HIV Incidence Surveillance: Innovations in Tracking HIV Infection in LA County

The Evolution of HIV/AIDS Surveillance in LA County

Since the early 1980’s, the Department of Public Health has conducted surveillance activities to monitor trends in the HIV/AIDS epidemic in our county. With new developments in laboratory technology, we continue to enhance our HIV/AIDS surveillance system. Recently, the Serologic Testing Algorithm for Recent HIV Seroconversion (STARHS) was developed to differentiate between long-standing and recent HIV infection. STARHS testing is the foundation of HIV Incidence Surveillance (HIS), a system that allows us to better identify groups currently at risk of acquiring HIV infection.

HIV Incidence Surveillance Methods

In March 2005, LA County was one of 33 jurisdictions selected by the Centers for Disease Control and Prevention (CDC) to implement HIS activities. Currently, 25 public health departments across the US participate in HIS activities. These areas represent approximately 75% of the national epidemic.

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HIV Incidence Surveillance... from page 1

Calculation of an accurate HIV incidence rate estimate requires data from both laboratories and HIV testing providers for every newly diagnosed HIV-positive individual.

Local laboratories that perform confirmatory HIV testing are asked to ship remnant sera from all HIV-positive Western Blot tests to the CDC laboratory for subsequent STARHS testing. The STARHS testing method uses a detuned, or less-sensitive, enzyme immunoassay (EIA) to assess the level of HIV antibodies in a serum sample. A STARHS test indicates a recent HIV infection when the amount of HIV antibodies is not sufficient to trigger a reactive result with the detuned assay. Thus, only individuals with a long-standing HIV infection will test reactive on the detuned assay. Individuals infected with HIV within approximately the past 5 months will have a non-reactive result on the detuned assay.

Because people test at different frequencies, some individuals are more likely to test during the STARHS window period. To reduce this bias and increase the accuracy of the STARHS result, the calculation for the HIV incidence rate estimate incorporates HIV testing and treatment behavior data.

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Our county’s HIS system relies upon HIV testing providers to collect this information from every newly diagnosed HIV-positive client.

Testing and Treatment History consists of 4 data elements:

- The date of the first positive HIV test.
- The date of the last negative HIV test.
- The number of HIV tests in the two years prior to the first positive.
- Any history of antiretroviral use in the 6 months prior to the first positive.

Achievements

To date, 86 providers and 5 laboratories in our county participate in HIS. Through the efforts of these community partners, LA County has collected adequate data to calculate an HIV incidence estimate for 2007. National HIV incidence estimates for 2006, excluding California data, are expected to be published in early August 2008.

HIV Testing and Treatment Data Submission

It is only with participation of all LA County HIV testing providers that we will produce an accurate and representative HIV incidence estimate for our county and contribute to the national estimate.

The testing and treatment history data elements should be reported to the LA County Department of Public Health HIV Epidemiology Program using “Section X” on the green HIV/AIDS Reporting System Case Report Form. Providers may also opt to use the HIV Supplemental Questionnaire, a self-report data collection tool the patient completes before or after the HIV test is administered. Both forms can be obtained by calling (213) 351-8539. Completed forms should be mailed in a double-envelope to: LA County Department of Public Health, 600 S. Commonwealth Ave, Suite 1260, Los Angeles, CA 90005.

Summary

- HIS enhances our existing HIV/AIDS Surveillance efforts.
- HIS provides an earlier window into our HIV/AIDS epidemic than the existing surveillance system alone.
- An accurate HIV incidence estimate will improve our county’s ability to plan HIV prevention programs, funding, and services for those most at risk.
- We encourage all providers responsible for diagnosing HIV infection and all laboratories performing Western Blot confirmatory tests to participate in HIS.

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HIV Epidemiology Program
Los Angeles County Department of Public Health

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Stay up to date on Immunization Recommendations!

Enroll Today in a 2-Day Training: Epidemiology & Prevention of Vaccine-Preventable Diseases

November 20–21, 2008 / 8:00 AM–5:00 PM
Doubletree Hotel, Orange, CA 92868

This course will provide a comprehensive overview of vaccine-preventable diseases, the principles of vaccination, vaccination recommendations, and recommended immunization strategies. CME credits are available. Registration fee is $50.00. Register early – space is limited!

For more information, visit http://www.cdc.gov/vaccines/ed/onsite-trg.htm#ca

The course is presented by The Centers for Disease Control and Prevention; The California Department of Public Health, Immunization Branch; The County of Orange, Health Care Agency; and PHFE Management Solutions.
The school year is fast approaching! It’s a great time for both parents and providers to ensure that school-aged kids have all their required immunizations. Most children will need booster shots before starting kindergarten, and prior to entering seventh grade.

