2004 Childhood and Adolescent Immunization Schedule Inside

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Avian Influenza

Heightened awareness and surveillance is critical

Human infections due to avian strains of influenza are extremely rare, not a new phenomenon and, nonetheless, a serious public health issue. Avian influenza typically affects only birds—but when human infection occurs, it is often fatal. As of February 12, the present strain of avian influenza (type A H5N1) contributed to 19 deaths among 25 cases in two countries (Thailand and Viet Nam). Increasing the likelihood of further human cases is the identification of avian influenza (type A H5N1) among birds in seven other countries: Cambodia, China, Hong Kong, Indonesia, Japan, Laos and South Korea. To date, all known cases of this strain of influenza have resulted from direct contact with infected birds—there is no known evidence of person-to-person transmission.

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Current information on avian influenza is available through:

- **Centers for Disease Control and Prevention (CDC) www.cdc.gov/flu/avian/index.htm**
- **World Health Organization (WHO) www.who.int/csr/disease/avian_influenza/en/**

Meningococcal Disease:

An old disease is still a threat in Los Angeles County

Early this year, the Los Angeles County Department of Health investigated an upswing in invasive meningococcal cases. During January 2004, 8 suspected cases of invasive meningococcal disease, with 2 deaths, were reported—compared to 4 cases for January 2003. While this increase in cases was deemed a normal fluctuation and not related to an outbreak, it demonstrates that this serious illness is a continuing threat in our county.

Meningococcal disease is a reportable disease and all clinical isolates are required to be submitted to the Los Angeles County Public Health Lab for serogrouping. Nationally, the rate of meningococcal disease varies from 0.8 to 1.3 per 100,000 population, with a fatality rate of 10%. Within Los Angeles County from 1993 to 2002, there was an overall decline in cases of invasive meningococcal disease from 1.2 to 0.5 per 100,000 population; the case fatality rate was 7% in 2002.

What is Meningococcal Disease?

As influenza season is peaking or on its way out, meningococcal disease is in full swing. The disease, caused by the bacterium *Neisseria meningitidis*, peaks in late winter and early spring, and is harbored in the nose and throat of asymptomatic carriers. Fortunately, fewer than 15% carry the bacteria in their oral flora and fewer than 1% of the population is at risk for contracting the disease, which causes fever, severe headache, stiff neck, nausea, vomiting, and often a petechial rash. The illness may also include delirium and coma. Meningococcal disease can be fatal without prompt treatment.

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Avian Influenza (from page 1)

The presence of human infection with avian influenza is of great public health significance because of the possibility of viral mutation. Once a human is infected with avian influenza, there is the chance the virus may mutate resulting in a form that can be transmitted from person-to-person. Should this occur, this new virus would be highly pathogenic because no immunity or vaccination would exist to offer protection. Plus given our highly mobile and global society, there is the possibility for rapid, worldwide spread of infection, which may result in an influenza pandemic.

The difference in Delaware

Unfortunately, the media has been using a more generic term, "bird flu," to describe all strains of avian influenza, which can be very misleading. The outbreak among poultry in Delaware is due to an H7 strain of influenza, not the H5N1 strain currently associated with human infections in Asia. While the Delaware H7 strain is highly lethal to poultry, it is not pathogenic to humans—no human cases have be associated with this outbreak, nor are any expected.

What is avian influenza?

Wild birds are natural hosts for influenza A viruses and all known subtypes of influenza A have been documented in wild birds. Avian influenza does not typically lead to illness in wild birds—however, it causes serious illness and is often fatal among domesticated birds, such as chickens. Once infected, large amounts of the virus are secreted in bird droppings which contaminate dust, soil, equipment, vehicles, and even the clothing and shoes of poultry workers. As such, outbreaks are often very difficult to control and easily spread from farm to farm. In addition, migratory birds have been shown to spread the disease across great distances and from country to country. Once illness occurs among domesticated poultry it can quickly reach epizootic proportions unless control measures are rapidly enacted. The most common method of control includes slaughtering and proper disposal of all infected and exposed birds.

Enhanced surveillance and proper infection control is essential:

As shown by the rapid worldwide spread of SARS, the containment of existing and emerging infections requires hospitals and clinicians to be diligent in identifying suspected cases and enacting proper infection control to prevent the spread of infection. Central to case identification is recognizing the epidemiologic factors that increase the likelihood for infection—especially since the clinical manifestations of this illness is identical to many other more common diseases.

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Avian Influenza (from page 2)

Since the epidemiologic factors, such as travel to countries with documented avian influenza infections, are constantly changing, Acute Communicable Disease Control (ACDC) is available to provide assistance in the diagnosis and testing of possible cases. Any suspected case should be reported immediately to ACDC (213-240-7941).

All patients who present to a healthcare setting with fever and respiratory symptoms should be: 1) questioned regarding their travel history and possible poultry exposure, and 2) managed according to established CDC recommendations for respiratory hygiene and cough etiquette (available at: www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm).

Isolation precautions, identical to those for SARS, should be implemented for all hospitalized cases diagnosed or under evaluation for influenza A (H5N1). This includes: contact precautions (e.g., gloves and gowns), eye protection (e.g., face mask and goggles), and airborne precautions (e.g., negative pressure isolation room and N-95 mask). These precautions should be continued for 14 days after onset of symptoms or until an alternative diagnosis is established or until diagnostic test results indicate that the patient is not infected with avian influenza A. Patients may be managed as outpatients, but must undergo home isolation precautions as established for SARS home isolation. ACDC will assist with enacting these precautions.

