Helpful Tips for Successful Immunization
Objectives:

- Discuss holding positions and distraction techniques to use during immunization.
- Discuss management of adverse reactions after immunization including syncope and emergency protocols in case of anaphylactic reactions.
- Describe techniques to use (such as needle size, sites of immunization, vaccine type/expiration date verification and documentation accuracy) for proper immunizations.
Holding Positions and Distraction Techniques
Infants and Toddlers
Kindergarten and Older Children
Distraction Techniques

Parents Distract and comfort by:

- Touching soothingly and talking softly.
- Making eye contact as parent smiles at him/her.
- Holding child securely on parent’s lap.
- Talking to or singing with child.
- Helping child take deep breaths and slowly blow out the pain.
- Using a hand puppet.
- Pointing out posters or objects around the room.
- Telling child a story or have him/her tell you one.
- Allowing child to cry, don’t force him/her to be brave.
Distraction Techniques
Adverse Reaction Management

Medical Management of Vaccine Reactions in Children and Teens

All vaccines have the potential to cause an adverse reaction. To minimize adverse reactions, patients should be carefully screened for precautions and contraindications before vaccine is administered. Even with careful screening, reactions can occur. These reactions can vary from trivial and inconvenient (e.g., soreness, itching) to severe and life threatening (e.g., anaphylaxis). If reactions occur, staff should be prepared with procedures for their management. The table below describes procedures to follow if various reactions occur.

<table>
<thead>
<tr>
<th>Reaction</th>
<th>Symptoms</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized</td>
<td>Soreness, redness, itching, or swelling at the injection site</td>
<td>Apply a cold compress to the injection site. Consider giving an analgesic (pain reliever) or antipruritic (anti-itch) medication.</td>
</tr>
</tbody>
</table>

Adverse Reaction Management
Syncope Management

Fainting. Brief fainting spells and related symptoms (such as jerking movements) can happen after any medical procedure, including vaccination. Sitting or lying down for about 15 minutes after a vaccination can help prevent fainting and injuries caused by falls. Associated symptoms include dizziness or light-headedness, or has vision changes or ringing in the ears.
Anaphylaxis Management

Sudden or gradual onset of generalized itching, erythema (redness), or urticaria (hives); angioedema (swelling of the lips, face, or throat); severe bronchospasm (wheezing); shortness of breath; shock; abdominal cramping; or cardiovascular collapse
Anaphylaxis Management

If swelling or itching occurs at site after immunization, observe patient for generalized symptoms. If generalized symptoms occur, activate the EMS system. One health care personnel remains with patient and monitors airway, breathing and circulation.

First-line treatment: Administer aqueous epinephrine 1:1000 dilution (i.e., 1 mg/mL) intramuscularly; the standard dose is 0.01 mg/kg body weight, up to 0.3 mg maximum single dose in children and 0.5 mg maximum in adolescents.
Secondary treatment option: For hives or itching, you may also administer diphenhydramine either orally or by intramuscular injection; the standard dose is 1–2 mg/kg body weight, up to 30 mg maximum dose in children and 50 mg maximum dose in adolescents.
Anaphylaxis Management

- Perform CPR as necessary
- Take pulse and BP every 5 minutes
- If BP is low, elevate legs
- If EMS has not arrived repeat epinephrine every 5 – 15 minutes for up to 3 doses dependent upon patient’s response
- Record all vital signs, medications administered to the patient, including the time, dosage, response, and the name of the medical personnel who administered the medication, and other relevant clinical information.
- Notify patient’s primary care physician
## Administering Vaccines: Dose, Route, Site, and Needle Size

<table>
<thead>
<tr>
<th>Vaccines</th>
<th>Dose</th>
<th>Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria, Tetanus, Pertussis (DTP, DT, Tdap, Td)</td>
<td>0.5 mL</td>
<td>IM</td>
</tr>
<tr>
<td><em>Haemophilus influenzae</em> type b (Hib)</td>
<td>0.5 mL</td>
<td>IM</td>
</tr>
<tr>
<td>Hepatitis A (HepA)</td>
<td>≤18 yrs: 0.5 mL, ≥19 yrs: 1.0 mL</td>
<td>IM</td>
</tr>
<tr>
<td>Hepatitis B (HepB)</td>
<td>≤19 yrs: 0.5 mL*, ≥20 yrs: 1.0 mL</td>
<td>IM</td>
</tr>
</tbody>
</table>

*Persons 11–15 yrs may be given Recombivax HB* (Merck) 1.0 mL adult formulation on a 2-dose schedule.

### Subcutaneous (SC) injection

Use a 23–25 gauge needle. Choose the injection site that is appropriate to the person’s age and body mass.

<table>
<thead>
<tr>
<th>Age</th>
<th>Needle Length</th>
<th>Injection Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants (1–12 mos)</td>
<td>%*</td>
<td>Fatty tissue over anterolateral thigh muscle</td>
</tr>
<tr>
<td>Children 12 mos or older, adolescents, and adults</td>
<td>%*</td>
<td>Fatty tissue over anterolateral thigh muscle or fatty tissue over triceps</td>
</tr>
</tbody>
</table>

### Intramuscular (IM) injection

<table>
<thead>
<tr>
<th>Injection Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty tissue over anterolateral thigh muscle</td>
</tr>
<tr>
<td>Fatty tissue over anterolateral thigh muscle or fatty tissue over triceps</td>
</tr>
</tbody>
</table>

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Needle Size and Site Selection

- **Intramuscular (IM) Injection**
  - 1” needle (children and teens 3 – 18 years)
  - Deltoid muscle of arm or anterolateral thigh muscle
  - A 5/8” needle may be used only if the skin is stretched tight, subcutaneous tissue is not bunched, and injection is made at a 90-degree angle.

