Varicella Death and Diphtheria Case Rock Cascade County

Two recent health events occurring in Cascade county offer a grim reminder of the importance of continuing to protect our communities from vaccine preventable diseases, both common and rare.

The first event occurred in mid December and involved the unexpected death of a previously healthy 37-year-old male. Prior to his admission to the hospital, the patient had sought medical care and was presumptively diagnosed with varicella (chicken-pox). While home, he progressed to pneumonia and after returning to the hospital by ambulance he later died. Efforts to identify other causes of the illness were unsuccessful, varicella was eventually cultured from a lesion. As illustrated by this case, the risk of complications from varicella varies with age. While fatalities are relatively rare among children aged 1 to 14 (1 in 100,000), they are much more common among adults, approximately 25 of every 100,000 adults aged 30-49 die from the infection. This patient had provided care to a child with varicella prior to his illness. This fatality is Montana's second since 1998.

The second event occurred in February and involved a 59-year-old male diagnosed with diphtheria based on its unique clinical symptoms. Efforts to confirm the case by laboratory analysis continue, but were complicated by aggressive treatment efforts initiated before specimen collection. The patient met the CDC criteria for the administration of diphtheria anti-toxin and is currently recovering. No record of having had received diphtheria vaccine could be found in the medical records of this individual. Cascade county has identified 45 close contacts who are being evaluated for *C. diphtheriae* and receiving prophylaxis. When confirmed, this case will be one of only a handful that occurs in the U.S. each year.

DPHHS would like to acknowledge and thank the Cascade County Health Department for their quick identification and efforts to protect the members of their community and Montana.

No Association Found Between MMR Immunization And Increasing Occurrence of Autism

Loring Dales, M.D., and colleagues from the Immunization Branch, California Department of Health Services, Berkeley, conducted a retrospective study to determine if a correlation exists in secular trends of MMR immunization coverage among young children and autism occurrence. They examined MMR immunization coverage rates among children born in 1980-1994 who were enrolled in California kindergartens, using survey samples of 600 to 1900 children each year. The children's immunization records were reviewed to retrospectively determine the age at which they first received MMR immunization. The authors also analyzed caseload data among children born in these years who were diagnosed with autism and were enrolled in the California Department of Developmental Services regional service center system.

Autism is a disorder of children that involves impairments in social interactions and interpersonal communication, along with repetitive and stereotyped activities. The authors point out that autism is an incompletely understood developmental disorder or group of related disorders that vary in clinical presentation, so diagnosis is not always straightforward.

According to background information cited in the study, a medical investigative group in Great Britain postulated in the mid to late 1990s that measles immunization and/or immunization with measles, mumps and rubella vaccines given combined at the same time or in succession over a relatively short time period might be a cause of autism. ***(Continued on Page 2)***

MMR...Continued

There has been strong interest in the debate over this hypothesis. In this connection, some cite a 1999 report from the California Department of Developmental Services showing an increase within the past two decades in its regional system caseload of children with autism, wondering if increasingly widespread combined MMR immunization of young children might have been responsible for this increase.

The authors measured MMR coverage rates as of ages 17 months and 24 months and the numbers of Department of Developmental Services system enrollees diagnosed with autism grouped by year of birth.

"Essentially no correlation was observed between the secular trend of early childhood MMR immunization rates in California's regional service center system," they write.

"For the 1980-1994 birth cohorts, a marked, sustained increase in autism case numbers was noted, from 44 cases per 100,000 live births in the 1980 cohorts to 208 cases per 100,000 live births (a 373 % relative increase) between 1980-1994, but changes in early childhood MMR immunization coverage over the same time period were much smaller samples and of shorter duration" the authors report.

"Immunization coverage by the age of 24 months increased from 72 % to 82 %, a relative increase of only 14 %, over the same time period," they continue.

Citing previous reports, the authors point out that a similar lack of correlation between the trends in early childhood MMR immunization rates and autism occurrence has been noted in Great Britain and Sweden.

"In conclusion, to date, published observations based on empirical evidence do not suggest that increased MMR immunization among young children is associated with secular increases in cases of autism", they conclude. *(Reprinted JAMA. 2001 285: 1183-1185)*

DTaP Notes

Whole cell pertussis vaccine (DTP) contains whole, inactivated pertussis organisms and is still used in many parts of the world. DTaP, (acellular pertussis vaccine), contains only 2-5 components of the pertussis organism (antigens) thought to be most important in developing immunity.

