Kentucky
CABINET FOR HEALTH SERVICES
DEPARTMENT FOR PUBLIC HEALTH
DIVISION OF EPIDEMIOLOGY
& HEALTH PLANNING
Epidemiologic Notes & Reports
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Kentucky Influenza Season 2001-2002

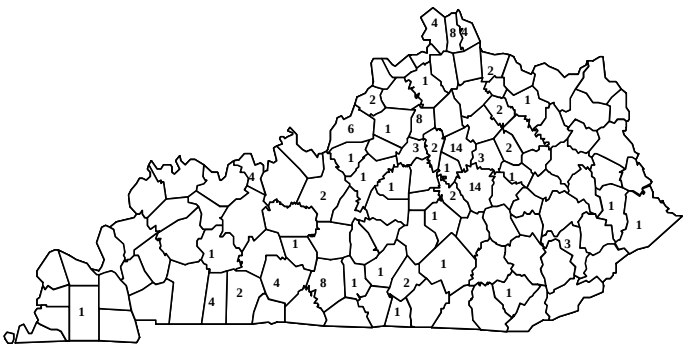
Peggy Dixon, RN, CIC

Again this season, the Communicable Diseases Branch urges every local health department to obtain influenza viral culture kits and distribute them to local physicians. All local health departments are requested to participate in this activity, whether or not the health department is participating in the surveillance network. All physicians are requested to keep the kits on hand and collect specimens on patients with Influenza-like illness (ILIs). The only cost involved is postage to mail the specimen back to the state lab. Local health departments may choose to pick up the specimens and mail them to the laboratory, relieving the medical professional of this expense.

Strains of influenza can only be determined from cultures. Strain identification is necessary to detect epidemic or pandemic strains of influenza, to make informed decisions regarding the components of the next season's vaccine, and to determine whether strains of influenza are similar in all areas of the state.

During the Kentucky 2000-2001 Influenza season, 42 counties submitted 124 confirmed isolates/cultures to laboratories. (Figure 1.)

Figure 1. Number of Laboratory Confirmed Cultures of Influenza by county, October, 2000 through May, 2001.



Of the 124 total cultures confirmed, 52.4% were Type A; 47.6% were Type B. (Table 1.)

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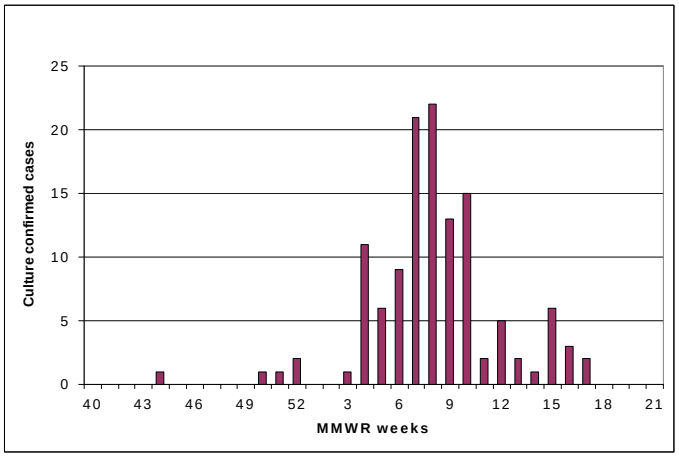
Table 1. Number of Influenza Culture Types and Strains, Kentucky 2000-2001

A	19
A:H1N1-New Caledonia	43
A:H3N2-Panama-like	3
B	31
B:Yamanashi/166/98-like	28
TOTAL	124

Figure 2. Influenza Cases by MMWR Week, Kentucky 2000-2001



Surveillance

Surveillance for the current influenza season will begin the **first week in October 2001.**

The Kentucky influenza surveillance network is comprised of three essential components:

- **Sentinel physicians**, who report directly to the Centers for Disease Control and Prevention (CDC) with information, which pertains to the number of patients (age grouped) that have been seen for a specified week with ILIs.
- **Sentinel Local Health Departments**, who have agreed to participate in Kentucky's influenza

Kentucky Influenza 2001-2002 (continued)

network report ILIs information obtained from a specific local nursing home and report their school district absenteeism for a specified day each week. In addition, local health departments in the surveillance network located in larger populated areas of the state obtain information of ILIs from a doctor's office and/or a hospital. This information is reported to the State Influenza Surveillance Coordinator.

