Scabies: A Review to Control the Rise of Outbreaks

In 2005, scabies accounted for 13 of 34 (38%) acute care hospital outbreaks and 55 of 76 (72%) of skilled nursing facility (SNF) reported outbreaks. Since 2002, the number of scabies outbreaks in the county has risen dramatically. This may be due to an increase of patients into both settings with scabies that has been undiagnosed for long periods of time.

Scabies is a highly contagious skin infection caused by the human itch mite, *Sarcoptes scabiei var. hominis*.

Scabies is separated into two different types, typical or atypical, also known as crusted or Norwegian scabies. Typical scabies generally presents as a papular rash, with or without burrows, with intense pruritis which worsens at night. Affected areas generally include the wrists, finger webs, antecubital fossae, breasts, lower abdomen, genitals, and buttocks. In typical cases only 10-15 adult female mites may be present on the body at any given time. In certain cases no mites are recovered from skin scrapings.

Since 2002, the number of scabies outbreaks in the county has increased dramatically.

In contrast, atypical scabies involves heavy infestation of mites; as many as hundreds or thousands of mites may be present at any given time. These hyperkeratotic lesions begin to crust or scale, may be harder to diagnose than...
**Increases of Fatal Listeriosis Cases in Los Angeles County**

The Department of Public Health is concerned over a recent increase in fatal listeriosis cases. From January 1, 2007 to May 14, 2007 there have been 5 reported cases of listeriosis, of whom 4 have died. All five cases were at high risk for listeriosis, with weakened immune systems or over the age of 65. None were perinatal cases.

Listeriosis is a disease caused by *Listeria monocytogenes* in persons with immune systems weakened by such conditions as cancer, long-term high dose steroid therapy, and HIV disease; adults over 65 years and pregnant women are also at higher risk. Sepsis, meningitis, and death may result. In pregnant women it can result in fetal demise and premature delivery. It is critical for your high risk patients presenting with sepsis syndrome, especially if altered mental status is present, that you consider Listeria as a possible cause and treat with an anti-listeria antibiotic, pending lab results.

Additionally, please help your patients prevent illness by providing immune-suppressed and pregnant patients with written instructions about avoiding listeriosis and other foodborne diseases. Please visit the following links for resources and further information:

- Acute Communicable Disease Control Brochures (English and Spanish)
  - [http://www.lapublichealth.org/acd/docs/ListeriaEnglishBrochureFinal.pdf](http://www.lapublichealth.org/acd/docs/ListeriaEnglishBrochureFinal.pdf)

- Centers For Disease Control and Prevention
  - [http://www.cdc.gov/ncidod/dbmd/diseaseinfo/listeriosis_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/listeriosis_g.htm)

**Foods at high risk of Listeria contamination include:**

- Hot dogs, luncheon meats, and deli meats, unless they are reheated until steaming hot
- Soft cheeses such as feta, Brie, Camembert, blue-veined cheeses, and Mexican-style cheeses such as queso blanco, queso fresco, and panela (unless the labels clearly state they are made from pasteurized milk)
- Refrigerated pâtés and meat spreads (canned or shelf-stable pâtés and meat spreads may be eaten)
- Refrigerated smoked seafood, unless it is contained in a cooked dish (canned or shelf-stable smoked seafood may be eaten).

For information on diagnosis and treatment of listeriosis, please consult your infectious disease consultant or you may contact the Acute Communicable Disease Control Program, (213) 240-7941. Case reports of listeriosis may be sent to Public Health by telephone at (888) 397-3993 or fax (888) 397-3778.
psychological, cultural and behavioral factors associated with HIV risk among Black and Latino MSM. As one of the two Latino study sites, the HIV Epidemiology Program enrolled 565 Latino MSM, ages 18 years and older, during the epidemiologic research phase in 2005-2006. Study participants were recruited with respondent-driven sampling (RDS) methods, completed detailed questionnaires using audio computer-assisted self interviews (ACASI), and consented to either standard or rapid HIV testing. Community collaborators included Bienestar and The Wall-Las Memorias.

Study Findings

HIV Diagnosis and Healthcare

- Our sampling method produced a large proportion of previously diagnosed HIV-positive study participants (50% of the 565 Latino MSM already knew that they were HIV positive).
- Of the 276 men without a previous HIV-positive test, 29 received a new HIV-positive diagnosis for an HIV testing prevalence of 10.5%.
- Of the 29 men receiving a new HIV diagnosis, 32% reported no previous HIV test.
- Among the men with known HIV infection, 95% reported receiving some type of HIV healthcare treatment in the past 12 months.
- Eighty-three percent (83%) of participants with known HIV infection reported ever having taken antiretroviral medications.
- Seventy-eight percent (78%) of known HIV infection reported they were currently taking antiretroviral medications.

