Wisconsin State Laboratory of Hygiene

Results

News from Wisconsin's Public Health and Environmental Laboratory

Issue No. 22 Fall 1999

Turning point: A transformation process

Change is the operative word among hundreds of Wisconsin's citizens involved in a statewide initiative to transform the public health system and create a healthier Wisconsin.

This initiative, called Turning Point, is both a state and national effort. Nationally, approximately 30 states were awarded funds through a competitive grant process with the goal of strengthening the public health infrastructure to meet the health challenges of the 21st century. The Robert Wood Johnson Foundation reports that a study by the U.S. Department of Health and Human Services "...concluded that only 10 percent of premature deaths are avoidable through improved access to medical care. The remainder were attributed to personal risk behaviors (52 percent), environmental risks (20 percent) and human biology (18 percent). Thus, public health approaches have the potential to prevent the majority of early deaths by targeting factors that contribute to these deaths."

Turning Point began in Wisconsin in September 1998 when Wisconsin Department of Health and Family Services Secretary Joe Leean appointed 45 citizens and organizational leaders to become the strategic planning team for the initiative. This team consists of leaders from many different sectors across Wisconsin, including state and local government and the following organizations:

- Aurora Health Care
- Black Health Coalition of Wisconsin
- Catholic Health Association
- Center for Urban Children
- Dietetic Association
- Family Health Center of Marshfield
- Good Samaritan Health Center
- Great Lakes Inter-Tribal Council
- Ho Chunk Nation
- Horizon Health Care
- Latino Health Organization
- League of Women Voters
- Madison Area Technical College
- Marquette University
- Medical College of Wisconsin
- Physician's Plus Insurance Corporation
- Planned Parenthood of Wisconsin
- United Migrant Opportunity Services
- University of Wisconsin-Madison
- University of Wisconsin-Milwaukee
- Urban League of Greater Madison
- Wausau Insurance
- Wisconsin Alliance of Cities
- Wisconsin Association of HMOs
- Wisconsin Catholic Conference
- Wisconsin Clearing House
- Wisconsin Counties Association

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Peggy Hintzman, MBA, is assistant director at the WSLH. For the past 1-1/2 years, she has held a split position with the Wisconsin Division of Public Health serving as a facilitator and resource to the Turning Point initiative.

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Directors' Corner

Ronald H. Laessig, Ph.D., *became WSLH director in 1980 after 10 years as assistant director. He earned his bachelor's degree in chemistry from UW-Stevens Point and his doctorate from UW-Madison. He completed post-doctoral work at Princeton University. A UW Medical School professor of preventive medicine and pathology and laboratory medicine, he is an active speaker on the topic of clinical laboratory regulations.*

2000 here we come

In this last issue of *Resu!ts* that we'll publish this century, I'd like to take a moment to reflect on where we, as the State's public health laboratory, have come from and where we are going. Yes, even we are bowing to the popular press and their millennial fever, even though as scientists we know the new Millennium doesn't begin until 2001.

But in all seriousness, the WSLH has almost a century of public health laboratory experience. Combined with our partner the Milwaukee City Health Department laboratory, we have more than a century of experience. A century that has seen the highs of the introduction of the Pap Smear to Wisconsin, the eradication of polio and the rise of molecular technology to the lows of the re-emergence of an old foe—tuberculosis. And this time it's drug-resistant.

In 1903 the WSLH was founded to help ensure the health of the public by performing laboratory analysis for communicable disease and waterborne illness. That mission was spelled out in this 1903 state statute:

"There is hereby appropriated annually for the period of two years from the general fund of the state...fifteen hundred dollars annually for two years for the establishment and maintenance of a hygienic laboratory in connection with existing bacteriological laboratories with proper and necessary apparatus for the chemical and bacteriological examination of water supplies and of the cases of infectious and contagious diseases peculiar to man and animals, and the use of which laboratory, so far as necessary and as arranged satisfactorily to the (UW) regents, shall be given to the state board of health." *Laws of Wisconsin, Chapter 344, Section 4, May 22, 1903*

Now at the turn of the 21st century our mission is in many ways the same. We are still concerned with waterborne illness and infectious diseases, though the list of those illnesses and technology (and cost) to detect them has greatly expanded. Our focus on environmental health has also branched out to looking for health threats in the air and soil. Our clinical laboratories now include cytology, cytogenetics and newborn screening—areas of research that weren't even imagined in 1903.