- **Laboratories**, report isolate/culture confirmed influenza cases to the Division of Epidemiology and Health Planning in Kentucky's Department for Public Health (KDPH). All laboratories are required by law to participate by reporting isolates/cultures of influenza on a weekly basis to the KDPH.

Information from all three reporting areas is used to determine weekly influenza activity statewide.

CDC's case definition for an ILI is: Fever greater than 100 degrees Fahrenheit, and cough or sore throat. Rapid diagnostic tests can be useful to the practitioner for the purpose of treatment decision. However, the CDC only considers influenza viral isolate/cultures as confirmation of an influenza case. Rapid diagnostic test results may only be used in determining surveillance activity if accompanied by a Kentucky Reportable Disease Form with complete information regarding signs and symptoms and submitted to the KDPH. The information can then be used for counting ILIs for determining influenza activity. CDC's definitions for influenza activity are defined as:

- **No activity** is no ILIs or culture confirmed cases;
- **Sporadic activity** is ILIs or culture confirmed cases with no outbreaks;
- **Regional activity** is an outbreak of either ILIs or culture confirmed cases in less than 50% of the state's population;
- **Widespread activity** is an outbreak of either ILIs or culture confirmed cases in greater than 50% of the state's population.

Supplemental Recommendations to the April, 2001 Recommendations for the Use of Influenza Vaccine

Because of the 2001-02 influenza season vaccine delay and the large number of doses projected for distribution in November and December, the Advisory Committee on Immunization Practices (ACIP) has developed the following supplemental recommendations. The CDC MMWR July 13, 2001/Vol.50/No.27 may be viewed in its entirety on the CDC website at www.cdc.gov.

- Providers should target vaccine available in September and October to persons at increased risk for influenza complications and to health-care workers.
- Beginning in November, providers should offer vaccine to contacts of high-risk persons, healthy persons aged 50-64 years, and any other persons wanting to reduce their risk for influenza.
- Providers should continue vaccinating patients, especially those at high risk and in other target groups.
- Persons at high risk for complications from influenza, including those aged >65 years and those aged <65 years who have underlying chronic illnesses, should seek vaccination with their provider when vaccine is available.
- Persons who are not a high risk for complications from influenza, including household contacts of high-risk persons, are encouraged to seek influenza vaccine in November and later.
- Distribution of vaccine to worksites, where campaigns primarily vaccinate healthy workers, should be delayed until November.
- All providers who have placed orders should receive some early season vaccine.
- Manufacturers, distributors, and vendors should inform providers of the amount of vaccine they will be receiving and the date of shipment.
- Organizers of mass vaccination campaigns not in workplaces (e.g., at health departments, clinics, senior centers, and retail stores) should plan campaigns for late October or November or when they are assured of vaccine supply and make special efforts to vaccinate elderly persons and those at high risk for influenza complications.
- Influenza vaccine service providers should develop contingency plans for possible delays in vaccine distribution.

Updates on vaccine supply, and other information about influenza vaccination that may be helpful to providers and health departments, will be available at http://www.cdc.gov/nip.flu.

Information regarding surveillance, statistics and recommendations for vaccine for adults and antiviral drug use may be directed to: Peggy Dixon, RN, CIC, Communicable Diseases Branch, 502/564-3261, extension 3583.

To request influenza collection kits, please contact: Diane Young, division of Laboratory Services, 502/564-4446, extension 4483.

For information regarding ordering, distribution, information statements and recommendations for Vaccines for Children influenza vaccine, please contact: Immunization Program, 502/564-4478.