Patient-Doctor Relationship

Study participants were asked if they had a regular doctor or healthcare provider (Chart 1). A higher percentage of those with known HIV infection reported having a regular doctor or healthcare provider (97%) compared with men without an HIV diagnosis (38%). Of those with a regular provider, the majority reported that they were close to their doctor or healthcare provider (86%). With the exception of MSM with known HIV infection, less than 40% of participants reported their healthcare provider was aware of their sexual behaviors with men.

Risk Behaviors

Sixty-nine percent (69%) of the participants with a new HIV diagnosis reported unprotected anal sex (UAS) in the past three months compared with 51% of uninfected men and 48% of known HIV infected men. Chart 2 shows the prevalence of selected HIV risk behaviors by HIV status for participants who report having a regular healthcare provider. Binge drinking is defined as 5 or more drinks in one sitting on at least a monthly basis. Substance use includes use of crystal methamphetamine, cocaine, crack, heroin, ecstasy, or GHB in the past 3 months. Chart 3 indicates lower levels of these HIV risk behaviors among Latino MSM who reported a close relationship with a healthcare provider.
“Brothers y Hermanos”...Continued from page 3

**Forced Sex and Intimate Partner Violence**
- One-third (33%) of all participants reported ever being forced to have sex
- Almost two-thirds (63%) of the men reporting forced sex stated that it occurred before they were 13 years old
- Thirty-seven percent (37%) of all participants reported ever being physically abused by a boyfriend or lover
- Forced sexual activity before the age of 13 was associated with higher levels of recent HIV risk behaviors (Chart 4)
- Seventy-five (75%) of the newly diagnosed participants reported they felt no one understood their private worries/fears
- Sixty-eight (68%) of the newly diagnosed participants reported they often felt isolated and alone

**Limitations**
While respondent-driven sampling was used in Brothers y Hermanos to produce a population-based sample, the study population is regarded as a convenience sample of Latino MSM due to difficulties implementing the method.

**Implications**
Data collected for the county’s Brothers y Hermanos study indicate a high proportion of Latino MSM continue to practice unsafe anal sex practices that put themselves and others at risk for HIV infection. Although having a close relationship to a healthcare provider is associated with lower HIV risk behaviors in these data, missed opportunities for additional HIV prevention are apparent, even among MSM in regular care. Furthermore, we observed high proportions of forced sexual experiences, intimate partner violence, self-reported depressive symptoms, and a higher risk of UAS and substance use among study participants reporting childhood sexual abuse. In light of these findings, we recommend that improved healthcare services for Latino MSM include a thorough assessment of these experiences. Referrals to available counseling or mental health services may help to reduce HIV-related risk behaviors for this population.

**Mental Healthcare Referrals**

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<tr>
<td>Altamed</td>
<td>(800) 410-0027</td>
</tr>
<tr>
<td>Bienestar</td>
<td>(323) 727-7896</td>
</tr>
<tr>
<td>El Proyecto del Barrio (Arleta)</td>
<td>(818) 830-7181</td>
</tr>
<tr>
<td>Gay and Lesbian Community Ctr. (Long Beach)</td>
<td>(562) 434-4455 x231</td>
</tr>
<tr>
<td>L.A. Gay and Lesbian Center</td>
<td>(323) 993-7640</td>
</tr>
<tr>
<td>Minority AIDS Project (L.A.)</td>
<td>(323) 936-4949</td>
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**References**
5. Respondent Driven Sampling website: http://www.respondentdrivensampling.org/
The Medical Monitoring Project (MMP) is designed to produce nationally representative data on people living with HIV/AIDS and who are receiving HIV care in the U.S. In collaboration with federal agencies (CDC, NIH, HRSA) and the RAND Corporation, state and local health departments are implementing MMP in 26 designated areas across the country.

In Los Angeles, the first year of MMP data collection has ended, and the department’s HIV Epidemiology Program and MMP providers are preparing for the 2007 data collection cycle. Through close coordination with the 25 HIV care providers who were sampled from the 221 total HIV care providers in the county, 400 sampled patients will represent the almost 30,000 people in care for HIV in Los Angeles. A one-time interview and medical record abstraction will be conducted following the ascertainment of patient informed consent.

MMP’s goals are to:
1) Provide a wide array of local and national estimates of behaviors and clinical outcomes for persons in HIV care;
2) Describe health-related behaviors;
3) Determine accessibility and the use of prevention and support services;
4) Increase knowledge of the care and treatment provided; and
5) Examine variations in factors by geographic area and patient characteristics.

Each individual included in the patient sample of 400 represents thousands of HIV-positive persons in care; it is critically important we interview everyone included in the patient sample. We appreciate all of the help and support we have received from our participating providers and patients and look forward to an even more successful 2007 MMP cycle!

Amy Rock Wohl, PhD
HIV Epidemiology program

For more information, please contact Amy Rock Wohl, PhD, LAC MMP Principal Investigator or Rosa Valencia, Acting Project Coordinator at (213) 351-8196 or visit the CDC MMP website at: http://www.cdc.gov/hiv/topics/treatment/mmp/index.htm
typical scabies, and are often misdiagnosed as a dermatitis or psoriasis.

