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Statewide Disease Facts & Comparisons

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Influenza surveillance in West Virginia:
2003 - 2004 season summary

Background

Influenza is a serious disease that affects people of all ages. According to the CDC, every year in the United States, an average of 5% to 20% of the population gets the flu, more than 200,000 people are hospitalized from flu complications, and approximately 36,000 people die from influenza. Surveillance for influenza answers the questions of where, when, and what influenza viruses are circulating. It allows us to detect changes in influenza viruses and helps to determine if influenza activity is increasing or decreasing. It also allows West Virginia to determine how severe the influenza season is compared to other years. It cannot, however, be used to ascertain how many people have become ill with influenza during the influenza season.

Methods

The Infectious Disease Epidemiology Program (IDEP) within the Division of Surveillance and Disease Control of the West Virginia Department of Health and Human Resources (WVDHHR), in cooperation with the West Virginia Office of Laboratory Services (OLS), and West Virginia Local Health Departments monitors influenza around the state. There is also the CDC-sponsored Sentinel Providers Surveillance Network (SPSN) in West Virginia that has over 58 providers who voluntarily report outpatient influenza-like illness by age group to the CDC on a weekly basis, and some providers

*(See **Influenza**, page 4)*

IN THIS ISSUE:

Division of Surveillance & Disease Control

AIDS Surveillance	(304) 558-2987
AIDS Prevention	(304) 558-2195
Cancer Registry	(304) 558-6421
Epidemiology	(304) 558-5358
Immunization	(304) 558-2188
STD Program	(304) 558-2950
TB Control	(304) 558-3669

Logistical considerations of OraSure testing

New HIV testing technology brings new questions

Observations and recommendations from a West Virginia AIDS prevention specialist

After many years of trial and error, it looks like use of the OraSure HIV testing kit is finally meeting with some degree of success in West Virginia. This is important as the CDC mandates more testing of genuinely high-risk populations. Yet the fact that the OraSure sampling procedure can be done by just about any individual with a minimum of training does raise a number of important logistical questions.

When virtually all HIV testing in West Virginia was done using blood samples collected at county health departments, there were firmly established standards of quality in terms of pre-test counseling, transportation of the samples to the State Lab, and post-test counseling. But as OraSure allows us to expand HIV testing beyond county health departments, with more people qualified to collect samples, a number of new logistical issues need to be addressed.

PRE-TEST COUNSELING

The West Virginia AIDS Program has been conducting client-centered counseling and testing training courses for several years now. Persons who sign up for these workshops may be health care professionals, social workers, or volunteers with local, community-based AIDS service organizations. These people receive valuable training in pre-test and post-test client counseling. Any person who does pre-test counseling, whether or not they actually collect OraSure samples, must complete this training.

According to CDC guidelines, a good client-centered counseling session should last approximately 20 minutes and include the following six steps:

1: Introduce and orient a client to the session
2: Identify the client's personal risk behaviors and circumstances
3: Identify safer goal behaviors
4: Develop a client action plan
5: Make referrals and provide support
6: Summarize and close the session

In theory, such a counseling session is ideal. In practice, it may not always be realistic. During an OraSure clinic at a Gay bar, for instance, men wishing to be tested may already demonstrate a good working knowledge of HIV risk behaviors and prevention. They may have already been tested in the past, perhaps more than once. And if there are many clients wishing to be tested, but only a given timeframe in which to accommodate all of them, pre-test counseling may have to be abbreviated. It's difficult to plan for every eventuality. Since we wish to limit testing, as much as possible, to truly high-risk individuals, my first questions to clients at Gay bars go straight to the issue of risky behaviors: Unprotected receptive anal sex, usually as a result of excessive alcohol consumption, is first and foremost on the list. It is also important that the client understand and be able to cope with the results of the test.

Finally, it is important to discuss how the client will best be given their test results when they become available. If I conduct an OraSure clinic at a Gay bar elsewhere in West Virginia, it is standard procedure to have clients return in one week for their test results. But if my clinic is in the Charleston area, I ask my clients if they wish for me to call them on the phone when I have their test results (usually within a few days), then arrange to meet them at a location of their choosing to discuss those results. If the client agrees to this, it is important to get a secure phone number at which they can best be reached, and write it somewhere on the FRONT of the patient information form.

