



Bulletin No. 13

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## Implementation of Revised ACIP Immunization Recommendations in Alaska

The Advisory Committee on Immunization Practices (ACIP) released an important document updating the *General Recommendations on Immunization*. [*Morbidity and Mortality Weekly Report (MMWR)*, February 8, 2002/ 51(RR02); 1-36] The principal changes from the 1994 *General Recommendations* are highlighted below. The full text may be viewed at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/445102a1.htm>

**4-DAY GRACE PERIOD FOR VACCINE TIMING AND SPACING**

Since 1994 the ACIP has recommended that doses of vaccine separated by less than the recommended minimum interval should not be considered part of a primary series. **The ACIP continues to recommend that vaccine doses should not be given at intervals less than the minimum intervals or earlier than the minimum age.** However, the ACIP also recommended that vaccine doses administered up to four days before the minimum interval or age could be counted as valid. This recommendation came with **two important caveats**:

1. The 4-day grace period should NOT be used when scheduling *future* vaccination visits.
2. **Physicians and other healthcare providers (should) comply with local or state vaccination requirements when scheduling and administering vaccines.**

**The 4-day grace period will NOT be honored in determining compliance with Alaska school and childcare facility immunization requirements.**

- The ACIP states utilization of the 4-day grace period requires examination not only of the *minimum interval*, but also the *minimum age* of the child for EACH dose of vaccine. Alaska schools and childcare facilities have been required to consider minimum age standards only for the first dose of a vaccine series (e.g.,  $\geq 6$  weeks of age for DTaP, polio, or Hib, or  $\geq 12$  months of age for MMR or varicella.) Adding an age criterion to EVERY dose of vaccine would seriously complicate the already complex compliance standards.
- The national debate on the advisability of the 4-day grace period was intense, including discussions on the difficulty of implementation logistics and the lack of data supporting the shortened schedule's efficacy. (In fact, one exception already has been noted to the 4-day grace period acceptability, as noted below.)

**NON-SIMULTANEOUS ADMINISTRATION OF LIVE VACCINES**

Since 1983 the ACIP has recommended that live-virus vaccines not administered on the same day should be administered at least 30 days apart, because of concern that the vaccine given first could interfere with the immune response to the vaccine given second. A 2001 *MMWR* article reported that children who received varicella vaccine  $<30$  days after MMR vaccination had a 2.5-fold increased risk of breakthrough varicella—*i.e.*, varicella disease in a vaccinated person) compared with those who received varicella vaccine before, simultaneous with, or more than 30 days after MMR. Although subsequent analysis indicated no significant difference between 28 or 30 day intervals, *the immune response decreased when the interval was reduced to 24 days (per the 4-day grace period).*

The ACIP now recommends that **if two live parenteral vaccines are given less than 28 days apart, the vaccine given second should not be counted as valid and should be repeated at least 4 weeks after the "invalid" dose.** (The single exception is that yellow fever vaccine may be given at any time after measles vaccine.)

**REPEATING INVALID DOSES**

Doses of any live or killed vaccine given at less than the minimum interval should not be counted. **The repeat dose should be spaced after the invalid dose by the recommended minimum interval.**

**NON-STANDARD ROUTE OR SITE OF ADMINISTRATION**

In 1994 the ACIP recommended that any vaccination using less than a standard dose or a nonstandard route or site of administration should not be counted, and the person should be revaccinated according to age. In the revised *General Recommendations*, the ACIP continues to strongly discourage variation from the recommended route, site, or dose of any vaccine. However, **the ACIP now recommends repeating doses only in the following circumstances** where a reduction in immunogenicity has been demonstrated:

- Hepatitis B and rabies vaccines administered in the gluteus.
- Hepatitis B vaccine administered by any route other than intramuscular injection (*i.e.*, intradermal or subcutaneous).

**INTERNATIONALLY ADOPTED CHILDREN**

Since 1994 the ACIP has recommended that vaccines administered outside the United States could be accepted as valid if they were documented by a written, dated record. The ACIP continues to recommend that vaccines received outside the United States usually can be accepted if there is written, dated documentation and the age, spacing and timing is comparable with that recommended in the United States.

However, it is especially important for a provider to carefully review the records of children adopted from orphanages due to potential issues of authenticity. **If there is any doubt about the validity of a vaccination record, age-appropriate revaccination generally is recommended** (*e.g.*, doses dated before the child's birth or a record of receiving MMR or Hib vaccine, which are not commonly used in less developed countries).

#### **ASPIRATION BEFORE INJECTION**

Previous *General Recommendations* recommended aspiration (*i.e.*, gently pulling back on the plunger to check for blood before injection) prior to injection, particularly before intramuscular injection. No data exist to document necessity of this procedure. **The 2002 *General Recommendations* do not recommend aspiration before injection.**

#### **MANAGEMENT OF PRETERM INFANTS WHOSE MOTHERS' HBSAG STATUS IS UNKNOWN**

Infants born prematurely, regardless of birth weight, usually should be vaccinated at the same chronological age and according to the same schedule and precautions as full-term infants and children. However, hepatitis B vaccine requires special considerations when given to a low birth weight infant.

Premature infants born to HBsAg-positive mothers and mothers with unknown HBsAg status must receive immunoprophylaxis with hepatitis B vaccine within 12 hours of birth. (Although the *General Recommendations* also recommend the use of HBIG for these infants, this is not required by the Section of Epidemiology.) If the infant weighs <2,000 grams at birth, the initial vaccine dose should not be counted towards completion of the hepatitis B vaccine series; three additional doses of hepatitis B vaccine should be administered, beginning when the infant is 1 month of age. >(For more information, see "Importance of Birth Dose of Hepatitis B Vaccine Reaffirmed", *Epidemiology Bulletin* No. 14, June 18, 2002.)