**DEFINITIONS:**

**Antigen:** A molecule recognized as ‘foreign’ by the body’s immune system, causing the release of antibodies.

**Allergens:** A type of antigen that produces an abnormal vigorous immune response in which the immune system fights off a perceived threat that would otherwise be harmless to the body.

**Allergic reaction:** The body’s response to allergens. Severity of reaction can range from mild symptoms to life threatening emergency. Allergic reactions can be caused by the following types of contact and include the following symptoms:

- **Ingestion** (Consuming food or drink one is sensitive to. Foods commonly associated with allergies are peanuts, cow’s milk, eggs, wheat, soy, nuts, sesame, fish, shellfish and preservatives such as sulphites.) Reaction symptoms can include digestive problems, hives or trouble breathing.

- **Inhalation** (Breathing in pollen, dust mite droppings, perfume or pet dander). Reaction symptoms can be watery eyes, congestion and breathing difficulty.

- **Direct** (Brushing against an allergy causing plant such as poison ivy, poison oak, etc., contact with insect venom - wasps, fire ants, bees, or contact with latex). Reaction symptoms can range from skin irritation and local swelling to life-threatening shock.

- **Medication administration** (Penicillin/other antibiotics). Reaction symptoms can be hives, rash, fever and difficulty breathing. Severe reactions can be life threatening.

**Anaphylaxis (also called Systemic Reaction):** An extremely serious form of allergic reaction which causes multiple symptoms throughout the body. Symptoms include rash, hives, nausea and vomiting, difficulty breathing, dangerous drop in blood pressure, swelling of eyes and throat and possibly, shock. Implement 911. Notify allergist.

**Immunotherapy:** Allergen immunotherapy, also known as desensitization, is a medical treatment for environmental allergies, allergies to insect bites and asthma. Immunotherapy:

- **Involves exposing people to larger and larger amounts of allergen** in an attempt to change the immune system’s response.

- **Consists of protocols** that generally involve weekly injections during a ‘build-up’ phase that can last several months to a year, followed by monthly maintenance injections for a period of 3-5 years.

**Localized Reaction:** Minor swelling, redness or itching at the injection site after administration of the allergy shot. Dime to quarter size swelling at the injection site is normal within minutes of the injection. Larger local reactions (great than quarter size) can occur over 24 hours and last 2-3 days. Larger local reactions require allergist notification and dosage adjustment.

**POLICY:**

Patients receiving immunotherapy injections (allergy shots) must be under the care of an allergist.
PROCEDURE:

1. **Initiation of care – necessary referral components:**
   A. **Referral - The patient’s allergist must provide the following:**
      - Prescribing physician’s name, address, phone and fax numbers
      - Allergy Injection Protocol with patient’s signed consent
      - Allergen extract for injection
   B. **Protocols - must contain specific instructions on:**
      - Dosing, contents and strengths of extracts
      - Dose adjustments for missed shots, late shots or reactions
      - Escalation and maintenance dosing, interval between injections
      - Missed dose schedule
      - Use of new vials
      - Seasonal exposures
      - Reaction to last dose administered
   C. **Clarification** MUST occur should orders (Protocol) be unclear or incomplete. The Provider or clinic nurse are responsible for performing clarification.

2. **Initial and Subsequent Visits:**
   A. **Medicare and Medicaid patients require injections be administered in provider visits.**
      - Vital Signs must be recorded for all ‘Provider’ visits.
      - A minimum of temperature must be performed for ‘Nurse Only’ visits.
   B. **Confirm:**
      - **A PROVIDER IS IN THE BUILDING – No provider present – No Shot!**
      - The patient has EpiPen – **No EpiPen – No Shot!**
      - The patient has taken antihistamine at prior night or in a.m. – **No Antihistamine – No Shot!**
      - The patient is NOT ill – **Ill with any of the following – No Shot!**
        - Shortness of Breath (If Asthmatic and used inhaler in LAST 24 HOURS)
        - Productive Cough or colored nasal drainage
        - Hives
        - Had an insect sting in the last 24 hours
        - Fever – Temperature above 99°F - **Injection possible - consult provider**
      - The patient is NOT taking Beta-Blockers. **Beta-Blockers or MAOIs – No Shot!**
        - Ask the patient if the patient is taking any new medications
        - Consult with provider regarding the patient’s medications: Allergy injections are contraindicated for patients taking Beta-Blockers (Coreg/Carvedilol, Lopressor/Metaprolol, Tenormin/Atenolol, Corgard/Nadolol, Inderal/Propanolol) or Monamine Oxidase Inhibitors - M.A.I.O’s – (Marplan/Isocarboxid, Nardil/Phenelzine, Emsam/Selegiline, Parnate/Tranclypromine).
   C. **Use Caution:**
      - **CONSULT PROVIDER** if patient has started new medications.
        Allergy Injections are contraindicated for persons taking BETA-BLOCKERS or MONOAMINE OXIDASE INHIBITORS (M.A.O.I.’S.)
      - **REVIEW PROTOCOL FOR NEW VIAL:** Some Allergists require patients to receive 1st injection of new vial at the Allergists office.
      - **QUESTION THE PATIENT REGARDING RESPONSE TO LAST ALLERGY SHOT**
        **REMEMBER:** Localized reaction with redness greater equal to or greater than 3 cm (quarter size) or **SIGNIFICANT DISCOMFORT** at time of injection or delayed (within 24 hours of injection), require protocol review of dosing instructions and allergist notification.
3. **Administration:**
   A. Inform patient of procedure. Have patient be seated. If patient has a history of fainting from injections, have patient lie on exam table.
   