Hepatitis A in Kentucky – 2001

By Troi M. Johnson, RN

Hepatitis A is a viral illness spread by fecal-oral transmission and is characterized by sudden onset of fever, malaise, nausea, abdominal discomfort, and fatigue. The clinical case description may or may not be accompanied by jaundice within a few days of symptom onset. The severity and duration of the illness can vary dramatically. The Centers for Disease Control and Prevention (CDC) states that over 70% of children 6 years old or younger affected by the disease will be asymptomatic. This can pose a significant problem when outbreaks occur in daycare or young school-age children.

Kentucky is experiencing a record year in dealing with Hepatitis A. Sixty-four cases were reported in 1999; sixty-three cases were reported in 2000. From January through August 2001, there have been 82 cases reported in the state thus far.

One outbreak beginning in late November 2000 involved a fast food restaurant resulting in nine Kentucky cases. The outbreak was eventually contained through mass administration of immune globulin (IG). Approximately 850 doses were given in the community after an infected food handler worked while symptomatic with the disease. Through investigative efforts involving the CDC and the Federal Drug Administration (FDA), a produce trace-back eventually identified the likely index to be green onions imported from Mexico that were not cleansed properly at the time of preparation. Three states were ultimately involved in this outbreak and with this restaurant chain.

Another outbreak beginning in May of 2001 involved elementary to high school aged children and a church revival. There was no link identified between the schools and church revival in this outbreak nor was an index case discovered. By the time this outbreak ran its course, nineteen cases were identified and numerous contacts were prophylaxed.

The most recent and significant outbreak to date involves forty cases since January 1, 2001. Most of these cases have occurred since May and were initially contained within one geographical area. Despite exhaustive efforts by district health department staff, this outbreak has now spread to four counties. The multi-county involvement has been largely associated with transmission by asymptomatic children. The CDC is currently being consulted in an effort to contain the spread of this disease.

During two of these outbreak situations, the use of Hepatitis A vaccine was discussed as a control measure. The CDC recommends that Hepatitis A vaccine be administered to those at high-risk such as international travelers, persons with chronic liver disease, men who have sex with men, and children living in communities with consistently elevated rates of Hepatitis A. To date, Kentucky has not had a community named as an endemic area in which that definition would apply. The CDC advises that the use of Hepatitis A vaccine for outbreak control has generally proven to be labor-intensive and largely unsuccessful.

What can be done to prevent the spread of Hepatitis A? Education regarding proper hand washing and food preparation is the primary intervention. However, observation for clinical symptoms and laboratory testing are also vital in detecting the disease. Physician and community awareness and involvement during an outbreak can be instrumental in eradication of the disease.

Performing anti-HAV IgM testing is vital for diagnosis of Hepatitis A. The Hepatitis A Total Antibody test actually signifies both IgG (past infection and resulting immunity) and IgM (active infectivity). The Total Antibody test does <u>not</u> stand alone as a diagnostic tool. In order to identify an active case, an anti-HAV IgM must be performed. In addition, jaundice or elevated hepatic enzyme levels must be present to complete the Kentucky case definition and prompt Kentucky Department for Public Health recommendation for prophylaxis of contacts.

An epi-link case definition can be determined if a person experiences clinical symptoms accompanied by jaundice <u>or</u> elevated hepatic enzyme levels <u>and</u> is a known contact to a laboratory-confirmed case. The epi-link case does <u>not</u> require a positive anti-HAV IgM test to be considered a case if the aforementioned criteria are met. If an epi-link case is determined, prophylaxis of contacts will proceed as necessary.

Hepatitis A must be reported to local or state health officials within twenty-four hours. If daycare, school, or food handling is involved, the infected individual must be excluded from that environment as soon as possible. The Division of Epidemiology and Health Planning strongly encourages consultation for assistance in determining exclusion periods and prophylaxis of contacts by calling (502) 564-3418.

Could This Happen in Kentucky?
Infant Death Due to Hepatitis B: Michigan

Infant Death Due to Hepatitis B: Michigan[1]
Reprinted with permission from Tracy Miller, MPH, Editor, North Dakota Department of Health
March - April 2001 Newletter

Case report: On Dec. 13, 1999, a previously healthy three-month-old infant of Southeast Asian descent was brought to a local Michigan hospital emergency department and was admitted following a five-day history of fever, diarrhea and jaundice.