The circumstances under which a client gets his test results will depend on where the OraSure clinic takes place, which qualified individuals are available locally to give test results, etc. When county health departments conduct HIV testing on blood samples, clients are typically told to call back a week later to see if their test results are available, then make an appointment to come in for post-test counseling. Expanding OraSure screening beyond county health departments can conceivably expand our options for giving clients their test results while still maintaining confidentiality.

*(See **OraSure**, page 3)*

Gregory Clark Moore passed away on June 1, 2004, Thomas Memorial Hospital in South Charleston after a recurring battle with cancer. He was 55.

He was preceded in death by his wife, Betsey Howie Moore. He and Betsey are survived by their son, Grant.

Most recently Greg was the assistant director of the West Virginia HIV/AIDS & STD Program, and he had just retired from 32 years of service with the State of West Virginia.

*(**OraSure**, continued from page 2)*

COLLECTING THE TESTING SAMPLE

The tests used to detect HIV antibodies in blood are the same tests used to detect HIV antibodies in saliva, and accuracy of the tests is nearly the same in both cases. The advantage of OraSure, however, is that one doesn't have to be a trained phlebotomist to collect the sample. Instead, a swab is used to collect "oral mucosal transudate" from between the cheek and gum. Virtually anyone with a minimum of training can collect samples for testing, and the person collecting the samples does not necessarily need to be the same person doing pre-test counseling. In fact, two people working together (one doing pre-test counseling, one collecting samples) will be able to process more clients in the same amount of time.

DELIVERING THE SAMPLES TO THE STATE LAB

This is one area that must be considered carefully. In my own experience with OraSure, whether I have collected the samples here in the Charleston area or in a Gay bar several hours' drive away, I have always personally delivered the samples to the State Lab in South Charleston. But what if the person collecting OraSure samples, for example, lives in Morgantown and does volunteer work for Caritas House, a community-based organization? Would it be realistic for that person to personally make a six-hour round trip to deliver the samples to the State Lab? Would mailing the samples or having them FedExed be an option? It is important that OraSure samples be protected from excessive heat, so there must be some secure means in place to get the samples from the OraSure clinic and into the hands of the testing technician at the State Lab in a timely and climate-controlled fashion.

I had a long conversation with the director of the State Lab concerning standards for shipping blood specimens from county health departments to the State Lab for testing. She said that county health departments are given special postage-paid mailers that can be dropped off at any UPS office, and she suggested that those same pre-paid mailers could be supplied to anyone doing OraSure testing. The paper test results are then mailed back to the health department. The lab technician who processes blood and OraSure samples keeps a list of persons who have been approved to receive paper lab results. Anyone who plans on giving OraSure test results to clients will need to make sure his or her name is on that list.

POST-TEST COUNSELING

This is the most sensitive aspect of OraSure testing, since post-test counseling, by definition, includes giving a client the results of his HIV test. The number of people who are party to this information must be limited to the client himself, the post-test counselor, the lab worker processing the test, and surveillance staff on a need-to-know basis. At this time persons who are considered qualified to give test results are:

- Doctors and nursing staff at county health departments
- Private physicians, dentists, psychologists, and licensed nurses
- Representatives of the West Virginia Bureau for Public Health, including HIV/AIDS educators
- Disease Intervention Specialists (DIS)
- Representatives of the HIV Care Consortium

All of the persons listed above are required by state law to observe confidentiality and make sure that the privacy of a patient is not breached. If it becomes necessary to expand the number of persons qualified to do post-test counseling *beyond* those persons listed above, those persons will have to conform to the same standards of counselor-client confidentiality. How can we guarantee this? I propose we draft a written contract and agreement that each person undertaking post-test counseling be required to sign. Those persons must be made aware of the "AIDS-Related Medical Testing and Records Confidentiality Act" and associated Legislative Rule 64CSR64. These laws protect the privacy of all people getting tested for HIV. Those persons must be of sound judgment and personal responsibility. We absolutely cannot run the risk of someone divulging the results of an HIV test to a third party through some lapse of judgment.

RECOMMENDATIONS

- Although it is not necessary for the persons doing pre-test and post-test counseling to be the same, it is preferable. Pre-test counseling establishes a rapport and a bond of trust between counselor and client, and that trust is important in the post-test counseling phase.
- If the post-test counselor is going to be different from the pre-test counselor, the client needs to be made aware of this.
- One of our biggest problems in HIV testing is when clients fail to return to get their test results. I believe we can dramatically reduce this by suggesting to the client that we call them by phone when we have their test results ready. If they can agree to this, a safe and secure phone number must be written on the front of the patient information form or in the counselor's notes.
- We should begin drafting a written contract and agreement that persons who do post-test counseling must sign. They must agree to write their name, address, phone number, CBO affiliation, social security number, and signature. Today there are many persons who have been trained in both pre-test and post-test counseling, and there is no point in letting their skills go to waste.
- In the era of OraSure and rapid HIV testing technologies such as OraQuick, I think the "AIDS-Related Medical Testing and Records Confidentiality Act" is long overdue for revision.