Most importantly, our partners have changed over the past century. At our founding, our primary partners were the UW-Madison and the State Board of Health. While the UW and the now Division of Public Health remain core partners in our public health efforts, the list has grown to include the Department of Natural Resources, the Department of Agriculture, Trade and Consumer Protection, local public health agencies and other public and private clinical and environmental laboratories in the state.

The 21st century brings with it many possibilities and many questions. The medical field is now viewing prevention as a key component to public health because that's where the most good will be done for the most people. As a laboratory, the WSLH is ready to perform the laboratory work our changing public health world will require, but the critical question is what form will that lab work take and how will it be done.

One fact is clear, partnership will be of the utmost importance to the success of public health in the next century (and millennium). Our partner list will most likely grow to include more non-traditional public health organizations. These changes can only help the citizens of Wisconsin as we set forth together on this new adventure.

Turning point… *from page 1*

- Wisconsin Health and Hospital Assoc.
- Wisconsin Jewish Conference
- Wisconsin Network for Health Policy Research
- Wisconsin Office of Rural Health
- Wisconsin Primary Health Care Association
- Wisconsin Public Health Association.

Turning Point is sponsored by the Wisconsin Division of Public Health and led by Margaret Schmelzer, Director of Public Health Nursing. It will result in both infrastructure and health status priorities and be implemented through a statutorily required state health plan.

Recently, over 200 citizens met in five different regions of Wisconsin to provide feedback on three key elements of the planning process: a vision statement, a definition of Public Health and 13 essential services for a transformed public health system.

Turning Point is intended to engage public-private partnerships in innovative ways. Bringing providers, purchasers, payers and consumers together in a unified effort to improve health care and environmental protection through a stronger public health system is critical to helping people and their environment meet their potential in the next century.

Stanley Inhorn, M.D., receives lifetime achievement award

Dr. Stanley Inhorn, Emeritus medical director of the Wisconsin State Laboratory of Hygiene (WSLH) and Emeritus professor of the UW Medical School, was awarded the Lifetime Achievement Award by the Association of Public Health Laboratories (APHL) at its annual meeting in Washington, D.C. on June 28, 1999.

Stanley Inhorn, M.D.

APHL is the national organization representing state and territorial public health laboratory directors. Its objective is to develop, in concert with other organizations such as the Centers for Disease Control and Prevention, a coordinated nationwide approach to providing public health laboratory services in the United States. APHL President Dr. Eric Blank said Inhorn received the award "in recognition of a lifetime of outstanding leadership, significant contributions to the advancement of public health laboratory practice and service to the Association."

Inhorn has served in various leadership positions at the WSLH and the UW Medical School. From 1966 to 1980, he was director of the WSLH, and from 1980 until his retirement in 1998, WSLH Medical Director. His Medical School duties included serving as acting chair from 1974-1977 and then chair of the Department of Pathology from 1978-1981. He was also a professor of pathology and laboratory medicine and preventive medicine.

Inhorn's research focused on cytogenetics and clinical cytology. He was a member of the UW team that identified one of the first chromosomal abnormalities, 13 Trisomy. In the field of cytology, his contributions have been primarily in the area of quality assurance and in the development of newer technologies for diagnostic cytology. He has worked on many advisory committees to the CDC, including two that are charged with guiding implementation of the Clinical Laboratory Improvement Act regulations, the primary regulatory code for all clinical laboratories in the U.S.

Clip and Save

Medicare compliance information:

Screening Pap Smear

Medicare denies payments on some tests because the test is performed more frequently than Medicare permits. The most common example is the Screening Pap smear. Medicare will only cover payment for this test every **three years** in most cases.