Enhanced Surveillance and Diagnostic Evaluation for Influenza A (H5N1) Virus Infections

Since the epidemiologic factors that increase risk for influenza A (H5N1) are frequently changing, consultation with Acute Communicable Disease Control is essential to provide advice on diagnostic testing and specimen collection.

Suspected cases should have:

1. Radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternate diagnosis has not been established, **AND**
2. A history of travel within 10 days of symptom onset to a country with documented H5N1 avian influenza in poultry and/or humans.

Testing for influenza A (H5N1) will be considered on a case-by-case basis for cases for hospitalized or ambulatory patients with:

1. Documented temperature of >38°C (>100.4°F), **AND**
2. At least one symptom of respiratory illness (e.g., cough, sore throat, etc.), **AND**
3. A history of contact with domestic poultry (e.g., visited a poultry farm or bird market, household raising poultry, etc.) **OR**
4. A history of contact with a known or suspected human case of influenza A (H5N1) within 10 days of symptom onset.

Any suspected case of avian influenza should be reported immediately to

Acute Communicable Disease Control

(213) 240-7941

Meningococal disease (from page 1)

Before modern therapy, the case fatality rate was 50%; now it is between 5% and 15%. It is imperative to see a doctor immediately if one experiences any symptoms resembling meningococcal disease.

Meningococcal disease transmission

Meningococcal disease is transmitted by direct contact (e.g., kissing, coughing, sneezing, sharing food or drinks). Exposure to an infected person's saliva or secretions from their nose or throat is the primary method of transmission. Household contacts with someone sick with meningococcal disease or employment at a childcare center (especially caring for children under 2 years of age) increases risk.

Meningococcal disease diagnosis

Invasive meningococcal disease is diagnosed by recovery of the *Neisseria meningitidis* from a sterile site such as cerebral spinal fluid (CSF) or blood. Once the organism is recovered it can be serogrouped (A, B, C, Y, and W serogroups). A confirmed diagnosis requires the isolation of the organism and clinically compatible symptoms. A probable case is defined by detecting the meningococcal polysaccharide antigen in the CSF and clinically compatible symptoms.

Meningococcal disease treatment

Meningococcal disease is treatable with intravenous antibiotics. Individuals with meningococcal disease as well as those who have had direct contact require immediate medical evaluation and antibiotic therapy. Even with optimal therapy, survivors have a 15% rate of central nervous system damage.

Meningococcal disease prevention

To reduce the likelihood of infection, it is important to avoid sharing food or beverages, cigarettes, and toothbrushes—anything that would be contaminated with a person's saliva can cause infection. Overcrowding also increases the spread of meningococcal disease—so limiting overcrowding in living quarters (e.g., schools, college dormitories, military barracks) may reduce transmission.

A quadrivalent polysaccharide vaccine that provides protection against serotypes A, C, Y, and W-135 is the only licensed and available vaccine in United States. This vaccine has not been universally used because of its relative ineffectiveness in infants, who have the highest risk of sporadic disease. The vaccine has a relatively short duration of protection as well as lack of protection from serogroup B disease; however, it is recommended for the control of outbreaks due to serogroups A, C, Y, and W-135. Vaccination is also recommended for those at very high risk, such as those who had splenectomies or those with complement deficiency. The vaccine is also recommended for those traveling to countries where meningococcal disease is hyperendemic or epidemic, military recruits, and college students living in dormitories.

A new conjugate vaccine, which is awaiting FDA approval, will provide longer protection and can be given to children as young as two. This new product, Menactra™ developed by Aventis Pasteur, is a meningococcal polysaccharide diphtheria toxoid conjugate vaccine effective against serogroups A, C, Y, and W-135. It should be available in 2005.

Antibiotic prophylaxis

Those who have had close contact with meningococcal patients (i.e., household contacts, day care center contacts, and those that have shared food or beverages, kissed or had direct contact with the patient's oral secretions) need to start chemoprophylaxis as soon as possible. Rifampin at 10 mg/kg every 2 hours is the prophylaxis of choice; for children one month or younger, the dosage is 5mg/kg. Alternatives to rifampin include: ceftriaxone 125 mg IM injection if 15 years of age or younger and 250 mg IM injection if older than 15. Ciprofloxacin can also be used for those 18 or older at 500 mg orally in a single dose.

For questions aout meningococcal disease, call Acute Communicable Disease Control, (213) 240-7941.

RECOMMENDED CHILDHOOD AND ADOLESCENT IMMUNIZATION SCHEDULE
United States, January–June 2004

The Advisory Committee on Immunization Practices (ACIP), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP) have updated the Recommended Childhood and Adolescent Immunization Schedule for 2004. This updated schedule is only effective through June 2004, when another schedule will be released. The immunization catch-up schedule for children who either start late or are <1 month behind remains unchanged from the 2003 schedule.

The following is a list of the changes made in the January–June 2004 schedule:

1. The last dose of the hepatitis B vaccine can now be given as early as 24 weeks of age provided the minimum interval between doses is maintained.
2. There is now a preference for the administration of the adolescent dose of Td at 11–12 years of age with Td at ages 13–18 being shown as catch-up.
3 The schedule now specifies the **minimum** age for the final dose of several vaccines:
   a. 4 years of age for Diphtheria and Tetanus toxoids and acellular Pertussis (DTaP)
   b. ≥12 months of age for *Haemophilus influenzae* type b (Hib) conjugate vaccine
   c. ≥12 months of age for pneumococcal conjugate vaccine (PCV)
4. For healthy persons age 5–49 years, the intranasally administered live-attenuated influenza vaccine (LAIV) is an acceptable alternative to the intramuscular trivalent inactivated influenza vaccine (TIV).