Upon admission to the hospital, hepatitis B serology was obtained, along with liver function tests and liver enzymes. Laboratory results revealed that the infant was hepatitis B surface antigen (HBsAg) positive and IgM core antibody (IgM anti-HBc) positive with an elevated total bilirubin of 16.6, a direct bilirubin of 4.7, an ALT of 693 and an AST of 203. The infant's test results were reported to the local health department Dec. 14, 1999. The infant's mother was tested at the same time and was HBsAg and anti-HBc positive.

The infant was diagnosed with hepatic failure due to hepatitis B virus infection and was transferred to another hospital Dec. 16 for possible liver transplantation. After transfer, the infant developed seizures and her condition deteriorated rapidly. She died Dec. 17.

An investigation revealed that the infant's mother had tested positive for HBsAg during her pregnancy, but that the test result was communicated incorrectly as "hepatitis negative" to the hospital where the baby was born. Neither the laboratory nor the prenatal care provider reported the HBsAg-positive test results to the local health department as required by state law. The infant received neither hepatitis B vaccine or hepatitis B immune globulin (HBIG) at the time of birth.

The hospital where the infant was born had suspended administration of hepatitis B vaccine to all newborns during the summer of 1999 due to the concern about the presence of thimerosal used as a preservative in hepatitis B vaccine. The first dose of hepatitis B vaccine was not administered to this infant until she was two months of age.

Discussion:
Serious medical errors occurred in this case that contributed to the infant's death. The errors included the following:

1. The HBsAg-positive test result was not conveyed to the pregnant woman by her physician.

2. The physician failed to report the HBsAg-positive test result to the local health department as mandated by state law.

3. The laboratory that performed the test did not notify the local health department of the positive result.

4. The HBsAg test result was transcribed incorrectly on the prenatal record that was sent to the hospital. A copy of the original lab report did not accompany the prenatal record.

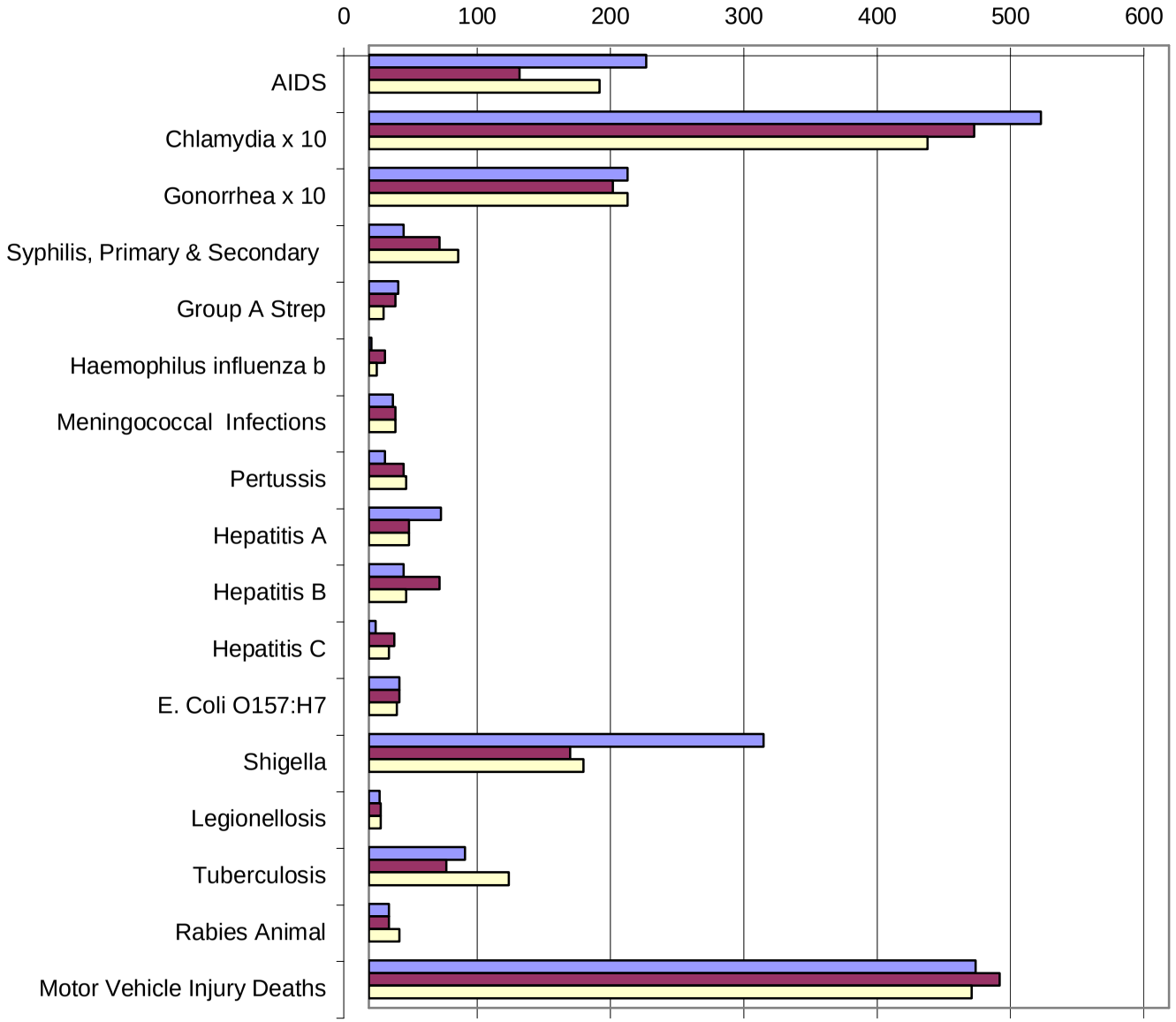
5. The perinatal staff did not verify the HBsAg test result; they did not review a copy of the actual laboratory report.