There are two types of Pap smear tests: Diagnostic and Screening tests. Diagnostic tests are ordered when the provider diagnoses or treats a specific disease.

Screening Pap smear tests are ordered as a preventive measure when there are no signs or symptoms of disease. It is important that the appropriate ICD-9 code be assigned. This will allow us to appropriately bill Medicare for the test. An ICD-9 code must be provided for all tests, regardless if they are diagnostic or screening tests.

If you have any questions about this issue, please call John Shalkham at (608) 265-9191.

Ten great U.S. public health achievements -1900-1999

Reprinted from CDC's *Morbidity and Mortality Weekly Report*, April 2, 1999 / 48(12);241-243

During the 20th century, the health and life expectancy of persons residing in the United States improved dramatically. Since 1900, the average lifespan of persons in the United States has lengthened by greater than 30 years; 25 years of this gain are attributable to advances in public health. ...

Many notable public health achievements have occurred during the 1900s, and other accomplishments could have been selected for the list. The choices for topics for this list were based on the opportunity for prevention and the impact on death, illness and disability in the United States and are not ranked by order of importance.

The ten great achievements are:

- Vaccination
- Motor-vehicle safety
- Safer workplaces
- Control of infectious diseases
- Decline in deaths from coronary heart disease and stroke
- Safer and healthier foods
- Healthier mothers and babies
- Family planning
- Fluoridation of drinking water
- Recognition of tobacco use as a health hazard

News from the WSLH

RESEARCH AND EPIDEMIOLOGY DIVISION

Conference looks at bioterrorism issues

Stevie Kuenn, WSLH Public Affairs

Biological and chemical terrorism is more than a plotline for bestsellers-it's a significant, serious threat to the country and the world. And national and state public health agencies are working together to address the threat.

More than 40 public health and Hazardous Materials Response professionals from around the state learned just that at a conference sponsored by the WSLH and the Wisconsin Division of Public Health (DPH) held in late September. The conference focused not only on scientific issues related to bio/chem terrorism, but also elements of Wisconsin's plan to prepare for these events. The State's plan will be funded by a $1.1 million grant from CDC. The grant amount is for the first year of a five-year effort.

WSLH Communicable Disease Division Director Dr. Pete Shult led off the conference by giving a quick introduction to chemical and biological warfare.

"Bioterrorism is in fact an emerging disease threat," Shult said.

Shult and Jan Schneider, WSLH Public Affairs, presented a possible case history of an anthrax attack, a chilling example of how quietly and quickly a biological attack can cripple a city.

In the scenario, terrorists release anthrax from a truck in a U.S. city named Northeast, which has a population of 2 million. The attack occurs about one-half mile upwind of an open-air stadium where 70,000 people are watching a football game. Ultimately, twenty thousand people are infected in the attack and, within 10 days, approximately 4,000 are dead. The stadium and nearby business and residential districts are abandoned. The terrorists are most likely in another country within a day of the attack.

Bob Bagley, a conference participant from the Racine Health Department, said he had never considered the full scope of a bioterrorist attack.

"I didn't realize you could expose as many people as that scenario indicated you could, how easily it could be done," Bagley said. "I didn't understand you could hit an open area."

The morning and early afternoon of the conference were filled with scientific presentations by WSLH staff-including Shult, John Pfister of the Research and Epidemiology Division and Dr. John Mathew from the Environmental Health Division-on the agents and epidemiology of biological and chemical terrorism.

After the scientific presentations, Shult and Tom Anderson, DPH emergency response coordinator, discussed the CDC's strategic plan for bioterrorism awareness and preparedness.

Dr. Larry Hanrahan, chief of the Epidemiology and Toxicology Section of DPH, Dr. Jeff Davis, chief medical officer and state epidemiologist for Communicable Disease at DPH, and Shult then brought the issue down to the state level by outlining the components of the state's bioterrorism preparedness plan. Wisconsin received funding in three of five areas-Health Alert Network/Training, Surveillance and Epidemiology Capacity and Laboratory Capacity for Biologic Agents.