Immunization providers are reminded that the National Childhood Vaccine Injury Act requires that health care providers give parents/patients copies of the Vaccine Information Statements (VIS) before administering each dose of the vaccines listed in the schedule. Information on using the VIS and copies of the different VIS forms can be found on the CDC web site (at: www.cdc.gov/nip/publications/vis) or can be obtained from the Los Angeles County Immunization Program by calling (213) 351-7800.

Immunization providers are reminded to report clinically significant adverse events occurring after immunization to the Vaccine Adverse Event Reporting System (VAERS). Reporting forms and information on completing the forms can be found on their website at www.vaers.org or by calling (800) 822-7967.

Temporary Suspension of the Third and Fourth Dose of Pneumococcal Conjugate Vaccine

In the February 13, 2004 issue of the MMWR,[1] the Centers for Disease Control and Prevention (CDC) recommended temporary suspension of the fourth dose of the pneumococcal conjugate vaccine (PCV7, Prevnar®) for healthy children. However, in the March 2, 2004 MMWR Dispatch,[2] CDC recommended further restrictions on PCV7 usage due to continuing manufacturing problems at Wyeth.

All healthcare providers, regardless of their inventory of PCV7, are asked to immediately implement the following temporary recommendations:

1. Suspend routine administration of both the third and fourth doses to healthy children.

2. Vaccinate unvaccinated, healthy children aged 12 to 23 months with a single dose of PCV7.

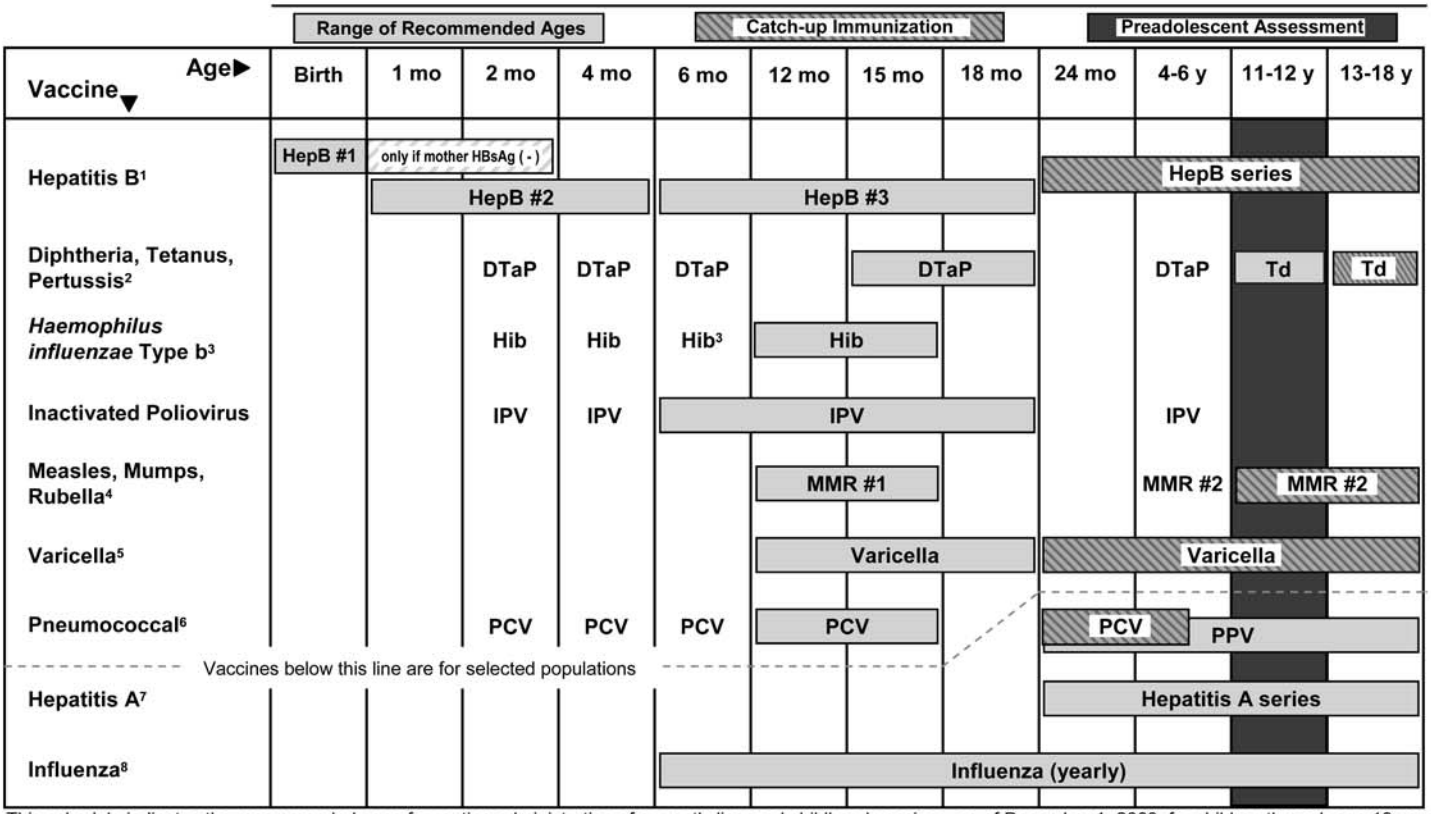
3. Routine vaccination of healthy children between 24 and 59 months is not recommended.

