

THE PUBLIC'S HEALTH

Newsletter for Medical Professionals in Los Angeles County

Volume 6 • Number 8 October 2006

Guide to Evaluating Patients with Fevers and Generalized Vesicular/Pustular Rash Illness: What to do if you suspect smallpox.

Although smallpox disease has been declared eradicated worldwide since 1980, the threat of bioterrorism has continued to keep public health and healthcare providers vigilant in recognizing the signs and symptoms of a potential smallpox case. The county's Acute Communicable Disease Control Program (ACDC) responds 1-2

The threat of bioterrorism has continued to keep public health and healthcare providers vigilant in recognizing the signs and symptoms of a potential smallpox case.

times per year to reports made by providers concerned about smallpox in patients who present with a fever and acute generalized vesicular or pustular rash illness. All these suspected cases, after further assessment and lab studies, were determined to be chickenpox. A case is illustrated in the example below.

In early August 2006, a 20 year-old male from Southeast Asia, who came to the U.S. for the first time, presented to a community emergency department (ED). Based on the patient's history and clinical presentation, the ED physician became concerned about

smallpox. ACDC was immediately notified by phone and the ED rapidly instituted appropriate infection control measures. After assessment and laboratory testing by ACDC staff, the patient was diagnosed with varicella (chickenpox) infection. However, if this patient truly had smallpox the rapid notification of the public health department and the infection control actions instituted by the ED would have been critical in reducing exposures.

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Primary Prevention of Childhood Lead Poisoning:

A Series of Interventions in Los Angeles County

Since the start of the county's Childhood Lead Poisoning Prevention Program (CLPPP) in 1991, the primary focus has been on lead poisoning case management to minimize the adverse affects of lead exposure in children. Lead poisoning continues to be one of the major environmental health threats to children in this county. Since 1991, more that 12,000 children under the age of six have been identified with elevated blood lead levels.

Over the last 15 years, required lead screening for children has given health care providers opportunities to educate families

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October is Halloween
Safety month.
October 22nd
to the 28th is
lead awareness
week . The
Public's Health encourages
patients and practitioners alike to become
knowledgeable about lead exposure and to
be aware of the potential of lead poisoning
in Halloween candy.

THE PUBLIC'S HEALTH



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National STD Conference Features Local Research and Programming (Part II)

The Los Angeles County STD program staff presented numerous presentations and posters at this year's annual National STD Prevention Conference. The conference theme was "Beyond the Hidden Epidemic: Evolution or Revolution?" Presenters were asked to look at past goals and challenges, assess the present, and suggest future strategies for containment of the markedly high rates of STD infection.

The following are summaries of these presentations. Complete abstracts can be found at http://www.lapublichealth.org/std/.

MSM syphilis prevention: sexual identity and intersecting social **networks.** F Bloom, A Goodfellow, M Berry, M Hayes.

Since 2000, there have been increased rates of syphilis in Los Angeles' MSM populations. Current prevention systems are not equipped to optimally address differential needs of transgendered MTF or other nongay identified MSM subpopulations. Self identity for MSM is important to: understand the social and sexual networks of syphilis transmission, give added meaning to epidemiologic statistics describing infection patterns and develop relevant and appropriate syphilis prevention interventions.

Use of a personal data assistant to collect sexual risk behaviors in men who have sex with men with incident syphilis in Los Angeles County: a pilot study. JT Galea, PM Gorbach, M Roldolph, L Olea, PR Kerndt.

Risk behaviors of those with incident syphilis in Los Angeles County are collected via verbal interview by Public Health Investigators. Use of Personal Data Assistants could enhance data quality, particularly if clients self-administered responses. Findings indicate that data were more complete when PHIs used PDAs, but because PHIs ask followup questions during interviews, clients reported more risk behaviors than when self-administering the public health interview.

Women's sexual risk: an ethnography of garment district workers. J Steinberg, N Liddon, F Bloom, J Leichliter, M Berry, E Waldman, C Vieyra, B Dominguez, S Alvarez, PR Kerndt.

Ethnographic interviews and observation were conducted among 21 Hispanic female vendors. Research revealed significant structural and sociocultural barriers that negatively influenced sexual decision-making and risk behaviors. Public health practitioners need to tailor risk reduction strategies to the challenges faced by these vendors. Health outreach at the workplace is important for engaging discussion about sexual risks and increasing access to STD services.

