**Give all vaccines in the same visit: Simultaneous administration**

All vaccines, whether live or inactivated, can be given at the same visit. However, if not administered at the same visit, follow these simple rules (based on ACIP General Recommendations, *Table 3 Guidelines for spacing of live and inactivated antigens*, page 96):

- Two or more inactivated vaccines can be given at same visit or at any interval between doses.
- Inactivated and live vaccines can be given at the same visit or at any interval between doses.
- Two or more live intranasal or injectable vaccines must be given at least four weeks apart if not given at the same visit.
- Live oral vaccines: Can be given at the same visit or at any interval before or after inactivated or live injectable vaccines.

**Live vaccines:**
- Influenza: LAIV, intranasal
- Measles, mumps, rubella
- Measles, mumps, rubella, varicella
- Rotavirus, oral
- Typhoid, oral
- Varicella
- Yellow fever
- Zoster

**Inactivated vaccines:**
- DTaP, DT, Td, TT, Tdap
- *Haemophilus influenzae* type b
- Hepatitis A
- Hepatitis B
- Human papillomavirus
- Influenza: TIV, injectable
- Japanese encephalitis
- Meningococcal, conjugate and polysaccharide
- Pneumococcal, conjugate and polysaccharide
- Polio, injectable
- Rabies
- Typhoid, injectable

**Selecting the injection site (IM or SQ)**
- Intramuscular (IM) injections are generally recommended for inactivated vaccines and vaccines that contain an adjuvant or preservative; see *How to Administer IM Injections* on page 171.
- Subcutaneous (SQ) injections are generally recommended for live vaccines and other vaccines that may cause fewer local reactions; see *How to Administer SQ Injections* on page 172.
• Aspiration during IM injection is not necessary. For those who still aspirate, if blood is aspirated, withdraw the needle and discard the dose – do not give the vaccine with blood in it. Draw up a new dose into a new syringe and administer it in a separate limb if possible or at least 1 inch from the previous injection site.

• When giving injections use only the muscle site identified for the patient's age group, usually the vastus lateralis for infants and toddlers and the deltoid for older children, adolescents, and adults.

• Don’t use the gluteal area (buttocks) to administer vaccine. It is covered by a significant layer of subcutaneous fat that can prevent the needle from reaching the muscle. In young children, an IM injection in the gluteal area has the potential to damage the sciatic nerve.

Vaccine given by the wrong route?
• If a vaccine is administered by the wrong route, e.g., SQ rather than IM, the injection usually does not need to be repeated. Hepatitis B and rabies vaccinations are the exception to this rule. If hepatitis B or rabies vaccine is improperly administered, SQ rather than IM, the dose should be repeated.

• Keep in mind that improperly administered IM vaccines may cause a local reaction (e.g., irritation, redness, swelling, or necrosis). Make sure to advise the patient/parent of possible local reactions.

Administering more than one vaccine at the same site
If multiple vaccines are being administered at a single visit, try to give each vaccine at a different site. However, if two or more injections are given in a single limb follow these rules:

For infants and younger children:
• Use the vastus lateralis muscle
• Separate injections by 1 inch or more

For older children and adults:
• Use the deltoid muscle
• Separate injections by 1 inch or more

For simultaneous administration of a vaccine and an immune globulin (e.g., hepatitis B and hepatitis B immunoglobulin [HBIG]), use different limbs for each injection.

Creating an immunization site map
When giving multiple and/or simultaneous injections a site map of which vaccines to give and where can be a helpful tool. A site map takes the guess work out of deciding which vaccine to give at which site. An additional benefit is knowing which vaccine may have caused a local reaction. Create an immunization site map for your clinic by writing the vaccine name or abbreviation next to the appropriate site on the Infant, Toddler, Teen and Adult Immunization Site Maps on pages 173-174.

Immunization Techniques: Best Practices with Infants, Children, and Adults
Brush up on skills and techniques for giving vaccines. Use this video for training and orientation, as well as a refresher for more experienced staff. See page 161 for more information.