Providers should continue to use the standard schedule to vaccinate children at increased risk of severe disease.
Consult the March 5, 2004 issue of the MMWR for additional information on PCV7 vaccine supply and estimated effectiveness of the reduced number of doses (www.cdc.gov/mmwr/preview/mmwrhtml/mm5308a5.htm).

1 CDC. Limited supply of pneumococcal conjugate vaccine: Suspension of recommendation for fourth dose. MMWR 2004; 53:108–109. Available at: www.cdc.gov/mmwr/preview/mmwrhtml/mm5305a6.htm

2 CDC. Updated recommendations on the use of pneumococcal conjugate vaccine: Suspension of recommendations for third and fourth dose. MMWR 2004; 53(Dispatch):1–2. Available at: www.cdc.gov/mmwr/preview/mmwrhtml/mm53d302a1.htm

Recommended Childhood and Adolescent Immunization Schedule — United States, January – June 2004



This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2003, for children through age 18 years. Any dose not given at the recommended age should be given at any subsequent visit when indicated and feasible. ▨ Indicates age groups that warrant special effort to administer those vaccines not previously given. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and the vaccine's other components are not contraindicated. Providers should consult the manufacturers' package inserts for detailed recommendations. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS). Guidance about how to obtain and complete a VAERS form can be found on the Internet: http://www.vaers.org/ or by calling 1-800-822-7967.

1. Hepatitis B (HepB) vaccine. All infants should receive the first dose of hepatitis B vaccine soon after birth and before hospital discharge; the first dose may also be given by age 2 months if the infant's mother is hepatitis B surface antigen (HBsAg) negative. Only monovalent HepB can be used for the birth dose. Monovalent or combination vaccine containing HepB may be used to complete the series. Four doses of vaccine may be administered when a birth dose is given. The second dose should be given at least 4 weeks after the first dose, except for combination vaccines which cannot be administered before age 6 weeks. The third dose should be given at least 16 weeks after the first dose and at least 8 weeks after the second dose. The last dose in the vaccination series (third or fourth dose) should not be administered before age 24 weeks.

Infants born to HBsAg-positive mothers should receive HepB and 0.5 mL of Hepatitis B Immune Globulin (HBIG) within 12 hours of birth at separate sites. The second dose is recommended at age 1 to 2 months. The last dose in the immunization series should not be administered before age 24 weeks. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) at age 9 to 15 months.

Infants born to mothers whose HBsAg status is unknown should receive the first dose of the HepB series within 12 hours of birth. Maternal blood should be drawn as soon as possible to determine the mother's HBsAg status; if the HBsAg test is positive, the infant should receive HBIG as soon as possible (no later than age 1 week). The second dose is recommended at age 1 to 2 months. The last dose in the immunization series should not be administered before age 24 weeks.

2. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine. The fourth dose of DTaP may be administered as early as age 12 months, provided 6 months have elapsed since the third dose and the child is unlikely to return at age 15 to 18 months. The final dose in the series should be given at age ≥4 years. **Tetanus and diphtheria toxoids (Td)** is recommended at age 11 to 12 years if at least 5 years have elapsed since the last dose of tetanus and diphtheria toxoid-containing vaccine. Subsequent routine Td boosters are recommended every 10 years.

3. *Haemophilus influenzae* type b (Hib) conjugate vaccine. Three Hib conjugate vaccines are licensed for infant use. If PRP-OMP (PedvaxHIB or ComVax [Merck]) is administered at ages 2 and 4 months, a dose at age 6 months is not required. DTaP/Hib combination products should not be used for primary immunization in infants at ages 2, 4 or 6 months but can be used as boosters following any Hib vaccine. The final dose in the series should be given at age ≥12 months.

4. Measles, mumps, and rubella vaccine (MMR). The second dose of MMR is recommended routinely at age 4 to 6 years but may be administered during any visit, provided at least 4 weeks have elapsed since the first dose and both doses are administered beginning at or after age 12 months. Those who have not previously received the second dose should complete the schedule by the 11- to 12-year-old visit.

5. Varicella vaccine. Varicella vaccine is recommended at any visit at or after age 12 months for susceptible children (i.e., those who lack a reliable history of chickenpox). Susceptible persons age ≥13 years should receive 2 doses, given at least 4 weeks apart.

6. Pneumococcal vaccine. The heptavalent **pneumococcal conjugate vaccine (PCV)** is recommended for all children age 2 to 23 months. It is also recommended for certain children age 24 to 59 months. The final dose in the series should be given at age ≥12 months. **Pneumococcal polysaccharide vaccine (PPV)** is recommended in addition to PCV for certain high-risk groups. See *MMWR* 2000;49(RR-9):1-38.

7. Hepatitis A vaccine. Hepatitis A vaccine is recommended for children and adolescents in selected states and regions and for certain high-risk groups; consult your local public health authority. Children and adolescents in these states, regions, and high-risk groups who have not been immunized against hepatitis A can begin the hepatitis A immunization series during any visit. The 2 doses in the series should be administered at least 6 months apart. See *MMWR* 1999;48(RR-12):1-37.