Hanrahan explained that the Health Alert Network is a statewide communications, information, training and organizational development system that will greatly improve Wisconsin's health information infrastructure. Its design will support public health response to bioterrorism and other Wisconsin public health priority programs.

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The Network will focus on four goals: Internet access for all local public health agencies in Wisconsin, Distance Learning, Alert Messaging Systems and Organizational Capacity.

Davis outlined a plan for enhancing existing infectious disease surveillance and epidemiology capabilities to better detect and respond to agents of bioterrorism.

Finally, Shult described plans to strengthen the State's public health laboratory infrastructure-including both the WSLH and the Milwaukee Health Department Laboratories-by developing expertise, increasing laboratory diagnostic capacity and providing training related to agents of bioterrorism.

Overall the conference served to introduce public health and Hazardous Materials Response professionals to the real threat of bio/chem terrorism and to suggest ways for Wisconsin to prepare for it. In his presentation, John Mathew summarized the threat best: "We do know this is a community problem."

Although anthrax and smallpox receive most of the headlines, there are other agents that could be involved in bio/chem terrorism events. The following are some of the agents mentioned by Tom Anderson of the Wisconsin Division of Public Health at the September conference.

Bioterrorism agents

Agents of most concern to authorities (high mortality rates, easy to disseminate or transmit person to person)

Anthrax
Smallpox
Plague
Botulinum Toxin
Tularemia
Filoviruses
Arenaviruses

Agents of moderate concern to authorities (moderately easy to disseminate, with moderate morbidity and low mortality rates)

Coxiella burnetti
Brucella spp.
Burkholderia mallei
Alphaviruses (V.E. and WEE viruses)
Rickettsia prowazekii
Ricin toxin
Epsilon toxin
Staphylococcal Enterotoxin B
Chlamydia

Emerging pathogens that could be used in the future

Nipah virus
Hantaviruses
Tickborne hemorrhagic fever
Tickborne encephalitis
Multi-drug resistant Tuberculosis

Chemical Weapons

Nerve agents (Sarin, Tabun, Soman, GF, VX)
Blood agents (hydrogen cyanide, cyanogen chloride)
Blister agents (sulfur mustard, Lewisite, etc.)
Heavy metals (arsenic, lead, mercury)
Volatile toxics (benzene, chloroform, etc.)
Pulmonary ag. (phosgene, chlorine, etc.)
Incapacitating agents
Pesticides
Dioxins, Furans, PCBs
Explosives, Flammables, Corrosives

Influenza time is drawing near

It's that time of year again - time to tell you that the winter respiratory season is coming. As usual, we can expect influenza to circulate again this winter, but we don't know which strain, how widespread it will be, or how severe the illnesses associated with it will be. Each year we must wait to see which strain(s) will circulate and what the patterns will be.

Officials at the CDC have not predicted when influenza activity is expected to increase in the U.S. Although the A/Sydney strain of influenza A (H3N2) was detected during an outbreak among tourists and tour workers in Alaska again this summer, the CDC did not detect any new or unusually virulent influenza strains. Influenza A/Sydney-like (H3N2) viruses have predominated for the last two seasons. Last season was classified as "moderate to severe" in the northern hemisphere.

In each of the last four years, the first influenza isolate in Wisconsin has occurred in November. Peak activity usually follows four to 12 weeks later. During the last two years, the A/Sydney strain of influenza has been predominant and influenza detections have reached their peak eight to 12 weeks after the initial detections.

This year, two cases of influenza A were detected by Wisconsin virology laboratories in late October. Medical Science Laboratories, Wauwatosa, isolated influenza A from a 76-year-old woman who was hospitalized in Milwaukee; Marshfield Laboratories, Marshfield, isolated influenza A from a 62-year-old woman who was hospitalized in Tomah. One case of influenza A(H3N2) had been detected by the Milwaukee Health Department during September, but there were no subsequent cases associated with it.

At this point, we cannot be sure if the 1999 September-October isolates signal an early season or sporadic pre-season isolates. Although influenza has occasionally been isolated in Wisconsin during August or September in past years, there has been either no subsequent spread of the virus or limited spread of the virus.

