



## PREVENTION OPPORTUNITIES UNDER THE BIG SKY

### Improving Childhood Vaccination Rates in Montana

The Advisory Committee on Immunization Practices (ACIP) recommends the routine administration of vaccines to children aged 0 to 18 months for protection against 14 vaccine-preventable diseases.<sup>1</sup> Despite these recommendations, the National Immunization Survey (NIS) reported that in 2009 for children aged 19 to 35 months, the estimated coverage nationally for the modified seven-vaccine series (i.e., 4:3:1:3:3:1:4 minus *Haemophilus influenzae* type b vaccine [Hib]) was just over 70% and coverage varies substantially among states.<sup>2</sup> Nationally, recent outbreaks of vaccine-preventable diseases, including measles, mumps, and pertussis, have been attributed to decreases in vaccination coverage.

The modified seven-vaccine series 4:3:1:3:3:1:4 includes ≥4 doses of diphtheria, tetanus toxoid, and acellular pertussis vaccine, which can include diphtheria and tetanus toxoid vaccine or diphtheria, tetanus toxoid, and pertussis vaccine (DTaP); ≥3 doses of poliovirus vaccine (IPV); ≥1 dose of measles, mumps, and rubella vaccine (MMR); ≥3 doses of *Haemophilus influenzae* type b conjugate vaccine (Hib); ≥3 doses of Hepatitis B vaccine (HepB); and ≥1 doses of varicella vaccine (VAR).

In Montana during 2009, the estimated vaccine coverage for the modified seven-vaccine series among children aged 19 to 35 months was 61.7%. This issue of Montana Public Health describes two of the recent activities in Montana aimed at increasing childhood vaccination rates. Increasing childhood vaccination rates in Montana would reduce the probability of vaccine-preventable disease outbreaks and improve the health of Montanans.

#### Review of Childcare Facility Vaccine Records.

According to the Administrative Rules of Montana (ARM 37.95.140), children aged less than five years must have received certain vaccines (Table) before attending a childcare facility (<http://www.mtrules.org>), or have on file at the facility Form No. IZ HES101 (<http://www.dphhs.mt.gov/PHSD/Immunization/>) signed by a physician stating the child has a valid medical contraindication to receiving the missing vaccine(s). Additionally, in Montana, a child can be exempted from receiving the Hib vaccine through a parent-signed document citing conflicting religious beliefs

To assess compliance with Montana rule, county health departments coordinate with the Department of Public Health and Human Services (DPHSS) to conduct annual site visits to childcare facilities. During the site visits, vaccine records and medical exemption forms are reviewed for compliance. From January 1–March 31, 2011, vaccine records for 3,451 children were reviewed. Of these, 3207 (93%) children were considered up-to-date, 24 (0.7%) had no record on file, 4 (0.1%) had a medical exemption, and none had a religious exemption to Hib. Of the 110 childcare facilities reviewed, 74 (67%) received a certificate of excellence for achieving ≥90% vaccination rates.

Following childcare facility reviews, public health officials provide owners and/or managers of the childcare facilities with feedback regarding those children missing required vaccines.

**Table. Vaccines required for children aged <5 years before entry to a licensed childcare facility in Montana.**

Age at Entry	Number of Doses-Vaccine Type
<2 months	No vaccines required
by 3 months	1 dose of polio vaccine 1 dose of DTaP vaccine 1 dose of Hib vaccine
by 5 months	2 doses of polio vaccine 2 doses of DTaP vaccine 2 doses of Hib vaccine
by 7 months	2 doses of polio vaccine 2 doses of DTaP vaccine **2 or 3 doses of Hib vaccine
by 16 months	2 doses of polio vaccine 3 doses of DTaP vaccine 1 dose of MMR vaccine **1 dose of Hib vaccine given after 12 or 15 months of age
by 19 months	1 dose of varicella vaccine 3 doses of polio vaccine 4 doses of DTaP vaccine 1 dose of MMR vaccine **1 dose of Hib vaccine given after 12 or 15 months of age

\*\*Varies with type of vaccine used.

**Medical Exemption Review Panel.** During childcare facility site visits, medical exemptions that lack adequate documentation are occasionally discovered and often forwarded to the State Medical Officer for further review. Since autumn 2010, over 45 medical exemptions have been sent to the State Medical Officer. To further advise the State Medical Officer, in June 2011, a medical exemption review panel was formed consisting of two Family Medicine physicians, two pediatricians, and two infectious disease physicians. The State Medical Officer provides to the panel for their review selected and redacted medical

exemptions. The review panel then provides an opinion to the State Medical Officer whether sufficient evidence was presented warranting the exemption to vaccination(s), or if as documented, requires additional information to justify the exemption.. If the review panel finds more evidence is required to justify the exemption, the State Medical Officer then sends a certified letter to the physician of record indicating that more evidence is needed. If additional information is not provided, the medical exemption is voided.

### General Recommendations for Improving Childhood Vaccination Rates

- Educate the child's parent(s) about the risk of acquiring a vaccine-preventable disease and the importance of vaccination.
- Provide parent education to address common misconceptions concerning vaccinations and to ensure informed decision-making.
- Use each visit as an opportunity to assess vaccination status and provide needed vaccines (e.g., sports or camp physicals, pre-college assessments, other routine visits).
- Schedule return visits for vaccinations.
- Use reminder/recall systems to communicate to a parent that the child is due for a vaccination (**reminder**). In addition, use active outreach by letter or phone to schedule appointments for children in need of vaccination (**recall**).
- Use the Montana Immunization Registry (WIZRD) to populate and access a child's vaccination record. WIZRD provides healthcare providers with vaccination information in a wide variety of treatment settings.

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#### References:

1. Centers for Disease Control and Prevention (CDC). General Recommendations on Immunization. *MMWR* 2011;60(RR-02):1-60.
2. CDC. National, State, and Local Area Vaccination Coverage Among Children Aged 19-35 Months — United States, 2009. *MMWR*. 2010;59:1171-77.

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