8. Influenza vaccine. Influenza vaccine is recommended annually for children age ≥6 months with certain risk factors (including but not limited to children with asthma, cardiac disease, sickle cell disease, human immunodeficiency virus infection, and diabetes; and household members of persons in high-risk groups [see *MMWR* 2003;52(RR-8):1-36]) and can be administered to all others wishing to obtain immunity. In addition, healthy children age 6 to 23 months are encouraged to receive influenza vaccine if feasible, because children in this age group are at substantially increased risk of influenza-related hospitalizations. For healthy persons age 5 to 49 years, the intranasally administered live-attenuated influenza vaccine (LAIV) is an acceptable alternative to the intramuscular trivalent inactivated influenza vaccine (TIV). See *MMWR* 2003;52(RR-13):1-8. Children receiving TIV should be administered a dosage appropriate for their age (0.25 mL if age 6 to 35 months or 0.5 mL if age ≥3 years). Children age ≤8 years who are receiving influenza vaccine for the first time should receive 2 doses (separated by at least 4 weeks for TIV and at least 6 weeks for LAIV).

For additional information about vaccines, including precautions and contraindications for immunization and vaccine shortages, please visit the National Immunization Program Web site at www.cdc.gov/nip/ or call the National Immunization Information Hotline at 800-232-2522 (English) or 800-232-0233 (Spanish).

Approved by the Advisory Committee on Immunization Practices (www.cdc.gov/nip/acip), the American Academy of Pediatrics (www.aap.org), and the American Academy of Family Physicians (www.aafp.org).

For Children and Adolescents Who Start Late or Who Are >1 Month Behind

The tables below give catch-up schedules and minimum intervals between doses for children who have delayed immunizations. There is no need to restart a vaccine series regardless of the time that has elapsed between doses. Use the chart appropriate for the child's age.

Catch-up schedule for children age 4 months through 6 years

Dose 1 (Minimum Age)	Minimum Interval Between Doses			
	Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
DTaP (6 wk)	**4 wk**	**4 wk**	**6 mo**	**6 mo**[1]
IPV (6 wk)	**4 wk**	**4 wk**	**4 wk**[2]	
HepB[3] (birth)	**4 wk**	**8 wk** (and 16 wk after first dose)		
MMR (12 mo)	**4 wk**[4]			
Varicella (12 mo)				
Hib[5] (6 wk)	**4 wk:** if first dose given at age <12 mo **8 wk (as final dose):** if first dose given at age 12-14 mo **No further doses needed:** if first dose given at age ≥15 mo	**4 wk**[6]**:** if current age <12 mo **8 wk (as final dose)**[6]**:** if current age ≥12 mo and second dose given at age <15 mo **No further doses needed:** if previous dose given at age ≥15 mo	**8 wk (as final dose):** this dose only necessary for children age 12 mo–5 y who received 3 doses before age 12 mo	
PCV[7]**:** (6 wk)	**4 wk:** if first dose given at age <12 mo and current age <24 mo **8 wk (as final dose):** if first dose given at age ≥12 mo or current age 24-59 mo **No further doses needed:** for healthy children if first dose given at age ≥24 mo	**4 wk:** if current age <12 mo **8 wk (as final dose):** if current age ≥12 mo **No further doses needed:** for healthy children if previous dose given at age ≥24 mo	**8 wk (as final dose):** this dose only necessary for children age 12 mo–5 y who received 3 doses before age 12 mo	

Catch-up schedule for children age 7 through 18 years

Minimum Interval Between Doses		
Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Booster Dose
Td: **4 wk**	**Td:** **6 mo**	**Td**[8]**:** **6 mo:** if first dose given at age <12 mo and current age <11 y **5 y:** if first dose given at age ≥12 mo and third dose given at age <7 y and current age ≥11 y **10 y:** if third dose given at age ≥7 y
IPV[9]**:** **4 wk**	**IPV**[9]**:** **4 wk**	**IPV**[2,9]
HepB: **4 wk**	**HepB: 8 wk** (and 16 wk after first dose)	
MMR: **4 wk**		
Varicella[10]**:** **4 wk**		

1. **DTaP:** The fifth dose is not necessary if the fourth dose was given after the fourth birthday.
2. **IPV:** For children who received an all-IPV or all-oral poliovirus (OPV) series, a fourth dose is not necessary if third dose was given at age ≥4 years. If both OPV and IPV were given as part of a series, a total of 4 doses should be given, regardless of the child's current age.
3. **HepB:** All children and adolescents who have not been immunized against hepatitis B should begin the HepB immunization series during any visit. Providers should make special efforts to immunize children who were born in, or whose parents were born in, areas of the world where hepatitis B virus infection is moderately or highly endemic.
4. **MMR:** The second dose of MMR is recommended routinely at age 4 to 6 years but may be given earlier if desired.
5. **Hib:** Vaccine is not generally recommended for children age ≥5 years.
6. **Hib:** If current age <12 months and the first 2 doses were PRP-OMP (PedvaxHIB or ComVax [Merck]), the third (and final) dose should be given at age 12 to 15 months and at least 8 weeks after the second dose.
7. **PCV:** Vaccine is not generally recommended for children age ≥5 years.
8. **Td:** For children age 7 to 10 years, the interval between the third and booster dose is determined by the age when the first dose was given. For adolescents age 11 to 18 years, the interval is determined by the age when the third dose was given.
9. **IPV:** Vaccine is not generally recommended for persons age ≥18 years.
10. **Varicella:** Give 2-dose series to all susceptible adolescents age ≥13 years.

Reporting Adverse Reactions
Report adverse reactions to vaccines through the federal Vaccine Adverse Event Reporting System. For information on reporting reactions following immunization, please visit www.vaers.org or call the 24-hour national toll-free information line (800) 822-7967.

Disease Reporting
Report suspected cases of vaccine-preventable diseases to your state or local health department.