Influenza is an infection of the respiratory tract, causing sore throat, cough, runny or stuffy nose, headache, fever, muscle aches and fatigue. **Influenza is not "stomach flu"**. Although gastrointestinal symptoms can occur during an influenza infection, they are not the predominant feature. "Stomach flu" is caused by a number of other agents, viral and nonviral, but not by influenza.

This is the first influenza season in which at least one treatment (and possibly two, by the time this newsletter goes to press) for both influenza A and B will be available. Although amantadine and rimantadine have been available for several years for treatment of influenza A, the FDA has recently approved one drug and is considering another for treatment of both types of influenza. Considering that the treatment must be initiated within one or two days of onset, it is unclear what the impact of these drugs will be.

Rapid detection tests for influenza

Another potential twist to this influenza season is the availability of additional rapid antigen detection tests for influenza. Traditional methods of detecting influenza require culturing of the virus, which usually requires one to five days. Many of the virology laboratories in Wisconsin also perform a direct fluorescent antibody test on specimens if requested, with results usually available within 24 hours.

While a rapid test for influenza A has been available for several years, three tests which detect both influenza A and B will be available this year. These newer tests do not differentiate between the two types of influenza, but can usually provide results within 30 minutes.

The use of these tests can be optimized by utilizing information about the prevalence of influenza in the state. The positive and negative predictive values of these tests depend not only on the "sensitivity" and "specificity" of the tests, but also on the prevalence of the disease. To optimize the predictive values of these tests (the probability that a result is a "true" result), laboratories should consider confirming positive

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***Peter Shult, Ph.D.**, is director of the WSLH Communicable Disease Division and is WSLH chief virologist. He received his doctorate from UW-Madison.*

***Carol Kirk** is a microbiologist supervisor in the WSLH Virology Laboratory. She has 25 years of professional laboratory experience at the WSLH.*

results during the summer and fall when influenza is not likely to be circulating. Confirmation of these results by culture is also important to allow subtyping of "out of season" isolates.

Bi-weekly reports on the status of influenza, RSV and other respiratory viruses are available from the WSLH by fax or e-mail. These reports are based on data from the WSLH and other virology laboratories participating in the Wisconsin Laboratory Information Network.

If you wish to receive these reports, please contact Carol Kirk at the WSLH by phone (608-262-1021) or by e-mail (cjk@mail.slh.wisc.edu).

Influenza vaccine

Excerpts from the Centers for Disease Control and Prevention web site. For more information, visit the CDC's web site at: http://www.cdc.gov/ncidod/diseases/flu/fluvac.htm

Much of the illness and death caused by influenza can be prevented by annual influenza vaccination.

Influenza vaccine is specifically recommended for people who are at high risk for developing complications as a result of influenza infection. These high-risk groups include all people aged 65 years or older and people of any age with chronic diseases of the heart, lung, or kidneys, diabetes, immunosuppression, or severe forms of anemia.

Other groups for whom vaccine is specifically recommended are residents of nursing homes and other chronic-care facilities housing patients of any age with chronic medical conditions, and children and teenagers who are receiving long-term therapy and who may therefore be at risk for developing Reye syndrome after an influenza virus infection.

Influenza vaccine is also recommended for people who are in close or frequent contact with anyone in the high-risk groups defined above. These people include health care personnel, volunteers who work with high-risk patients and people who live in a household with a high-risk person.

Influenza vaccine causes no side effects in most people. The most serious side effect that can occur after influenza vaccination is an allergic reaction in people who have a severe allergy to eggs, since the viruses used in the vaccine are grown in hens' eggs. For this reason, people who have an allergy to eggs should not receive influenza vaccine.

When to receive influenza vaccine

In the United States, influenza usually occurs from about November until April. Typically, activity is very low until December, and peak activity most often occurs between late December and early March. Influenza vaccine should be administered between September and mid-November. The optimal time for organized vaccination programs for persons at high risk for influenza-related medical complications is usually the period from October to mid-November. It takes about 1 to 2 weeks after vaccination for antibody against influenza to develop and provide protection.