*(**Influenza**, continued from page 1)*

submit cultures to the OLS. West Virginia also has four actively reporting sentinel laboratories that report to the state and CDC on a weekly basis.

Results

During the 2003-2004 flu season, 98% of all specimens tested by West Virginia's sentinel laboratories were Influenza A and the remaining 2% were Influenza B. The season was characterized by the predominance of a drifted Influenza A strain, A/Fujian/411/2002-like (H3N2), that was not included in the 2003-2004 flu vaccine. In West Virginia, the predominant strain identified was Influenza A/Korea/770/2002-like (H3N2). Both strains, though similar to each other, were a slight variant of the 2002-2003 vaccine strain A/Panama/2007/99-like (H3N2). There were several reports of influenza-like illness outbreaks in West Virginia during the 2003-2004 season. Of the reported outbreaks, seven occurred in nursing homes between November-December 2003 (Fayette (1), Nicholas (1), Gilmer (1), Putnam (1) and Kanawha (3)). All were investigated and confirmed as Influenza A. Reports of outbreaks were also received from several schools in the state, with high levels of school absenteeism (ranging from 25 to 75 percent) in Fayette and Hardy Counties. Two school outbreaks (elementary to high) in Fayette County were investigated and confirmed as Influenza A in November, 2004.

Conclusion

Enhancing West Virginia's capacity to detect novel viruses with pandemic potential requires maintaining a strong influenza surveillance program. Influenza, commonly called "the flu," is caused by the influenza virus, which infects the respiratory tract (nose, throat, lungs). Influenza is not the same illness as a common cold; though both are respiratory illnesses, they are caused by different viruses. Influenza is spread from one person to another through the air and can also be spread by direct contact with nasal discharges. Flu symptoms include fever (101-102 F), chills, muscle aches, sore throat, and a dry cough. Other symptoms may include abdominal pain, nausea, vomiting, headache, runny nose, eye pain, and sensitivity to light. The symptoms may last two to seven days. Although the term "stomach flu" is sometimes used to describe vomiting, nausea, or diarrhea, these illnesses are caused by certain other viruses, bacteria, or possibly parasites, and are rarely related to influenza.

The 2003-2004 flu season marked the second consecutive year of year round surveillance in West Virginia, tracking the numbers of patients presenting with "influenza-like-illness" (ILI). ILI is defined for the purpose of surveillance by the CDC as, "Fever (>100 F [37.8 C], oral or equivalent) and cough and/or sore throat (in absence of a known cause)."

The 2003-04 influenza season in West Virginia was characterized by the early onset of influenza activity which became widespread by mid-December. The season began with the identification of Influenza A (H3N2) by the West Virginia Office of Laboratory Services from a specimen collected October 27, 2003, in Braxton County. By early February 2004, influenza activity appeared to have already peaked, and by the end of February, West Virginia witnessed a sharp decline in the number of reporting counties, a trend that continued until the end of the flu season.

The season's predominant strain was an Influenza A (H3N2) virus strain that was antigenically different from the Influenza A (H3N2) vaccine strain. Ninety eight percent of all specimens tested were Influenza A (H3N2). Very few cases of Influenza B viruses were reported in West Virginia, only 2% of specimens tested.

Methods

State and Territorial Epidemiologists Reports:

West Virginia participates in a surveillance program coordinated by the Centers for Disease Control and Prevention (CDC) by reporting the estimated level of influenza activity to the CDC every week during flu season (October to May). Influenza activity levels are reported as *no activity, sporadic, local, regional, or widespread, based on the definitions noted in table below:*

Influenza Activity Levels
No Activity No laboratory-confirmed cases of influenza and no reported increase in the number of cases of ILI.
Sporadic Small numbers of laboratory-confirmed influenza cases or a single influenza outbreak has been reported, but there is no increase in cases of ILI.
Local Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.
Regional Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least 2 but less than half the regions of the state.
Widespread Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state.

