or generic brand, 1 tsp. stirred into 8 oz. cool water daily to t.i.d.; follow each dose with additional glass of water; optimal benefit 2-3 days
- *Laxative* - Milk of Magnesia 2-4 tbsp followed by a glass of water for mild laxative
- *Stool softener* - docusate sodium (Colace) 50-200 mg daily; adjust dose to individual response; effects noticed in 1-3 days
- *Lubricant* - Glycerin Suppository at time bowel movement required

Referral Indicators:

Constipation not corrected with above management in 72 hours
Nausea and vomiting
Persistent, severe, or recurrent abdominal pain
Temperature above normal
Rectal bleeding or positive serocult
Abnormal color of stool

References

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006

DIAPER DERMATITIS (DIAPER RASH)

Subjective

Caretaker reports diaper rash
Irritability

Objective

Contact dermatitis: Chafed, reddened, non-raised areas over genital and buttocks area
Infected dermatitis: Inflamed, bright red, indurated and tender skin; parched area With satellite lesions; thick white plaques with an erythematous base may be present on oral mucus membrane (thrush), especially during or following antibiotic therapy (see also oral candidiasis/moniliasis)

Assessment

Contact or Infected Diaper Dermatitis

Plan

For Contact Diaper Dermatitis:
Change diaper as soon as possible after it becomes wet or soiled; check diaper every hour in newborn
Dry diaper area gently and expose to air to dry completely after urination. Clean diaper area with warm water and mild soap (ie. Dove or Basis) after each bowel movement and dry gently but thoroughly
Leave diaper off during nap time to allow drying of the area
A thin layer of protective ointment or cream or medicated powder may be applied to skin with each diaper change.
Do not overdress infant
Discourage use of waterproof pants, plastic covered diapers, tightly pinned or double diapers, scented diapers, and diaper wipes as many contain perfume or alcohol
DO NOT USE TALCUM POWDER, BAKING SODA, OIL, OR PETROLEUM JELLY
Provide laundry instructions for cloth diapers, if applicable:
Suggest laundering diapers in mild detergent (i.e. Dreft) and rinse thoroughly
Discourage use of fabric softener

Referral Indicators:

Infected diaper dermatitis
Suspicion of burn
No response to treatment within 2-3 days
Presence of systemic involvement (e.g., fever)

Follow up:

Parent will be asked to contact health provider in 48-72 hours if not improved

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006
Uphold and Graham, Fourth Edition 2003
American Academy of Pediatrics, Healthy Children
http://www.healthychildren.org/English/ages-stages/baby/diapers-clothing/Pages/Diaper-Rash-Solution.aspx

DIARRHEA

Subjective

Loose, watery stools, increased frequency
Urgency for stool
Cramping abdominal pain
Decreased urination, strong colored urine

Objective

Increased bowel sounds
Observe for signs of dehydration:
- Sunken fontanelles
- Dry mucus membranes
- Sunken eyes
- Decreased skin turgor
- Decreased urination
- Fever
- Grayish skin
- Rapid breathing and pulse
- Weight loss

Assessment

Diarrhea: Acute and Unaccompanied by Nausea/Vomiting

Plan

Weigh patient

<u>For infants older than 2 months, instruct parent to</u>:
- Increase liquids containing calories, sodium (Na), and potassium (K), example Pedialyte, etc.
- Discontinue solid foods but do not withhold formula milk/breast milk
- After 24 hours if improvement, add semi-solids (e.g., cereal, applesauce, bananas) if tolerated, and if infant was on semi-solids prior to diarrhea
- Slowly advance diet to its previous level if semi-solids are well tolerated
- Teach signs and symptoms of dehydration

<u>For young child or adult</u>:
- Rehydrate with clear liquids (apple juice, gingerale, tea, broth) for 12 to 24 hours
- Then try usual diet, avoid simple sugars and fats
- Add soda crackers, toast, rice, cereal, yogurt, fruits, vegetables
- Add soft foods as symptoms begin to improve

Referral Indicators:

Infant less than 2 months old
Preschool child with 9-10 stools per 24 hours
Patients with lethargy, vomiting, or fever
Patients with signs of severe dehydration (sunken eyes, dry mucus membranes, decreased skin turgor, decreased urination)
Presence of abdominal tenderness
Patients with no improvement after 24 hours on liquid diet
Blood, pus, or mucus in stool
Weight loss significant in relation to age
Infants and children less than 4 years of age who fails to improve in 24 hours after clear liquids
If infants/children are taking fluids poorly

References

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006
Managing Acute Gastroenteritis Among Children, MMWR. November 21, 2003

ENTEROBIUS VERMICULARIS (PINWORMS)

Subjective

Rectal itching, especially at night
Heavy infestations may cause perianal pain and bleeding with defecation
White threadlike worms may be seen in bowel movements
Restlessness and irritability
Nightmares

Objective

Anal area shows evidence of scratching, may have perianal infection
Using clear tape collection method, ova may be seen microscopically
Laboratory confirmation of pinworm infestation from stool specimen
Visual observation of pinworm

Assessment

Enterobius Vermicularis (Pinworms) or Enterobiasis

Plan

Pyrantel Pamoate, 11 mg pyrantel base/kg, given as a single dose with a maximum of 1 gm/single dose.

Pyrantel Dosing - Single Dose			
Weight		Chewable Tablets (250 mg Pyrantel base/chewable tablet)	Suspension (50 mg Pyrantel base/ml)
25 to 37 lbs	11 to 16 kg	1/2	2.5 ml
38 to 62 lbs	17 to 28 kg	1	5 ml
63 to 87 lbs	29 to 39 kg	1 & 1/2	7.5 ml
88 to 112 lbs	40 to 50 kg	2	10 ml
113 to 137 lbs	51 to 62 kg	2 & 1/2	12.5 ml
138 to 162 lbs	63 to 73 kg	3	15 ml
163 to 187 lbs	74 to 84 kg	3 & 1/2	17.5 ml
188 lbs or more	85 kg or more	4	20 ml

NOTE: DO NOT GIVE TO CHILDREN UNDER TWO YEARS OLD, PREGNANT OR POSSIBLY PREGNANT, OR BREAST-FEEDING WOMEN

The entire family (immediate household members) should be treated, even if asymptomatic, to prevent reinfestation.

A second treatment should be given in 2 weeks to eliminate possible reinfection.

Health Teaching

Inform that reinfection and recurrence is common and will require retreatment
Sanitary disposal of feces; cleaning of toilet seat
Change bed linens and underwear of infected person daily
Wash soiled laundry in hot water
Wash hands before preparing food, eating, and after elimination; keep nails short
Discourage habits of nail biting and scratching bare anal area

Referral Indicators:

Secondary bacterial infection
No response to treatment
Children under 2 years of age
Pregnant or breast-feeding women

Follow-Up:

Patient/parent will be asked to contact health provider if reoccurrence of symptoms after second treatment

Reference:

cdc.gov; Enterobius Vericularis Infection – See Pinworm Infection
UpToDate.com; Pyrantel Pamoate: pediatric drug information; Septermber 2012.
quartzpharmaceuticals.com; Pin-x-overview; September 2012.

FEVER, VACCINE ASSOCIATED

SUBJECTIVE

History of vaccine administration within 24-36 hours of fever onset (may occur 7-14 days after administration of MMR)
Seizure activity may or may not be reported

OBJECTIVE

Temperature 100.4^0F or greater orally
99^0F or greater axillary
101^0F or greater rectally/ear
Please note ear thermometers are not reliable in children less than 6 months of age and must be used per manufacturer instructions to be accurate.

ASSESSMENT

Vaccine Associated Fever

PLAN

Recommend administration of **ACETAMINOPHEN** drops, elixir, or tablets according to dosage chart. Repeat dosage every 4 hours as needed. Max of 5 doses in 24 hours. Suppositories are available in 4 strengths and may be kept behind the pharmacy counter.

Weight (lb)	Dose (mg)	Drops (80 mg/0.8 ml) Dropperfuls	Children's Elixir (80 mg/1/2 tsp)	Chewable Tablets (80 mg tabs)	JR Chewable Tablets (160 mg tabs)	Adult Tablets (325 mg tabs)
6-11	40	½	¼ tsp	-		-
12-17	80	1	½ tsp	-		-
18-23	120	1 ½	¾ tsp	1 ½		-
24-35	160	2	1 tsp	2	1	-
36-47	240	3	1 ½ tsp	3	1 ½	-
48-59	320	4	2 tsp	4	2	1
60-71	400	5	2 ½ tsp	5	2 ½	1
72-95	480	-	3 tsp	6	3	1 ½

For children over 6 months of age, recommend administration of **IBUPROFEN** suspension instead of acetaminophen, but not in addition to acetaminophen, according to dosage chart. Repeat dosage every 6-8 hours as needed, max of 4 doses in 24 hours.

Weight (lb)	Dose (mg)	Drops 50mg/1.25ml	Children's liquid 100mg/5ml	Chewable Tablets 50mg	Chewable Tablets 100mg
12-17	50 mg	1.25 ml	½ tsp		
18-23	75 mg	1.875 ml	¾ tsp		
24-35	100 mg	2.5 ml	1 tsp	2	1
36-47	150 mg		1 ½ tsp	3	1 ½
48-59	200 mg		2 tsp	4	2
60-71	250 mg		2 ½ tsp	5	2 ½
72-95	300 mg		3 tsp	6	3
96-154	400 mg		4 tsp	8	4

Health Teaching

Children do not need antipyretic medication unless the fever is making them uncomfortable. In general, it is not necessary to medicate a child to prevent a fever after vaccination. If temperature is 104.6^0F or higher, child may be cooled in tepid bath until medication takes effect. Child should NOT be sponged in alcohol or placed in ice water to combat fever.

Counsel regarding side effects of medication (i.e. GI ulceration, bleeding and perforation with ibuprofen, and liver toxicity with acetaminophen)

Inform parents that many OTC products (i.e. cold and cough, allergy relief products) may contain acetaminophen or ibuprofen. Encourage parents to read labels carefully before giving other OTC product.

Referral Indicators:

Fever exceeding 103^0F rectally or 102^0F orally after completing above
Seizure activity
Appearance of other illness symptoms
Continuing fever

Follow-up:

Return to clinic as needed

REFERENCES

Wolters Kluwer Health, Inc. Facts and Comparisons, February 2011; http://online.factsandcomparisons.com/index.aspx.
Medscape, Drug Information, February, 2011;http://search.medscape.com/all-search.

FLUORIDE DEFICIENCY

NOTE:

- The use of dietary fluoride supplements is one alternative means of providing fluoride protection to the teeth of children 6 months old to 16 years of age who consume fluoride-deficient water with 0.6 ppm fluoride or less.
- Dietary fluoride supplements, in the form of daily tablets, lozenges, liquids, or vitamin-fluoride combinations, provide systemic benefits to developing teeth as well as topical benefits to erupted teeth. When practical, supplements should be prescribed as chewable tablets or lozenges to maximize the topical effects of fluoride.
- When prescribed and used appropriately, fluoride supplements provide benefits similar to those obtained from ingesting optimally-fluoride water over the same period of time.
- **When improperly prescribed, fluoride supplements may cause mild enamel fluorosis (white spots on teeth). Therefore, systemic fluoride supplements should never be prescribed to children in fluoridated communities who are already receiving optimally fluoridated water (0.7-1.2 ppm fluoride).**
- Because of an increase in the milder forms of dental fluorosis associated with fluoride ingestion in excess of that necessary to prevent tooth decay, a conservative approach to fluoride supplementation should be used and in accordance with the recently revised guidelines
- If a child's primary drinking water source is a well, spring, or non-fluoridated community water system, a water sample must first be taken and analyzed to determine its fluoride content and what dosage of fluoride supplement, if any, is needed.

Subjective

No other systemic source of fluoride besides that present in foods and beverages processed with fluoridated water
Request for dietary fluoride supplement
Age 6 months to 16 years

Objective

Private community water supply with a fluoride content 0.6 ppm fluoride or below as confirmed by fluoride assay
Dental caries are more common in areas of fluoride deficient water supply.

Assessment

Fluoride Deficiency

Plan

Drinking water should be analyzed for fluoride content prior to supplementation in order to determine if supplements are necessary and how much to prescribe.

To determine the level of fluoride in the child's existing water supply:

1. Obtain water sample bottles from either Fluoridation Specialist (TDEC Nashville Env. Field Office, Division of Water Supply, 711 R.S. Gass Blvd, Nashville, TN 37216, Telephone 615-687-7037 or the Regional Dental Director.
2. Provide parent or guardian with 1 water sample bottle, request slip for fluoride determination.
3. Instruct patient on the correct procedure for collecting and handling of the water sample:
    a. Using a kitchen or bathroom faucet allow cold water to run for at least 30 seconds.
    b. Rinse out the sample bottle twice before filling.
    c. Fill sample bottle with cold water and screw on cap firmly.
    d. Mail the sample within 3 days.

Estimate an effective fluoride concentration as indicated (child is consuming water from multiple sources)

Example: If the home water supply is tested and the fluoride concentration is 0.2 ppm, but it only accounts for half of the child's daily water intake (0.2 ppm x 0.50 = 0.1 ppm) and the day-care water supply has a known fluoride concentration of 1.0 ppm and it accounts for the remaining half of the child's daily intake (1.0 ppm x 0.50 ppm) a dietary fluoride supplement (if prescribed) should be based on the effective fluoride concentration of 0.6 ppm and not 0.2 ppm

Dispense fluoride supplements according to the following dosage schedule:

Dietary Supplemental Fluoride Dosage Schedule in mg F/day
Revised, ADA Winter 1994

Age of Child	ppm fluoride in water supply		
	0-0.3 ppm	0.3-0.6 ppm	>0.6 ppm
Birth to 6 mo	0	0	0
6 mo to 3 yrs	0.25 mg	0	0
3 to 6 yrs	0.5 mg	0.25 mg	0
6-16 yrs	1.0 mg	0.5 mg	0

Dispense on a "one bottle at a time" basis

Each bottle should not exceed the recommended limit of 120 mgs of fluoride

Health Teaching:

There is a well-documented decline in dental caries in children in the United States which is due to widespread use of various forms of fluoride

Even people living in communities where water supplies are not fluoridated still benefit from exposure to fluorides found in toothpaste, mouth rinses, professionally applied fluorides and in foods processed in cities where water supplies are fluoridated (i.e., the "halo" phenomenon)

In order to reduce risk of dental fluorosis, it is recommended that parents closely supervise tooth brushing by young children to prevent their ingestion of fluoride toothpaste and to ensure that only very small quantities (pea-sized amounts) are used

Careful use of fluoride is particularly appropriate during the time of anterior tooth enamel development (birth to 6 years)

Follow-Up:

The parent or guardian of the child will be asked to return for a refill when one bottle is near completion or if the fluoride status of the water supply changes

Reference

MMWR August 17, 2001 / 50 (RR14) 1-42
MMWR "Achievements….etc." October 22, 1999 / 48 (41); 933-940

FLUORIDE VARNISH

NOTE:

- The bacteria associated with dental caries have been identified as Streptococcus Mutans. The presence of these bacteria along with food and saliva allow the process of decay to begin on the tooth surface. Untreated decay progresses through stages of tooth destruction. As the decay progresses, the affected area becomes larger.
- There has been a well-documented decline in dental caries in children in the United States, which has been attributed to widespread use of various forms of fluoride. With the use of fluoride varnish, a high-concentration of fluoride in a small amount is painted directly onto the teeth.
- Even people living in communities where water supplies are not fluoridated still benefit from exposure to fluorides found in toothpaste, mouth rinses, professionally applied fluorides, and in foods processed in cities where water supplies are fluoridated (i.e., the "halo" phenomenon)
- The use of topical fluoride supplements is one alternative means of providing protection to the teeth of children 0 months old to 21[1] years of age who are at risk for dental caries.
- Proper application technique reduces the possibility that a patient will swallow varnish during its application and limits the total amount of fluoride swallowed as the varnish wears off the teeth over several hours.
- A combination of various types of fluoride use (e.g. optimally fluoridated water, prescription fluoride supplements, and professionally applied topical fluoride) reduces dental caries significantly more than any one method alone.
- No published evidence indicates that professionally applied fluoride varnish is a risk factor for enamel fluorosis, even among children aged <6 years.
- Applying the fluoride varnish to any and all tooth surfaces reduces the risk of decay.
- A helpful tip for applying fluoride varnish to the teeth of young children is to sit knee-to-knee with parent or caregiver, and have child lay in the health care provider's lap

SUBJECTIVE

Age 0 – 21 years of age
Target population age 0 - 5 years
Mother requests application of dental varnish for child
Health care provider recommends application of dental varnish

[1] Topical application of fluoride varnish is safe for the prenatal patient

OBJECTIVE

White spot lesions may or may not be present on any teeth in the child's oral cavity

ASSESSMENT

Need for dental varnish application

PLAN

RN to apply dental fluoride varnish application according to package instructions

Health Teaching:

Instruct parent/guardian on the correct care of child's teeth until the next day
Provide parent/guardian with appropriate information sheet for care of child's teeth following fluoride varnish application
Instruct parent or guardian on the need for additional applications of fluoride varnish
Counsel parent/guardian to closely supervise tooth brushing by young children in order to prevent their ingestion of fluoride toothpaste and to ensure that only very small quantities (pea-sized amounts) are used (so as to reduce the risk of dental fluorosis)
Counsel parent/guardian regarding the risks that contributes to dental decay
Instruct parent/guardian about proper diet and feeding habits, as well as the daily care of the child's teeth to contribute to the prevention of dental decay

Follow-Up:

Fluoride varnish should be applied at least two times annually

REFERENCE

Morbidity and Mortality Weekly Report, Recommendations and Reports, August 17, 2001, Vol. 50 No. RR-14; pages 18–19

FOLIC ACID PROPHYLACTIC THERAPY FOR WOMEN OF REPRODUCTIVE AGE

GENERAL INFORMATION

Folic acid is vital to the early development of the fetal brain and spinal cord. Brain and spinal cord development occur by the 5th week of pregnancy. This is only one week after the menstrual period has been missed. Some women will not yet know they are pregnant. Inadequate folic acid levels can lead to a defect in the developing fetal brain and spinal cord. This is called a neural tube defect. All women of reproductive age should consume 400mcg (0.4 mg) of folic acid daily in order to be prepared should a pregnancy occur. Folic acid prior to pregnancy is an important component of preconception care.

Supplementation with folic acid is recommended because it is difficult to eat a diet that contains adequate amounts of folic acid. Today, enriched grain products such as flour, cereal, bread, rice and pasta are fortified with folic acid. Other sources of folic acid include dark green leafy vegetables, dried beans, legumes oranges, and orange juice. Nevertheless supplementation is recommended.

SUBJECTIVE

No medical history of intolerance to multivitamins with folic acid
Negative obstetric history for a child with spina bifida or anencephaly
Not currently taking a daily multivitamin with folic acid

OBJECTIVE

Woman of reproductive age (approximately 10 to 44 years of age)

ASSESSMENT

Client is appropriate for supplementation with a daily multivitamin with 400 mcg of folic acid.

PLAN

Educate the client about the importance of folic acid.
If the client already takes a multivitamin with folic acid, assure that she understands that she needs only one a day. She should complete what she has before beginning what is given to her at the clinic.
If there is an obstetric history of neural tube defects, consult for the proper dosage of folic acid. Women who have given birth to a child with a neural tube defect require higher doses of folic acid.
Give the client a supply of multivitamins with folic acid with the instructions to take one tablet orally daily.

Client may take the supplement with food if she has nausea when taking it on an empty stomach.
Provide client with any written materials you may have regarding folic acid.
The return appointment is scheduled as needed.

REFERENCES

http://ods.od.nih.gov/factsheets/folate.asp

www.cdc.gov/Features/FolicAcid/

www.marchofdimes.com

FOODBORNE OUTBREAK INVESTIGATION

GENERAL INFORMATION

A foodborne outbreak is defined as the occurrence of two or more cases of a similar illness resulting from the ingestion of a common food.

Exception: one case of botulism is considered a foodborne outbreak and is subject to notification and investigation

Complaints about taste, appearance or odor of food without illness are not considered outbreaks.

PLAN

Follow instructions in the following manual:

Foodborne Outbreak Investigation Manual
Tennessee Department of Health
January 2000

Report all foodborne outbreaks to the local health department as stated in the following document**:**

Rules and Regulations Governing Communicable Diseases in Tennessee
Chapter 1200-14-1-.02
Tennessee Department of Health

Notify according to the following document:

Foodborne Outbreak Investigation Manual
Tennessee Department of Health
January 2000

Note:
Important Telephone Numbers listed in Appendix A of the Foodborne Outbreak Manual

INVASIVE *HAEMOPHILUS INFLUENZA TYPE B*, DISEASE CONTACT

Background

Before the introduction of effective vaccines, Haemophilus influenza type b (Hib) was the leading cause of bacterial meningitis in the United States among children younger than 5 years old. Widespread use of Hib conjugate vaccine has virtually eliminated invasive Hib disease in the United States and other countries where vaccination is routine. Hib is spread by direct contact with a patient's oral secretions. Hib can be spread by people who have the bacteria in their noses or throats but who do not show symptoms. The incubation period is unknown.

SUBJECTIVE

Referred to Health Department with history of recent (within 1 week) contact to confirmed case of invasive *Haemophilus influenzae* type B disease and other resources for patient to purchase medication is not available

OBJECTIVE

Chemoprophylaxis with Rifampin Recommended

For all household contacts in the following circumstances:

- Household with at least 1 contact younger than 4 years of age who is unimmunized or incompletely immunized
- Household with a child younger than 12 months of age who has not completed the primary Hib vaccine series
- Household with a contact who is an immunocompromised child, regardless of that child's Hib immunization status

For preschool and childcare center contacts when 2 or more cases of Hib invasive disease have occurred within 60 days

For the index patient, if younger than 2 years of age, or a member of a household with a susceptible contact and treated with a regimen other than cefotaxime or ceftriaxone.

Consult with Regional Health Officer as needed for further identification/clarification of contacts needing chemoprophylaxis

Chemoprophylaxis Not Recommended

For occupants of households with no children younger than 4 years of age other than the index patient

For occupants of households where all household contacts 12 through 48 months of age have completed their Hib immunization series and when household contacts younger than 12 months of age have completed their primary series of Hib immunization

For preschool or childcare contacts of one index case

For pregnant women

Observe for symptoms of fever, malaise, nausea, vomiting, severe headache, increased sensitivity to light, altered mental status or confusion.

IF SYMPTOMATIC DO NOT PROVIDE PROPHYLAXIS, REFER IMMEDIATELY FOR DEFINITIVE DIAGNOSIS AND TREATMENT

ASSESSMENT
Provide chemoprophylaxis and immunization as indicated

PLAN
Rifampin is the drug of choice for chemoprophylaxis

Obtain order from physician to dispense Rifampin (for individual with no known allergy to Rifampin)
Obtain Rifampin from regional pharmacy; ask regional pharmacist to re-package tablets for adults and mix suspension for children; if necessary, Rifampin may be provided to a local pharmacist for re-packaging

Rifampin Dosage:
Adults: 600 mg/day (single dose) x 4 days, by mouth
Children (1 month-12 years): 20 mg/kg/day (single dose) x 4 days, not to exceed 600 mg per dose, by mouth
Infants (less than 1 month): 10 mg/kg/day (single dose) x 4 days, by mouth

Instruct patient regarding medication side effects and contraindications

Immunization
Children in the household and younger than age 5 years who are incompletely immunized against Hib disease according to the Hib immunization schedule should be administered a dose of Hib-containing vaccine and, if necessary, educated to return for the next dose when due. A single dose of Hib vaccine completes the series for any child age 15 months through 59 months.

Health Teaching
Advise barrier method (foam and condoms) for oral contraceptives
Advise contact lens wearers that tears will be orange and stain contacts; urine may be orange
Notify Regional Health Officer, Communicable Disease Director and Nursing Supervisor

Referral Indicators:
Symptomatic for meningitis
Unable to tolerate, or allergy to, Rifampin

REFERENCES
CDC. Meningitis – Bacterial
www.cdc.gov/meningitis/bacterial

American Academy of Pediatrics. Haemophilus influenzae infections. In: Pickering, LK, Baker CJ, Kimberlin DW, Long SS, eds. *Red Book: 2012 Report of the Committee on Infectious Diseases.* Elk Grove Village, IL: American Academy of Pediatrics; 2012:345-352.

Epidemiology and Prevention of Vaccine- Preventable Diseases, Department of Health and Human Services, Centers for Disease Control and Prevention, 12th Edition, May 2011

Manual for Surveillance of Vaccine-Preventable Diseases, Centers for Disease Control and Prevention, 5th Edition, 2012

Yeh, S. Prevention of Haemophilus influenza infection. In: UpToDate, Torchia, M (Ed), Waltham, MA, 2013

HEPATITIS A, CASE OR PRESUMPTIVE (0701)

General Information

Management should be considered for:
- Hepatitis A confirmed by laboratory
- If hepatitis A is strongly suspected
- Epidemiological contact to confirmed hepatitis A case occurring within the preceding 30 days

Symptoms of hepatitis A may include:
- Fever
- Malaise
- Anorexia
- Nausea
- Abdominal discomfort
- Jaundice

Plan

Institute fecal-oral precautions

Determine if post-exposure prophylaxis is indicated (see Hepatitis A Contacts page 2-12)

Notify nursing supervisor and communicable disease investigator; fill out appropriate case investigation forms

Notify environmentalist if food or water borne transmission is suspected

If on oral contraceptives, consult with health care provider regarding discontinuance during acute illness

HEPATITIS A, POSTEXPOSURE

GENERAL INFORMATION

Hepatitis A virus (HAV) symptoms may appear two to seven weeks after exposure to the infected source, but usually occur about four weeks after exposure. However, people who have been infected are contagious from about two weeks before the symptoms appear and continue to be contagious for about one week after the onset of jaundice. After they recover from HAV they are immune to it for life and do not continue to carry the virus.

The recommendations for the use of hepatitis A vaccine after exposure to HAV have changed. People who recently have been exposed to HAV and who previously have not had hepatitis A vaccine should be given a single dose of hepatitis A vaccine (not the combination vaccine) **or** immune globulin (IG) as soon as possible and within 14 days of the last exposure. The effectiveness of postexposure prophylaxis declines over time. Decisions to use vaccine or IG should take into account which of them is readily available and patient characteristics associated with more severe manifestations of hepatitis A, including older age and chronic liver disease.

Federally funded vaccine and IG may be used for PEP. Federally funded vaccine is not available for second doses of vaccine unless the recipient would otherwise be provided the second dose as part of the routine hepatitis A immunization protocol.

Hepatitis A vaccine is preferred for:

- Most people age 12 months through 40 years of age (exceptions below)

IG is preferred for:

- People over 40 years of age (hepatitis A vaccine can be used if IG is unavailable)
- Children younger than 12 months of age
- Immunocompromised persons
- Persons who have diagnosed chronic liver disease
- Persons for whom vaccine is contraindicated

Contact to a known or suspected hepatitis A case is defined as follows:

Close personal contact (with not more than 14 days since last exposure to infectious case):

- Household and sexual contacts
- Persons who have shared illicit drugs
- Close family and playmates
- Ongoing personal contact (e.g., regular babysitting)

Daycare contact (with not more than 14 days since exposure)

Hepatitis A vaccine or IG should be administered to all previously unvaccinated staff members and attendees of child care centers or homes if:

1) one or more cases of hepatitis A are recognized in children or employees or
2) cases are recognized in two or more households of center attendees

In centers that do not provide care to children who wear diapers, hepatitis A vaccine or IG need be administered only to classroom contacts of the index patient. When an outbreak occurs (i.e., hepatitis A cases in three or more families), hepatitis A vaccine or IG also should be considered for members of households that have children (center attendees) in diapers.

Common-source exposure

If case is a **food handler**, hepatitis A vaccine or IG should be given to other food handlers in the same establishment (if not more than 14 days since exposure) - consult with communicable disease director and regional health officer before acting.

Recommended for patrons if

1) during the time when the food handler was likely to be infectious, the food handler both directly handled uncooked or cooked foods and had diarrhea or poor hygienic practices, AND
2) patrons can be identified and treated $\leq$2 weeks after the exposure

In settings in which repeated exposures to HAV might have occurred (e.g., institutional cafeterias), stronger consideration of hepatitis A vaccine or IG use could be warranted.

Schools, hospitals, and work settings

Hepatitis A postexposure prophylaxis is not routinely indicated when a single case occurs in an elementary or secondary school or an office or other work setting, and the source of infection is outside the school or work setting. Also, when a person who has hepatitis A is admitted to a hospital, staff members should not routinely be administered hepatitis A postexposure prophylaxis; instead, careful hygienic practices should be emphasized. Hepatitis A vaccine or IG should be administered to persons who have close contact with index patients if an epidemiologic investigation indicates HAV transmission has occurred among students in a school or among patients or between patients and staff members in a hospital.

Plan

Report all know cases and suspects to the Communicable Disease Representative
For persons exposed to HAV within the past 14 days and who previously have not received hepatitis A vaccine administer appropriate postexposure prophylaxis, according to guidelines above: either a single dose of single-antigen vaccine (refer to the Hepatitis A Vaccine protocol for dosage and administration) or IG (0.02mL/kg) as soon as possible (and **only** within 14 days of exposure); see Dosage for IG Prophylaxis Chart
The Tennessee Department of Health provides post-exposure prophylaxis with vaccine or immune globulin for contacts to hepatitis A cases who meet listed criteria
If using immune globulin, obtain order from public health or private physician to administer immune globulin
Delay administration of live virus vaccine(s) for at least 3 months after IG administration
If immune globulin is given within 14 days after a live virus vaccine has been given, the live virus vaccine should be repeated in 3 months
If immune globulin has been given in the previous 3 months, consult communicable disease director or public health physician prior to repeating
If the preferred postexposure prophylaxis (immune globulin or vaccine) for a particular patient is not readily available, but the alternative product is, consult with a public health physician or communicable disease director to determine acceptability of administering the alternative product.

Health Teaching:

Household and close contacts
- Fecal/oral precautions
- Wash hands after elimination, and before preparing food and eating; keep nails short

Daycare Facilities
- Prompt and proper diaper changing
- Proper disposal of diapers and disinfection of changing area
- Hand washing after elimination, diaper changing, before eating, before food preparation
- Disinfection of toys and play equipment in areas with diagnosed children
- Educate that all children 12 months and up are now recommended to be vaccinated routinely against hepatitis A

Food Service Facilities
- Environmental inspection and emphasis on personal hygiene, hand washing and sanitation
- Remove food handler with diarrhea from direct food handling duties

Management to notify health department if secondary cases indicated in food handlers (fever, malaise, anorexia, abdominal pain, or nausea)
Contact health provider immediately if symptoms develop in coinfected cases (similar time frame) or in secondary cases (within six weeks)

Follow-up

If hepatitis A vaccine is initiated for postexposure, instruct patient that they may obtain a second dose after 6 months or longer to complete the series for lifelong immunity. The second dose of vaccine is not necessary for post-exposure prophylaxis and is not provided by the health department to persons for whom the health department would not otherwise provide hepatitis A vaccine.

Referral Indicators:

Symptomatic for hepatitis A

REFERENCES

MMWR, Update: Prevention of Hepatitis A After Exposure to Hepatitis A…., October 19, 2007 /56 (41); 1080-1084
Red Book, 27th Edition 2006
"Federally Funded Vaccines for Adults" memo from Dr. Kelly Moore and Dr. Tom Jaselskis, July 8, 2009

DOSAGE OF IMMUNE GLOBULIN (IG) FOR PROPHYLAXIS OF HEPATITIS A

Dosage is 0.02 ml of IG/kg
1 kg = 2.2 lbs

Weight	Immune Globulin
11 lbs	.1 ml
22 lbs	.2 ml
33 lbs	.3 ml
44 lbs	.4 ml
55 lbs	.5 ml
66 lbs	.6 ml
77 lbs	.7 ml
88 lbs	.8 ml
99 lbs	.9 ml
110 lbs	1.0 ml
121 lbs	1.1 ml
132 lbs	1.2 ml
143 lbs	1.3 ml
154 lbs	1.4 ml
165 lbs	1.5 ml
176 lbs	1.6 ml
187 lbs	1.7 ml
198 lbs	1.8 ml
209 lbs	1.9 ml
220 lbs	2.0 ml
231 lbs	2.1 ml
242 lbs	2.2 ml
253 lbs	2.3 ml
264 lbs	2.4 ml
275 lbs	2.5 ml

HERPES SIMPLEX TYPE I
(Fever Blister)

Subjective

Singular or grouped blisters around mouth (cold sores, fever blisters)
Sores may be preceded by irritation, a tingling sensation or burning at affected site and may appear following exposure to sun or tanning bed, and at times of stress

Objective

Vesicular eruption and ulceration of mucous membranes of the lips, mouth and/or face
Initial case may have fever [Fever may reach 40-40.6°C (104-105°F)]
Tender, enlarged lymph nodes (submandibular, submaxillary)
Increased salivation, halitosis, and anorexia

Assessment

Herpes Simplex (Fever Blister)

Plan

Inform that disease is usually self-limiting, lasting 1-2 weeks
Important to ensure adequate fluid intake (avoid acidic drinks)
Advise regarding temporary relief:
- Application of ice cube (1 hour duration) when lesions first suspected or within 24 hours of appearance may promote rapid healing
- Acetaminophen for fever or pain with generalized primary infection
- Local analgesics prior to feedings
- Local drying agents, i.e., Blistex, 3-4 times daily

Health Teaching:

Antibody studies indicate over 85% of all adults have had this exposure
Teach proper hand washing technique
Educate that recurrent infection may be reactivated by overexposure to heat (sunlight, ultraviolet light) or cold, emotional stress, fever, trauma, or menses; often returns in same location
Advise use of lip moisturizer containing sun screen
Advise to avoid kissing when lesion present
Encourage additional rest

Referral Indicators:

Newborn infants, severely malnourished infants or children, immunosuppressed patients, or in association with another disease (i.e., measles)
Generalized eruption or extensive mucosal involvement
Ocular or genital lesions
Secondary bacterial infection
Suspected dehydration
Signs of neurologic manifestation (i.e., headache, vomiting, photophobia, convulsions, or neurologic findings)

Follow-Up:

Contact health provider if blister not improving in 72 hours; may need reassessment for hydration status
Antiviral antibiotics can be effective if started early.

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006
Ferri's Clinical Advisor 2008

HERPETIC STOMATITIS
(Gingivostomatitis)

Subjective

Sores in mouth
Sudden onset of pain in mouth, drooling, bad breath, refusal to eat, and fever
Sores may be preceded by fever and irritability by 1-2 days

Objective

Vesicular eruption and ulceration of gingival and oral mucosa
Fever may reach 40-40.6°C (104-105°F)
Tender, enlarged lymph nodes (submandibular, submaxillary)
Increased salivation, halitosis, and anorexia
Signs of dehydration

Assessment

Herpetic Stomatitis (usually Herpes Simplex type 1)

Plan

Inform that disease is self-limiting, lasting 4-10 days
Important to ensure adequate fluid intake (avoid acidic drinks; offer children popsicles)
Acetaminophen for fever or pain
Local analgesics prior to feedings
Teach proper hand washing technique

Health Teaching:

Avoid kissing when lesions are present

Referral Indicators:

Infants less than 2 months, severely malnourished infants or children, immunosuppressed patients, or in association with another disease (e.g. measles)
Secondary bacterial infection (i.e., suspected strep)
Suspected dehydration (i.e., no urinary output in 12 hours)
Signs of neurological manifestation (i.e., headache, vomiting, photophobia, convulsions or neurological findings)
Persistence or non-healing over 2 weeks

Follow-Up:

Patient/parent will be asked to contact health provider if the condition is not improving in 48-72 hours

Reference:

Ferri's Clinical Advisor 2008

STY
(HORDEOLUM)

Subjective

Tenderness at site of infection
Tearing

Objective

Redness, swelling, and small, hard, red boil at base of eyelash

Assessment

Hordeolum (Sty)

Plan

Advise warm, moist (water) compresses 5-15 minutes, 3-4 times daily

Health Teaching:

Instruct patient to keep hands away from eyes and wash hands after touching eyes
Systemic Antibiotics generally not necessary

Referral Indicators:

More than one sty
Redness of sclera
Exudate or swelling
Increasing redness of the eyelid margin
Marked pain
Discharge

Follow-Up:

Patient/parent will be asked to contact health provider if no improvement in 3-4 days

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition. 2006
Ferri's Clinical Advisor, 2006

IMPETIGO/BULLOUS IMPETIGO

Subjective

Often history of trauma, i.e., insect bites, abrasions or chronically wet skin from muggy weather or hot clothes (diapers), eczema or chickenpox
It can be spread by touch and by shared objects such as towels.

Sores that do not heal or are spreading
May complain of itching
Dysuria

Objective

Impetigo: Seropurulent vesicles surrounded by an erythematous base; may be honey-colored crust present, especially around nose and mouth
Bullous Impetigo: Seropurulent or ruptured vesicles often on extremities; lesions vary in size; these lesions can form on face, trunk, limbs and diaper area
Blood pressure
Proteinuria
Swollen glands

Assessment

Impetigo or Bullous Impetigo

Plan

Check blood pressure
Do urine dipstick for protein
Soak and then gently scrub lesions with warm water and antibacterial soap 2-3 times a day to soften and remove crusts
Apply thin coat of topical OTC antibacterial ointment (e.g., Bacitracin, Neosporin, Neomycin or generic equivalent) to affected area after each cleansing TID or QID

Teaching

Trim and clean fingernails to prevent spread of infection and teach children not to scratch
Counsel on treatment of other family members/contacts if applicable; impetigo is highly contagious. It can be spread by touch and by shared objects such as towels.
Don't share towels or clothing
Provide advice on school attendance
When cuts and scrapes occur , wash then with antibacterial soap and a dab of OTC ointment such as Neosporin

Referral Indicators:

Three or more lesions greater than 1/2 inch in diameter
Little or no response to treatment within 3 days
Impetigo in conjunction with acute or chronic illness
Any systemic symptoms, i.e., fever, regional adenopathy
Signs or symptoms of complications, i.e., glomerulonephritis (dark colored urine, decreased urinary output, edema)
Eye involvement or close to eye
Hypertension
Proteinuria
Widely spaced lesions, such as face and buttocks (may need systemic treatment)

Follow-Up:

Patient/parent will be asked to contact health provider in 48-72 hours

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006

LEAD TOXICITY SCREENING

GENERAL INFORMATION

Children from 6 to 72 months may be at risk for lead poisoning (lead poisoning can affect any child regardless of race, economic status, or living conditions)

Children under the age of 6, living in older homes, and living in poverty have the highest risk for lead poisoning

Sources of lead exposure include:

- Housing built prior to 1978 with old chipping paint, lead water pipes, or lead soldered pipes
- Recently renovated home or frequently visited house/building built before 1978
- Close proximity (80 ft) to a heavily traveled highway (leaded gasoline) or near industrial site
- Work or hobbies involving paint, chemicals, battery, mining, lead smelting, leaded glass, lead sinkers, and lead glazed pottery
- Pewter or leaded crystal containers for storing, cooking, or eating food/drink
- Plastic or vinyl mini blinds, (purchased prior to 1996)
- Folk medicine such as Mexican, Asian, and Middle Eastern
- Sibling, housemate, frequent visitor, playmates of children with known lead toxicity

Effects of lead toxicity include:

- Very severe lead exposure in children can cause coma, convulsions, and even death
- Lower levels can affect the central nervous system and kidneys
- Very low levels are associated with decreased intelligence, behavior problems, decreased growth, and hearing difficulties

SUBJECTIVE

Have parent/guardian complete the **Blood Lead Risk Assessment Questionnaire** (see Table 1). Document all positive risk factors in the medical record. If the parent/guardian answers "yes" or "don't know" to any of the questions, the child is considered to be at **high risk** and should be **screened with a finger stick BLL at that time.**

OBJECTIVE

Obtain a finger stick blood lead level at well child visit on all children **12 months and 24 months of age**

Obtain a finger stick blood lead level at well child visit on **children 36 to 72 months of age Who do not have a previously documented blood test**

Confirm all elevated blood lead levels (5 μg/dL or greater) using venous blood sampling in accordance with the **Recommended Schedule for a Confirmatory Venous Sample** (see Table 2)

Obtain a finger stick blood lead level for siblings (6-72 months of age) of children with a confirmed elevated blood lead level, and consult with parents regarding the need to test other frequent playmates, pregnant household members, and others

Consult parent(s) or caretaker regarding results and need for follow-up (document any parent/guardian refusal)

Comprehensive follow-up services must be based on the child's confirmed Blood Lead Level (BLL) and managed according to **Schedule for Follow-up Blood Lead Testing** (see Table 3)

ASSESSMENT

All children with a confirmed **BLL ≥5 µg/dL** should receive comprehensive follow-up services based on the confirmed Blood Lead Level(BLL) and managed according to **Schedule for Follow-up Blood Lead Testing** (see Table 3)

PLAN

Provide comprehensive follow-up services for confirmed **BLL ≥5 µg/dL** according to **Schedule for Follow-up Blood Lead Testing** (see Table 3)
Stress need for appropriate follow-up, testing, treatment, and intervention
Repeat blood lead level (BLL) according to guidelines
If developmentally delayed, refer to appropriate programs

Health Teaching (for confirmed cases of lead exposure of 5 µg/dL or greater)

Provide anticipatory guidance during pregnancy, when children are 3-6 months of age, and again when they are 12 months of age (parental guidance during this time frame might prevent some lead exposure)
Provide lead poisoning prevention counseling to all children receiving child health exams
Educate about the effects/problems of lead poisoning, important sources of lead (be alert to parental occupations/hobbies), and discuss ways to prevent access to causative agents
Stress hand washing (especially before eating), showering, proper handling of soiled clothes, and frequent washing of toys and pacifiers
Educate about soil contaminated with lead (if soil near house is contaminated because of lead-based paint or near major highway, advise to plant shrubs near house to decrease play activity in that area)
Educate about miniblinds and possible lead contamination
Provide nutritional counseling regarding the need for 3 small meals and 3 snacks a day with adequate iron and calcium (iron deficiency can enhance lead absorption and empty stomach increases lead absorption)
Stress need to clean floors, window frames, windowsills, and other surfaces at least weekly with warm water and a general all-purpose cleaner or a cleaner made specifically for lead
Discuss the ineffectiveness of dry methods of cleaning, such as sweeping or vacuuming (unless a Hepavac is used) for lead removal
If drinking water has increased lead, use only fully flushed water (let water run one to two minutes) from cold-water tap for cooking, drinking, and making formula (encourage breast-feeding)
For cooking preparation and storage, use pottery that is labeled safe for cooking and/or storing food, and do not store food in open cans

Table 1: BLOOD LEAD RISK ASSESSMENT QUESTIONNAIRE

Mandatory Questions:

Does your child live in or regularly visit a house built before 1950? (This could include a day care center, home of a baby sitter, or a relative.)

Does your child live in or regularly visit a house built before 1978 with recent, ongoing, or planned renovations or remodeling (within the past 6 months)?

Does your child have a sibling or a playmate that has, or did have, lead poisoning?

Optional Questions (may be asked at the provider's discretion):

Does your child frequently come in contact with an adult who works with lead? (Examples include construction, welding, pottery, etc.)

Does your home contain any plastic or vinyl mini blinds made before July 1996?

Have you ever been told that your child has low iron?

Have you seen your child eating paint chips, crayons, soil, or dirt?

Does your child live near or visit with someone who lives near a lead smelter, battery recycling plant or other industry that could release lead?

Do you give your child any home or folk remedies that may contain lead? (such as moonshine, Azarcon, Greta, Paylooah)

Does your child live within 80 feet (or one block) of areas with a constant flow of traffic, such as busy intersections and streets, highways and interstates? (The soil near heavily used streets and roads may contain lead as a result of past use of lead in gasoline; automobile exhaust from past leaded gasoline contributes to both air and soil lead pollution)

Does your home's plumbing have lead pipes or copper pipes with lead solder joints?

Does your family use pottery ware or leaded crystal for cooking, eating, or drinking?

Table 2: RECOMMENDED SCHEDULE FOR A CONFIRMATORY VENOUS SAMPLE

Screening test result (µg/dL)	Time to confirmation testing:
5-9	1-3 months
10-44	1 week - 1 month*
45-59	48 hours
60-69	24 hours
≥ 70	Urgently as emergency test

* The higher the BLL on the screening test, the more urgent the need for confirmatory testing

Table 3: SCHEDULE FOR FOLLOW-UP BLOOD LEAD TESTING[a]

Medical management includes follow-up blood lead testing. The following table (Table 3) presents the suggested frequency of follow-up tests and should be used as guidance. Case managers and PCPs should consider individual patient characteristics and caregiver capabilities and adjust the frequency of follow-up tests accordingly.

Venous Blood Lead Level (µg/dL)	Early Follow-Up (first 2-4 tests after identification)	Late Follow-Up (after BLL begins to decline)
5-9	3 months [b]	6-9 months
10-19	1-3 months [b]	3-6 months
20-24	1-3 months [b]	1-3 months
25-44	2 weeks-1 month	1 month
≥ 45	As soon as possible	As soon as possible

a Seasonal variation of BLLs exists and may be more apparent in colder climate areas. Greater exposure in the summer months may necessitate more frequent follow-ups.

b Some case managers or PCPs may choose to repeat blood lead tests on all new patients within a month to ensure that their BLL is not rising more quickly than anticipated.

Table 4: SUMMARY OF RECOMMENDED ACTIONS FOR CHILDREN BASED ON BLOOD LEAD LEVEL(µg/dL) VALUES

<5	5 - 44	45 – 69	≥70
Lead education* -Dietary -Environmental Environmental assessment for pre-1978 housing Follow-up blood lead monitoring	Lead education* -Dietary -Environmental Follow-up blood lead monitoring (see guidelines) Complete history and physical exam Lab work: -Iron status -Consider hemoglobin or hematocrit Environmental investigation** (BLL's ≥ 20 or persistently elevated levels) Lead hazard reduction Neurodevelopmental monitoring Abdominal X-ray (if particulate lead ingestion is suspected) with bowel decontamination if indicated	Lead education* -Dietary -Environmental Follow-up blood lead monitoring (see guidelines) Complete history and physical exam Lab work: - Iron Status -Hemoglobin or hematocrit -Free erythrocyte protoporphyrin (FEP) Environmental investigation** Lead hazard reduction Neurodevelopmental monitoring Abdominal X-ray (if particulate lead ingestion is suspected) with bowel decontamination if indicated Oral Chelation therapy Consider hospitalization if lead-safe environment cannot be assured	Hospitalize and commence chelation therapy (following confirmatory venous blood lead test) in conjunction with consultation from a medical toxicologist or a pediatric environmental health specialty unit. Proceed according to actions for 45-69 µg/dL

*http://pediatrics.aappublications.org/content/116/4/1036.full.pdf

**Environmental investigations are requested by a Childhood Lead Prevention Nurse at the Central office .

If the child lives in Section 8 housing and has an elevated blood lead level, the Tennessee Housing Development Agency will be notified for environmental investigation, assessment, and correction of the problem. For certified inspection, assessment, and abatement firms in the area, call the Lead Line at 1-888-771-5323.

The following actions are **NOT** recommended at any blood lead level:

- Searching for gingival lead lines
- Testing of neurophysiologic function
- Evaluation of renal function (except during chelation with EDTA)
- Testing of hair, teeth, or fingernails for lead
- Radiographic imaging of long bones
- X-ray fluorescence of long bones

REFERENCES

"Recommendations for Blood Lead Screening of Young Children Enrolled in Medicaid: Targeting a Group at High Risk", MMR, December 8, 2000

Centers for Disease Control and Prevention. Managing Elevated Blood Lead Levels Among Young Children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention. Atlanta: CDC; 2002

http://www.cdc.gov/nceh/lead/ACCLPP/Final_Document_030712.pdf

MENINGOCOCCAL DISEASE (Case)

BACKGROUND

Meningococcal disease is an acute, severe illness caused by the bacterium *Neisseria meningitidis*. *Neisseria meningitidis* is rare, but is the leading cause of bacterial meningitis and is considered a medical emergency. About 1,000 cases occur in the U.S. each year. Meningococcal disease is spread person to person through exchange of respiratory and throat secretions such as coughing, kissing or sharing eating utensils. Household contacts living with a case in the week before illness onset are at the greatest risk of illness. The incubation period of meningococcal disease is 3–4 days, with a range of 2–10 days.

SUBJECTIVE

Meningococcal disease is a reportable condition under Tennessee Reportable Disease Regulations. Meningococcal disease may be reported to the health department by physician, physician's office or hospital

Meningococcal meningitis due to *Neisseria meningitidis* confirmed by laboratory results

OBJECTIVE

Symptoms include sudden onset of fever, headache, stiff neck often accompanied by nausea, vomiting, sensitivity to light and altered mental status. A non-blanching, red purpuric rash may be present on the skin.

PLAN

Determine if chemoprophylaxis is indicated for contacts. Consult Regional Medical Director and Regional Communicable Disease Director

Educate patients that all exposed close contacts who develop febrile illness should **receive prompt medical evaluation**.

Notify nursing supervisor

Complete Case Report in the National Electronic Disease Surveillance system (NEDSS).

REFERENCES

Immunization Action Coalition, Meningococcal: Questions and Answers Information about the disease and vaccines, March 2012
http://www.immunize.org/catg.d/p4210.pdf

CDC. Meningococcal Disease
www.cdc.gov/meningococcal/about/symptoms.html

Kaplan SL, & Pentima CD. Meningitis in Children Beyond the Basics, In: UpToDate, Torchia, MM (Ed), Waltham, MA, 2013

MENINGOCOCCAL, INVASIVE DISEASE, Contact

BACKGROUND

Invasive infections with *Neisseria meningitidis* may present as meningococcemia (an infection of the bloodstream), meningococcal meningitis (inflammation of the protective membranes that cover the brain and spinal cord), or both. Invasive meningococcal disease is rare (about 1,000 cases occur in the United States each year) and serious. About 10% of cases die. Among survivors, 11-20% suffer neurologic damage or loss of limbs. Invasive meningococcal disease is spread person to person through exchange of respiratory and throat secretions such as coughing, kissing or sharing eating utensils. The incubation period of meningococcal disease is 1-10 days, usually less than 4 days. Meningococcal vaccines cannot prevent all cases of meningococcal disease and is not a factor in decisions concerning chemoprophylaxis of contacts.

SUBJECTIVE

Referred to Health Department with history of exposure to confirmed case of invasive meningococcal disease within 7 days of onset of disease in the index case and less than 2 weeks after exposure and other resources not available for patient to purchase medication.

OBJECTIVE

Chemoprophylaxis recommended (high risk)

Chemoprophylaxis is indicated for the following close contacts, ideally within 24 hours of diagnosis of *Neisseria meningitidis* invasive disease in the index case, but *not* more than 2 weeks after exposure.

- Household members, roommates, intimate contacts in the 7 days prior to disease onset
- Child care or preschool contacts any time during 7 days before onset of illness
- Direct exposure to index patient's oral secretions through kissing or through sharing toothbrushes, cigarettes, drinks or eating utensils, markers of close social contact, at any time during 7 days before onset of illness.
- Mouth-to-mouth resuscitation, *unprotected* endotracheal intubation or endotracheal tube management during 7 days before onset of illness
- People who frequently slept in the same dwelling as index patient during 7 days before onset of illness
- Passengers seated directly next to the index patient during airline flights lasting more than 8 hours

Consult with Regional Health Officer as needed for further identification/clarification of contacts needing chemoprophylaxis

Observe for symptoms of fever, malaise, nausea, vomiting, severe headache, increase sensitivity to light, altered mental status or confusion

IF SYMPTOMATIC, DO NOT PROVIDE PROPHYLAXIS, REFER IMMEDIATELY FOR DEFINITIVE DIAGNOSIS AND TREATMENT

ASSESSMENT
Provide chemoprophylaxis as indicated

PLAN
Obtain order from health care provider to dispense Rifampin (no known allergy to Rifampin)

Obtain Rifampin from regional pharmacy; ask regional pharmacist to repackage tablets for adults and mix suspension for children

Rifampin: **Adults:** 600 mg every 12 hours x 2 days
Children: (**1 month-12 years**) 10 mg/kg/dose every 12 hours x 2 days not to exceed 600 mg/dose
Infants: (**less than 1 month**) 5 mg/kg/dose every 12 hours x 2 days

Ciprofloxacin: 500 mg STAT dose may be dispensed or prescribed as an alternate treatment for persons **over age 18** years

Health Teaching
Counsel patient that chemoprophylaxis is not 100% protective, review the signs and symptoms of meningococcal disease (sudden onset of fever, chills, malaise, muscle pain or a rash), advise to seek immediate medical attention should these signs develop.
Instruct patient regarding side effects and contraindications of chemoprophylaxis
Advise barrier method (foam, film or condoms) for oral contraceptive clients
Advise that tears will be orange and stain contacts lenses; urine may be orange
Notify regional health officer, communicable disease director and nursing supervisor
Should check to see that index case received Rifampin post treatment to eradicate upper respiratory tract colonization of organism

Referral Indicators:
Symptomatic for meningitis
Unable to tolerate Rifampin

REFERENCES

American Academy of Pediatrics. Meningococcal infections. In: Pickering, LK, Baker CJ, Kimberlin DW, Long SS, eds. *Red Book: 2012 Report of the Committee on Infectious Diseases.* Elk Grove Village, IL: American Academy of Pediatrics; 2012:500-509.

CDC. Meningococcal Disease
www.cdc.gov/meningococcal/about/symptoms.html

Epidemiology and Prevention of Vaccine-Preventable Diseases, Department of Health and Human Services, Centers for Disease Control and Prevention, 12th Edition, May 2011

Immunization Action Coalition, Meningococcal: Questions and Answers Information about the disease and vaccines, March 2012
http://www.immunize.org/catg.d/p4210.pdf

Kaplan SL, & Pentima CD. Meningitis in Children Beyond the Basics, In: UpToDate, Torchia, MM (Ed), Waltham, MA, 2013
Red Book, Report of the Committee on Infectious Diseases, 29th Edition, 2012

MILIARIA
(Prickly Heat, Heat Rash)

Subjective

"Little pimples" on skin
May have history of recent elevated temperature, or exposure to hot, humid temperature

Objective

Very small vesicles without erythema (miliaria crystallina) or erythematous papules (miliaria rubra) over the chest and neck
Vesicle fluid is clear, vesicles are extremely superficial, and no inflammation is present
Lesions are usually localized to sites of occlusion or to flexural areas where skin may become macerated and eroded
Infants may be overdressed

Assessment

Miliaria (Prickly Heat)

Plan

Avoidance of overheating
Cool patient by regulation of environmental temperature
Remove excessive clothing
Discontinue inappropriate use of topical agents (powder, ointments, lotions)
Bath with tepid water with baking soda, no soap bath

Referral Indicators:

Secondary bacterial infection

Follow-Up:

Patient/parent will be asked to contact health provider if condition worsens

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006

OBSTRUCTED NASOLACRIMAL DUCT

Subjective

Excessive tearing
Swollen inner eyelid

Objective

Swelling over medial aspect of upper lid extending to the nose

Assessment

Obstructed nasolacrimal duct

Plan

Instruct parent to wash hands prior to procedure and to massage the area by applying pressure from the inner canthus of the eye down the side of the nose 3-4 times daily

Referral Indicators:

Significant redness or swelling
Intermittent swelling past 6 months of age
Purulent discharge with reddened conjunctiva or sclera

Follow-Up:

Parent will be asked to contact health provider in 5-7 days

Reference:

Uphold and Graham, Clinical Guidelines in Family Medicine, Fourth Edition 2003

ORAL CANDIDIASIS/MONILIASIS
(Thrush)

Subjective

Inability of infant to breast or bottle feed due to discomfort in mouth; older child may complain of painful or sore mouth or tongue
White rash in mouth
Infant/child unusually fussy

Objective

Excessive drooling
Creamy white patches of exudate found on tongue or buccal mucosa
Occasional cracking and redness of skin at corners of mouth
Exudate cannot be removed when scraped with tongue blade

Assessment

Thrush

Plan

Nystatin oral suspension 100,000 u./ml, quantity 60 ml with the following directions:
Place 1 cc in each side of mouth four times a day
If infant is breastfed, mothers must also be treated, even if asymptomatic; give Nystatin topical cream 15 gm Rx - advise to apply to breast TID
Wipe off breast prior to breast-feeding; change bra/nursing pads daily; avoid use of excessive soap on breasts during treatment
Sterilize bottles and pacifiers used by infant

Referral Indicators:

Baby refuses to bottle or breast feed
No response to treatment within 2-3 days
Presence of systemic involvement, such as fever

Follow-Up

Contact health provider in 48-72 hours if no improvement

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006
Ferri's Clinical Advisor 2008
Medline Plus Medical Encyclopedia (online)

PEDICULOSIS CAPITIS (1320) (Head Lice)

POLICY STATEMENT

The following policy was adopted by the Medical Services Evaluation Committee July 22, 1998:

> **Local school authorities have the sole authority to implement a no-nit policy in a school. However, the Tennessee Department of Health encourages school officials to consult with the Regional Health Officer and the local health department prior to implementing such a policy. Scientific evidence for or against a no-nit policy is not available. Educational efforts directed toward local medical professionals, school officials, teachers, and parents should be at the center of control measures. The Health Department feels that only in special cases should any no-nit policy be attempted, and then for a limited period of time. In these cases, the problems accompanying the implementation of the policy should be understood and reviewed with all concerned.**

SUBJECTIVE

Severe itching of scalp
Bugs on head or nits (eggs) on hair
Contact with infected individual
Rule out allergies to drug components

OBJECTIVE

Light, tan, or dark eggs firmly attached to hair shaft
May see lice in hair, especially at the back of the head in occipital region
Excoriation of scalp
Enlargement of occipital and cervical nodes

ASSESSMENT

Pediculosis Capitis (head lice)

PLAN

Advise Parents Regarding Appropriate Treatment:

Issue and/or advise to treat with OTC pediculocide shampoo or crème rinse according to specific product instructions
Nits should be removed with a fine tooth comb or fingernails
Treat all family members and other close contacts

Advise Parents How to Clean the Environment:

Soak all combs and brushes in hot water for 5 – 10 minutes.