Vaccine for the 1999-2000 Influenza Season

The Food and Drug Administration's Vaccines and Related Biological Products Advisory Committee (VRBPAC) has recommended that the trivalent influenza vaccine prepared for the 1999-2000 season include A/Beijing/262/95-like (H1N1), A/Sydney/5/97-like (H3N2), and B/Beijing/184/93-hemagglutinin antigens. For the B/Beijing/184/93-like antigen, U.S. manufacturers will use the antigenically equivalent strain B/Yamanashi/166/98 because of its growth properties and its similarity to circulating B/Beijing/184/93-like viruses. Although the current influenza vaccine can contain one or more of the antigens administered in previous years, annual vaccination with the current vaccine is necessary because immunity declines during the year following vaccination.

For more information

For additional information, see the "Prevention and Control of Influenza" Recommendations of the Advisory Committee on Immunization Practices (ACIP)," Morbidity and Mortality Weekly Report (MMWR) April 30, 1999 / Vol. 48 / No. RR-4 , and "Update: Influenza Activity - States and Worldwide, 1998-99 Season, and Composition of the 1999-2000 Influenza Vaccine," MMWR, May 14 1999 / Vol. 48 No. 18, p. 374-378. The MMWR is available at the following Internet address: http://www.cdc.gov/epo/mmwr

If you do not have access to Internet, you may call the toll-free number 888-CDC-FACT (888-232-3228) to receive a hard copy of the recommendations. Once the system has answered, you may bypass other disease information not specific to influenza by pressing options 2, 2, 1, 3, 4, 3. At the prompt that asks if you want a current copy of the ACIP recommendations, leave your name and address, and the document will be mailed to you.

An in-depth look at the "other" respiratory viruses Part 1

Each respiratory season influenza garners the majority of our attention, while we briefly describe the "other respiratory viruses." While these virus groups do not generate the same concern as influenza, respiratory syncytial virus, the parainfluenza viruses, the adenoviruses and the rhinoviruses are each important in their own right.

Respiratory Syncytial Virus (RSV)

RSV infections are a major cause worldwide of lower respiratory tract illness during infancy and childhood. RSV causes bronchiolitis and pneumonia in infants and young children and frequently causes upper respiratory tract infections when re-infecting older children and adults. Fifty percent of all infants are infected with RSV within the first year of life and nearly all have been infected by age two.

In temperate climates, RSV causes annual winter-spring epidemics, with most cases occurring within the one to two month peak of activity. In Wisconsin, peak activity usually occurs between late January and late March.

During these annual epidemics, RSV is believed to be responsible for 70-80 percent of hospitalizations for acute respiratory disease, and nosocomial transmission of RSV remains a significant problem.

Transmission of RSV requires close contact with infected individuals or contact with contaminated objects. Infection can occur when infectious material is brought into contact with the mucous membranes of the eyes, mouth or nose; inhalation of infectious droplets generated by sneezing or coughing may also cause infection. Not surprisingly, schools and day-care centers provide optimal settings for transmission of the virus.

RSV infection produces upper respiratory tract symptoms (fever, runny nose, cough and congestion), which may progress to the lower respiratory tract in about half of all infected infants. Most children recover within eight to 15 days. Re-infection with RSV occurs throughout life, usually producing moderate to severe cold-like symptoms. However, severe lower respiratory tract disease can occur at any age, especially among the elderly, immunocompromised or those with underlying cardiac or pulmonary problems.

The incubation period for RSV is three to five days, with symptoms lasting eight to 15 days. Virus shedding , however, can continue for up to three weeks. Antibodies produced to RSV do not protect from re-infection, but do appear to protect from severe lower respiratory involvement.

Although most infants can be managed at home, hospitalization for supplemental oxygen therapy or other respiratory support may be necessary for children with severe disease. Ribavirin treatment and prophylactic use of RSV immune globulin have been suggested for those with or at increased risk for life-threatening RSV disease.