The California School Immunization Law requires that children be up-to-date with a series of recommended immunizations in order to attend school or child care. Diseases like chickenpox, measles, and whooping cough can spread quickly, so children need to be protected before they enter school.

To enter or transfer into public and private elementary and secondary schools (grades K-12), children under age 18 years need to have protection against the following diseases (per the recommended schedule):

- Polio
- Diphtheria, Tetanus, Pertussis
- Measles, Mumps, Rubella
- Hepatitis B
- Haemophilus Influenzae Type B*
- Varicella

* Recommendations have recently changed as a result of Hib vaccine shortage; for updated requirements, see http://ww2.cdph.ca.gov/programs/immunize/Pages/SchedulesandRecommendations.aspx

In addition, while not required by law, some colleges and universities may require immunizations including measles, mumps, and rubella; tetanus, diphtheria, pertussis; varicella; hepatitis B; and/or meningococcal vaccine prior to admission.

The law allows two opportunities for exemption from school requirements: 1) physician-elected medical exemption and 2) parent/guardian-elected Personal Belief Exemption (PBE). The law does not allow parents/guardians to elect a PBE because of an inconvenience such as a lost or incomplete immunization record. If children meet the criteria for a medical exemption, providers must provide a written statement, which should accompany the California Immunization Record (yellow card). Parents/guardians who elect a PBE must sign an affidavit, and, if a disease outbreak occurs at the school, the child will be excluded from school until the local Health Officer determines that the child is no longer at risk for catching and spreading the disease. This is for the protection and safety of the child and the community and could last up to 21 days or more.

In recent years, PBE rates have risen across California and Los Angeles County. The measles outbreaks of this year illustrate the increased risk posed by under-immunized children on both individual and community-wide levels. The Back-to-School season is a great time for healthcare and child care providers to educate parents/guardians about the risks of vaccine preventable diseases and the benefits of immunizations.

To view and download educational materials promoting immunization during this Back-to-School season, visit http://www.cdc.gov/vaccines/

To view and download the California Immunization Handbook for Schools and Child Care Programs, visit http://www.cdph.ca.gov/programs/immunize/Pages/CaliforniaImmunizationSchoolLaw.aspx

To view and download the Immunization Action Coalition’s “What if you don’t immunize your child?” brochure (available in English and Spanish), visit http://www.immunize.org/catg.d/p4017.pdf

Be sure to stay tuned for our special Back-to-School Immunizations issue coming in September.

Kim Harrison-Eowan, MPH, CHES
Immunization Program
Los Angeles County Department of Public Health
Important Travel Information

Will you or your patients be traveling outside of the U.S. in the near future? If so, it's important to review immunization records for all those who will be traveling, because travelers may be at risk for serious diseases that are rare in the U.S. but more common overseas.

Most recently, the focus has been on measles. There have been 103 cases reported in the U.S. during the first five months of this year. Most of the cases have been linked to measles acquired in other countries, including specific areas in Europe and the Middle East. Both these sites have traditionally been known to be major risk sites for measles.

Travelers to all countries outside of the U.S. need to be certain that they are protected against measles, either through immunization or by having previously had measles as documented by a positive blood serological test result. Children less than 12 months of age (the normal age for receipt of the first dose of measles vaccine) should receive measles immunization before travel if they are at least 6 months of age. The dose will need to be repeated when they reach 12 months of age. This is because a small number of children vaccinated at 6 months of age do not respond adequately to the vaccine.

Most adults less than 50 years of age who were born in and attended school in the U.S. received immunizations to protect them against many of the diseases that they are likely to be exposed to overseas. However, some of these same adults have not received regularly recommended booster doses of diphtheria and tetanus vaccines, or the recently recommended adult pertussis vaccine. Additionally, adults of any age who have certain chronic health conditions, as well as all healthy seniors, need to be protected against diseases like pneumococcal septicemia and pneumonia, and influenza.

In addition to the routinely recommended adult immunizations noted above, travelers to certain regions and specific countries will need to be protected against yellow fever, Japanese encephalitis, bacterial meningitis, hepatitis A and B, polio, and even rabies. Please refer to the Los Angeles County Immunization Program web site: http://lapublichealth.org/ip, for information about the routinely recommended child, adolescent, and adult immunizations, and to the CDC web site: http://wwwn.cdc.gov/travel/contentVaccinations.aspx, for information about immunizations required for travel to specific parts of the world.