Launder all washable clothing and bed linens used within previous 48 hours with hot water (130 degrees) and detergent, and dry at high heat for at least 20 minutes; dry clean clothing that is not washable, or place items that cannot be washed, including stuffed animals, in a heavy duty plastic bag, and securely seal for 10-14 days

Vacuum carpet, furniture, and car upholstery (throw away vacuum cleaner bag); if vacuum is not available use a pediculocide spray on such areas

Advise Parents How to Prevent Spread and Re-infestation:

Report case of head lice to school, day care, camp, church, and social groups so that other children in the facility can be checked

Strategy Regarding Persistent Infestation:

Question to assess reason for continued infestation (misdiagnosis, non-compliance, new infestation); have patient describe process used

Tell me step-by-step how you used the product

Tell me step-by-step how you cleaned the environment

How did you remove the nits? (assess for adequate eyesight/lighting and use of comb and fingernail)

Retreat all household members and close contacts if live lice are noted 7-10 days after initial treatment using OTC pediculocide shampoo or crème rinse or alternatively use a non-toxic, pesticide-free product.

Repeat questions to assess correct use of product and compliance with cleaning the environment

Retreat using a different OTC pediculocide shampoo or crème rinse in accordance with package instructions, if live lice are noted 7-10 days after second treatment, (a maximum of three treatments may be advised)

Health Teaching (in accordance with "Lice Advice" in the appendices)**:**

Instruct parents to check child's head daily for lice (this catches head lice early and thus prevents it from spreading in school/daycare and keeps child from missing school and parents from missing work)

Teach mode of transmission and prevention of spread (e.g., headphones in school, stuffed toys, auto upholstery, car seats, sharing of hats, hair scrunches, combs, and helmets)

Teach children to avoid sharing hats, sports headgear, combs and brushes, or borrowing clothing or other personal objects

Teach use and side effects of medications, and caution against overuse

Advise that rinsing the hair with a 1:1 vinegar/water rinse before treatment may help to loosen the nits. Advise that oil treatment (e.g., vegetable oil, olive oil) may be used as a last resort or as an interim treatment if live lice are noted prior to 7 days following a traditional treatment with pediculocide shampoo or

crème rinse; the family should be told that there is no guarantee that this will work and that mechanical removal of the nits should still be performed

Massage oil into the child's head and scalp
Cover with shower cap or plastic wrap for 30 to 60 minutes
Shampoo with liquid dish detergent (will require repeated shampooing)
Remove nits
Clean environment using traditional methods

Teach mother to wear gloves if they are shampooing the child's hair and especially if she is pregnant

Teach patients to shampoo their hair in the sink to prevent over absorption of medication due to contact on other body surfaces

Advise do not use conditioner or shampoo that contains conditioner when washing hair before treatment.

Advise to avoid shampooing the hair for 2 days after treatment and then to shampoo as infrequently as possible for the next two weeks using a mild shampoo.

Referral Indicators:

Children 2 years and under, refer to specific product instructions on the package insert for age appropriate use.

Pregnant women in their first trimester, or lactating women

Secondary bacterial infection

Those with a known sensitivity to pediculocide shampoo, crème rinse or chrysanthemums/ragweed sensitized persons

Nits present in eyelashes

Repeat infestations (greater than 3)

Neurological disorders

Raw or inflamed scalp

Follow-up:

Assessment after treatment

REFERENCE

Centers for Disease Control. http://www.cdc.gov/parasites/lice/head/treatment.html

PERIODICITY SCHEDULE INFANCY

Recommendations for preventive health care

The mission of the Tennessee Department of Health is to protect and promote the health of Tennesseans. In order to fulfill this mission, priority must be given to services that address disease prevention, health promotion, and health education.

By way of introduction to this section, the American Academy of Pediatrics (AAP)/Bright Futures periodicity tables for Infancy, Early Childhood, Middle Childhood, and Adolescence, as well as Preventive Health Care tables for Adults 22 through 49 years, and age 50 and older have been included. These tables identify recommended periodic health screening/examinations for child and adult health. The following should be noted:

- These tables provide **general recommendations for the provision of preventive health care**. In so doing they assume that the client is healthy and with no significant problems. However, once a problem has been identified through the periodic health screening, a plan of care should be determined which accurately reflects specific patient needs.
- It should be noted that **procedures** identified in the Children's table have been divided into those that are routine (general) and those screening procedures that are recommended for high-risk populations/individuals.
- The recommendations provided for **preventive pediatric health care** are designed for the care of children who are receiving competent parenting, have no manifestations of any important health problems, and are growing and developing in satisfactory fashion. Additional visits may become necessary if circumstances suggest variations from normal.
- The following guidelines include **recommendations** for preventive services that can be provided directly through the health department as well as those that may necessitate a referral.
- A patient may enter at any point in the health care continuum. At the discretion of the nurse practitioner and/or triage nurse, each patient must be evaluated in order to **identify those services that are required related to the patient's chief complaint or preventive health care needs**. A complete health history should be taken at the first comprehensive preventive screening visit. An updated health history should be taken at each subsequent visit (which may be as simple as asking the question "Have there been any health changes since your last visit?")
- These tables can also be used as **teaching tools** in order to educate patients as to the availability of, and recommended need for, specific services, as determined by age criteria.
- Distinction should be made between a **sick visit and a well visit**. For example, if a patient seeks services for a sore throat, it may not be advisable, or feasible, to provide all the services that are recommended for that particular visit according to age. The patient should be questioned as to his/her current status regarding those recommended services, and advised as to the need to schedule an appointment whereby such recommended services can be provided.
- It must be emphasized that **documentation** as to the specific services and patient information that was provided is essential.
- Although not specifically addressed in the list of recommended services for adults, **anticipatory guidance and preventive health counseling** are vital elements of public health. Each patient visit provides a valuable opportunity for education. The nurse should make efficient use of every chance to provide preventive health counseling on such topics as proper nutrition, exercise, alcohol/drug/tobacco use, safe sex, child safety, seatbelt use, violence prevention, cancer warning signs, and recommendations for self-examination.

INFANCY PERIODICITY TABLE

AGE[1]	Prenatal[2]	Newborn[3]	3-5 d[4]	By 1mo	2 mo	4 mo	6 mo	9 mo
HISTORY								
Initial/Interval	•	•	•	•	•	•	•	•
MEASUREMENTS								
Length/Height and Weight		•	•	•	•	•	•	•
Head Circumference		•	•	•	•	•	•	•
Weight for Length		•	•	•	•	•	•	•
Body Mass Index								
Blood Pressure[5]		★	★	★	★	★	★	★
SENSORY SCREENING								
Vision		★	★	★	★	★	★	★
Hearing		•[7]	★	★	★	★	★	★
DEVELOPMENTAL/ BEHAVIORAL ASSESSMENT								
Developmental Screening[8]								•
Autism Screening[9]								
Developmental Surveillance[8]		•	•	•	•	•	•	
Psychosocial/Behavioral Assessment		•	•	•	•	•	•	•
Alcohol and Drug Use Assessment								
PHYSICAL EXAMINATION[10]		•	•	•	•	•	•	•
PROCEDURES[11]								
Newborn Metabolic/Hgb Screening[12]		←	•	→	→			
Immunization[13]		•	•	•	•	•	•	•
Hematocrit or Hemoglobin[14]						★		
Lead Screening[15]							★	★
Tuberculin Test[17]				★			★	
Dyslipidemia Screening[18]								
STI Screening[19]								
Cervical Dysplasia Screening[20]								
ORAL HEALTH[21]							★	★
ANTICIPATORY GUIDANCE[23]	•	•	•	•	•	•	•	•

AAP Recommendations for Preventive Pediatric Health Care/Bright Futures

KEY

• = to be performed

★ = risk assessment to be performed, with appropriate action to follow, if positive

← • → = range during which a service may be provided, with the symbol indicating the preferred age

EARLY CHILDHOOD PERIODICITY TABLE

AGE[1]	12 mo	15 mo	18 mo	24 mo	30 mo	3 yr	4 yr
HISTORY							
Initial/Interval	•	•	•	•	•	•	•
MEASUREMENTS							
Length/Height and Weight	•	•	•	•	•	•	•
Head Circumference	•	•	•	•			
Weight for Length	•	•	•				
Body Mass Index				•	•	•	•
Blood Pressure[5]	★	★	★	★	★	•	•
SENSORY SCREENING							
Vision	★	★	★	★	★	•[6]	•
Hearing	★	★	★	★	★	★	•
DEVELOPMENTAL/ BEHAVIORALASSESSMENT							
Developmental Screening[8]			•		•		
Autism Screening[9]			•	•			
Developmental Surveillance[8]	•	•		•		•	•
Psychosocial/Behavioral Assessment	•	•	•	•	•	•	•
Alcohol and Drug Use Assessment							
PHYSICAL EXAMINATION[10]	•	•	•	•	•	•	•
PROCEDURES[11]							
Newborn Metabolic/Hgb Screening[12]							
Immunization[13]	•	•	•	•	•	•	•
Hematocrit or Hemoglobin[14]	•		★	★		★	★
Lead Screening[15]	• or ★[16]		★	• or ★[16]		★	★
Tuberculin Test[17]	★		★	★		★	★
Dyslipidemia Screening[18]				★			★
STI Screening[19]							
Cervical Dysplasia Screening[20]							
ORAL HEALTH[21]	• or ★[21]		• or ★[21]	• or ★[21]	• or ★[21]	•[22]	
ANTICIPATORY GUIDANCE[23]	•	•	•	•	•	•	•

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MIDDLE CHILDHOOD PERIODICITY TABLE

AGE[1]	5 yr	6 yr	7 yr	8 yr	9 yr	10 yr
HISTORY						
Initial/Interval	•	•	•	•	•	•
MEASUREMENTS						
Length/Height and Weight	•	•	•	•	•	•
Head Circumference						
Weight for Length						
Body Mass Index	•	•	•	•	•	•
Blood Pressure[5]	•	•	•	•	•	•
SENSORY SCREENING						
Vision	•	•	★	•	★	•
Hearing	•	•	★	•	★	•
DEVELOPMENTAL/BEHAVIORAL ASSESSMENT						
Developmental Screening[8]						
Autism Screening[9]						
Developmental Surveillance[8]	•	•	•	•	•	•
Psychosocial/Behavioral Assessment	•	•	•	•	•	•
Alcohol and Drug Use Assessment						
PHYSICAL EXAMINATION[10]	•	•	•	•	•	•
PROCEDURES[11]						
Newborn Metabolic/Hgb Screening[12]						
Immunization[13]	•	•	•	•	•	•
Hematocrit or Hemoglobin[14]	★	★	★	★	★	★
Lead Screening[15]	★	★				
Tuberculin Test[17]	★	★	★	★	★	★
Dyslipidemia Screening[18]		★		★		★
STI Screening[19]						
Cervical Dysplasia Screening[20]						
ORAL HEALTH[21]		•[22]				
ANTICIPATORY GUIDANCE[23]	•	•	•	•	•	•

AAP Recommendations for Preventive Pediatric Health Care/ Bright Futures

KEY

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- ★ = risk assessment to be performed, with appropriate action to follow, if positive
- ← • → = range during which a service may be provided, with the symbol indicating the preferred age

ADOLESCENCE PERIODICITY TABLE

AGE[1]	11 yr	12 yr	13 yr	14 yr	15 yr	16 yr	17 yr	18 yr	19 yr	20 yr	21 yr
HISTORY											
Initial/Interval	•	•	•	•	•	•	•	•	•	•	•
MEASUREMENTS											
Length/Height and Weight	•	•	•	•	•	•	•	•	•	•	•
Head Circumference											
Weight for Length											
Body Mass Index	•	•	•	•	•	•	•	•	•	•	•
Blood Pressure[5]	•	•	•	•	•	•	•	•	•	•	•
SENSORY SCREENING											
Vision	★	•	★	★	•	★	★	•	★	★	★
Hearing	★	★	★	★	★	★	★	★	★	★	★
DEVELOPMENTAL/ BEHAVIORAL ASSESSMENT											
Developmental Screening[8]											
Autism Screening[9]											
Developmental Surveillance[8]	•	•	•	•	•	•	•	•	•	•	•
Psychosocial/Behavioral Assessment	•	•	•	•	•	•	•	•	•	•	•
Alcohol and Drug Use Assessment	★	★	★	★	★	★	★	★	★	★	★
PHYSICAL EXAMINATION[10]	•	•	•	•	•	•	•	•	•	•	•
PROCEDURES[11]											
Newborn Metabolic/Hgb Screening[12]											
Immunization[13]	•	•	•	•	•	•	•	•	•	•	•
Hematocrit or Hemoglobin[14]	★	★	★	★	★	★	★	★	★	★	★
Lead Screening[15]											
Tuberculin Test[17]	★	★	★	★	★	★	★	★	★	★	★
Dyslipidemia Screening[18]	★	★	★	★	★	★	★	←	—	•	→
STI Screening[19]	★	★	★	★	★	★	★	★	★	★	★
Cervical Dysplasia Screening[20]	★	★	★	★	★	★	★	★	★	★	★
ORAL HEALTH[21]											
ANTICIPATORY GUIDANCE[23]	•	•	•	•	•	•	•	•	•	•	•

AAP Recommendations for Preventive Pediatric Health Care/ Bright Futures

KEY

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- ★ = risk assessment to be performed, with appropriate action to follow, if positive
- ← • → = range during which a service may be provided, with the symbol indicating the preferred age

FOOTNOTES FOR PERIODICITY TABLES
INFANCY THROUGH ADOLESCENCE

1. If a child comes under care for the first time at any point on the schedule, or if any items are not accomplished at the suggested age, the schedule should be brought up to date at the earliest possible time.
2. A **prenatal visit** is recommended for patients who are at high risk, for first-time parents, and for those who request a conference. The prenatal visit should include anticipatory guidance, pertinent medical history, and a discussion of benefits of breastfeeding and planned method of feeding per AAP statement "The Prenatal Visit" (2001). [URL:http://aappolicy.aappublications.org/cgi./content/full/pediatrics;107/6/1456]
3. Every **infant** should have a newborn evaluation after birth, breastfeeding encouraged, and instruction and support offered.
4. Every **infant** should have an evaluation within 3 to 5 days of birth and within 48 to 72 hours after discharge from the hospital, to include evaluation for feeding and jaundice. Breastfeeding infants should receive formal breastfeeding evaluation, encouragement, and instruction as recommended in AAP statement "Breastfeeding and the Use of Human Milk" (2005) [URL: http://aappolicy.aappublications.org/cgi/content/full/pediatrics;115/2/496]. For **newborns** discharged in less than 48 hours after delivery, the infant must be examined within 48 hours of discharge per AAP statement "Hospital Stay for Healthy Term Newborns" (2004) [URL: http://aappolicy.aappublications.org/cgi/content/full/pediatrics;113/5/1434].
5. Blood pressure measurement in infants and children with specific risk conditions should be performed at visits before age 3 years.
6. If the patient is uncooperative, rescreen within 6 months per the AAP statement "Eye Examination in Infants, Children, and Young Adults by Pediatricians" (2007) [URL: http://aappolicy.aappublications.org/cgi/content/full/pediatrics;111/4/902].
7. All **newborns** should be screened per AAP statement "Year 2000 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs" (2000) [URL: http://aappolicy.aappublications.org/cgi/content/full/pediatrics;106/4/798]. Joint Committee on Infant Hearing. Year 2007 position statement: principles and guidelines for early hearing detection and intervention programs. Pediatrics. 2007; 120:898-921.
8. AAP Council on Children With Disabilities, AAP Section on Developmental Behavioral Pediatrics, AAP Bright Futures Steering Committee, AAP Medical Home Initiatives for Children With Special Needs Project Advisory Committee. Identifying infants and young children with developmental disorders in the medical home: an algorithm for developmental surveillance and screening. Pediatrics. 2006; 118: 405-420 [URL:http://aappolicy.aappublications.org/cgi/content/full/pediatrics;118/1/405].
9. Gupta VB, Hyman SL, Johnson CP, et al. identifying children with autism early? Pediatrics. 2007; 119: 152-153 [URL: http://pediatrics.aappublications.org/cgi/content/full/119/1/152].
10. At each visit, age-appropriate physical examination is essential, with infant totally unclothed, older child undressed and suitably draped.
11. These may be modified, depending on entry point into schedule and individual need.
12. Newborn metabolic and hemoglobinopathy screening should be done according to state law. Results should be reviewed at visits and appropriate retesting or referral done as needed.
13. Schedules per the Committee on Infectious Diseases, published annually in the January issue of Pediatrics. Every visit should be an opportunity to update and complete a child's immunizations.
14. See AAP Pediatric Nutrition Handbook, 5th Edition (2003) for a discussion of universal and selective screening options. See also Recommendations to prevent and control iron deficiency in the United States. MMWR. 1998; 47 (RR-3):1-36.
15. For children at risk of lead exposure, consult the AAP statement "Lead Exposure in Children: Prevention, Detection, and Management" (2005) [URL: http://aappolicy.aappublications.org/cgi/content/full/pediatrics;116/4/1036]. Additionally, screening should be done in accordance with state law where applicable.
16. Perform risk assessments or screens as appropriate, based on universal screening requirements for patients with Medicaid or high prevalence areas.
17. Tuberculosis testing per recommendations of the Committee on Infectious Diseases, published in the current edition of *Red Book: Report of the Committee on Infectious Diseases*. Testing should be done on recognition of high-risk factors.
18. "Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) Final Report" (2002) [URL: http://circ.ahajournals.org/cgi/content/full/106/25/3143] and "The Expert Committee Recommendations on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity." Supplement to Pediatrics. In press.
19. All sexually active patients should be screened for sexually transmitted infections (STIs).
20. All sexually active girls should have screening for cervical dysplasia as part of a pelvic examination beginning within 3 years of onset of sexual activity or age 21 (whichever comes first).
21. Referral to dental home, if available. Otherwise, administer oral health risk assessment. If the primary water source is deficient in fluoride, consider oral fluoride supplementation.
22. At the visits for 3 years and 6 years of age, it should be determined whether the patient has a dental home. If the patient does not have a dental home, a referral should be made to one. If the primary water source is deficient in fluoride, consider oral fluoride supplementation.
23. Refer to the specific guidance by age as listed in Bright Futures Guidelines. (Hagan JF, Shaw JS, Duncan PM, eds. B*right Futures*: *Guidelines for Health Supervision of Infants, Children, and Adolescents*. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2008.)

PERIODICITY TABLE FOR 22 THROUGH 49 YEARS

AGE	22	24	26	28	30	32	34	36	38	40	42	44	45	46	47	48	49
SUBJ: Update Hx	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Depression[1]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
OBJ: Phys. Exam		•			•		•										
Height[2]	• ←	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	→
Weight/BMI[2]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
B/P	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Thyroid Exam	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Breast Exam[3]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Pelvic Exam[4]	•	•	•	•	•	•	•	•	•	•	•	•		•		•	
Rectal Exam[5]										•	•	•		•		•	
Oral Exam[6]	•	•	•	•	•	•	•	•	•	•	•	•		•		•	
Skin Exam[7]	•	•	•	•	•	•	•	•	•	•	•	•		•		•	
Ovaries Exam	•	•	•	•	•	•	•	•	•	•	•	•		•		•	
Testicles Exam[8]	•	•	•	•	•	•	•	•	•	•	•	•		•		•	
Prostate Exam[9]																	
Visual Screening										•	•	•		•		•	
Glaucoma[10]																	
Hearing Screen[11]																	
LAB: Pap Smear[12]	•	•	•	•	•	•	•	•	•	•	•	•		•		•	•
Mammography[13]										•	•	•	•	•	•	•	•
Bone Density[14]																	
PSA[15]																	
Stool Occult Bld[16]																	
Plasma Glucose[17]																	
Sigmoidoscopy[18]																	
Urinalysis[19]																	
Hemoglobin[20]																	
Cholesterol/HDL[21]	*					*		*M					*F				
IMMUNIZ: Td[22]					•					•							
Influenza[23]	* ←	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	→
Pneumococcal[24]	* ←	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	→
Hepatitis B[25]	*																
MMR[26]																	
PD[28]																	

PERIODICITY TABLE FOR 50 YEARS AND OLDER

AGE	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70+
SUBJ: Update Hx	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Depression[1]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
OBJ: Phys. Exam	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Height[2]																					
Weight/BMI[2]	•		•		•		•		•		•		•		•	•	•	•	•	•	•
Blood Pressure	•		•		•		•		•		•		•		•	•	•	•	•	•	•
Thyroid Exam	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Breast Exam[3]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Pelvic Exam[4]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Rectal Exam[5]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Oral Exam[6]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Skin Exam[7]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ovaries Exam	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Testicles Exam[8]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Prostate Exam[9]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Visual Screening	•		•		•		•		•		•		•		•		•		•		•
Glaucoma[10]											•		•		•		•		•		•
Hearing Screen[11]																•		•		•	
LAB: Pap Smear[12]	•		•		•		•		•		•		•		•		•		•		•
Mammography[13]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Bone Density[14]											*					•					
PSA[15]																					
Stool Occult Bld[16]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Plasma Glucose[17]																					
Sigmoidoscopy[18]	•			•			•			•			•			•			•		•
Hemoglobin[20]																					
Cholesterol/HDL[21]																					
IMMUNIZ: Td[22]	•										•										•
Influenza[23]	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Pneumococcal[24]	* ←	—	—	—	—	—	—	—	—	—	—	—	—	—	→	•					
Hepatitis B[25]	* ←	—	—	—	—	—	—	—	—	—	—	—	—	—	→						
MMR[26]																					
PPD[28]																					

FOOTNOTES FOR PERIODICITY TABLES

AGE 22 THROUGH 49 YEARS AND AGE 50 AND OLDER

1. **Depression:** The USPSTF recommends screening adults for depression in clinical practices that have systems in place to assure accurate diagnosis, effective treatment, and follow-up. Screening, or referral, should be part of an annual exam. Asking the following two simple questions about mood and anhedonia may be as effective as using longer instruments –

   "Over the past 2 weeks, have you felt down, depressed, or hopeless?"

   "Over the past 2 weeks, have you felt little interest or pleasure in doing things?"

2. **Height & Weight:** The USPSTF recommends that clinicians screen all adult patients for obesity and offer intensive counseling and behavioral interventions to promote sustained weight loss for obese adults.

   Increased BMI is associated with an increase in adverse health effects. Expert committees have issued guidelines defining overweight and obesity based on BMI. Persons with a BMI between 25 and 29.9 are overweight and those with a BMI of 30 and above are obese. There are 3 classes of obesity: class I (BMI 30-34.9), class II (BMI 35-39.9), and class III (BMI 40 and above). BMI is calculated either as weight in pounds divided by height in inches squared multiplied by 703, or as weight in kilograms divided by height in meters squared.

   BMI = [weight in lbs/(height in inches) squared] x 703 <u>OR</u>

   BMI = [weight in kgs/(height in meters) squared]

   Central adiposity increases the risk for cardiovascular and other diseases independent of obesity. Clinicians may use the waist circumference as a measure of central adiposity. Men with waist circumferences greater than 102 cm (> 40 inches) and women with waist circumferences greater than 88 cm (> 35 inches) are at increased risk for cardiovascular disease. The waist circumference thresholds are not reliable for patients with a BMI greater than 35.

3. **Breast Exam (Women):** Annual examination. Increased frequency recommended if first-degree relative has had breast cancer diagnosed before menopause. The current USPSTF concludes that there is insufficient evidence to recommend for or against routine clinical breast examination alone to screen for breast cancer. It also concludes that there is insufficient evidence to recommend for or against teaching or performing routine breast self-examination. The TDH protocols will continue to include this exam.

4. **Pelvic Exam (Women):** Baseline screening at 18 years of age (before if sexually active), and annually for next two years. If results of all three exams are negative, then screen every two years until age 50 and annually 50 years of age and older. Annual exam recommended if on birth control method or exhibiting high-risk behaviors.

5. **Rectal Exam:** Annually if family history of prostate cancer, otherwise baseline at 40 years of age and then every 2 years to age 50; annually 50 years of age and older. Begin annual screening at 35 years of age if either a family history of colorectal adenomatous polyps, cancer in one or more first-degree relatives, or personal history of adenomas or inflammatory bowel disease.

6. **Oral Exam:** Give special attention to persons at high risk due to tobacco and alcohol use, or those of lower socioeconomic status.

7. **Skin Exam:** High-risk persons include those with a family or personal history of skin cancer, increased occupational or recreational exposure to sunlight, or clinical evidence of precursor lesions (e.g., dysplastic nevi and certain congenital nevi).

8. **Testicular Exam (Men):** High-risk persons have a history of cryptorchidism, testicular atrophy, ambiguous genitalia. These persons should be encouraged to be alert for testicular masses. The U.S. Preventive Services Task Force (USPSTF) recommends against routine screening for testicular cancer in asymptomatic adolescent and adult males.

9. **Prostate Exam (Men):** Annual screening for men 40 to 49 years of age who have a family history of prostate cancer, and for all men over 50. The USPSTF concludes that the evidence is insufficient to recommend for or against routine screening for prostate cancer using digital rectal examination (DRE).

10. **Glaucoma Screening:** Refer high-risk patients (those with family history of glaucoma, diabetes, or severe myopia) to ophthalmologist. Prevalence of glaucoma is higher in African Americans over 40 and in Caucasians over 65 years of age. Frequency of screening in these populations is determined by clinical judgment.

11. **Hearing Screening:** Those persons exposed regularly to excessive noise (e.g., in recreational or occupational settings), should be screened every one to three years. Persons 65 years of age and over should be screened every two years.

12. **PAP Smear (Women):** The USPSTF strongly recommends screening women for cervical cancer if they are sexually active and have a cervix. Indirect evidence suggests most of the benefit can be obtained by beginning screening within 3 years of onset of sexual activity or age 21 (whichever comes first) and screening at least every 3 years. The USPSTF recommends against routinely screening women older than age 65 if they have had adequate recent screening with normal Pap smears and are not otherwise at increased risk for cervical cancer. The USPSTF recommends against routine Pap screening for women who have had a total hysterectomy for benign disease.

Following three negative screenings, screen every two years, or as determined by clinical judgment.

13. **Mammography (Women):** Baseline at 40 years of age and thereafter annually. Begin annual screening at 35 years of age if either a first-degree relative has had breast cancer diagnosed before menopause, or there is a family history of bilateral breast cancer.
14. **Bone Density** The USPSTF recommends that women aged 65 and older be screened routinely for osteoporosis. The USPSTF recommends that routine screening begin at age 60 for women at increased risk for osteoporotic fractures.
15. **Prostate Specific Antigen (Men):** Routine screening for asymptomatic persons is not recommended. At present the lack of evidence regarding benefits of prostate screening and the considerable risks of treatment complications make it important for patients to be referred to a physician for additional counseling. The USPSTF concludes that the evidence is insufficient to recommend for or against routine screening for prostate cancer using prostate specific antigen (PSA) testing.
16. **Stool occult Blood:** Annual screening for all persons 50 years of age and older. Begin screening at 40 years of age if high risk, i.e., first degree relative with colorectal cancer; personal history of endometrial, ovarian, or breast cancer; previous diagnosis of inflammatory bowel disease, adenomatous polyps, or colorectal cancer; or family history of familial polyposis or cancer family syndrome.
17. **Plasma Glucose (Fasting):** Routine screening for asymptomatic persons is not recommended. Clinicians may decide to screen selected persons at high risk of NIDDM who include obese men and women over 40, patients with a strong family history of diabetes, and members of certain ethnic groups (Native Americans, Hispanics, African Americans); the frequency of screening is according to clinical discretion. Clinicians may decide to screen high-risk pregnant women. Risk factors include obesity, older maternal age, family history of diabetes, and a history of macrosomia, fetal malformations, or fetal death. The USPSTF recommends screening adults who have hypertension or hyperlipidemia for type 2 diabetes.
18. **Sigmoidoscopy:**. Beginning at age 50 and thereafter every 3 to 5 years based on advice of physician. Begin screening at 40 years of age if high risk, i.e., first degree relative with colorectal cancer; personal history of endometrial, ovarian, or breast cancer; previous diagnosis of inflammatory bowel disease, adenomatous polyps, or colorectal cancer; family history of familial polyposis or cancer family syndrome. The USPSTF now **strongly** recommends screening for colon cancer. Screening options for colorectal cancer include home fecal occult blood test (FOBT), flexible sigmoidoscopy, the combination of home FOBT and flexible sigmoidoscopy, colonoscopy, and double-contrast barium enema. There are insufficient data to determine which particular screening strategy is best in terms of the balance of benefits and harms or cost-effectiveness. Studies reviewed by the USPSTF indicate that colorectal cancer screening is likely to be cost effective (costing less than $30,000 per additional year of life gained) regardless of which screening method is used.
19. **Urinalysis:** Screening for asymptomatic bacteriuria with urine culture is recommended for pregnant women at 12-16 weeks gestation. Subsequent periodic urine cultures during pregnancy are left to clinical discretion. Routine screening for bacteriuria with leukocyte esterase or nitrite testing is not recommended for other asymptomatic adults.
20. **Hemoglobin or Hematocrit:**
    Screen all **non-pregnant women** every 5-10 years until menopause
    Screen **high risk women** annually (extensive menstrual/other blood loss, low iron intake, previous diagnosis of iron-deficiency anemia)
21. **Cholesterol/HDL:** All men aged 35 and older and all women aged 45 and older should be screened routinely for lipid disorders. Reasonable options include every 5 years, shorter intervals for people who have lipid levels close to those warranting therapy, and longer intervals for low-risk people who have had low or repeatedly normal lipid levels. This extends the recommendations of the second USPSTF, which recommended that adults be screened until age 65. Younger adults—men aged 20-35 and women aged 20-45—should be screened if they have other risk factors for heart disease. These risk factors include tobacco use, diabetes, a family history of heart disease or high cholesterol, or high blood pressure. This recommendation expands on the recommendations of the second USPSTF, which focused on screening middle-aged men and women. Clinicians should measure HDL in addition to measuring total cholesterol or LDL. There is insufficient evidence to recommend for or against measuring triglycerides.
22. **Td:** Follow current immunization recommendations.
23. **Influenza:** Annual immunization is recommended for any person at increased risk for complications of influenza. Target groups include all persons 50 years of age or older, persons any age that have a chronic illness (lungs, cardiovascular, diabetes, renal, immunosupression), those persons receiving long-term aspirin therapy, and women who will be in the second or third trimester of pregnancy during the influenza season. Immunization is also recommended for individuals who may transmit influenza to persons at increased risk, such as health-care workers and household members.
24. **Pneumococcal Vaccine:** Immunize <u>once</u> all people 65 years of age and older. Also immunize <u>once</u> at any age persons who are immunocompromised, and those with chronic illness, e.g., cardiovascular disease, pulmonary disease, diabetes mellitus, alcoholism, cirrhosis.

25. **Hepatitis B:** Immunize, or advise of the need for immunization, those individuals in groups at increased risk for

HBV infection, i.e., health care workers and others at occupational risk; hemophiliacs and other recipients of certain blood products; household contacts and sex partners of HBsAg positive persons; hemodialysis patients; injection drug users; sexually active homosexual or bisexual males.

26. **MMR:** Immunize persons who were born after 1957 and who have not received immunizations for measles, mumps and rubella.
27. **PPD:** Follow current recommendations in Tuberculosis Guidelines for routine screening and high-risk populations.

KEY	
•	= to be performed
*	= to be performed for patients at risk
⟷	= the range during which a service may be provided, with the dot indicating the preferred age
S	= subjective by history
O	= objective, by a standard testing method

PITYRIASIS ROSEA

Subjective

Mild itching
Occasionally mild fever or malaise
Usually history of solitary oval lesion (herald patch) preceding a generalized rash by several days

Objective

Initial lesion with central clearing and a scaly border (herald patch) may or may not be present
Symmetric maculopapular pink oval lesions with scaly appearance (collarette), usually located on trunk in caucasian or on extremities in black persons
Characteristic "Christmas tree" pattern may be evident on back with lesions aligned along cutaneous cleavage lines

Assessment

Pityriasis Rosea

Plan

Reassurance that disease is not contagious, is self-limited, and will resolve without treatment in 6-8 weeks
Advise that artificial or natural sunlight may decrease severity
Soak in a tepid to cold Burrow solution (Domeboro), baking soda, or colloidal oatmeal (Aveeno bath) as needed for temporary relief of itching
An OTC oral antihistamine medication, e.g., diphenhydramine (Benadryl) may be necessary, especially at night, for sedation and relief of pruritis; Benadryl dosage according to package instructions
Recommend hydrocortisone OTC cream (e.g., Cort-aid, etc.) as per package instructions for itching
WARN REGARDING DROWSINESS EFFECT OF ANTIHISTAMINE THERAPY
Prevent secondary bacterial infection (clean, short nails)
Obtain syphilis serology if indicated by history

Referral indicators:

Evidence of secondary bacterial infection

Follow-Up:

As required for patient reassurance and/or with signs of complications

Reference:

Ferri's Clinical Advisor 2008

POISON IVY DERMATITIS
(Poison Oak, Poison Sumac)

Subjective

Itching moderate to severe
Exposure to offending plant, contaminated clothing, smoke of burning plant, or to affected pet, commonly within preceding 24-48 hours

Objective

Irregularly shaped, raised, erythematous lesions; vesicobullous and weeping, if severe
Linear streaks or scratch marks may be evident

Assessment

Contact Dermatitis Due to Poison Ivy, Poison Oak, Poison Sumac

Plan

Soak affected area in colloidal oatmeal (Aveeno bath) for 20 minutes at least 4 times daily
Dry thoroughly and apply calamine lotion or OTC cortisone cream such as Cort-aid, etc. (as per package instructions), to lesions for itching
Discourage topical antihistamines
An OTC oral antihistamine medication, e.g., diphenhydramine, (Benadryl) may be judiciously used (according to package instructions) to interrupt the itch/scratch cycle and for sedation.
WARN REGARDING DROWSINESS EFFECT OF ANTIHISTAMINE THERAPY
Keep nails clean and short
Discourage scratching especially in mucosal areas to prevent secondary bacterial infection

Health Teaching:

Recognition of plants
Avoidance
Protect by wearing long sleeves and gloves
Cleansing of skin and clothing with soap and water within 5-30 minutes after suspected exposure
Warmth intensifies itching

Referral Indicators:

Extensive involvement or uncontrollable discomfort
Ingestion or inhalation of irritant
Mucosal involvement (mouth, eyelid, conjunctiva, anus, vagina)
Evidence of secondary bacterial infection (impetigo, pyoderma)

Follow-Up:

Patient/parent will be asked to contact health provider in 48-72 hours

Reference:

Ferri's Clinical Advisor 2008

PREVENTION OF VITAMIN DEFICIENCY
PRENATAL

PLAN

Recommend or provide an approved prenatal vitamin preparation that contains 27-30mg of elemental iron* and not exceeding 1 mg of folic acid.

> (*Elemental iron is the absorbable portion of the iron salt. For example, 20% of ferrous sulfate is absorbable, thus a 325 mg tablet of ferrous sulfate provides 65 mg of elemental iron. 33% of ferrous fumarate is absorbable, thus a 300mg tablet of ferrous fumarate provides 100mg of elemental iron. Ferrous gluconate provides 12% elemental iron.)

Advise to take one vitamin tablet daily during pregnancy, for 6 weeks postpartum and during lactation.
Refer to local health department nutrition provider and WIC if appropriate.

Health Teaching

Instruct patient to take vitamin with food to avoid nausea and vomiting.
Vitamins with iron may cause stools to darken.
Counsel on the importance of iron-rich foods.
May require further iron supplementation via the obstetrical provider if iron deficiency anemia develops.

Referral Indicators

All pregnant women are to be assessed for presumptive eligibility for TennCare and referred to an obstetrical provider.
WIC if eligible
HUGS if eligible
Dental if eligible

Follow-up

Prenatal vitamins should be resupplied through the obstetric provider if possible.
TennCare will pay for prenatal vitamins with a prescription.

Reference

National Institute of Health website http://ods.od.nih.gov/factsheets/iron.asp

SARCOPTES SCABIEI (Scabies)

BACKGROUND

Scabies is found worldwide and affects people of all races and social classes. Scabies is an infestation of the skin by the human itch mite (*Sarcoptes scabiei* var. *hominis*). The microscopic scabies mite burrows into the upper layer of the skin where it lives and lays its eggs. The most common symptoms of scabies are intense itching and a pimple-like skin rash. The scabies mite usually is spread by direct, prolonged, skin-to-skin contact with a person who has scabies.
The incubation period in a person who has never had scabies before is 4-6 weeks while in a person who has had scabies before, symptoms usually appear much sooner (1-4) days after exposure. It is important to remember than an infested person can spread scabies during this time, even if he/she does not have symptoms yet.
Institutions such as nursing homes, extended-care facilities, and prisons are often sites of scabies outbreaks. Child care facilities also are a common site of scabies infestations.

SUBJECTIVE

Intense itching (pruritus) of affected area, especially at night
A pimple-like (papular) itchy rash that can include tiny blisters (vesicles) and scales.

The itching and rash each may affect much of the body or be limited to common sites such as:

- Fingers and webbing between the fingers
- Skin folds around the wrists, elbows, and knees
- Armpits
- Area surrounding the nipples (particularly in women)
- Waist
- Male genitalia (penis and scrotum)
- Lower buttocks and upper thighs
- Sides and bottoms of the feet

OBJECTIVE

Small vesicle may be visible at point of entrance of the mite
Tiny burrows sometimes are seen on the skin; these are caused by the female scabies mite tunneling just beneath the surface of the skin. These burrows appear as tiny raised and crooked (serpiginous) grayish-white or skin-colored lines on the skin surface.
They are found most often in the webbing between the fingers, in the skin folds on the wrist, elbow, or knee, and on the penis, breast, or shoulder blades.
The head, face, neck, palms, and soles often are involved in infants and very young children, but usually not adults and older children.

ASSESSMENT

Sarcoptes Scabiei (scabies) – suspected

PLAN

Treatment of choice is Permethrin Cream 5%

Treatment is recommended for household members and sexual contacts, particularly those who have had prolonged direct skin-to-skin contact with the infested person within the preceding month. All members of the household should be treated at the same time to prevent reinfestation

Instruct children and adults

- Read the package instructions carefully before use
- Thoroughly wash and dry skin
- Massage permethrin (Elimite 5% cream) into the skin from the head to the soles of the feet paying special attention to creases in the skin, hands, feet, between fingers and toes, underarms, and groin. Scabies rarely infests the scalp of adults
- The hairline, neck, side of the head, and forehead may be infested in older people and in infants
- Infants should be treated on the scalp, side of the head, and forehead. Do not use around eyes, including eyelashes or eyebrows
- Leave the permethrin cream on the skin for 8 to 14 hours.
- Wash off by taking a shower or bath.
- Put on clean clothes.
- Itching may continue for up to 4 weeks after treatment

Contraindications include:

- Known hypersensitivity to Pyrethroid or pyrethrin or chrysanthemums

Precautions (requiring physician consultation or referral) include:

- Infants under 2 months of age
- Pregnant or nursing women

Adverse reactions include:

- Mild and transient burning and stinging
- Pruritus
- Infrequent erthyema, numbness, tingling and rash

Health Teaching:

Treatment may temporarily exacerbate pruritis, edema, and erythema

One application is usually curative but that itching may persist for several weeks post-treatment

An OTC oral antihistamine medication, diphenhydramine (Benadryl), may be judiciously used to interrupt the itch/scratch cycle, or for sedation; warn regarding drowsiness effect of antihistamine therapy

May need to apply topical corticosteroid preparation if itching persists

Skin sores that become infected should be assessed by a physician for treatment

Children should be allowed to return to childcare or school after treatment has been completed

Teach mode of transmission- prolonged direct skin-to-skin contact. Animals do not spread human scabies. Although very uncommon, scabies can be spread by sharing a towel or item of clothing that has been used by a person with scabies

Teach prevention of spread – environmental controls and personal hygiene
Scabies mites do not survive more than 2-3 days away from human skin. Bedding, clothing and towel used by a person with scabies can be decontaminate by machine washing in hot water and drying using the hot cycle. Items that can not be washed can be decontaminated by removing from any body contact for 72 hours.

Environmental treatment is unnecessary

Referral Indicators:
Infants under 2 months of age
Pregnant or nursing women

Follow-Up
Patient/parent will be asked to contact health provider if recurrence of symptoms after 2 weeks

REFERENCES

http://www.cdc.gov/parasites/scabies/gen_info/index.html

Goldstein, BG & Goldstein, AO, Patient Information: Scabies (Beyond the Basics), In: UpToDate, Ofori, AO (Ed), UpToDate, Waltham, MA 2013

Red Book, Report of the Committee on Infectious Diseases, 27th Edition. 2006

SEBORRHEIC DERMATITIS
(Cradle Cap)

Subjective

Family history of allergic conditions
Occurrence of scales on scalp

Objective

Inflammation of forehead and face
Scaling, crusting of the scalp

Assessment

Seborrheic Dermatitis (Cradle Cap)

Plan

Use Baby Oil immediately before shampooing to loosen crust
Wash scalp with antiseborrheic shampoo, (e.g., Head and Shoulders, Selsun Blue) every 2 to 3 days (avoid contact with eyes)
Use a small soft brush to gently loosen crusts while shampooing

Referral Indicators:

No response to treatment in 7 days
Area other than scalp involved

Follow-Up:

Patient/parent will be asked to contact health provider if no improvement in one week

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006

Smoking Cessation Counseling and Treatment Protocol

General Information

All health department patients aged 13 or older receiving clinical services should be asked the basic tobacco data questions; if applicable, be asked to complete the Patient Tobacco Survey; and receive evaluation and smoking cessation counseling from a provider according to the 5 As or 5 Rs guideline and protocol. All patients to receive pharmaceutical treatment should be seen by an RN or referred to an APN or MD/DO.

Subjective: Patient has completed the Patient Tobacco Survey and states a willingness to quit smoking. If patient does not state a desire to quit smoking today, counsel according to the **Patient Not Willing to Make Quit Attempt Protocol (5 Rs).**

Contraindications:
See **Patient Willing to Make Quit Attempt Smoking Cessation Protocol** and **Pharmacotherapies for Smoking Cessation (Appendix A)**

Objective: Blood Pressure
Pulse
Respirations
Weight
Date of last menstrual period (LMP)

Assessment: Desires smoking cessation
Has no contraindication to treatment
Assess history according to **Patient Willing to Make Quit Attempt Smoking Cessation Protocol** and **Pharmacotherapies for Smoking Cessation (Appendix A)**

Plan:

1) Patient using tobacco and states willingness to quit, counsel according to **Patient Willing to Make Quit Attempt Smoking Cessation Protocol (5 As)**

   a. For treatment with nicotine gum or nicotine lozenge, refer **to Patient Willing to Make Quit Attempt Smoking Cessation Protocol** and **Pharmacotherapies for Smoking Cessation (Appendix A)**

   Note: Refer to Pharmacotherapies for Smoking Cessation (Appendix A) – for precaution/ contraindications, adverse effects, dosage/ directions, and duration of available therapies. Dosing for nicotine gum and lozenge vary. Only nicotine gum, nicotine lozenge, and Chantix® to be stocked at this time.

   b. RN may initiate an order for nicotine replacement therapy (NRT) products only
   c. Refer to APN or MD for questions or concerns related to issuing

nicotine gum or nicotine lozenges

d. Refer to APN or MD for patient to be treated with Chantix®

e. Give appropriate smoking cessation counseling materials

f. Refer to 1-800-Quit Now (1-800-784-8669)

2) Patient uses tobacco but is not willing to quit, counsel according to **Patient Not Willing to Make Quit Attempt Smoking Cessation Protocol (5 Rs)**

Follow-up for re-supply visits:

At a minimum, assess and document the following:

i. Assess Blood Pressure, Pulse, Respirations, Weight, and LMP

ii. Assess pharmacotherapy use and screen for side effects

a. Any **significant** changes in mood or behavior including erratic or aggressive behavior

Patients who experience **significant** side effects, in particular **significant** mood and/or behavior changes including erratic and/or aggressive, should be instructed to:

i. Stop the medication immediately

ii. Immediately contact the health care provider

b. Significant drowsiness due to quitting or medication

Patients should use caution when driving or operating machinery until they know how quitting smoking and the medication may affect them

c. Any other side effects or general concerns

d. Alcohol/illicit drug use

If **negative** for **"any significant changes in mood or behavior, including erratic or aggressive behavior,"→** the **RN may re-supply the pharmacotherapy according to protocol for nicotine gum or nicotine lozenge, or following written order of APN or MD/DO for Chantix®**

If **positive** for **"any significant changes in mood or behavior including erratic or aggressive behavior," →** the RN must consult a physician immediately, either on-site or by phone, to determine current medical plan (including assessment for crisis intervention).

e. For patients on Chantix® who are making reasonable progress toward quitting and are felt to be committed by the provider, it will be acceptable with provider discretion to continue these patients on another three months of pharmacotherapy, provided the patient is enrolled for counseling with the QuitLine

iii. Repeat "**Patient Pharmacotherapy Counseling"** from **Section 4.f.v** of **Patient Willing to Make Quit Attempt Smoking Cessation Protocol.**

iv. Provide Practical Counseling

a. Congratulate success and review benefits derived from cessation
b. If relapse, obtain recommitment to abstinence (learning experience – Average 6-10 quit attempts before successful)
c. Identify problems encountered (barriers or triggers) and anticipate future challenges
d. Help patient identify additional sources of support- Tennessee Tobacco Quit Line
e. Consider providing or referring to more intensive counseling:
    i. Appropriate for those willing to participate
    ii. May be group, individual, or telephone

v. At the discretion of the provider, committed patients who are already in the program may be restarted on treatment if they previously failed to complete a three month treatment regimen, provided the patient is enrolled for counseling with the QuitLine

If no problems are identified during the assessment, the RN may re-supply the pharmacotherapy according to protocol for nicotine gum or nicotine lozenge, or following written order of APN or MD/DO for Chantix®

Problems will be referred to the APN or MD/DO.

Patient Willing to Make Quit Attempt
Smoking Cessation Protocol

All health department patients aged 13 or older receiving clinical services should be asked the basic tobacco data questions. If applicable, patients will be asked to complete the Patient Tobacco Survey, and receive evaluation and smoking cessation counseling from their provider according to the 5 As or 5 Rs guideline and protocol. All patients to receive pharmacologic treatment should be seen by or referred to an RN, APN, or MD/DO.

1) ASK

"Do you use any kind of tobacco now?" (Asked by office assistant)

If Yes → give Patient Tobacco Survey to complete and discuss with nurse/provider

If No → second question by office assistant **"Have you ever used any kind of tobacco?"**

If Yes → give self-assessment form to complete and discuss with nurse/provider
If No → apply non-tobacco user identification to chart (blank sticker)

2) ADVISE – By RN, APN, MD/DO, or DDS/DMD

a) Tell patient importance of stopping tobacco use now and that you want to help

b) Emphasize that it is the most important health step that they can take

c) Give reasons of improved health for self and loved ones (second-hand smoke):

Parents – increased respiratory infections in children; poor role model for health

New smokers – easier to stop now

Adolescents – decreased athletic performance

Pregnant women – preterm birth, low birth weight, reduced oxygen levels, respiratory problems, and increased hospital stays for infants while mother goes home

Asymptomatic – 2x risk of stroke, 6x risk of oral cancer, 10x risk of larynx cancer and COPD, 12x risk of lung cancer and CAD, 5-8 year shorter life span

Symptomatic – URIs, gum disease, dyspnea, ulcers, angina, claudication, osteoporosis, esophagitis, shortened enjoyment of life (e.g. retirement and grandchildren)

Negative social impact – costly, bad breath, stained teeth, facial wrinkles

3) ASSESS – By RN, APN, MD/DO, or DDS/DMD

Ask – "Are you thinking about quitting within the next 6 months?"

If Yes, ask if thinking about quitting within 30 days – if yes, start the "quit plan"

If No, continue to ask and offer assistance at every visit. Refer ***to "Patient Not Willing to Make Quit Attempt Smoking Cessation Protocol"*** **(5 Rs intervention)**.

4) ASSIST – Provide counseling by RN, APN, MD/DO, or DDS/DMD and pharmacotherapy (when indicated) by RN, APN, or MD/DO.

a) Help with a **Quit Plan**

- Set a quit date (ideally within 2 weeks)
- Enlist support of family, friends, co-workers
- Identify smoking triggers/habits and ways to avoid or mitigate triggers
- Remove tobacco products from environment
- Anticipate challenges (nicotine withdrawal typically peaks within 1-3 weeks after quitting)

b) Provide Practical Counseling

- Encourage total abstinence as ultimate goal
- Anticipate set-backs (a "slip" is not a failure)
- Review past experience with quit attempts
- Advise limiting or stopping alcohol use (strongly associated with relapse)
- Encourage cessation in other household members

c) Advise that provider and staff are available for support

- Give patient information (available throughout office) and give Health Department number

d) Assist with outside support system

- Give patient Tennessee **Tobacco QuitLine number (1-800-784-8669)** and if patient willing, initiate Tennessee Tobacco Quit Line fax referral (may be faxed as a batch at the end of the day or on the following day)
- Tell **prenatal patients** that the Tennessee Tobacco Quit Line provides coaches specifically trained to help pregnant women

e) Refer to APN or MD/DO for treatment today, or RN may provide nicotine replacement therapy (NRT) products today, or schedule an appointment

f) **Pharmacotherapy** – If appropriate, pharmacotherapy provided by RN, APN or MD/DO after patient's medical history and physical assessment

Note: Refer to Pharmacotherapies for Smoking Cessation (Appendix A) – for precaution/ contraindications, adverse effects, dosage/ directions, and duration of available therapies. Dosing for nicotine gum and lozenge vary. Only nicotine gum, nicotine lozenge, and Chantix® to be stocked at this time.

Chantix® should **not** be routinely prescribed for the following patients**:

- pregnant females
- lactating females
- patients with current or significant past history of psychiatric disorders
- patients with **significant** changes in mood and behavior *including* erratic and/or aggressive behavior
- patients who refuse to discontinue alcohol/illicit drug use while taking Chantix®

****Careful review of the patient's medical history and clinical judgement by a physician (MD/DO) may warrant going off protocol. Justification for this decision must be thoroughly documented in the medical record.**

At a minimum, all patients being considered for pharmacotherapy must have an assessment documented in the medical record to include the following:

i. Past Medical History/Review of Systems

a. Psychosocial: Current or past history of psychiatric disorders; Current or past history of **significant** changes in mood or behavior including erratic or aggressive behavior; Current alcohol/illicit drug use
b. Oropharynx: TMJ disease; dentures
c. Resp: Asthma; COPD
d. CV: MI; MI within 2 weeks; Angina; Arrythmias
e. GI: DM; insulin
f. Renal: Renal disease/renal impairment
g. GU: Last menstrual period; Pregnancy
h. Other: Breast feeding female

ii. Medications

a. All current medications including psychiatric medications, alternative medications, vitamins, herbal supplements, and OTCs
b. Screen for use of: Insulin; asthma medications; anticoagulants (*e.g.* warfarin)

iii. Allergies

iv. Physical Assessment

At a minimum, include the following and highlight the damage that can be done to each body system**:**

a. Vital signs: Heart rate, Respiratory rate, Blood pressure, Weight
b. Systems: Oropharynx, Lungs, Heart

v. Patient Pharmacotherapy Counseling

a. Patients receiving smoking cessation medication must be given the Health Department's 24-hour on-call number

b. Patients who experience **significant** side effects, in particular **significant** mood and/or behavior changes including erratic and/or aggressive, should be instructed to:
   i. Stop the medication immediately
   ii. Immediately contact the health care provider

c. Patients should use caution when driving or operating machinery until they know how quitting smoking and the medications may affect them

d. If the patient is receiving Chantix®, provide the patient with the teaching tool "How to Start Taking Chantix®"

5) ARRANGE – by RN, APN, MD/DO, or other trained staff

a) For patients receiving pharmacotherapy, place patient in patient tracking system

b) For patients receiving pharmacotherapy or other intensive smoking cessation counseling, schedule return visit by end of first month during initial visit

c) Advise patient to call Health Department with any questions or problems with medications, or any other concerns

d) Follow-up visits for resupply: At a minimum, assess and document the following:

i. Pharmacotherapy use and screen for side effects
   a. Any **significant changes in mood or behavior** including erratic or aggressive behavior
   b. **Significant drowsiness** due to quitting or medication
   c. Any other side effects or general concerns
   d. Alcohol/illicit drug use

If **negative** for **"any significant changes in mood or behavior including erratic or aggressive behavior,"** → then the RN may resupply the pharmacotherapy following written order of an APN or MD/DO.
RN may initiate an order for nicotine replacement therapy (NRT) products only

If **positive** for **"any significant changes in mood or behavior including erratic or aggressive behavior,"** → then the RN must consult with a physician immediately, either on-site or by phone, to determine current medical plan (including assessment for crisis intervention).

e. For patients receiving pharmacotherapy who are making reasonable progress toward quitting and are felt to be committed by the provider, it will be acceptable with provider discretion to continue these patients on another three months of pharmacotherapy, provided the patient is enrolled for counseling with the QuitLine

ii. Repeat "**Patient Pharmacotherapy Counseling**" from **Section 4.f.v**

iii. Provide Practical Counseling

a. Congratulate success and review benefits derived from cessation
b. If relapse, obtain recommitment to abstinence (learning experience – Average 6-10 quit attempts before successful)
c. Identify problems encountered (barriers or triggers) and anticipate future challenges
d. Help patient identify additional sources of support – Tennessee Tobacco QuitLine
e. Consider providing or referring to more intensive counseling:
    i. Appropriate for those willing to participate
    ii. May be group, individual, or telephone

iv. At the discretion of the provider, committed patients who are already in the Program may be restarted on treatment if they previously failed to complete a three month treatment regimen provided the patient is enrolled in the QuitLine

Patient Tobacco Survey (TSA), Clinical Documentation, and Data Management

a) Review the patient section of the Patient Tobacco Survey (Appendix B). If necessary, assist patient in completing the patient section of the survey.

b) Answer questions P1, P2, and P3.

c) Question P4 should be answered with the best clinical judgment at the time of this visit. The answer to question P4 may change on subsequent visits.