Although early efforts to develop a vaccine for RSV were not effective, work is ongoing and remains a high priority. Good infection control practices, frequent hand-washing, and not sharing cups or utensils can all help to reduce the spread of RSV to others. For specific information and prevention guidelines, you may refer to the CDC Guidelines for Preventing Nosocomial Pneumonia or RSV in the Child Care Setting, both available from CDC.

Testing for RSV usually involves culture of the virus, direct antigen detection, or serology on acute and convalescent sera. Direct antigen detection methods are the most widely available and can provide the most rapid results, but positive test results should be confirmed when not in RSV season.

Parainfluenza viruses

Parainfluenza viruses (PIV) are second only to RSV as causes of viral lower respiratory disease in young children. Approximately one-third of the more than five million lower respiratory infections in children less than five years of age in the U.S. are caused by PIV types 1-3. In addition, these viruses cause upper respiratory tract disease in infants, older children and adults.

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Infection with the PIV occurs early in life and re-infection occurs throughout life. Although re-infections usually result in upper respiratory tract illness, they can also result in lower respiratory tract illnesses, especially among the elderly and the immunocompromised. The PIV can cause a broad array of respiratory diseases, but there are epidemiological and clinical variations among the four types.

PIV-1 is the leading cause of croup (laryngotracheobronchitis) in children in the U.S. More than 75 percent of children have been infected with PIV-1 by age five. Between 1957 and 1961, PIV-1 seemed to occur sporadically, with no seasonality. Since 1962, however, PIV-1 has demonstrated a biennial cycle, causing sharp outbreaks in the fall. Initially, these outbreaks occurred in even-numbered years, but they now occur in the autumn of odd-numbered years (like 1999).

PIV-2 also causes croup, but is not detected as often in lower respiratory tract illnesses as PIV-1 or PIV-3. This may, however, be partially due to greater difficulty detecting the virus. Like PIV-1, about 75 percent of children have antibody to PIV-2 by age five. PIV-2 produces annual or biennial outbreaks in the fall, often in the same years as PIV-1 (again, like this year).

PIV-3 is second only to RSV as a cause of pneumonia and bronchiolitis in infants less than six months of age. Lower respiratory tract illnesses caused by PIV-3 result in 20,000 hospitalizations each year in the U.S., according to one estimate. By age four, approximately 80 percent of children have been infected by PIV-3. In addition to being endemic, with infections occurring year-round, PIV-3 exhibits annual spring outbreaks.

PIV-4 is detected less frequently (perhaps because it is more difficult to recover) and is usually associated with mild illnesses. Infection is probably common, as evidenced by detection of antibody in about 50 percent of children aged three to five years, and 75-95 percent of adults.

Transmission of the PIV occurs much like with RSV - by close contact with infected persons or contact with contaminated objects. PIV-3 appears to be more efficient than PIV-1 or PIV-2 in its ability to spread. Although the incubation period has not been well-defined for all PIV types in all ages, two to six day incubation periods have been documented. PIV-3 can be shed from the oropharynx of infected individuals for three to 10 days during primary infections and for shorter periods during reinfection, although prolonged shedding of virus has also been documented.

There is currently no effective vaccine for PIV, although efforts are ongoing; there are also no proven antiviral treatments for PIV infection. Frequent hand-washing, not sharing cups or utensils, and good infection control practices should decrease the spread of infection, much like with RSV.

Testing for PIV is usually performed by virus culture; serology on acute and convalescent sera can also be performed.

Look for information on rhinoviruses and adenoviruses in the Winter 2000 issue of Resu!ts.

WSLH co-sponsors public health virology workshop

The WSLH and the National Laboratory Training Network (NLTN) were co-sponsors of the Virology Methods for Public Health Laboratories course, which was held July 26-30 at the University of Wisconsin Biotechnology Center, Madison. Laboratorians from 22 states participated in lectures, laboratory demonstrations and hands-on activities designed to provide a comprehensive review of viral agents, cell culture isolation, identification and subtyping methods.

