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Kentucky Influenza Surveillance By Peggy Dixon

State influenza surveillance began October 4, 1999, and will end May 26, 2000. Again this season, a network of 15 sentinel physicians and 19 local health departments have agreed to participate in weekly influenza surveillance. The sentinel local health departments obtain information from nursing homes, schools, physicians' practices, and hospitals. In addition, one employee health clinic will report cases if they occur, and one pediatric practice will share independent influenza surveillance activities with the Communicable Disease Branch,

In addition to the sentinel physicians, many volunteers submitted specimens to the State Laboratory. However, the total number of specimens collected represented approximately 20% of the more than 600 collection kits distributed by the Virology/FA Laboratory Division of Epidemiology and Health Planning.

The following test data from isolates were submitted by the Division of Laboratory Services, Virology/FA Section, for the 1998-99 influenza season:

For the September, 1998 through May, 1999 season, 273

COUNTY	REC'D	NEG	FLU TYPE A	FLU TYPE B	RSV*	HERPES
BALLARD	1	0	0	1	0	0
BARREN	19	9	7	3	0	0
BOONE	5	2	2	0	1	0
BOURBON	9	5	3	0	0	1
BOYD	5	4	0	1	0	0
CALLOWAY	2	2	0	0	0	0
FLEMING	1	1	0	0	0	0
HART	2	1	1	0	0	0
JESSAMINE	3	2	0	1	0	0
JEFFERSON	29	20	6	3	0	0
MCCRACKEN	9	1	3	5	0	0
MADISON	21	6	10	5	0	0
METCALFE	7	3	2	1	1	0
OLDHAM	4	1	1	1	1	0
WARREN	12	4	7	1	0	0
WASHINGTON	1	0	1	0	0	0
WOODFORD	1	1	0	0	0	0
TOTAL	131	62	43	22	3	1

*Respiratory Syncytial Virus

confirmed cases were reported to the Centers for Disease Control from the Division of Epidemiology and Health

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Planning.

For the 1999-2000 season, the first confirmed influenza isolate, Type B, was reported in September from Clark County. A second confirmed isolate, Type B, was reported in October from Rowan County.

When considering the potential for an influenza pandemic, the need to detect changes in influenza viruses causing illnesses is obligatory; therefore, increased surveillance is essential. To enhance and further expand surveillance opportunities, and to provide the earliest detection and identification, it is imperative that submitters have immediate access to specimen collection kits. Sentinel local health departments are requested to contact and inform medical providers in their communities of the availability of the kits through their agencies. Also, other local health departments are encouraged to prepare a plan for an influenza collection kit distribution system. Any local health department, physician, or laboratory may request kits from the Division of Laboratory Services. Sentinel physicians and sentinel local health departments may request more kits as needed. The only cost for the service is for postage when the medical professional sends the specimen to the state lab.

For additional information on the test procedures, how the laboratory data are generated and used, requesting additional collection kits, and completing patient information, please contact Diane Young, Division of Laboratory Services, 502/564-4446. Discussion regarding surveillance, case determination, and pandemic planning may be directed to Peggy Dixon, Communicable Disease Branch, 502/564-3261. For information on statistics, please contact Pat Beeler, Division of Epidemiology and Health Planning, 502/564-3418.

**Survey of Factors Affecting Indoor Air Quality
In Kentucky Public Schools
By Colleen Kaelin, MSPH**

In recent years, the media has issued several reports about public schools attempting to investigate and correct suspected indoor air quality (IAQ) problems. In Montgomery, Carter, Campbell, and Garrard counties, school officials have dealt with concerns from students, parents, and staff regarding allergenic mold, chemical hypersensitivity, foul odors and infectious disease.^{1,2,3,4} A survey of schools conducted by the United States General Accounting Office in 1996 found that 19 percent of Kentucky's schools had unsatisfactory indoor air quality.⁵ According to the Environmental Protection Agency, indoor levels of pollutants may be 2-5 times, and occasionally more than 100 times, higher than outdoor levels. Since most people spend about 90% of their time indoors, high levels of indoor air pollutants may be of particular concern. In schools, failure to prevent IAQ problems or to respond promptly to complaints about IAQ, can have consequences such as: increasing the potential for health problems for students and staff, impacting the student learning environment, and reducing the productivity of teachers and staff.⁶