Current smoker, not willing to quit

Current smoker, willing to quit

- Include in this category any patient who has quit for less than 30 days and will not be starting treatment

Current smoker, starting treatment or in treatment (*any combination* of the following: Smoking Cessation Program, QuitLine, tobacco cessation pharmacotherapy such as NRT or Chantix®)

- Include in this category any patient who has received from the Health Department any counseling, QuitLine referral/recommendation, and/or pharmacotherapy for tobacco cessation and has subsequently quit for less than 90 days

Former Smoker -- Completed Health Department treatment

- A patient who has received from the Health Department any combination of counseling, QuitLine referral/recommendation, and or pharmacotherapy for tobacco cessation and has quit for 90 days or greater

Former smoker

- A patient identified at the first tobacco visit who has not smoked for 30 days or greater
- NOTE: A patient identified at the first tobacco visit who has quit for less than 30 days would be classified either as a "Current smoker, willing to quit" or a "Current smoker, starting treatment or in treatment"

Never smoked

- A patient identified at the first tobacco visit who has never smoked
- Include in this category any patient who has never smoked and only used smoke-less tobacco

Unable to determine

- A patient who has refused to answer questions pertaining to tobacco use and smoking

Not determined

- A patient who is not screened due to participation in mass vaccination clinics or in group classes (*e.g.* Quick WIC or WIC classes)

d) Perform medical history and physical exam. Document required findings pertinent to smoking cessation pharmacotherapy in SOAP note or on "**Tobacco Cessation Clinical Form: Initial Visit and Resupply Visit**" (Appendix C).

References:

Clinical Practice Guideline – "Treating Tobacco Use and Dependence"
US Department of Health and Human Services, Public Health Service, June 2000

Clinical Guidelines in Family Practice (Fourth Edition), Uphold and Graham 2003

Tennessee Tobacco QuitLine – http://health.state.tn.us/tobaccoquitline.htm

Facts and Comparisons 4.0, Wolters Kluwer Health, Inc., 2007

FDA: Early Communication about an Ongoing Safety Review – Varenicline (Marketed as Chantix®). November 20, 2007, updated February 1, 2008

FDA: Public Health Advisory – Important Information on Chantix® (varenicline). February 1, 2008, updated May 16, 2008

Pfizer: Medication Guide, Chantix® (varenicline) Tablets – May 2008

Pfizer: Package Insert, Chantix® (varenicline) Tablets – May 2008

Patient Not Willing to Make Quit Attempt
Smoking Cessation Protocol

1) **ASK** – "Do you use any kind of tobacco now?" (Asked by office assistant)

If Yes – give self-assessment form to complete and discuss with nurse/provider

If No – second question by office assistant "Have you ever used any kind of tobacco?"

If Yes – give self-assessment form to complete and discuss with nurse/provider

If No – apply non-tobacco user identification to chart (blank sticker)

2) **ADVISE** – By RN, APN, MD/DO, or DDS/DMD

a) Tell patient importance of stopping tobacco use now and that <u>you want to help</u>

b) Emphasize that it is the most important health step that they can take

c) Give reasons of improved health for self and loved ones (second-hand smoke):

Parents – increased respiratory infections in children; poor role model

New smokers – easier to stop now

Adolescents – decreased athletic performance

Pregnant women – preterm birth, low birth weight, reduced oxygen levels, respiratory problems, and increased hospital stays for infants while mother goes home

Asymptomatic – 2x risk of stroke, 6x risk of oral cancer, 10x risk of larynx cancer and COPD, 12x risk of lung cancer and CAD, 5-8 year shorter life span

Symptomatic – URIs, gum disease, dyspnea, ulcers, angina, claudication, osteoporosis, esophagitis, shortened enjoyment of life, retirement and grandchildren

d) Negative social impact – costly, bad breath, stained teeth, facial wrinkles

3) ASSESS – by RN, APN, MD/DO, or DDS/DMD

Ask – "Are you thinking about quitting in the next six months?" - NO

4) ASSIST – by RN, APN, MD/DO, or DDS/DMD

a) Patient may be unwilling to quit for the following reasons

Misinformation

Concern about the effects of quitting

Demoralization from previous unsuccessful quit attempts

b) Assist with outside support system

Give patient Tennessee Tobacco Quit Line number (1-800-784-8669) and if patient willing, initiate Tennessee Tobacco Quit Line fax referral (may be faxed as a batch at the end of the day or on the following day)

Tell prenatal patients that the Tennessee Tobacco Quit Line provides coaches specifically trained to help pregnant women.

c) Use **5 Rs** motivational intervention:

Relevance – encourage patient to tell you why quitting would be personally relevant to him/her (ask them to be as specific as possible)

Risks – ask patient to identify potential negative consequences of tobacco use (acute and long-term disease risks and environmental risks)

Rewards – ask patient to identify potential benefits of stopping tobacco use (i.e. improved health, food tastes better, improved sense of smell, save money, better self-image, stop worrying about quitting, be good example to children, have healthier babies and children, perform better in physical activities, and reduce wrinkling/aging of skin)

Roadblocks – ask patient to identify barriers and note elements of treatment that could address barriers (i.e. withdrawal symptoms, fear of failure, weight gain, lack of support, depression, and enjoyment of tobacco)

Repetition – motivational intervention should be repeated every time an unmotivated patient presents to the Health Department (therefore, every tobacco user must be identified on every visit)

Patient Tobacco Survey (TSA) and Data Management

a) Review the patient section of the Patient Tobacco Survey (Appendix B). If necessary, assist patient in completing the patient section of the survey.

b) Answer questions P1, P2, and P3.

c) Question P4 should be answered with the best clinical judgment at the time of this visit. The answer to question P4 may change on subsequent visits.

Patient Not Willing to Make Quit Attempt (Continued)

Current smoker, not willing to quit

Current smoker, willing to quit

- Include in this category any patient who has quit for less than 30 days and won't be starting treatment

Current smoker, starting treatment or in treatment (*any combination* of the following: smoking cessation program, quit line, tobacco cessation aid such as NRT or Chantix®)

- Include in this category any patient who has received from the Health Department any counseling, Quit Line referral/recommendation, and/or pharmacotherapy for tobacco cessation and has subsequently quit for less than 90 days

Former Smoker -- Completed Health Department treatment

- A patient who has received from the Health Department any combination of counseling, Quit Line referral/recommendation, and or pharmacotherapy for tobacco cessation and has quit for 90 days or greater

Former smoker

- A patient identified at the first tobacco visit who has not smoked for 30 days or greater
- NOTE: A patient identified at the first tobacco visit who has quit for less than 30 days would be classified either as a "Current smoker, willing to quit" or a "Current smoker, starting treatment or in treatment"

Never smoked

- A patient identified at the first tobacco visit who has never smoked
- Include in this category any patient who has never smoked and only used smoke-less tobacco

Unable to determine

- A patient who has refused to answer questions pertaining to tobacco use and smoking

Not determined

- A patient who is not screened due to participation in mass vaccination clinics or in group classes (*i.e.* Quick WIC or WIC classes)

References:

Clinical Practice Guideline – "Treating Tobacco Use and Dependence"
US Department of Health and Human Services, Public Health Service, June 2000

Clinical Guidelines in Family Practice (Fourth Edition), Uphold and Graham 2003

Tennessee Tobacco Quit Line – http://health.state.tn.us/tobaccoquitline.htm

Appendix A

Pharmacotherapies for Smoking Cessation[a]

Medication	Availability	Precautions / Contraindications	Adverse Effects	Dosage / Directions	Duration	Cost / Day[b]
Varenicline	Chantix® (prescription only)	Pregnancy (Category C), breast-feeding Not recommended in patients < 18 years of age. Caution in patients with renal impairment. **See additional precautions below.**[c]	Nausea/Vomiting Constipation/Gas Insomnia Abnormal dreams Headache	Days 1-3 – 0.5 mg once daily; Days 4-7 – 0.5 mg twice daily; Days 8 through end of treatment – 1 mg twice daily	12 weeks (if successful, additional 12 weeks recommended)	$4.49 (based on dose-pack)
Nicotine Gum[d]	Nicorette®, Nicorette® Mint (OTC only)	Pregnancy (Category C)[e] Recent (< 2 weeks) MI, unstable angina, serious underlying arrhythmias, TMJ disease, difficult to use with dentures	Increased heart rate Increased blood pressure Mouth soreness Dyspepsia Increased salivation	1-24 cigs/day – 2 mg gum[fg]; 25+ cigs/day – 4 mg gum [fg] Either dosage up to 24 pcs/day	Up to 12 weeks [fg]	$5.03 – 2 mg or 4 mg (based on 10 pieces per day)
Nicotine Lozenge[d]	Commit® (OTC only)	Pregnancy (Category C)[e] Recent (< 2 weeks) MI, unstable angina, serious underlying arrhythmias	Increased heart rate Increased blood pressure Hiccoughs Heartburn Nausea	1st cig ≤ 30 min. of waking – 4 mg loz.[gh]; 1st cig > 30 min. of waking – 2 mg loz.[gh] Either dosage at least 9 loz./day x first 6 wks	Up to 12 weeks [gh]	$5.14 – 2 mg or 4 mg (based on 10 lozenges per day)
Nicotine Patch[d]	Nicoderm CQ® (OTC only)	Pregnancy (Category D)[e] Recent (< 2 weeks) MI, unstable angina, serious underlying arrhythmias, acute and/chronic skin disorders.	Local skin reaction Insomnia	>10 cigs/day – 21 mg/24 hours; ≤10 cigs/day – 14 mg/24 hours start here x 6 weeks then 7mg x 2 weeks; 7 mg/24 hours	Weeks 1-6 Weeks 7-8 Weeks 9-10	$3.58 all strengths
Nicotine Inhaler[d]	Nicotrol® Inhaler (prescription only)	Pregnancy (Category D)[e] Recent (< 2 weeks) MI, unstable angina, serious underlying arrhythmias, underlying reactive airway disease.	Local irritation of mouth and throat Insomnia	6-16 cartridges/day	Up to 6 months	$11.11 (based on 10 cartridges per day)
Nicotine Nasal Spray[d]	Nicotrol NS® (prescription only)	Pregnancy (Category D)[e] Recent (< 2 weeks) MI, unstable angina, serious underlying arrhythmias, underlying chronic nasal disorders (rhinitis, nasal polyps, sinusitis), severe reactive airway disease.	Nasal irritation Insomnia	8-40 doses/day	3-6 months	$5.62 (based on 12 doses per day)
Bupropion SR	Zyban® (prescription only)	Pregnancy (Category B), concomitant therapy with meds known to lower seizure threshold (e.g., antipsychotic/ depressants, theophylline, lithium, etc.) MAO inhibitor in previous 14 days, abrupt discontinuing of alcohol or sedatives, Hx of seizure, or eating disorder.	Insomnia Dry mouth	150 mg every morning x 3 days, then 150 mg twice daily Begin treatment 1-2 weeks pre-quit.	7-12 weeks maintenance up to 6 months	$5.18 (based on twice a day dosing)

[a] Information contained within this table is not comprehensive. See package insert for additional information.
[b] Prices are based on Average Wholesale Price (AWP) February 2008.
[c] **Monitor** for behavior and mood changes, and have patients contact healthcare provider if they experience behavior or mood changes. Patients should use caution when driving or operating machinery until they know how quitting smoking with Chantix® may affect them. *FDA: Early Communication About an Ongoing Safety Review – Varenicline (Marketed as Chantix®), February 1, 2008.* Choose quit date and start treatment approximately 1 wk prior to quit date.
[d] Age less than 18 years (unless ≥ 100 pounds and with parental/guardian consent only may use Nicotine Replacement Therapy (NRT)). RN or APN may request MD/DO consult as needed.
[e] Unless after 20 weeks under special circumstances may use NRT. RN or APN may request MD/DO consult as needed.
[f] Chew gum slowly until it tingles, then park it between the cheek and gum for 30 minutes. When tingling is gone instruct patient to repeat process.
[g] One pc of gum or loz. every 1-2 hrs for wks 1-6; 1 pc of gum or loz. every 2-4 hrs for wks 7-9; 1 pc gum or loz. every 4-8 hrs for wks 10-12. No food or drink 15 min. before or while chewing gum or using lozenge. Do not smoke during treatment.
[h] Do not use > 1 lozenge at one time or continuously. Do not use > 5 lozenges in 6 hrs, or > 20 lozenges/day. Do not chew or swallow lozenge.

Patient Label

Patient Tobacco Survey (Completed by check-in staff)

C1. Do you use any kind of tobacco now? *(Check one box)*

- [Y] Yes → **Go to Question 1**
- [N] No → **Go to Question C2**
- [R] Refused

C2. Have you ever used any kind of tobacco? *(Check one box)*

- [Y] Yes → **Go to Question 1**
- [N] NO → **Stop**
- [R] Refused

Patient Tobacco Survey

This section to be completed by the patient.

1. Which tobacco products do you currently use? ***(Check all that apply)***

- [ ] Cigarettes
- [ ] Cigars, pipes, or other smoking tobacco
- [ ] Chewing tobacco, snuff, or other smokeless tobacco
- [ ] I do not currently use tobacco
- [ ] Refused

2. Have you smoked at least 100 cigarettes in your entire life? ***(Check one box)***

NOTE: 5 packs = 100 cigarettes

- [Y] Yes
- [N] No
- [D] Don't know/Not sure
- [R] Refused

3. Do you now smoke cigarettes everyday, some days, or not all? *(Check one box)*

- [E] Everyday
- [S] Some days
- [N] Not at all
- [R] Refused

4. How many times during the past 12 months have you stopped smoking for 1 day or longer because you were trying to quit smoking? *(Check one box)*

- [A] I have not smoked in the past 12 months
- [B] I have not tried to quit
- [C] 1 time
- [D] 2 times
- [E] 3 to 5 times
- [F] 6 to 9 times
- [G] 10 or more times
- [R] Refused

5. When you last tried to quit, how long did you stop smoking? *(Check one box)*

- [A] I have never smoked
- [B] I have never tried to quit
- [C] Less than a day
- [D] 1 to 7 days
- [E] More than 7 days but less than 30 days
- [F] 30 days or more but less than 6 months
- [G] 6 months or more but less than a year
- [H] 1 year or more
- [R] Refused

6. Would you like to stop smoking? *(Check one box)*

- [I] I do not smoke now
- [Y] Yes
- [N] No
- [D] Don't know/Not sure
- [R] Refused

STOP.

Thank you. Please give this sheet to your health care provider.

THIS SECTION TO BE COMPLETED BY THE HEALTH CARE PROFESSIONAL.

During this visit <u>today</u> with the patient, did you as the health care professional provide any of the following services? *(For each item circle Y (Yes) if you did, or circle N (No) if you did not)*

		Yes	No
P1.	**<u>Ask</u>** about tobacco use; **<u>Advise</u>** them to quit; **<u>Assess</u>** readiness to quit.	Y	N
P2.	**<u>Refer</u>** to a *smoking cessation class, program, quit line or other health care professional*.	Y	N
P3.	**<u>Prescribe or recommend</u>** a patch, nicotine gum, nasal spray, an inhaler, or pills such as Chantix®.	Y	N

P4. Please classify the smoking status of this patient. *(Check one box)*

- ❑ Current smoker, ***<u>not willing</u>*** to quit (WONTQT)
- ❑ Current smoker, ***<u>willing</u>*** to quit (not in treatment) (WILLQT)
- ❑ Current smoker, starting ***treatment*** → ***<u>TN QuitLine only</u>*** (QTREAT)
- ❑ Current smoker, starting ***<u>treatment</u>*** → ***<u>medication only</u>*** (e.g. patch, nicotine gum, nasal spray, an inhaler, or pills such as Chantix®) (MTREAT)
- ❑ Current smoker, starting ***<u>treatment</u>*** → ***<u>TN QuitLine AND medication</u>*** (BTREAT)
- ❑ Former smoker – Completed Health Department treatment (COMPTX)
- ❑ Former smoker (FORMER)
- ❑ Never smoked (NEVER)
- ❑ Unable to determine (NOTDET)

P5. Provider number *(provider who reviewed patient questions 1 – 6 and completed Questions P1 – P4)*: _____

Appendix C

Patient Label

Tobacco Cessation Clinical Form (Pilot)
INITIAL Clinical Visit

DATE: _____

CC: Patient desires pharmacologic assistance with smoking cessation

PMH:_____

Past Psychiatric Hx: _____

Detailed PMH		**Circle Y or N**	
Psychosocial	Current or past hx of psychiatric disorders	Y	N
	Current or past hx of **significant** changes in mood or behavior including erratic or aggressive behavior	Y	N
	Current alcohol/illicit drug use	Y	N
Oropharynx	TMJ disease	Y	N
	Dentures	Y	N
Respiratory	Asthma	Y	N
	COPD	Y	N
CV disease	MI	Y	N
	MI within 2 weeks	Y	N
	HTN	Y	N
	Arrythmias	Y	N
	Angina	Y	N
GI	DM	Y	N
Renal	Renal disease/renal impairment	Y	N
Other	Pregnancy	Y	N
	Breast feeding female	Y	N

Current Medications: Insulin **Y N** Asthma/COPD medication **Y N** Warfarin **Y N**

Psychiatric Medications:_____

OTCs:_____

Physical Exam:

VS: HR_____ RR_____ BP_____/_____ Wt._____ LMP_____

Oropharynx:

Resp:

CV:

A/P: Tobacco use._____

Medication *(check medication prescribed)*:

- □ Chantix® per protocol
- □ Nicotine gum 2mg per protocol
- □ Nicotine gum 4mg per protocol

Verbal/written medication instructions given ***(circle one or both)***.

Provide **Patient Pharmacotherapy Counseling** per protocol.

Practical Counseling and Use of Tennessee QuitLine advised.
Tennessee QuitLine # (1-800-QUIT NOW) **provided/fax referral** completed ***(circle one or both.)***
Return to clinic in 3-4 weeks for resupply.

_____ / _____ _____

Provider Signature (s) Date

Appendix C

Patient Label

Tobacco Cessation Clinical Form (Pilot)
Resupply Visit

DATE: _____

S: OV for resupply of Chantix® or Nicotine Gum (circle one).

Detailed Follow-up	**Circle Y or N**	
Any **significant** changes in mood or behavior including erratic or aggressive behavior	Y	N
Significant drowsiness due to quitting or medication	Y	N
Current alcohol/illicit drug use	Y	N

Other adverse side effects/general concerns: _____

Patient desires to continue current tobacco cessation medication regimen **Y N**

O: VS: HR_____ RR_____ BP_____/_____ Wt._____ LMP_____

A: Tobacco use/Attempting to quit

P: Dispense one month resupply of Chantix® or Nicotine gum per order ***(circle one)***.
Counseled per PHN protocol.
Advised Use of Tennessee QuitLine.
Return to clinic in 3-4 weeks for resupply.

_____/_____ _____
Provider Signature(s) Date

Patient Label

Tobacco Cessation Clinical Form (Pilot)
Resupply Visit

DATE:_____

S: OV for resupply of Chantix® or Nicotine Gum (circle one).

Detailed Follow-up	**Circle Y or N**	
Any **significant** changes in mood or behavior including erratic or aggressive behavior	Y	N
Significant drowsiness due to quitting or medication	Y	N
Current alcohol/illicit drug use	Y	N

Other adverse side effects/general concerns: _____

Patient desires to continue current tobacco cessation medication regimen **Y N**

O: VS: HR_____ RR_____ BP_____/_____ Wt._____ LMP_____

A: Tobacco use/Attempting to quit

P: Dispense one month resupply of Chantix® or Nicotine gum per order ***(circle one)***.
Counseled per PHN protocol.
Advised Use of Tennessee QuitLine.
Return to clinic in 3-4 weeks for resupply.

_____/_____ _____
Provider Signature (s) Date

TINEA CORPORIS
(Ringworm)

Subjective

Round or oval patch(es) on body
Usually asymptomatic, but may itch

Objective

Ring-shaped, erythematous, scaling patch(es) with central clearing and distinct border(s) which are often raised
Lesions may be located on face, trunk, or extremities

Assessment

Tinea Corporis (Ringworm)

Plan

Instruct to bathe with soap and water
Apply wet dressing (water); allow to air dry 2 to 3 times daily to assist with debridement
Apply topical antifungals, such as clotrimazole 1% cream (Lotrimin), miconazole, or tolnaftate (Tinactin) cream to affected area morning and evening until lesion clears and for 2 weeks after clearing
Discontinue treatment if condition worsens
Simultaneous treatment of affected family members and pets
Avoid contact with infected animals
Do not share clothing or towels with others
Avoid community baths, showers, pools, sauna's, etc.

Referral Indicators:

Severe or extreme involvement (oral antifungal antibiotic therapy required)
Lesions on face or head (hair loss), eyes
No response to local treatment or worsening of condition
Secondary bacterial infection

Follow-Up:

Patient/parent will be asked to contact health provider if no improvement in one week

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006
Ferri's Clinical Advisor 2008

TINEA CRURIS (Jock Itch, Gym Itch)

Subjective

Marked itching of groin and upper thighs and under breast
Rash (varies in color from red to brown)
Oozing red rash
Scaly rash
Obesity

Objective

Lesions consist of erythematous macules with sharp margins, cleared centers, and active, spreading peripheries in intertriginous areas; may be vesicle formation at the borders
Bilateral fan-shaped rash
May have associated tinea infection of feet

Assessment

Tinea Cruris (Jock Itch)

Plan

Instruct to keep area clean and dry but avoid over bathing and excessive use of soap on skin while infected (blow dry with a hair dryer)
Advise to wear loose fitting, non-rough textured cotton clothing
Avoid conditions that cause sweating in affected areas
Instruct to change clothing frequently and launder in hot, soapy water
Instruct to apply topical over the counter antifungal preparation such as clotrimazole, miconazole, and tolnaftate (Tinactin) to the affected areas and surrounding skin twice daily for several weeks and at least 7 days after the rash has cleared; do not use steroids
Advise that the use of a bland, absorbent powder may be helpful adjuvant to therapy (apply evenly)
Recommend sitz baths to relieve itching of the anogenital area
Check for pubic lice

Health Teaching:

Mode of transmission - directly through contact with infected lesions or indirectly through contact with contaminated articles such as towels and shorts
Use separate towel to dry infected area
Dry feet last

Referral Indicators:

Patient will be asked to contact health provider if no response to treatment in 2-3 days

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006
Ferri's Clinical Advisor 2008

TINEA VERSICOLOR

Subjective

Patches on the skin that will not tan
Usually asymptomatic, but may burn or itch

Objective

Hypo- or hyperpigmented round or oval macules or scaly patches on upper trunk (commonly chest, back, neck, and arms) which are unaffected by sunlight
Prevalent in older children and adolescents

Assessment

Tinea Versicolor

Plan

Bathe and dry thoroughly prior to treatment
Appropriate therapy may include one of the following:

- A topical selenium sulfide suspension (Selsun or Exsel) applied daily x 7 consecutive days; rinse off after 10 minutes; if not cleared in one month, have patient repeat treatment
- Lotions, ointments, or creams containing 3-6% salicylic acid twice daily for 2-4 weeks
- Topical Miconazole, clotrimazole or ketoconazole cream twice daily for 2-4 weeks

Use not indicated during pregnancy
Repigmentation may take months; reoccurrence is common
Treat other family members concurrently if symptomatic

Referral Indicators:

Extensive involvement with acute inflammation or exudation
No response to treatment after 3 weeks
Pregnancy

Follow-Up:

Patient will be asked to contact health provider if no improvement in 3 weeks

Reference

Ferri's Clinical Advisor 2008

TUBERCULIN SKIN TESTING (TST)

GENERAL INFORMATION

Routine tuberculin skin testing (TST) is NOT recommended for populations at LOW RISK for tuberculosis

TST is not contraindicated for persons who have been previously vaccinated with **BCG**

Targeted tuberculin skin testing should be performed to identify persons with increased risk of having latent tuberculosis infection (LTBI) or TB disease who would benefit from treatment (A DECISION TO TEST IS A DECISION TO TREAT)

Persons at **high risk** for developing active TB should be offered TST (see Table 1 "*Groups at High Risk for TB Infection*")

Every child and adolescent who presents for a comprehensive examination (**Child Health/EPSDT exam**), is foreign born, has symptoms of TB, or is a suspected contact to a suspect or case of TB should be clinically evaluated for risk of TB (see Table 2, "*TB Risk Assessment Questionnaire*"); if risks are found, complete the Risk Assessment Tool (RAT)

Children < 5 years who are exposed to a person with active TB and have a negative initial TST:

- Should be re-tested 10 weeks after they no longer have contact with the active case of TB or 10 weeks after the person with active TB is no longer considered contagious
- Should be treated for LTBI if TB ruled out (window therapy), regardless of initial TST results; treatment can be stopped if the child's TST remains negative at 10 week follow-up testing

Serial TST is recommended in children with certain TB risk factors (see Table 4 "*AAP Recommendations for Serial TST in Children*")

Pregnant women should be targeted for tuberculin skin testing only if they have a specific risk factor for TB infection (there is no evidence that the TST has adverse effects on the pregnant mother or fetus)

HIV-positive persons should have an annual TST

NOTE: As long as there is no history of prior severe reaction or allergy to the TB skin test, the TST may be repeated if the initial results are questionable or if there is no documentation of prior result

SUBJECTIVE:

Evaluate/Document TB Risk Status:

- Evaluate risk status according to "*Groups at High Risk for TB Infection* " (see Table 1)
- Administer "*TB Risk Assessment Questionnaire*" (see Table 2) to all children and adolescents
- Complete the "*TB/LTBI Risk Assessment Tool*" (RAT) (see Table 3) for all persons that are at high risk of TB, those being considered for TST, or those that give a positive answer to the "TB Risk Assessment Questionnaire".

TABLE 1 Groups at High Risk for TB Infection (Immediate Skin Testing Required)

1. Close contacts of a person known or suspected to have TB (i.e., those sharing the same household or other enclosed environments)
2. Foreign-born persons from areas where TB is common (includes all countries except Canada, Western Europe, Japan, Australia, and New Zealand)
3. Health care workers who serve high-risk clients
4. Mycobacterial laboratory workers
5. Persons with HIV infection or AIDS
6. Persons with medical conditions that place them at high-risk (includes diabetes, silicosis, end-stage renal disease, certain malignancies, immunosuppressive condition or treatment, intestinal bypass surgery or gastrectomy chronic malabsorption syndromes, or body weight less than 10% ideal)
7. Persons who inject illicit drugs
8. Residents and staff, or volunteer workers in high-risk congregate settings (alcohol and drug rehabilitation or methadone maintenance centers, homeless shelters, correctional facilities, mental health facilities, and long-term care facilities)
9. Children under 18 years of age exposed to adults in high-risk categories
10. Homeless persons
11. Persons with radiographic or clinical findings suggesting TB disease
12. Residence or prolonged travel in a country where TB is common
13. Other high-risk populations as locally defined by the Department of Health (designation as a locally defined high-risk population will be based on the incidence of TB disease and infection for that specific area or population and may include some medically underserved populations, i.e., US-born Asians and Pacific Islanders, Hispanics, Native Americans, migrant farm workers)

TABLE 2 TB Risk Assessment Questionnaire (Administer to Children & Adolescents)

1. Are you or your child in **close contact** of a person with TB?
2. Are you or your child **foreign born** (especially Asian, African, Latin American), a refugee or a migrant?
3. Have you, your child, or any household member traveled to a **country** where TB is common (e.g., Africa, Asia, Latin America, Eastern Europe, Russia, Caribbean) in the last 12 months?
4. Do you or your child have a **medical condition** or treatment of a medical condition that suppresses the immune system?
5. Do you or your child have **HIV infection** or is he/she considered at risk for HIV infection?
6. Are you or your child **exposed** to the following individuals?
   HIV-infected, homeless individuals, residents of nursing homes, institutionalized adolescents or adults, users of illicit drugs, incarcerated adolescents or adults, or migrant farm workers

If reports yes to any of the above, YOU MUST COMPLETE A RISK ASSESSMENT TOOL

TABLE 3 TB/LTBI Risk Assessment Tool (RAT)

As a guide to help educate patient about TB/LTBI
As documentation of risk factors, including medical conditions
To determine if patient is high or low-risk for TB or LTBI (discourage skin testing a person assessed to be low-risk)
As documentation of risk assessment and TB/LTBI education
As source for PTBMIS required data

Table 4 AAP Recommendations for serial TST in children

1. **Children who should have annual TST:**
   - Children infected with HIV or living in household with HIV-infected persons
   - Incarcerated adolescents
2. **Children who should be tested every 2-3 years:**
   - Children exposed to persons that are HIV-infected, homeless, residents of nursing homes, institutionalized adolescents or adults, users of illicit drugs, incarcerated adolescents or adults, and migrant farm workers
   - Foster children with exposure to adults in the preceding high-risk groups
3. **Children who should be considered for repeat TST at 4-6 and 11-16 years of age**
   - Children whose parents immigrated (with unknown TST status) from regions of the world with high prevalence of tuberculosis
   - Children with continued potential exposure by travel to the endemic areas and /or household contact with persons from the endemic areas (with unknown TST status)
   - Children who live in areas locally defined as having an increased prevalence of TB (e.g., among medically undeserved, low-income, or high-risk racial or ethnic minority populations)

OBJECTIVE:

TST (initial visit) any person with one or more positive risk factors, or symptoms of TB [Inject 0.1 ml PPD intradermally into the volar (palm side) surface of the left forearm; the scapula area may be used as an alternative site for persons who cannot receive the TB skin test in the lower arm

Two-step TST (initial visit) all persons who are required to receive regular TST (e.g., health care or correctional facility workers) in order to ascertain a baseline

TST as indicated (subsequent visits) *"AAP Recommendations for Serial TST in Children"* (see Table 4)

ASSESSMENT:

Read TST within 48-72 hours by measuring the transverse diameter of induration and record inn millimeters; do not record as positive or negative

A negative result in a person who returns for skin test interpretation after 72 hours is not considered accurate, therefore repeat testing is required

Interpret positive TST results in accordance with Table 5 *"Criteria for Tuberculin Positivity by Risk Group"*

A positive result in a person who returns for skin test interpretation after 72 hours is still considered positive

For persons with negative TST reactions who undergo repeat skin testing, an increase in reaction size of ≥10 mm within a period of 2 years should be considered a skin-test conversion indicative of recent infection with *M. tuberculosis*

Table 5 Criteria for Tuberculin Positivity, By Risk Group

1. **Reaction ≥5 mm of induration**
   - HIV-infected persons
   - Recent contacts of patients with TB
   - Fibrotic changes on chest radiograph consistent with prior TB
   - Immunosuppressed patients, including those with organ transplants, those receiving the equivalent of ≥15 mg per day of prednisone for 1 month or more, chemotherapy, and TMF-2 antagonists etc *
2. **Reaction ≥10 mm of induration**
   - All foreign born (*was recent immigrants*) from high prevalence countries
   - Injection drug users
   - Residents and employees of the following high-risk congregate settings:
     Prisons and jails, nursing homes and other long-term care facilities, hospitals and other health care facilities, residential facilities for patients with acquired immunodeficiency syndrome (AIDS), or homeless shelters
   - Mycobacteriology laboratory personnel
   - Persons with the following clinical conditions:
     Silicosis, diabetes mellitus, chronic renal failure, some hematologic disorders (e.g., leukemias and lymphomas), other specific malignancies (e.g., carcinoma of the head or neck and lung), weight loss of ≥10% of ideal body weight, or gastrectomy and jejunoileal bypass
   - Children younger than 5 years (*was 4 years*) of age or infants, children, and adolescents exposed to adults at high-risk
   .
3. **Reaction ≥15 mm of induration**
   - Person with no risk factors for TB†

* *The risk of TB in patients treated with corticosteroids increases with higher dose and longer duration*

† *For persons who are otherwise at low risk and are tested at the start of employment, a reaction of ≥15 mm induration is considered positive*

PLAN:

Children less than 5 years old with a known exposure to a person with TB should be referred to the TB clinic for evaluation and possible treatment of LTBI, regardless of skin test results

If TST is positive, refer to medical provider or regional TB clinic for evaluation and consideration of preventive treatment

Repeat TST as indicated (see Table 4 "*Recommendations for Serial TST in Children*")

REFERENCES

CDC. Targeted tuberculin testing and treatment of latent tuberculosis infection. MMWR 2000;49:1-51.

American Academy of Pediatrics. Tuberculosis. In: Pickering LK, ed. 2000 Red Book: Report of the Committee on Infectious Diseases. 25th ed. Elk Grove Village, IL: American Academy of Pediatrics, 2000:593-613.

Reichman LB, and Hershfield ES, eds. Tuberculosis: A Comprehensive International Approach, 2000; Vol. 144.
Tennessee Department of Health Tuberculosis Guidelines, 2004.

TUBERCULIN SKIN TESTING, TWO STEP PROCEDURE (V741)

GENERAL INFORMATION

Two-step testing is done to detect waning sensitivity to infection with *Mycobacterium tuberculosis*

A person entering the health care field (with potential for direct patient contact) must be two stepped (i.e., first time employed in nursing home, hospital, health department, home health agency) regardless of age unless they can show documented proof within past 12 months of a PPD skin test

SUBJECTIVE:

Complete TB/LTBI Risk Assessment form at initial visit **(Note: Not to be used for Health Department employees)**

OBJECTIVE:

Administer a Mantoux Tuberculin Test using 5 TU (0.1 ml) PPD in left forearm; the scapula area may be used as an alternative site for persons who cannot receive the TB skin test in the lower arm

ASSESSMENT:

Read the tuberculin skin test in **48 to 72 hours**:

If reading is negative, repeat the skin test one to three weeks after the first test

If reading is positive, do not proceed to second test

If second test has no significant induration, consider it negative, depending on clinical situation, and record measurement in millimeters

Note: TB/LTBI Risk Assessment form does not need to be completed twice unless a patient returns to the clinic at a later time and it is determined that they have a new exposure or risk factors, in which case another TB/LTBI Risk Assessment form should be completed

PLAN:

All positive tuberculin skin test reactors should be referred to a private physician or to a tuberculosis clinic for a chest radiograph and further evaluation

Document results in record in millimeters, even if negative, and give results in writing to patient

TUBERCULOSIS, CASE OR SUSPECT (INITIAL VISIT) (0110)

SUBJECTIVE

Symptoms may include the following:
- Cough > 2 weeks
- Hemoptysis
- Chest pain
- Fever
- Chills
- Night sweats
- Weight loss
- Fatigue

Referral from physician

OBJECTIVE

Productive Cough
Respirations normal or labored
Thin, pale
Documented weight loss
HIV status
Jaundice, yellow eyes
Positive or negative tuberculin skin test (TST)
Positive or negative smear, cultures, or cultures pending
Abnormal chest x-ray
Other diagnostic tests/results
Baseline measurements from TB clinic to include hepatic enzymes, bilirubin, serum creatinine, CBC, platelet count and HIV (must have signed consent for HIV); routine laboratory monitoring for toxicity is generally not needed in people with normal baseline
Clinical information from other providers, hospital

ASSESSMENT

Tuberculosis suspect (culture report not available)
Tuberculosis Case (culture report is positive, indicate site of infection)
Latent Tuberculosis Infection (LTBI)

PLAN

Note: HAVE CLIENT WEAR SURGICAL MASK IF SYMPTOMATIC; NURSE MUST WEAR N-95 MASK

Initial Contact:

- Should be made within 24 hours of notification of a new TB suspect/case; this contact may be in the home, office, hospital, or by phone
- Explain contact investigation and begin identifying contacts
- An initial visit by the PHN should be made within 3 working days of notification of a newly diagnosed case or suspect
- Records should be obtained within 24 hours of report of suspect

Conduct Home Assessment:

- If the initial visit is not a home visit, PHN should make home visit to assess the home environment within 5 working days from notification; the home visit should be made preferably prior to patient's discharge from hospital, but no later than 24 hours of discharge from a hospital (see TB Guidelines)
- Nurse must ensure that no immunosupressed persons or children <5 years of age are in the home if an infectious patient is being discharged home

Provide Screening Evaluation:

- Consider psychosocial, cultural background, and language/literacy comprehension level
- Provide interpreter services
- Complete TB/LTBI Risk Assessment Tool (if not done previously) and evaluate history, including onset and duration of symptoms and signs of TB (as listed above)
- Evaluate for possible pregnancy
- Screen for any contraindications to anti-tuberculosis drugs (using PH 2040, Screening and Monitoring Forms)
- Observe patient's and family's ability and availability of resources to cope, adherence to medications regimen, and compliance with follow-up
- If being treated by private physician, obtain record of physical exam, CXR report, significant lab tests (sputum cultures, liver functions, and WBC) and medication orders
- Ascertain whether MD will follow or if Health Department to follow; if Health Department to follow, refer to TB Clinic
- Assure that a focused physical exam and chest X-ray have been performed by TB clinic MD/NP; if not done, refer back to TB clinic
- Begin contact investigation
- If patient is hospitalized, notify hospital of isolation discharge requirements
- If patient is discharged from hospital, obtain and send copy of all records (notes, lab, and radiology reports, physician orders, and medication sheets) to regional TB clinic

Obtain and Document the Following Information:

- Physician referral of suspect, case, or orders for anti-TB drugs
- Known contacts
- HIV status/other TB risk factors
- PPD skin test history (including measurement)

Previous history of -
- Tuberculosis
- Administration of anti-TB medications
- Adverse reaction to previous medications

Symptoms including -
- Date of first symptoms
- Weakness, weight loss, anorexia
- "Flu-like" episode, chills, fever
- Productive cough, chest pain, blood in sputum
- Night sweats

Other health problems including –
- HIV or other immunosuppression
- Liver or kidney disease
- History of alcohol or drug abuse
- Current medications (including OTCs and herbal medicines)
- LMP
- Allergies
- Other evaluation by private MD, other providers, or health care facility
- Special patient needs

Treatment:

- Instruct on home isolation precautions until no longer infectious, or place patient on isolation if indicated
- Measure height, weight, and vital signs initially and every month
- DIRECTLY OBSERVED THERAPY (DOT) IS THE STANDARD OF CARE FOR <u>ALL</u> TB CASES
- Dispense anti-tuberculosis drugs as prescribed by TB clinic physician (only those medications approved by TB clinic MD may be dispensed)
- If on ETHAMBUTOL perform visual acuity (Snellen Chart) including Romberg, Red/Gren color discrimination monthly; if patient wears glasses, check vision with glasses and note this in record
- If an AMINOGLYCOCIDE is to be used, obtain BUN; patient should be questioned at baseline and monthly about possible hearing loss or tinnitus, and monitor vestibular function using the Romberg at baseline and monthly (if STREPTOMYCIN is used, also obtain baseline serum creatinine)
- At treatment initiation, if not drawn in TB clinic, draw blood for hepatic enzymes, bilirubin, serum creatinine, a complete blood count, platelet count, and HIV (if not known); all labs to be reviewed by physician
- Issue 3 sputum containers, dated and numbered (if pulmonary TB or to rule out pulmonary TB) with instructions for collecting in AM (COLLECT FIRST SPECIMEN IN CLINIC IN PERSON AND ISSUE 2 CANS TO PATIENT WHICH ARE PRE-LABELED AND DATED FOR THE NEXT 2 CONSECUTIVE DAYS)
- All documentation must be put in PTBMIS as appropriate

Provide Health Teaching:

Teach importance of maintaining regular medical supervision

Teach signs and symptoms of possible toxic effects of prescribed medications

Provide patient education pamphlets (in appropriate language) i.e., "*prevention of spread of disease*", "*infectiousness of tuberculosis*", "*need to take medications regularly and keep return appointments*", "*HIV TB Connection*" (give verbally and assess understanding of instructions) and Document on form PH 2037 (*TB counseling/Patient Education*) or in the patient's record

Discuss contact investigation

Perform Contact Investigation: (See TB Guidelines)

All high-risk contacts should be tested within 7 working days and completion of initial medical assessments of high-risk contacts should be completed within 10 working days of contact identification

Document all contact information on PH 1631, "*TB Contact Record*" (Revised 10-04)

All contacts should receive a tuberculin skin test (TST) if they have a documented negative PPD history

All high-risk contacts (from all environments) that have a positive TST are to have a chest x-ray and evaluation by an MD or NP

Those contacts that have a negative TST but are at particular risk of TB (i.e., children < 5, immunosuppressed persons, pregnant women, dialysis patients) are to have a chest x-ray and evaluation by an MD or NP

All contacts with a negative TST should have a repeat TST at 10 weeks after contact is broken with the suspect/case; only one TST is needed if contact has been broken for more that 10 weeks

Consult with regional TB nurse/physician for preventive therapy on <u>all</u> children who are close contacts of infectious, or potentially infectious, cases of TB, regardless of skin test results

Document all information in PTBMIS and on contact record (PH 1631) as required

When contact investigation is completed, send copy of PH 1631 to regional TB office

Provide Follow-up:

Schedule monthly return appointments to TB clinic if being followed by Health Department or at local Health Department if being followed by private provider to evaluate for medication side effects

For patients with active TB, assess for side effects each time DOT is given

ENSURE DOT AS ORDERED BY PHYSICIAN UNTIL REGIMEN IS COMPLETED

Weigh at every TB clinic visit

Ensure baseline labs and sputum culture results are in chart

Perform appropriate laboratory testing for any symptoms suggesting drug toxicity

If on ETHAMBUTOL, perform monthly vision checks including color red/green discrimination

If on AN AMINOGLYCOCIDE (SUCH AS STREPTOMYCIN), perform monthly Romberg and hearing evaluation (see TB guidelines)

Repeat liver testing if indicated (underlying liver disease, alcohol use symptoms) or as ordered by physician

Issue monthly sputum containers (set of 3); three sputum cultures must be obtained at one month and two months and as ordered by physician (document reason if unable to obtain and notify Regional TB clinic), remind physician to order at 2 months if not done

Sputum cultures must be done every month until the patient has 3 consecutive negative cultures for 2 consecutive months

When made aware cultures sent to outside labs, contact private provider or lab to ensure culture and susceptibility are ordered and that culture isolate is sent to state lab

Send a copy of drug monitoring sheet to the regional TB clinic monthly (when form is complete)

Ensure TB clinic is aware of all culture and sensitivity results

Provide Referral:

Significant history, current medication intolerance and/or adverse reactions

Abnormal laboratory findings

Pregnancy

Non- adherence

REFERENCES

CDC. Targeted tuberculin testing and treatment of latent tuberculosis infection. MMWR 2000;49:1-51.

Reichman LB, and Hershfield ES, eds. Tuberculosis: A Comprehensive International Approach, 2000; Vol. 144.

Tennessee Department of Health Tuberculosis Guidelines, 2004.

TUBERCULOSIS, Treatment of Latent Tuberculosis Infection (LTBI) (7995)

***NOTE*: Latent Tuberculosis Infection (LTBI) is an asymptomatic state in persons who are infected with Mycobacterium tuberculosis and have future risk of developing active TB, but are not currently infectious to others.**

SUBJECTIVE (Provide interpreter services as needed)

History of positive Mantoux skin test
Physician referral
History of positive HIV status
Previous treatment for LTBI
Contact to TB case or suspect
Risk factor(s) for TB on TB/LTBI Risk Assessment Tool (RAT)
Clinical information from other providers if applicable

OBJECTIVE

Positive tuberculin skin test
Normal chest x-ray
No symptoms of TB

ASSESSMENT

Positive tuberculin skin test
Immunosuppressed with known contact to TB case/suspect regardless of TST results
Child <5 years and contact to TB case/suspect regardless of TST results
Pregnant and contact to TB case/suspect regardless of TST results

PLAN

Provide Screening Evaluation:

Before placing a skin test, complete TB/LTBI RISK ASSESSMENT TOOL (RAT) (if not already completed by primary provider, or on previous visit) and document in PTBMIS

Use the RAT
As a guide to help educate patient about TB/LTBI
As documentation of risk factors, including medical conditions
To determine if patient is high or low-risk for TB or LTBI (discourage skin testing a person assessed to be low-risk)
As documentation of risk assessment and TB/LTBI education
As source for PTBMIS required data

Review responses on TB/LTBI Risk Assessment Tool
Make appointment for patient with the regional TB clinic for evaluation if not previously done and/or consult with TB clinic staff
TB physician should be notified of any patient with TB symptoms
Ensure that patient has been evaluated by physician in TB clinic and has had a focused physical exam, chest x-ray (including PA and lateral for children), and appropriate lab tests if indicated
Obtain medical history, obtain records from other providers
Record any allergies or previous adverse reactions to medications
Assess and document all current medications (prescription, OTCs, or home remedies)
Assess and document history of substance abuse (alcohol or drugs)

Treatment:

Perform baseline laboratory tests (if not already drawn) for -
- Persons with chronic liver disease (see TB Guidelines)
- Those whose initial evaluation suggests a liver disorder
- Those with immunosuppression (HIV etc)
- Pregnant women and those in the immediate post-partum period (i.e., those within 3 months after delivery)
- Those who use alcohol regularly
- (Testing can be considered on an individual basis for individuals taking other medications for chronic medical conditions)

Obtain written medical order by physician for appropriate anti-tuberculosis medication and copy of last office visit if seen by private provider
If patient is a child, notify regional clinic for recommendations and/or specific orders -
- All children <5 years of age who are contacts to TB cases/suspects are to receive LTBI therapy until 10 week follow-up skin test is negative (window therapy)
- CHILDREN (≤18 YEARS OF AGE) ARE TO RECEIVE DIRECTLY OBSERVED PREVENTIVE THERAPY (DOPT) THROUGHOUT LTBI TREATMENT

Dispense only one (1) month supply of drugs as ordered by physician
If patient is going out of town for an extended period, consult with TB clinic regarding dispensing more than one-month supply of medication
If patient buying medication, obtain name of drug store and monitor monthly pick-up
Monitor for possible contraindications prior to initiating drug therapy, especially liver disease or factors that may contribute to liver disease (i.e., liver toxic medications, and alcohol abuse) and document on drug monitoring form (notify TB clinic of any contraindications)
Always consult with regional TB clinic regarding special circumstances (obtain approval from regional TB physician to dispense medication orders from private providers; review chart to assure appropriateness)
If patient is off INH for less than 2 months, PHN may restart INH after consulting with Regional TB Physician and carefully monitoring for signs and symptoms of active TB
If patient is off INH for greater than 2 months, a re-evaluation by the TB physician is needed
Document treatment completion or reasons not completed, and ensure that appropriate disposition code is entered in PTBMIS

Provide Health Teaching:

- Discuss specific drug dosage, possible side effects (especially liver toxicity) and the anticipated benefits
- Educate patient on whom to contact (give name and number) if side effects develop, including contact for holidays and weekends (emergency room, etc.)
- Advise patient to stop the drug if adverse reactions occur and provide name and number of person to contact for instructions (provide "*Patient Medication Instruction Sheet*," INH PM 070, or appropriate information with health department phone number)
- Educate patient about the importance of disclosing any other medications (prescription, over-the-counter, or home remedies) including use of alcohol or drugs
- Educate patient about adverse effects of alcohol use with LTBI medications
- Educate patient about the importance of keeping appointments and date of next clinic visit

Provide Documentation:

- If local health department, send a copy of record, prescriptions and test results to regional TB clinic
- Ensure that all patient data and correct procedural codes are entered in PTBMIS
- Document patient's verbalized understanding of risks/benefits and willingness to take LTBI treatment
- Document providing patient with TB/LTBI education materials in appropriate language and document use of interpreter services, if applicable

Provide Follow up:

- Set up tickler card system or utilize computerized tracking for follow-up
- If patient does not pick up medication, contact him/her by phone, make home visit, send non-compliance letter from TB physician outlining risks (send a copy to regional clinic along with copy of drug monitoring record)
- Dispense only one (1) month supply of drugs as ordered by physician
- Do a clinical evaluation monthly for contraindications and signs/symptoms of adverse reactions while on therapy and notify TB clinic of any signs/symptoms
- Ask patient monthly about new medications (prescription, over-the-counter, home remedies)
- Provide laboratory monitoring if indicated by clinical evaluation (or ordered by physician)
- If any test exceeds the upper limit of normal (ULN), send results to TB clinic or private physician for review; if liver enzymes (SGOT/SGPT) exceed ULN by three (3) times with symptoms, or by five (5) times without symptoms, or bilirubin is over the ULN at any level, notify TB clinic immediately for special orders
- Contact patient if appointment not kept

Provide Referral:

- Refer patient to private physician or tuberculosis clinic:
  - SGOT/SGPT > 3x ULN with symptoms, or > 5x ULN even without symptoms, or any abnormal bilirubin
  - Symptoms of adverse reactions or drug toxicity (fill out the FDA 3500 voluntary form and send to the State TB Medical Director for review)
  - Patient develops symptoms of active tuberculosis

URTICARIA (Hives)

Subjective

Itchy, red welts present on skin either singly or in crops
Often exposure to aggravating substance reported, i.e., drug, food, insect bites, inhalant, or in association with an infection

Objective

Erythematous, raised plaques of varying size, with distinct borders - may coalesce
May involve trunk and/or extremities
Often evidence of scratching

Assessment

Urticaria Reaction (Hives)

Plan

Critical to **R/O ANAPHYLAXIS** with complete and immediate physical assessment - if evidence of hypotension, tachycardia, coughing, anxiety, dyspnea, wheezing, vomiting or cyanosis, refer to emergency treatment protocol; if symptoms began within last 2 hours, patient should be observed in clinic for a minimum of 30 minutes for development of further signs and symptoms

Mild Urticaria:

- Assess etiology (diet history, drug history, insect bites), and counsel on avoidance of allergen
- Use of oral antihistamine, i.e., Diphenhydramine HCL or Chlorpheniramine maleate syrup (as directed); Benadryl dosage according to packet-instructions.

WARN REGARDING DROWSINESS EFFECT OF ANTIHISTAMINE THERAPY
Treat pruritis with colloidal oatmeal (Aveeno bath)
Cut and clean nails to help prevent infection

Referral Indicators:

Anaphylaxis reaction after stabilization
Any evidence of respiratory involvement
Widespread urticaria, intense pruritis, or angioedema producing deeper, larger wheels, usually on hands, feet, lips, and eyelids
Evidence of secondary bacterial infection
Chronic or recurrent urticaria

Follow-Up:

Closely monitor response to treatment
Immediate assessment warranted if reaction reoccurs

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006
Ferri's Clinical Advisor 2008

VARICELLA (Chickenpox)

Subjective

Fever, chills, headache, malaise
Itchy rash - first appears on trunk, later on face, neck, and extremities

Objective

Discrete lesions; progress from macule to papule to vesicle to scab; appear in crops; various forms are present simultaneously; crusted vesicles
Rash generally follows active case exposure in about 14 days

Assessment

Varicella (chickenpox)

Plan

Advise chickenpox is extremely contagious - keep away from others; communicable from one to two days prior to onset of symptoms until all lesions have crusted over (usually about six days after appearance of rash); incubation period 14-21 days
Keep in house and out of school until all lesions are crusted or dry
Bathe with soap and water, lukewarm baking soda baths, or colloidal oatmeal (Aveeno baths)
Cut fingernails short and encourage not to scratch; apply calamine or caladryl lotion to lesions for itching
Recommend diphenhydramine (Benadryl) if needed; dosage according to package instructions; warn regarding drowsiness
Use acetaminophen for elevated temperature, **<u>CAUTION</u> - DO NOT USE ASPIRIN (REYE'S SYNDROME)**
Antibiotics not needed routinely

Referral Indicators:

Patients receiving steroid or immunosuppressive therapy or are immunocompromised
Patients with malignant disease
Newborns
Development of cough, shortness of breath, pneumonia, bleeding problems, or central nervous system symptoms (i.e., Reye's Syndrome, encephalitis)
Secondary bacterial infections
Significant eye involvement
For those wishing to be treated with Acyclovir

Follow-Up:

In routine cases, no follow-up required
Varicella vaccine available for those 12 months and older

Reference:

Mayo Clinic, Guide To Self-Care, Fifth Edition 2006

SECTION IV: IMMUNIZATIONS

4.010 – 4.290

COMVAX
(Haemophilus b Conjugate (Meningococcal Protein Conjugate) and Hepatitis B (Recombinant Vaccine)

GENERAL INFORMATION:

Hepatitis B vaccine is available in combination with *Haemophilus influenzae* type b (Hib) vaccine as Comvax® (by Merck). It is licensed for use when either or both antigens are indicated and the other antigen is not contraindicated. Because premature Hib vaccination can cause non-response to subsequent doses ("immunotolerance") of Hib vaccine, instead of immunity, no Hib-containing vaccine should ever be administered before 6 weeks of age. Comvax may be used to complete the hepatitis B vaccine series in all infants, including those whose mothers are or may be infected with hepatitis B virus (HBsAg positive or HBsAg status unknown). (For additional information, see HIB and Hepatitis protocols)

Contraindications and precautions

Severe allergic reaction to vaccine component or following a prior dose
Moderate or severe acute illness
Age younger than 6 weeks

Adverse events may include:

Swelling, redness and/or pain
Systemic reactions infrequent, serious adverse reactions rare

PLAN

Have accompanying adult read "Vaccine Information Statement"/"Vaccine Information Materials"
Counsel regarding benefits, side effects, and management

Administration of Vaccine:

RECOMMENDED SCHEDULE

Age		Volume and Route	Minimum Age	Minimum interval
2 months	Primary dose	0.5ml IM	6 weeks	
4 months	Primary dose	0.5ml IM		4 weeks after dose 1
12-15 months	Booster dose	0.5ml IM	12 months	8 weeks after dose 2

OFF SCHEDULE AND MIXING WITH OTHER HIB AND HEPATITIS B VACCINE

Children who have started the vaccine with Comvax or PedvaxHIB may complete the series with PedvaxHIB and/or Comvax following the 2 –dose primary series with a third dose as a booster after the first birthday (remember to administer Hepatitis B with PedvaxHIB)

If it is necessary to change vaccine type (by switching to a different type of Hib vaccine, such as ActHIB® or Pentacel® by Sanofi Pasteur), then three (3) doses of any combination constitute the primary series. In such cases, either vaccine may be used for the booster (4th dose), regardless of what was administered in the primary series (remember to administer a hepatitis B vaccine, if necessary, when using a Hib vaccine other than Comvax)

DELAYED VACCINE SCHEDULES

VACCINE	AGE STARTING HIB AND HEP B SERIES	RECOMMENDED CATCH-UP FOR OLDER CHILDREN
Hepatitis B	Birth (no Hib given)	Follow routine Comvax schedule above. Final valid Hep B dose is the booster dose (a 4-month dose is too early to be a valid 3rd Hep B).
Comvax	Starting at 12-14 months	Give 2 doses of Comvax two (2) months apart and the third hepatitis B vaccine six (6) months after first Comvax
Comvax	Starting at 15-59 months	Give one dose of Comvax; give second hepatitis B at least 4 weeks later, and 3rd (final) dose at least 8 weeks after the second dose and at least 16 weeks after the Comvax dose;* only one dose of Hib vaccine is required at this age

*The accelerated catch up schedule is recommended whenever children are behind on their shots.