Dr. Pete Shult and Carol Kirk from the WSLH worked with Rosemary Humes and Valerie Johnson from the National Laboratory Training Network to plan the course and also served as faculty. Dr. David Schnurr of the California State Department of Health Services, Sandy Jirsa of the University of Iowa Hygienic Laboratory and Dr. Dan Wiedbrauk of William Beaumont Hospital in Royal Oak, MI, also participated in course development and served as faculty throughout the week. Dr. David Battigelli of the WSLH Environmental Virology Unit and Dan Hopfensperger of the WI DPH Immunization Program served as additional faculty.

In addition, the WSLH Virology Laboratory Staff prepared many of the laboratory materials utilized in the workshop and assisted faculty in the week-long event.

On Tuesday, July 27th, the faculty also included Dr. Olen Kew and Dr. Helen Regnery from the CDC and John Pfister of the WSLH. The Tuesday program was opened to clinical laboratory staff from Wisconsin and Illinois for a full day of presentations covering changing patterns of viral diseases, polio eradication efforts, molecular methods, influenza pandemic preparedness and assuring quality in the virology laboratory. Over 70 people participated in this program, which closed with a panel discussion of how the roles of the public health virology laboratories and clinical laboratories are changing in the current health care systems.

Course evaluations completed by participants were very favorable. All of the participants felt there was great benefit in the opportunity to network and share expertise across states. Planning has already begun for an encore presentation next summer.

West Nile-like virus serves as reminder about emerging infections

"Because we do not know what new diseases will arise, we must always be prepared for the unexpected. CDC's vision for the 21st century is of individuals, communities, and nations joined in a common effort to control today's emerging infectious diseases and to prevent those of tomorrow. To realize this vision, CDC scientists have designed a plan to respond to the emergence and resurgence of microbial threats in the new millenium - *Preventing Emerging Infectious Diseases: A Strategy for the 21st Century*."

- Statement by James Hughes, M.D., Director, CDC, National Center for Infectious Diseases

Many of us have been watching closely the reports of an arbovirus encephalitis outbreak in New York. The detection of an arbovirus as the cause of the outbreak caused quite a stir, but the later finding that the arbovirus was West Nile-like virus created an even greater stir. This virus had never before been seen in the Western Hemisphere, but has now been confirmed in mosquitoes in New York City and Connecticut. Federal, state and local health officials are working together to investigate and control the outbreak. The CDC is also working with state wildlife agencies, state and local health agencies and with the National Wildlife Health Center here in Madison to conduct surveillance of birds and mosquitoes that may be infected with this virus in the U.S.

This outbreak of West Nile-like virus encephalitis serves as an example of an "emerging infection" in the United States. As such, it reminds us of the continuing need for vigilance and disease surveillance. While we may not be able to completely prevent the entry of viruses into our country or to prevent viruses from jumping from animals to humans, we must remain vigilant to detect them early and formulate a response to them. This outbreak also serves as an example of the need for health professionals and agencies at many levels and in many fields to work together and share information.

For additional information about the outbreak or about West Nile-Like Virus, see the CDC website at http://www.cdc.gov or the *Morbidity and Mortality Weekly Reports* (MMWR) dated October 1, 1999, Vol. 48, No. 38, and October 8, 1999, Vol. 48, No. 39.

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Readers are encouraged to send comments and questions to the address below:

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Health Summit 2000: Our Promise To Future Generations

Health professionals and advocates from across the state have been preparing for *Health Summit 2000: Our Promise to Future Generations*, a major statewide conference to be held June 15-16, 2000, at the Monona Terrace Community and Convention Center in Madison.

Members of the planning committee, including the Wisconsin State Laboratory of Hygiene, have created a comprehensive health summit focusing on public health issues for the 21st century and featuring nationally recognized speakers.

Workgroups and poster sessions will be organized around four key topics:

Encouraging healthy behaviors, Keeping communities safe and healthy, Improving systems for personal and public health and Preventing and reducing diseases and disorders.

Through discussion and reflection, sponsors expect participants to identify actions and partners needed to ensure good health for future generations.

More information is available by calling Peggy Hintzman, assistant director, Wisconsin State Laboratory of Hygiene at (608) 262-8856 or e-mail her at: plh@mail.slh.wisc.edu

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