Newborn Critical Care Center (NCCC) Clinical Guidelines

Immunization Guidelines

ROUTINE IMMUNIZATIONS

Irrespective of the degree of prematurity, routine childhood immunizations should be given based upon the patient's **chronologic age** if clinically feasible, with the exception of two caveats:

1. If the infant is unstable or with an active infectious process. In this instance, vaccines are postponed until the infant's stability has improved. The medical team determines medical stability; however, in general this includes infants free of infection, metabolic disease, renal, cardiovascular, or respiratory instability and are demonstrating sustained recovery and steady growth.
2. Live vaccinations such as Rotavirus, MMR, Varicella, must **NOT** be administered during the neonatal intensive care hospitalization. These vaccines are postponed until after discharge from the NCCC and given by the primary care pediatrician.

Healthcare providers who recommend or administer vaccines can immediately access all CDC recommended immunization schedules and footnotes using the CDC Vaccine Schedules app. Optimized for tablets and useful on smartphones, the app shows child, adolescent, and adult vaccines recommended by the Advisory Committee on Immunization Practices (ACIP).

NEW CDC UPDATES FOR COVID VACCINATION ADMINISTRATION

The updated COVID guidelines from the CDC as of January, 9th 2023, recommend the bi-valent primary series COVID vaccine, either Pfizer-BioNTech or Moderna, for the infant ≥ 6 months of age. UNC carries the Pfizer-BioNTech brand. This vaccine is also based on chronologic age. Children receive a smaller dose of the vaccine as compared to teens and adults. Administer two doses of the COVID vaccine at 6 months of age and/or prior to discharge, given 3 – 8 weeks apart, the first time the patient receives this medication. A COVID booster may be given at any time after 8 weeks from the most recent previous COVID vaccination.

SPECIAL CONSIDERATIONS FOR HEPATITIS B VACCINE #1

See information under Hepatitis B Vaccination -> Routine Vaccination

Mother HBsAg NEGATIVE

- 3-dose series at age 0, 1–2, 6–18 months (use monovalent HepB vaccine for doses administered before age 6 weeks)
    - *Birth weight ≥2,000 grams:*
        - 1 dose within 24 hours of birth if medically stable
    - *Birth weight <2,000 grams:*
        - 1 dose at chronological age 1 month or hospital discharge (whichever is earlier and even if weight is still <2,000 grams).

- Infants who did not receive a birth dose should begin the series as soon as possible
- Administration of 4 doses is permitted when a combination vaccine containing HepB is used after the birth dose

Mother HBsAg POSITIVE

- Birth dose (monovalent HepB vaccine only): administer HepB vaccine and hepatitis B immune globulin (HBIG) (in separate limbs) within 12 hours of birth, regardless of birth weight
    - *Birth weight <2000 grams:*
        - Administer 3 additional doses of HepB vaccine beginning at age 1 month (total of 4 doses)
- Final (3rd or 4th) dose: administer at age 6 months (minimum age 24 weeks)
- Test for HBsAg and anti-HBs at age 9–12 months. If HepB series is delayed, test 1–2 months after final dose. Do not test before age 9 months.

Mother HBsAg UNKNOWN

- If other evidence suggestive of maternal hepatitis B infection exists (e.g., presence of HBV DNA, HBeAg-positive, or mother known to have chronic hepatitis B infection), manage infant as if mother is HBsAg-positive
- Birth dose (monovalent HepB vaccine only):
    - *Birth weight ≥2,000 grams:*
        - Administer HepB vaccine within 12 hours of birth. Determine mother's HBsAg status as soon as possible. If mother is determined to be HBsAg-positive, administer HBIG as soon as possible (in separate limb), but no later than 7 days of age.
    - *Birth weight <2,000 grams:*
        - Administer HepB vaccine and HBIG (in separate limbs) within 12 hours of birth. Administer 3 additional doses of HepB vaccine beginning at age 1 month (total of 4 doses)
- Final (3rd or 4th) dose: administer at age 6 months (minimum age 24 weeks)
- If mother is determined to be HBsAg-positive or if status remains unknown, test for HBsAg and anti-HBs at age 9–12 months. If HepB series is delayed, test 1–2 months after final dose. Do not test before age 9 months.

INFLUENZA VACCINE

Inactivated influenza vaccine (IM only, not intra-nasal) should be given annually during flu season (typically mid-October – March). Administer the vaccine after 6 months chronologic age. Administer two doses of influenza vaccine, given ≥ 4 weeks apart, the first year the patient receives this immunization.

CATCH-UP IMMUNIZATION SCHEDULE

The CDC Catch-up Immunization Schedule provides schedules and minimal intervals between doses for children based on age whose vaccinations have been delayed.

REFUSAL OF VACCINES

If parents refuse a recommended vaccination, document this and the reason for refusal in the medical record.

References:

1. American Academy of Pediatrics Red Book Online. CDC Immunization Schedules for 2023.
2. CDC Centers for Disease Control and Prevention – Update January 2023: Coronavirus Vaccination for Children
3. CDC Centers for Disease Control and Prevention - Last Reviewed February 2023: CDC Catch-up Immunization Schedule.
4. Red Book: 2021–2024 Report of the Committee on Infectious Diseases (32ND EDITION): https://login.libproxy.lib.unc.edu/login?url=https://publications.aap.org/redbook

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