NOTE

If a child is **greater than 59 months of age**, Hib-containing vaccine is not normally indicated

Older children, if at **high risk** (e.g., sickle cell, post splenectomy, immunodeficient), may receive Hib-containing vaccine with a physician or nurse practitioner's order

Comvax may be given **simultaneously with all other vaccines**

Comvax may be **interchangeable** with other Hib and Hepatitis B vaccine, but the total number of doses changes if switching brands of Hib vaccines (see schedule above)

Advise to wait in clinic 20 minutes after injection
Record manufacturer and lot number of the vaccine administered, date, name, address, and title of person administering vaccine
Instruct parent to contact Health Department if adverse reaction occurs (complete VAERS form)

Referral Indicators:

Severe allergic (anaphylactic) hypersensitivity to any component of the vaccine

Follow-up:

Return for next Comvax at appropriate intervals

REFERENCES:

"Epidemiology and Prevention of Vaccine-Preventable Diseases, Department of Health and Human Services, Centers for Disease Control and Prevention, 10th Edition, February 2008

DIPHTHERIA, TETANUS TOXOID & ACELLULAR PERTUSSIS VACCINE (V061) DTaP

GENERAL INFORMATION

DTaP vaccine may be used for children **as early as 6 weeks through 6 years** of age (**up to 7th birthday**)

The **1st, 2nd, and 3rd doses** of DTaP should be **separated by a minimum of 4 weeks** (28 days)

For **4th dose** of DTaP, child must be **at least 12 months of age, and less than 7 years of age, and, at least 6 months (180 days) since 3rd dose** of DTaP

The **5th dose** of DTaP may be administered **any time after the fourth birthday and at least 6 months since the 4th dose** of DTaP vaccine (any brand of DTaP may be used for the 5th dose)

If a child has a **valid contraindication to Pertussis vaccine, DT should be used to complete the series:**

- If a child is **12 months of age or older** when the first dose of DT vaccine is given (as DTaP or DT), then a total of **three doses** of DT (third dose 6-12 months after the second) are needed to complete the primary DT series
- If the first dose is given **before 12 months**, **four primary doses** are required to complete the DT series

Contraindications to giving the vaccine include the following:

- An immediate anaphylactic reaction to a vaccine or following a previous dose of vaccine containing any of the components of DTaP (diphtheria, tetanus, or pertussis)
- Encephalopathy within 7 days of administration of previous dose of DTP or DTaP

The following precautions, although not considered contraindications, should be carefully evaluated concerning the risks and benefits of vaccination for individuals who experienced any one of the following adverse reactions:

- Temperature of 105°F or higher within 48 hours (with no other identifiable cause) after vaccination with DTaP/DTP
- Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours after vaccination with DTaP/DTP
- Persistent, inconsolable crying lasting 3 hours or more, occurring within 48 hours after vaccination with DTaP/DTP
- Convulsions, with or without fever, within 3 days after vaccination with DTaP/DTP

Defer vaccination of children with moderate to severe acute illness until they are well

NOTE: Stable/resolved neurologic condition (i.e., controlled epilepsy, cerebral palsy, or developmental delay), or a family history of convulsions in first-degree family members (parents or siblings) is not a contraindication for DTaP.

If a child has any of the following conditions, vaccination should be delayed until the child has been evaluated, treatment initiated, and the condition stabilized: (1) an evolving neurologic disorder (uncontrolled epilepsy, infantile spasms, progressive encephalopathy); (2) a history of seizures which has not been evaluated; or, (3) a neurologic event which occurs between doses of pertussis containing vaccine.

Adverse events include the following:

Local reactions (erythema, induration), increased risk of injection site swelling following 4th or 5th dose (not harmful, resolves spontaneously), nodule at injection site

Hypersensitivity reactions (Arthus-type)

Fever and systemic symptoms are uncommon

Severe systemic reactions are rare

PLAN

Ask parent or guardian about the medical history and recent health status of the child to determine the existence of any contraindications

Ask parent or guardian about adverse reaction after previous dose

Counsel regarding benefits, side effects, and management.

Recommend that parent may administer acetaminophen if a fever develops and the child is uncomfortable. If the child does not show signs of discomfort, medication is not necessary.

Have accompanying adult read "Vaccine Information Statement" (VIS)

Administer 0.5 cc DTaP vaccine INTRAMUSCULARLY according to recommended schedule:

VACCINE	DOSE #	AGE	MINIMUM AGE	MINIMUM INTERVAL
DTaP	Primary 1	2 months	6 weeks	
	Primary 2	4 months		at least 4 weeks since dose #1
	Primary 3	6 months		at least 4 weeks since dose #2
	Primary 4	12-18 months	12 months	at least 6 months since dose #3, but less than 7 years of age
	Booster (5)	4-6 years	any time after 4th birthday	at least 6 months since dose #4: not recommended if #4 given on or after 4th birthday

Advise to wait in clinic for 20 minutes after injection

Record manufacturer and lot number of the vaccine administered, date that vaccine and VIS were given, name, address, and title of person administering vaccine

Instruct parent to contact Health Department if adverse reaction occurs (complete form)

Referral Indicators:

Unstable neurological conditions
Allergic hypersensitivity to any component of the vaccine
Severe reaction to previous DTaP/DTP
If severe reaction is reported as occurring within 30 days following vaccine administered by health department personnel, VAERS Report form must be completed
Undiagnosed seizure disorder
Refer for Tdap at 11-12 years

Follow-up:

Return for next DTaP, Tdap, or Td at appropriate interval
If child was **6 years and 6 months of age or older when DTaP #3** was given, **no additional DTaP or DT is indicated** because DTaP #4 must be given at least 6 months after DTaP #3, but before the 7th birthday
The **5th dose is omitted if DTaP #4 was given on or after the 4th birthday**
The **5th dose is given if DTaP #4 was given prior to the 4th birthday, AND it has been at least 6 months since DTaP was given, AND the child is at least 4 years old but less than 7 years old**
After completion of series, refer for Tdap at 11-12 years (if 5 years since last DTP or DtaP) and subsequently for Td every 10 years

REFERENCES:

Current PDR Packet Instructions
National Childhood Vaccine Injury Act
"Epidemiology and Prevention of Vaccine-Preventable Diseases", Centers for Disease control and Prevention, DHHS, Current Addition
Current ACIP recommendations

DIPHTHERIA AND TETANUS TOXOID, PEDIATRIC (V068)
DT (Pediatric)

GENERAL INFORMATION

DT is indicated in situations when there is documented history of severe reaction to previous DTaP/DTP:

Fever of 105° F or greater (≥40.5˚C) (by any measurement route) not due to another identifiable cause within 48 hours of previous dose
Collapse or shock-like state within 48 hours or more of previous dose
Persistent, inconsolable crying or screaming for 3 or more hours within 48 hours of previous dose
Convulsions (seizures) with or without fever within 3 days of a previous DTaP dose
Encephalopathy

Contraindications to DT vaccine include the following:
A history of neurologic reaction following previous dose of DT
A history of severe allergic reaction (acute respiratory distress or collapse) to any vaccine containing diphtheria or tetanus antigen (e.g., DT or DTaP)
Moderate to severe acute illness

PLAN

Document medical contraindications to DTP/DTaP
Have accompanying adult read "Vaccine Information Statement" (VIS) and "Vaccine Information Material"
Counsel regarding benefits, side effects, and management
Administer 0.5 cc DT (Pediatric) vaccine INTRAMUSCULARLY according to recommended schedule:

VACCINE	DOSE #	AGE
DT/DTaP	Primary 1	2 months
	Primary 2	4 months (or at least 4 weeks since dose #1)
	Primary 3	6 months (or at least 4 weeks since dose #2)
	Primary 4[1]	12-18 months (must be at least 12 mos but less than 7 yrs of age, and at least 6 mos since dose #3)
	Booster (5)[1,2]	4-6 years (any time after 4th birthday, but at least 6 mos since dose #4 and before 7th birthday)
TDAP or TD	Booster	11-12 years

[1] If Dose #1 is given at or after age 12 months, Dose #4 acts as a booster and should be given at age 4-6 years, Dose #5 is not recommended.
[2] If Dose #4 is given after the 4th birthday, Dose #5 is not recommended.

Provide statement regarding medical exemption in accordance with HIPAA guidelines (state that the child is exempt, but do not state the medical condition requiring exemption)
Advise parent that child is not protected from pertussis
Advise to wait in clinic 20 minutes after injection
Record manufacturer and lot-number of the vaccine administered, date vaccine and VIS were given, date of VIS version and name, address, and title of person administering vaccine
Instruct parent to contact Health Department if adverse reaction occurs (complete appropriate form)

Referral Indicators:

Neurologic conditions associated with vaccine use
Allergic hypersensitivity to any component of the vaccine
History of severe reaction to previous dose of DT (Pediatric)
If severe reaction is reported as occurring within 30 days following vaccine administered by health department personnel, VAERS Report form must be completed
Vaccination of children with moderate to severe acute illness should be deferred until condition improves

Follow-up:
The child should return for the next scheduled dose according to the table above
When the series is completed, the child should return for a booster dose of Tdap or Td (per the Tdap protocol) at age 11-12 years.

REFERENCES

"Epidemiology and Prevention of Vaccine - Preventable Diseases" Centers for Disease Control and Prevention, DHHS, Jan. 2004

DIPHTHERIA, TETANUS TOXOID, ACELLULAR PERTUSSIS, INACTIVATED POLIO VACCINE (DTaP-IPV) (Kinrix®, by GSK)

GENERAL INFORMATION

Kinrix® (DTaP-IPV booster), by GSK, is licensed as a single dose by the FDA as the fifth dose in the diphtheria, tetanus, and acellular pertussis (DTaP) vaccine series and the fourth dose in the inactivated poliovirus vaccine (IPV) series in children 4 through 6 years of age.

Kinrix® may be used only once as the DTaP-IPV booster dose routinely administered between ages 4 and 6 years

Contraindications to giving the vaccine include the following:

Kinrix® is not licensed for use before the 4th birthday or after the 7th birthday

An immediate anaphylactic reaction following a previous dose of vaccine containing any of the components of DTaP or IPV (diphtheria, tetanus, pertussis or poliomyelitis) or any vaccine components, including neomycin and polymixin B.

Encephalopathy within 7 days of administration of previous dose of DTP or DTaP

Progressive neurologic disorder

Children with a severe (anaphylactic) allergy to latex should not receive Kinrix® in the pre-filled vaccine formulation. The single dose vial preparation is latex free.

The following precautions, although not considered contraindications, should be carefully evaluated concerning the risks and benefits of vaccination for individuals who experienced any one of the following adverse reactions:

Temperature of 105°F or higher within 48 hours (with no other identifiable cause) after vaccination with DTaP/DTP

Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours after vaccination with DTaP/DTP

Persistent, inconsolable crying lasting 3 hours or more, occurring within 48 hours after vaccination with DTaP/DTP

Convulsions, with or without fever, within 3 days after vaccination with DTaP/DTP

Guillain-Barre Syndrome occurring within 6 weeks of a previous dose of a tetanus toxoid-containing vaccine.

Defer vaccination of children with moderate to severe acute illness until they are well

NOTE: Stable/resolved neurologic condition (i.e., controlled epilepsy, cerebral palsy, or developmental delay), or a family history of convulsions in first-degree family members (parents or siblings) is not a contraindication for DTaP. If a child has any of the following conditions, vaccination should be delayed until the child has been evaluated, treatment initiated, and the condition stabilized: (1) an evolving neurologic disorder (uncontrolled epilepsy, infantile spasms, progressive encephalopathy); (2) a history of seizures which has not been evaluated; or, (3) a neurologic event which occurs between doses of pertussis containing vaccine.

Adverse events include the following:

Local reactions (injection site pain, swelling or redness)
Nodule at injection site
Hypersensitivity reactions (Arthus-type)
Fever
Drowsiness, loss of appetite
Severe systemic reactions are rare

PLAN

Ask parent or guardian about the medical history and recent health status of the child to determine the existence of any contraindications
Ask parent or guardian about adverse reaction after previous dose
Counsel regarding benefits, side effects, and management; recommend that parent may administer acetaminophen if a fever develops and the child is uncomfortable. If the child does not show signs of discomfort, medication is not necessary.
Have accompanying adult read "Vaccine Information Statement" (VIS)
Administer vaccine INTRAMUSCULARLY
Advise to wait in clinic for 20 minutes after injection
Record manufacturer and lot number of the vaccine administered, date that vaccine and VIS were given, name, address, and title of person administering vaccine
Instruct parent to contact Health Department if adverse reaction occurs (complete VAERS form)

Referral Indicators:

Unstable neurological conditions
Allergic hypersensitivity to any component of the vaccine
Severe reaction to previous DTaP/DTP or IPV
If severe reaction is reported as occurring within 30 days following vaccine administered by health department personnel, VAERS Report form must be completed
Refer for Tdap at 11-12 years

Follow-up:

After completion of series, refer for Tdap at 11-12 years

REFERENCES:

KINRIX™ (Diphtheria and Tetanus Toxoids and Acellular Pertussis Adsorbed and Inactivated Poliovirus Vaccine) by GSK. Package Insert June 2008.
"Epidemiology and Prevention of Vaccine-Preventable Diseases", Centers for Disease Control and Prevention, DHHS, current edition. http://www.cdc.gov/vaccines/pubs/pinkbook/pink-chapters.htm. Last accessed August 12, 2008.

DIPHTHERIA, TETANUS TOXOID & ACELLULAR PERTUSSIS, INACTIVATED POLIO, HAEMOPHILUS INFLUENZAE TYPE B COMBINATION VACCINE: DTaP-IPV-Hib (PENTACEL® BY SANOFI PASTEUR)

GENERAL INFORMATION

Pentacel® (DTaP-IPV-Hib) vaccine is licensed for use as doses 1 through 4 of DTaP, IPV and Hib vaccine series in children **42 days through 4 years** of age (**up to 5th birthday**) DTaP-IPV-Hib is *not* licensed for use as the 5th dose in the DTaP series.

The vaccine consists of lyophilized ActHIB reconstituted with liquid DTaP-IPV.

The **1st, 2nd, and 3rd doses** of DTaP-IPV-Hib should be **separated by a minimum of 4 weeks** (28 days)

For **4th dose** of DTaP-IPV-Hib, the child must be **at least 12 months of age, and less than 5 years of age, and, at least 6 months (180 days) since 3rd dose** of DTaP

Contraindications to giving the vaccine include the following:

- An immediate anaphylactic reaction following a previous dose of vaccine containing any of the components of DTaP-IPV-Hib
- Encephalopathy within 7 days of administration of previous dose of any pertussis-containing vaccine
- No pertussis-containing vaccine should be given to a child with a progressive neurological disorder (see Note below)

The following precautions, although not considered contraindications, should be carefully evaluated concerning the risks and benefits of vaccination for individuals who experienced any one of the following adverse reactions:

- Temperature of 105°F or higher within 48 hours (with no other identifiable cause) after vaccination with DTaP/DTP
- Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours after vaccination with DTaP/DTP
- Persistent, inconsolable crying lasting 3 hours or more, occurring within 48 hours after vaccination with DTaP/DTP
- Seizures, with or without fever, within 3 days after vaccination with DTaP/DTP
- Guillain-Barre syndrome within 6 weeks of a previous dose of a tetanus toxoid-containing vaccine

Defer vaccination of children with moderate to severe acute illness until they are well

NOTE: Stable/resolved neurologic condition (e.g., controlled epilepsy, cerebral palsy, or developmental delay), or a family history of convulsions is not a contraindication for DTaP.

If a child has any of the following conditions, vaccination should be delayed until the child has been evaluated, treatment initiated, and the condition stabilized: (1) an evolving neurologic disorder (uncontrolled epilepsy, infantile spasms or progressive encephalopathy); (2) a history of seizures which has not been evaluated; or, (3) a neurologic event which occurs between doses of pertussis containing vaccine.

Adverse events include the following:

Local reactions (pain, redness, swelling at injection site)
Increased chance of injection site swelling following 4th dose (not harmful, resolves spontaneously)
Nodule at injection site
Hypersensitivity reactions (Arthus-type)
Fever
Severe systemic reactions are rare

PLAN

Ask parent or guardian about the medical history and recent health status of the child to determine the existence of any contraindications
Ask parent or guardian about adverse reaction after previous dose
Counsel regarding benefits, side effects, and management; recommend that parent may administer acetaminophen if a fever develops and the child is uncomfortable. If the child does not show signs of discomfort, medication is not necessary.
Have accompanying adult read "Vaccine Information Statement" (VIS)
Reconstitute vaccine according to manufacturer's instructions
Administer vaccine INTRAMUSCULARLY according to recommended schedule:

VACCINE	DOSE #	AGE
DTaP-IPV-Hib	1	2 months (minimum age 6 weeks)
	2	4 months (or at least 4 weeks since dose #1)
	3	6 months (or at least 4 weeks since dose #2)
	4	12-18 months (must be at least 12 mos but less than 5 yrs of age, and at least 6 mos since dose #3)

Advise to wait in clinic for 20 minutes after injection
Record manufacturer and lot number of the vaccine administered, date that vaccine and VIS were given, name, address, and title of person administering vaccine
Instruct parent to contact Health Department if adverse reaction occurs (complete VAERS form)

Referral Indicators:

Unstable neurological conditions
Allergic hypersensitivity to any component of the vaccine
Severe reaction to previous DTaP, IPV, Hib or other vaccine component

If severe reaction is reported as occurring within 30 days following vaccine administered by health department personnel, VAERS Report form must be completed

If history of more than one seizure, consult with patient's private physician or public health physician

Refer for DTaP 5th dose and IPV final dose at age 4-6 years – The complete primary IPV series requires that the final dose be given on or after the 4th birthday. A 5th dose of IPV is necessary if the 4th dose was administered more than 4 days before the 4th birthday.

Follow-up:

Return for next DTaP appropriate interval

The 5th dose is omitted if DTaP #4 was given on or after the 4th birthday

The child will need a final dose of IPV after the 4th birthday (or up to 4 days before)

REFERENCES:

Diphtheria and Tetanus Toxoids and Acellular Pertussis Adsorbed, Inactivated Poliovirus and Haemophilus b Conjugate (Tetanus Toxoid Conjugate) Vaccine (Pentacel®) by Sanofi Pasteur. Package Insert. June 2008.

MMWR, Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis (Tdap) Vaccine from the Advisory Committee on Immunization Practices (ACIP), January 14, 2011/60(01);13-15.

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6001a4.htm?s_cid=mm6001a4_w

GENERIC INJECTIONS

GENERAL INFORMATION

Physician may request administration of specific injection
Patient may have received one injection, without side effects, from outside provider
A written physician's order, including dosage and duration (phone order followed by a written order within 72 hours), is required
Order must be current (within 6 months, unless otherwise specified by Health Officer)

PLAN

Health Officer will review all physicians' orders requesting injections for appropriateness
Approval will be granted for a maximum 6 months (time frame dependent on specific injection and/or individual circumstances)
Patient to provide own medication
Read medical insert regarding administration and side effects of the medication
Administer medication as ordered by physician
Counsel on side effects
Give return appointment
Rotate injection sites on return appointments
Re-certify physician orders as indicated

HAEMOPHILUS *INFLUENZA* type b CONJUGATE VACCINE (Hib)

GENERAL INFORMATION

Contraindications and Precautions include the following:
Anaphylactic reaction to a vaccine component or following a prior dose of that vaccine
Moderate or severe acute illness
Children younger than 6 weeks of age

Adverse events include the following:
Swelling, redness and/or pain
Systemic reactions infrequent, serious adverse reactions rare

ACIP Recommended Population
All infants, including those born premature should receive a primary series conjugate Hib vaccine (separate or in combination), beginning at 2 months of age.
The number of doses in the primary series depends on the type of vaccine used.
A primary series of PRP-OMP (PedvaxHIB) vaccine is two doses; PRP-T (ActHIB) requires a three-dose primary series (see table). A booster is recommended at 12-15 months regardless of which vaccine is used for the primary series.
For persons older than age 5 years (including adults) who have a medical indication for the vaccine (e.g.,bone marrow transplant or spleen removed), a single dose of Hib vaccine may be given. These indications are rare. Administer with MD or APN order.

To determine if a patient in an ACIP-recommended group is eligible for free, Federal vaccine, please see the current Tennessee Immunization Program Policy on the use of Federal vaccine.

Administration of Vaccine:
Appropriate age for Hib: at least 2 months old, but less than 5 years
Appropriate time interval since last Hib
Children who have started the 3 dose primary series of vaccinations with ActHib vaccine may complete the primary series with Pedvax HIB but will still need a total of 3 doses in the primary series. The dose administered routinely after age 12 months is a booster dose.

PLAN
Ask patient/guardian about contraindications
Have patient/guardian read Vaccine Information Statement
Counsel regarding benefits, side effects, and management
NOTE: This vaccine is lyophilized and must be reconstituted with the diluent that is provided with the vaccine; NO OTHER DILUENT CAN BE USED; reconstitute with entire content of diluent vial and inject the entire amount of the reconstituted vial; this is a single unit dose and must be administered within 24 hours of reconstitution
Advise to wait in clinic for 20 minutes after injection
Document vaccine administration on the immunization clinic record
Instruct patient/guardian to contact Health Department if adverse reaction occurs

HAEMOPHILUS *INFLUENZAE* type b CONJUGATE VACCINE (Hib)

VACCINE	AGE BEGINNING PRIMARY SERIES	PRIMARY SERIES	BOOSTER
PRP-T (ActHIB) 0.5 cc IM	2-6 months	3 doses, 2 months apart	12-15 months**
	7-11 months	2 doses, 2 months apart	12-15 months**
	12-14 months	1 dose	2 months later
	15-59 months	1 dose	---
PRP-OMP (PedvaxHIB) 0.5 cc IM	2-6 months	2 doses, 2 months apart	12-15 months**
	7-11 months	2 doses, 2 months apart	12-15 months**
	12-14 months	1 dose	2 months later
	15-59 months	1 dose	---

**At least 2 months after previous dose

NOTE:

- If child is greater than 59 months of age, HIB vaccine is not routinely indicated
- Ideally, the same brand of vaccine should be used throughout the entire vaccination series; however, where it is necessary to change the types of vaccine, a child 2-6 months of age seen for the primary series should receive three doses of Hib vaccine (i.e., child receives 1 dose ActHIB should then receive 2 doses of Pedvax HIB or if child receives 2 doses of ActHIB should then receive 1 dose of Pedvax HIB for primary series; child would then get booster at 12-15 months)
- Hib vaccines may be given simultaneously at different injection sites with all other vaccines.

Referral Indicators:
Allergic hypersensitivity to any component of the vaccine

Follow-up:

If severe reaction is reported as occurring within 30 days following vaccine administered by health department personnel, VAERS Report form must be completed
Return at appropriate interval according to schedule

REFERENCES

"Epidemiology and Prevention of Vaccine - Preventable Diseases", 10th Edition, Centers for Disease Control and Prevention, Department of Health and Human Services, February 2008
ACIP Adult Immunization Schedule footnote, 2009

HEPATITIS A VACCINE

GENERAL INFORMATION

Hepatitis A disease is a serious liver infection caused by the Hepatitis A virus (HAV). HAV is found in the stool of persons with Hepatitis A. It is not often fatal, but is highly contagious with transmission occurring primarily by the fecal-oral route.

Hepatitis A vaccine is inactivated and contains no live organisms; it is a 2-dose series (0 and 6-12 months); 3 doses are given (at 0, 1, and 6 months) if the patient is receiving a combination hepatitis A and hepatitis B vaccine (Twinrix™ by GSK). Monovalent hepatitis A vaccines are licensed for use in persons ≥12 months of age. Hepatitis A vaccine may be administered simultaneously with other vaccines.

In 2005, hepatitis A vaccine was added to the US routine childhood immunization schedule, beginning at 1 year of age (i.e., age 12-23 months).

ACIP Recommended Populations for pre-exposure vaccination include the following:

All children 12-23 months
Previously unvaccinated children 23 months through 18 years of age (with emphasis on children coming for school-entry immunizations)
International travelers
Users of illegal drugs
Persons who have blood clotting-factor disorders or chronic liver disease (with MD or NP order)
Persons working with hepatitis A-infected non-human primates (refer)
Persons working with hepatitis A in a laboratory setting (refer)
Military personnel (refer to military facility)
Men who have sex with men

To determine if a patient in an ACIP-recommended group is eligible for free, Federal vaccine, please see the current Tennessee Immunization Program Policy on the use of Federal vaccine.

Contraindications to giving the vaccine include the following:

Persons with a history of severe reaction to a prior dose of hepatitis A vaccine or to any hepatitis A vaccine component

Precautions (risks and benefits of vaccination should be carefully evaluated for individuals under the following circumstances):

Moderate to severe acute illness (defer until illness resolves)
Pregnancy[1], MD or NP order required (**breastfeeding is NOT a precaution**)

Adverse Reactions:

Severe allergic reaction to vaccine (rare)
Injection site soreness, tenderness, redness, swelling (common)
Fatigue, fever, malaise, anorexia, nausea, headache (systemic)

[1] The safety of hepatitis A vaccination during pregnancy has not been determined; however, there is no evidence that the vaccine is harmful to pregnant women or their unborn babies; the theoretical risk associated with vaccination should be weighed against the risk of hepatitis A disease in women who might be at high risk for exposure to HAV (e.g., while traveling or during a community outbreak)

PLAN

Ask patient/guardian about contraindications
Have patient/guardian read Vaccine Information Statement
Administer the appropriate pediatric or adult formulation of the vaccine according to manufacturer instructions
Counsel regarding side effects of vaccine
Advise patient or parent/guardian to return for the second dose in 6-12 months
Advise to wait in clinic for 20 minutes after injection
Document vaccine administration on the immunization clinic record
Instruct patient/guardian to contact Health Department if adverse reaction occurs

Dosage:

VAQTA (Merck) **or** HAVRIX (GlaxoSmithKline) hepatitis A vaccines:
Pediatric Formulation (ages 12 mos. to 19 years) Administer 0.5 cc IM, 2 doses required. Administer second dose 6-12 months later.
Adult Formulation (≥19 years) Administer 1.0 cc IM, 2 doses required. Administer second dose 6-12 months later.

TWINRIX Combination Hepatitis A and B vaccine (GlaxoSmithKline) (If available):
Adult Formulation Only (Licensed for persons ≥18 years)
Administer 1.0 cc IM, 3 doses required. Administer second dose 1 month after the first dose. Administer third dose 6 months after the first dose.

Referral Indicators:

If patient is pregnant, written order from MD or NP is needed

If vaccine is indicated for liver disease or blood clotting factor disorder[2], written order from MD or NP is needed
Severe reaction to previous vaccine (consult MD)

REFERENCES

CDC. Epidemiology and Prevention of Vaccine-Preventable Diseases. 12th edition, May 2012:pp 101-114.

[2] Per Advisory Committee on Immunization Practices (ACIP) guidelines, hemophilia is not a contraindication for any vaccination, but administration should be done in consultation with a physician to minimize the risk of hematoma formation

HEPATITIS A INACTIVATED, HEPATITIS B RECOMBINANT VACCINE (Twinrix®, GSK), Adult (age 18 years and up)

GENERAL INFORMATION

Twinrix® (inactivated hepatitis A and hepatitis B recombinant vaccine) is manufactured by GSK and licensed by the FDA for use in persons 18 years of age and up. It is typically given as a 3-dose series (although an alternative 4-dose schedule also is available).

Please consult current state or local health department policy concerning adults eligible to receive hepatitis A and B vaccines at the health department with or without a physician or nurse practitioner order.

In accordance with the general immunization guidelines of the CDC, Twinrix® may be used when protection against either disease is indicated and the other is not contraindicated. If the patient does not need vaccination against both hepatitis A and hepatitis B, then use Twinrix® only when the separate hepatitis A or B vaccine product is not available.

Twinrix® is not licensed for hepatitis A post-exposure prophylaxis (PEP).

Twinrix® may be used for anyone recommended for hepatitis A and B immunization, including, but not limited to:

Persons with chronic liver disease
Persons with an occupational risk of exposure to blood or body fluids and feces
Persons at risk because of sexual practices, including men who have sex with men
International travelers
Recreational injection drug users
Persons who are at increased risk for hepatitis A and are close contacts of persons with hepatitis B infection

Contraindications and precautions include the following:

Anaphylactic reaction to a previous dose of hepatitis A or B vaccine or vaccine component (including neomycin and yeast)
Moderate to severe febrile illness (defer until recovered)
Breast feeding are NOT contraindications if immunization is indicated
Give during pregnancy only if clearly indicated (Refer to a physician)

Persons with severe (anaphylactic) allergy to latex should not be given the vaccine in the pre-filled syringe preparation, which contains natural latex. The single dose vial stopper is latex free and this preparation may be used for latex-allergic patients.

Administration of vaccine (see dosing schedule charts below):

Twinrix® may be administered simultaneously with any other vaccines; if not administered simultaneously, schedule next visit for deferred vaccine(s) at any time interval (does not have to be 30 days)

If any dose in the series is delayed, it should be administered when possible and the schedule resumed; DO NOT RE-START SERIES

PLAN

Read Vaccine Information Statement (VIS)

Draw up vaccine in accordance with package insert instructions

Administer vaccine IM using deltoid

Advise patient to wait 20 minutes for observation before leaving clinic

Counsel patient to return for next scheduled dose

Advise patient to report any suspected adverse events to the health department (health department to complete and submit VAERS form if necessary)

Recommended Schedule

ROUTINE	ROUTINE SCHEDULE	ALTERNATE	ALTERNATE SCHEDULE
Dose 1	1st visit	Dose 1	1st visit
Dose 2	1 month after 1st dose	Dose 2	7 days after 1st dose
Dose 3	6 months after 1st dose	Dose 3	21 days after 1st dose
		Dose 4	12 months after 1st dose

*doses administered more than 4 days earlier than any minimum interval are considered invalid

Referral Indicators:

Contraindications or precautions as noted

Return at appropriate interval

REFERENCES

GlaxoSmithKline. Prescribing Information. Twinrix (hepatitis A inactivated and hepatitis B recombinant vaccine). April 2007

CDC. A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices (ACIP). Part II: Immunization of Adults. MMWR 2006;55(No. RR-16).

CDC. General Recommendations on Immunization: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2006;55(No. RR-15).

HEPATITIS B RECOMBINANT VACCINE,
Birth through 18 Years, Pre-Exposure

GENERAL INFORMATION

Immunization is recommended for the following target groups:

ALL infants, beginning with birth dose prior to hospital discharge
ALL patients18 years of age and under not previously vaccinated

Contraindications and precautions include the following:

Serious reaction to a previous dose of hepatitis B vaccine or vaccine component
Moderate to severe febrile illness (defer until resolved)

Administration of vaccine:

HBV may be administered simultaneously with other vaccines; if not administered simultaneously, schedule visit for deferred vaccine(s) at any time interval (does not have to be 30 days)
See table below for recommended infant and child schedules.
If the vaccination series is interrupted, it should be resumed as soon as possible; DO NOT RE-START SERIES

PLAN

If patient being evaluated for potential sexual, perinatal or blood exposure to a person with hepatitis B infection, evaluate possible need for HBIG according to section on hepatitis.
Read Vaccine Information Statement (VIS)
Administer vaccine IM using anterolateral thigh of infants and deltoid in all others according to dosage schedule for age (review specific package insert for dosage)

Recommended Schedule/Dosage for Infants/Toddlers

VACCINE Brand	DOSE	ROUTINE SCHEDULE	MINIMUM INTERVAL (accelerated schedule)*
Recombivax HB (Merck) 0.5 ml (5mcg) of Pediatric Formula, or	Dose 1	Birth	
	Dose 2	Age 1-2 months	4 weeks after 1st dose
Engerix-B (GSK) 0.5ml (10 mcg) of Pediatric Formula	Dose 3	Age 6-18† months	8 weeks after Dose 2 *and* 16 weeks after Dose 1 *and* minimum age of 24 weeks

*doses administered more than 4 days earlier than any minimum interval are considered invalid and do not count toward completion of hepatitis B series
† Infants whose mother is hepatitis B positive or of unknown status should receive the last vaccine dose at 6 months of age (12-15 months if Comvax® series is used)

Use of Combination Vaccines in Infants/Toddlers (see separate protocols for details)

VACCINE Brand	MAY BE USED FOR
Comvax (Merck) 0.5 ml (Hep B-Hib combination) **Pediarix (GSK)** DTaP-Hep B- IPV combination	Doses administered after age 6 weeks NOTE: The Comvax dose administered at age 4 months does not count toward hepatitis B series because it fails to meet minimum age/interval requirements

Recommended Schedule/Dosage for older children up to 18 Years of Age

VACCINE	OPTION	DOSE	RECOMMENDED SCHEDULE	MINIMUM INTERVAL
Recombivax HB (Merck) 0.5 ml (5mcg) of Pediatric Formula or **Engerix-B (GSK)** 0.5ml (10 mcg) of Pediatric Formula	**I**	Dose 1 Dose 2 Dose 3	First visit 1-2 months after 1st Dose 6 months after 1st Dose	 4 weeks 8 weeks after Dose 2 *and* 16 weeks after Dose 1
Recombivax HB (Merck) 1 ml (10 mcg) ONLY	**II** If age 11 through 15 years for <u>both</u> doses	Dose 1 Dose 2	First visit 4-6 months after 1st dose	4 months

<u>Referral Indicators</u>:
Contraindications as noted under "General Information"
Return at appropriate interval to complete immunization series

REFERENCES

CDC. "Epidemiology and Prevention of Vaccine-Preventable Diseases, 10th Edition", DHHS, January 2007

CDC. A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices (ACIP). Part I: Immunization of Infants, Children and Adolescents. MMWR 2005;54(No. RR-16).

HEPATITIS B RECOMBINANT VACCINE, Adult (age 19 years and up) Pre-Exposure

GENERAL INFORMATION

Please consult current state or local health department policy concerning adults eligible to receive hepatitis B vaccine at the health department. Refer to the **current** Tennessee Immunization Program Policy on the use of Federal vaccine and any current guidance on the use of any special supplies of hepatitis B vaccine.

Immunization is recommended by CDC for the following unvaccinated persons:

ALL at risk adult patients (with ANY one of the following risk factors):

- All sexually-active persons not in long term, mutually-monogamous relationships
- History of more than one sex partner in the past 6 months
- Persons seeking evaluation or treatment of sexually transmitted infection
- History of injecting drug use or sexual partner(s) who use injecting drugs
- Men who have sex with men
- At risk (generally, household, sexual or needle-sharing) contacts of persons with hepatitis B
- ALL persons served in HIV risk reduction, outreach activities
- Residents and staff of facilities for developmentally delayed persons
- Persons with end-stage renal disease, dialysis, HIV or chronic non-hepatitis B liver disease
- ALL adults with diabetes younger than age 60 years, generally as soon as possible after diagnosis
- Adults with diabetes aged 60 and over, with MD or NP order.

ALL adults requesting vaccination against hepatitis B (no reported risk factor required)

To determine if a patient in an ACIP-recommended group is eligible for free, Federal vaccine, please see the current Tennessee Immunization Program Policy on the use of Federal vaccine.

Contraindications and precautions include the following:

Anaphylactic reaction to a previous dose of hepatitis B vaccine or vaccine component
Moderate to severe febrile illness (defer until recovered)
Pregnancy or breast feeding are NOT contraindications if immunization is indicated

Administration of vaccine (see dosing schedule charts below):

HBV may be administered simultaneously with any other vaccines; if not administered simultaneously, schedule next visit for deferred vaccine(s) at any time interval (does not have to be 30 days)

If any dose in the series is delayed, it should be administered when possible and the schedule resumed; DO NOT RE-START SERIES

Immunocompetent persons are not recommended for booster doses. Immunocompetent persons who require serologic evidence of immunity with a documented remote history of hepatitis B immunization and a negative serology may receive a dose to stimulate an immune response and be retested for serologic evidence of immunity in 4 weeks.

HEPATITIS B RECOMBINANT VACCINE
Adult (age 19 years and up) Pre-Exposure

PLAN

If patient being evaluated for potential sexual or blood exposure to a person with hepatitis B infection, evaluate possible need for HBIG according to section on hepatitis.
Read Vaccine Information Statement (VIS)
Educate about post-immunization serologic testing if in a group for whom testing is recommended (health care providers, sexual or neonatal contacts of persons with hepatitis B)
Draw up vaccine in accordance with package insert instructions
Administer vaccine IM using deltoid according to dosage schedule for age
Document vaccine administration on the immunization clinic record

Recommended Schedule/Dosage for Adults 19 Years of Age

VACCINE Brand	DOSE	ROUTINE SCHEDULE	MINIMUM INTERVAL (accelerated schedule)*
Recombivax HB (Merck) 0.5 ml (5mcg) Pediatric or Adult Formula, or	Dose 1	1st visit	
	Dose 2	4 weeks after 1st dose	4 weeks after 1st dose
Engerix-B (GSK) 0.5ml (10 mcg) of Pediatric Formula, or	Dose 3	~~4~~-6 months after 2nd dose	8 weeks after Dose 2 *and* 16 weeks after Dose 1
Engerix-B Adult formulation 1.0 ml (20 mcg)[3]			

*doses administered more than 4 days earlier than any minimum interval are considered invalid

Recommended Schedule/Dosage for Adults 20 Years of Age and Older

VACCINE	DOSE	SCHEDULE	MINIMUM INTERVAL (accelerated schedule)*
Recombivax HB (Merck) 1.0ml (10 mcg) of Adult Formula, or	Dose 1	1st visit	
	Dose 2	4 weeks after 1st dose	4 weeks after 1st dose
Engerix-B (GSK)1.0 ml (20mcg)	Dose 3	~~4~~-6 months after 2nd dose	8 weeks after Dose 2 *and* 16 weeks after Dose 1

*doses administered more than 4 days earlier than any minimum interval are considered invalid

[3] The adult formulation of Engerix-B may be used in adolescents, but the approved dose is 1.0 ml (20 mcg).

HEPATITIS B RECOMBINANT VACCINE
Adult (age 19 years and up) Pre-Exposure

Recommended Schedule/Dosage for Hemodialysis and Immunocompromised Patients Aged 20 Years or Older (<20 years, recommendations same as general population)

VACCINE	DOSE	SCHEDULE	MINIMUM INTERVAL (accelerated schedule)*
Recombivax HB (Merck): 1.0ml (40 mcg) of Dialysis Formulation, or	Dose 1	1st visit	None given
	Dose 2	4 weeks after 1st dose	
	Dose 3	6 months after 1st dose	
	Booster	If annual serologic testing <10 mIU/mL	
Engerix-B (GSK): each dose requires 40 mcg. Use two doses of the 1.0 ml (20 mcg) Adult Formulation	Dose 1	1st visit	None given
	Dose 2	1 month after 1st dose	
	Dose 3	2 months after 1st dose	
	Dose 4	6 months after 1st dose	
	Booster	If annual serologic testing <10 mIU/mL	

*doses administered more than 4 days earlier than any minimum interval are considered invalid

Referral Indicators:
Contraindications as noted under "General Information"

REFERENCES

CDC. "Epidemiology and Prevention of Vaccine-Preventable Diseases, 10th Edition", DHHS, January 2007

CDC. A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices (ACIP). Part II: Immunization of Adults. MMWR 2006;55(No. RR-16).

"Federally Funded Vaccines for Adults" memo from Dr. Kelly Moore and Dr. Tom Jaselskis, July 8, 2009

HERPES ZOSTER (SHINGLES) VACCINE – LIVE VACCINE
(Zostavax)

GENERAL INFORMATION

Herpes Zoster vaccine is recommended by the Advisory Committee on Immunization Practices of the CDC as a single dose for adults 60 years of age and older.[1] It is not licensed for use under age 50. Vaccination is recommended by CDC irrespective of a patient's history of shingles in order to reduce the risk of recurrence.

To determine if a patient in an ACIP-recommended group is eligible for free, Federal vaccine, please see the current Tennessee Immunization Program Policy on the use of Federal vaccine.

Contraindications

History of severe allergic reaction (anaphylaxis) to any component of the vaccine, including neomycin or gelatin

Cancer: persons with leukemia, lymphoma or other malignancy affecting the bone marrow or lymphatic system. It may be given to persons with leukemia in remission who have not had chemotherapy or radiation in at least 3 months.

Persons with AIDS or other clinical manifestations of HIV infection

Persons on immunosuppressive therapy, including ≥20 mg/day of prednisone or equivalent for 2 or more weeks. Defer vaccination for at least 1 month after discontinuation.

Persons with cellular immunodeficiency

Persons undergoing stem cell transplants (may be considered at least 2 years after transplant)

Persons receiving recombinant human immune mediators and immune modulators (such as adalimumab, infliximab, etanercept). Defer vaccination for at least 1 month after discontinuation.

Precautions include the following:

Moderate to severe acute illness: postpone until recovery

Adverse events include the following:

Local reactions (erythema, pain or tenderness, and swelling)

Administration of Vaccine:

Give a single dose of Herpes Zoster vaccine for adults 60 years of age and older whether or not they report a prior episode of shingles.

This may be given simultaneously with any other vaccines indicated for the recipient. If not given simultaneously, live virus vaccines (e.g., MMR, yellow fever) must be administered at least 1 month apart.

PLAN

Have patient/guardian read Vaccine Information Statement/Vaccine Information Material
Counsel regarding benefits, side effects, and management
Administer unit dose of Herpes Zoster vaccine subcutaneously
Advise to wait in clinic 20 minutes after injection
Document vaccine administration on the immunization clinic record
Instruct patient to contact Health Department if severe reaction occurs

Referral Indicators:

Person with contraindications as noted under "General Information"

Follow-Up:

All serious adverse events that occur after receipt of any vaccine should be reported to the Vaccine Adverse Event Reporting System (VAERS).

REFERENCE

CDC. Prevention of Herpes Zoster: Recommendations of the Advisory Committee on Immunization Practices. May 15, 2008
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr57e0515a1.htm
Package insert 06/2011

QUADRIVALENT HUMAN PAPILLOMAVIRUS (HPV) VACCINE (GARDASIL® by Merck)

GENERAL INFORMATION

Human Papillomavirus (HPV) is the most common sexually-transmitted virus in the United States, with about 40 known strains. More than half of sexually-active men and women are infected with HPV at some point in their lives. Most HPV infections are asymptomatic and resolve on their own; however, certain HPV types can cause cervical cancer, oropharyngeal cancers, other rare genital cancers, and genital and respiratory tract warts. Approximately 22,000 HPV 16- or 18-related cancers occur in the United States each year; about 7,000 of them in males.

HPV vaccine is an inactivated vaccine, administered intramuscularly. Gardasil® is licensed by the Food and Drug Administration (FDA) for administration to males and females aged 9 years through 26 years. The vaccine is given in a three-dose series. It protects against HPV 16 and 18, which cause 70% of cervical cancer in the United States and HPV 6 and 11, which cause 90% of genital warts. The vaccine has no effect on pre-existing HPV infections; however, of the sexually active young women in the clinical trials, >90% were susceptible to at least 3 of the 4 vaccine strains.

GlaxoSmithKline produces the HPV vaccine Cervarix®, which targets the cancer-causing HPV strains 16 and 18, but does not prevent genital warts. It is FDA-licensed for females only, aged 9 through 25 years as a 3-dose series for use on a 0, 1 month, 6 month schedule. Because of its more limited indication, Cervarix® is not generally stocked by health departments; if a woman has already started the HPV vaccine series with an unknown brand or Cervarix® and she needs to be vaccinated at the health department, the HPV vaccine that is available may be used to complete the series.

The vaccine may be simultaneously administered with other vaccines, including live virus vaccines. It is stored in standard refrigerated conditions at 2-8°C (35-46°F).

ACIP Recommendations for Use:

Routine Recommendation: Give first dose to all pre-teens at age 11 or 12 years (may begin at 9 years); catch-up vaccination of all females age 13 through 26 years and all males 13 through 21 years is recommended. The vaccine *may* be given to older males 22-26 who have not completed the series. It is *recommended* for previously unvaccinated older males 22-26 who have sex with men or whose immune system is weakened by HIV infection, other illness or medication.

	Recommended Interval	**Minimum Interval**
Dose 2	1 to 2 months after dose 1	4 weeks after dose 1
Dose 3	6 months after dose 1	12 weeks after dose 2 **and** 24 weeks after dose 1

Contraindications to giving the vaccine include the following: Severe allergic (anaphylactic) reaction to a previous dose of the vaccine or any component (including yeast). The vaccine contains no preservatives.

Precautions:

Moderate to severe acute illness (defer until recovery) [Note: Low grade fever <100.5ºF or mild illnesses are not reasons for deferring immunization]

Pregnancy: the vaccine has not been associated with adverse events when given during pregnancy; however it is not recommended for use if recipient is known to be pregnant

Special Situations (per ACIP):

Breastfeeding is not a contraindication to immunization

A history of abnormal Pap smears, genital warts or other HPV infection is not a contraindication to vaccination. Persons with this history can benefit from protection against strains they have not yet acquired. Recipients should be advised that the vaccine does not protect against any strains they have already acquired.

Adverse Reactions:

Soreness, swelling or redness around the injection site

Syncope (especially common in adolescents)

PLAN

Counsel regarding HPV benefits, side effects, and management

Ask parent/guardian or recipient about contraindications, precautions

Have parent/guardian or recipient read Vaccine Information Statement

Administer the 0.5 mL dose of vaccine intramuscularly according to manufacturer instructions

Advise parent/guardian or recipient to return for the next dose at the appropriate interval

Advise to wait in clinic for 20 minutes after administration of vaccine

Record manufacturer and lot number of the vaccine administered, date vaccine and VIS given, address of facility, and name and title of person administering vaccine

Instruct patient/guardian to contact Health Department if adverse reaction occurs

Referral Indicators

Please consult Department of Health policy (policy provided with protocol cover letter) concerning eligibility for federally-funded and state or locally-funded vaccine. Only children under 19 years eligible for the Vaccines for Children (VFC) Program may receive federally-funded vaccine.

REFERENCES

Centers for Disease Control and Prevention Advisory Committee on Immunization Practices (ACIP) Recommendations for the Use of Quadrivalent HPV Vaccine, MMWR March 12, 2007 / 56(Early Release);1-24 http://www.cdc.gov/mmwr/preview/mmwrhtml/rr56e312a1.htm Last accessed January 27, 2010.

GARDASIL® [Quadrivalent Human Papillomavirus (Types 6, 11, 16, 18) Recombinant Vaccine] Vaccine package insert, Merck, copyright 2006, Revised April 2011.

Cervarix [Bivalent Human Papillomavirus (Types 16, 18) Vaccine, Recombinant] Prescribing Information, GlaxoSmithKline, copyright 2009. Revised February 2012. http://us.gsk.com/products/assets/us_cervarix.pdf

Centers for Disease Control and Prevention. Vaccine Information Statement – HPV (Human Papillomavirus) Vaccine 2/22/2012. http://www.cdc.gov/vaccines/pubs/vis/downloads/vis-hpv-gardasil.pdf. Last accessed March 20, 2012.

CDC. Recommendations on the Use of Quadrivalent Human Papillomavirus Vaccine in Males — Advisory Committee on Immunization Practices (ACIP), 2011. MMWR December 23, 2011. http://www.cdc.gov/mmwr/pdf/wk/mm6050.pdf. Last accessed February 15, 2012.

2009 H1N1 INFLUENZA (For Information and Guidance)

In the primary care setting, established patients or the uninsured, may receive evaluation for 2009 H1N1 influenza.

The following protocol covers the use of oseltamivir (Tamiflu), and zanamivir (Relenza) in the primary care setting under the guidance of the Regional Health Officer and the prescribing provider in that clinic.

GENERAL INFORMATION

Influenza antiviral medications are prescription drugs that decrease the ability of influenza viruses to reproduce and reduce the impact of influenza.

Influenza antiviral medications have long been used to limit the spread and impact of influenza outbreaks, especially in individuals at high risk for morbidity and mortality. They are also used for treatment and chemoprophylaxis of persons in other settings. Four antiviral medications (amantadine, rimantadine, oseltamivir and zanamivir) are approved for treatment of influenza and chemoprophylaxis. The choice of antiviral treatment will be dependent on the susceptibility of the influenza strain.

This protocol addresses the use of oseltamivir and zanamivir only. **When used for treatment within the first two days of illness, oseltamivir and zanamivir are similarly effective in reducing the duration and intensity of illness by one or two days.**

MODE OF SPREAD	Person-to-person, Respiratory secretions
INCUBATON PERIOD	1 –7-days (Average 1-4 days)
INFECTIVITY Adults	1 day before symptoms through 5 days post illness onset
Children	> 10 days
Young Children	< 6 days before illness onset
Severely immunocompromised	Weeks to months*

*** This information could change as we learn more about 2009 H1N1.**

SUBJECTIVE:

Patient states signs and symptoms of influenza-like illness.

- fever, chills
- cough, sneezing
- sore throat
- body aches

- fatigue
- headache
- may have nausea, vomiting or diarrhea

Clinical Signs and symptoms of Influenza

Uncomplicated influenza:

- Abrupt onset of fever, myalgia, headache, malaise, nonproductive cough, sore, throat, and rhinitis
- Children - otitis media, nausea, and vomiting
- For the majority of persons, symptoms typically resolve after 7 – 10 days, although cough and malaise can persist for >2 weeks

Respiratory illness caused by influenza is difficult to distinguish from illness caused by other respiratory pathogens on the basis of symptoms alone.

Comparing the Symptoms of Influenza and the Common Cold

	INFLUENZA	**COMMON COLD**
Onset	**Abrupt**	**More gradual**
Fever	Common 37.7-40º C (100-104ºF)	Uncommon or increase of only about 0.5ºC (1ºF)
Myalgia	Severe, common	Uncommon
Arthralgia	Severe, common	Uncommon
Anorexia	Common	Uncommon
Headache	Severe, common	Mild, uncommon
Cough (dry)	Common, severe	Mild to moderate
Malaise	Severe	Mild
Fatigue, weakness	More common, lasting 2-3 weeks	Very mild, short lasting
Chest discomfort	Common, severe	Mild to moderate
Stuffy nose	Occasional	Common
Sneezing	Occasional	Common
Sore throat	Occasional	Common

Note: Patients with 2009 H1N1 may have more nausea, vomiting and diarrhea than patients with seasonal influenza.

Complications of Influenza

- Influenza can exacerbate underlying medical conditions
  - Pulmonary or Cardiac Disease:
    - Secondary bacterial pneumonia
    - Primary influenza viral pneumonia
    - Co infection with other viral or bacterial pathogens
  - Young Children:
    - ≤20% of children hospitalized with influenza have febrile seizures
  - Also Associated with:
    - Encephalopathy
    - Transverse myelitis
    - Reye syndrome
    - Myositis
    - Myocarditis
    - Pericarditis

OBJECTIVE:

- Weight
- Blood Pressure
- Temperature

ASSESSMENT:

Indications for Treatment

Patient presents to the primary care clinic with influenza-like symptoms. Refer patient to the APN, MD, or DO in primary care clinic.

PLAN:

Primary Care patients in a health department primary care setting will be evaluated and provided appropriate care which may include antiviral medication as ordered by the APN, MD, or DO.

For additional guidance refer to the following:

- CDC: Oseltamivir and Zanamivir Fact Sheets
- http://www.cdc.gov/swineflu/recommendations.htm
- TDH: Interim Guidance/Algorithm for Clinicians: May 5, 2009

Assure patient has a copy of the appropriate FDA/EUA (Emergency Use Authorizations) medication fact sheet.

Assure patient has health department telephone number for questions.

Health Teaching:

Discuss the following respiratory precautions:

- Take medication as prescribed.
- Cover nose and mouth with tissue when coughing or sneezing.
- Throw the tissue in the trash after use.
- Wash hands often with soap and water, especially after coughing or sneezing.
- Alcohol-based hands cleaners are also effective.
- Avoid touching eyes, nose or mouth.
- Remain home and avoid close contact with others until illness subsides.
- Try to avoid close contact with high risk individuals (closer than 6 feet).

Follow–up:

As instructed by your health care provider.

REFERENCE:

Resources: For more information, visit www.cdc.gov/flu
http://www.cdc.gov/swineflu/recommendations.htm
Indications for Treatment 2009 H1N1

2009 H1N1 LIVE ATTENUATED INFLUENZA VACCINE (LAIV) (FluMist® by MedImmune)

GENERAL INFORMATION

The 2009 H1N1 ("pandemic" or "swine" flu) influenza vaccine comes in two forms: inactivated vaccine administered by injection (the "flu shot") and live attenuated, intranasally-administered vaccine (LAIV). Both vaccines are FDA-licensed and manufactured in the same way as seasonal influenza vaccine; only the strain of virus in the vaccine is different.

In the absence of an influenza vaccine shortage, the Tennessee Immunization Program recommends vaccination of persons in all CDC-recommended groups.

Any changes in eligibility for vaccination during influenza season will be announced through Tennessee Immunization Program policy updates.

The 2009 H1N1 LAIV is available through a special federal program for all persons eligible to receive it. There is no charge for the vaccine or administration in any public health vaccination setting; federal policy permits billing of insurance for administration in public health operated clinics (state/regional public health policies address this elsewhere).

No preference between inactivated injected vaccine and LAIV is expressed for persons who are eligible to receive either. See the 2009 H1N1 inactivated vaccine protocol for influenza vaccination of persons who are not eligible for LAIV

A separate protocol covers 2009-2010 seasonal influenza vaccine.

2009 H1N1 LAIV indication:

2009 H1N1 LAIV is approved by the Food and Drug Administration (FDA) for use in healthy persons aged 24 months through 49 years who are not pregnant.

Persons medically eligible for LAIV who are among CDC target populations for 2009 H1N1 influenza vaccination include some healthcare workers, household contacts of infants <6 months of age, and all healthy children and young adults ages 2 years through 24 years.

If supply is sufficient to meet demand among target populations, persons eligible for LAIV outside those target populations (i.e., healthy persons 25 through 49 years) may receive it.

Special situations:

2009 H1N1 LAIV may be co-administered with any other vaccine at the same visit except with the 2009-2010 seasonal LAIV. Live vaccines that are not given on the same day (e.g., varicella, MMR) should be administered at least 4 weeks apart. NOTE: The interval recommended at this writing is subject to change (to a shorter interval) – the protocol will be updated when changed.

Patients who require both seasonal and 2009 H1N1 influenza vaccines at the same visit may have 1 in the form of LAIV and 1 inactivated (shot), or both inactivated vaccines.

Patients **<10 years of age require 2 doses** of 2009 H1N1 vaccine, at least 28 days apart, for adequate protection. They do <u>not</u> have to use the same type of vaccine (TIV or LAIV) for both doses. If a patient <10 years of age presents for vaccination at least 21 days after

their first dose, it is acceptable to give Dose 2 at that time, in order to avoid a missed opportunity to vaccinate. Clinical trials show that this is effective.

Patients who are <10 years of age at the time of their first dose, but will turn age 10 before the 2nd dose is due do not need to have a second dose.

Breastfeeding or living in a household with a pregnant woman or immunocompromised person (who is able to live outside a special hospital isolation ward, such as a bone marrow transplant unit) is not a contraindication to vaccination.