For additional information about vaccines, including precautions and contraindications for immunization and vaccine shortages, please visit the National Immunization Program Web site at www.cdc.gov/nip or call the National Immunization Information Hotline at 800-232-2522 (English) or 800-232-0233 (Spanish).

Severe Hypersensitivity Reactions and Liver Failure in Two Patients Receiving Allopurinol While On Treatment with Anti-Tuberculosis (TB) Drugs for Active TB

The incidence of dermatologic reactions with allopurinol is common and may occur in up to 10% of patients on this drug.[1, 2] Skin rashes can be severe and sometimes fatal. Hypersensitivity reactions are reported to be rare with allopurinol with an incidence of less than 0.1%; however, the mortality rate is estimated as high as 25-30%.[3] Allopurinol hypersensitivity reaction and cytolytic hepatitis in a patient receiving tuberculosis medications has been reported.[4]

In April 2003, a 33-year old woman who was being treated for Pott's disease (vertebral tuberculosis) with isoniazid, rifampin, ethambutol, and pyrazinamide developed fevers, elevated liver function tests (LFT), and a generalized rash. This patient was also taking allopurinol. Despite discontinuing TB medications, the LFTs remained elevated (peak AST 1933/ALT 826, total bilirubin 20.9); viral hepatitis serologies were negative. She developed progressive hepatic and renal failure and required transfer to the intensive care unit. The patient's histological features and clinical findings were consistent with allopurinol hypersensitivity reaction. Allopurinol was discontinued, LFTs eventually normalized and isoniazid, rifampin, and ethambutol were reintroduced without adverse reactions.

In December 2003, a 52-year-old male who was being treated for pulmonary tuberculosis with isoniazid, rifampin, ethambutol, and pyrazinamide for two months developed fevers, generalized rash, and elevated LFTs (AST and ALT over 1000). The patient recently had been prescribed allopurinol for hyperuricemia. He developed liver failure and was noted to have erythema multiforme and eosinophilia. Clinical manifestations and histological features were compatible with hypersensitivity due to allopurinol and the patient's LFT's eventually improved after allopurinol was discontinued.

The mechanism of action for allopurinol hypersensitivity is an immune-mediated reaction. Allopurinol may act as a haptene, and induce immune-complex nephritis, vasculitis and a polyarteritis nodosa syndrome resulting in fatality. Hypersensitivity reactions have been noted to occur more frequently in patients with renal insufficiency;[3] however, the two cases described above had no history of baseline renal insufficiency.

The severity of the hypersensitivity reaction related to allopurinol in these two patients, who were being treated with tuberculosis medications, underscores the importance of the risks associated with the use of allopurinol. Although some older literature had recommended allopurinol for hyperuricemia related to pyrazinamide,[5] in light of this experience, we conclude that allopurinol should generally not be used to treat hyperuricemia or arthralgias related to pyrazinamide and prescribing allopurinol should be used with extreme caution in patients on tuberculosis medications.

The healthcare providers for these patients were notified to report these cases of allopurinol hypersensitivity to the Food and Drug Administration's MEDWATCH program. Providers can refer to www.fda.gov/medwatch/index.html to report serious adverse reactions to medications.

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Increase in AIDS Cases

First increase since 1992: Improved reporting or disease progression?

The health department recently released preliminary findings indicating the first observed increase in AIDS cases diagnosed in Los Angeles County since 1992. Compared with 2001, the 2002 increase is one-half of one percent.

"Although this increase is small, it may well signal an end to the yearly decline in new AIDS cases we have been seeing since 1992," said Dr. Jonathan E. Fielding, Director of Public Health and Health Officer.

The 2002 increase was only seen among men, whose annual cases increased by 1.6%; cases diagnosed among women actually dropped by 6%. Also, the increase in diagnosed AIDS cases was seen predominantly among Whites and Asian/Pacific Islanders. Despite the increase, Asian/Pacific Islanders continue to have the lowest AIDS case rates of any major racial or ethnic group in Los Angeles County.

"Because the increase comes at a time when we have also increased our ability to detect new HIV and AIDS cases using laboratory reporting, it is too early to know if what we are seeing is a real increase or just a one-time anomaly due to the new expanded surveillance," said Gordon Bunch, director of the HIV/AIDS Epidemiology Program.

Soon after other states, including New York, Florida and Illinois, implemented HIV reporting systems, they all observed temporary increases in new AIDS diagnoses followed by a drop in subsequent years.

HIV reporting mandated

Since 1982, AIDS surveillance, a partnership among County officials and medical service providers, has identified over 47,600 persons diagnosed with AIDS. Because of the prolonged lag time between infection and an AIDS diagnosis, AIDS is a poor indicator of new HIV transmission. In order to better assess the number of HIV infections in California, the State mandated a program of HIV reporting by coded identifier starting in July 2002. This requires that County officials collect information systematically on persons known to be infected with HIV, but who do not have AIDS. It further requires that these HIV-infected persons be reported to the State in a manner that does not divulge their name or address.

This HIV reporting system requires laboratories, with information on diagnostic tests that indicate HIV infection, to report to the local health department.

"The addition of laboratory-based surveillance was included to enhance HIV reporting, and has also substantially improved surveillance for AIDS," said Bunch.

These data highlight the fact that some people with HIV continue to progress to AIDS, although this progression is slower than it was 10 years ago.