Background information was needed to support funding requests to train school administrative and maintenance personnel about the importance of IAQ maintenance and methods to correct IAQ problems. The purpose of the survey was to determine the average age and overall condition of Kentucky's public school buildings. In addition, questions were asked regarding specific building conditions that could impact IAQ. For example, a leaking roof (or other source of excess moisture) could lead to the growth of mold or other microorganisms on carpet or ceiling tiles. These molds could be the source of allergic or asthmatic reactions among the students and staff. Chemicals stored or used on school grounds or in the building materials are another source of potential IAQ problems.

A two page, 62 item questionnaire was developed by the epidemiologist for the Division of Public Health Protection and Safety. The questionnaire was developed and analyzed using the EPI-INFO computer software developed by the Centers for Disease Control and Prevention. Questions included the grade levels taught at the school, the age of the building, the age of the Heating, Ventilation, and Air Conditioning System

(HVACS), the frequency of inspection of the HVACS and the personnel involved, renovations and additions to the building, chemical storage and use, and 17 specific IAQ related conditions. In addition, school personnel were asked if a professional IAQ consultant had ever visited the premises.

Between December 22, 1998, and April 7, 1999, survey forms were received from 478 schools in 63 counties. The response rate was approximately 39.3 percent. The age of the school buildings ranged from less than one year to 99 years old, with a median age of 35 years. The grade levels taught ranged from preschool to grade 12. The majority of schools taught elementary grade levels, preschool through grade six. There was no association between the grade levels taught at the school and the age of the school building.

The HVACS ranged from less than one year in age to 89 years. The median age was 11.5 years. In 61.7 percent of the school buildings, the original HVACS was still in use. The vast majority of schools (93.1%) inspected the HVACS at least once a year. The majority of schools inspected the HVACS either monthly (36.4%) or semi-annually (40.0%). The remaining schools performed an annual HVACS inspection (13.8%) or did not specify (9.8%). The personnel who performed the inspections were typically school personnel (79.3%). Less frequently, district personnel (8.4%) or private contractors (8.6%) were used. The remaining schools (3.8%) did not specify the personnel, if any, that were involved in the HVACS inspection.

A slight majority of schools reported using pesticides (60.9%) or herbicides (50.2%) on school grounds during the last calendar year. Nearly all schools reported that cleaning agents (99.2%) and art supplies (91.2%) were stored on school property. Other categories of potentially hazardous agents stored on school property included laboratory supplies (51.9%), pesticides (9.2%), herbicides (4.6%), paint (52.3%), and other (2.3%). Individual sensitivities effect which, if any, substances may pose a potential health hazard when used or stored on school grounds.

When given a list of seventeen conditions that could impact indoor air quality, 183 schools (38.3%) reported at least one of the conditions was currently present. For each specific condition, the number and percentage of schools affected is included in Table 1.

Table 1. Frequency of IAQ Conditions

FACTOR	NUMBER OF SCHOOLS AFFECTED	PERCENT
Dust	60	12.6
Leaking Roof	75	15.7
Leaking Windows	21	4.4
Broken/Leaking Pipes	14	2.9
Periodic Flooding	7	1.5
Excess Moisture	34	7.1
Condensation	22	4.6
Offensive Odors	39	8.2
Moldy	16	3.4
Chemical	2	0.42
Other	19	4.0
Water Stains on Carpet	22	4.6
Water Stains on Ceiling Tiles	121	25.3
Water Stains on Floor Tiles	13	2.7
Mold on Carpet	11	2.3
Mold on Ceiling Tiles	29	6.1
Mold on Pipes	2	0.42
Other Visible Mold	12	2.5
Asbestos	3	2.7
Other Conditions	34	7.1

Only 80 schools (16.7%) reported being visited by a professional IAQ consultant at some time. School buildings age 10-19 years had the highest percentage of reported IAQ conditions (55.0%), followed by schools age 20-29 (53.4%). The percentage of schools with at least one IAQ condition decreased steadily with increasing age until buildings age greater than or equal to 70 years. There was a significant association between the age of the school building and a report of a leaking roof ($X^2 = 16.94$; $p = .02$), leaking windows ($X^2 = 15.05$; $p = .04$), stains on carpet ($X^2 = 22.91$; $p = .002$) and stains on ceiling tiles ($X^2 = 20.02$; $p = .0006$). There was no statistically significant association between the age of the school building and any of the other building conditions. Of schools that had been visited by an IAQ consultant, the majority were 50-59 years old (35% of total).