Contraindications and precautions:

People less than 2 years of age or age 50 years or older
People with a medical condition that places them at high risk for complications from influenza [e.g., chronic heart or lung disease, asthma, diabetes, kidney disease, hemoglobinopathies, any condition that compromises the ability to handle respiratory secretions, pregnant women, or persons with a weakened immune system]
Children less than 5 years old with a history of recurrent (more than 1 episode) wheezing
Children or adolescents receiving aspirin therapy
People with a history of Guillain-Barré syndrome
People who have taken oseltamivir (Tamiflu) or zanamivir (Relenza) antiviral medication within the previous 48 hours

Common Adverse Reactions (≥10% of patients)

Nasal congestion
Sore throat in adults
Fever >100°F in children ages 2-6 years

PLAN

Have recipient, parent, or guardian read Vaccine Information Statement (VIS)
Verify that the patient has not taken oseltamivir or zanamivir antiviral medication within the past 48 hours
Verify that the patient has not received seasonal LAIV within the past 4 weeks
Counsel regarding benefits, side effects, and management
Administer vaccine intranasal spray (0.1ml in each nostril) according to manufacturer's recommendation
Remind about the need for seasonal influenza vaccine for protection against seasonal influenza viruses this season. Advise parent or guardian of recipients less than 10 years of age to return for a second dose in 1 month if the child is receiving 2009 H1N1 influenza vaccine for the first time.
Advise them not to take oseltamivir or zanamivir antiviral medication, unless medically necessary, within 2 weeks of receiving LAIV (whether seasonal or 2009 H1N1). These medications can interfere with the effectiveness of LAIV.
Advise to wait in clinic 20 minutes after intranasal administration
Record manufacturer and lot number of the vaccine administered, date, name, address, and title of person administering vaccine
Instruct patient to contact Health Department if adverse reaction occurs (complete appropriate VAERS form: http://vaers.hhs.gov)

Recommended Schedule and Dosage of 2009 H1N1 LAIV (FluMist®):

Age Group	Dosage Schedule
Children 24 months through 9 years	2 doses (each dose 0.1ml per nostril) given about 1 month apart
Other persons aged 10-49 years	1 dose (0.1 ml per nostril)

Referral Indicators:

Persons with severe allergy to eggs or other components of vaccine (gelatin, gentamicin, arginine)
Persons with history of Guillain-Barré syndrome
Persons having moderate to severe acute febrile illness or illnesses with significant nasal congestion (until illness resolves)

REFERENCES

Use of Influenza A (H1N1) 2009 Monovalent Vaccine, Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, August 28, 2009. Available at http://www.cdc.gov/mmwr/pdf/rr/rr58e0821.pdf Last accessed October 2, 2009.

Influenza A (H1N1) 2009 Monovalent Vaccine, Live Intranasal, Package Insert (MedImmune). Revised September 2009.

2009 H1N1 INACTIVATED INFLUENZA VACCINE
(various manufacturers)

GENERAL INFORMATION

General Recommendations for 2009 H1N1 Influenza Vaccination:
The 2009 H1N1 ("pandemic" or "swine" flu) influenza vaccine comes in two forms: inactivated vaccine administered by injection (the "flu shot") and live attenuated, intranasally-administered vaccine (LAIV). Both vaccines are FDA-licensed and manufactured in the same way as seasonal influenza vaccine: only the strain of virus in the vaccine is different.

In the absence of an influenza vaccine shortage, the Tennessee Immunization Program recommends vaccination of persons in all CDC-recommended groups.

Any changes in eligibility for vaccination during influenza season will be announced through Tennessee Immunization Program policy updates.

The 2009 H1N1 inactivated vaccine is available through a special federal program for all persons eligible to receive it. There is no charge for the vaccine or administration in any public health vaccination setting; federal policy permits billing of insurance for administration in public health operated clinics (state/regional public health policies address this elsewhere).

No preference between inactivated injected vaccine and LAIV is expressed for persons who are eligible to receive either. See the 2009 H1N1 live attenuated vaccine protocol for influenza vaccination of persons who are not eligible for LAIV

A separate protocol covers 2009-2010 seasonal influenza vaccine.

Special Clinical Notes:

Seasonal influenza vaccine (either LAIV or inactivated injected vaccine) may be co-administered with 2009 H1N1 inactivated vaccine, if indicated.

All children 6 months through 9 years are recommended to receive 2 doses of 2009 H1N1 influenza vaccine. The recommended interval is at least 28 days.* However, in order to avoid missed opportunities to vaccinate, if the child presents to the HD and the first dose was administered at least 21 days earlier, then the nurse may go ahead and administer dose #2.

Patients who are <10 years of age at the time of their first dose, but will turn age 10 before the 2nd dose is due do not need to have a second dose.

Licensed inactivated vaccine formulations by manufacturer:

Manufacturer	Product Formulation	FDA-licensed ages
Sanofi Pasteur (Fluzone®)	0.25 ml preservative-free, pre-filled syringe (PFS)	6-35 months only
	0.5 ml PFS	≥36 months
	5 ml multidose vial (MDV)	≥ 6 months
Novartis (Fluvirin®)	5 ml MDV	≥4 years
CSL Biotherapies (Afluria®)	0.5 ml PFS	≥36 months
CSL Biotherapies (Afluria®)	5 ml MDV	6-35 months: 0.25 ml ≥36 mo: 0.5 ml dose
GSK TIV (Flulaval®)	5 ml MDV	≥18 years

Centers for Disease Control and Prevention (CDC) recommendations:

The CDC has recommended 2009 H1N1 influenza vaccine for the following:

Initial target groups (in no particular order):

Pregnant women

Persons who live with or care for infants aged <6 months (e.g., parents, siblings and daycare providers)

Health-care and emergency medical services personnel

ALL persons aged 6 months through 24 years (especially <5 years, chronically ill)

Persons aged 25 through 64 years with certain chronic medical conditions[1]

CDC-recommended subset of target groups: For consideration <u>only</u> if local demand temporarily greatly exceeds supply (follow local/regional public health guidance)

Pregnant women

Persons who live with or care for infants aged <6 months (e.g., parents, siblings and daycare providers)

Health-care and emergency medical services personnel who have direct contact with patients or infectious material

Children aged 6 months through 4 years

Children aged 5 years through 18 years who have medical conditions that put them at higher risk for influenza-related complications[1]

As supplies permit (follow local/regional public health guidance):

CDC Second Level Group

Other healthy adults 25 through 64 years wishing to be vaccinated.

CDC Lowest Level Group (lowest rates of infection with 2009 H1N1 influenza)

Adults 65 years of age and older wishing to be vaccinated.

Persons who should not receive the influenza vaccine include the following:

(*See Referral Indicators)*

Persons with a severe allergy (i.e., anaphylactic allergic reaction) to a previous dose of any influenza vaccine or its components

Children less than 6 months of age

PLAN

Have recipient, parent, or guardian read Vaccine Information Statement (VIS)

Counsel regarding benefits, side effects, and management

Administer vaccine injection according to manufacturer's recommendation

Remind about the need for seasonal influenza vaccine to protect against seasonal influenza viruses (co-administration permitted). Advise parent or guardian of recipients less than 10

[1] Those with chronic medical conditions at increased risk for complications include: Persons who have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, cognitive, neurologic/neuromuscular, hematological or metabolic disorders (including diabetes mellitus); persons who have immunosuppression (including immunosuppression caused by medication or HIV); children (aged 6 months--18 years) on long-term aspirin therapy.

years of age to return for a second dose of 2009 H1N1 influenza vaccine in at least 28 days.* Advise to wait in clinic 20 minutes after injection

Record manufacturer and lot number of the vaccine administered, date, name, address, and title of person administering vaccine

Instruct patient to contact Health Department if adverse reaction occurs (complete appropriate VAERS form)

Recommended Schedule and Dosage of 2009 H1N1 Inactivated Vaccine:

Age Group	Dosage	No. Doses	Route
6 through 35 months	0.25 ml	2	Intramuscular
3 through 9 years	0.50 ml	2	Intramuscular
Age 10 years and older	0.50 ml	1	Intramuscular

* Two doses of 2009 H1N1 influenza vaccine administered at least 28 days apart are recommended for **all** children 6 months through 9 years of age. TIV or LAIV may be used interchangeably for either dose, if appropriate.

Referral Indicators:

Persons allergic to eggs or components of vaccine (see package insert)

Persons with history of Guillain-Barré syndrome

Persons having moderate to severe acute febrile illness (until illness resolves)

REFERENCES

Use of Influenza A (H1N1) 2009 Monovalent Vaccine, Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, August 28, 2009. Available at http://www.cdc.gov/mmwr/pdf/rr/rr58e0821.pdf Last accessed October 2, 2009.

Updated Guidance for the Use of CSL™ 2009 H1N1 Monovalent Vaccine, November 19, 2009

LIVE ATTENUATED SEASONAL INFLUENZA VACCINE (LAIV) (FluMist® by MedImmune)

GENERAL INFORMATION

General Recommendations for Influenza Vaccination:

Seasonal influenza vaccine comes in two forms: trivalent inactivated vaccine (TIV) administered by injection and trivalent live-attenuated, intranasally-administered vaccine (LAIV). See TIV protocol for persons who prefer it or who are ineligible for LAIV.

It is recommended that all persons aged 6 months and up be vaccinated each influenza season. No preference between TIV and LAIV is expressed for persons eligible to receive either.

New this season: During the 2012-2013 season, **all** children aged 6 months through 8years *who have not received 2 or more doses of influenza vaccine since July of 2010, or are not sure* should receive *2 doses this season*, regardless of previous influenza vaccination history, in order to assure adequate immunity to the 2009 H1N1 strain of influenza. (see recommended schedule)

The 2012-2013 seasonal vaccine has 2 new strains compared to the 2011-12 vaccine (only the H1N1 strain is the same): an A/California/7/2009 (H1N1) pdm09-like virus; an A/Victoria/361/2011 (H3N2)-like virus; a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).

Begin vaccinating patients as soon as vaccine arrives for the season; delaying vaccination **is not** recommended.

Seasonal LAIV indication:

LAIV is approved by the Food and Drug Administration (FDA) for use in healthy persons aged 24 months through 49 years who are not known to be pregnant.

Special situations:

LAIV may be co-administered with any other vaccine at the same visit. Live vaccines that are not given on the same day (e.g., varicella, MMR) should be administered at least 4 weeks apart when possible.

LAIV may be given to breastfeeding women, and close contacts of pregnant women, infants and contacts of persons with mild to moderate immunocompromise. It should not be administered to close contacts of severely immunocompromised persons who reside in a protective environment (such as a bone marrow transplant unit).

Because influenza antiviral medications (such as oseltamivir or zanamavir) reduce replication of influenza viruses, LAIV should not be given until 48 hours after stopping influenza antiviral

therapy and influenza antiviral medications should not be administered for 2 weeks after receipt of LAIV, unless medically necessary.

Contraindications:
People under 2 years of age or age 50 years or older
Persons with a history of a severe allergic reaction (anaphylaxis) to a previous dose of influenza vaccine or to any component of LAIV, including egg protein.
Children or adolescents on long term aspirin therapy

Precautions (use TIV or refer):
Persons with egg allergy [may be eligible for TIV, see TIV protocol]
People with any medical condition that places them at high risk for complications from influenza [e.g., any chronic heart or lung disease, asthma, recent wheezing episode, reactive airways, diabetes, kidney disease, hemoglobinopathy (e.g., sickle cell), women known to be pregnant, or persons with a weakened immune system]. Use TIV
Children under 5 years whose parent answers "yes" when asked "In the past year, has a healthcare provider ever told you your child had wheezing or asthma?" Use TIV
People with a history of Guillain-Barré syndrome within 6 weeks following a previous dose of influenza vaccine (a precaution, refer)

Common Side Effects (>10% of patients)
Mild, transient symptoms of influenza: nasal congestion, sore throat, headache, fever in young children

PLAN
Have recipient, parent, or guardian read Vaccine Information Statement (VIS)
Counsel regarding benefits, side effects, and management
Administer vaccine intranasal spray (0.1 ml in each nostril) according to manufacturer's recommendation
Remind that seasonal influenza vaccine is recommended annually. Advise the parent or guardian of recipients less than 9 years of age to return for a second dose in 4 weeks if the child has not previously received at least 2 doses of seasonal influenza vaccine since July 2010.
Advise that recipient should not use an antiviral medication within 2 weeks after LAIV administration unless medically necessary.
Advise to wait in clinic 20 minutes after intranasal administration
Record manufacturer and lot number of the vaccine administered, date, name, address, and title of person administering vaccine
Instruct patient to contact Health Department if adverse reaction occurs (complete appropriate VAERS form: http://vaers.hhs.gov)

Recommended Schedule and Dosage of LAIV (FluMist®):

Age Group	Influenza Vaccination Status	Dosage Schedule
Children 24 months through 8 years	Has **not** had at least 2 seasonal influenza vaccine doses since July 2010 **or not sure**	2 doses (each dose 0.1ml per nostril) given at least 4 weeks apart*
	Has had 2 or more seasonal influenza vaccine doses since July 2010**	1 dose (0.1 ml per nostril)
Other persons aged 9 through 49 years	n/a	1 dose (0.1 ml per nostril)

*TIV or LAIV may be used interchangeably for either dose, if appropriate.
**This is the simplest screening option. If a child is known to have had 2 doses of any seasonal influenza vaccine *and* at least 1 dose of any vaccine containing the 2009 H1N1 strain (the 2009 pandemic vaccine, or either 2010-11 or 2011-12 seasonal vaccines), such a child needs only one dose of seasonal vaccine this season.

Referral Indicators:
Persons with history of severe allergic reaction to components of vaccine (gelatin, gentamicin, arginine, egg protein) or who have had a severe allergic reaction to a previous dose of influenza vaccine.
Persons who report egg allergy. Evaluate them for administration of TIV using the assessment tool in the TIV protocol.
Persons with history of Guillain-Barré syndrome within 6 weeks of a previous dose of influenza vaccine.
Persons having moderate to severe acute febrile illness or illnesses with significant nasal congestion (until illness resolves)

REFERENCES
CDC. Epidemiology and Prevention of Vaccine Preventable Diseases, 12th Ed. May 2012;151-171.

CDC. Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP) — United States, 2012–13 Influenza Season. MMWR 2012;61:613-618.

FluMist® Influenza Vaccine, Live Intranasal Vaccine Prescribing Information for 2012-2013 (MedImmune). http://www.medimmune.com/pdf/products/flumist_pi.pdf. Last accessed August 19, 2011.

TRIVALENT INACTIVATED SEASONAL INFLUENZA VACCINE (TIV)

GENERAL INFORMATION

General Recommendations for Influenza Vaccination:

Seasonal influenza vaccine comes in two forms: trivalent inactivated vaccine (TIV) administered by injection and live-attenuated, intranasally-administered vaccine (LAIV). See LAIV protocol for healthy persons 24 months and up who choose LAIV, where available.

It is recommended that all persons aged 6 months and up be vaccinated each influenza season.

New this season: During the 2012-2013 season, **all** children aged 6 months through 8years *who have not received 2 or more doses of influenza vaccine since July of 2010 or are not sure* should receive *2 doses this season*, regardless of previous influenza vaccination history, in order to assure adequate immunity to the 2009 H1N1 strain of influenza. (see recommended schedule)

The 2012-2013 seasonal trivalent influenza vaccine has 2 new strains compared to the 2011-12 vaccine (only the H1N1 strain is the same): an A/California/7/2009 (H1N1) pdm09-like virus; an A/Victoria/361/2011 (H3N2)-like virus; a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).

Begin vaccinating patients as soon as vaccine arrives for the season; delaying vaccination **is not** recommended.

Licensed TIV and LAIV formulations available by manufacturer (not all available in health departments):

Manufacturer	Trade Name	How Supplied	Mercury Content (mcg Hg/0.5 mL dose)	Age Group
CSL Biotherapies (Distributed by Merck Vaccines)	Afluria	0.5 mL (single-dose syringe)	0	9 years & older
GlaxoSmithKline (GSK)	Fluarix	0.5 mL (single-dose syringe)	0	36 months & older
ID Biomedical Corporation of Quebec (Distributed by GlaxoSmithKline)	FluLaval	5.0 mL (10-dose vial)	25	18 years & older
MedImmune	FluMist	0.2 mL (single-use sprayer)	0	2 through 49 years
Novartis Vaccines	Fluvirin	0.5 mL (single-dose syringe)	≤1	4 years and older
		5.0 mL (10-dose vial)	25	
	Agiflu	0.5 mL (single-dose syringe)	0	18 years & older
sanofi pasteur	Fluzone	0.25 mL (single-dose syringe)	0	6 through 35 months
		5.0 mL (multi-dose vial)	12.5	6 through 35 months
		0.5 mL (single-dose syringe)	0	36 months & older
		0.5 mL (single-dose vial)	0	36 months & older
		5.0 mL (multi-dose vial)	25	6 months & older
	Fluzone High-Dose	0.5 mL (single-dose syringe)	0	65 years & older
	Fluzone Intradermal	0.1 mL (single-dose microinjection system)	0	18 through 64 years

Centers for Disease Control and Prevention (CDC) recommendations:
CDC recommends annual influenza vaccine for ALL persons without medical contraindications, aged 6 months or older.

Persons who should not receive the influenza vaccine include the following:
(*See Referral Indicators for precautions)*
Persons with a severe allergy (i.e., anaphylactic allergic reaction) to a previous dose of influenza vaccine or its components
Children less than 6 months of age

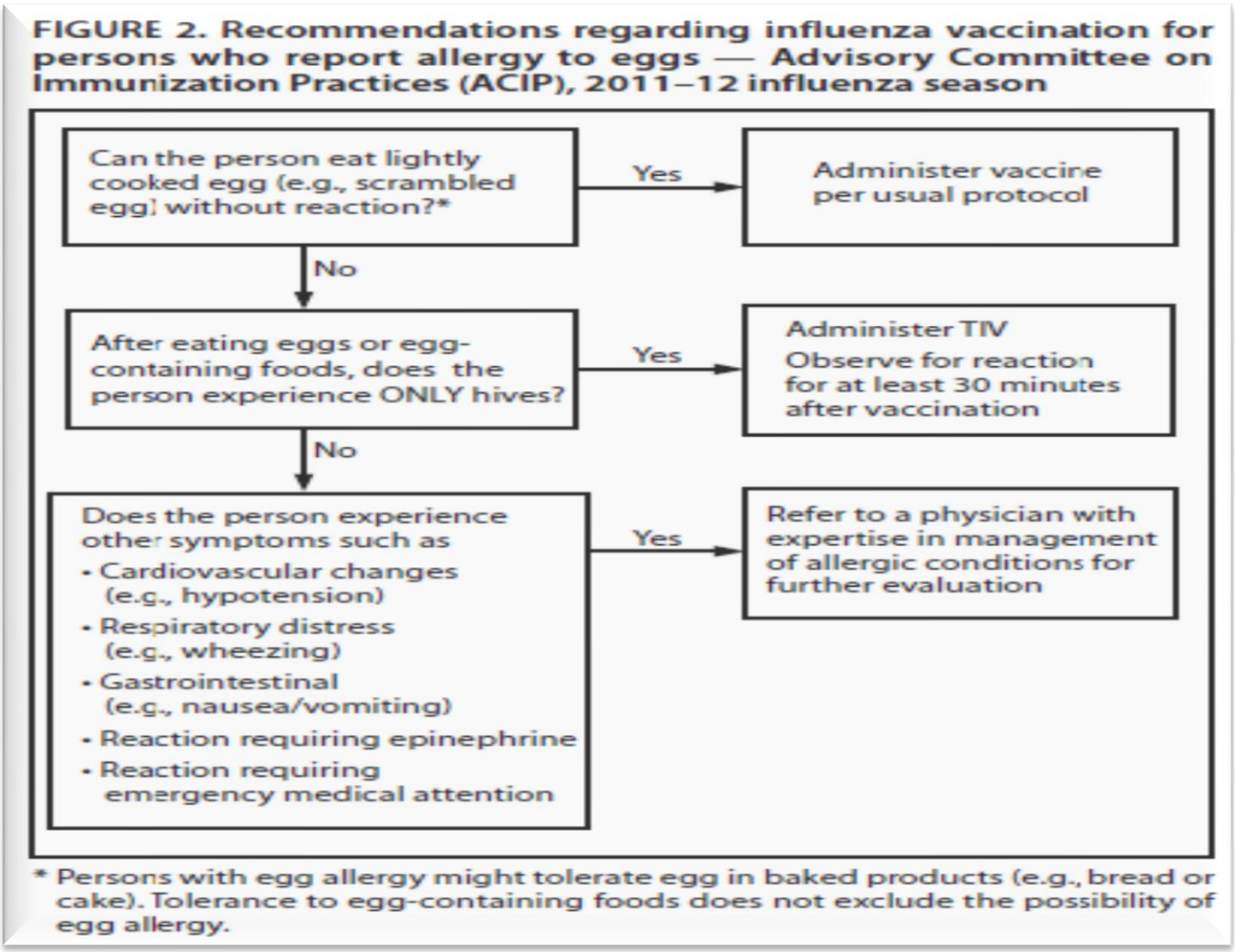
PLAN
Have recipient, parent, or guardian read Vaccine Information Statement (VIS)
Counsel regarding benefits, side effects, and management (see figure below for assessment of persons who report egg allergy)
Administer vaccine injection according to manufacturer's recommendation
Remind that seasonal influenza vaccine is recommended annually. Advise the parent or guardian of recipients less than 9 years of age to return for a second dose in 1 month if the child has not previously received at least 2 doses of seasonal influenza vaccine since July 2010.
Advise to wait in clinic 20 minutes after injection
Record manufacturer and lot number of the vaccine administered, date, name, address, and title of person administering vaccine
Instruct patient to contact Health Department if adverse reaction occurs (complete appropriate VAERS form)

Recommended Schedule and Dosage of Seasonal Trivalent Inactivated Vaccine (TIV):

Age Group	Influenza Vaccination Status	Dosage Schedule
Children 6 months through 35 months	Has **not** had at least 2 seasonal influenza vaccine doses since July 2010 **or not sure**	2 doses (each dose 0.25 ml, IM) at least 4 weeks apart*
	Has had 2 or more seasonal influenza vaccine doses since July 2010**	1 dose (0.25 ml, IM)
Children 36 months through 8 years	Has **not** had at least 2 seasonal influenza vaccine doses since July 2010 **or not sure**	2 doses (each dose 0.5 ml, IM) at least 4 weeks apart*
	Has had 2 or more seasonal influenza vaccine doses since July 2010**	1 dose (0.5 ml, IM)
All others 9 years and up	Not relevant	1 dose (0.5 ml, IM)

*TIV or LAIV may be used interchangeably for either dose, if appropriate.
**This is the simplest screening option. If a child is known to have had 2 doses of any seasonal influenza vaccine *and* at least 1 dose of any vaccine containing the 2009 H1N1 strain (the 2009 pandemic vaccine, or either 2010-11 or 2011-12 seasonal vaccines), such a child needs only one dose of seasonal vaccine this season.

Use the following table to screen all patients who report allergy to egg:



Referral Indicators:

Persons with severe allergy to eggs (not only hives, as defined in the figure above) or components of vaccine (see prescribing information)
Persons with history of Guillain-Barré syndrome
Persons having moderate to severe acute febrile illness (until illness resolves)

REFERENCES

CDC. Epidemiology and Prevention of Vaccine Preventable Diseases, 12th Ed. May 2012;151-171.

CDC. Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP) — United States, 2012–13 Influenza Season. MMWR 2012;61:613-618.

MEASLES, MUMPS, RUBELLA VACCINE (MMR)

GENERAL INFORMATION – MMR is a live virus vaccine that is administered subcutaneously. MMR vaccine may be stored in the refrigerator or freezer and should be used within 8 hours of reconstitution.

Contraindications and Precautions, include the following:

Severe allergic (e.g., anaphylaxis) reaction to vaccine component, such as gelatin or neomycin, or to a previous dose of MMR vaccine (Refer)

Moderate to severe acute illness (wait until resolving)

Pregnancy (if known, testing is not required before vaccinating)

Known severe immunodeficiency (e.g., from hematologic or solid tumors; receiving chemotherapy; congenital immunodeficiency; or, patients with HIV and severe immunocompromise) (Refer)

Patients currently on long term immune suppression therapy: has had ≥14 days of ≥2 mg/kg/day (or, ≥20 mg/day) of prednisone, or equivalent. (Defer vaccination until high dose therapy has been stopped for 1 month).

Recent (within 11 months) antibody-containing blood product (specific interval depends upon the blood product – see CDC's General Recommendations on Immunization for details)

MMR vaccine may be given on the same day as other live virus vaccines (e.g. varicella) however, if not given on the same day, they must be separated by 4 weeks (28 days).

If not given on the same day, wait 4 weeks from date of MMR vaccine to administer TST.

History of thrombocytopenic purpura or thrombocytopenia (low platelet count) (Refer)

Note: The following are NOT contraindications or precautions to MMR vaccination: egg allergy; breast feeding or pregnant household contact; oral low dose, short course or inhaled steroid use.

Adverse events

Common: Susceptible recipients may develop the following mild symptoms caused by measles vaccine virus replication 5 to 12 days after immunization:

1-2 days of fever of 103°F or higher (5-15%)

rash (5%)

Joint symptoms (pain or inflammation) with onset 1-3 weeks after vaccination and lasting up to 3 weeks (up to 25% of adult females, uncommon in children and males)

Rare:

severe allergic reaction (e.g., anaphylaxis)
pain in arms and legs 1-3 weeks after vaccination
thrombocytopenia
parotitis
deafness
encephalopathy

ACIP Recommended Populations

NOTE: ***See current policy from the Tennessee Immunization Program for guidance concerning which recommended persons are eligible for federally funded vaccine***

All children (2 doses)
Adults born in 1957 or later (at least 1 dose if no acceptable history of disease), with emphasis on certain groups at higher risk of infection or complication:
Women of childbearing age (who have never had MMR or who lack serologic evidence of immunity)
Unvaccinated HIV patients without evidence of severe immunocompromise
College students (2 doses required by state law for full time students in TN)
International travelers (total of 2 doses, [§]federal vaccine only for ages 6 months through 18 years)
Healthcare workers (2 doses or evidence of immunity)
Vaccinate susceptible persons age 6 months and up within ≤72 hours of exposure to measles

Administration of Vaccine:
Give first dose at 12-15 months of age
Give second dose at 4-6 years***** (recommended if born after 1957)
MMR vaccine may be given simultaneously with all other vaccines; if MMR and varicella (or another live virus vaccine) are not administered at the same visit, they should be separated by at least 28 days

For children traveling outside the United States:
6-11 months: 1 MMR before travel (because it gives less than ideal protection, this extra dose does not count toward the 2 dose routine MMR series).
12 months or up: should get 2 doses of MMR before travel (28 days apart, minimum interval). Two doses after 12 months of age completes the MMR series.*

Vaccine is not needed if patient has laboratory evidence of immunity to all three (measles, mumps and rubella). However, if any is negative, documentation of 2 MMR doses is needed.

*****The 2nd dose of MMR is recommended routinely at 4-6 yrs of age but may be administered during any visit, provided at least 1 month has elapsed since receipt of the 1st dose and that both doses are administered beginning at or after 12 months of age.

PLAN

Have patient or accompanying adult read Vaccine Information Statement
Counsel regarding benefits, side effects, and management
Counsel females of childbearing age to avoid pregnancy for 28 days post vaccination (document LMP)
Administer unit dose of MMR subcutaneously
Advise to wait in clinic 20 minutes after injection
Record manufacturer and lot number of the vaccine administered, date, name, address, and title of person administering vaccine (National Childhood Vaccine Injury Act)
Instruct patient to contact Health Department if adverse reaction occurs

NOTE: Any dose of MMR vaccine given earlier than 4 days before the 1st birthday will not count as one of the routine two-dose series; persons who have not received 2 doses of measles mumps and rubella-containing vaccines, such as those who received only a monovalent measles vaccine or combined Measles/Rubella (MR) vaccine should complete a 2 dose series of MMR.

Referral indicators (in addition to contraindications or precautions listed above):

Uncontrolled neurological conditions, such as uncontrolled seizures
Active untreated tuberculosis

Follow-Up:

If severe reaction is reported as occurring within 30 days following vaccine administered by health department personnel, VAERS Report form must be completed.
Return at appropriate interval according to schedule

REFERENCES

Manufacturer Packet Inserts.
National Childhood Vaccine Injury Act, 1986.
Epidemiology and Prevention of Vaccine-Preventable Diseases. Department of Health and Human Services, Centers for Disease Control and Prevention, 12th Ed., May 2011.

MENINGOCOCCAL VACCINE
MENINGOCOCCAL CONJUGATE VACCINE (MCV4)
(MENACTRA™, MENVEO™)

GENERAL INFORMATION

Meningococcal disease is caused by bacteria (Neisseria meningitidis) that infect the bloodstream and the linings of the brain and spinal cord, causing serious illness. Meningococcal disease is rare in the United States, but is now the leading cause of bacterial meningitis in children. Of people with meningococcal disease, 10% die and 11-19% of survivors have permanent disabilities (such as mental retardation, hearing loss, and loss of limbs). Meningococcal disease is most likely to occur in infants and toddlers, although the type (serogroup B) that causes most disease in this age group is not preventable by vaccine. After infancy, the next period of increased risk is from 16-21 years. Infection is spread by direct contact with infected individuals (e.g., sharing a glass or cigarette, or kissing), or via droplets of respiratory secretions (e.g., coughing or sneezing). Symptoms include the sudden onset of fever, chills, severe headache, stiff neck, rash, nausea, vomiting and lethargy.

Meningococcal vaccine is inactivated and contains no live organisms. The vaccine is designed to prevent infections from serogroups A, C, Y and W-135. Protective antibody levels may be achieved within 7-10 days after vaccination. Meningococcal vaccine may be given at the same time as other immunizations, if needed.

Meningococcal Conjugate Vaccine (MCV4)

There are 2 MCV4 vaccines: Menactra™ by Sanofi Pasteur (licensed age 9 months through 55 years) and Menveo™ by Novartis (licensed age 24 months through 55 years)

Immunity is expected to last 3-5 years following a single dose.

MCV4 is recommended for routine use in preteens and certain individuals who are at elevated risk for meningococcal disease and are between 2 and 55 years of age

Where MCV4 is not available, Meningococcal Polysaccharide Vaccine (MPSV4, Menomune™) is an acceptable substitute for some, not all, persons for whom MCV4 is recommended; refer to Meningococcal Polysaccharide vaccine (MPSV4, Menomune) protocol as needed for additional information. MCV4 is always preferred to MPSV4.

ACIP Recommended Populations include the following:

Adolescents (First dose routinely for children 11 through 12 years and as catch up for any children 13 through 18 years not previously vaccinated with MCV4)

College freshmen in dormitories, including those through age 21 who enroll in college and present for vaccine before moving on campus, if not previously vaccinated or booster indicated

Persons age 2 through 55 years who have anatomic or functional asplenia or terminal complement component deficiencies, including such persons who had received one dose of MPSV4 three (3) or more years earlier (with physician order)

Persons age 2 through 55 years who travel to, or reside in, countries in which N. meningitidis is hyperendemic or epidemic, particularly if contact with local populations is prolonged

Military recruits (Health departments should refer)

Microbiologists routinely exposed to isolates to N. meningitidis (Health departments refer)

To determine if a patient in an ACIP-recommended group is eligible for free, Federal vaccine, please see the current Tennessee Immunization Program Policy on the use of Federal vaccine.

Contraindications to giving the vaccine include the following:

Persons under 2 years or over 55 years of age
If known to be pregnant, consult with health officer or refer to medical provider
Hypersensitivity to any component of the vaccine, including diphtheria toxoid
Menactra only: hypersensitivity to dry natural latex (contained in vaccine vial stopper)
Note: Menveo packaging does not contain latex.

Precautions include the following:

Immunization should be deferred during the course of any moderate to severe illness
Anyone who has ever had Guillain-Barre Syndrome

Adverse Reactions include the following:

COMMON
- Mild injection site pain and redness (within 1 -2 days of vaccination)
- Mild systemic reactions such as headache and malaise (within 7 days of vaccination)

RARE
- Fever (within 7 days of vaccination) or severe systemic reaction

PLAN

Vaccinate according to the following table [Use federally-funded vaccine, in accordance with current guidance for its use (see cover letter). If state or locally-purchased vaccine is available, persons ineligible for federally-funded vaccine may be vaccinated in accordance with local policy]:

Risk group	First dose (age in years)	Booster dose (age in years)§
Persons aged 11 through 18 years	11 through 12	16 (catch up dose through age 18)*
	13 through 15	16 through 18*
	16 or older	**-none-**
HIV-infected persons age 11 through 18 years	11 through 12 (primary 2-dose series, at least 8 weeks apart*)	16 (catch up dose through age 18)* ¥
	13 through 15 (primary 2-dose series, at least 8 weeks apart*)	16 through 18*¥
	≥16 (primary 2-dose series, at least 8 weeks apart*)	**-none-**
Persons aged 2 through 55 years with persistent complement component deficiency (such as C5-C9, properidin or factor D) or asplenia (functional or anatomic)	At earliest opportunity (primary 2-dose series, at least 8 weeks apart)	Every 5 years following the second primary series dose.
Persons age 2-55 years with prolonged increased risk for exposure to N. meningitidis**	1 dose	If aged 2 through 6 years, after 3 years, *if still at increased risk* If aged 7 years or older, after 5 years *if still at increased risk*
§ Minimum interval between primary and booster doses of vaccine is 8 weeks		
***** To determine if a patient in an ACIP-recommended group is eligible for free, Federal vaccine, please see the current Tennessee Immunization Program Policy on the use of Federal vaccine.**.**		
¥Calculate need for booster dose based upon age at receipt of the second dose in the primary 2-dose series.		
***Microbiologists routinely working with Neisseria meningitidis and travelers or residents of countries where meningococcal disease is hyperendemic or epidemic.*		

If using Menveo, reconstitute product according to manufacturer package insert prior to administration.
Administer a single dose of vaccine, 0.5 ml **INTRAMUSCULARLY**

Ask patient/guardian about contraindications
Have patient/guardian read Vaccine Information Statement
Document vaccine administration on the immunization clinic record
Advise to wait in clinic for 20 minutes after injection
Instruct patient/guardian to contact Health Department if adverse reaction occurs

Health Teaching:

Provide current Vaccine Information Sheet (VIS) about meningococcal disease and the benefits of vaccination
If the vaccine is used in persons receiving immunosuppressive therapy, the expected immune response may not be obtained
Educate recipients for whom a booster dose is recommended about the timing and importance of the booster dose

Referral:

Pregnancy
Military recruits
Microbiologists occupationally exposed to isolates of N. meningitidis
Travelers (to a travel clinic)

REFERENCES

Menactra® [Meningococcal (Groups A, C, Y and W-135) Polysaccharide Diphtheria Toxoid Conjugate Vaccine] package insert, Sanofi Pasteur (Aventis Pasteur), April 2008

MENVEO® [Meningococcal (Groups A, C, Y and W-135) Oligosaccharide Diphtheria CRM197 Conjugate Vaccine] package insert, Novartis, January 2011

MMWR, Prevention and Control of Meningococcal Disease, Recommendations of the Advisory Committee on Immunization Practices (ACIP), U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), Atlanta, GA 30333, May 27, 2005/Vol.54/No. RR-7

MMWR, Notice to Readers: Recommendation from the Advisory Committee on Immunization Practices (ACIP) for Use of Quadrivalent Meningococcal Conjugate Vaccine (MCV4) in Children Aged 2--10 Years at Increased Risk for Invasive Meningococcal Disease. December 7, 2007 / 56(48);1265-1266

MMWR, Updated Recommendations for the Use of Meningococcal Conjugate Vaccines – Advisory Committee on Immunization Practices (ACIP) 2010, January 28, 2011. http://www.cdc.gov/mmwr/pdf/wk/mm6003.pdf

MENINGOCOCCAL VACCINE
MENINGOCOCCAL POLYSACCHARIDE VACCINE (MPSV4)
(MENOMUNE)

GENERAL INFORMATION

Meningococcal disease is caused by bacteria (Neisseria meningitidis) that infect the bloodstream and the linings of the brain and spinal cord, causing serious illness. Every year in the United States, 1,400 to 2,800 people get meningococcal disease. Ten to 14 percent of people with meningococcal disease die, and 11-19 percent of survivors have permanent disabilities (such as mental retardation, hearing loss, and loss of limbs). Infection is spread by direct contact with infected individuals (e.g., sharing a glass or cigarette, or kissing), or through the air via droplets of respiratory secretions (e.g., coughing or sneezing). Symptoms include the sudden onset of fever, chills, severe headache, stiff neck, rash, nausea, vomiting and lethargy.

Meningococcal vaccine is inactivated and contains no live organisms. Different strains of the meningococcus are more likely to produce disease and the vaccine is designed to prevent infections from groups A, C, Y and W-135. Serogroup B is the most common cause of meningococcal disease in children < 1 year of age; no vaccine is yet available to offer protection against serogroup B. Protective antibody levels may be achieved within 7-10 days after vaccination. Meningococcal vaccine may be given at the same time as other immunizations, if needed.

Meningococcal Polysaccharide Vaccine (MPSV4, Menomune)

Licensed in 1981
It is manufactured by Sanofi Pasteur and is marketed as **MENOMUNE™**
Immunity expected to last 3-5 years following a single dose
It may be administered to persons 2 years of age and older
MPSV4 (Menomune) should only be administered to persons aged 11-55 years when Meningococcal Conjugate Vaccine (MCV4) is not available
MPSV4 (Menomune) is an acceptable alternative for college freshmen living in dormitories when Meningococcal Conjugate Vaccine (MCV4) is not available
MPSV4 (Menomune) is <u>not recommended</u> as a substitute for MCV4 in healthy adolescents ages 11-12 or for adolescents entering high school; healthy adolescents in these age groups, without medical or travel risk factors for disease, are recommended only to receive MCV4

<u>ACIP Recommended Populations include the following:</u>

College freshmen living in dormitories, including those enrolled in college who present for immunization before moving on campus who have not previously received MCV4

Persons who have anatomic or functional asplenia or terminal complement component deficiencies (with physician order)
(recommended population cont.)
Persons who travel to, or reside in, countries in which N. meningitidis is hyperendemic or epidemic, particularly if contact with the local population will be prolonged
Military recruits (Health departments should refer)
Microbiologists who are routinely exposed to isolates to N. meningitidis (Health departments should refer)

To determine if a patient in an ACIP-recommended group is eligible for free, Federal vaccine, please see the current Tennessee Immunization Program Policy on the use of Federal vaccine.

Contraindications to giving the vaccine include the following:
Children under 2 years of age (effectiveness questionable in this age group)
Hypersensitivity to any component of the vaccine, including Thimerosal
Anaphylactic hypersensitivity to dry natural rubber latex (contained in vial stopper)
If pregnant, consult with health officer or refer to medical provider

Precautions include the following:
Immunization should be deferred during the course of any moderate to severe illness
If the vaccine is used in persons receiving immunosuppressive therapy, the expected immune response may not be obtained

Adverse Reactions include the following:
MOST COMMON
Mild injection site pain and redness
Transient fever
RARE
Headache, malaise, chills

PLAN
Ask patient/guardian about contraindications
Have patient/guardian read Vaccine Information Statement

Vaccine Administration:
[1]Reconstitute the vaccine using only the diluent supplied for this purpose May be administered to persons 2 years of age and older as outlined in program policy
May be given to any college student requesting vaccine
Administer to individuals 2 years through10 years of age that have medical or travel risk factors for meningococcal disease (see Recommended Population)

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[1] **Single dose vial - should be used within 30 minutes after reconstitution**
Multidose vial - discard remainder of vaccine within 35 days after reconstitution

Administer a single dose of vaccine, 0.5 ml, **SUBCUTANEOUSLY**

Advise to wait in clinic for 20 minutes after injection
Document vaccine administration on the immunization clinic record
Instruct patient/guardian to contact Health Department if adverse reaction occurs

Health Teaching:

Provide current Vaccine Information Sheet (VIS) about meningococcal disease and the benefits of vaccination
Counsel regarding side effects of vaccine

Referrals:

Pregnancy
Military recruits
Microbiologists occupationally exposed to isolates of N. meningitidis

REFERENCES

Meningococcal Disease and Meningococcal Vaccines Fact Sheet, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), Atlanta, GA 30333, April 2005

Meningococcal Polysaccharide Vaccine Groups A, C, Y & W-135 Combined package insert, Sanofi Pasteur (Aventis Pasteur), February 2001

MMWR, Prevention and Control of Meningococcal Disease and Meningococcal Disease, Recommendations of the Advisory Committee on Immunization Practices (ACIP), U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), Atlanta, GA 30333, May 27, 2005/Vol.54/No. RR-7

PEDIARIX
[Diphtheria, Tetanus Toxoid & Acellular Pertussis (DTaP), Hepatitis B Recombinant, and Inactivated Polio Vaccine (IPV) Combined]

GENERAL INFORMATION (For additional information, see DTaP, Hep B pre-exposure, and IPV vaccine protocols)

Pediarix can be administered simultaneously with Hib, Hep A, Varicella, and MMR using separate injection sites
Pediarix is approved as a 3-dose primary series, and should be given at 2, 4, and 6 months
The vaccine is licensed for children 6 weeks through 6 years of age and should not be given to infants less than 6 weeks of age or to anyone 7 years of age or older
The vaccine should be refrigerated between 36° and 46° F (2° and 8°C); vaccine that has been subjected to freezing temperatures should be discarded
Immunosuppressive therapies may reduce the immune response to vaccine

Contraindications include:

- Hypersensitivity to any component of the vaccine, including yeast, neomycin, and polymyxin B
- A history of anaphylaxis to a previous dose of Pediarix, or any of its components
- Moderate to severe febrile illness
- A history of encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures) within 7 days of administration of previous dose of any pertussis-containing vaccine
- Progressive neurologic disorder[1] (e.g., infantile spasms, uncontrolled epilepsy, progressive encephalopathy)
- Pregnancy

The following precautions, although not considered contraindications, should be carefully evaluated concerning the risks and benefits of vaccination for individuals having experienced these circumstances following a previous dose of DTaP or DTP:

- Temperature of 105°F or higher within 48 hours of prior dose (with no other identifiable cause)
- Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours of prior dose
- Persistent, inconsolable crying lasting 3 hours or more, occurring within 48 hours of receiving vaccine
- Seizures, with or without fever, within 3 days of prior dose
- Guillain-Barre syndrome within 6 weeks of prior dose

[1] Stable/resolved neurologic condition (i.e., controlled epilepsy, cerebral palsy, or developmental delay), or a family history of convulsions in first-degree family members (parents or siblings) is not a contraindication for Pediarix.

Adverse Reactions include:

Local injection site reaction (pain, redness, swelling)
Fever (higher rates relative to separately administered vaccines)
Possibility of hypersensitivity reactions in individuals sensitive to streptomycin, polymixin B, or neomycin
Arthus-type hypersensitivity reactions
Severe systemic reactions are rare

Administration of vaccine:

Pediarix should be given at 2, 4, and 6 months, with a 6 to 8 week interval between doses
If an accelerated schedule is needed, there should be a minimum interval of 4 weeks between the first and second doses
The third dose should be administered at least 16 weeks after the first dose and at least 8 weeks after the second dose but not before age 6 months
Pediarix is NOT indicated for use as a booster dose following a 3-dose primary series
A birth dose of single-antigen vaccine is preferred for all infants but MUST be administered to infants who are born to women who are HbsAg-positive or whose HbsAg status is unknown; the birth dose can then be followed by 3 doses of Pediarix at ages 2, 4, and 6 months

PLAN

Ask parent/guardian about personal/family history, adverse reaction following a previous vaccination, and recent health status of the child to determine existence of any contraindications
Counsel regarding vaccine benefits, side effects, and management.
Recommend that parent may administer acetaminophen if a fever develops and the child is uncomfortable. If the child does not show signs of discomfort, medication is not necessary.
Have accompanying adult read "Vaccine Information Materials" (VIMS) and "Vaccine Information Statement" (VIS)
Administer 0.5 mL Pediarix vaccine IM according to recommended schedule

Recommended Vaccine Schedule:

Vaccine	Dose #	Age	Minimum Age	Minimum Dose Interval
PEDIARIX	1	2 months	6 weeks	N/A
	2	4 months	10 weeks	4 weeks
	3	6 months	6 months	8 weeks
DTaP	4	15-18 months	12 months[2]	6 months
	5[3]	4-6 years	4 years	6 months
IPV	4	4-6 years	13 months	1 month

[2] May give #4 as early as 12 months of age if 6 months have elapsed since #3 and the child is unlikely to return at age 15-18 months
[3] 5th dose may be omitted if dose 4 is given on or after fourth birthday

NOTE:

Pediarix may be used to **complete a hepatitis B vaccination series**

Pediarix may be used to **complete the first 3 doses of the IPV vaccination series if initiated with vaccine from a different manufacturer**

Pediarix is **NOT recommended for completion of the first 3 doses of the DTaP vaccination series when initiated with vaccine from a different manufacturer**

Children who have received a **3-dose primary series of Pediarix should receive a fourth dose of IPV at 4-6 years and a fourth dose of DTaP vaccine at 15 to 18 months of age**[2]

Advise to wait in clinic for 20 minutes after injection

Record manufacturer and lot number of the vaccine administered, date, name, address, and title of person administering vaccine

Instruct parent to contact Health Department if adverse reaction occurs (complete appropriate form)

Referral Indicators:

Allergic hypersensitivity to any component of the vaccine

History of severe reaction to previous dose

Follow-up:

Return at appropriate interval according to schedule

REFERENCES

MMWR, March 14, 2003/52(10); 203-204. FDA Licensure of Diphtheria and Tetanus Toxoids and Acellular Pertussis Adsorbed, Hepatitis B (Recombinant), and Poliovirus Vaccine Combined, (PEDIARIX^{tm}) for Use in Infants

National Immunization Program, FAQs on Pediarix^{tm} Vaccine

SmithKline Beecham Pharmaceuticals PEDIARIX^{tm} Package insert

(STREP) PNEUMOCOCCAL CONJUGATE VACCINE – 13 VALENT (PREVNAR 13® BY PFIZER)

(PCV13)

GENERAL INFORMATION

Pneumococcal conjugate vaccine (PCV13) helps to prevent invasive diseases caused by 13 strains of S. pneumoniae (including bloodstream infections, meningitis and ear infections).

PCV13 replaces PCV7 and expands coverage to include 6 additional disease-causing strains.

The vaccine is approved by the Federal Food and Drug Administration (FDA) for use in infants and children at least six (6) weeks of age through 71 months old.

Immunosuppressed children may not respond optimally to immunization; however, it is still important to administer.

Pneumococcal conjugate vaccine may be administered simultaneously with other vaccines

PCV13 is recommended for:

All children who have not reached their 5th birthday; even if they have completed the PCV7 vaccine series. (See **Plan** for additional recommendations)

All children aged 60 through 71 months (until 6th birthday) with underlying medical conditions that increase their risk for invasive pneumococcal disease (IPD) – **Table 3.**

Contraindications to giving the vaccine include the following:

An immediate anaphylactic reaction to the vaccine or a constituent of the vaccine, such as diphtheria toxoid

Acute, moderate, or severe illnesses with or without fever (defer until resolution).

Note: Mild illness with or without fever is NOT a contraindication.

Note: There is no risk for latex allergic patients. The product does not contain latex.

Adverse events:

Swelling, redness and/or pain at site of administration

Low-grade fever

Systemic reactions infrequent, serious adverse reactions rare

PLAN

Have accompanying adult read "Vaccine Information Statement" (VIS)

Counsel regarding benefits, side effects, and management

Administration of vaccine:

The recommended immunization schedule consists of three (3) doses at approximately two (2) month intervals (ages 2, 4, and 6 months), followed by a fourth dose at 12-15 months of age. (See **Table 1** for dosing schedule)

The usual age for the first dose is 2 months, but it can be given as young as six (6) weeks of age

The recommended dosing interval is 4-8 weeks
The fourth dose should be administered at age 12-15 months, and at least 8 weeks after the third dose
For children who have never received a dose of PCV 7, follow Table 1 (Routine Schedule)
For children who have received at least one previous dose of PCV 7, follow Table 2 (Transition Schedule)
For a list of high risk medical conditions, see Table 3.

The dose is 0.5 ml to be given intramuscularly
Shake vigorously immediately prior to administration of vaccine in order to obtain a uniform suspension

Table 1: Routine Schedule

Recommended routine vaccination schedule for PCV13 among infants and children who have not received previous doses of PCV7 or PCV13, by age at first dose

Age at first dose (mos.)	Primary PCV13 series*	PCV13 booster dose†
2–6	3 doses (ideally age 2, 4, 6 mos.)	1 dose at age 12–15 mos.
7–11	2 doses	1 dose at age 12–15 mos
12–23	2 doses	—
24–59 (Healthy children)	1 dose	—
24–71 (Children with certain chronic diseases or immunocompromising conditions§)	2 doses	—

* Minimum interval between doses is 8 weeks except for children vaccinated at age <12 months for whom minimum interval between doses is 4 weeks. Minimum age for administration of first dose is 6 weeks.
† Given at least 8 weeks after the previous dose.
§ For complete list of conditions, see **Table 3.**

Table 2: Transition Schedule

Recommended transition schedule from PCV7 to 13-valent vaccine (PCV13) vaccination among infants and children, according to number of previous PCV7 doses received

Infant series			Booster dose	Supplemental PCV13 dose
2 mos	4 mos	6 mos	≥12 mos*	14–59 mos†
PCV7	PCV13	PCV13	PCV13	—
PCV7	PCV7	PCV13	PCV13	—
PCV7	PCV7	PCV7	PCV13	—
PCV7	PCV7	PCV7	PCV7	PCV13

* No additional PCV13 doses are indicated for children age 12–23 months who have received 2 or 3 doses of PCV before age 12 months and at least 1 dose of PCV13 at age ≥12 months.
† For children with underlying medical conditions (**see Table 3**), a single supplemental PCV13 dose is recommended through age 71 months

Table 3: Medical Conditions that Increase Risk of Invasive Pneumococcal Disease

Underlying medical conditions that are indications for pneumococcal vaccination among children, by risk group

Risk group	Condition
Immunocompetent children	Chronic heart disease*
	Chronic lung disease†
	Diabetes mellitus
	Cerebrospinal fluid leaks
	Cochlear implant
Children with functional or anatomic asplenia	Sickle cell disease and other hemoglobinopathies
	Congenital or acquired asplenia, or splenic dysfunction
Children with immunocompromising conditions	HIV infection
	Chronic renal failure and nephrotic syndrome
	Diseases treated with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin disease; or solid organ transplant
	Congenital immunodeficiency§

* Particularly cyanotic congenital heart disease and cardiac failure.
† Including asthma if treated with prolonged high-dose oral corticosteroids.
§ Includes B- (humoral) or T-lymphocyte deficiency; complement deficiencies, particularly C1, C2, C3, and C4 deficiency; and phagocytic disorders (excluding chronic granulomatous disease).

Note:
The use of PCV13 does not replace the use of 23-valent pneumococcal polysaccharide vaccine (PPSV23) in children ≥ 24 months of age with the underlying medical conditions listed in **Table 3**. PCV13 should be given at least 8 weeks after the last dose of PCV7 or PPSV23. If a child will need PPSV23 and PCV13, it is preferred to administer the PCV13 before the PPSV23 (at least 8 weeks apart).

With a physician or nurse practitioner order, a single dose of PCV13 may be administered to children aged 6-18 years who have sickle cell disease, HIV or other immunocompromising condition, cochlear implant or cerebrospinal fluid leaks, regardless of PPSV23 or PCV7 immunization status.

Post Immunization Administrative Issues:

Advise to wait in clinic 20 minutes after injection
Record manufacturer and lot number of the vaccine administered, date, name, address and title of person administering vaccine
Instruct parent to contact Health Department if adverse reaction occurs (complete appropriate Vaccine Adverse Event Report [VAERS] Form)

Referral Indicators:

A history of anaphylactic hypersensitivity to any component of the vaccine

Follow-up:

Return for next pneumococcal vaccine dose at appropriate interval

REFERENCES:

CDC. Licensure of a 13-Valent Pneumococcal Conjugate Vaccine (PCV13) and Recommendations for Use Among Children — Advisory Committee on Immunization Practices (ACIP), 2010. MMWR http://www.cdc.gov/mmwr/pdf/wk/mm5909.pdf

PREVNAR 13 (Pneumococcal 13-valent Conjugate Vaccine [Diphtheria CRM197 Protein]) Prescribing Information: http://www.wyeth.com/content/showlabeling.asp?id=501

PNEUMOCOCCAL POLYSACCHARIDE VACCINE
(PPV23)

GENERAL INFORMATION

More than 40,000 cases of invasive pneumococcal disease (4,400 deaths) occurred in the US in 2005. Overall, this vaccine reduces the risk of invasive pneumococcal disease by 60-70%. It may be less effective persons with significant underlying illness, but is still recommended because they are at high risk of severe disease. It has not been shown to prevent pneumococcal pneumonia.

Refer to the Pneumococcal Conjugate Vaccine (PCV) protocol for information about vaccination of certain high risk adults with PCV in addition to PPV23.

Contraindications and Precautions include the following:

Moderate to severe acute illness
Severe allergic reaction to vaccine component or following prior dose of vaccine (e.g., phenol)
Pregnancy
Children less than 2 years of age

ACIP recommended groups (single dose – see note for second dose recipients):

All adults 65 years of age and older
Adults aged 19 through 64 in the following categories:

Current smokers

Persons with chronic illness: diabetes, liver disease (include cirrhosis and alcoholism), chronic lung disease (include asthma), chronic renal failure, nephrotic syndrome, chronic cardiovascular disease (not essential hypertension)

Asplenia (functional or anatomic)

Immunocompromising conditions: ASAP after HIV diagnosis; leukemia, lymphoma, Hodgkin disease, multiple myeloma, generalized malignancy, organ or bone marrow transplantation, immunosuppressive chemotherapy and high dose corticosteroids for >14 days

residents of nursing homes or other long-term care facilities

Cochlear implant recipients

Persons with CSF leaks

Children aged 2-18 in the following categories:

Same as adults 19-64, except not indicated for asthma, smokers in this age group, administer at least 2 months after last dose of pneumococcal conjugate vaccine.

To determine if a patient in an ACIP-recommended group is eligible for free, Federal vaccine, please see the **current** Tennessee Immunization Program Policy on the use of Federal vaccine.

Additional notes: (1) Persons with unknown or uncertain immunization history may be vaccinated. (2) Give vaccine at least 2 weeks before planned splenectomy or initiation of immunocompromising treatments that will cause a person to become high risk. (3) Give PPV23 at least 2 months after the last dose of PCV.

PLAN

Have patient or accompanying adult read Vaccine Information Statement
Administer one dose of 0.5 cc pneumococcal vaccine intramuscularly or subcutaneously (preferably in the deltoid muscle or lateral mid thigh)
Counsel regarding benefits, side effects, and management
Advise to wait in clinic for 20 minutes after injection
Document vaccine administration on the immunization clinic record
Instruct patient to contact Health Department if adverse reaction occurs (complete VAERS form)

NOTE: REVACCINATION RECIPIENTS

Because of the lack of evidence of improved protection with multiple doses of this vaccine, **a second dose (revaccination) is not recommended for most recipients.** PPV23 **revaccination** is recommended only for certain persons at the highest risk of severe disease.

A second dose ≥ 5 years after the first is recommended for the following:

- Persons ≥ 2 years of age with ongoing high risk:
  - functional or anatomic asplenia (ex. sickle cell disease, splenectomy)
  - immunosuppression (HIV, leukemia, lymphoma, Hodgkin disease, multiple myeloma, generalized malignancy, chronic renal failure, nephrotic syndrome, organ or bone marrow transplantation, immunosuppressive chemotherapy and long term corticosteroids.)
- Persons aged 65 and older who received one *or two* doses before age 65 and 5 or more years have passed since the most recent dose (such persons may receive up to 3 total doses).