6. There was no hospital protocol in place to vaccinate newborns born to HBsAg-negative mothers belonging to populations or groups that have a high risk of perinatal a and early childhood hepatitis B infection.

Reference

1. Adapted from Fasano N. Unprotected people…..Infant dies of fulminant hepatitis B, 1999. Needle Tips and the Hepatitis B Coalition News 2000;10(1):12.

CASES OF SELECTED REPORTABLE DISEASES/CONDITIONS IN KENTUCKY, YEAR TO DATE (YTD), JANUARY 1, 2001 THROUGH JULY 31, 2001



Diseases Of Low Frequency Occurrence	2001 YTD	2000 Annual Totals
Diphtheria	0	0
Measles	2	0
Mumps	1	1
Polio	0	0
Rubella	0	1
Tetanus	0	1
VECTOR-BORNE DISEASES		
Arboviral encephalitis	0	2
Lyme Disease	9	13
Malaria	6	18
Rocky Mountain spotted fever	1	4
Tularemia	0	3

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Welcome Dr. Englender & Good Bye Retirees

Dr. Steven Englender Appointed Division Director and State Epidemiologist

The Division of Epidemiology and Health Planning welcomes Dr. Steven Englender as the new State Epidemiologist and Division Director. Dr. Englender is Board Certified in Preventive Medicine-Public Health and Epidemiology and is a former Centers for Disease Control and Prevention (CDC) Epidemic Intelligence Service Officer. Public health experience includes positions as a consultant, a practitioner, an instructor, a county health department director, and Arizona State Epidemiologist. As a native of Cincinnati, OH, he is very familiar with Kentucky. Please welcome Dr. Englender to our staff.

Division of Epidemiology and Health Planning Retirees

The Division of Epidemiology and Health Planning extends its best wishes to 7 employees who retired during July and August 2001. They are: Dr. Glyn Caldwell, Division Director, Pat Beeler, Reportable Disease Surveillance Technician, Bill Graham, Immunization Field Representative, Donna Perkins, TB Nurse Consultant, Carl Spurlock, Program Administrator, Laurel Walls, Ryan White Care Act Grant Administrator, and Nancy Yates, Administrative Specialist. With their retirement we are losing over 134 years of experience and institutional memory. We all wish them the best of retirements.