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Smallpox Continued from page 1

Since smallpox is classified as a Category A agent by the CDC, a suspected case of smallpox is immediately reportable to Public Health 24 hours a day, 7 days a week. Category A agents are believed to pose the greatest potential threat for adverse public health impact and have a moderate to high potential for large-scale dissemination. ACDC and other Department of Public Health (DPH) programs have an important role investigating suspected acts of bioterrorism such as smallpox, and the DPH has an established relationship with the FBI who investigates any act of bioterrorism as a lead agency.

SMALLPOX OVERVIEW

Smallpox is an acute, contagious, and sometimes fatal disease caused by the variola virus (an orthopoxvirus), and is marked by fever and a distinctive progressive skin rash. In 1980, the disease was declared eradicated following worldwide vaccination programs. However, in the aftermath of the terrorist events of September and October, 2001, the U.S. government began preparations to respond to a bioterrorist attack using smallpox as a weapon. Today, the smallpox virus is kept in two approved labs in the U.S. and Russia. However, concern exists that the virus has been weaponized by some countries and terrorists may have obtained it.

A single confirmed case of smallpox is considered an emergency. In the event of a bio-terrorist release of smallpox virus, effective public health control strategy requires early recognition of a smallpox case. Most clinicians have never seen a case of smallpox and therefore lack experience with making a smallpox diagnosis.^{1,2} Because other rash illnesses may be confused with smallpox, a diagnostic algorithm has been developed by the

CDC to guide providers in making a diagnosis.³

CDC ACUTE, GENERALIZED VESICULAR OR PUSTULAR RASH ILLNESS EVALUATION

(http://www.bt.cdc.gov/agent/smallpox/diagnosis/riskalgorithm/)

High Risk: Meets all three major smallpox diagnostic criteria

Moderate Risk: Febrile prodrome AND 1 other major smallpox criterion OR Febrile prodrome AND ≥ 4 minor smallpox criteria

Low Risk: No febrile prodrome OR febrile prodrome AND <4 minor smallpox criteria

Major Diagnostic Criteria for Smallpox are:

- Febrile prodrome: occurring 1-4 days before rash onset: fever ≥101°F (38.3°C) and at least one of the following: prostration, headache, backache, chills, vomiting or severe abdominal pain
- Classic smallpox lesions: deep-seated, firm/hard, round, well-circumscribed vesicles or pustules; as they evolve, lesions may become umbilicated or confluent
- Lesions in the same stage of development: on any ONE part of the body (e.g., the face, arms) all the lesions are all in the same stage of development (i.e., all are vesicles or all are pustules)

Minor Diagnostic Criteria for Smallpox are:

- Centrifugal distribution: greatest concentration of lesions on face and distal extremities
- First lesions on the oral mucosa/palate, face, or forearms
- Severity: Patient appears toxic or moribund
- Slow rash evolution: lesions evolved from macules to papules to pustules over days (each stage lasts 1-2 days)
- Lesions on the palms and/or soles

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SEEK APPROPRIATE GUIDANCE FOR CLINICAL AND PUBLIC HEALTH RESPONSE BASED ON HIGH, MODERATE, OR LOW RISK ASSESSMENT.

High Risk: If the patient is considered high risk after assessment, obtain an urgent Infectious Disease and/or Dermatology consultation (if available). If the patient is assessed as high risk:

- Treat as a medical and public health emergency.
- Make appropriate notifications to Public Health
- Clinical specimen collection by recently vaccinated responders.
- Take digital photos for consultation with experts.
- Treat patient as clinically indicated. Do not delay treatment for other likely conditions in the differential diagnosis while awaiting for response team.
- Do not proceed with laboratory testing for other diagnoses until smallpox has been ruled out.

Moderate Risk: If moderate risk after assessment:

- Obtain infectious diseases and/or dermatology consultation as soon as possible.
- Make appropriate notification to Public Health
- Take digital photos for consultation with experts.
- Obtain appropriate clinical specimens (e.g. scraping of lesion, swabs, slides, biopsy samples, blood, etc.)
- Proceed with laboratory testing for confirmation or exclusion of varicella or other differential diagnoses.
- Initiate treatment for likely etiology as clinically indicated.

Low Risk: If low risk after assessment, test for varicella at the clinical or Public Health laboratory and manage as clinically indicated. Contact Public Health for assistance and consultation if needed. Take digital photos for consultation with experts.