Referral Indicators:

Persons with contraindications as noted under "General Information"

REFERENCES

Epidemiology and Prevention of Vaccine Preventable Diseases, Centers for Disease Control and Prevention, February 2008

POLIO VACCINE, INACTIVATED
ALL-IPV SCHEDULE

GENERAL INFORMATION

IPV is the only poliovirus vaccine recommended for all persons
The all-IPV routine schedule requires 4 doses of vaccine to be given at ages 2 months, 4 months, 6-18 months, and 4-6 years
IPV can be administered simultaneously with all other vaccines recommended for the same visit

Contraindications and precautions to IPV include:

Anaphylactic hypersensitivity
Severe febrile illness (a precaution; delay until resolved)
Allergic to streptomycin, neomycin, or polymixin B
Pregnancy (a precaution; however, if required because immediate protection needed for traveling outside of country, obtain a physician order)

Adverse Reactions to IPV include:

Possibility of hypersensitivity reactions in individuals sensitive to streptomycin, polymixin B, or neomycin

PLAN

Have accompanying adult read Vaccine Information Statement/Vaccine Information Material
Counsel regarding benefits, side effects, and management
Administer appropriate vaccine, as specified by manufacturer, in accordance with schedule

Recommended Vaccine Schedule:

2 months, 4 months, 6-18 months, and 4-6 years
The minimum age for dose 1 is 6 weeks.
A minimum interval of 4 weeks is required from dose 1 to dose 2 and from dose 2 to dose 3. A minimum interval of 6 months is required between doses 3 and 4.
Use of minimum intervals during the first 6 months of life is recommended only if the recipient is at risk for exposure (during an outbreak or for travel to a polio-endemic area). History shots administered using minimum intervals do not need to be repeated.
The final dose of IPV is recommended routinely at 4-6 years of age, regardless of the number of previous doses.
Children immunized with the DTaP/IPV-Hib combination vaccine (Pentacel) will receive 4 doses of IPV by 18 months of age and are recommended to receive a

(continued on next page)

5th dose at 4-6 years. If a 5-dose schedule is used, a minimum interval of 6 months is recommended between doses 4 and 5.

The 4th dose is not needed if the 3rd dose is given on or after the 4th birthday and 6 months from the previous dose.

See table below for details of approved use for various IPV-containing vaccines.

TABLE. Currently licensed vaccines containing inactivated poliovirus vaccine (IPV) — United States, 2009*

Vaccine composition	Trade name	Manufacturer	Approved use in ACIP† routine schedule	Comments
IPV	Ipol (Poliovax§)	Sanofi Pasteur	2, 4, 6–18 mos, and 4–6 yrs	Approved for use in infants, children, and adults¶
DTaP-HepB-IPV**	Pediarix	GlaxoSmithKline	2, 4, and 6 mos	Approved for first 3 doses of IPV through age 6 yrs††
DTaP-IPV/Hib§§	Pentacel	Sanofi Pasteur	2, 4, 6, and 15–18 mos	Approved for 4 doses of IPV through age 4 yrs¶¶
DTaP-IPV***	Kinrix	GlaxoSmithKline	4–6 yrs	Approved for booster dose at age 4–6 yrs†††

* As of August 5, 2009.
† Advisory Committee on Immunization Practices. Full schedule available at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5751a5.htm.
§ Not currently distributed in the United States.
¶ Package insert available at http://www.fda.gov/downloads/biologicsbloodvaccines/vaccines/approvedproducts/ucm133479.pdf.
** Diphtheria and tetanus toxoids and acellular pertussis adsorbed, hepatitis B (recombinant), and inactivated poliovirus vaccine combined.
†† Package insert available at http://www.fda.gov/downloads/biologicsbloodvaccines/vaccines/approvedproducts/ucm168055.pdf.
§§ Diphtheria and tetanus toxoids and acellular pertussis adsorbed, inactivated poliovirus, and *Haemophilus* b conjugate (tetanus toxoid conjugate) vaccine.
¶¶ Package insert available at http://www.fda.gov/downloads/biologicsbloodvaccines/vaccines/approvedproducts/ucm109810.pdf.
*** Diphtheria and tetanus toxoids and acellular pertussis adsorbed, and inactivated poliovirus vaccine.
††† Package insert available at http://www.fda.gov/downloads/biologicsbloodvaccines/vaccines/approvedproducts/ucm107220.pdf.

Advise to wait in clinic 20 minutes after injection

Record manufacturer and lot number of the vaccine administered, date, name, address and title of person administering vaccine (National Childhood Vaccine Injury Act)

Instruct patient to contact Health Department if adverse reaction occurs (complete appropriate form)

Referral Indicators:

Allergic hypersensitivity to any component of the vaccine

History of severe reaction to previous dose

Follow-up:

Return at appropriate interval according to schedule

References

MMWR, August 7, 2009/58 (30): 829. Updated Recommendations of the Advisory Committee on Immunization Practices Regarding Routine Poliovirus Vaccination.

MMWR, July 16, 1999/48(27);590. Recommendations of the Advisory Committee on Immunization Practices; Revised Recommendations for Routine Poliomyelitis Vaccination

Epidemiology and Prevention of Vaccine-Preventable Diseases, Centers for Disease Control and Prevention, latest edition

RABIES VACCINE, POSTEXPOSURE - Information Only

In general, postexposure rabies vaccination is not provided by the Health Department. Referrals should be made to the emergency department or private physician. If these referral options are not available, the Regional Health Officer, Regional CEDS Director or on-call staff should be contacted.

GENERAL INFORMATION

Rabies postexposure prophylaxis is a medical urgency (not an emergency). However, when rabies prophylaxis is indicated, it should be started as soon as possible.

The following factors help determine whether rabies postexposure prophylaxis is indicated:

- History of possible rabies exposure:
    - Bite Exposure involves penetration of the skin by the animal's teeth, with injection of potentially infectious saliva with the wound
    - Nonbite Exposure involves contamination of scratches, abrasions, open wounds or mucous membranes with potentially infectious material (saliva or central nervous tissue); it should be noted that the probability of introduction of virus is much lower with nonbite than with bite exposures; casual contact, such as petting a rabid animal, or contact with its blood, urine, or feces, does not constitute an exposure
- Epidemiology of animal rabies in the area where the exposure occurred
- Vaccination status of animal (properly immunized pets are unlikely to be rabid)
- Circumstances of animal bite (while not the sole determinant of the need for post exposure prophylaxis, unprovoked attacks and bites constitute a higher risk than provoked ones)
- Species of animal involved (skunks, raccoons, and bats are most commonly infected and always suspect; foxes, coyotes, cattle, dogs, and cats [especially stray] are occasionally infected; and rodents, rabbits and hares are rarely infected)
- Rabies confirmed in animal
- Rabies suspected in animal - test results pending
- Animal unavailable for quarantine or testing (i.e., runaway animal, stray - unable to capture, killed-head destroyed, etc.)

RABIES POSTEXPOSURE TREATMENT PLAN:

Review patient history and provide local wound care:

- Meticulous deep cleaning and flushing of the wound site as soon as possible is an effective means of preventing attachment of the rabies virus if present
- Cleanse wound thoroughly and vigorously to the depth of the wound with soap and water and a virucidal agent such as povidone-iodine, flush wound thoroughly and deeply

Administer anti-rabies treatments: Reconstitute vaccine per manufacturer's directions

- **Previously vaccinated persons:** persons who have previously completed a preexposure or postexposure series should not receive Human Rabies Immune Globulin (HRIG); Administer 1 ml rabies vaccine (Human Diploid Cell Vaccine [HDCV / Imovax] **or** Purified Chick Embryo Cell Vaccine [PCEC / RabAvert]), IM on day 0 and day 3

- **Unvaccinated persons:** should always receive both HRIG and rabies vaccine
  - Administer HRIG (Imogam Rabies-HT or BayRab), 20 IU/kg or 1 ml/16 lb of body weight on day 0 (at the same time the first dose of vaccine is given) or as soon as possible after exposure
    - If possible, up to half the dose should be used to infiltrate the wound (except mucous membrane exposure), and the rest administered intramuscularly in the buttocks
    - If HRIG is not available, proceed with the vaccine series; HRIG can be given with the 2nd or 3rd rabies vaccine dose (until day 7), but should not be given any later in order to prevent immune response interference
  - Administer 1 ml of rabies vaccine (Human Diploid Cell Vaccine [HDCV / Imovax] **or** Purified Chick Embryo Cell Vaccine [PCEC / RabAvert]) on days 0, 3, 7, and 14 given IM per manufacturer's directions

- **Precautions–Immunosuppression:** for persons with broadly defined immunosuppression, post-exposure prophylaxis should be administered using 5 doses (on days 0, 3, 7, 14, and 28) of vaccine, with the awareness that the immune response may still be inadequate.

Instruct patient to remain in clinic for 20 minutes following treatment / vaccination (observe for possible reaction)

Health Education:

- Discuss adverse reactions such as mild to moderate inflammatory reactions, as well as mild systemic reactions such as headache, nausea, abdominal pain, muscle aches, dizziness
- Be sure that client understands the importance of keeping return appointment dates

Follow-Up:

- Post-vaccination serology is not recommended except in unusual circumstances, e.g., when the patient is known to be immunosuppressed
- Document and report any adverse reaction

References:

2006 Red Book, Report of the Committee on Infectious Diseases, American Academy of Pediatrics

Centers for Disease Control and Prevention, Human Rabies Prevention —United States, 2008, Recommendations of the Advisory Committee on Immunization Practices. MMWR 2008;57(No. RR-3).

Centers for Disease Control and Prevention, Use of a Reduced (4-Dose) Vaccine Schedule for Postexposure Prophylaxis to Prevent Human Rabies, Recommendations of the Advisory Committee on Immunization Practices. MMWR 2010;59(No. RR-2).

RABIES VACCINE, PRE-EXPOSURE

Preexposure vaccination and post-vaccination serology and booster vaccination are generally not given by health department personnel. If provided, the Regional Health Officer or Regional Medical CEDS Director should be notified to approve administration prior to the health department implementation.

General Information

Appropriate candidates for the primary course of pre-exposure rabies vaccination include those persons who are associated with a professional or recreational activity that places them at risk for contact with rabies virus according to the recommendations of the Advisory Committee on Immunization Practices (ACIP).

Persons considered to be at **continuous risk** (e.g., rabies research laboratory workers, rabies biologics production workers) are advised to receive the primary course and have serologic testing every 6 months. A booster vaccination is given if antibody titer is below the acceptable level as reported by the laboratory.

Persons considered to be at **frequent risk** (e.g., spelunkers, veterinarians and staff and animal-control and wildlife workers in rabies-enzootic areas) are advised to receive the primary course and have serologic testing every 2 years. A booster vaccination is given if antibody titer is below the acceptable as reported by the laboratory.

Persons considered to be at **infrequent risk** (e.g., Veterinarians and animal-control and wildlife workers in areas with low rabies rates, veterinary students, travelers visiting areas where rabies is enzootic and immediate access to appropriate medical care including biologics is limited) should receive the primary course. No serologic testing or booster vaccination is recommended.

According to current ACIP guidelines post-vaccination serology and booster vaccination for persons at continuous or frequent rabies risk are indicated. Serology should be based on rapid fluorescent focus inhibition test (RFFIT). RFFIT testing and submission guidelines are available from:

- Kansas State University College of Veterinary Medicine Rabies Laboratory (785-532-4483), http://www.vet.ksu.edu/DEPTS/dmp/service/rabies/rffit.htm
- Atlanta Health Associates (770-205-9091 or 800-717-5612), http://www.atlantahealth.net/

A booster is indicated if the titer is less than complete neutralization at a 1:5 serum dilution by the RFFIT as reported by the testing laboratory. Contact the State Public Health Veterinarian for additional consultation.

VACCINATION PLAN FOR PRIMARY COURSE (PREVIOUSLY UNVACCINATED):

- Review patient history for pre-exposure vaccination or post-exposure prophylaxis and contraindications (previous severe reaction, pregnancy, concurrent use of chloroquine phosphate for malaria prophylaxis, immunosuppression)

- Reconstitute vaccine per manufacturer's directions.

- Administer 1 ml of rabies vaccine (Human Diploid Cell Vaccine [HDCV / Imovax] **or** Purified Chick Embryo Cell Vaccine [PCEC / RabAvert]) on days 0, 7, 21 or 28; given IM per manufacturer's directions

- Instruct patient to remain in clinic for 20 minutes following vaccination (observe for possible reaction)

Health Education:

- Discuss adverse reactions such as mild to moderate inflammatory reactions, as well as infrequent mild systemic reactions such as headache, nausea, abdominal pain, muscle aches, dizziness
- Be sure that the client understands the importance of keeping return appointment dates
- Return for 2nd (day 7) and 3rd dose (day 21 or 28) according to schedule

PLAN FOR SEROLOGY AND BOOSTERS (PREVIOUSLY VACCINATED):

- Review patient history for pre-exposure vaccination or post-exposure prophylaxis. Conduct and review results of RFFIT. Guidance on submission of serum should be obtained from the laboratory performing the test or the Tennessee State Public Health Veterinarian.

- If a booster is indicated, review contraindications (previous severe reaction, pregnancy, concurrent use of chloroquine phosphate for malaria prophylaxis, immunosuppression)

- Reconstitute vaccine per manufacturer's directions.

- Administer 1 ml of rabies vaccine (Human Diploid Cell Vaccine [HDCV / Imovax] **or** Purified Chick Embryo Cell Vaccine [PCEC / RabAvert]) on day 0; given IM per manufacturer's directions

- Instruct patient to remain in clinic for 20 minutes following vaccination (observe for possible reaction)

Health Education:

Discuss adverse reactions such as mild to moderate inflammatory reactions, as well as infrequent mild systemic reactions such as headache, nausea, abdominal pain, muscle aches, dizziness

References:

2006 Red Book, Report of the Committee on Infectious Diseases, American Academy of Pediatrics

Rabies Prevention - United States, 1999, Recommendations of the Immunization Practices Advisory Committee (ACIP), U.S. Department of Health and Human Services, Centers for Disease Control, MMWR, January 8, 1999/Vol. 48/No. RR-1.

ROTAVIRUS VACCINE
(RotaTeq® "RV5" by Merck, Rotarix® "RV1" by GSK)

GENERAL INFORMATION

Rotavirus causes severe diarrhea and is usually accompanied by fever and vomiting. It is the most common cause of severe gastroenteritis in infants and young children in the U.S. Rotavirus is seasonal, with peak numbers of cases occurring in the winter and early spring. Before the introduction of vaccine in 2006, rotavirus diarrhea resulted in about 200,000 emergency room visits and 55,000 hospitalizations in the US annually. Transmission occurs through the fecal-oral route.

Rotavirus vaccines are live vaccines administered by mouth, between the age of 6 weeks zero days and 8 months zero days of age. They may be administered simultaneously with other vaccines. Two rotavirus vaccines are licensed in the U.S.: Rotateq® by Merck (abbreviated "RV5" by CDC) and Rotarix® by GSK (abbreviated "RV1" by CDC). RV5(Rotateq) is a three-dose series and RV1 (Rotarix) is a two-dose series: the ACIP/CDC expresses no preference between the two vaccines. Please note: this protocol follows ACIP/CDC recommendations for a harmonized schedule of the two brands, which differs from product package inserts.

Special situations:

Infants in contact with pregnant women or persons with compromised immune systems **may** be vaccinated.

Infants who have received or will receive blood or antibody-containing products may receive the vaccine *at any time*. Previously, it was recommended that such infants wait 42 days before vaccination.

Re-administration of a dose to an infant who spits up or vomits during or after administration of the vaccine is not generally recommended. If this occurs, continue series at normal interval.

If *any* dose in the series is RV5, or if the brand of any dose is unknown, a total of 3 doses must be administered to complete the series. Although preferable to use one brand for the entire series, vaccination should not be deferred because the product previously used is unknown or unavailable.

3-Dose Immunization Schedule: If any dose is Rotateq® (RV5) or unknown brand

Dose	Product	Recommended age	Minimum interval to next dose	Special Notes
Dose 1	RotaTeq (RV5) or Rotarix (RV1)	2 months: Administer between age 6 weeks and 14 weeks 6 days (42-104 days)	4 weeks	If dose 1 was given at ≥15 weeks, the series may be continued
Dose 2	RotaTeq (RV5) or Rotarix (RV1)	4 months	4 weeks	
Dose 3 Final dose	RotaTeq (RV5) or Rotarix (RV1)	6 months		Do not administer after age 8 months 0 days

2-Dose Immunization Schedule: If Using Rotarix® (RV1) Only

Dose Number	Recommended age at administration	Minimum interval to next dose	Special Notes
Dose 1	2 months: Administer between age 6 weeks and 14 weeks 6 days (42-104 days)	4 weeks	If dose 1 was given at ≥ 15 weeks, the series should be completed
Dose 2 Final dose	4 months		Do not administer after 8 months 0 days of age.

Contraindications to giving the vaccine include the following:
Infants <6 weeks (42 days) or >8 months 0 days (precise age in days not specified)
Infants with a history of severe allergic reaction to a prior dose of rotavirus vaccine or to any rotavirus vaccine component
Infants with a severe (anaphylactic) reaction to latex should not receive Rotarix (RV1). RotaTeq (RV5) should be used because it is latex free.
Previous history of intussusception
Infants diagnosed with Severe Combined Immunodeficiency (SCID)

Precautions (risks and benefits of vaccination should be carefully evaluated under the following circumstances):

Moderate to severe acute illness (defer until illness resolves) [Note: Low grade fever <100.5ºF or mild upper respiratory infections are not reasons for deferring]
Preexisting chronic gastrointestinal disease (e.g., chronic diarrhea, congenital abdominal disorders)
Altered immunocompetence including:
- Blood disorders or cancers involving the bone marrow or lymph system
- Infants on high dose systemic corticosteroids
- Infants with an immunodeficiency other than SCID

Adverse Reactions:
- Severe allergic reaction to vaccine (rare)
- High fever

PLAN

Ask parent/guardian about contraindications, precautions
Have parent/guardian read Vaccine Information Statement
If using Rotarix (RV1), reconstitute vaccine according to manufacturer's instructions
Administer the vaccine by mouth according to the manufacturer instructions [if an incomplete dose is administered or the infant vomits, repeating the dose is not recommended]
Counsel regarding side effects of vaccine
Advise parent/guardian to return for the next dose in a minimum of 4 weeks
Advise to wait in clinic for 20 minutes after administration of vaccine
Record manufacturer and lot number of the vaccine administered, date vaccine and VIS given, address of facility, and name and title of person administering vaccine
Instruct patient/guardian to contact Health Department if adverse reaction occurs (complete VAERS)

Referral Indicators:

Infants with precautions to vaccination other than an acute moderate to severe illness should be referred for a physician order.

REFERENCES

CDC. Cortese MM, Parashar UD. Prevention of rotavirus gastroenteritis among infants and children: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2009;58(No. RR-2).
RotaTeq (Rotavirus Vaccine, Live, Oral, Pentavalent) Vaccine package insert, Merck, Revised September 2011.
Rotarix (Rotavirus Vaccine, Live Attenuated) Vaccine package insert, GSK, Revised February 2011.
CDC. Prevention of Rotavirus Gastroenteritis among Infants and Children. Recommendations of the Advisory Committee on Immunization Practices, MMWR.

August 11, 2006. http://www.cdc.gov/mmwr/PDF/rr/rr5512.pdf. Last accessed August 12, 2008.
CDC. Addition of Severe Combined Immunodeficiency as a Contraindication for Administration of Rotavirus Vaccine, June 11, 2010. MMWR. http://www.cdc.gov/mmwr/pdf/wk/mm5922.pdf. Last accessed February 15, 2012.

TETANUS, DIPHTHERIA, AND PERTUSSIS VACCINE TETANUS, DIPHTHERIA, AND ACELLULAR PERTUSSIS (Tdap) VACCINE FOR CHILDREN AND ADOLESCENTS (7 through 18 years) (ADACEL™ OR BOOSTRIX™)

GENERAL INFORMATION

Tdap vaccine is inactivated and contains no live organisms. The vaccine protects against tetanus ("lockjaw"), diphtheria, and pertussis ("whooping cough"). Like tetanus and diphtheria, immunity to pertussis wanes following childhood immunization or disease. Two Tdap vaccines were licensed in 2005 by the U.S. Food and Drug Administration (FDA) as a **ONE-TIME DOSE**:

ADACEL™ (Sanofi Pasteur) is licensed **for ages 11through 64 years.**

BOOSTRIX™ (GlaxoSmithKline) is licensed **for ages 10 years and older..**

Tdap is currently recommended by the Advisory Committee on Immunization Practices (ACIP) for routine use in adolescents aged 11 through 18 years. Subsequent routine Td BOOSTERS are recommended every 10 years (see Td protocol).

Tdap vaccine may be given at the same time as other immunizations, including meningococcal vaccine. It may be given before or after meningococcal vaccine if both vaccines cannot be given simultaneously.

Tdap SHOULD NOT BE GIVEN TO PERSONS WHO HAVE ALREADY RECEIVED Tdap. It should be given if the patient is unable to verify they have had Tdap.

Note: The CDC published ACIP recommendations in January 2011 that differ from the current manufacturers' package inserts on age and dose intervals. ACIP guidelines for the use of vaccines take priority and should be followed as written below.

ACIP Recommendations for Use (updated January 2011):

Tdap may be used **ONE TIME** either as a routine **BOOSTER** dose, OR as one of a **PRIMARY** vaccine series, OR for tetanus **PROPHYLAXIS** in accordance with standard guidelines for wound management.

Timing of Tdap: May be administered regardless of interval since the last tetanus- or diphtheria-containing vaccine.

Note: A "complete" primary series of pertussis vaccine in childhood is typically defined as 5 doses of DTaP. Four doses of DTaP is considered complete when the 4th dose is given after the 4th birthday.

Children (7 through 10 years) who have not had a complete primary series of pertussis vaccine as defined above: give one dose of Tdap. Use Td for any additional doses necessary to complete the primary series of tetanus immunization.

Adolescents (11 through 18 years) who had a complete primary series of tetanus-containing vaccine in childhood - A single dose of Tdap is routinely recommended and should be given to **all children** between ages 11-12 years; administer at ages 13-18 years to any child that has not already received a Tdap.

Adolescents (11 through 18 years) who have not had a primary series of tetanus-containing vaccine - A single dose of Tdap should be **substituted for one Td** in the 3-dose primary series; it is preferred as the first dose.

Any pregnant adolescent who had a complete primary series of tetanus containing vaccine in childhood but has not received the recommended single dose of Tdap between ages 11-12, should be given Tdap after 20 weeks gestation unless contraindicated. Adolescents who fail to receive Tdap before or during pregnancy should receive a dose immediately post-partum.

REFERRAL INDICATORS (PER ACIP)

Contraindications to giving the vaccine include the following:

- History of an immediate severe allergic reaction (anaphylaxis) to any of the three components of Tdap (i.e., tetanus, diphtheria, or pertussis vaccines) or to any combination vaccine containing Tdap components
- History of encephalopathy (e.g., coma, prolonged seizures) within 7 days of administration of a pertussis-containing vaccine that is not attributable to another identifiable cause; tetanus/diphtheria vaccine (Td) should be used instead of Tdap in such patients

Precautions which may require referral include the following:

- History of Arthus-type hypersensitivity reactions (extensive painful limb swelling within hours of injection) following prior tetanus vaccination; such patients should not be given any tetanus-containing vaccine more frequently than every 10 years
- A current progressive neurologic disorder, uncontrolled epilepsy, or progressive encephalopathy; defer vaccination with pertussis-containing vaccine until treatment regimen is established and condition is stabilized, Td may be used
- History of a severe allergic reaction (anaphylaxis) to latex[1]
- Guillain-Barre syndrome (GBS) within 6 weeks after a previous dose of a tetanus toxoid-containing vaccine
- Patient has an acute moderate-to-severe illness, with or without fever; vaccination should be deferred until illness has resolved

PLAN

Provide current Vaccine Information Sheet (VIS) about Tdap and the benefits of vaccination
Counsel regarding benefits, side effects, and management
Shake the vial well, administer 0.5 ml of vaccine INTRAMUSCULARLY
Remind that tetanus/diphtheria vaccine boosters are recommended every 10 years
Advise to wait in clinic 20 minutes after injection
Record manufacturer and lot number of the vaccine administered, date, name, address and title of the person administering vaccine

[1] Boostrix™ pre-filled syringes contain latex. Adacel™ products and Boostrix™ single dose vials do not contain latex; there is no precaution against the use of these products in patients with latex allergy.

Instruct patient to contact Health Department if adverse reaction occurs (complete appropriate form)

Referral Indicators:

History of an immediate severe allergic reaction (anaphylaxis) to prior tetanus, diphtheria, or pertussis vaccines
History of encephalopathy (e.g., coma, prolonged seizures) within 7 days of administration of a pertussis-containing vaccine
Refer for precautions as indicated

Follow-up:

Return for Td booster in 10 years, or for the next scheduled dose if administering a catch-up primary series.
Return for wound management as required

REFERENCES

Advisory Committee on Immunization Practice (ACIP) Votes to Recommend Routine Use of Combined Tetanus, Diphtheria and Pertussis (Tdap) Vaccines for Adolescents, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), Atlanta, GA 30333, June 30, 2005

Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine Adsorbed (ADACEL™) Vaccine package insert, Sanofi Pasteur (Aventis Pasteur), June 2005

Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine, Adsorbed (BOOSTRIX™) Prescribing information, GlaxoSmithKline, May 2005, revised January 2009. http://us.gsk.com/products/assets/us_boostrix.pdf

Centers for Disease Control and Prevention, Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis (Tdap) Vaccine from the Advisory Committee on Immunization Practices, 2010. MMWR. http://www.cdc.gov/mmwr/pdf/wk/mm6001.pdf Last accessed January 14, 2011.

TETANUS, DIPHTHERIA, AND PERTUSSIS VACCINE TETANUS, DIPHTHERIA, AND ACELLULAR PERTUSSIS (Tdap) VACCINE FOR ADULTS (19 and up) (ADACEL™ OR BOOSTRIX™)

GENERAL INFORMATION

Tdap vaccine is inactivated and contains no live organisms. The vaccine protects from tetanus ("lockjaw"), diphtheria, and pertussis ("whooping cough"). Immunity wanes following childhood immunization. With pertussis, adults may suffer prolonged coughing illness and may infect others, including infants at risk for severe complications.

ADACEL™ (Sanofi Pasteur) was licensed in 2005 by the U.S. Food and Drug Administration (FDA) for ages **11 through 64 years** as a **ONE-TIME DOSE.**

BOOSTRIX™ (GSK) is licensed **for ages 10 years or older as a ONE–TIME DOSE.**

The Advisory Committee on Immunization Practices (ACIP) recommends providers should not miss an opportunity to vaccinate persons aged 65 years and older with Tdap, and may administer the vaccine that they have available. When feasible, for adults aged 65 years and older, Boostrix should be used; however, either vaccine product administered to a person aged 65 years and older provides protection and is considered valid.

Tdap is routinely recommended by the ACIP for any person age 11 years or older who has not yet had Tdap, regardless of interval since last tetanus booster. (See the Tdap protocol for adolescents for recommendations ages 7 through 18 years). **Subsequent routine Td BOOSTERS are recommended every 10 years** (see Td protocol).

Tdap is especially important for pregnant women, healthcare personnel and persons who care for or live with infants under age one, in order to help prevent exposing the infant to pertussis disease ("cocooning")

Tdap vaccine may be given at the same time as other immunizations, including meningococcal vaccine. It may be given before or after meningococcal vaccine if both vaccines cannot be given simultaneously.

Tdap is approved only as a ONE TIME dose; however, Tdap SHOULD be given if there is no documentation of a previous dose of Tdap.

Note: The ACIP now recommends the use of Tdap for pregnant women and all adults who have not previously had a dose of Tdap, regardless of the interval since the recipient's last Td. These ACIP recommendations differ from the manufacturer package insert and take priority over information contained in the package insert.

ACIP Recommendations for Use:

Tdap may be used **ONE TIME** either as a routine **BOOSTER** dose, OR as one of a **PRIMARY** vaccine series, OR for tetanus **PROPHYLAXIS** in accordance with standard guidelines for wound management:

Adults (19 and older): A single dose of Tdap is routinely recommended to any adult who has not had a dose of Tdap. Adults who have completed a primary series of tetanus containing vaccine in the past are routinely recommended to have a booster dose of tetanus containing vaccine every 10 years. The next tetanus booster would be due 10 years after the dose of Tdap.

Adults (19 and older) WITHOUT A COMPLETE PRIMARY SERIES of Td-containing vaccine - A single dose of Tdap should be **substituted for one Td** in the primary series; it is preferred as the first dose.

Adults (19 and older), REQUIRING TETANUS PROPHYLAXIS FOR WOUND MANAGEMENT - A single dose of Tdap should be given, if available, if the patient has not had Tdap before (See Protocol for Wound Management); otherwise, Td should be used.

PREGNANCY: Unless contraindicated, **Tdap should be given to each pregnant woman after 20 weeks gestation if she has not previously had a dose of Tdap**. Women who fail to receive Tdap before or during pregnancy should receive a dose immediately post-partum.

DOSING INTERVALS since last tetanus vaccine dose: Tdap should be given regardless of the interval since the last tetanus-containing vaccine.

REFERRAL INDICATORS (PER ACIP)

Contraindications to giving the vaccine include the following:

History of an immediate severe allergic reaction (anaphylaxis) to any of the three components of Tdap (i.e., tetanus, diphtheria, or pertussis vaccines) or to any combination vaccine containing Tdap components

History of encephalopathy (e.g., coma, prolonged seizures) within 7 days of administration of a pertussis-containing vaccine that is not attributable to another identifiable cause; tetanus/diphtheria vaccine (Td) should be used instead of Tdap in such patients

Precautions which may require referral include the following:

History of Arthus-type hypersensitivity reactions (extensive painful limb swelling within hours of injection) following tetanus vaccination administered <10 years previously; such patients should not be given any tetanus-containing vaccine more frequently than every 10 years

A current unstable neurologic disorder, uncontrolled epilepsy, or progressive encephalopathy; defer vaccination with pertussis-containing vaccine until treatment regimen is established and condition is stabilized; Td may be used

Guillain-Barre syndrome (GBS) within 6 weeks after a previous dose of a tetanus toxoid-containing vaccine

Defer immunization if the patient has an acute moderate-to-severe illness, with or without fever, until illness has resolved

PLAN

Provide current Vaccine Information Sheet (VIS) about Tdap and the benefits of vaccination
Counsel regarding benefits, side effects, and management
Shake the vial well, administer 0.5 ml of vaccine INTRAMUSCULARLY
Remind that tetanus/diphtheria vaccine boosters are recommended every 10 years
Advise to wait in clinic 20 minutes after injection
Record manufacturer and lot number of the vaccine administered, date, name, address and title of the person administering vaccine
Instruct patient to contact Health Department if adverse reaction occurs (complete appropriate form)

Referral Indicators:

History of an immediate severe allergic reaction (anaphylaxis) to prior tetanus, diphtheria, or pertussis vaccines
History of encephalopathy (e.g., coma, prolonged seizures) within 7 days of administration of a pertussis-containing vaccine
Refer or defer immunization for precautions as indicated

Follow-up:

Return for Td booster in 10 years (or for next dose, if completing a primary series)
Return for wound management as required

REFERENCES

Centers for Disease Control and Prevention. Preventing Tetanus, Diphtheria, and Pertussis Among Adults: Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine Recommendations of the Advisory Committee on Immunization Practices (ACIP) and Recommendation of ACIP, supported by the Healthcare Infection Control Practices Advisory Committee (HICPAC), for Use of Tdap Among Health-Care Personnel. MMWR 2006;55(No. RR-17).

Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine Adsorbed (ADACEL™) Vaccine package insert, Sanofi Pasteur (Aventis Pasteur), June 2005. Revised 2/22/2012.

Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine, Adsorbed (BOOSTRIX ™) Prescribing information, GlaxoSmithKline, July 2011, revised March 2012. http://us.gsk.com/products/assets/us boostrix.pdf

Centers for Disease Control and Prevention. FDA Approval of Expanded Age Indication for a Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine. MMWR 2011;60(No. 37): pp. 1279-1280.

Centers for Disease Control and Prevention. Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine (Tdap) in Pregnant Women and Persons Who Have or Anticipate Having Close Contact with an Infant Aged <12

Months — Advisory Committee on Immunization Practices (ACIP), 2011. MMWR 2011;60(No. 41): pp1424-1426.

ACIP provisional recommendations for adults aged 65 years and older on use of tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccine (Tdap) and guidance on use of Tdap products for adults aged 65 years and older. http://www.cdc.gov/vaccines/recs/provisional/Tdap-feb2012.htm. Last accessed March 22, 2012.

TETANUS AND DIPHTHERIA TOXOID, ADULT TYPE
Td (Adult Type)

GENERAL INFORMATION

Tdap is recommended for most persons aged 11 years and older who have not yet received it (see Tdap protocol for adolescents 11 through 18 years or the protocol for adults ≥19 years). Subsequent routine Td boosters are recommended every 10 years.

Appropriate candidates for Td include the following:

At least seven years of age and older and requiring tetanus immunization for whom Tdap is not recommended (e.g., medical contraindication, previous dose of Tdap, or child 7-9 years of age who had a complete DTaP vaccination series)

No previous dose of Td, or at least 4-8 weeks after Td #1 or 6 months after Td #2

Ten years since last tetanus-containing vaccine (DTP, DTaP, Tdap or Td)

Contraindications include the following:

History of severe allergic reaction (i.e., anaphylaxis) to a previous dose of any tetanus- or diphtheria-containing vaccine or component of the vaccine

Precautions include the following:

Defer vaccination until resolution of moderate to severe acute illness

History of Arthus-type hypersensitivity reactions (extensive painful limb swelling within hours of injection) following tetanus vaccination administered <10 years previously; such patients should not be given any tetanus-containing vaccine more frequently than every 10 years

Guillain-Barre syndrome (GBS) within 6 weeks after a previous dose of a tetanus toxoid-containing vaccine

Severe (anaphylactic) latex allergy; vial stopper and pre-filled syringes may contain latex (see package insert of specific product)

PREGNANCY: Pregnancy is not a contraindication to Td or Tdap; if tetanus vaccination during pregnancy is indicated, Tdap is preferred and should be administered to those who have not had a dose of Tdap **(see protocol)**. Td should be given to pregnant women if they have had an incomplete primary series of tetanus vaccine and require additional doses of tetanus-containing vaccine after the single dose of Tdap.

PLAN

Have patient or accompanying adult read Vaccine Information Statement/Vaccine Information Material

Counsel regarding benefits, side effects, and management

Administer 0.5 cc of Td INTRAMUSCULARLY

Advise to wait in clinic 20 minutes after injection

Record manufacturer and lot number of the vaccine administered, date of administration and provision of VIS, name, address, and title of person administering vaccine (National Childhood Vaccine Injury Act)

Instruct patient to contact Health Department if adverse reaction occurs (complete appropriate form)

Referral Indicators:

History of severe reaction to previous dose of tetanus- or diphtheria-containing vaccine (DTP / DTaP / DT / Td)

History of severe latex allergy (if Td vial stopper or pre-filled syringe contains latex, see package insert)

Needs tetanus immune globulin (TIG) for wound management

If severe reaction is identified following vaccine administered by health department personnel, VAERS Report Form must be completed

Follow-Up:

If no primary series, return for Td #2 in 4-8 weeks or for Td #3 in 6-12 months [use Tdap for one of the doses if not previously administered]

Return for Td booster in 10 years, according to current immunization schedule

Return for wound management as required (see Tetanus Prophylaxis in Wound Management Protocol)

REFERENCES

Packet Insert: http://www.fda.gov/downloads/BiologicsBloodVaccines/UCM152826.pdf last accessed March 21, 2012.

Current Vaccine Information Statement: http://www.cdc.gov/vaccines/pubs/vis/downloads/vis-td-tdap.pdf last accessed March 21, 2012.

Centers for Disease Control and Prevention, Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis (Tdap) Vaccine from the Advisory Committee on Immunization Practices, 2010. MMWR. http://www.cdc.gov/mmwr/pdf/wk/mm6001.pdf Last accessed January 14, 2011.

Centers for Disease Control and Prevention. FDA Approval of Expanded Age Indication for a Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine. MMWR 2011;60(No. 37): pp. 1279-1280.

Centers for Disease Control and Prevention. Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine (Tdap) in Pregnant Women and Persons Who Have or Anticipate Having Close Contact with an Infant Aged <12 Months — Advisory Committee on Immunization Practices (ACIP), 2011

ACIP provisional recommendations for adults aged 65 years and oler on use of tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccine (Tdap) and guidance on use of Tdap products for adults aged 65 years and older. http://www.cdc.gov/vaccines/recs/provisional/Tdap-feb2012.htm. Last accessed March 22, 2012.

TETANUS PROPHYLAXIS IN WOUND MANAGEMENT (8799)

GENERAL INFORMATION

Tetanus prophylaxis needed in wound management

PLAN

Teach wound care
Have patient or accompanying adult read Vaccine Information Statement/Vaccine Information Material
Counsel regarding benefits, side effects, and management
Administer IM 0.5cc DTaP, DT, Tdap or Td vaccine using the following schedule:

Child less than 7 years of age (Consult clinic visit schedule):

Give DTaP (or DT if pertussis component is contraindicated) if:
a) child has not had the immunizations recommended for age (e.g., <4 doses if ≥12 months)
[Injured child may need referral for Tetanus Immune Globulin (Human) --TIG
Indications for TIG are usually the same as for an older child (see chart below)], OR
b) The child has had <3 previous tetanus immunizations, the last dose was at least 28 days earlier, AND the child is at least the minimum age for the next dose due (Minimum ages: dose 1, ≥6 weeks old; dose 2, ≥10 weeks old; dose 3, ≥14 weeks old)

Do not give DTaP if:
a) The total number of DTaP immunizations would be in excess of the number recommended for the child's age
b) They have not reached the minimum age for the next dose due

Adult or child 7 years of age and over:

	CLEAN, MINOR WOUNDS		ALL OTHER WOUNDS +	
	Tdap (or Td)§	TIG	Tdap (or Td)§	TIG
Unknown or < 3 doses	Yes	No	Yes	Yes
≥ 3 doses*	No**	No	No++	No

+Such as, but not limited to, wounds contaminated with dirt, feces, soil, saliva, etc., puncture wounds, avulsions, and wounds resulting from missiles, crushing, burns, and frostbite
§ For persons with unknown or <3 doses (age 7 and up) Tdap is preferred if the patient has not previously received Tdap (if so, Td is preferred)
* If patient records indicate that only three doses of fluid tetanus toxoid have been received, a fourth dose of a tetanus toxoid, preferably adsorbed, should be given. Although licensed, fluid tetanus toxoid is rarely used. Children 7-10 years with incomplete pertussis immunization may receive Tdap, see Tdap protocol for children and adolescents.
**Yes, if more than 10 years since last dose

++Yes, if more than 5 years since last dose (more frequent boosters are not needed and can accentuate side effects)

NOTE: For non-pregnant persons 11 or older (including those over age 64), Tdap should be used instead of Td if the recipient has not previously received Tdap. If Tdap is not available or was administered previously, Td should be administered.

Pregnancy: Pregnancy is not a contraindication or precaution for the use of Td or Tdap. However, Td is preferred if tetanus immunization is necessary during pregnancy and may be given by protocol. Tdap may be given by MD or NP order.

Referral Indicators:

Needs TIG
History of severe reaction (e.g., anaphylaxis) to DTP/DTaP/DT/Td
If a severe reaction is reported as occurring within 30 days following vaccine administered by health department personnel, VAERS Report Form must be completed.

Follow-Up:

Persons whose immunizations are incomplete should be scheduled for the remainder of the recommended series.

REFERENCES

MMWR, Vol. 40, No. RR-10, August 1991.
2009 Red Book, American Academy of Pediatrics, 28th Ed.
MMWR, Vol. 55, No. RR-3, March 24, 2006
Advisory Committee on Immunization Practice (ACIP) Votes to Recommend Use of Combined Tetanus, Diphtheria and Pertussis (Tdap) Vaccines for Adults, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), Atlanta, GA 30333, March 2, 2006. http://www.cdc.gov/nip/vaccine/tdap/tdap_adult_recs.pdf Last accessed May 12, 2006
Centers for Disease Control and Prevention, Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis (Tdap) Vaccine from the Advisory Committee on Immunization Practices, 2010. MMWR. http://www.cdc.gov/mmwr/pdf/wk/mm6001.pdf Last accessed January 14, 2011.

VARICELLA VACCINE (VARIVAX® by Merck)

GENERAL INFORMATION

Varicella virus causes chickenpox and lies dormant in nerve roots following the primary infection. The virus can cause recurrent infection, resulting in herpes zoster ("shingles"). The virus is highly contagious and enters the body through the respiratory tract or mucus membranes. Up to 90% of susceptible household contacts of persons with chickenpox will become infected. In the U.S. each year, before routine vaccination, there were about 4 million cases of chickenpox, resulting in 11,000 hospitalizations and 100 deaths, with the highest risk of death among susceptible adults.

Varicella vaccine is a live attenuated (weakened) virus vaccine derived from the Oka strain of varicella and administered subcutaneously; it is licensed by the Food and Drug Administration (FDA) for administration to persons 12 months of age and older. Two doses of the vaccine are recommended for all recipients, including a second dose for those who may have had a single dose earlier in childhood. A single dose confers approximately 70-90% protection from disease; the seroconversion rate of 2-dose recipients is approximately 99%. The vaccine is not recommended for persons with evidence of immunity to varicella (see below).

The vaccine may be simultaneously administered with other vaccines, including other live virus vaccines. It is stored frozen at an average temperature of ≤-15°C (5°F), but not below -50°C. It must be discarded if not administered to the recipient within 30 minutes of reconstitution.

Evidence of immunity to varicella:
Persons with evidence of immunity to varicella should not be vaccinated. Acceptable evidence includes the following (Advisory Committee on Immunization Practices, ACIP, 2006):

1. Documentation of age-appropriate vaccination:
    a. Children 12 months up to school entry: one dose
    b. School-aged children: 2 doses
2. Laboratory evidence of immunity or laboratory confirmation of disease
3. Born in the US before 1980 (this is insufficient evidence for healthcare workers or pregnant women)
4. Healthcare provider diagnosis of varicella or provider verification of a patient's credible reported history of varicella disease (for "atypical" or "mild" disease, this verification should include an epidemiologic link to a person with typical disease or laboratory confirmation, because other diseases may mimic atypical varicella)
5. Healthcare provider diagnosis of herpes zoster

ACIP Recommendations for Use:

- Routine immunization schedule: first dose at age 12-15 months, second dose at age 4-6 years (before starting school) (See below)
- A second, catch-up dose is recommended for all children and adults who previously had received only one dose (unless they have appropriate evidence of immunity due to breakthrough disease)
- Adults (2-dose series) for whom it is medically indicated (in other words, they do not meet criteria for immunity listed above)

NOTE: See current policy from the Tennessee Immunization Program for guidance concerning which recommended persons are eligible for federally-funded vaccine.

Routine Immunization Schedule

Dose Number	**Recommended age at administration**	**Minimum interval to next dose**
Dose 1	12-15 months	3 months (age 1-12 years)** 4 weeks (28 days) (age >13 years) **At any age, a second dose administered at least 28 days after the first dose does not need to be repeated
Dose 2	4-6 years	

Contraindications to giving the vaccine include the following:
Evidence of immunity (per above criteria)
Pregnancy
Moderate to severe acute illness (defer until recovery) [Note: Low grade fever <100.5ºF or mild illnesses are not reasons for deferring immunization]
Anaphylactic reaction to a previous dose of the vaccine or any component (including neomycin and gelatin)
Blood dyscrasias, leukemia, lymphoma of any type, other malignant neoplasm affecting the bone marrow or lymphatic system
Primary or acquired cellular immunodeficiencies (e.g., AIDS or clinical manifestations of HIV)
Untreated, active tuberculosis (not latent tuberculosis infection)
Family history of congenital or hereditary immunodeficiency in a first-degree relative (e.g., parent or sibling), unless the immunocompetence of the recipient has been clinically confirmed by a physician or verified by a laboratory
Ongoing immunosuppressive therapy (does not apply to corticosteroid replacement therapy)

Precautions (risks and benefits of vaccination should be carefully evaluated under the following circumstances):
Persons on steroid therapy not otherwise immunocompromised (refer)
Impaired humoral immunity or asymptomatic HIV infection (refer)
Receipt of a blood or plasma transfusion or immune globulin within the past 5 months (defer vaccination until at least 5 months after receipt of blood products)
Varicella vaccine may be given on the same day as other live virus vaccines (e.g., MMR); however, if not given on the same day, they must be separated by 4 weeks (28 days).
If not given on the same day, wait 4 weeks (28 days) from date of varicella vaccine to administer TST.

Special Situations (per ACIP):
Breastfeeding is not a contraindication to immunization
Vaccinees who are healthcare workers or household contacts of susceptible, high risk persons in whom a vaccine-related vesicular rash develops should avoid contact with such persons while they have the rash
Women should be advised to avoid becoming pregnant for at least 1 month (per ACIP) following vaccination, though having a pregnant household contact is not a contraindication to vaccination
Aspirin use during natural varicella disease is associated with Reye's Syndrome and recipients should be advised to avoid salicylates for 6 weeks following vaccination

Adverse Reactions:
Soreness, swelling or redness around the injection site within 48 hours of immunization
An injection site or full body rash up to 1 month following vaccination in ≤5% of Recipients

PLAN
Ask parent/guardian or recipient about contraindications, precautions
Have parent/guardian or recipient read Vaccine Information Statement
Reconstitute vaccine and administer the vaccine subcutaneously according to the manufacturer instructions
Counsel regarding side effects of vaccine, e.g., rash
Advise women of child-bearing age to avoid becoming pregnant for at least 1 month
Advise that recipients should avoid use of salicylates (e.g., aspirin) for 6 weeks
Advise parent/guardian or recipient to return for the next dose at the appropriate interval
Advise to wait in clinic for 20 minutes after administration of vaccine
Record manufacturer and lot number of the vaccine administered, date vaccine and VIS given, address of facility, and name and title of person administering vaccine
Instruct patient/guardian to contact Health Department if adverse reaction occurs

Referral Indicators
Persons with impaired immune systems (acquired or primary)
Persons on steroid therapy (other than corticosteroid replacement)

REFERENCES
Advisory Committee on Immunization Practices (ACIP) Provisional Recommendations for Prevention of Varicella, posted August 2006. http://www.cdc.gov/nip/vaccine/varicella/varicella_acip_recs_prov_june_2006.pdf Last accessed October 31, 2006.
VARIVAX® [Varicella Virus Vaccine Live (Oka/Merck)] Vaccine package insert, Merck, copyright 2001. Centers for Disease Control and Prevention. Prevention of varicella: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1996; 45 (No. RR-11): pp1-36.
Centers for Disease Control and Prevention. Prevention of Varicella: updated recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1999; 48 (No. RR-6): pp1-5.
Centers for Disease Control and Prevention. Vaccine Information Statement – Varicella Vaccine 12/16/98. http://www.cdc.gov/nip/publications/VIS/visvaricella.pdf Last accessed October 31, 2006.

SECTION V: SEXUALLY TRANSMITTED DISEASES

5.010 – 5.160

Screening Criteria for Chlamydia and Gonorrhea
Effective September 1, 2010

The screening criteria for chlamydia and gonorrhea have been revised based on risk criteria, national recommendations, and availability of funds. The screening criteria for Tennessee are:

1. **Family Planning:**
   - Screen at the routine initial/annual exam:
     - all clients less **than age 26**
     - all clients ages **26-29** who receive family planning services in a county with a chlamydia positivity rate of 3 percent or higher for 2009. **(*See below for these counties.)**
   - For clients ages **26 and over** (regardless of county where family planning services are received), only screen the following:
     - a client being prepared for IUD insertion;
     - a client with documented NEW signs or symptoms;
     - a client named as a contact;
     - a client using drugs;
     - a client exchanging sex for money or drugs.
   - Regardless of age, a female client who has been treated for a positive chlamydia test should be retested 3 months after treatment or whenever she next seeks medical care within the following 3-12 months regardless of whether the client believes her partner was treated.

2. **STD:**
   - **Test all STD clients:**
     - if contact to any STD;
     - symptomatic for any STD;
     - who request an examination for any STD.

     Notable exception: Chlamydia testing is not required but *should be offered* to clients requesting only an HIV test and who are asymptomatic for any other STD.

3. **EPSDT:**
   - All sexually active clients 11 years and older should be screened for sexually transmitted diseases (STDs) during routine EPSDT visits.

4. **Adult Health/Other:**
   - Offer testing to any sexually active client less than age 26.
   - Test clients with signs or symptoms suggestive of gonorrhea or chlamydia.

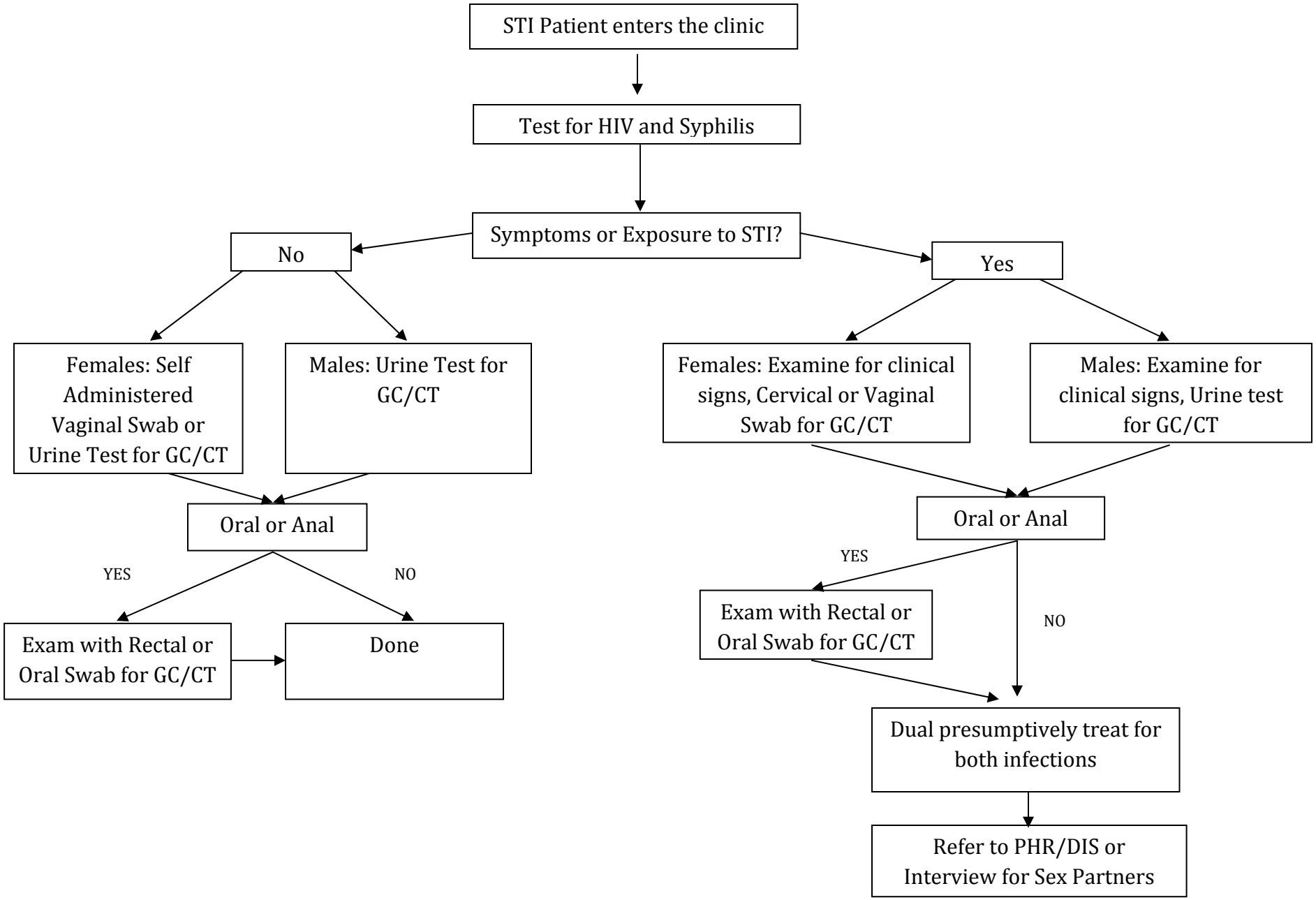
5. **Pregnancy Testing:**
   - All women under age 30 reporting to clinic for a urine pregnancy test should be offered chlamydia and gonorrhea screening from their pregnancy test urine sample. Considering the sequelae that might occur in the mother and neonate if the infection persists, repeat testing is recommended 4 - 6 weeks after completion of therapy for all pregnant women to ensure therapeutic cure.

*The counties with positivity rates of 3 percent or higher in women ages 26 – 29 for 2009 are:

Northeast Region – Johnson and Unicoi
East Tennessee Region – Anderson, Jefferson, Campbell, Cocke, Grainger, and Sevier
Southeast – Franklin and Marion
Upper Cumberland – Overton and Smith

Mid Cumberland – Sumner, Cheatham and Dickson
South Central – Giles, Lawrence and Marshall
West Tennessee – Chester, Crockett, Dyer, Fayette, Gibson, Hardeman, Haywood, Henry, Lake, Lauderdale, Obion, Tipton, and Weakley
Memphis/Shelby County – Health Department clinics, Memphis Planned Parenthood
Nashville/Davidson
Knoxville/Knox
Jackson/Madison

Decision Tree for Examination of STI Patients



CHLAMYDIA TRACHOMATIS, Case (0798), Contact (V016)

SUBJECTIVE

Symptoms may include:

FEMALES-
- Vaginal discharge
- Dysuria, pelvic pain
- Changes in menses
- Intermenstrual spotting
- Postcoital bleeding
- Commonly asymptomatic

MALES -
- Dysuria
- Penile discharge
- Commonly asymptomatic

"A friend told me to come in"
Sexual contact to confirmed or suspected case of chlamydia, gonorrhea, NGU, or non-specific cervicitis
Private physician or other health care provider referral

OBJECTIVE

Muco-purulent discharge from urethra or cervix
Laboratory positive for *Chlamydia trachomatis*

ASSESSMENT

Confirmed or suspected case of *Chlamydia trachomatis*
Contact to confirmed or suspected case of *Chlamydia trachomatis*
Last menstrual period
Assess sites exposed (vaginal, oral, rectal, and urethral)

PLAN

Screen[1] for chlamydia and gonorrhea using currently available test; refer to "*Laboratory Policies and Procedures Manual for Local Health Departments*" for information on specimen storage and mailing.
Draw blood for syphilis serology.

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[1] Several studies of different test technologies have shown various post-treatment intervals wherein a false positive test result may occur. Therefore, repeat testing should not be performed within 3 weeks of appropriate treatment. Patients that have been exposed to an infected person within 3 weeks of treatment should be retreated, but not retested.

Consider need for hepatitis B vaccination and provide (if available) or refer as indicated
Offer HIV counseling and literature for all clients; offer testing for high-risk individuals or those requesting service.
Interview patient for sexual contacts and encourage all contacts to obtain treatment:
Obtain name, address, phone number, age, sex, race, and date of exposure of all contacts within the last 60 days; do not write the information in the patient's record; if a contact to confirmed case, do not write the original case name in the contact's chart.
Notify the public health representative of the original positive case name and contact information
Counsel, examine, and test all persons exposed.

TREATMENT

Use dual treatment on the person to be treated, unless you have a confirmed negative test for gonorrhea (see protocol for gonorrhea).

If the chlamydia test is positive, refer to the treatment guidelines found in the PHN Protocol for **Chlamydia Partner Delivered Treatment.**

AZITHROMYCIN is the drug of choice for chlamydia.

Treatment for Chlamydia Only[2]

Adult/Adolescent:
Azithromycin 1 gm orally as a single dose
OR
Doxycycline 100 mg orally BID x 7 days[3]

Pregnant Adult/Adolescent or Nursing Mothers:
(if unprotected coitus since LMP, suspect pregnancy and treat accordingly):
Azithromycin 1 gm orally as a single dose
OR
Amoxicillin 500 mg orally TID x 7 days

Allergic Pregnant Individuals:
Consult with physician regarding choice of above antibiotics

Dual Treatment for Chlamydia and Gonorrhea (regardless of site of exposure)[4]

[2] Patients and/or sex partners presenting for treatment of laboratory confirmed chlamydia, and are **known to have a negative gonorrhea test**, are to be treated for chlamydia only.

[3] Doxycycline is contraindicated in pregnancy and nursing mothers.