The age of the HVACs was associated with a report of at least one of the building conditions listed in this survey. However, there was a significant relationship between HVACs age and reported dust problems ($X^2 = 13.62$, $p = 0.02$), as well as water stains on ceiling tiles ($X^2 = 11.4$, $p = 0.05$). There was no association between the age of the HVACs and the number of schools that had been visited by an IAQ consultant.

The most commonly reported IAQ related problem in this survey was water stains on ceiling tiles, followed by leaking roofs, dust, and offensive odors. Unfortunately, there are no national standards for factors affecting IAQ

in public buildings, so it is not possible to determine the acceptability of these conditions from the results of the survey. However, it may be possible to use these results for further studies.

In order to provide acceptable IAQ, it is necessary for schools to ensure the proper maintenance of the HVACs. While the majority of schools in this survey reported inspecting the building's HVACs at least once a year, all schools should perform regular HVACs inspections to ensure IAQ for both staff and students. It is also recommended that schools limit the use of pesticides and herbicides and avoid storing potentially hazardous substances on school property.

The education of administrative and school personnel is essential to ensure adequate IAQ in Kentucky's schools. The Environmental Protection Agency's *Tools for Schools* program is designed to educate school staff in IAQ maintenance and to document IAQ maintenance and problems. This program should be implemented in all Kentucky schools to ensure the health and well being of students and school personnel. The *Tools of Schools* Website is www.epa.gov/iaq/schools/index.html.

References

1. *Montgomery board will take bids to rid school of mold.* Lexington Herald-Leader. September 28, 1998.
2. *Olive Hill school may be rid of stench.* Lexington Herald-Leader. November 20, 1998.
3. *Green but not with envy.* Kentucky Post. December 11, 1997.
4. *Judge Expands Suit Against Garrard Board: Complaint Alleges Middle School is Unsafe, Unhealthy.* Lexington Herald-Leader. June 23, 1999.
5. United States General Accounting Office. *School Facilities: Profiles of School Condition by State.* GAO/HEHS-96-148. June, 1996.
6. Environmental Protection Agency: *Tools for Schools Website.*

Breast Cancer Awareness By Pamela Spradling

In conjunction with Breast Cancer Awareness Month in October, the Kentucky Women's Cancer Screening Project of the Kentucky Department for Public Health is promoting the availability of free or low-cost mammograms and breast examinations to eligible women who call their local health department to schedule an appointment.

This year, more than 175,000 women in the United States will learn for the first time they have breast cancer, and more than 43,000 women will lose their lives – 700 women in the state of Kentucky alone. In 1997, breast cancer was the second leading cause of cancer deaths among Kentucky women, resulting in 615 deaths.

Experts stress that all women are at risk for breast cancer and that the earlier breast cancer is detected, the better a woman's chance for survival. Breast cancer incidence increases with age. Women age 40-44 are nearly twice as likely to be diagnosed with breast cancer as women age 35-39, with incidence rates of 118.31 compared to 65.85, respectively. The incidence rate doubles again at the age group 50-54 to a rate of 250.61, and continues to increase, such that in the age group 60-64, the rate is 337.82, and by the age group 75-79, it is 442.72 per 100,000 women.

The American Cancer Society recommends that women age 40 and over receive a mammogram every year. Early detection and prompt treatment can significantly reduce the suffering and deaths caused by this disease. Experts say the key to an early diagnosis is a mammogram, because it can detect a tumor before a woman or even her physician can feel it. Women diagnosed early by an annual mammogram experience a 90 to 95 percent survival rate. Because incidence rates increase as women age, screening is especially important for older women. The 1997 Kentucky Behavioral Risk Factor Surveillance Survey showed that only 64.8 percent of Kentucky women age 50 and over have had a mammogram and clinical breast exam within the past two years.