INFECTION CONTROL

Smallpox is transmissible:

- from person-to-person by exposure to respiratory secretions, particularly during coughing
- by contact with pox lesions, and
- by fomites.

Airborne and Contact Precautions in addition to Standard Precautions should be implemented for patients with suspected smallpox.

DIFFERENTIAL DIAGNOSIS

Varicella is the disease most likely to be confused with smallpox and it is important to recognize the differentiating features of varicella.

With varicella, there is generally no, or a mild, prodrome period. However, adults get much sicker with varicella than children and they may have a febrile prodrome.

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The skin lesions in varicella are located on the skin surface. They typically appear in crops meaning that new lesions appear over several days. This leads to the next important differentiating feature. Lesions are typically in different stages of development. Thus, on any one part of the body, there may be macules, papules, vesicles and crusted lesions. The lesions evolve more rapidly than smallpox lesions; typically they progress from macule to vesicle and even crust within 24 hours, and unlike smallpox, there is a centripetal (central) distribution of the rash.

With varicella, lesions appear rarely on the palms of the hands or soles of the feet and the patient is rarely toxic or moribund. Again, adults are more likely to be the exception to this rule than children. A severe case of varicella may on occasion have so many lesions that distribution may not be a useful differentiating feature.

Apart from varicella, other conditions to consider in the differential diagnosis in a patient with fever and a vesicular or pustular rash are: disseminated herpes zoster, impetigo, drug eruptions, contact dermatitis, erythema multiforme, enteroviral infections (especially, hand, foot and mouth disease), disseminated herpes simplex virus infections, scabies and insect bites, and molluscum contagiosum (in immunocompromised patients). Acne, secondary syphilis, rickettsial diseases and diseases like monkeypox that are unlikely to be seen in the U.S. may also be rare causes of confusion.

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References:

- 1) Cosgrove SE, Perl TM, Song X, et al. Ability of physicians to diagnose and manage illness due to category A bioterrorism agents. Arch Intern Med. 2005; 165:2002-6.
- 2) Woods R, McCarthy T, Barry MA, et al. Diagnosing smallpox: would you know it if you saw it? Biosecur Bioterror. 2004;2:157-63.
- 3) Seward JF, Galil K, Damon I, et al. Development and experience with an algorithm to evaluate suspected smallpox cases in the United States, 2002-2004. Clin Infect Dis. 2004; 39:1477-83.

http://www.bt.cdc.gov/agent/smallpox/

http://www.bt.cdc.gov/agent/smallpox/diagnosis/pdf/spox-poster-full.pdf

http://labt.org/pdf/ZebraFinal.pdf

http://www.dhs.ca.gov/ps/dcdc/dcdcindex.htm

Healthcare providers who suspect smallpox, should IMMEDIATELY notify the Department of Public Health's Acute Communicable Disease Control Program (Tel: 213-240-7941 during business hours and 213-974-1234 after-hours) to facilitate specimen collection, processing, and public health response. A vaccinated member of the Public Health Smallpox Response Team will respond and assist with assessment of the patient, sample collection, epidemiologic investigation, contact identification and tracing, and coordination with law enforcement and the Federal Bureau of Investigation (FBI) for joint investigation. For a suspected case deemed at high risk for smallpox, only personnel recently vaccinated for smallpox and wearing appropriate barrier protection (gloves, gown, shoe covers, and face shields) should be involved in specimen collection for smallpox testing.

National STD Conference (Part II) Continued from page 2

Choice-based conjoint: A new methodological approach to assess sexual practices and decision making among men who have sex with men (MSM) cruising the Internet for sex. J Montoya, A Plant, PR Kerndt.

A better understanding of MSM sexual decisions with Internet partners is important because these men are at higher risk of acquiring HIV and/or other STDs. A choice-based conjoint design will be used to assess the attributes (e.g., preferences, physical characteristics, serostatus) MSM consider when choosing sexual partners.

Integrating hepatitis vaccination into public STD Clinics: findings from Los Angeles County STD clinics. A Stirland, M Javanbakht, L Borenstein, S Guerry.

Despite guidelines recommending Hepatitis B vaccination of all STD clinic patients, vaccination is not widespread. A pilot of Hepatitis A/B combination vaccination was performed at three STD clinics. Results indicate that vaccination of STD patients is feasible and worthwhile.