Non-Allergic Adult/Adolescent:
Ceftriaxone 250 mg IM as a single dose
PLUS ONE OF THE FOLLOWING:
Azithromycin 1 gm orally as a single dose
OR
Doxycycline 100 mg orally BID x 7 days[5]

Non-Allergic Pregnant Adult/ Adolescent/ Nursing Mothers:
Ceftriaxone 250 mg as a single dose
PLUS ONE OF THE FOLLOWING:
Azithromycin 1 gm orally as a single dose
OR
Amoxicillin 500 mg orally TID x 7 days

Allergic Adult/Adolescent:
Azithromycin 2 grams (tablets only) orally as a single dose[6]

Allergic Pregnant Adult/Adolescent/Nursing Mothers :
Azithromycin 2 grams (tablets only) orally as a single dose
OR
Azithromycin 1 gm orally as a single dose for chlamydia and refer to physician for cephalosporin desensitization and treatment (an infectious disease physician experienced in the procedure should be selected)

DILUENT- Use 1% lidocaine solution, sterile water for injection, or 0.9% sodium chloride solution and document accordingly (if allergic to lidocaine, mix with sterile water or normal saline). Lidocaine allergy includes allergies to local anesthesia such as Nupercaine®, Xylocaine®, Carbocaine®, Marcaine® or Atanert®. There has been no cross sensitivity shown to para-amninobenzoic derivatives such as procaine, tetracaine, and benzocaine.

Penicillin or Cephalosporin Allergies: Ceftriaxone is the drug of choice for gonorrhea. If the patient alleges an allergy to penicillin or cephalosporins, the nurse should take a thorough history

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[4] When the laboratory results for both diseases are not available on the person being treated, dual treatment (for chlamydia and gonorrhea) should be administered. Do not refer for desensitization treatment in absence of lab confirmed gonorrhea.

[5] Doxycycline is contraindicated in pregnancy and nursing mothers.

[6] Studies have indicated increase frequency of gastrointestinal problems with a 2 gram dose of azithromycin. According to the PDR, azithromycin tablets can be taken with food to lessen the occurrence of GI symptoms. Patients should be advised to return for repeat treatment if vomiting occurs.

of allergic response to determine if there is a history of severe allergic reaction such as anaphylaxis or Stevens Johnson syndrome. If the history indicates a non-anaphylactic reaction, (i.e. mild to moderate rash, itching, etc.), the patient should be treated with ceftriaxone. If history indicates a severe reaction such as anaphylaxis, or nurse is unable to gain a history consistent with a non-anaphylactic reaction the patient should be treated with 2 grams azithromycin.[7] Since there is little to no incidence of ceftriaxone resistant gonorrhea reported in the United States, all patients returning with gonorrhea and persistent or recurring symptoms should be considered reinfected and retreated with ceftriaxone.[8]

Health Teaching

Offer condoms and encourage use during any sexual activity.
Encourage all sexual contacts to obtain care.
Stress completion of all medicines and advise to avoid intercourse until patient and their sex partner(s) have completed treatment including 7 days after single-dose therapy or completion of 7 or 14-day treatment regimen.
Warn patient that until medication is completed and all sex partners are treated, chlamydial infection may be transmitted and reinfection is likely.
If using oral contraceptive, encourage use of barrier method until two weeks following completion of treatment. Offer condoms.
Discuss HIV and STD prevention.
Encourage voiding before and after intercourse.
Increase water intake with medications.
Avoid antacids and exposure to sun when taking doxycycline.
Stress hygiene, including wearing cotton underwear, loose clothing, avoidance of underpants while sleeping, wiping front to back, and avoid feminine hygiene sprays and deodorants.
Stress need for follow-up exam if symptoms persist, recur, or exacerbate.

Referral Indicators

Pregnant individuals with **significant** medical issues (consultation with private physician or Health Officer prior to treatment)
Prepubertal children as indicated (refer to HSA Child Abuse Policy)

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[7] Studies indicate that 10% of patients alleging an allergy to PCN are actually allergic when testing is done. Only 5-10% of patients allergic to PCN will have a cross reaction/sensitivity to cephalosporins. Therefore, only 0.5-1% of patients that allege an allergy to PCN would actually be allergic to a cephalosporin. With a thorough history taken on those patients alleging PCN allergy, a risk of an allergic reaction to ceftriaxone will be extremely rare.

[8] There is no need for the laboratory to perform sensitivity testing on isolates unless the CDC begins reporting an increased incidence of ceftriaxone-resistant gonorrhea from their Gonorrhea Isolate Surveillance Program GISP).

No response to treatment
Dyspareunia and/or moderate to severe abdominal pain
Complications (i.e., PID, postpartum infection, abnormal Pap)

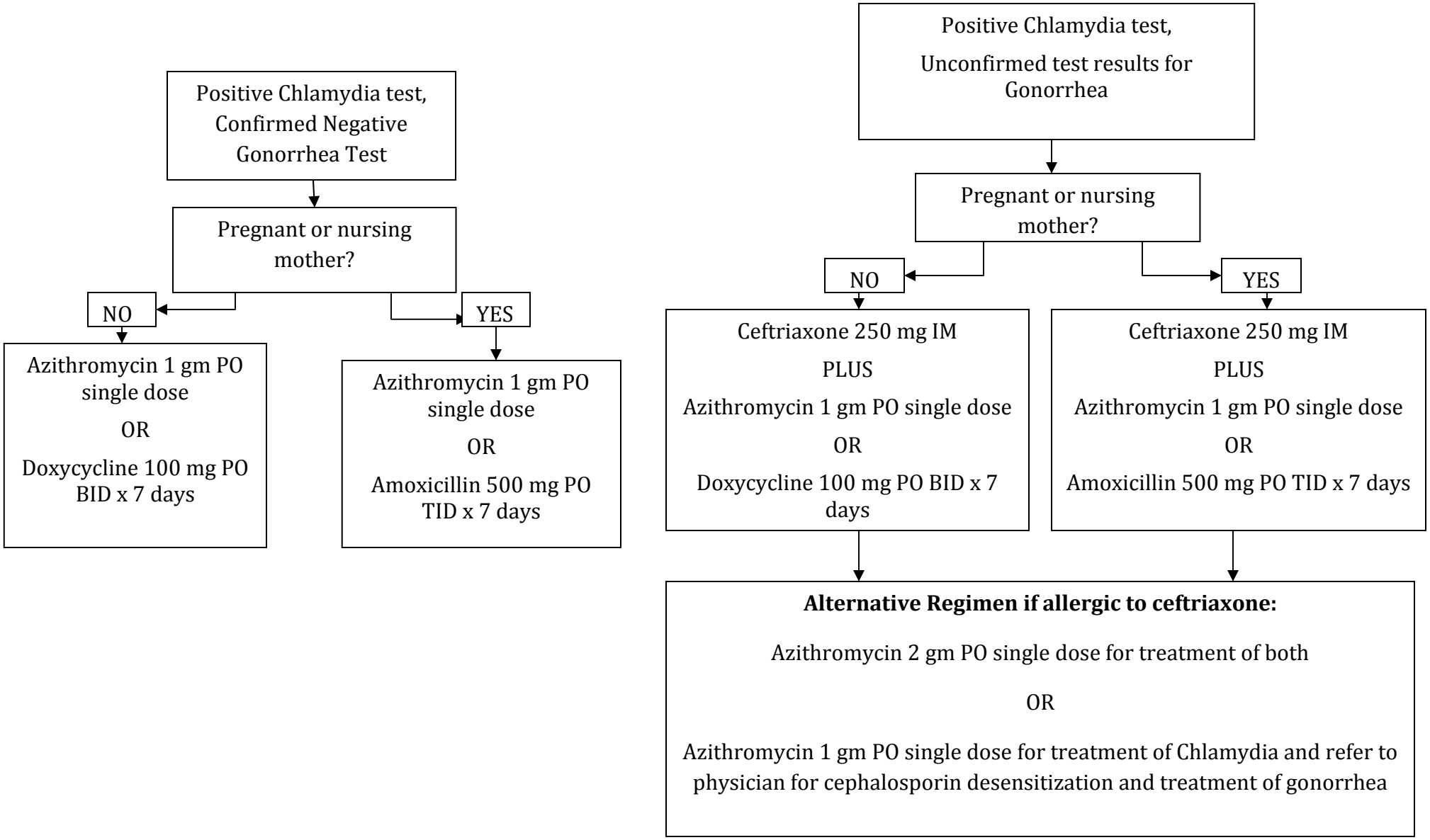
Follow-Up

Return if no improvement after treatment.
Counsel infected patient to return for retesting 3 months after completion of treatment. If this does not occur, retest all persons treated for chlamydia infection if they present for care within 12 months following treatment.
In cases of treatment failure, consult with nurse practitioner or physician.
Report all cases to Sexually Transmitted Disease Program representative.
Test of cure is not appropriate except in pregnant women who should be tested 4-6 weeks after completing therapy.

REFERENCE

Centers for Disease Control and Prevention Sexually Transmitted Diseases Treatment Guidelines, 2010. MMWR 2010; 59(No. RR-12).

Chlamydia and Gonorrhea Treatment Decision Tree



Protocol 5.020 - Chlamydia Trachomatis, Case, Contact, Opt-Out HIV Testing (Metros Areas Only)

Removed from manual on December 9, 2010

CHLAMYDIA TRACHOMATIS, CONTACT PARTNER DELIVERED THERAPY

NOTE: ***In 2002 the Board of Medical Examiners and the Board of Osteopaths adopted an amendment to the medical practice act allowing providers and those who provide medical services under their responsibility and control to use partner delivered therapy.***

The following protocol should be implemented as an important DISEASE CONTROL STRATEGY and in accordance with CDC recommendations.

SUBJECTIVE

Partner delivered therapy is for those contacts to index cases of chlamydia who are unlikely to seek medical care.

OBJECTIVE

A laboratory confirmed Chlamydia infection without evidence of co-infection with gonorrhea or other complications suggestive of a relationship to Chlamydia infection

Provision of treatment of the (index) patient for Chlamydia

An attempt to persuade the infected patient to have all partners evaluated and treated and indication from the patient that partner(s) would not comply

PLAN

Document objective findings in index patient's record.

Provide a Chlamydia fact sheet to the patient with copies for all partners.
http://www.cdc.gov/std/chlamydia/chlamydia-fact-sheet.pdf
http://www.nlm.nih.gov/medlineplus/druginfo/meds/a697037.html

Counsel the patient on sexual abstinence for seven days after treatment and until seven days after partners have been treated.

Provide to the treated patient a non-named signed (MD or NP) prescription(s) or a signed, name-specific prescription(s) **OR**

Dispense to the treated patient 1 gram of azithromycin for each of the unnamed sex partners or for each of the total number of known sex partners named by the patient.

Contacts who present to the health department requesting treatment for Chlamydia will be given the following:

- 1 gram azithromycin
- Opportunity for a full STD examination
- Opportunity for questioning about other STD symptoms and encouragement to have HIV testing

GONORRHEA

SUBJECTIVE
Symptoms may include:

FEMALES- (a large percentage of infected women are asymptomatic in the early stages of disease

Early Symptoms
- Dysuria
- Leukorrhea, change in vaginal discharge
- Unilateral labial pain and swelling
- Lower abdominal discomfort
- Pharyngitis

Later Symptoms
- Purulent, irritating vaginal discharge
- Fever (possibly high)
- Rectal pain and discharge
- Abnormal menstrual bleeding
- Increased dysmenorrhea
- Nausea, vomiting
- Lesions in genital area
- Joint pain and swelling
- Upper abdominal pain

MALES -

Early Symptoms
- Dysuria with increased frequency
- Whitish discharge from penis
- Pharyngitis

Later Symptoms
- Yellowish/greenish discharge from penis
- Epididymitis
- Proctitis

"A friend told me to come in"
Pain, tenderness in pelvic organs
Sexual contact to confirmed or suspected case of gonorrhea
Private physician or other health care provider referral

OBJECTIVE
Purulent discharge from urethra or cervix noted on exam
Laboratory positive for *Neisseria gonorrhoeae*

ASSESSMENT
Confirmed or suspected case of *Neisseria gonorrhoeae*
Contact to confirmed or suspected case of *Neisseria gonorrhoeae*
Last menstrual period
Assess sites exposed (vaginal, oral, rectal, and urethral)

PLAN

Screen[1] for chlamydia and gonorrhea using currently available test; refer to "*Laboratory Policies and Procedures Manual for Local Health Departments*" for information on specimen storage and mailing.

Draw blood for syphilis serology.

Consider need for hepatitis B vaccination and provide (if available) or refer as indicated

Offer HIV counseling and literature for all clients; offer testing for high-risk individuals or those requesting service.

Interview patient for sexual contacts and encourage all contacts to obtain treatment:

Obtain name, address, phone number, age, sex, race, and date of exposure of all contacts within the last 60 days; do not write the information in the patient's record; if a contact to confirmed case, **do not write the original case name in the contact's chart.**

Notify the public health representative of the original positive case name and contact information

Counsel, examine, and test all persons exposed.

TREATMENT

It is recommended that all patients being treated for gonorrhea receive dual treatment for both gonorrhea and chlamydia.[2]

Treatment for Gonorrhea and Chlamydia (regardless of site of infection)

Non-Allergic Adult/Adolescent:

Ceftriaxone 250 mg IM as a single dose

PLUS ONE OF THE FOLLOWING:

Azithromycin 1 gm orally as a single dose

OR

Doxycycline 100 mg orally BID x 7 days[3,4]

Non-allergic Pregnant Adult/Adolescent or Breastfeeding Mothers:
(if unprotected coitus since LMP, suspect pregnancy and treat accordingly):

Ceftriaxone 250 mg IM as a single dose

PLUS ONE OF THE FOLLOWING:

Azithromycin 1 gm orally as a single dose

OR

Amoxicillin 500 mg orally TID x 7 days[4]

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[1] Several studies of different test technologies have shown various post-treatment intervals wherein a false positive test result may occur. Repeat testing for *N. gonorrhoeae* should not be performed less than 1 week after appropriate treatment, and repeat testing for *C. trachomatis* should not be performed less than 3 weeks after appropriate treatment. Patients that have been exposed to an infected person within these intervals treatment should be re-treated, but not re-tested.

[2] Dual treatment is recommended because patients infected with *N. gonorrhoeae* frequently are co-infected with *C. trachomatis*, Additionally, the use of a second antimicrobial is recommended for use with ceftriaxone to theoretically improve treatment efficacy and delay emergence and spread of resistance to *N. gonorrhoeae* to cephalosporins.

[3] Doxycycline is contraindicated in pregnancy and nursing mothers.

[4] Because of resistance concerns among Gonococcal Isolate Surveillance Project isolates, the use of azithromycin as the second antimicrobial is preferred to doxycycline (and, among pregnant or nursing mothers, to amoxicillin).

Allergic Adult/Adolescent (regardless of pregnancy or breastfeeding status):
Azithromycin 2 grams (tablet only) orally as a single dose
PLUS
Test-of-cure in 1 week
If the patient has no clinical symptoms of persistent infection, the DNA-Probe specimen collection may be used for testing.
OR
If the patient has persistent symptoms, a culture plate with antimicrobial susceptibility should be performed.

The decision to re-treat at the test-of-cure visit will be based on nursing judgment and/or consultation with the APN or physician.

DILUENT- Use 1% lidocaine solution, sterile water for injection, or 0.9% sodium chloride solution and document accordingly (if allergic to lidocaine, mix with sterile water or normal saline). Lidocaine allergy includes allergies to local anesthesia such as Nupercaine®, Xylocaine®, Carbocaine®, Marcaine® or Atanert®; there has been no cross sensitivity shown to para-amninobenzoic derivatives such as procaine, tetracaine, and benzocaine.

Penicillin or Cephalosporin Allergies: Ceftriaxone is the drug of choice for gonorrhea. If the patient alleges an allergy to penicillin or cephalosporins, the nurse should take a thorough history of allergic response to determine if there is a history of a severe reaction such as anaphylaxis or Stevens Johnson syndrome. If the history indicates a non-anaphylactic reaction, (i.e. mild to moderate rash, itching, etc.), the patient should be treated with ceftriaxone. [5] If history indicates a severe reaction such as anaphylaxis, or the nurse is unable to gain a reliable history consistent with a non-anaphylactic reaction, the patient should be treated with azithromycin 2 grams followed by a test-of-cure 1 week after treatment.

Health Teaching

Offer condoms and encourage use during any sexual activity.
Encourage all sexual contacts to obtain care.
Stress completion of all medicines and advise to avoid intercourse until patient and their sex partner(s) have completed treatment including 7 days after single-dose therapy or completion of 7 or 14-day treatment regimen.
Warn patient that until medication is completed and all sex partners are treated, gonococcal infection may be transmitted and reinfection is likely.
If using oral contraceptive, encourage use of barrier method until two weeks following completion of treatment. Offer condoms.
Discuss HIV and STD prevention.
Encourage voiding before and after intercourse.
Increase water intake with medications.

[5] Studies indicate that only 10% of patients alleging an allergy to PCN are actually allergic when testing is done. Only 5-10% of patients allergic to PCN will have a cross reaction/sensitivity to cephalosporins; therefore, only 0.5-1% of patients that allege an allergy to PCN would actually be allergic to a cephalosporin. With a thorough history taken on those patients alleging PCN allergy, a risk of an allergic reaction to ceftriaxone will be extremely rare.

Avoid antacids and exposure to sun when taking doxycycline.
Stress hygiene, including wearing cotton underwear, loose clothing, avoidance of underpants while sleeping, wiping from front to back and avoid feminine hygiene sprays and deodorants.
Stress need for follow-up exam if symptoms persist, recur, or exacerbate.

Referral Indicators

Pregnant individuals with **significant** medical issues (consultation with private physician or Health Officer prior to treatment)
Prepubertal children as indicated (refer to HSA Child Abuse Policy)
No response to treatment
Dyspareunia and/or moderate to severe abdominal pain
Complications (i.e. PID, postpartum infection, abnormal Pap)

Follow-Up

Counsel all infected clients, regardless of treatment regimen, to return 1 week after treatment **if they experience persistent clinical symptoms**.
In the absence of persistent clinical symptoms, counsel all infected patients to return for retesting of gonorrhea 3 months after completion of treatment or 1 week after treatment if not treated with ceftriaxone. If this does not occur, retest all persons treated for infection if they present for care within 12 months following treatment.
Treatment failure should be considered in all patients with clinical or laboratory evidence of persistent infection after treatment. In all cases of suspected treatment failure, consult with nurse practitioner or physician and obtain a culture with antimicrobial susceptibility testing on specimens from relevant anatomic sites.
Suspected treatment failures should be reported within 24 hours.
Report all cases to Sexually Transmitted Disease Program representative.

REFERENCE

Centers for Disease Control and Prevention Update to CDC's Sexually Transmitted Diseases Treatment Guidelines, 2010: Oral Cephalosporins No Longer a Recommended Treatemtn for Gonococcal Infections. MMWR 2012; 61(31);590-594.

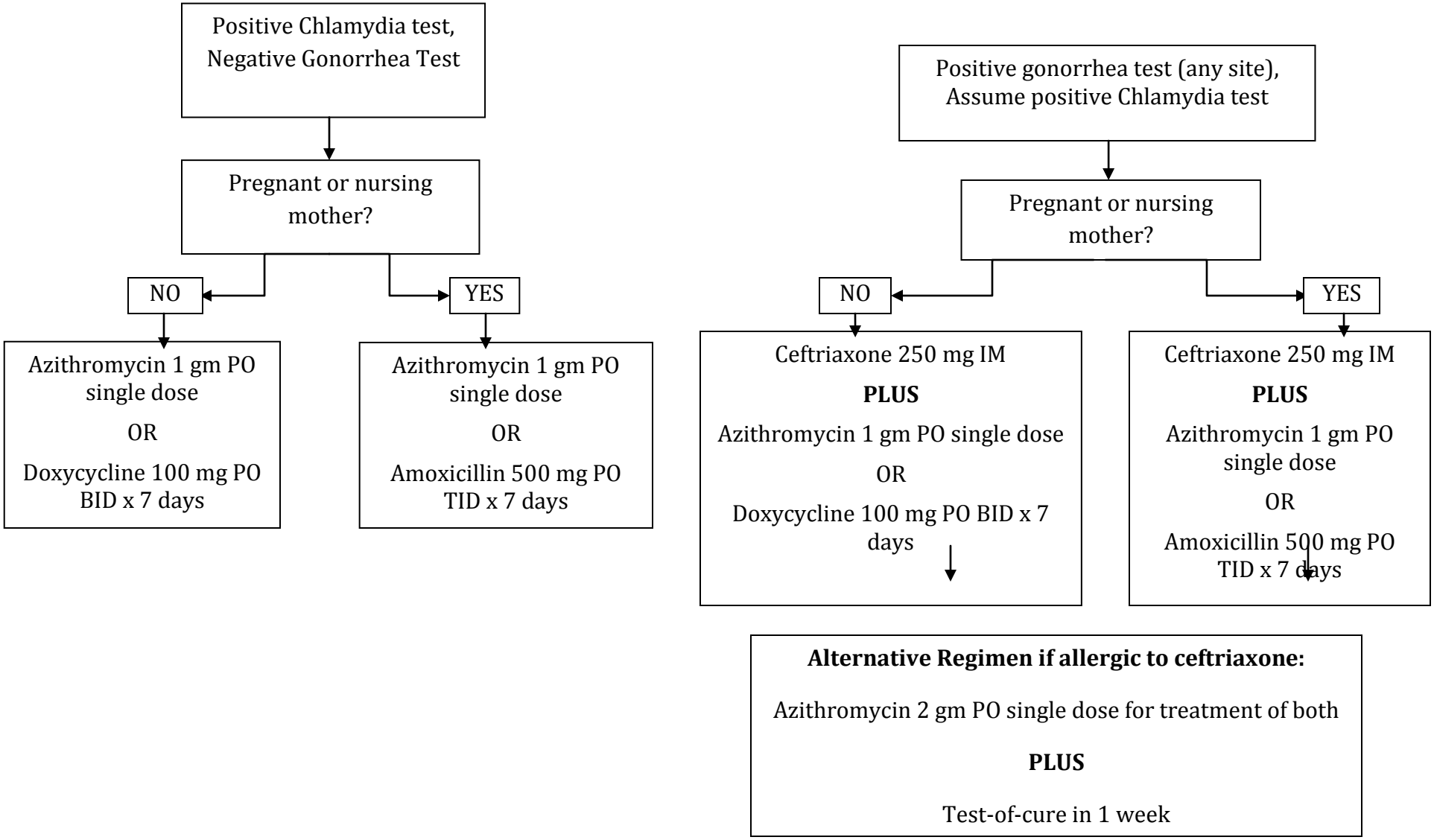
Centers for Disease Control and Prevention Sexually Transmitted Diseases Treatment Guidelines, 2010. MMWR 2010; 59 (No. RR-12).

Lyss SB, Kamb ML, Peterman TA, et al. *Chlamydia trachomatis* among patients infected with and treated for *Neisseria gonorrhoeae* in sexually transmitted disease clinics in the United States. Ann Intern Med 2003;139:178–85.

Sathia L, Ellis B, Phillip S, et al. Pharyngeal gonorrhoea—is dual therapy the way forward? Int J STD AIDS 2007;18:647–8.

Golden M, Kerani R, Shafii T, Whittington W, Holmes K. Does azithromycin co-treatment enhance the efficacy of oral cephalosporins for pharyngeal gonorrhea? Presented at: 18th International Society for STD Research (ISSTDR) Conference, London, UK, June 2009.

Gonorrhea and Chlamydia Treatment Decision Tree



Protocol 5.050 - Gonorrhea, Case or Contact Opt-Out HIV Testing (Metro Areas Only)

Removed from manual on December 9, 2010

HEPATITIS B, Case or Presumptive (0703)

GENERAL INFORMATION

Hepatitis B, confirmed or strongly suspected, may be reported to health department by physician's office or hospital
Confirmation is by serologic testing, the presence of HBsAg, IgM anti-HBc, or HBeAg

PLAN

If pregnant, notify nursing supervisor and communicable disease director or medical director (see Tennessee Department of Health, Perinatal Hepatitis B Prevention Program guidelines for further information)
Open viral hepatitis case record (Form CDC 53.1)
Discuss blood and body fluid precautions until HBsAg disappears and anti-HBs appears
Interview household and sexual contacts and others who may have contact with blood or secretions e.g., intravenous drug users (for contacts see Hepatitis B, All Other Contacts, Post Exposure)
Offer condoms

REFERENCE

Tennessee Department of Health, Perinatal Hepatitis B Prevention Program Guidelines, Revised 10/98

HEPATITIS B, Infant Contacts

GENERAL INFORMATION

Infant born to a woman infected with hepatitis B, either chronically or acutely, which includes all women who test positive for hepatitis B surface antigen (HBsAg) (see Tennessee Department of Health, Perinatal Hepatitis B Prevention Program Guidelines for further information)

PLAN

Notify CEDS Regional Director or designated Regional Perinatal Hepatitis B Coordinator of the infant that needs follow-up by the Perinatal Hepatitis B Prevention Program and care.

Assure that infant has received Hepatitis B Immune Globulin (HBIG) and the first dose of hepatitis B vaccine (HBV) (0.5 ml) I.M. within 12 hours of birth. If infant was not given HBIG and HBV at birth and more than 7 days have elapsed since birth - **do not give HBIG.** If infant was not given HBIG and **fewer than 7 days** have elapsed since birth, **give HBIG,** if available, or notify those listed above to arrange for HBIG to be given as soon as possible.

Administer the second and third dose of HBV according to Hepatitis B Vaccine protocol. Combination vaccines containing hepatitis B also may be used to complete the vaccine series using their recommended schedules.

Test infant for HBsAg and anti-HBs no earlier than one month after completion of HBV series at 9 to 18 months of age.

If infant is positive for HBsAg, refer for medical evaluation.

If infant is negative for anti-HBs and HBsAg, repeat the complete HBV series according to HBV single antigen vaccine protocol; retest for anti-HBs and HBsAg one month after last dose of HBV and follow Perinatal Hepatitis B Prevention Program guidelines.

Assure that the designated Regional Perinatal Hepatitis B Prevention Coordinator is aware of immunization visits and test results to facilitate case management.

Health Teaching:

Although many hepatitis B viral infections cause no symptoms, discuss the following symptoms of hepatitis which would need medical evaluation if present:

- serum sickness-like prodrome
- skin eruptions, urticaria
- arthralgias, arthritis
- lassitude
- anorexia
- nausea, vomiting
- headaches, fever
- dark urine, jaundice, moderate liver enlargement with tenderness

REFERENCES

"Epidemiology and Prevention of Vaccine-Preventable Diseases", Centers for Disease Control and Prevention, DHHS, February 2008

Tennessee Department of Health, Perinatal Hepatitis B Prevention Program Guidelines, Revised 10/98

Red Book, Report of the Committee on Infectious Diseases, 27th Edition. 2006

HEPATITIS B, Other Non-Occupational Contacts POST-EXPOSURE

GENERAL INFORMATION

Client may have:

History of sexual contact, needle sharing, or household exposure to blood or body fluids. Most will need testing for markers of hepatitis B infection and vaccination, if susceptible.

PLAN

Notify Regional Communicable and Environmental Disease Services (CEDS) Director or Regional Perinatal Hepatitis B Coordinator if patient is pregnant.

Evaluate need for Hepatitis B Immune Globulin (HBIG) and Hepatitis B Vaccine (HBV) (percutaneous or mucosal exposure) based on the HBsAg status of the source and the HBV immunization and vaccine-response status of the person exposed.

Evaluate need for pre- and post-vaccination serologic testing.

Table 1. Guidelines for **Pre-Vaccination** Testing and Interpretation of Results for Non-Occupational Contacts of HBsAg Positive Persons

Exposure	**Testing**	**Timing of test**	
All household, needle-sharing, sexual contacts	HBsAg and anti-HBs	Before administering PEP (at same visit)	
Test Results	**HBsAg positive**	**HBsAg negative, anti-HBs positive**	**HBsAg negative, anti-HBs negative**
Next steps	Patient is infected. Discontinue vaccination, refer for medical follow-up, refer to Regional CEDS Director for case investigation, contact management	Patient immune, discontinue vaccination	Patient is susceptible, complete vaccine series

HEPATITIS B, Other Non-Occupational Contacts POST-EXPOSURE
(Continued)

Table 2. Guidelines for **Postexposure Prophylaxis (PEP)** of susceptible persons with non-occupational discrete exposures to blood or body fluids that contain blood from a known HBsAg positive source, by exposure type and vaccination status**:

Exposure	**Unvaccinated** (or incompletely vaccinated)	**Previously vaccinated** (without prior serologic confirmation of immunity)*
Percutaneous (e.g., bite or needle stick) or mucosal exposure (within 7 days)	Administer HBIG and initiate HBV series	Administer one HBV booster dose
Sexual contact (within 14 days of last contact)	Administer HBIG and initiate HBV series	Administer one HBV booster dose
Victim of sexual assault (within 14 days)	Administer HBIG and initiate HBV series	Administer one HBV booster dose

*Persons who have ever had laboratory confirmation of immunity (e.g., positive for anti-HBs) do not require a booster dose or HBIG.
**Administer PEP as soon as possible, preferably within 24 hours. PEP should not be given after the maximum number of days specified in the exposure category, because it is not expected to be protective. Vaccine may still be appropriate to protect from future exposure.

Federally funded vaccine may be used for all HBV vaccine used as PEP and to complete immunization series of all at risk contacts, regardless of age.

Table 3. Guidelines for PEP of susceptible persons with non-occupational discrete exposures to blood or body fluids that contain blood from a person of **unknown HBsAg status**, by exposure type and vaccination status**:

Exposure	**Unvaccinated** (or incompletely vaccinated)	**Previously vaccinated** (with *or* without previous serologic testing)
Percutaneous (e.g., bite or needle stick) or mucosal exposure (within 7 days)	Initiate HBV series	No treatment
Sexual contact (within 14 days of last contact)	Initiate HBV series	No treatment
Victim of sexual assault (within 14 days)	Initiate HBV series	No treatment

** Administer PEP as soon as possible, preferably within 24 hours. PEP should not be given after the maximum number of days specified in the exposure category, because it is not expected to be protective. Vaccine may still be appropriate to protect from future exposure.

HEPATITIS B, Other Non-Occupational Contacts POST-EXPOSURE
(Continued)

Certain contacts should receive post-vaccination testing to document immunity.

Table 4. Guidelines for **Post-Vaccination Testing of Certain Contacts** of HBsAg positive persons.

Type of exposure	**Test needed**	**Test timing** (never earlier than 1 month after vaccination)
Ongoing sexual partner of infected person	Anti-HBs	At least 1 month after vaccination
Ongoing needle-sharing partner of infected person	Anti-HBs	At least 1 month after vaccination
Children <5 years in household of an infected person (not offspring of case)*	Anti-HBs	At least 1 month after vaccination
Fully immunized children of woman with chronic hepatitis B: considered perinatal contacts	Anti-HBs and HBsAg (if not previously tested)	At least 1 month after vaccination: see detailed information below

* Children under 5 years are at high risk of chronic infection if they remain susceptible following vaccination and are exposed to the virus. This risk declines with age.

If HBIG has been given in past 4 months, consult with Health Officer.

For fully immunized children of a woman who is HBsAg+, where there is any possibility that she was HBsAg+ during her pregnancy with them: these children are not simply household contacts, but should be considered incompletely evaluated perinatal contacts that are overdue for post-vaccination testing. Like younger perinatal contact infants, these children are still due to have serology done for both **HBsAg and anti-HBs.**

Testing should **not** be done if there is documentation that the child has ever had serology proving they were immune or proving they were already infected. **If they are fully immunized**, **HBsAg negative and anti-HBs negative, a single challenge dose of vaccine** should be given and the patient should have an anti- HBs drawn 1 month later. This will stimulate a positive antibody response in the vast majority of children who are immune but whose antibody levels had dropped.

For patients that test negative for anti-HBs following three doses of vaccine, **repeat the vaccine series of 3 doses** in accordance with the routine vaccination schedule and re-test for anti-HBs at least 1 month after the second series. If the patient remains non-immune, they are a vaccine **non-responder** and no further vaccination will be of benefit. Educate about risk

behaviors and their ongoing risk of HBV infection if exposed. HBIG will be needed for protection if an exposure occurs in the future.

Health Teaching:

Although many hepatitis B viral infections cause no symptoms, discuss symptoms of hepatitis B: serum sickness-like prodrome (skin eruptions, urticaria, arthralgias, arthritis), lassitude, anorexia, nausea, vomiting, headache, fever, dark urine, jaundice, and moderate liver enlargement with tenderness.
Encourage HBV vaccine and the importance of testing, where relevant.
Avoid sharing needles with others.
Abstain from sexual contact with infected partners.
Use condoms for each sexual encounter to prevent exchange of body fluids or skin contact.
Discuss the use of lubricants (such as K-Y) during sexual encounter (do not use oil-based products).
Avoid donating blood or organs if test positive for hepatitis B.

REFERENCES

"Epidemiology and Prevention of Vaccine-Preventable Diseases", Centers for Disease Control and Prevention, DHHS, 10th Edition, February 2008
Red Book, Report of the Committee on Infectious Diseases, 27th Edition. 2006
MMWR, A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States. Recommendations of the Advisory Committee on Immunization Practices (ACIP) Part II: Immunization of Adults. December 8, 2006. Vol. 55 Number RR-16.
MMWR, Recommendations for Identification and Public Health Management of Persons with Chronic Hepatitis B Virus Infection. September 19, 2008 / Vol. 57 / No. RR-8.
"Federally Funded Vaccines for Adults" memo from Dr. Kelly Moore and Dr. Tom Jaselskis July 8, 2009

HEPATITIS C, (Non - A, Non - B), Case

NOTE: Only applicable for patients with physician diagnosed, active acute or chronic hepatitis C

General Information:

Hepatitis C may be chronic or acute.
If patient has positive hepatitis C antibody test, refer to physician for evaluation.
Client may have history of blood transfusion, IV drug use, tattooing, or percutaneous exposure to blood or be referred by physician, health care provider or blood donation agency because of hepatitis C or positive serology.
Acute disease tends to be mild and insidious, in onset, and most infections are asymptomatic; however symptoms may include jaundice, anorexia, nausea, vomiting, malaise, abdominal discomfort, flu-like syndrome and fever.
Hepatomegaly, splenomegaly, elevated ALT and AST enzyme levels may be seen in acute cases; positive anti- HCV (antibody to HCV) serology in chronic cases.
Hepatitis C virus infection becomes chronic in approximately 75-85% of cases.

Plan:

Inform patient of false positives in early serologic testing, unclear risk of perinatal transmission, possible development of chronic active hepatitis, cirrhosis and need to refrain from donating blood.
Teach patient about transmission and prevention measures for percutaneous and sexual exposures (although not necessarily the method of transmission).
Immune Globulin is not recommended for contacts at this time.

Health Teaching:

Avoid IV drug use or sharing of needles with others.
Use condoms with each sexual encounter to prevent exchange of body fluids or skin-to-skin contact.
Use of lubricant (such as KY) during sexual encounters can lower risk of tissue damage (do not use oil-based products).
Refrain from donating blood, organs, tissue or semen and from sharing toothbrushes and razors if test positive for hepatitis C.
Avoid alcohol/OTC medications that affect the liver.
Inform of need for immunization against hepatitis A and hepatitis B.

Reference:

Red Book, 2006 Report of the Committee on Infectious Diseases, 27th Edition
http://www.cdc.gov/hepatitis/HCV/HCVfaq.htm#section1

HERPES SIMPLEX
(GENITAL HERPES)

BACKGROUND

Genital Herpes is a common sexually transmitted disease caused by the herpes simplex virus, usually type 2 (HSV-2). While HSV-2 causes mainly genital infections, HSV-1 is associated primarily with oral infection, however either type can infect any site. It is a life-long viral infection that can be transmitted through anal, vaginal, or oral sex.
The majority of genital herpes infections are transmitted by persons unaware that they have the infection or who are asymptomatic when transmission occurs. The average incubation period after exposure is 4 days with a range of 2 to 12 days.
Transmission from an infected male to his female partner is more likely than from an infected female to her male partner.

SUBJECTIVE

Primary infection:
Symptoms occur from 3 to 7 days after contact
Uniform shaped blisters that become painful ulcers. New lesions may develop for up to 5 – 7 days after the first group appears. Symptoms tend to resolve within 2-3 weeks.
Local pain, itching, and burning may be present at the affected site.
Dysuria (may lead to urinary retention)
May experience flu like symptoms including headache, low grade fever, muscle aches and swollen inguinal lymph nodes

Recurrent infection:
Common, particularly during the first year of infection.
May be brought on by alteration in the immune system, fatigue, stress, and local skin trauma.
Symptoms are typically shorter in duration and less severe than the first outbreak

OBJECTIVE

Multiple vesicular or ulcerative lesions that are uniform in size
Lesions may appear anywhere on genitalia, mouth, throat or anus
Tender enlarged nodes may be palpated in groin
Patient may have an elevated temperature and flu-like symptoms

ASSESSMENT

Possible genital herpes

PLAN

If available, culture for herpes
Refer to physician or clinician for prescription or order for acyclovir

Counsel regarding medication:

FIRST CLINICAL EPISODE of genital herpes, recommended regimen:

Acyclovir 400 mg orally three times a day for 7-10 days
OR
Acyclovir 200 mg orally five times a day for 7-10 days

EPISODIC RECURRENT INFECTION of genital herpes, recommended regimen:

Acyclovir 400 mg orally three times a day for 5 days
OR
Acyclovir 800 mg orally twice a day for 5 days
OR
Acyclovir 800 mg orally three times a day for 2 days

Suppressive therapy is a low does antiviral treatment that is taken every day to prevent future outbreaks and to prevent spread to sex partner(s). Patients may discuss with the APN or MD to determine if suppressive therapy is an appropriate treatment option for their situation.

Provide STD counseling, screen for gonorrhea and chlamydia, offer testing for HIV and syphilis as indicated

Palliative measures:
Tepid water sitz bath 2-4 times daily while lesions are present (do not allow anyone else to use same towel). Urinating while sitting in a tub of tepid water may relieve the burning associated with voiding.

Keep genital area clean and dry. A hair dryer on cool setting may be used

May take Ibuprofen or Acetaminophen q 4 hrs/PRN for pain
Over the counter creams and ointments are generally not recommended

Increase consumption of water to keep urine dilute

Avoid tight or irritating underwear and clothing

Health Teaching:
Counsel patients regarding the natural history of the disease, with emphasis on the potential for recurrent episodes, asymptomatic viral shedding, and the risk for sexual transmission

Recurrent outbreaks are common but tend to become less frequent and severe after the first year Recurrences may be triggered by emotional stress, illness, sunlight and fatigue. Many patients experience mild symptoms called prodromal symptoms before ulcers develop. These may

include itching, tingling or pain. Effective episodic treatment requires initiation of therapy within 1 day of lesion onset or during the prodromal period that precedes some outbreaks.

Encourage patient to inform their current sex partners that they have genital herpes and to inform future partners before initiating a sexual relationship

Advise to abstain from sexual activity when lesions or prodromal symptoms are present

Oral sex should be avoided if there are ulcers or blister around the mouth because a person with the oral form can give a partner genital herpes by performing oral sex.

Condoms used consistently and correctly may reduce the risk of herpes transmission

Do not touch the lesions or fluid from the lesions in order to avoid transfer of virus to other parts of the body, e.g., the eyes

Instruct patient in immediate and through hand washing after any genital contact or use disposable gloves

Assess and/or encourage Hepatitis B vaccination

Pregnant women should inform their doctor if they have ever experienced any symptoms of, been exposed to, or been diagnosed with genital herpes. HSV is of particular concern in pregnant women because the infection can be passed from mother to child during delivery resulting in a potentially fatal infection in the neonate.

REFERENCES

Albrecht, MA. Epidemiology, clinical manifestations and diagnosis of genital herpes simplex virus infection. In: UpToDate, Thorner AR(Ed), UpToDate, Waltham, MA, 2013

Albrecht, MA. Patient information: Genital herpes (Beyond the Basics). In: UpToDate, Thorner, AR (Ed), UpToDate, Walthan, MA, 2013

CDC. Diseases Characterized by Genital, Anal, or Perianal Ulcers, STD Treatment Guidelines, 2010.
http://www.cdc.gov/std/treatment/2010/genital-ulcers.htm#hsv

Ferri, FF. (2010), Ferri's Clinical Advisor, Philadelphia, PA: Mosby Elsevier

HIV TESTING AND COUNSELING

GENERAL INFORMATION

Encourage testing for persons at high-risk for HIV infection:

- Men who have had sex with a man (gay, bisexual, sexual abuse, in prison, etc.)
- Injecting drug users (sharing of needles)
- Sex partners of those with, or at risk for, HIV
- Persons with syphilis
- Anyone seeking STD evaluation/treatment
- Individuals with tuberculosis
- Persons living in certain high-risk areas (significant transmission among non-high risk individuals)

Counseling should focus on the following:

- Client centered counseling, directed towards individuals who are at a point in their lives where they are able to take actions which will reduce their risk of becoming infected with, or transmitting HIV
- Counseling recognizes individual needs and specific desires, which may include risk reduction counseling or be limited to providing sero status information
- Client driven counseling, whereby the client must be willing to undertake needed actions, with assistance from the counselor in order to overcome the obstacles to behavior change that the client will face

PLAN

Screen for HIV using currently available test (serologic, oral[1] rapid); refer to "*Laboratory Policies and Procedures Manual for Local Health Departments*" for information on specimen storage and mailing

Draw blood for syphilis serology on all STD patients examined in clinic, and when appropriate during outreach activities

Offer testing/counseling for other STDs (gonorrhea, chlamydia)

Consider need for Hepatitis B vaccination and provide (if available) or refer as indicated

Assess client's individual risk status

Determine client's needs (testing, level of counseling)

Advise/provide HIV testing and risk reduction counseling

Provide follow-up, e.g., test results, counseling as indicated, information relative to services available, and future opportunity for testing/counseling

<u>Health Teaching</u>:

Offer condoms and encourage use during sexual activity

Encourage contacts to obtain testing/care

[1] The use of Oral/Rapid testing is not a routine clinic procedure, at this time. These testing modalities should be used in outreach activities, or on a case-by-case basis in extraordinary clinic circumstances, with prior Supervisor approval.

Reference:

Morbidity and Mortality Weekly Report, *Revised Recommendations for HIV Testing in Adults, Adolescents and Pregnant Women in Health-Care Settings.* Released by Centers for Disease Control and Prevention (CDC) on September 22, 2006

Protocol 5.120 - HIV Opt-Out HIV Testing (Metro Areas Only)

Removed from manual on December 9, 2010

PEDICULOSIS PUBIS (PUBIC LICE) (1322)

SUBJECTIVE

Severe itching in genital area
"Bugs down there"
"Crabs"

OBJECTIVE

Visible nits and/or lice on pubic hair
Excoriation of skin may be present (crusts or scales in pubic area)
Black dots (representing excreta) on surrounding skin and underclothing
Nits in eyebrows, eyelashes, scalp hair, axillary hair, and other body hair

ASSESSMENT

Pediculosis Pubis (Pubic Lice)

PLAN

Treatment:
Permethrin 1% creme rinse - Apply to affected area and wash off after 10 minutes.

OR

OTC pyrethrin with piperonyl butoxide – per package instructions.

In difficult cases, refer to nurse practitioner. In all cases, removal of nits is encouraged.
Concurrently with treatment, machine launder all washable clothing and bed linens in hot water and detergent. Dry in high heat for at least 20 minutes.
Dry-clean clothing that is not washable.
Place items that cannot be washed or dry-cleaned in a large, heavy duty plastic bag, and securely seal for 10-14 days.
Both sexual and close personal or household contacts within the preceding month should be examined and treated.
Suspect other STDs and offer counseling and testing as appropriate.

Referral Indicators

Secondary bacterial infection
Pregnant or lactating women
Neurological disorders (in lindane only)
Known sensitivity to permethrin/pyrethrin products
Coexisting dermatological conditions
Lice found in eyelashes since shampoo cannot be used
Treatment failure

Follow-Up

Patient should be evaluated after one week if symptoms persist
Retreatment may be necessary if lice are found or if eggs are observed at the hair-skin junction. Do not retreat with lindane without consulting a provider.
Patients who do not respond to one of the recommended regimens should be referred to a provider for treatment with an alternative regimen.

REFFERENCES

CDC. Sexually Transmitted Diseases Treatment Guidelines, 2010. MMRW 2010; 59(No. RR-12).

SYPHILIS, CASE OR CONTACT (0910)

SUBJECTIVE

Previous history of syphilis infection
History of **symptoms suggestive of syphilis**:
- Painless indurated lesion on genitalia or adjacent areas or other mucous membranes such as lip, vulva, labia, cervix, or anus
- Body rash or spots on palms of hands or soles of feet
- Sore throat, fever, headaches, or general malaise

Sexual contact to serology proven or physician verified case
Referral from private physician
Person at risk of syphilis as identified through the course of case investigation
"My partner told me he/she has syphilis"

OBJECTIVE

Report of reactive Captia Syphilis-G test (from Blood Bank)

Primary Syphilis:
- One or more chancres (hard, painless, indurated) on the genitalia; others may appear on anus, fingers, tongue, nipples, tonsils, or eyelids
- Regional lymphadenopathy (unilateral or bilateral)

Secondary syphilis:
- Regional lymphadenopathy (unilateral or bilateral)
- Uniform rash, well defined, and generalized on trunk, arms, palms, soles, face, and scalp
- Lesions enlarge and erode producing highly contagious sores that are pink or grayish-white
- Reactive RPR and positive TP-PA[1] (sometimes RPR may be false positive)
- Alopecia, hair may have "moth eaten look"

ASSESSMENT

Confirmed or suspected syphilis, syphilis contact, or person identified through the course of syphilis case investigation

PLAN

NOTE
If there has been an exposure within 90 DAYS prior to the exam, all known contacts to cases of syphilis, or persons identified through case investigation as being at risk for syphilis should be preventively treated.

If a report is received of an individual with a reactive Captia Syphilis-G test, an attempt should be made to locate the person to inform him or her of the test result. It is important to inform the individual that the Captia Syphilis-G tests are used for screening purposes and that further tests (RPR and TP-PA) are needed for confirmation of a current syphilis infection.

[1] The TP-PA (Treponemal pallidum-particle agglutination) test has replaced the MHA-TP test, which is no longer available

Obtain specimen from lesion(s), if present, for darkfield examination (if available) by Public Health Representative or physician.
For persons with a positive Captia Syphilis-G test, question regarding a previous history of syphilis infection, recall of symptoms suggestive of syphilis, sexual exposure to someone with symptoms, or known exposure to a confirmed case in order to make a more clear diagnosis.
After obtaining a specimen on individuals with only a positive Captia Syphilis-G test, both the RPR and the TP-PA should be concurrently ordered on the syphilis serology form (i.e. lab slip). Also indicate that it is a re-test of a Captia Syphilis-G test per State Lab protocols.
Obtain blood specimen for serologic test for syphilis. Request TP-PA if reactive RPR.
Refer all patients with syphilis for HIV counseling and testing.
Consider need for Hepatitis B vaccination and provide (if available) or refer as indicated.
Perform gonorrhea and chlamydia screening.
Ask whether patient has any drug sensitivities, especially to penicillin.
Report all prepubertal children to the Department of Human Services.
Report all cases to the STD Representative or Regional CEDS Supervisor **immediately.**
If indicated, consult physician.

TREATMENT

Early Syphilis (Primary and secondary syphilis, early latent syphilis of less than one year's duration)

Non-pregnant, Non-allergic Adult/Adolescent:
Benzathine penicillin G 2.4 million units IM (give 1.2 million units in each buttock)

Non-pregnant, Penicillin Allergic Adult/Adolescent:
Doxycycline[2], 100 mg orally BID x 14 days

Non-tolerance to Doxycycline:
If follow-up or compliance cannot be assured, the patient should be referred for skin testing for penicillin allergy and undergo desensitization, if necessary.
With careful follow-up and permission obtained from regional health officer, may give ceftriaxone 1gm IM once a day for 10-14 days. Caution must be used as patients who are allergic to penicillin may also be allergic to cephalosporins.

Late Latent Syphilis (over one year's duration) AND Unknown Duration Latent Syphilis

Non-pregnant, Non-allergic Adult/Adolescent:
Benzathine penicillin G 7.2 million units total, administered as one dose of 2.4 million units (1.2 million units IM in each buttock IM) at one week intervals for 3 consecutive weeks

Non-pregnant, Penicillin Allergic Adult/Adolescent:
If patient is allergic to penicillin and there are no clinical signs of neurological involvement (see next section on Neurosyphilis), the following regimen may

[2] Doxycycline is contraindicated in pregnancy and nursing mothers

be used following consultation with Regional CEDS Director and/or Regional Health Officer

Doxycycline, 100 mg orally BID x 28 days

Neurosyphilis (central nervous system disease may occur during any stage of syphilis)

With any clinical evidence of neurological involvement (e.g. optic and auditory symptoms, cranial nerve palsies or signs or symptoms of meningitis), consult with Regional CEDS Director and/or Regional Health Officer and refer as recommended.
Neurosyphilis can occur in any stage of syphilis. Treatment should be based on the stage of syphilis. Treatment should not be withheld pending evaluation.

Syphilis in Pregnancy

All pregnant women should be screened early in pregnancy.
Seropositive pregnant women should be considered infected unless treatment history and sequential serologic antibody titers are showing an appropriate response.
In areas in which the prevalence of syphilis is high, or for patients at high risk, testing should be repeated at 28 weeks and at delivery.

Tetracycline and doxycycline are contraindicated in pregnancy and nursing mothers. Erythromycin is not to be used due to high risk of failure to cure infection in fetus.

All Stages of Pregnancy, Non-allergic:
Benzathine penicillin G in dosage schedules appropriate for the stage of syphilis, as recommended for treatment of non-pregnant patients (see above).

All Stages of Pregnancy, Penicillin Allergic:
Contact Regional CEDS Director and/or Regional Health Officer and refer as recommended.

Syphilis and HIV

All syphilis patients should be screened for HIV.

HIV, Non-allergic
Benzathine Penicillin G in dosage schedules appropriate for the stage of syphilis, as recommended for treatment of non-HIV patients (see above).

Congenital Syphilis
Contact Regional CEDS Director and/or Regional Health Officer and refer according to CEDS guidelines.

Health Teaching

Offer condoms and encourage use during any sexual activity. The use of condoms is effective, but only protects the parts covered.
Wash exposed parts with soap and water as soon after contact as possible.
Advise regular check-ups when patient has more than one sexual partner or if sex partner has more than one partner.
Counsel regarding HIV and other STDs. Offer testing as indicated.
Advise women taking oral contraceptives to use condoms during, and for 2 weeks after, antibiotic treatment.
Counsel that RPR may stay reactive after treatment.
Instruct regarding potential Jarisch-Herxheimer Reaction (in 50% of cases, 6-12 hours after any therapy for syphilis, patient may develop high fever, malaise, exacerbation of symptoms lasting 24 hours and pregnant women may experience pre-term labor).
Encourage to return if primary syphilis lesion has not healed within a week

Referral Indicators

Pregnant and penicillin allergic
Continued elevated antibody titers after treatment
Prepubertal children as indicated (refer to HSA Child Abuse Policy)
A primary lesion that is not healing one week after treatment

Follow-Up

Return for repeat RPR tests at 6 and 12 months after conclusion of treatment or until 4 fold decrease (2 dilutions) (i.e., 128 dilutions to 32 dilutions) in titer is observed.
HIV infected persons should return for repeat tests at 3, 6, 9, 12 and 24 months after conclusion of treatment.
Careful follow-up serologic testing is particularly important in patients treated with antibiotics other than penicillin.
If less than 4 fold (2 dilutions) decrease in RPR (i.e. 128 dilutions to 64 dilutions) after 6 months (3 months for HIV infected patients) refer to STD/CEDS supervisor and/or clinic Regional Health Officer for evaluation of treatment or reinfection.
Counsel regarding HIV and other STDs. Offer testing as indicated.
If using oral contraceptives, counsel patient to use condoms during, and for 2 weeks after, antibiotic treatment.
Counsel that RPR may stay reactive after treatment.

Reference

Centers for Disease Control and Prevention Sexually Transmitted Diseases Treatment Guidelines, 2010. MMWR 2010; 59 (No. RR-12).

Protocol 5.150 - Syphilis, Case or COntact Opt-Out HIV Testing (Metro Areas Only)

Removed from manual on December 9, 2010

TRICHOMONIASIS, Case or Contact

BACKGROUND

Trichomoniasis is considered the most common curable sexually transmitted disease. Infection is more common in women than in men. According to the CDC, about 70% of patients with trichomoniasis have no symptoms of the infection. This is true for most men and some women. The incubation period averages 1week but ranges from 4-28 days.

SUBJECTIVE

In **women**, symptoms may include:

- Thin discharge with an unusual odor, may be clear, white, yellowish or greenish
- Itching, burning, redness or soreness of the genitals
- Discomfort with urination
- Painful sexual intercourse

In **men,** symptoms may include:

- Itching or irritation inside the penis
- Discharge from the penis
- Burning or pain during urination
- Burning after ejaculation
- Majority are asymptomatic

Referred by nurse practitioner, health department physician, or private physician
Contact to patient with positive wet mount or Pap smear indicating trichomoniasis
Self declaration of contact to trichomoniasis
Not pregnant

OBJECTIVE

Reported trichomoniasis on Pap smear not subsequently treated
Mobile trichomonads seen on normal saline slide preparation
LMP and pregnancy test, as indicated

ASSESSMENT

Trichomoniasis diagnosed on Pap smear or wet mount
Known or self reported contact to trichomoniasis case
Normal saline slide positive for mobile trichomonads

PLAN
All sexual partners should be treated at the same time. Instruct patient to abstain from sex until they and their sex partners have completed therapy and no longer have any symptoms
Determine any recent treatment with metronidazole

Treatment:

Non-Allergic, Non-Pregnant
Metronidazole (Flagyl) 2 Gm bolus dose in clinic or after next meal
(may cause nausea if taken without food)
OR
Metronidazole (Flagyl) 500 mg twice a day for 7 days

Pregnant
Consult with Health Department physician, APN or patient's OB/GYN provider.
Metronidazole is not contraindicated in pregnancy.
Allergic
Refer to physician or APN

If treatment failure occurs, patient should be re-treated with Metronidazole 500 mg twice a day for 7 days

For repeated treatment failure, the patient should be treated with a single 2 Gram dose of Metronidazole once a day for 3-5 days

Health Teaching:
Offer condoms and encourage use during all sexual activity

Counsel on other STDs; test as indicated

Stress importance of completing medication as ordered

Avoid consumption of alcoholic beverages (includes all products that contain alcohol such as cough syrups) during treatment with metronidazole and for 24 hours after completion on medication after treatment

Advise that Metronidazole can cause gastro-intestinal upset; also causes urine to darken

Comfort and personal hygiene measures include: cotton underwear, loose clothing, avoidance of underpants while sleeping,avoid feminine hygiene sprays and deodorants, sitz bath for several symptoms

Stress trichimoniasis has been associated with adverse pregnancy outcomes, particularly premature rupture of membranes pre-term delivery, and low birth weight babies.
Therefore, it is **very important that all pregnant females inform their OB/GYN** of any exposure, diagnosis or treatment of trichimoniasis during pregnancy.