- **Subcutaneous (SC) Injection**
  - 5/8” needle
  - Fatty tissue over anterolateral thigh muscle or fatty tissue over triceps
Administering Vaccines

- Intramuscular – use 23 – 25 gauge needle at 90 degree angle
  - For female adults 130 – 200 lbs and male adults 130 – 260 lbs use 1” – 11/2” needle
  - For female adults 200 lbs + and male adults 260 lbs + use 11/2” needle

- Subcutaneous – use 25 gauge needle at 45 degree angle
  - MMR, Varicella, Zoster, Meningococcal Polysaccharide (MPSV), MMRV; also can give Polio and Pneumococcal Polysaccharide (PPSV23) this route
Administering Vaccines

- Intradermal influenza – administer at 90 degree angle in deltoid
- Flumist/LAIV – administered intra-nasally
  - In young children be sure head is secure
  - No snorting
  - Fast delivery
Injection Considerations

- Separate injections sites by 1 - 2 inches
- Syncope or fainting after vaccination may occur in adolescents and young adults, usually within 15 minutes of vaccination
- Have teens sit down while you are giving vaccine(s)
- Observe patients for 15 – 20 minutes after vaccination
Vaccine Information Statements

- The National Childhood Vaccine Injury (NCVI) Act requires that all health-care providers give parents or patients copies of Vaccine Information Statements (VIS) before administering each dose of the vaccines listed in the schedule.

- [http://www.immunize.org/](http://www.immunize.org/) (for VIS in a variety of languages)
Vaccine Information Statements

- Give the VIS each time the vaccine is given.
- Offer that patient/parent take paper and/or electronic copy home.
Documentation Requirements

Vaccine Administration Record for Children and Teens

Before administering any vaccines, give copies of all pertinent Vaccine Information Statements (VISs) to the child’s parent or legal representative and make sure he/she understands the risks and benefits of the vaccine(s). Always provide or update the patient’s personal record card.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Type of Vaccine</th>
<th>Date given (mo/day/yr)</th>
<th>Funding Source (F,S,P)</th>
<th>Site</th>
<th>Vaccine Information Statement (VIS)</th>
<th>Vaccinator* (signature or initials &amp; title)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis B*</td>
<td>(e.g., HepB, Hib-HepB, DTaP-HepB-IPV)</td>
<td></td>
<td></td>
<td></td>
<td>LOT #</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Give IM</td>
<td></td>
<td></td>
<td></td>
<td>Mfr.</td>
<td></td>
</tr>
<tr>
<td>Diphtheria, Tetanus, Pertussis*</td>
<td>(e.g., DTaP, DTaP/Hib, DTaP-HepB-IPV, DTaP/Hib-IPV)</td>
<td></td>
<td></td>
<td></td>
<td>Date on VIS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Date given</td>
<td></td>
</tr>
</tbody>
</table>

Patient name:
Birthdate:
Chart number:

Vaccine Information Statement Documentation Requirements

- Edition date of the Vaccine Information Statement
- Date the Vaccine Information Statement is provided (date vaccine is administered)
- The name, address (office address) and title of the person who administered the vaccine
- The date the vaccine is administered
- The vaccine manufacturer and lot number
Record the generic abbreviation (e.g., Tdap) or the trade name for each vaccine.

- Record the funding source of the vaccine given as either F (federal), S (state), or P (private).
- Record the site where vaccine was administered as either RA (right arm), LA (left arm), RT (right thigh), LT (left thigh), or IN (intranasal).
Tips For Accuracy

- Use the Center For Disease Control schedule and post current adult and teen schedules in visible locations.
- Use NDIIS Forecaster to ensure you are offering all recommended vaccinations.
- Use “Child and Teen” or “Adult” screening questionnaires to check for precautions and contraindications.

Tips For Accuracy

Patient name: ____________________________ Date of birth: ______ / ______ / ______

(mo.) (day) (yr.)

Screening Questionnaire for Child and Teen Immunization

For parents/guardians: The following questions will help us determine which vaccines your child may be given today. If you answer “yes” to any question, it does not necessarily mean your child should not be vaccinated. It just means additional questions must be asked. If a question is not clear, please ask your healthcare provider to explain it.

1. Is the child sick today?

Yes ☐ No ☐ Don’t Know ☐

Tips For Accuracy

- Document accurately
- Triple check your vaccine and expiration date
- Administer vaccinations using the correct route and at the correct site
- Document immediately in NDIIS.
- Give parent/patient documentation of vaccine administered.
- Report adverse events to VAERS (Vaccine Adverse Event Reporting System) [http://vaers.hhs.gov/index]
Helpful Documents

- Teen Schedule - http://www.cdc.gov/vaccines/recs/sche
Helpful Documents

- Child Schedule -
- Adult Schedule -
- Summary of Recommendations for Adult Immunization -
Helpful Documents

Contact Information

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