   B. Injections are given subcutaneously using a 1 mL syringe with a 26 or 27 gauge needle.
   - Injections should be given in the posterior portion of the middle third of the upper arm at the junction of the deltoid and triceps muscle.
   - Syringe should be aspirated to check for blood return in syringe prior to injecting. If blood is present, DO NOT inject. Use a different needle and a different site.

4. **Documentation:**
   A. Document the injections on the ‘Allergy Flow Sheet’
   B. Complete BVCAA: Nurse Visit – Allergy Injections
   C. **If more than one injection is given, do the following:**
   - In ‘Treatment’ section of progress note – select treatment and go to ‘Procedures’
   - In section labeled ‘Today’s orders’ – delete ‘one injection’ (Select “Yes” to question “Are you sure you want to delete one injection?”)
   - Proceed to ‘look up’ and type in ‘inj’ – then select ‘MULTIPLE INJECTIONS’ and close
   - Proceed to Billing information’ and select ‘Procedure Codes’
     - Select Procedure Code 95117 for multiple injections
     - Change number of units to reflect number of injections administered

5. **Post Administration Observation and Documentation:**
   A. **Observe the patient for 20” (minutes) after the injection.** The onset of anaphylactic shock occurs within 30” (minutes) following injection.
   
   B. **Measure injection site for inflammation, swelling, wheal and flare size in longest diameter.**
     - **Localized reaction with redness greater equal to or greater than 3 cm (quarter size) requires protocol review**
     - Notify allergist
     - Follow protocol directions regarding dosing

C. **Remind patients they should NOT EXERCISE for at least 2 hours after injection.**

D. **Document reaction on the Allergy Flow Sheet.**

6. **Reactions and Treatment:**
   A. **Localized Reaction – Minor swelling or redness at site.**
     - Ice pack
     - Report to allergist as allergist may wish to consider adjustment of future doses
     - Topical steroids may be applied for reactions greater than 2” (inches)
B. Systemic Reaction: A ‘911’ Medical Emergency (AIRWAY – BREATHING - CIRCULATION)
   - Administer EpiPen near the allergy shot injection site
   - Call provider
   - Activate 911
   - Administer Oxygen via mask
   - STAY WITH PATIENT
   - Place patient in supine position (flat) with feet elevated
   - Administer Benadryl from EMERGENCY BOX as directed by the provider
   - Administer Albuterol via nebulizer if Provider orders
   - Monitor and record Vital Signs, including Pulse Oximetry readings
   - Ensure Documentation is Complete in Medical Record
   - Complete Variance Report
   - Notify the patient's allergist of injection response

7. Storage:
   A. Allergy shot extract MUST be clearly labeled with:
      - Patient’s name
      - Contents/Name of the vial
      - Expiration Date
   B. Refrigerator temperature should be maintained between 37.4°F and 42.8°F. If the extract is
      exposed to heat due to refrigerator malfunction or power failure, or frozen:
      - Contact the referring Allergist for instructions.
      - Document allergist’s instruction in the progress note.
   C. Allergy Extract must be ‘in date’.
      - Clinic staff and patient share the responsibility to notify allergist replacement extract is
        needed at least 3 weeks prior to expiration date on vial.
      - The patient is responsible for obtaining a ‘new’ vial and having the first injection
        administered in the allergist’s office.

RELATED POLICY:
   Emergency Assessment Policy (Location: Standing Delegated Orders section of Policy & Procedures)

REFERENCES:
   (Leave blank if none)

REQUIRED BY:
   (Leave blank if none)

ATTACHMENTS/ENCLOSURES:
   Example of Protocol Orders (Texas ENT)
**TITLE:** ALLERGY SHOTS (IMMUNOTHERAPY)

**Scope/Purpose:** To provide guidelines to ensure safe administration of immunotherapy agents.

**Division/Department:** All Clinics

**Policy/Procedure #:** _X_ New  __Replacement for:_

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