Referral Indicators:
Known allergy to any component of drug
More than 2 infections within 6 months
Pap smear abnormalities
Sexual abuse indicators

REFERENCES

CDC. Sexually Transmitted Disease Treatment Guidelines, 2010: Diseases Characterize by Vaginal Discharge, http://www.cdc.gov/std/treatment/2010/vaginal-discharge.htm

CDC. Trichomoniasis – CDC Fact Sheet. National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, Division of STD Prevention.
http://www.cdc.gov/std/Trichomonas/STDFact-Trichomoniasis.htm

Ferri, FF. (2010), Ferri's Clinical Advisor, Philadelphia, PA: Mosby Elsevier

Patient information: Trichomoniasis (The Basics) In: UpToDate, Waltham, MA 2013

Red Book, Report of the Committee on Infectious Diseases, 27th Edition. 2006

SECTION VI: DISASTER PREPAREDNESS AND BIOTERRORISM

6.010 – 6.030

ANTHRAX VACCINE

GENERAL INFORMATION

Anthrax Vaccine Absorbed, (BioThrax™) is a sterile, milky-white suspension (when mixed) made from cultures of a benign strain of Bacillus antracis

This vaccine contains no dead or live bacteria, but it does contain aluminum hydroxide, benzethonium chloride, and formaldehyde in 0.85% NaCl

Anthrax disease presents in three forms: cutaneous (skin), gastrointestinal and inhalational (pulmonary)

The fatality rate for inhalation anthrax is estimated to be 45% to 90%

Vaccine Supply, Handling, and Storage:

Anthrax Vaccine Adsorbed (BioThrax™) is supplied in 5 mL multidose vials

THIS PRODUCT IS TO BE STORED AT 2^{O} C TO 8° C (36 TO 46° F); do not freeze

Do not use after the expiration date given on the package

Candidates for Vaccination:

Persons at high risk for exposure due to a bioterrorism event

Persons who work directly with Bacillus Anthracis in the laboratory

Persons who work with imported animal hides or furs from areas where exposure to anthrax spores may occur

Persons[1] who handle potentially infected animal products in high-incidence areas

Military personnel deployed to areas with high risk for exposure to the organism

Contraindications to Vaccination:

Persons with a history of anaphylactic or anaphylactic-like reaction following a previous dose of BioThrax™, or any of the vaccine components

Pregnant women, unless the potential benefits of vaccination clearly outweigh the potential risks to the fetus

Persons <18 or >65 years of age

Precautions:

Persons with a history of Guillain-Barré Syndrome (GBS)

Persons with a history of anthrax disease

Persons with impaired immune responsiveness due to congenital or acquired immunodeficiency, or immunosuppressive therapy (may not be adequately immunized following administration of BioThrax™); vaccination during chemotherapy, high dose corticosteroid therapy of greater than 2-week duration, or radiation therapy may result in a suboptimal response (deferral of vaccination for three months after completion of such therapy may be considered)

Persons with a concurrent moderate or severe illness

Persons with a latex allergy (the vial stopper contains dry natural rubber)

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[1] While incidence is low in the United States, veterinarians who travel to work in other countries where incidence is higher should consider being vaccinated

Potential Adverse Reactions:

Mild local reactions include tenderness, erythema, **subcutaneous nodule**, induration, warmth and local pruritis

Severe local reactions are infrequent and consist of extensive swelling of the forearm in addition to the local reaction

Systemic reactions include fever, chills, nausea, headache, malaise, anorexia and general body aches

PLAN

Evaluate individual receiving vaccine for the presence of any contraindications

Vaccine Administration:

Primary immunization requires six 0.5 mL subcutaneous injections; the first three injections are given 2 weeks apart, followed by injections at 6, 12, and 18 months

Booster injections of 0.5 mL of BioThrax are recommended annually after the primary series is completed

Immunization is best accomplished with a subcutaneous injection in the upper deltoid region of the arm away from the tricep muscle (to avoid the ulnar nerver), with a short needle (less than one inch, 5/8-inch, 25- to 27-gauge recommended) at a 45-degree angle with the skin surface

Use a different site for each injection

After injecting, withdraw the needle and briefly and gently massage the injection site to promote dispersal of the vaccine

Referral Indicators:

Patients who have conditions listed under precautions

Patients with respiratory difficulty or an allergic reaction (hives, swelling of hands, face and feet)

REFERRENCES

http://www.bt.cdc.gov/agent/anthrax/index.asp

http://www.anthrax.osd.mil/

http://www.bt.cdc.gov/agent/anthrax/vaccination/index.asp

POTASSIUM IODIDE (KI) ADMINISTRATION

GENERAL INFORMATION:

Potassium Iodide is used to block the uptake of radioactive iodine by the thyroid gland in individuals exposed to radioactive iodine

Administration of Potassium Iodide has been shown to reduce the risk of developing thyroid cancer

Its use is indicated if Rad Health has determined that radioactive iodine was released and detected and the State Health Officer has issued an order for exposed people to take KI to block the uptake of radioactive iodine

EFFECTIVENESS IS INCREASED IF POTASSIUM IODIDE IS GIVEN BEFORE, OR SOON AFTER, EXPOSURE

Contraindications include:

- Allergy to iodide
- Dermatitis, herpetiformis, and hypocomplementemic vasculitis (extremely rare conditions associated with an increased risk of iodine hypersensitivity)

Caution should be used in:

- Individuals with multinodular goiter, Graves' disease, and autoimmune thyroiditis, especially if dosing extends beyond a few days
- People on lithium carbonate are more likely to have hypothyroidism if they take KI (less of an issue when only used for <10 days)
- Pregnancy, if taking >10 days

PLAN:

Assess the client for contraindications to KI

Educate the patient on adverse reactions:

- Metallic taste
- Rash
- GI upset
- Sialadenitis (rare inflammation of salivary gland).

Administer KI, if possible prior to exposure, in accordance with the following recommendations:

Dose recommendations:

Recommended Doses of KI for Different Risk Groups **Orally once a day (may be crushed if necessary)**			
	KI dose (mg)	# of 130 mg tablets	# of 65 mg tablets
Adults over 40 yrs	130	1	2
Adults over 18 through 40 yrs			
Pregnant or lactating women			
Adoles. over 12 through 18 yrs*	65	1/2	1
Children over 3 through 12 yrs			
Over 1 month through 3 years	32	1/4	1/2
Birth through 1 month	16	1/8	1/4

REFERENCES

Guidance, Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies, U.S. Department of Health and Human Services, Food and Drug Administration Center for Drug Evaluation and Research (CDER), December 2001, Procedural

SMALLPOX VACCINE (VACCINIA)

GENERAL INFORMATION

Dr. Edward Jenner discovered a vaccine that would protect against smallpox in 1796; the vaccine was derived from the cowpox virus and a related strain is in use today

The last case of smallpox occurred in 1977, the United States discontinued vaccination in 1972, and smallpox was declared eradicated in 1980; since smallpox vaccination does not confer lifelong immunity, the vast majority of the population is not currently immune to smallpox

After exposure to smallpox, it takes between 7-17 days for symptoms of smallpox to appear (average incubation 12-14 days) during which time the infected person feels well and is not contagious

Immunity provided by the smallpox vaccine typically develops within 8 to 14 days, but vaccine can be given up to 3 days after exposure in order to prevent the development of disease

Smallpox is a potential threat as a biological weapon for the following reasons:

- Smallpox is infectious when inhaled and has the potential to infect large groups of people because it can be disseminated as an aerosol
- Smallpox is highly infectious, even in low doses, and is transmitted from person-to-person; however, it is less contagious than measles, influenza, or varicella
- Smallpox infection can be fatal in up to 30% of cases

Vaccine Precaution:

- Smallpox vaccine is made from live vaccinia virus
- Unlike other current immunizations, smallpox vaccination is characterized by a virus that propagates in the skin and can potentially contaminate the vaccinee's hands or the skin and mucosa of others with whom the vaccinee comes into contact
- Vaccinia virus is present at the vaccine site 3 to 4 days after vaccination
- The vaccine site should be considered infectious until the scab falls off
- General rules for vaccination with a live virus should be applied, i.e., vaccinations using live viruses should be separated by 4 weeks if not given simultaneously
- Vaccinations may be given simultaneously except for varicella
- Vaccinated persons should avoid taking steroids for 2 weeks after administration of smallpox vaccine

Vaccine Handling and Storage:

- Keep at 2-8° C or 35-46°F when transferring; do not place ice directly on vial (use barrier between)
- **Mix vaccine according to package insert and mark date when opened**
- **Do not shake** following reconstitution but gently swirl the vaccine to insure adequate mixture (limit loss of doses through contact with stopper)
- Vaccine can stay at room temperature for the duration of the smallpox clinic

When rubber stopper is removed prior to using vaccine, keep in a safe, clean space (e.g., screw top bottle, zip lock bag)
During clinic, place vaccine bottle in stabilizer to prevent spills, and place on plastic chux
Any vaccine spills should be cleaned in accordance with infectious control guidelines
Following smallpox clinic, any remaining vaccine should be returned to the refrigerator in bottle stabilizer and kept at 2-8° C or 35-46°F; empty vials should be placed in sharps container
Reconstituted vaccine must be used within 90 days

Candidates for Vaccination:

Routine Non-emergency Vaccination (No Outbreak, Pre-event Vaccination)
Public health, hospital, and other personnel, between 18 and 64 years of age, who may have to **respond to a smallpox case or outbreak**
Laboratory workers who handle cultures or animals contaminated or infected with vaccinia or other related viruses (e.g., monkeypox, cowpox, variola)

Emergency Vaccination (Smallpox Outbreak, Post-event Vaccination)
Anyone **directly exposed** to smallpox virus should get one dose of vaccine as soon as possible after exposure
Anyone **at risk of exposure** to smallpox virus should get one dose of vaccine when the risk occurs or becomes known

Contraindications to Vaccination:

THERE ARE NO ABSOLUTE CONTRAINDICATIONS FOR PERSONS WHO ARE EXPOSED, OR AT RISK OF EXPOSURE, TO SMALLPOX; IN A POST-EVENT SITUATION, SPECIFIC GUIDANCE WILL BE PROVIDED BY THE CDC

Contraindications to vaccination for the INDIVIDUAL taking the vaccine (PRE-EVENT)

ALLERGY:
Polymyxin B sulfate
Streptomycin sulfate
Chlortetracycline hydrochloride
Neomycin sulfate
Phenol
Glycerin
Serious allergic reaction to previous smallpox vaccination
Extreme latex allergy (anaphylaxis)

ILLNESS:

Acute to moderate illness (e.g., flu)

AGE:

Less than18 years or over 64 years of age

BREAST FEEDING

HEART DISEASE[2]:

Do not give if diagnosed with a **heart condition, with or without symptoms**, including:

- Known coronary disease (previous myocardial infarction, angina)
- Congestive heart failure
- Cardiomyopathy
- Stroke or transient ischemic attack
- Chest pain or shortness of breath with activity
- Other conditions under the care of a doctor

Do not give if the individual has **3 or more of the following risk factors**:

- High blood pressure
- High cholesterol
- Diabetes
- First-degree relative with heart condition prior to the age of 50
- Smokes cigarettes

<u>Contraindications to Vaccination in either the INDIVIDUAL taking the vaccine OR HOUSEHOLD MEMBERS (PRE-EVENT)</u>

PREGNANCY

Query all females of childbearing age as to current, suspected, or planned pregnancy

IMMUNODEFICIENCY

Includes any disease with immunodeficiency, congenital or acquired, as a component:

- HIV Infection
- AIDS
- Many cancers
- Lupus

IMMUNO-SUPPRESSIVE THERAPY:

- Cancer treatments
- Organ/transplant maintenance
- Steroid therapy ≥ 2mg/kg/day or ≥ 20mg/day x 14 days (wait 3 months after steroid therapy to receive vaccine)

[2]The presence of these conditions in a close contact is not a reason to defer vaccination

ECZEMA:

History or presence of eczema, (including "healed" eczema) or atopic dermatitis

SKIN DISORDERS

Currently active, acute or chronic skin conditions that cause multiple areas of broken skin):

- Severe Acne
- Recent Burns
- Wounds or current (non-healed) surgical incisional wounds
- Acute contact dermatitis
- Varicella
- Allergic rash
- Impetigo
- Psoriasis
- Darier's disease (a chronic, hereditary skin disease, placing individual at risk of developing eczema vaccinatum)

Anticipated Normal Vaccine Reaction:

DAY	DESCRIPTION	AVERAGE SIZE
0	Vaccination	
3-4	Papule (red and itchy)	11-15 mm
5-6	Vesicle with surrounding erythema, Vesicle with depressed center	16-24 mm
8-9	Well-formed pustule	12 mm
12+	Pustule crusts over and forms a scab	
17-21	Scab detaches revealing scar	

Normal Vaccine Side Effects:

Soreness at the vaccination site
Erythema surrounding the vaccination site (a normal reaction may be as large as 3 inches)
General malaise
Lymphadenopathy (local, usually in the vaccine site arm)
Myalgia, headache, chills, nausea, fatigue
Fever 7-12 days after vaccination
Rash around 10th day (resolves spontaneously in 2 to 4 days)

Normal Variants (not adverse events and require no specific treatment):

Satellite lesions around vaccination site (limited)
Lymphangitis from the site to regional nodes
Regional lymphadenopathy
Considerable local edema at the site

Intense erythema (viral cellulitis)

Adverse Events (true adverse events and referral required):

Allergic hypersensitivity to any component of the vaccine
Post-Vaccinial Encephalitis (10-14 days post-vaccination, headache, vomiting, drowsiness, fever)
Ataxia, convulsions, paralysis, or confusion
Accidental implantation (extensive satellite lesions, eye involvement)
Bacterial infection (Staphylococcus aureus, Group A beta Hemolytic Streptococcus, anaerobic organisms)
Generalized Vaccinia (multiple lesions within a week, rapid evolution to scarring)
Eczema Vaccinatum (implantation of vaccinia virus into diseased skin)
Erythema Multiforme (toxic and/or hypersensitivity rashes 1-2 weeks post-vaccination)
Progressive Vaccinia (failure to heal, rapid local spread and by viremia to other parts of the body)
Vaccinia Keratitis (viral replication with ulceration of cornea)

PLAN

Evaluate individual receiving vaccine for the presence of any contraindications, including contraindications for household members; THERE ARE NO ABSOLUTE CONTRAINDICATIONS FOR PERSONS EXPOSED, ORAT RISK OF EXPOSURE, TO A CASE OF SMALLPOX
Vaccine candidates must read pre-vaccination materials and sign consent form

Vaccine Administration:

Persons should be vaccinated in the deltoid area of the upper, non-dominant arm (avoiding previous smallpox scar)
Do not clean vaccine site prior to administration unless grossly contaminated; if vaccine site is grossly contaminated, clean with soap and water and completely dry with gauze prior to administration
With gloved hand, pull skin taut
Being careful not to contaminate the point, dip bifurcated needle into the vaccine, withdraw and hold for a few seconds to allow drainage of excess vaccine
Inspect needle tip after dipping in vaccine to assure that vaccine is present between the prongs of the bifurcated needle
For a **PRIMARY** vaccination (individual has not been previously immunized against smallpox as determined by history or lack of smallpox scar), prick the skin **3 times** within a 5 mm area, applying enough pressure during vaccine administration to produce trace amounts of blood that is visible in 10 to 20 seconds after giving the vaccine; if no blood is seen, prick the skin 3 more times (DO NOT REDIP THE NEEDLE INTO THE VACCINE AFTER SKIN CONTACT HAS BEEN MADE)

For **SECONDARY** vaccination (individual has been previously immunized against smallpox as determined by history or presence of smallpox scar), prick the skin **15 times** within a 5 mm area, applying enough pressure during vaccine administration to produce trace amounts of blood that is visible in 10 to 20 seconds after giving the vaccine; (do not prick again, even if no blood is seen)

For **REVACCINATION** (following a non-take), give the same umber of sticks as was given at the initial vaccination

Wipe off excess vaccine at the immunization site with gauze

Dispose of needle in sharps container and gauze in a hazardous waste receptacle

Cover site with 2x2 gauze and semi permeable dressing[3] (e.g., Tegaderm™, OpSite™, SureSite™)

Change gloves and wash hands with warm soapy water or hand rub containing ≥60% alcohol between each vaccination

Successful vaccination will be indicated 6-8 days after vaccination by a clear-cut pustule OR an area of definite induration or congestion surrounding a central lesion that may be a scab or ulcer

An equivocal reaction, or non-take, includes any other reaction/response (e.g., "allergic" reaction) or no reaction; REVACCINATION IS INDICATED IN ALL PERSONS WITH AN EQUIVOCAL REACTION

It should be noted that appropriate vaccination techniques might sometimes result in no reaction

If no reaction occurs by 8th day, schedule an appointment for revaccination as soon as possible (if possible use a different vial and avoid previous vaccination site)

No further attempts should be made following a second unsuccessful immunization

Health Teaching:

Inform patient of the expected effects of the vaccine (see Anticipated Normal Reaction under General Information)

Educate patient on proper care of vaccine site because it is important to prevent dissemination of the vaccinia virus from the vaccination site to other parts of the vaccinee's body or to others

Educate patient on good hand washing technique while handling vaccine site covering

Counsel patient to **avoid becoming pregnant for 4 weeks** after vaccination

Counsel patient to **avoid donating to blood banks until scab has fallen off**

Advise vaccinees and/or guardians with regards to the following:

Keep the vaccination site covered for 21 days or until scab separates and comes off; gauze (loosely taped) is recommended

Change the vaccination site covering every 3-5 days or when the bandage becomes wet, soiled, or is loose

[3]Semi permeable dressing required for health care workers having direct patient contact

Discard the vaccination site covering carefully (the covering contains viable virus and can spread the infection to others) by enclosing the gauze in a plastic bag that can be sealed prior to placing it in a trash receptacle
Always thoroughly wash hands with soap and running water after handling the vaccination site covering
Avoid touching, scratching, rubbing or otherwise performing any maneuvers that might transfer vaccinia virus to the eye or surrounding skin; encourage patient to wear long sleeves to avoid scratching site and as an extra barrier
Counsel regarding use of OTC ibuprofen and benadryl for pain and itching
Avoid placing any type of ointment or ice on the vaccination site
Cover the site with non-permeable material while bathing and for medical persons while in direct contact with patients
Avoid hot tubs and swimming pools for 2 weeks following vaccine administration
Wash linens and clothing that come in contact with vaccine site in hot water using detergent and/or bleach
Avoid taking steroids for 2 weeks following vaccination
Vaccination site must be evaluated (by medical personnel) for vaccine take on 6th, 7th or 8th day

Referral Indicators:

Allergic hypersensitivity to any component of the vaccine
Unusual side effects or adverse events as listed under "Adverse Events" in "General Information" section
Chest pain, shortness of breath, or other **symptoms of cardiac disease** following vaccination should be **referred immediately**
If side effects occur, notify Hospital Appointed Physician (HAP) and Tennessee Department of Health Adverse Events Coordinator (615-741-7247) immediately, and complete VAERs form

Follow-up:

Daily site-care checks (for all those having direct patient contact)
Evaluations on day 6, 7, or 8 for successful vaccination take
Appointment for revaccination as indicated (if no reaction occurs)
Follow-up at 21-28 days to assure absence of advent events

REFERENCES

Smallpox Vaccine Information Statement, U.S. Department of Health and Human Services Centers for Disease Control and Prevention National Immunization Program (1/16/03)

Smallpox Vaccination Pocket Guide, U.S. Department of Health and Human Services Centers for Disease Control and Prevention National Immunization Program

U.S. Department of Health and Human Services Centers for Disease Control and Prevention, Web site, http://www.bt.cdc.gov/agent/smallpox/index.asp

APPENDICES

A. ADDITIONAL IMMUNIZATION INFORMATION
7.010

B. LIST OF STANDARD ABBREVIATIONS
7.020

MEDICATION ADMINISTRATION
(How To Avoid Medication Errors)
Follow The Five Rights of Medication Administration

General Information

As nurses, we must do our part to observe basic rules we learned in nursing school to avoid medication errors. It is important that all nurses follow the **Five Rights of Medication Administration:** 1) Right Patient 2) Right Route 3) Right Dose 4) Right Time 5) Right Medication. Never take shortcuts with your license!

The Right Patient

Can you identify this patient? Don't assume you know who the patient is. Check the patient's identity and address the patient by name before administering the medication.

The Right Route

Be sure you know the prescribed route by which a medication is to be administered. Administering vaccines by the recommended route is imperative. Deviation from the recommended route of administration might reduce vaccine efficacy or increase the risk of local reactions.

The Right Dose

Does this dose make sense for your patient? Be sure you know the prescribed dose before administering a medication.

The Right Time

To achieve maximum therapeutic effectiveness, medications are scheduled to be administered at specific times. To ensure optimal results from each immunization, always follow the currently recommended immunization schedules for children, adolescents, and adults, including the catch-up schedule, when appropriate. Administering doses earlier than minimum intervals or minimum ages may interfere with the vaccine's antibody response and result in the need to repeat the dose at an appropriate time.

The Right Medication

Always check the medication order and check it against the medication label. **Check Expiration Date Before Use.**

TIPS ON SAFEGUARDING YOUR VACCINE SUPPLY
(Refer to Vaccine Storage and Handling Toolkit)

1. Have a designated person in charge of the handling and storage of vaccines.
2. Have a back-up person in charge of the handling and storage of vaccines.
3. Check the condition of vaccine and the shipping temperature monitor (if included) **immediately** upon arrival.
4. Check the vaccine order sheet for:
   a.) Date the vaccine was received
   b.) Vaccine expiration date
   c.) Vaccine name and number of doses
   d.) Vaccine manufacturer and lot number
5. Refrigerator for vaccines is not dormitory-style. The freezer compartment must have a separate door.
6. Do NOT store any food or drink in the refrigerator or freezer.
7. Store vaccines in the middle of the storage unit, NOT in the door or drawers.
8. Stock and rotate the vaccine supply so that the newest vaccine of each type (with the longest expiration date) is placed behind the vaccine with the shortest expiration date. Use vaccine with shortest expiration date first.
9. Post a sign on the refrigerator door showing which vaccines should be stored in the refrigerator and which should be stored in the freezer. Have a **"Do Not Unplug"** sign next to the refrigerator's electrical outlet and mark the circuit breaker to the unit "Do not turn off".
10. Always keep a certified, calibrated thermometer in the refrigerator.
11. Ensure the refrigerator temperature is always 35°- 46° Fahrenheit (2°- 8° Celsius).
12. Store extra containers of water in the refrigerator door and floor to maintain cold temperatures.
13. Always keep a certified, calibrated thermometer in the freezer.
14. Temperature in the freezer is maintained at +5F (-15C) or colder.
15. Keep ice packs in the freezer to help maintain cold temperatures.
16. Document temperatures in all vaccine storage units twice daily on all working days (normally at opening and closing times) on Tennessee Immunization Program (TIP) temperature logs, posted on the storage unit door or other designated location- know whom to call if the temperature is out of range.
17. In the event of a refrigerator failure:
    a.) Assure that the vaccines are moved to adequate refrigeration, using emergency back up storage locations in your clinic's emergency plan, if needed.
    b.) Mark exposed vaccines "do not use" and separate from unexposed vaccines.
    c.) Note the refrigerator or freezer temperature and contact **TIP** at 1-800-404-3006 to determine how to handle the affected vaccines.
    d.) Follow TIP's instructions as to whether the affected vaccines can be used, and, if needed, mark the vials with revised expiration date provided by TIP.

VACCINES AND ROUTE OF ADMINISTRATION

VACCINES	ROUTE
Diphtheria, Tetanus, Pertussis (DTap, DT, Tdap, Td)	IM
Haemophilus influenzae type b (Hib)	IM
Hepatitis A (HepA)	IM
Hepatitis B (HepB)	IM
Human papillomavirus (HPV)	IM
Influenza, live attenuated (LAIV)	Intranasal spray
Influenza, trivalent inactivated (TIV)	IM
Measles, mumps, rubella (MMR)	SC
Meningococcal, conjugated (MCV4)	IM
Meningococcal, polysaccharide (MPSV4)	SC
Pneumococcal conjugate (PCV)	IM
Pneumococcal, polysaccharide (PPV)	IM or SC
Polio, inactivated (IPV)	IM or SC
Rotavirus	Oral
Varicella	SC
DTaP+HepB+IPV (Pediarix)	IM
Hib+HepB (Comvax)	IM

Intramuscular (IM)
Subcutaneous (SC)

REFERENCE

About.com:Nursing, From Kathy Quan, Your Guide to Nursing. Updated 1/12/07
Immunization Action Coalition, www.immunize.org 12/06
Epidemiology and Prevention of Vaccine-Preventable Diseases (Pink Book), 10th Edition, 1/07

How to Administer Intramuscular (IM) Injections

Administer these vaccines via intramuscular (IM) route: Diphtheria-tetanus (DT, Td) with pertussis (DTaP, Tdap); Hib; hepatitis A; hepatitis B; human papillomavirus (HPV); inactivated influenza; meningococcal conjugate (MCV4); and pneumococcal conjugate (PCV). Administer inactivated polio (IPV) and pneumococcal polysaccharide (PPV) either IM or SC.

Patient age	Site	Needle size
Birth to 12 mos.	Anterolateral thigh muscle	5/8"* needle (newborns only), 1" (older infants), 22–25 gauge
12 mos. to 10 yrs.	Thickest portion of deltoid muscle—above level of axilla and below acromion (if adequate muscle mass). The anterolateral thigh may also be used.	5/8"*† to 1" needle, 22–25 gauge
Children and adults 11 yrs. and older	Thickest portion of deltoid muscle—above level of axilla and below acromion	1"–1½"*† needle, 22–25 gauge

*A 5/8" needle can be used if the skin is stretched tight and the subcutaneous tissue is not bunched.
†A 5/8" needle may be used in the deltoid muscle in children ages 12 mos. or older and in adults weighing less than 130 lbs.

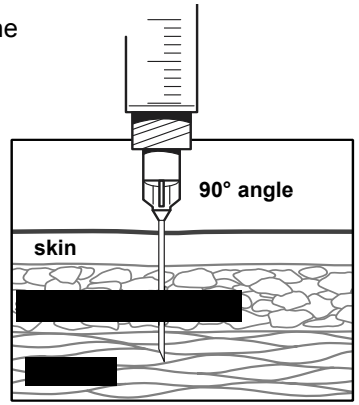
Needle insertion

Use a needle long enough to reach deep into the muscle.

Insert needle at a 90° angle to the skin with a quick thrust.

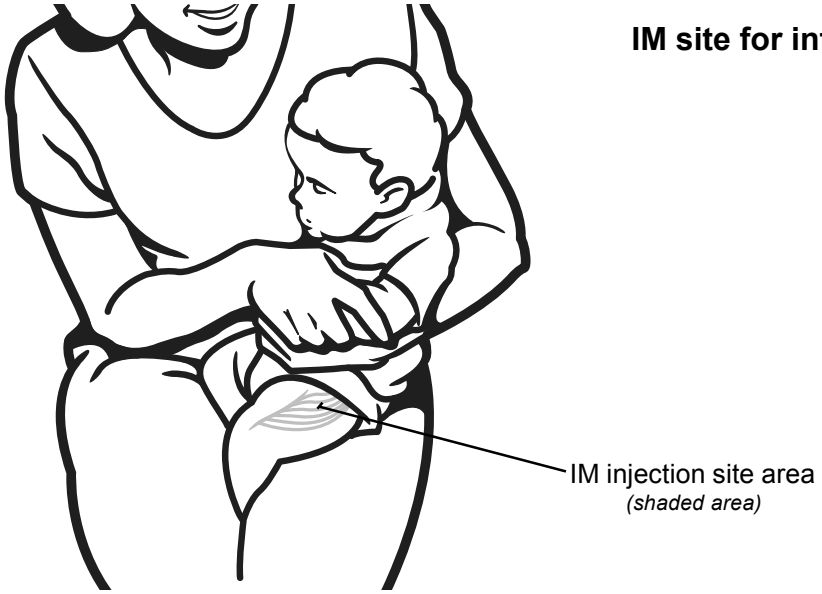
(Before administering an injection, it is not necessary to aspirate, i.e., to pull back on the syringe plunger after needle insertion.¶)

Multiple injections given in the same extremity should be separated by a minimum of 1", if possible.



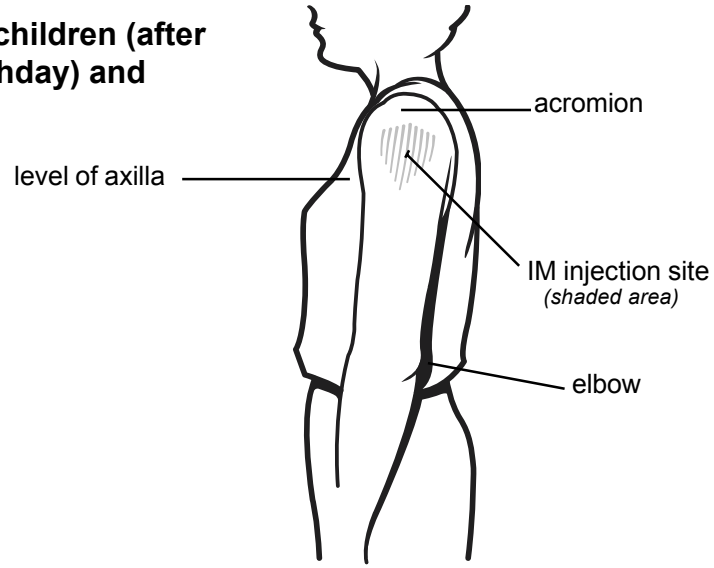
¶CDC. "ACIP General Recommendations on Immunization" at www.cdc.gov/nip/publications/ACIP-list.htm.

IM site for infants



Insert needle at a 90° angle into the anterolateral thigh muscle.

IM site for children (after the 1st birthday) and adults



Insert needle at a 90° angle into thickest portion of deltoid muscle—above the level of the axilla and below the acromion.

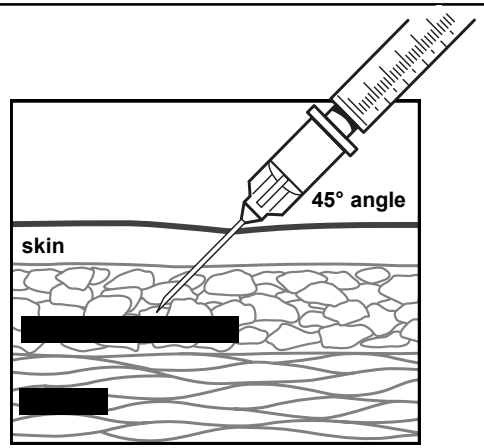
Technical content reviewed by the Centers for Disease Control and Prevention, Jan. 2007.

Immunization Action Coalition • 1573 Selby Ave. • St. Paul, MN 55104 • (651) 647-9009 • www.immunize.org • www.vaccineinformation.org • admin@immunize.org

How to Administer Subcutaneous (SC) Injections

Administer these vaccines via subcutaneous (SC) route: MMR, varicella, meningococcal polysaccharide (MPSV), and zoster (shingles). Administer inactivated polio (IPV) and pneumococcal polysaccharide (PPV) vaccines either SC or IM.

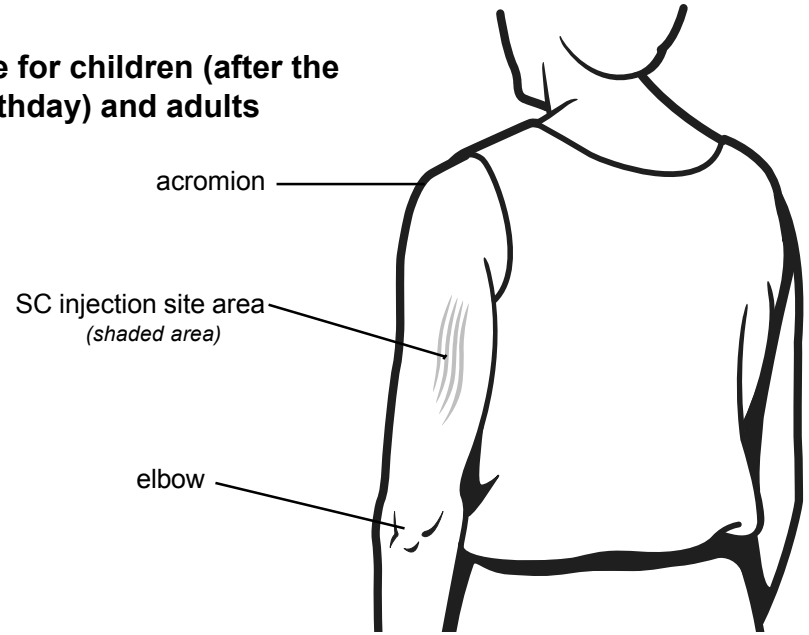
Patient age	Site	Needle size	Needle insertion
Birth to 12 mos.	Fatty tissue over the anterolateral thigh	5/8" needle, 23–25 gauge	Pinch up on SC tissue to prevent injection into muscle. Insert needle at 45° angle to the skin. (Before administering an injection, it is not necessary to aspirate, i.e., to pull back on the syringe plunger after needle insertion.*) Multiple injections given in the same extremity should be separated by a minimum of 1". *CDC. "ACIP General Recommendations on Immunization" at www.cdc.gov/nip/publications/ACIP-list.htm.
12 mos. and older	Fatty tissue over the triceps	5/8" needle, 23–25 gauge	



SC site for infants

Insert needle at a 45° angle into fatty tissue of the anterolateral thigh. Make sure you pinch up on SC tissue to prevent injection into the muscle.

SC site for children (after the 1st birthday) and adults



Insert needle at a 45° angle into the fatty tissue over the triceps muscle. Make sure you pinch up on the SC tissue to prevent injection into the muscle.

Technical content reviewed by the Centers for Disease Control and Prevention, Jan. 2007.

www.immunize.org/catg.d/p2020.pdf • Item #P2020 (1/07)

Immunization Action Coalition • 1573 Selby Ave. • St. Paul, MN 55104 • (651) 647-9009 • www.immunize.org • www.vaccineinformation.org • admin@immunize.org

WEBSITE: www.vaers.hhs.gov E-MAIL: info@vaers.org FAX: 1-877-721-0366

VACCINE ADVERSE EVENT REPORTING SYSTEM

24 Hour Toll-Free Information 1-800-822-7967
P.O. Box 1100, Rockville, MD 20849-1100
PATIENT IDENTITY KEPT CONFIDENTIAL

For CDC/FDA Use Only
VAERS Number _____
Date Received _____

Patient Name: _____
Last First M.I.
Address _____
City State Zip
Telephone no. (____) _____

Vaccine administered by (Name): _____
Responsible Physician _____
Facility Name/Address _____
City State Zip
Telephone no. (____) _____

Form completed by (Name): _____
Relation to Patient ☐ Vaccine Provider ☐ Patient/Parent ☐ Manufacturer ☐ Other
Address *(if different from patient or provider)* _____
City State Zip
Telephone no. (____) _____

1. State
2. County where administered
3. Date of birth ___/___/___ mm dd yy
4. Patient age
5. Sex ☐ M ☐ F
6. Date form completed ___/___/___ mm dd yy

7. Describe adverse events(s) (symptoms, signs, time course) and treatment, if any

8. Check all appropriate:
☐ Patient died (date ___/___/___ mm dd yy)
☐ Life threatening illness
☐ Required emergency room/doctor visit
☐ Required hospitalization (_____days)
☐ Resulted in prolongation of hospitalization
☐ Resulted in permanent disability
☐ None of the above

9. Patient recovered ☐ YES ☐ NO ☐ UNKNOWN

10. Date of vaccination ___/___/___ mm dd yy
Time _____ AM PM

11. Adverse event onset ___/___/___ mm dd yy
Time _____ AM PM

12. Relevant diagnostic tests/laboratory data

13. Enter all vaccines given on date listed in no. 10

	Vaccine (type)	Manufacturer	Lot number	Route/Site	No. Previous Doses
a.					
b.					
c.					
d.					

14. Any other vaccinations within 4 weeks prior to the date listed in no. 10

	Vaccine (type)	Manufacturer	Lot number	Route/Site	No. Previous doses	Date given
a.						
b.						

15. Vaccinated at:
☐ Private doctor's office/hospital
☐ Public health clinic/hospital
☐ Military clinic/hospital
☐ Other/unknown

16. Vaccine purchased with:
☐ Private funds
☐ Public funds
☐ Military funds
☐ Other/unknown

17. Other medications

18. Illness at time of vaccination (specify)

19. Pre-existing physician-diagnosed allergies, birth defects, medical conditions (specify)

20. Have you reported this adverse event previously? ☐ No ☐ To health department ☐ To doctor ☐ To manufacturer

Only for children 5 and under

22. Birth weight _____ lb. _____ oz.

23. No. of brothers and sisters

21. Adverse event following prior vaccination (check all applicable, specify)

	Adverse Event	Onset Age	Type Vaccine	Dose no. in series
☐ In patient				
☐ In brother or sister				

Only for reports submitted by manufacturer/immunization project

24. Mfr./imm. proj. report no.

25. Date received by mfr./imm.proj.

26. 15 day report? ☐ Yes ☐ No

27. Report type ☐ Initial ☐ Follow-Up

Health care providers and manufacturers are required by law (42 USC 300aa-25) to report reactions to vaccines listed in the Table of Reportable Events Following Immunization. Reports for reactions to other vaccines are voluntary except when required as a condition of immunization grant awards.

"Fold in thirds, tape & mail — DO NOT STAPLE FORM"

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BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 1895 ROCKVILLE, MD

POSTAGE WILL BE PAID BY ADDRESSEE

VAERS
P.O. Box 1100
Rockville MD 20849-1100

DIRECTIONS FOR COMPLETING FORM

(Additional pages may be attached if more space is needed.)

GENERAL

- Use a separate form for each patient. Complete the form to the best of your abilities. Items 3, 4, 7, 8, 10, 11, and 13 are considered essential and should be completed whenever possible. Parents/Guardians may need to consult the facility where the vaccine was administered for some of the information (such as manufacturer, lot number or laboratory data.)
- Refer to the Reportable Events Table (RET) for events mandated for reporting by law. Reporting for other serious events felt to be related but not on the RET is encouraged.
- Health care providers other than the vaccine administrator (VA) treating a patient for a suspected adverse event should notify the VA and provide the information about the adverse event to allow the VA to complete the form to meet the VA's legal responsibility.
- These data will be used to increase understanding of adverse events following vaccination and will become part of CDC Privacy Act System 09-20-0136, "Epidemiologic Studies and Surveillance of Disease Problems". Information identifying the person who received the vaccine or that person's legal representative will not be made available to the public, but may be available to the vaccinee or legal representative.
- Postage will be paid by addressee. Forms may be photocopied (must be front & back on same sheet).

SPECIFIC INSTRUCTIONS

Form Completed By: To be used by parents/guardians, vaccine manufacturers/distributors, vaccine administrators, and/or the person completing the form on behalf of the patient or the health professional who administered the vaccine.

Item 7: Describe the suspected adverse event. Such things as temperature, local and general signs and symptoms, time course, duration of symptoms, diagnosis, treatment and recovery should be noted.

Item 9: Check "YES" if the patient's health condition is the same as it was prior to the vaccine, "NO" if the patient has not returned to the pre-vaccination state of health, or "UNKNOWN" if the patient's condition is not known.

Item 10 and 11: Give dates and times as specifically as you can remember. If you do not know the exact time, please indicate "AM" or "PM" when possible if this information is known. If more than one adverse event, give the onset date and time for the most serious event.

Item 12: Include "negative" or "normal" results of any relevant tests performed as well as abnormal findings.

Item 13: List ONLY those vaccines given on the day listed in Item 10.

Item 14: List any other vaccines that the patient received within 4 weeks prior to the date listed in Item 10.

Item 16: This section refers to how the person who gave the vaccine purchased it, not to the patient's insurance.

Item 17: List any prescription or non-prescription medications the patient was taking when the vaccine(s) was given.

Item 18: List any short term illnesses the patient had on the date the vaccine(s) was given (i.e., cold, flu, ear infection).

Item 19: List any pre-existing physician-diagnosed allergies, birth defects, medical conditions (including developmental and/or neurologic disorders) for the patient.

Item 21: List any suspected adverse events the patient, or the patient's brothers or sisters, may have had to previous vaccinations. If more than one brother or sister, or if the patient has reacted to more than one prior vaccine, use additional pages to explain completely. For the onset age of a patient, provide the age in months if less than two years old.

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LIST OF STANDARD ABBREVIATIONS

Revised November 2012

NOTE:

Region specific abbreviations may be used as long as they are approved by the region and are attached to the following list of approved standard abbreviations.

The use of abbreviations in standard program and laboratory manuals and Patient Tracking and Billing Management Information System (PTBMIS) are allowed.

The following Joint Commission on Accreditation of Healthcare Organization (JCAHO) prohibited abbreviations should not be used because potential for provider error:

qd /every day; qod / every other day; and U/ units

-A-

A&D	Alcohol & Drug
A & O	alert and oriented
Ab	abortion
Abd	abdominal, abdomen
Abn	abnormal
ac	before meals
ACHES	abdominal pain, chest pain, headaches, eye problems and severe leg pain
ADD	attention deficit disorder
ADHD	attention deficit hyperactive disorder
ad lib	as desired
ADL	activities of daily living
adm	admission, admit
AIDS	acquired immunodeficiency Syndrome
AKA	above knee amputation
ALT	anterio lateral thigh
Am	morning
AMA	against medical advice
amb	ambulatory
Amox	Amoxocillin
amp	amputation
amt	amount
ant	anterior
ant font	anterior fontanelle
appt	appointment
ARDS	Acute Respiratory Distress Syndrome
ASA	aspirin
ASAP	as soon as possible
ASHD	arteriosclerotic heart disease
AUB	abnormal uterine bleeding
auth #	authorization number
AV	anteverted

- B –

BC	birth control
BCA	bichloracetic acid
BCP	birth control pills
B/F	black female
BF	breastfeeding
BID	two times daily
Bil	bilateral
BKA	below knee amputation
BM	bowel movement
B/M	black male
BMI	body mass index
BMR	basal metabolic rate
B/P or BP	blood pressure
BOM	bilateral otitis media
BS or BG	blood sugar or glucose
BSE	breast self exam
BSO	bilateral salpingo oophorectomy
BTB	break through bleeding
BTL	bilateral tubal ligation
BUM	back up method
BV	bacterial vaginosis
BW	birth weight
BX	biopsy

- C –

C	centigrade/ Celsius
Ca	cancer
Ca+	calcium
CABG	coronary artery bypass with graft
CAD	coronary artery disease
Cal	calorie
cap	Capsule
Carb	carbohydrate
cath	catheterization
cc	cubic centimeter
CC	chief complaint
CCLG	Creative Curriculum Learning Games
CCU	Coronary Care Unit
CD	communicable disease
CEDEP	Communicable Environmental Disease & Emergency Preparedness
Cert	certify
CHA	Community Health Agency
CHF	congestive heart failure
Chol	cholesterol
CHR	child health record
CID	correction in documentation
Cigs	cigarettes
Circ	circumcision
ck	check
cm	centimeter
CMT	cervical motion tenderness
CMV	cytomegalovirus
CNS	central nervous system
c/o	complains of
Co	county
CO_2	carbon dioxide
comp	comprehensive
colpo	colposcopy
cont	continue
COPD	chronic obstructive pulmonary disease
CPAP	continuous positive airway pressure
cryo	cryosurgery
C-section	cesarean section
CTA	clear to auscultation
CV	cardiovascular
CVA	cerebral vascular accident
CVAT	costo vertebral angle tenderness
Cx	cervix
CXR	chest x-ray

- D –

D	diarrhea
D & C	dilatation and curettage
dc, D/C	discontinue, discharge
DCS	Department of Children's Services
Del	delivery, delivered
delt	deltoid
dept	department
dev	development
DHS	Department of Human Services
diaph	diaphragm
diff	differential
Dir	Director
disc	discussed
disp	dispensed
DM	Diabetes Mellitus
DMPA, Depo	Depo-Medroxyprogesterone (Depo-Provera)
DOE	dyspnea on exertion
Doxy	Doxycycline
DTR	Deep tendon reflex
DTs	Delirium tremors
DVT	deep vein thrombosis
Dx	diagnosis
DZ	disease

- E -

ECC	endocervical curettage
ED	Emergency Department
edu/ed	education
EDC	estimated date of confinement
EDD	estimated date of delivery
EES, E-mycin	Erythromycin
EMS	Emergency Medical Services
enc	encourage
ENT	ear, nose, throat
Env	environment
ER	emergency room
eRx	e prescribe
esp	especially
etc	and so on
ETOH	alcohol

eval	evaluate
ex	example
ext	external

- F -

F, Fa	father
FA	Folic Acid
FBD	fibrocystic breast disease
FBS, FBG	fasting blood sugar or glucose
fe	female
Fe	iron
$FeS0_4$	ferrous sulfate
FM	fetal movement
font	fontannel
FH	fundal height
FHR	fetal heart rate
FHT	fetal heart tone
Fl	fluoride
freq	frequent
FSP	Family Service Plan
ft	foot
FTT	failure to thrive
f/u	follow-up
FUO	fever of undetermined origin
FVA	Fluoride Varnish Application
Fx	fracture

- G -

GB	gall bladder
GC	gonorrhea
GERD	gastro esophageal reflux disease
GF	grandfather
GI	gastrointestinal
glu	glucose
Gm	gram
GM	grandmother
Gr	grade
gr	grain
GSE	genital self-exam
gtt	drops
G_P_A_	gravida _, para _, abortion_
GYN	gynecology

- H -

H_2O	water
H_2O_2	hydrogen peroxide
HOH	hard of hearing
HA	headache
HBV	hepatitis B virus
HC	head circumference
HCTZ	hydrochlorothiazide
HCV	hepatitis C virus
HCW	health care worker
HD	health department
HDV	hepatitis D virus
HEENT	head, eyes, ears, nose, throat
HH	Home Health
HMB	heavy menstrual bleeding
hosp	hospital
hr	hour
HR	heart rate
HRT	hormone replacement therapy
HS	night, bedtime
HSV	herpes simplex virus
ht	height
HTN	hypertension
Hx	history
hyst	hysterectomy

- I -

IBW	ideal body weight
IBS	irritable bowel syndrome
ICU	Intensive Care Unit
I&D	incision and drainage
ID	intradermal or identification
IDDM	insulin dependent diabetes mellitus
i.e.	such as
IG	immune globulin
imm	immunization
in	inches
info	information
inj	injection
Ins	insurance
inst	instruct, instructed, instructions
IP	intestinal parasite
irreg	irregular
ISG	immune serum globulin
IUB	Irregular uterine bleeding
IUGR	intrauterine growth retardation
IUP	intrauterine pregnancy
IV	intravenous

- J -

(none)

- K -

K+	potassium
Kcal	kilo calorie
KCL	potassium chloride
kg	kilogram
KUB	kidneys, ureters, bladder

- L -

L&D	labor and delivery
LAC	left antecubital
Lap	laparotomy
lat	lateral
lb	pound
LBW	low birth weight
LD	left deltoid
LE	lower extremity
LEEP	Laser Electrosurgical Excision Procedure
LEP	Limited English Proficiency
LFA	left forearm
lg	large
LG	left gluteus
LGA	large for gestational age
LGM	left gluteus maximus
liq	liquid
LLE	left lower extremity
LLL	Left Lower Lobe
LLQ	left lower quadrant
LMP	last menstrual period
LNMP	last normal menstrual period
LSB	left sternal border
LSC	last sexual contact
LT	left thigh
LUA	left upper arm
LUE	left upper extremity
LUQ	left upper quadrant
LHD	local health department

- M -

m	male
M, Mo	mother
Max	maximum
mcg	microgram
mcg/dl	micrograms per dilution
MCO	Managed Care Organization
MDI	Metered Dose Inhaler
med	medication
mg	milligram
MGF	maternal grandfather
MGR	murmur, gallop, rub
MGM	maternal grandmother
mgt/mgmt	management
MH	Mental Health
MI	myocardial infarction
min	minute
misc	miscellaneous
ml	milliliter
mm	millimeter
MNT	medical nutrition therapy
mo	month
mod	moderate
mono	mononucleosis
MRSA	methicillin resistant staph aureus
mtg	meeting
MVA	motor vehicle accident
MVI	multivitamin
MVP	mitral valve prolapse
MTZ	metronidazole

- N -

Na	sodium
N/A	not applicable
NaCl	sodium chloride
NAS	intranasal
N&V	nausea and vomiting
NAD	no apparent distress
NFP	natural family planning
NGU	nongonococcal urethritis
NICU	neonatal intensive care unit
NIDDM	non insulin dependent diabetes mellitus
NKA	no known allergies
NKDA	no known drug allergies
nl	normal
NN	nurses notes
NOS	not otherwise specified
NPO	nothing by mouth
NRF	no refills
NRT	nicotine replacement therapy

NSAIDS	non-steroidal anti-inflammatory drugs
Nsg	nursing
NSR	normal sinus rhythm
NSSC	normal size, shape, and contour
N/T	non tender
nutr, nutri	nutrition

- O -

O_2	oxygen
O & P	ova and parasites
OB	obstetric
oc	oral contraceptive
occ	occasional
OCP	oral contraceptive pill
OD	overdose or right eye
OM	otitis media
ortho	orthopedic
OS	left eye
OT	Occupational Therapy
OTC	over the counter
OU	both eyes
OV	office visit
oz	ounce

- P -

P	pulse
palp	palpable
PAP	Patient Assistant Program
PC	Primary Care phone conference/call
pc	after meals
PCN	penicillin
PE	physical examination
ped	pediatric
peri	perineum
PERRLA	pupils equal, round, reactive to light and accommodation
PGF	paternal grandfather
PGM	paternal grandmother
PHBC	"Partners for Healthy Babies" curriculum
PID	pelvic inflammatory disease
pk	pack
pkg	package
pm	afternoon
PMH	past medical history
PMI	point of maximum impulse
PMS	premenstrual syndrome
pneu	pneumonia
PNV	prenatal vitamins
POC	plan of care
po	by mouth
post	posterior
pp	post partum
PPBS, PPBG	post prandial blood sugar or glucose
ppd	packs per day
PPNG	penicillinase producing neiserria gonorrhea
preg	pregnant
prep	preparation
Pres Elig	presumptive eligibility
PRN	as needed
Prog	program
PROM	premature rupture of membranes
PSVT	paroxysmal supraventricular tachycardia
PT	physical therapy or pregnancy test
Pt	patient
p/u	pick up
PUD	peptic ulcer disease
Pul	pulmonary
pvt	private
psych	psychiatric

- Q –

q	every
q ___ h	every ___ hours
QID	four times a day
qt	quart

- R -

R or RR	respirations
RA	rheumatoid arthritis
RAC	right antecubital
RD	right deltoid
RDS	respiratory distress syndrome
re	regarding
Re√	re-check
Rec	recommend

rec'd	received
rev'd	reviewed
recert	recertify, recertification
ref	referral, refer
reg	regulation, regular
rehab	rehabilitation
resp	respiratory
req	request
RF	refill
RFA	right forearm
RG	right gluteus
RGM	right gluteus maximus
Rh	serological blood grouping factor
RLE	right lower extremity
RLL	Right Lower Lobe
RLQ	right lower quadrant
r/o	rule out
ROI	release of information
ROM	range of motion
ROS	Review of Systems
R/R	reactive reparative changes
RRR	regular rate rhythm
R/S	resupply
RSB	right sternal border
r/t	related to
RT	Right Thigh
RTC	return to clinic
RUA	right upper arm
RUE	right upper extremity
RUQ	right upper quadrant
RV	retroverted
Rx	prescribed, prescription, treatment
RxAP	prescription assistance program

- S -

SAB	spontaneous abortion
SBE	self breast exam
SCJ	squamocolumnar junction
SE	side effects
SGA	small for gestational age
SIDS	Sudden Infant Death Syndrome
sl	slight
sm	small
SOB	shortness of breath
SOM	serous otitis media
s/p	status post
spec	specimen
sq	squamous
SQ/SC	subcutaneous
SS	Social Security
s/s	signs and symptoms
SSI	Supplemental Security Income
ST	Speech Therapy
STAT	immediately
SVD	spontaneous vaginal delivery
SVT	supraventricular tachycardia

T -

T/ temp	temperature
T & A	tonsillectomy and adenoidectomy
tab	tablet
TAH	total abdominal hysterectomy
Tbsp	tablespoon
TC	throat culture
TCA	trichloracetic acid
TIA	transient ischemic attack
TID	three times a day
TM	tympanic membrane
TNTC	too numerous to count
TOC	test of cure
TNCare	TennCare
tol	tolerated
tr	trace
trach	tracheostomy
trich	trichomoniasis
TSE	testicular self exam
tsp	teaspoon
TTQL	Tennessee Tobacco Quit Line
Tx	treatment

- U –

umb	umbilicus
UNK	unknown
UOQ	upper outer quadrant
URI	upper respiratory infection
US	ultrasound
UTD	up to date
UTI	urinary tract infection
UTV	unable to void

- V -

VA	Veterans Administration
vag	vaginal
VBAC	vaginal birth after caesarian section
VCF	vaginal contraceptive film
vit	vitamin
VO	verbal orders
Vo	vouchers only
VOC	verification of certification
Voc. Rehab	Vocational Rehabilitation
Vol	volume
VP	venipuncture
VS	vital signs
vtx	vertex
VU	verbalized understanding

- W -

W/F	white female
W/M	white male
w/c	wheel chair
wk	week
WNL	within normal limits
w/o	without
wt	weight

- X –

(none)

- Y -

y/o	year old
yd	yard
yr	year

- Z -

(none)

VACCINE MANUFACTURERS

CHI	Chiron
CSL	Commonwealth Serum Laboratories
GSK	GlaxoSmithKline
MBL	Massachusetts Biologic Labs
MI	MedImmune
MSD	Merck
NOV	Novartis
SP	sanofi pasteur
WL	Wyeth/ Lederle

CREDENTIALS/PERSONNEL

APN	Advanced Practice Nurse
BA	Bachelor of Arts
BFPC/BFC	Breast Feeding Pear Counselor
BS	Bachelor of Science
BSN	Bachelor of Science in Nursing
BSW	Bachelor of Social Work
CA	Counseling Assistant
CC	Care Coordinator
CDA	Child Development Aide
CNA	Certified Nursing Assistant
CNM	Certified Nurse Midwife
DA	Dental Assistant
DDS	Dentist
DH	Dental Hygienist
DIS	Disease Intervention Specialist
DO	Doctor of Osteopath
Dr.	Doctor
EMT	Emergency Medical Technician
HE	Health Educator
IBCLC	International Board Certified Lactation Consultant
LC	Lactation Consultant
LCSW	Licensed Clinical Social Worker
LDN	Licensed Dietitian/Nutritionist
LPN	Licensed Practical Nurse
LMSW	Licensed Medical Social Worker
MD	Medical Doctor
MHA	Masters in Health Administration
MPA	Masters in Public Administration
MPH	Masters in Public Health
MS	Master of Science
MSSW	Master of Science in Social Work
MSN	Master of Science in Nursing
MSW	Masters in Social Work
NA	Nursing Assistant
NE	Nutrition Educator
NUTR	Nutritionist
OT	Occupational Therapist
PA	Physician Assistant
PCP	Primary Care Physician/Provider
PHN	Public Health Nurse
PHOA	Public Health Office Assistant
PHR	Public Health Representative
PHOS	Public Health Office Supervisor
PMD	Private Medical Doctor
PMP	Private Medical Provider
PTA	Physical Therapy Assistant
RD	Registered Dietitian
RN	Registered Nurse
RN,C or RN-BC	Registered Nurse, Certified
RN-ES	Registered Nurse with Expanded Skills
RPh	Registered Pharmacist
RPT	Registered Physical Therapist
SC	Social Counselor
ST	Speech Therapist
SW	Social Worker

SYMBOLS

$\overline{p}$	after
$\overline{a}$	before
&	and
@	at
~	approximate
b√	breast check
√	check, checked
Δ	change
°	degree
=	equal
q	every
♀	female
’	foot
>	greater than
≥	greater than or equal to
↑	high, elevated, above, increase
"	inches
Ⓛ	left
<	less than
≤	less than or equal to
↓	low, decreased, below
♂	male
Ⓜ	murmur
Ø or O	no or normal
#	number
⊖	negative
/	per
%	percent
1º	primary
+ or ⊕	positive
?	question
Ⓡ	right
2º	secondary
$\overline{c}$	with
$\overline{s}$	without
X	times
∴	therefore

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