Los Angeles County GISP: resistance trends and predictors, 2003 – 2005. C Higgins, M Liggins, M Bosse, T Horton, P Amezola De Herrera, LV Smith, PR Kerndt.

The Gonococcal Isolate Surveillance Project, which monitors antibiotic resistance, established Los Angeles as a sentinel site in 2003. GISP surveillance suggests that decreased susceptibility to azithromycin has increased while resistance to penicillin, tetracycline, and ciprofloxacin has decreased. Continued epidemiological surveillance of drug resistant gonorrhea is indicated to help guide treatment recommendations.

Trends in the use of STD diagnostic technologies in California, 1996-2003. K Ahrens, JK Bradbury, HM Bauer, MC Samuel, G Gould, G Donatoni, C Higgins, PR Kerndt, G Bolan.

Self-administered survey findings demonstrate that STD testing increased from 1996 to 2003; laboratories shifted away from culture and non-amplified tests in favor of NAATs for chlamydia and gonorrhea; and private laboratories conducted the majority of STD testing. Health departments should promote the use of recommended technologies, and collaborations with private laboratories are essential.

HIV incidence among men diagnosed with primary and secondary syphilis in San Francisco and Los Angeles, 2004 – 2005. KA Buchacz, JD Klausner, J Schwendemann, CK Kent, G Aynalem, K Hawkins, RP Kohn, P McElroy, M Anthony, S Liska, L Rauch, M Taylor, JT Brooks, PR Kerndt.

Ongoing syphilis outbreaks among men who have sex with men in the U.S. have prompted concerns about accompanying HIV transmission. We found elevated HIV incidence rates among men diagnosed with P&S syphilis in STD clinics in SF and LA. Intensive integrated HIV/STD prevention programs are needed for this population.

Repeat Neisseria gonorrhea infections: a retrospective population-based analysis, 1999 – 2004. M Javanbakht, S Guerry, LV Smith, P Kerndt.

A retrospective study was conducted by constructing a cohort of patients with an initial case of treated gonorrhea reported to the Los Angeles County reportable STD disease registry between 1999 and 2000. Results indicate that repeat infections are very common among this population. Improved strategies are needed to treat sex partners, particularly among adolescents; retesting and other prevention efforts should not overlook men.

The impact of rapid HIV testing on receipt of results in a mobile testing setting. M Eldahaby, J Montoya, T Bustamante, C Magee, LV Smith, E Nitta, J Moore, PR Kerndt.

In June 2005, the Mobile Testing Unit (MTU) began using rapid HIV testing instead of standard HIV tests in their screening activities in Los Angeles County. A cross-sectional study was conducted using data from the LA County STD Program MTU. Results indicate that it is feasible and acceptable to conduct rapid HIV testing in a mobile testing setting.

Kim Harrison STD Program

Childhood Lead Poisoning Continued from page 1

about lead poisoning and the sources of lead poisoning. Subsequently, the number of lead cases has declined and the CLPPP has redirected its energy towards primary prevention activities. These interventions begin at the prenatal stage and continue throughout adolescence. A summary of ongoing primary prevention interventions has been submitted by the CDC's Lead Poisoning Unit, Childhood Lead Poisoning Prevention Program Health Education and Environmental Health Units.

Childhood Lead Poisoning Prevention Program and St. Francis Medical Center On "Baby Showers"

There is considerable need to increase awareness of lead poisoning in young children and expectant mothers in the county. Diverse communities coupled with older housing increase the risk of lead poisoning. In response, the CLPPP partnered with a local hospital in a targeted high-risk area of the county to address this issue.

St. Francis Medical Center is a major center for deliveries with approximately 500 babies born each month. Two baby showers are hosted each month by the hospital and the CLPPP program uses these events to share information about lead exposure and its effects on the unborn and the young child. CLPPP employees attend and co-host these events with the hospital to arrange outreach and offer incentives to participants. Typically at an event, each participants upon arrival, is asked to complete a pretest about lead exposure and poisoning. Then, during the event, an educational presentation about lead is given. After listening to the presentation, participants are given a 10 item post-test that they must submit to CLPPP employees. For their participation, guests can choose between several gifts, made possible by a grant from the CDC.

To date, CLPPP and St. Francis have delivered this information to about 340 guests. Approximately 71% of the participants are Hispanic and 46% are between the ages of 20-29 years. About 51% were first-time mothers.