DTaP vaccine is **95%** effective in preventing all three diseases that it vaccinates for-diphtheria, tetanus and pertussis. Pertussis occasionally occurs in children who have received pertussis immunization, but is less severe with fewer complications.

Studies have shown that children who receive the Hib vaccine at the same time as the DTaP vaccine are no more likely to experience side effects than children who only receive the DTaP vaccine.

In rare cases (about 100 children out of 10,000 shots given, or about 1%) children have moderate reactions such as prolonged crying, fever of 105 degrees or higher, seizure, or the child becoming limp, pale and less alert.

In very rare cases (less than 1 out of every 10,000 shots given, or about .003%) children have serious reactions such as breathing difficulty, shock, or severe brain reaction (long seizure, coma or lowered consciousness).

However, booster doses of DTaP can cause entire limb swelling, which is usually associated with redness and pain. Data suggest that this extensive swelling reaction may be due to a higher diphtheria toxoids component. There is no increase in systemic reactogenicity.

There are no laws instructing clinics how long they must keep Monthly Vaccine Report Forms. We keep copies of your reports for several years, however you should at least keep a copy of your last months report, so you can accurately file your current report. The Immunization Program suggests you keep a year's worth of reports so you can keep track of your clinic's vaccine usage.

2001 Montana Immunization Poster Contest

"2001 – An Immunization Health Odyssey" is the theme of the 5th annual Montana Immunization Poster Contest. Each County, IHS, and Tribal Health Department has been invited to sponsor this educational event. The contest is open to all fifth grade students. This contest is a great way to raise the level of interest and understanding of immunizations for these pre-adolescents, just as they need their booster shots for entry into middle school.

In the past, many health departments have partnered with local organizations and businesses to provide prizes, gift certificates, and coupons for entrants. Some counties have showcased this special artwork during National Infant Immunization Week, at local businesses or area health fairs.

All entries must be the original work of each individual, fifth grade student. The local judging process is entirely up to each health department. Each participating County, IHS or Tribal Health Department will choose their ONE top entry which must be sent to the MT Immunization Program in Helena, by **May 4, 2001.** State winners will be announced in mid-May, 2001.

Varicella Q & A's

Q. Why prevent a disease as mild as chickenpox?

A. One out of every thousand children infected with chickenpox will develop severe pneumonia or encephalitis.

Varicella can also cause birth defects in about 2% of children born to women infected during pregnancy.

Varicella is associated with skin infections caused by Group A beta-hemolytic streptococcus "flesh-eating" bacterium resulting in severe or fatal infections.

Many children are left with permanent facial scars caused by Varicella blisters.

About 10,000 people are hospitalized and 100 die of chickenpox each year in the United States. Almost all are previously healthy young children.

Q. If we immunize children will they be more likely to get chickenpox as adults?

A. Our experience with measles, mumps, and rubella vaccine has taught us that fading immunity after immunization should not be a problem. The incidence of these diseases decreased dramatically not only in children but also in adults. In addition, the Varicella vaccine has been used in children in Japan for about 25 years without any evidence of fading immunity.

Q. Can the chickenpox vaccine cause shingles?

A. You can get shingles after either chickenpox infection or Varicella vaccine. However, shingles after the vaccine is much less frequent and much less severe than after chickenpox.

Q. The vaccine is so new. Do we really know how it will affect children?

A. The Varicella vaccine has been tested since the early 1970s. The vaccine had been used for 20 years before it was licensed in the United States – about 5 times more experience than any other vaccine had before licensure.

Q. Can someone who was vaccinated with Varicella vaccine transmit varicella to others?

A. There is the slight chance of transmitting varicella virus ONLY through a varicella vesicle, which has developed through vaccination. The vaccine virus IS NOT transmitted via the naso-pharyngeal route .