*(See **Influenza**, page 5)*

*(**Influenza**, continued from page 4)*

Local Health Departments ILI Reports:
In accordance with the West Virginia Communicable Disease Rule, local health departments report aggregate total numbers of influenza-like-illness in their county regularly on a weekly basis. The information collected from this system during 2003-2004 flu season appeared to consistently document a seasonal outbreak curve that was consistent with data from other sources.

Sentinel Providers ILI Reports:
West Virginia had a total of 58 providers distributed throughout the state for the 2003-2004 flu season. During the 2003-2004 influenza season, 23 new providers from seven regions were enrolled. The total number of counties with at least one sentinel provider was 34 (Graph 1, right). A few counties had more than one sentinel provider. Of the 34 counties with providers, 20 were actively reporting, meaning that they reported the total number of ILI cases seen for the week (numerator) and the total number of any patients seen for the week (denominator).

Graph 1

Sentinel Provider Virology Reports:
During 2003-2004 flu season, the Office of Laboratory Services received several specimens from West Virginia's sentinel providers. Of a total of 194 specimens; 93 were positive for Influenza Type A, none were positive for Influenza B, and eight were positive for other respiratory viruses. Of the 93 Influenza A specimens, 89 were subtyped (75 specimens subtyped at OLS and 14 subtyped and confirmed at CDC.)

CDC Sentinel Laboratory Reports:
West Virginia had four actively reporting laboratories during the 2003-2004 flu season. All laboratories reported influenza data on a weekly basis. From these data, the percent of specimens testing positive for influenza was calculated and posted on the IDEP website http://www.wvdhhr.org/idep/flu_surv.htm.

Results
The 2003-2004 season was characterized nationally by the predominance of a drifted Influenza A strain, A/Fujian/411/2002-like (H3N2), that was not included in the 2003-2004 flu vaccine. In West Virginia, the predominant strain identified was Influenza A/Korea/770/2002-like (H3N2). Both strains, though similar to each other, were a slight variant of the 2002-2003 vaccine strain A/Panama/2007/99-like (H3N2).

During 2003-2004 flu season 98% of all specimens tested by West Virginia's sentinel laboratories were Influenza A and the remaining 2% were Influenza B (table 2, below). The first laboratory-confirmed influenza case of the 2003-2004 season was type A/Korea/770/2002-like identified by the West Virginia Office of Laboratory Services in November (week 44, week ending November 1, 2003). The first laboratory confirmed Influenza B case was reported in December (week 49, week ending December 6, 2003).

ALL SENTINEL LABORATORIES - WV			
	Total Specimens Positive	Flu A	Flu B
2001-2002	892	827 (93%)	65 (7%)
2002-2003	395	34 (9%)	361 (91%)
2003-2004	2309	2267 (98%)	42 (2%)

Table 2

There were 2309 laboratory-confirmed cases of influenza reported in West Virginia during the 2003-2004 season, compared to the 2002-2003 season in which only 395 cases were confirmed. Of the 2309 confirmed cases, 2267 (98%) were type A with 14 cases sub-typed as follows: A/Fujian/411/2002 (H3N2) (1); A/Wyoming/03/2003-like (1); A/Panama/2007/99-like (H3N2) (2); and A/Korea/770/2002-like (H3N2) (10).

*(See **Influenza**, page 6)*

*(**Influenza**, continued from page 5)*

The last laboratory-confirmed case of Influenza A was reported in January (week 02, week ending January 17, 2004). The last case of influenza B was reported in January (week 01, week ending January 10, 2003).