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Los Angeles County Department of Public Health

Alert
DISPOSING OF MEDICAL WASTE AT HOME

Physicians, please advise your patients that as of September 1, 2008, Senate Bill 1305 will take effect, prohibiting a person from placing home-generated sharps in their trash or recycling container. Home-generated sharps are defined as disposable hypodermic needles, syringes, lancets, and other medical devices used for self-injection or blood tests. Sanitation workers, adults, children, and even pets are at risk of needle-stick injuries when sharps are disposed of improperly. Used, home-generated sharps should be place in a commercial biohazard sharps container. Patients can ask a pharmacist, clinic administrator, or personal physician to ask if they have a “take back” program in place. If patients are purchasing sharps online, please remind them to request a pre-addressed, prepaid mail-back box for their used sharps.
New Multi-Vaccine VIS (Vaccine Information Statement)

Now Available for Download in Several Languages

Informing parents about the benefits of vaccinations and the recommended schedule just got easier. The CDC now offers a multi-vaccine VIS (Vaccine Information Statement) that providers may use in place of individual statements whenever routine birth through 6-month vaccines (DTaP, IPV, Hib, Hepatitis B, PCV, and Rotavirus) are administered at the same visit, including combination vaccines (e.g., Pediarix or Comvax). Optional use of the multi-vaccine VIS is an alternative to providing single-vaccine statements for each of these six vaccines. If you decide to use the new VIS, don’t forget to check off which vaccines were administered on the first page and to provide all four pages to the parent/guardian.

The multi-vaccine VIS may also be used when:

- Two or more of the six vaccines are given together at pediatric visits at 12-15 months or 4-6 years.

However, the form should not be used when:

- Vaccinating older children, adolescents or adults
- Recording PPV vaccinations given to children.

To download the CDC’s English language multi-vaccine VIS, visit http://www.cdc.gov/vaccines/Pubs/vis/

To view and download the multi-vaccine VIS in other languages, visit the Immunization Action Coalition at http://www.immunize.org/vis/vis_multi1.asp

For more information, review the CDC’s “Multi-Vaccine VIS: Frequently Asked Questions” sheet at http://www.cdc.gov/vaccines/pubs/vis/multi-vis-faqs.htm or contact the Los Angeles County Department of Public Health Immunization Program at 213-351-7800.

Suicide: An Occupational Hazard for Health Professionals

Healthcare professionals such as doctors, pharmacists and dentists, are all high suicide risks based on their proportional mortality ratio, with veterinarians topping the list as the most susceptible according to a recent study.

The study found veterinarians’ suicide rate is proportionally four times that of the general population and twice that of other health professionals.

The reasons for this elevated susceptibility are unknown, but job stress, lethal drug access and euthanasia acceptance are among the potential driving forces. A mental-health study of the United Kingdom veterinary profession is underway.

Deliberate drug ingestion is the most common method of veterinarian suicide, probably because lethal medication is so openly available in the profession. Practitioners have fatal drugs stored in clinic premises, and together with knowledge of medicines for self-poisoning, offers a possible contributory factor for their high suicide rate.

Intentional medicinal overdose accounts for an average of 82% of veterinarian suicides, compared with only 33% in the general population.

Dealing with Euthanasia

Euthanasia is a frequent obligation of veterinarians, and the action must often be explained, encouraged and justified to clients. This constant interaction, performance and support of euthanasia in the animal population may affect professional attitudes on death in general.

Veterinarians are often presented with animals that are either unwanted or for which there is no effective treatments. Money is also a factor as animal owners often have limited resources. Veterinarians may experience uncomfortable tension between the desire to save life and the perception of euthanasia as a positive alternative.

This altered attitude toward death may then facilitate self-
Suicide: An Occupational Hazard for Health Professionals...from page 6

### Suicide Sex Differences

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Suicide is the eighth leading cause of death for males and the sixteenth leading cause for females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Among males, adults ages 75 years and older have the highest rate of suicide</td>
</tr>
<tr>
<td></td>
<td>Among females, those in their 40s and 50s have the highest rates of suicide</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Method</th>
<th>Firearms are the most commonly used method of suicide among males (56.8%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poisoning is the most common method of suicide for females (37.8%)</td>
</tr>
</tbody>
</table>

justification and lower inhibitions toward suicide as a rational solution to their own problems.

**Suicides in the United States**

According to the Centers for Disease Control and Prevention (CDC), suicide was the eleventh leading cause of death for all ages. More than 32,000 suicides occurred in the U.S. in 2005. This is the equivalent of 89 suicides per day, one suicide every 16 minutes.