A female mite can travel up to 2.5 cm per minute. The mite will burrow into the skin and lay her eggs. Once the eggs are laid, larvae will begin to emerge within three days. The incubation period for scabies is four to six weeks. In the case of a re-infestation, symptoms may occur within 48 hours.

Risks to health care workers

Scabies is typically transmitted by direct skin-to-skin contact. Health care workers are at higher risk of infection due to increased patient contact during patient care. Procedures such as bathing patients or applying lotion onto a patient’s skin may increase risk of transmission. Mites may also be transmitted indirectly through bed linen or clothing, which is especially true with crusted scabies.

Scabies is typically diagnosed by direct clinical exam or skin scraping. Either method is appropriate; however, skin scraping confirms the diagnosis.

Failure to find mites from skin scraping samples does not rule out scabies. A skin biopsy may also be done in order to diagnose scabies when skin scrapings are not feasible.

Reporting scabies

Single cases of atypical or crusted scabies are reportable, and all outbreaks are reportable immediately to the DPH. (All health care facilities are also required to report outbreaks to DHS Health Facilities).

Individual cases of typical scabies are not reportable to public health. An outbreak generally consists of 2 or more cases of confirmed scabies and/or suspect cases in health care workers, patients, or visitors of the facility within a two week period.

A line-list of symptomatic patients and health care workers should be prepared to determine the possible source of the outbreak. Since the exposure period can extend to six weeks before the onset of symptoms, all persons who came into direct contact with cases should be identified and treated.

Employees who exhibit signs and symptoms of scabies should be immediately removed from the work area and sent to Employee Health for consultation and confirmation of scabies. Patients exhibiting signs and symptoms should be isolated until a diagnosis is made and effective treatment is administered. Environmental cleaning to the affected units must be done in order to prevent re-infestation of scabies. This includes washing clothing, bedding and linen in hot water, vacuuming upholstered furniture and carpeting, and continuing routine disinfection procedures.

Other disciplines that assist with outbreak management and support include administration, environmental services, medical staff, nursing staff and pharmacy. All should be aware of the outbreak to assist in coordinating control measures. Education on scabies should be provided to all staff to prevent re-infestation.

Costs associated with scabies outbreaks can be overwhelming to many health care institutions. Average costs of a typical outbreak can be as high as $200,000. This includes the costs of scabies treatment, isolation equipment, environmental cleaning and laundry costs, and overtime and additional salary costs associated with infected staff members. Negative publicity related to the outbreak may contribute to financial concerns.

Despite developments of scabies prevention and control programs, scabies continues to be a public health problem.

Questions should be directed to L’Tanya English, RN, MPH, Program Specialist, Public Health Nurse at (213) 240-7941.

Lorraine Sisneros, RN, PHN, BSN, Acute Communicable Diseases Control

Reference:
HCV is the most prevalent bloodborne infection in the U.S.; approximately 3.2 million people are chronically infected. No vaccine is available. National recommendations for prevention and control of HCV infection underscore the importance of primary prevention activities in reducing risk of transmission. These activities include screening and testing blood donors, viral inactivation of plasma-derived products, risk-reduction counseling for persons at risk for infection, and practice of infection-control precautions in health-care settings.

The role of sexual activity is controversial. Studies comparing HBV with HCV sexual transmission rates show a cumulative incidence of HCV seroconversion of 2.5% compared with 26% for HBV, suggesting that HCV’s efficiency of sexual transmission is about 10 times less than HBV (some partner studies suggest that male-to-female transmission may be more efficient). Recent research also indicates that long-term monogamous partners of HCV patients have a low prevalence of infection – approximately 1.5%.

Some experts argue, however, that sexual exposure may account for up to 17% of cases in whom higher risk sexual behavior is the only risk factor identified. Case-control studies show two sexual transmission related risk factors for HCV acquisition - sexual contact to an HCV-infected partner and having multiple sex partners. Surveillance data also indicate that 14%-20% of reported acute HCV cases have a history of sexual exposure in the absence of other risk factors. Also, HCV RNA has been detected in semen of HCV-infected males and in cervicovaginal secretions of HCV-infected females using PCR testing.

Despite these diverse and occasionally conflicting data, overall findings indicate that sexual transmission is possible, but inefficient. Additional data are needed to determine whether it may be increased in the context of HIV or other STD infection.

Kim Harrison, MPH, CHES

References:
5. http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5603a1.htm
**Pandemic Flu Updates Available Now**

Enroll now to receive Pandemic Flu and You: a free monthly newsletter, delivered via e-mail, providing summaries on the latest in pandemic influenza information and related activities in Los Angeles County. By registering you will also receive Influenza Watch providing weekly updates on seasonal influenza levels in our county during influenza season.

To register email: fluwatch@listserv.ladhs.org

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**Selected Reportable Diseases (Cases)** — January 2007

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