HIV and AIDS in Los Angeles County

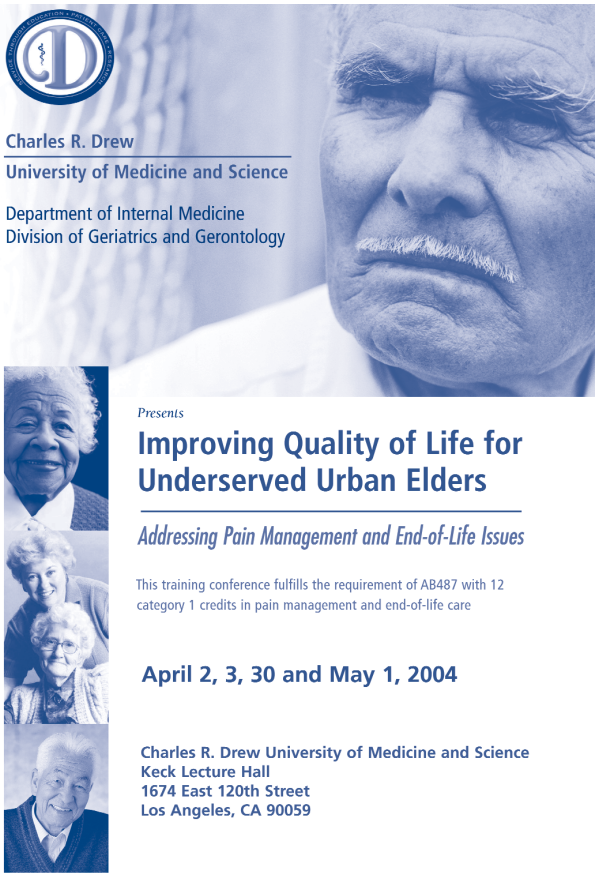
The number of persons reported living with AIDS in the County has increased 100% since 1993 and is now greater than 19,000. An estimated additional 25,000 to 35,000 people are living with HIV, but do not have an AIDS diagnosis.

Nationally, the CDC estimated a 17% increase of new HIV cases among men who have sex with men from 1999 to 2002. While the new HIV reporting system has not been in place long enough to prove a similar increase in Los Angeles County, there is evidence that risk behaviors known to transmit HIV have been increasing in the county. In a recent letter to the Journal of Acquired Immune Deficiency Syndrome and Human Retrovirology, Amy Wohl et al reported data on men living with AIDS who have sex with other men and who participate in the Supplement to HIV/AIDS Surveillance Project in Los Angeles. Those interviewed in 2003 were twice as likely as those interviewed in 2000 to report both having had more than ten sexual partners in the previous twelve months and having had unprotected anal intercourse in the previous twelve months.

The county's Sexually Transmitted Disease Program reported a sharp increase in early syphilis rates from 2001 to 2002 among men who have sex with men, of whom more than half reported being HIV-infected. HIV transmission is facilitated by the presence of syphilis and the increases in syphilis rates suggest an increase in unprotected sexual intercourse, which could also expose the same people to HIV.

Los Angeles County estimates between 1,500 and 2,000 new HIV infections each year, and has among its goals reduction of new infections by half in the next 5 years.

Special Announcement



Charles R. Drew University of Medicine and Science

Presents

Improving Quality of Life for Underserved Urban Elders

Addressing Pain Management and End-ofLife Issues

This training conference fulfills the requirement of AB487 with 12 category 1 credits in pain management and end-of-life care.

COURSE OVERVIEW

This 40 hour course has been designed for academic and clinical faculty in medicine, dentistry, nursing, pharmacy, social work, public health, public policy, including community-based health professionals who provide supervision/teaching to health professional students.

Participants will be taught the principles of pain management and methodologies for improving end-of-life care for underserved urban elders. Special emphasis will be placed on ethnic and cultural considerations in the management and treatment of pain and other ethical issues encountered by this special population at end-of-life, as well as conflicts and misunderstandings in healthcare settings due to cultural differences.

Morning sessions will be devoted to content and afternoon sessions will be dedicated to interactive workshops. Four full days of in-person training will be combined with outside assignments to complete 40-hours of training.

COURSE OBJECTIVES

At the end of this conference, participants should be able to:

1. Manage conflicts and misunderstanding in healthcare settings due to cultural differences.
2. Identify regulatory and legal issues that influent physician prescribing practices among multi-ethnic, multi-cultural groups.
3. Distinguish how provider interactions and clinical decision-making can impact health care utilization and outcome.
4. Define physician, patient and health system barriers to effective pain management and end-of-life care among minority populations.
5. Analyze ethical and legal issues and/or dilemmas that may arise in end-of-life care.
6. Construct an advanced multidisciplinary holistic approach to patient management that considers the impact of physical health, psycho-social well-being, cultural and spiritual aspects of patients at life's end.

FOR FURTHER INFORMATION

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or
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ANTIBIOTIC RESISTANCE INFORMATION CORNER

Multicenter, Postmarketing Assessment of Levofloxacin in the Treatment of Adults with Community-Acquired Pneumonia

B. Akpunonu, J. Michaelis, C. N. Uy, A. M. Tennenberg, B. A. Wiesinger, R. Karim, J. Scott Marshall, and J. B. Kahn. Clin Infect Dis 2004; 38:S5-S15.[1]

This large-scale community-based study confirms the results of previous studies that demonstrate the safety and efficacy of levofloxacin treatment for patients with community-acquired pneumonia. A 500 mg (once daily for 10-14 days) treatment of levofloxacin was effective among these patients and was also effective among those infected with *S. Pneumoniae* resistant strains to penicillin.