It is estimated that 250 physicians commit suicide every year in the United States. Loss of a health professional’s life not only impacts their individual family, but the patients they care for as well.

**Gender Disparities**

Males take their own lives at nearly four times the rate of females and represent 78.8% of all U.S. suicides. Men most often attempt suicide with a gun and are successful over 50% of the time. However, during their lifetime, women attempt suicide about two to three times as often as men.

**Suicide is Preventable**

Suicide is a public health problem that is preventable. Fifty years ago, the Los Angeles Suicide Prevention Center was the first in the country to provide a 24-hour suicide prevention crisis line and use community volunteers in providing hotline service. The Didi Hirsch Community Mental Health Center also operates the only free, accredited, 24-hour, seven-days-a-week, suicide prevention crisis line from Orange County to Santa Barbara.

**References**

1. Bartram DJ, Baldwin DS. Veterinary Surgeons and Suicide: Influences, Opportunities and Research Directions. Veterinary Record 2008 Jan 12;162(2):36-40.
3. CDC Suicide Facts at a Glance (Summer 2007) http://www.cdc.gov/ncipc/dvp/Suicide/SuicideDataSheet.pdf

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Los Angeles Department of Public Health

This year a nation wide outreach campaign began to explore the professional policies and the culture of stigma that prevent physicians and medical school students from seeking help for the common and treatable mood disorders that can lead to suicide. For more information visit www.doctorswithdepression.org
Physician Registry

**Become a Member of the Health Alert Network**
The Los Angeles County Department of Public Health urges all local physicians to register with the Health Alert Network (HAN). By joining, you will receive periodic email updates alerting you to the latest significant local public health information including emerging threats such as pandemic influenza. Membership is free. All physician information remains private and will not be distributed or used for commercial purposes.

Registration can be completed online at [www.lahealthalert.org](http://www.lahealthalert.org) or by calling (323) 890-8377.

Be aware of public health emergencies! Enroll now!

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**Selected Reportable Diseases (Cases)** — FEB/MAR 2008

<table>
<thead>
<tr>
<th>Disease</th>
<th>THIS PERIOD FEB/MAR 2008</th>
<th>SAME PERIOD LAST YEAR FEB/MAR 2007</th>
<th>YEAR TO DATE — FEB/MAR 2008</th>
<th>YEAR END TOTALS</th>
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<tr>
<td>AIDS1</td>
<td>349</td>
<td>255</td>
<td>431</td>
<td>1,448</td>
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<tr>
<td>Amebiasis</td>
<td>18</td>
<td>18</td>
<td>31</td>
<td>122</td>
</tr>
<tr>
<td>Campylobacteriosis</td>
<td>133</td>
<td>105</td>
<td>202</td>
<td>827</td>
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<tr>
<td>Chlamydial Infections</td>
<td>7,007</td>
<td>6,623</td>
<td>11,002</td>
<td>40,943</td>
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<tr>
<td>Encephalitis</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>65</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>1,416</td>
<td>1,558</td>
<td>2,220</td>
<td>9,327</td>
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<tr>
<td>Hepatitis Type A</td>
<td>9</td>
<td>19</td>
<td>17</td>
<td>78</td>
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<tr>
<td>Hepatitis Type B, acute</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>52</td>
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<tr>
<td>Hepatitis Type C, acute</td>
<td>0</td>
<td>0</td>
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<td>6</td>
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<tr>
<td>Measles</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Meningitis, viral/aseptic</td>
<td>32</td>
<td>29</td>
<td>57</td>
<td>395</td>
</tr>
<tr>
<td>Meningococcal Infect.</td>
<td>16</td>
<td>8</td>
<td>21</td>
<td>24</td>
</tr>
<tr>
<td>Mumps</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Pertussis</td>
<td>11</td>
<td>15</td>
<td>17</td>
<td>69</td>
</tr>
<tr>
<td>Rubella</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Salmonellosis</td>
<td>93</td>
<td>108</td>
<td>145</td>
<td>1,081</td>
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<tr>
<td>Shigellosis</td>
<td>31</td>
<td>27</td>
<td>49</td>
<td>463</td>
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<tr>
<td>Syphilis (prim. and sec.)</td>
<td>121</td>
<td>144</td>
<td>182</td>
<td>833</td>
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<tr>
<td>Syphilis Early latent</td>
<td>101</td>
<td>141</td>
<td>174</td>
<td>774</td>
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<tr>
<td>Tuberculosis</td>
<td>60</td>
<td>56</td>
<td>60</td>
<td>816</td>
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<tr>
<td>Typhoid fever, Acute</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>17</td>
</tr>
</tbody>
</table>

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