Prior to 1990, local health departments in Kentucky were providing limited breast cancer screening services consisting of instruction in breast self-examination and counseling on risk factors for breast cancer. When new state funds became available in 1990, services were expanded to include clinical breast exams performed in the local health departments, referrals for screening mammograms, and referrals for follow-up diagnostic tests. In each of Kentucky's 120 counties, breast cancer screening services are provided through local health departments using local mammography facilities, five mobile mammography vans, one portable unit, and local physicians' offices. Since its first year of operation, the Kentucky Women's Cancer Screening Project has provided 86,466 mammograms to low income women across the Commonwealth.

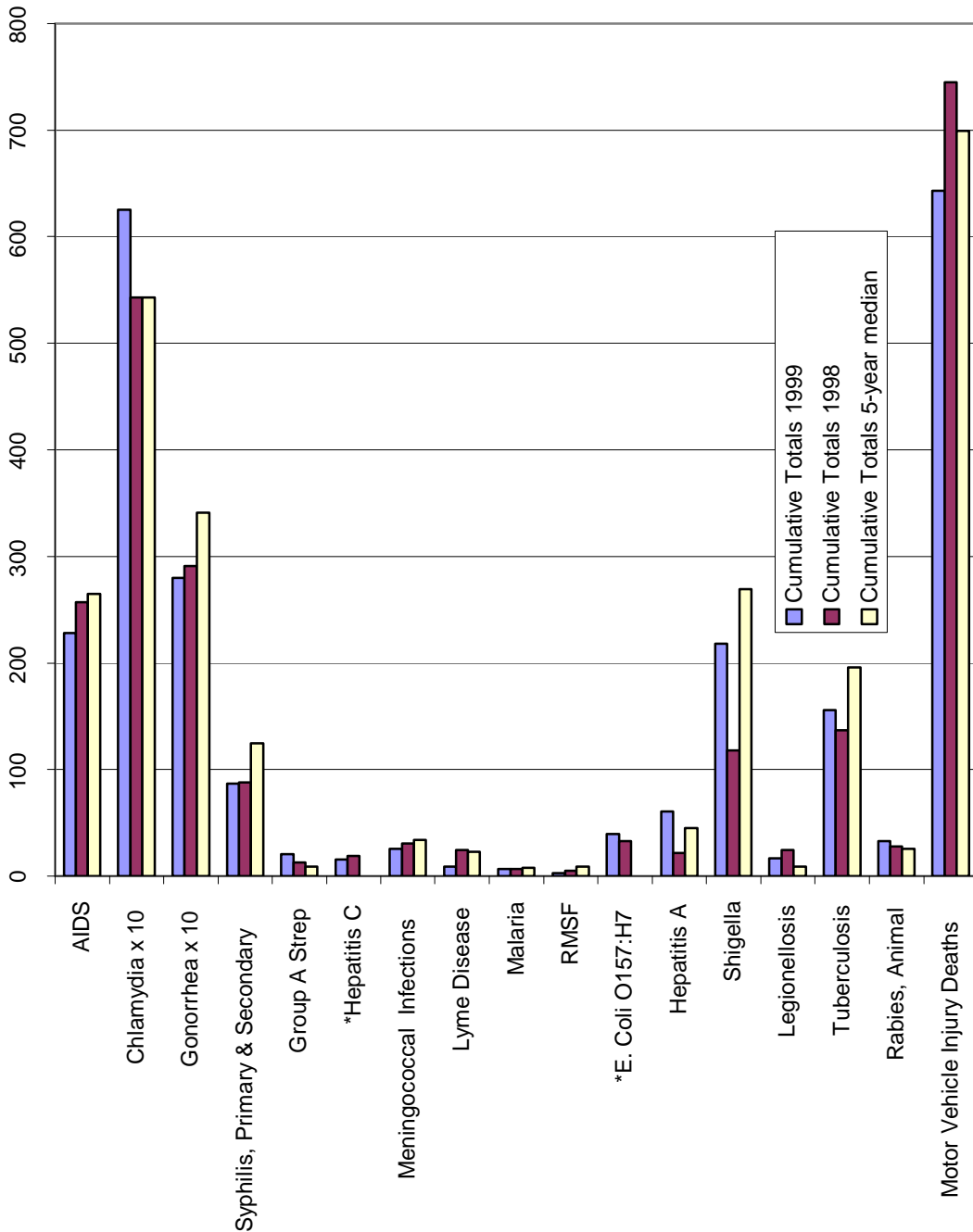
Women ages 40 and older who are at or below 100 percent of the federal poverty level and uninsured or underinsured are eligible for free annual mammograms and clinical breast exams. Uninsured or underinsured women age 40 and older whose income is from 101 percent to 250 percent of the federal poverty level are eligible for these services at low cost on a sliding fee scale. Women younger than 40 years of age may be eligible to receive screening services if they have a family history of breast cancer.

