Scheduling Vaccinations

Q: Why are vaccines generally not given to infants under 6 weeks of age?
A: Mainly because little safety or efficacy data exist on doses given before 6 weeks of age, and the vaccines aren’t licensed for this use. The data that does exist suggest that the response to doses given before 6 weeks is poor; the response to hepatitis B and BCG vaccines is the exception.

Q: The number of injections recommended to be given at a single office visit is increasing, and we are running out of injection sites. Should we defer certain vaccines?
A: We strongly recommend that you do not defer any recommended vaccines. This would be a missed opportunity. No upper limit has been established regarding the number of vaccines that can be administered in one visit. When giving several injections at a single visit, separate 2 intramuscular (IM) vaccines by at least 1 inch (2.5 cm) in the body of the muscle to reduce the likelihood of local reactions overlapping. Here is a link to a collection of illustrations (i.e., “site maps”) that shows how one can administer all indicated doses to children: www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/D/site-map.pdf. If live parenteral (injected) vaccines (MMR and/or yellow fever) and live attenuated influenza vaccine (LAIV) are not administered during the same visit, they should be separated by 4 weeks or more.

Q: If I have to give more than 1 injection in a muscle, are certain vaccines best given together?
A: Since DTP and pneumococcal conjugate are the vaccines most likely to cause a local reaction, it’s practical to administer them in separate limbs (if possible), so there is no confusion about which vaccine caused the reaction.

Q: What is meant by “minimum intervals” between vaccine doses?
A: Vaccination schedules are generally determined by clinical trials, usually prior to licensure of the vaccine. The spacing of doses in the clinical trial usually becomes the recommended schedule. A “minimum interval” is shorter than the recommended interval, and is the shortest time between two doses of a vaccine series in which an adequate response to the second dose can be expected.

Q: Is it necessary to give two injections of a vaccine series in one visit if they are given within the recommended interval, or can they be given over 2 or more visits?
A: For routinely administered vaccines, there is no vaccine series that needs to be restarted because of an interval that is longer than recommended. In certain circumstances, oral typhoid vaccine (which is sometimes given for international travel) needs to be restarted if the vaccine series isn’t completed within the recommended time frame.

Precautions and Contraindications

Q: For which vaccines is an egg allergy a contraindication? What about MMR vaccine?
A: Influenza and yellow fever vaccines are the only vaccines that are contraindicated for people who have a history of a severe (anaphylactic) allergy to eggs. Allergy to eggs is no longer considered a contraindication for giving MMR vaccine. Though measles and mumps vaccines are grown in chick embryo tissue culture, several studies have documented the safety of these vaccines in children with severe egg allergy.

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Q: Is it necessary to wear gloves when we administer vaccinations?
A: No. Occupational Safety and Health Administration (OSHA) regulations do not require healthcare personnel to wear gloves when administering vaccinations, unless the healthcare worker is likely to come into contact with potentially infectious body fluids or has an open lesion on her or his hand.

Q: Is it necessary to wear gloves when we administer vaccinations?
A: A general rule applies for all vaccines. If the vaccine is given by a route that is not approved for that particular vaccine (e.g., administration of IM vaccines by the SC route).

Q: Are vaccine diluents interchangeable?
A: As a general rule, vaccine diluents are not interchangeable.

Q: When a vaccine vial is new and the cap has just been removed, is the rubber stopper sterile, or should it be cleansed with alcohol before reinserting into the vial?
A: The rubber stopper is not sterile. When you remove the protective cap from a vaccine or diluent vial, you should always clean the stopper with an alcohol wipe.

Q: Should you administer a vaccine to a person who is taking antibiotics?
A: Treatment with antibiotics is not a valid reason to defer vaccination. If the child or adult is otherwise well, or has only a minor illness, vaccines should be administered. But if the person has a moderate or severe acute illness (regardless of antibiotic use) one should defer vaccination until the person’s condition has improved.

Q: Should vaccines be withheld for patients on steroids?
A: Steroid therapies that are short term (less than 2 weeks); alternate-day; physiologic replacement; topical (skin or eyes); aerosol; or given by intra-articular, bursal, or tendon injection are not considered contraindications to the use of live virus vaccines. The immunosuppressive effects of corticosteroid treatment vary, but many clinicians consider a dose equivalent to either 2 mg/kg of body weight or a total of 20 mg per day of prednisone for 2 or more weeks as sufficiently immunosuppressive to raise concern about the safety of vaccination with live virus vaccines (e.g., MMR, varicella, LAIV, yellow fever). Providers should wait at least 1 month after discontinuation of therapy or reduction of dose before administering a live virus vaccine to patients who have received high systemically absorbed doses of corticosteroids for 2 weeks or more. Inactivated vaccines and toxoids can be administered to all immunocompromised patients in usual doses and schedules, although the response to these vaccines may be suboptimal.

Q: Can I mix vaccines?
A: Many vaccines can be given simultaneously, without increasing the risk of complications. Exceptions are noted in the vaccine information inserts (VIs), for example, when giving yellow fever and polio vaccines on the same day.

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Q: Is it necessary to aspirate before vaccinating?
A: PAHO discourages the practice of profiling vaccine into syringes, primarily because of the increased possibility of administration and dosing errors. Another reason to discourage the practice in general is that some vaccines have a very limited shelf life after reconstitution.

Q: If a dose of vaccine is given by the wrong route (IM instead of SC or vice versa), does it need to be repeated?
A: Although vaccines should always be given by the route recommended by the manufacturer, if a vaccine is inadvertently given by the wrong route, PAHO recommends that it be counted as valid with two exceptions: Hepatitis B or rabies vaccine given by any route other than IM should not be counted as valid and should be repeated.

Q: Safety of these vaccines in children with severe egg allergy.
A: PAHO recommends that a 5/8” needle be used to administer IM injections in a newborn or premature infant only if the skin is stretched right and the subcutaneous tissues are not bunched. For infants age 1 month or older, IM injections should be given in the anterolateral thigh with a 1” needle.

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