MONTANA PUBLIC HEALTH

July, 2010
Vol. 5, Issue 7
www.dphhs.mt.gov/PHSD

PREVENTION OPPORTUNITIES UNDER THE BIG SKY

## IMMUNIZATION FOR ADOLESCENTS: BARRIERS REPORTED BY PHYSICIANS

Adolescence, the boundary between childhood and adulthood, is a time when most threats to health are related to behavior choices. Still, some important protection can be provided by vaccination for youth during this time of growth and experiment. However, adolescent immunization rates are low and many young persons have not received one or more of the recommended vaccines.[1,2] (Table 1) In order to identify barriers to vaccination perceived by Montana physicians who provide care for adolescents, the Immunization Section conducted a survey. The questions used were adopted from a national survey conducted in 1999.[3] This issue of *Montana Public Health* highlights the barriers reported by Montana physicians and offers recommendations to increase adolescent immunization rates.

**Table 1. Percent of adolescents immunized with vaccines recommended by ACIP, Montana and US, 2008**

| | Percent immunized | |
|---|---|---|
| Vaccine* | Montana | US |
| >1 Td or Tdap | 69.1 (62.6-74.8) | 72.2 (70.8-73.4) |
| ≥ 1 Tdap | 44.2 (37.8-50.7) | 40.8 (39.3-42.3) |
| ≥ 1 MCV4 | 17.8 (13.1-23.6) | 41.8 (40.3-43.2) |
| ≥ 1 HPV4 | 17.8 (12.0-25.5) | 37.2 (35.2-39.3) |
| ≥ 3 Doses HPV4 | 8.6 (4.8-15.1) | 17.9 (16.3-19.6) |

*Tdap=tetanus, diphtheria, pertussis vaccine; MCV=meningococcal vaccine; HPV=human papilloma virus vaccine

**The 2009 Montana Adolescent Immunization Survey** In August 2009 a sixty item questionnaire, adapted from one used in a national assessment [3] was mailed to 543 pediatricians and family physicians in active practice in Montana; 164 (30%) completed the questionnaire. Of the respondents, 120 were family physicians and 44 were pediatricians. The questionnaire included questions about the sources of physicians' vaccine recommendations, immunization practices pertaining to adolescents, and barriers to immunizing adolescents perceived by the physicians. Two thirds of the respondents were born before 1970 and 55% (of the 156 for whom sex was recorded) were women.

**Practices reported by physicians** Essentially all the physicians reported using vaccine recommendations from the American Academy of Family Physicians, the American Academy of Pediatrics, or the CDC Advisory Committee on Immunization Practices (ACIP). Of these physicians the proportion that reported routinely advising the following ACIP-recommended vaccines for adolescents was 96% (Tdap), 90% (HPV), 87% (meningococcal), 60% (MMR), 63% (hepatitis B), and 54% (Varicella).

These Montana physicians were less likely than pediatric and family practice physicians who responded to a national survey[3] to report that they scheduled return visits for overdue immunizations for adolescents aged 11-13 [MT 52%, US 78%], 14-18 [MT 54%, US 74%] and 19-21 [MT 49%, US 60%]. Few responding physicians in either Montana (21%) or the US (22%) reported use of a recall/reminder system.

**Barriers to adolescent immunization reported by physicians** The barrier most frequently cited by both Montana and US responding physicians was that adolescents rarely make office visits for preventive services: for adolescents aged 11-13 [MT 43%, US 51%], 14-18 [MT 60%, US 70%], and 19-21 [MT 64%, US 69%]. Physicians responding in Montana were more likely than those in the US to report adolescent or parent refusing to be vaccinated and overestimating the risk of vaccine side effects. (Table 2)

**Table 2. Barriers to vaccination related to adolescent/parental beliefs reported by physicians, Montana 2009 and US 1999.**

| Adolescent/parent attitude | Age of adolescent | | |
|---|---|---|---|
| reported by physicians | 11-13 | 14-18 | 19-21 |
| Refuse to be vaccinated | | | |
| MT | 39 | 34 | 27 |
| US | 11 | 10 | 11 |
| Overestimate risk of side-effects | | | |
| MT | 47 | 38 | 30 |
| US | 22 | 19 | 17 |

**Limitations of the survey** These results should be interpreted with caution. Both the Montana (30%) and national (59%) survey had relatively low response rates and may not be representative of family physicians or pediatricians in general. The national survey was conducted in 1999 ten years before the Montana survey. And, the results of both surveys were based on self-reported information, not validated (e.g., by medical record review.)

**Increasing vaccination rates for adolescents** In order to meet *Healthy People 2010* vaccination targets for adolescents[4] vaccination rates in Montana will need to be increased. The Recommendations box (below) lists several steps clinicians can take.

In addition, the following "Medscape CME" offers tips and recommendations for increasing adolescent immunization rates (valid for credit until March 15, 2011): http://cme.medscape.com/viewarticle/716764

**Recommendations for immunization providers**

- Use every visit: Use every visit to assess adolescent immunization status and to provide needed vaccines.
- Reminder, recall: Establish system to *remind* clinicians of vaccines that are due at the time of patient visits, and to *recall* for office visits patients who are due for vaccine.
- Montana Immunization Registry: Use the Montana Immunization Registry (WIZRD) to assess each adolescent's immunization status, and update the registry with information about vaccines you provide.
- Educate: Provide accurate information to adolescents and parents to help dispel misconceptions and assure informed vaccine decision-making.

For more information, contact the Lisa Underwood, Immunization Section, at 406-444-5580, or lunderwood@mt.gov

**References:**

1. http://www.cdc.gov/vaccines/acip-list.htm
2. http://www.cdc.gov/vaccines/stats-surv/imz-coverage.htm#nisteen
3. Oster NV, et al. Barriers to adolescent immunization: a survey of family physicians and pediatricians. J AM Board Fam Pract 2005; 18:13-19.
4. US Department of HHS. Objective 14-27; increase routine vaccination coverage levels for adolescents. Healthy People 2010. Washington, DC: US DHHS, 2000.

2,250 copies of this public document were published at an estimated cost of $0.619 per copy, for a total cost of $1394.94, which includes $ 472.72 for printing and $922.22 for distribution.
July 2010 Vol 5 Issue 7

MONTANA
Department of Public Health & Human Services

1400 Broadway
Helena, MT 59620-2951