“Early detection, followed by up-to-date treatment, provides a woman with a better chance for long-term freedom from breast cancer,” said Patty Sewell, program coordinator for the Kentucky Women's Cancer Screening Project. “Mammography screening should begin at the age of 40 and continue routinely – once is not enough. Women must make mammography screening a part of their regular health care routine.”

For more information about the Kentucky Women's Cancer Screening Project, contact Pamela Spradling, Public Education Coordinator, at 502-564-7996 or your local health department.



CASES OF SELECTED REPORTABLE DISEASES IN KENTUCKY, YEAR TO DATE (YTD) THROUGH OCTOBER 1999



Vaccine Preventable Diseases		
Diseases	1999 YTD	1998 Annual Totals
Diphtheria	0	0
<i>Haemophilus influenzae b</i>	6	7
Hepatitis B	37	44
Measles	2	0
Mumps	0	1
Pertussis	21	93
Polio	0	0
Rubella	0	0
Tetanus	0	0

* Historical data are not available. Disease numbers reflect only those cases which meet the CDC surveillance definition. Contributed by: Patricia Beeler, Surveillance and Health Data Branch.



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RETURN SERVICE REQUESTED

Correction

In the August-September 1999 *Epidemiologic Notes and Reports* article, "Vaccines Can Be a Life Preserver for People with Diabetes", incorrect immunization rates were reported for individuals with diabetes. The following table depicts the correct influenza and pneumococcal vaccination rates among individuals with diabetes in Kentucky for 1997. We apologize for this error.

1997			
	State	65+ Population	African American
Receiving a flu vaccination within the past 12	52%	77%	49%
Ever having a pneumonia vaccination	33%	49%	24%

Newsmakers

Viola Davis Brown, ARNP, retired August 31, 1999, as Director of Public Health Nursing. She served the Kentucky Department for Public Health from 1980 to 1999. Her career was filled with accomplishments. Ms. Brown was instrumental in assisting Advanced Registered Nurse Practitioners in obtaining prescriptive authority. The Kentucky Association for Advanced Registered Nurse Practitioners recognized her in 1998 with their Nurse Practitioners Award. She promoted public health throughout the country by her active role in the Association of State and Territorial Directors of Nursing. At its annual 1999 convention, the Kentucky Nurses Association honored Viola Davis Brown as "Distinguished Nurse of the Year". Her friends and associates in public health will miss working with her and wish her a happy and healthy retirement.

Sarah J. Wilding, RN, MPA, joined the Department for Public Health as Principal Assistant and Chief Nurse effective November 1, 1999. Ms. Wilding brings a broad-based understanding of nursing to the Department. She has been a hospital nurse in Lexington and Louisville. She has worked in a local health department as well as within the Department, in a variety of areas relating to maternal and child health issues. Ms. Wilding has been involved in legislative initiatives, public and professional awareness initiatives, and coalition building. More recently, she has been working on quality improvement, performance monitoring, and outcome measurement in the Department for Medicaid Services. In addition to her extensive nursing experience, she has a Masters in Public Administration degree. Please join us in welcoming her to the Department for Public Health.