Public Health Data System Update

"The Public Health Data System (PHDS) is slated to be rolled out during 2001 to all County Health Departments who agree to accept the software at that time. The PHDS will be different from current systems, in that a local Health Department will need to have an Internet connection before it will be able to use the PHDS. The performance of the PHDS on your computer system will be determined mostly by the carrying capacity of your Internet connection. Generally speaking, the faster your Internet connection, the more satisfied you'll be with the performance of the PHDS. County Health Departments that want to use the PHDS will need to have made arrangements for an Internet connection to their Local Health Department before they will be able to access the PHDS. Please contact Jim Aspevig at jaspevig@state.mt.us if you have questions about using Health Alert Network funds to establish a connection to the Internet for your County Health Department, or contact Sib Clack, manager of the IDEA project, at 406-444-9527, if you have questions about putting the PHDS into practice. Arranging for your Internet connection in advance, before adopting PHDS, will be very important because the Immunization Program will gradually discontinue its support of both FollowMe and HealthMaster as the PHDS and HAN funding are made available to County Health Departments."

Do 28 Days a Month Make?

We recently asked William Atkinson, MD, MPH from the National Immunization Program whether or not to consider the 28 day interval described as a month regarding spacing for 2 doses of MMR vaccine as a month in all other aspects of vaccine spacing.

" There is no guidance on this issue outside of the 1998 MMR statement, which defined a "month" as 28 days. Functionally, we have been suggesting that this 28-day month only be applied to intervals of 4 months or less. It becomes absurd to apply it to long intervals, you would lose nearly a month per year.

We suggest intervals of 5 months or more be counted in calendar months, not "28xX". The third dose of hepatitis B vaccine must be given at least 6 calendar months of age, and we recommend 6 calendar months between doses of hepatitis A vaccine."

Vaccine Names and Their Components

Td	Tetanus and diphtheria	Ages 7 and up
DT	Diphtheria and tetanus	Up to age 7
DTP	Diphtheria, tetanus and whole cell pertussis	Up to age 7
Tripedia	DTaP: Diphtheria, tetanus and acellular pertussis	Up to age 7
Acel-Immune	DTaP: Diphtheria, tetanus and acellular pertussis	Up to age 7
Infanrix	DTaP: Diphtheria, tetanus and acellular pertussis	Up to age 7
HibTITER (HbOC)	Haemophilus influenzae type B (HIB) conjugate vaccine	Up to age 5
PedvaxHIB (PRP-OMP)	Haemophilus influenzae type B (HIB) conjugate vaccine	Up to age 5
ActHIB (PRP-T)	Haemophilus influenzae type B (HIB) conjugate vaccine	Up to age 5
OmniHIB (PRP-T)	Haemophilus influenzae type B (HIB) conjugate vaccine	Up to age 5
	HIB Combination Vaccines	
Tetramune	DTP/HIB combination	Up to age 5
ActHIB/DTP	DTP/HIB combination	Up to age 5
TriHIBit	DTaP/HIB combination for 4th dose only	12 months-5yrs
Comvax	HIB/Hepatitis B	2 months-5yrs
MMR	Measles, Mumps and Rubella	12 months and above
Attenuvax	Measles only	12 months and above
Mumpsvax	Mumps only	12 months and above
Meruvax	Rubella only	12 months and above
Engerix	Hepatitis B	Birth on up
Recombivax	Hepatitis B	Birth on up
Havrix	Hepatitis A	2 years and above
VAQTA	Hepatitis A	2 years and above
Varivax	Varicella (Chickenpox)	12 months and above
Prevnar (PCV)	Pneumococcal conjugated Vaccine	2 months up to age 5
Rotashield	Rotavirus (no longer available)	2 months up to age 1

National Infant Immunization Week

NIIW week is April 22-28, 2001. Many health departments have begun to plan for this year's NIIW with various immunization activities. The Montana Immunization Program will be providing a media packet with a sample press release, and radio and TV Public Service Announcements for health departments to use in their communities. Daycare "Certificates of Excellence" will be available again this year. "Welcome to your new Baby" cards should arrive in time for NIIW.

Pertussis Testing

When you suspect that one of your patients has pertussis, it is time to submit a specimen to be cultured for pertussis to the Montana Public Health Lab for confirmation and sensitivity. A DFA test **is not** a reliable test for confirmation. culture media does outdate, so it is a good idea to mark your calendar and keep pertussis culture media on a regular ordering cycle. To order pertussis media, contact the Public Health Lab at 444-3444.