Multicenter, Open-Label, Randomized Study to Compare the Safety and Efficacy of Levofloxacin versus Ceftriaxone Sodium and Erythromycin Followed by Clarithromycin and Amoxicillin-Clavulanate in the Treatment of Serious Community-Acquired Pneumonia in Adults

C. Fogarty, G. Siami, R. Kohler, T. M. File, Jr., A. M. Tennenberg, W. H. Olson, B. A. Wiesinger, J.-A. Scott Marshall, M. Oross, and J. B. Kahn. Clin Infect Dis 2004; 38:S16-S23. [1]

This study compares the safety and efficacy of levofloxacin versus a ß-lactam/macrolide combination to treat seriously ill patients with community-acquired pneumonia (CAP). Treatment with levofloxacin was shown to be equally effective as ß-lactam/macrolide combination among CAP study patients. Study findings support recommendations of the empirical use of a ß-lactam/macrolide combination, or monotherapy with a respiratory fluoroquinolone (e.g., levofloxacin), for patients with serious CAP infections.[2] Further details and discussion of treatment regimens are provided in the article.

1. Articles available at: www.journals.uchicago.edu/CID/journal/contents/v38nS1.html
2. Mandell LA, Bartlett JG, Dowell SF, et al. Update of practice guidelines for the management of community-acquired pneumonia in immunocompetent adults. Clin Infect Dis 2003; 37:1405–33.

Clinical practice guidelines and other resources:

In late 2001, the California Medical Association (CMA) Foundation AWARE Project began the development of its clinical practice component. The purpose of the Clinical Compendium is to provide tools and education resources to enable physicians and other healthcare providers to more appropriately prescribe antibiotics for acute respiratory tract infections. It was designed to summarize appropriate antibiotic treatment of common outpatient infections, and is based on guidelines and recommendations from leading medical experts and professional organizations in the U.S. The guideline looks at five uncomplicated respiratory tract infections: sinusitis, pharyngitis, bronchitis, acute otitis media, and viral upper respiratory tract infections. These diagnoses were selected because they account for 62% of all outpatient antibiotic prescriptions in the U.S. Adult and pediatric clinical antibiotic use compendiums are available at the web site below.

- The California Medical Association (CMA) Foundation — www.aware.md/resource/index.asp
- Clinical Practice Guidelines Compendium (Pediatric and Adult) — www.aware.md/clinical/clinical_guide.asp
- The Centers for Disease Control and Prevention — www.cdc.gov/drugresistance/community/
- The Los Angeles County Department of Health Services Acute Communicable Disease Control Program — www.lapublichealth.org/acd/antibio.htm
- Infectious Diseases Society of America — www.idsociety.org
- Clinical Practice Guidelines — www.journals.uchicago.edu/IDSA/guidelines/

Calendar

Bioterrorism Preparedness: Mass Smallpox Vaccination Clinic Exercise

This clinic exercise will test and evaluate the County's mass vaccination plan. Many volunteers, both health care professionals and lay people including families, will be needed for the exercise. Over 1,000 people, of all ages, are needed to act as patients/clients. No real vaccination will be given. No medical experience required.

The flyer and registration form are available at www.lapublichealth.org/ip/smallpox/clinicexercise.pdf. For more information, call the Immunization Program at (213) 351-7800.

Date: Wed, June 23, 2004
Time: 8:00 am - 1:00pm
Place: Carson Center
801 E. Carson St
Carson, CA 90745

This Issue . . .

THE PUBLIC'S HEALTH

Newsletter for Medical Professionals in Los Angeles County

County of Los Angeles
Department of Health Services
Public Health

313 North Figueroa Street, Room 212
Los Angeles, California 90012

Selected Reportable Diseases (Cases)[1] - September~October 2003

Disease	THIS PERIOD Sept~Oct 2003	SAME PERIOD LAST YEAR Sept~Oct 2002	YEAR TO DATE - OCT 2003	YEAR TO DATE - OCT 2002	YEAR END TOTALS 2002	2001	2000
AIDS[1]	450	309	2,117	1,474	1,787	1,354	1,648
Amebiasis	28	22	108	99	109	139	109
Campylobacteriosis	265	250	932	951	1,092	1,141	1,273
Chlamydial Infections	6,543	6,403	30,193	28,557	36,590	31,658	30,642
Encephalitis	5	11	36	59	63	41	49
Gonorrhea	1,457	1,399	6,511	6,196	7,985	7,468	7,212
Hepatitis Type A	63	97	297	437	482	542	839
Hepatitis Type B, Acute	1	6	38	24	27	44	65
Hepatitis Type C, Acute	0	0	1	2	3	1	28
Measles	0	0	0	0	0	8	5
Meningitis, viral/aseptic	315	167	914	506	669	530	491
Meningococcal Infections	5	6	26	41	46	58	53
Mumps	0	2	11	23	16	17	29
Non-gonococcal Urethritis (NGU)	239	256	1,129	1,086	1,398	1,343	1,575
Pertussis	0	26	89	118	167	103	102
Rubella	0	0	0	0	0	0	3
Salmonellosis	266	210	873	831	990	1,006	990
Shigellosis	185	302	638	723	922	684	849
Syphilis, primary & secondary	73	68	365	289	362	181	136
Syphilis, early latent (<1 yr.)	54	73	301	291	341	191	194
Tuberculosis	168	149	659	744	1,025	1,046	1,065
Typhoid fever, Acute	2	7	14	29	34	17	21

1. Case totals are interim and may vary following periodic updates of the database.

Data provided by DHS Public Health programs: Acute Communicable Disease Control, HIV/Epidemiology, Sexually Transmitted Diseases, and Tuberculosis Control.