CLPPP staff continues to host these events and welcome participation from other hospitals.

T-Shirt Incentive Program

All children who participate in publicly funded programs (CHDP, Medi-Cal, WIC, etc.) should be screened for blood lead poisoning at ages 12 and 24 months or at any time there is a suspected high-risk situation or a known exposure to lead.

How does the CLPPP program educate these parents on the importance of lead screening?

CLPPP has an MOU with many of the WIC programs in the county working cooperatively to provide educational materials, training, and incentives for WIC staff so that they can educate parents about the importance of a blood lead screening and lead poisoning prevention. Information is offered to parents in multiple languages.

Parents are asked to have their children screened for blood lead poisoning and given a CLPP "Blood Lead Screening Form." Parents are asked to bring this form to their provider to complete when a blood sample is drawn. When the parent returns the completed form to WIC, they receive a special T-shirt for their child.

We are currently trying to expand the number of WIC programs participating in this outreach program and increase the number of children screened.

If you have any questions about our "t-shirt incentive program" or would like information on educational materials and incentives, please call 1-800 LA4 – LEAD.

Lead in Imported Candy

The county's Department of Public Health encourages health care providers to educate their patients about the potential risk of lead in Halloween candy. Halloween candy presents an often unrecognized risk for lead exposure when the candy is imported from other countries such as Mexico.

Imported candy has a unique attraction for young children because it is often very sweet, and colorful. However, there are potentially serious risks associated with the consumption of imported candies as some contain lead.

The State Department of Health Services is responsible for regulating the lead content of imported candy according to legislation passed in 2005. The federal standard for lead in food is 0.5ppm (0.5 mg/kg). Candy manufactured in the United States are lead safe because candy manufacturers are held to higher standards.

However, some imported candy may contain lead levels higher than the federal standard. This may be due to factors such as contamination by insipient ingredients, such as chili powder from improperly washed chili's; the result of the general manufacturing process; direct contamination from the actual storage containers; and, lead solder. Candy stored in miniature ceramic pots can be contaminated by glazes that are high in lead and paper wrapped candies are often contaminated by the inks used to die the paper.

Linda Ramirez, Susanna Lam, Deborah Reff, MSPH, CHES, Kathy Lang, MPH

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 emailed updates alerting you to the latest significant local public health information as well as emerging threats like pandemic influenza and possible bioterrorist activity. Membership is free and all physician information will remain private and will <u>not</u> be distributed to other agencies or used for commercial purposes.

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Be alert to Public Health emergencies! Enroll now!

This Issue...

THE PUBLIC'S HEALTH Newsletter for Medical Professionals in Los Angeles County



Selected Reportable Diseases (Cases) ¹ — May 2006							
	THIS PERIOD	SAME PERIOD	YEAR TO DATE – MAY		YEAR END TOTALS		
Disease	May 2006	LAST YEAR May 2005	2006	2005	2005	2004	2003
AIDS ¹	65	119	559	640	1,514	2,213	2,433
Amebiasis	6	5	46	52	114	114	121
Campylobacteriosis	45	71	268	268	725	884	1,100
Chlamydial Infections	3,606	3,263	17,045	16,376	38,862	38,464	36,900
Encephalitis	6	2	25	32	57	133	38
Gonorrhea	926	788	4,559	4,059	10,494	9,696	8,078
Hepatitis Type A	42	9	346	80	480	321	374
Hepatitis Type B, acute	9	6	33	32	57	72	73
Hepatitis Type C, acute	1	0	2	0	3	5	0
Measles	0	0	0	0	0	1	0
Meningitis, viral/aseptic	52	22	141	271	515	807	899
Meningococcal Infect.	3	3	27	18	37	28	32
Mumps	0	0	2	3	8	2	10
NGU	31	107	281	557	1,101	1,470	1,410
Pertussis	0	47	131	118	438	156	130
Rubella	0	0	1	0	1	0	0
Salmonellosis	72	55	332	340	1,085	1,205	995
Shigellosis	18	37	172	261	710	625	669
Syphilis (prim. and sec.)	42	55	235	245	646	470	468
Syphilis latent	34	51	268	227	571	395	388
Tuberculosis	75	53	211	233	906	930	949
Typhoid fever, Acute	2	0	9	4	12	13	16

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