Standing Orders For Vaccine Administration

Standing Physicians orders for vaccine administration have been used effectively in public health settings for a number of years. Standing orders can also be used in a private practice setting. Why you may ask when the physician, NP or PA is on site would it be pertinent to use standing orders?

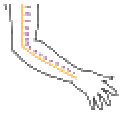
Standing Orders provide guidance on the administration of each vaccine used. The information which is usually included in standing orders could include but is not limited to:

- Acceptable age range for use of vaccine
- Acceptable vaccine administration site (noting the IM gluteal site is never appropriate for infants and children)
- Acceptable Needle length for the type of vaccine used and the age of the infant/child
- Dosage
- Vaccine specifics on spacing and timing of vaccine doses
- Contraindications to the vaccine and Adverse effects possible from the vaccine
- Emergency guidelines for anaphylaxis

Immunization recommendations are ever changing due to continued research and testing and the addition of new vaccines and vaccine combinations. Standing orders must be updated and signed whenever there is a change or on an annual basis if there hasn't been a change. Standing Orders have provided a ready set of guidelines for any nurse who has to step up to the immunization plate. If you would like more information on Standing Orders, please contact Marci Eckerson at 444-1805. Additionally, a vaccine administration video is available through the Immunization Program by calling 444-2969.

DTaP & Td Update

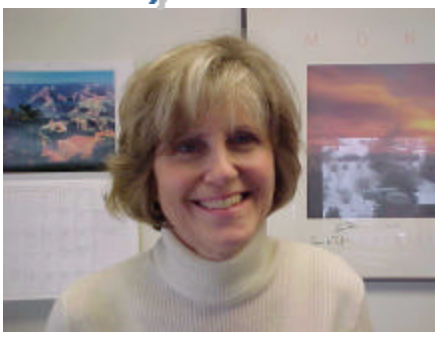
Wyeth-Lederle has announced that they will no longer manufacture adult Td or Acel-Imune®, their DTaP product. As a consequence our supply of Td will be a little tight for the rest of the year. If you can not order Td through your regular supplier it is still available through Aventis-Pasteur. If you have doses of Td that will outdate, please pass them to another provider or notify the Immunization Program in time to find another clinic to use the doses. We appreciate your patience.



TB Practice Arm is Missing!!

The TB Arm which is used to practice administration of the PPD test is missing! This Arm belongs to the Montana TB Program and seems to have walked off. If you know the whereabouts of this arm, please contact Denise Ingman at 444-2075.

Health Policy & Services Director Named



Maggie Bullock has recently been hired as the new Administrator of the DPHHS Health Policy and Services Division. Maggie will begin her new role on March 19, 2001. Maggie previously worked for the Dept of Social and Rehabilitation Services (SRS) for 20 years. Maggie replaces Nancy Ellery, who retired at the end of December.

New DPHHS Director Announced

On January 2, 2001, Gail Gray, Ed.D., succeeded Laurie Eckanger as the Director of the Montana Department of Public Health and Human Services. Gail comes to the Department of Public Health and Human Services from the Montana Office of Public Instruction. Gail can be reached at the following address:

Gail Gray, Ed.D, Director
Montana DPHHS
PO Box 4210
111 North Sanders
Helena, MT 59604-4210
Phone 406-444-5622 FAX 406-444-1970
Email: ggray@state.mt.us

As of April 1, 2001 Pneumococcal Polysaccharide Vaccine (PPV-23) will be available to order through the VFC Program. PPV-23 is indicated for children who are 2 years of age and older who have sickle cell disease, are asplenic, immunocompromised, HIV infected or have chronic illnesses.

Vaccine Information Statement Dates as of May 2001

Vaccine	Date
Anthrax	**11/06/00**
Chickenpox	**12/16/98**
Diphtheria, tetanus, and pertussis	**08/15/97**
***Haemophilus influenza* type b vaccine (Hib)**	**12/16/98**
Hepatitis A	**08/25/98**
Hepatitis B	**08/09/00**
Influenza	**04/24/01**
IPV Polio	**01/01/00**
Lyme	**11/01/99**
Measles, mumps, and rubella	**12/16/98**
Meningococcal	**03/31/00**
Pneumococcal conjugate	**07/18/00**
Pneumococcal polysaccharide	**07/29/97**
Tetanus and diphtheria	**06/10/94**