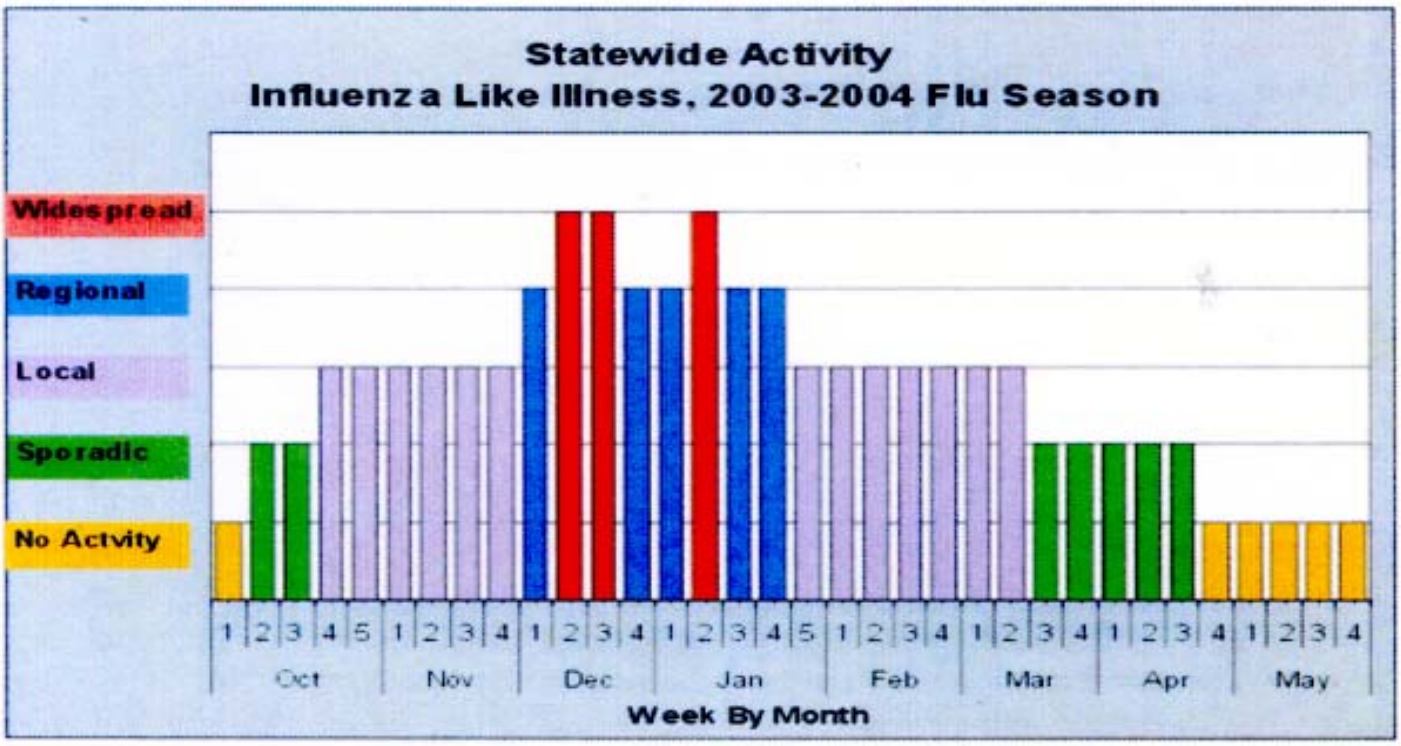
State influenza activity for the 2003-2004 season was "sporadic" for the early and middle part of October 2003, becoming "local" during the latter part of October and entire November. Flu activity picked up significantly during December 2003 and January 2004, and remained "regional" or "widespread" during this period. A decline to local activity was noticeable starting in February (Graph 2, below).

Comments

Data from influenza surveillance is used by national, state, and local public health officials, healthcare practitioners, policy makers, the general public, and the media in developing next year's vaccine, making healthcare decisions, and developing policy. An effective influenza surveillance program in West Virginia is central to our ability to prevent disease, control outbreaks, determine appropriate treatments, determine the effectiveness of vaccines, and respond to the threat of an influenza pandemic.

West Virginia is continuously in need of participants for its year-round surveillance. Physicians, physician assistants, and nurse practitioners from any specialty and any type of practice are invited to enroll. Sentinels report the number of patients seen with ILI in four broad age categories, and the total number of patients seen each week. Reports are submitted to the CDC via the Internet, fax or phone. The entire process is estimated to take 15 to 30 minutes each week. Materials to collect and ship six patient specimens to the West Virginia Office of Laboratory Services (OLS) are provided free of cost. Rapid antigen testing, culture, typing, and subtyping are performed by OLS without cost.

If you are a healthcare provider and are interested in learning more about the program or participating, please contact your local health department or the West Virginia state influenza coordinator at 304-558-5358.



Graph 2

*The **West Virginia EPI-LOG** is published quarterly by the West Virginia Department of Health and Human Resources, Bureau for Public Health, Office of Epidemiology & Health Promotion, Division of Surveillance and Disease Control. Graphic layout by Chuck Anziulewicz. Please call the Division of Surveillance & Disease Control at (304) 558-5358 if you need additional information regarding any article or information in this issue, or if you have suggested ideas you would like to contribute for a future issue.*