Hanover Risk Solutions

Preventing Staph/ MRSA Infections

This Loss Control Topic was developed to provide Hanover Policyholders with guidelines to help prevent Staph infections. Recent news headlines of antibiotic resistant infections have raised widespread concerns of potentially fatal infections that can be caught in a variety of environments, including, schools, day care centers, health care facilities and just about anywhere frequented by the public.

Staphylococcus aureus (staph) has long been recognized as a common cause of boils and soft-tissue infections as well as more serious conditions such as pneumonia or bloodstream infections. According to the Centers for Disease Control and Prevention, twenty-five to thirty per cent of adults and children in the United States are “colonized” with staph—the bacteria are present but do not cause illness. Staph colonization usually occurs in the armpit, groin, genital area, or the inside of the nose, with the nose being the most densely colonized. Although staph is carried in the nose, it is not usually transmitted through air droplets (airborne). Most infections occur through direct physical contact of the staphylococci with a break in the skin (cut or scrape), during contact with a person with the bacteria, or during contact with an inanimate object (such as clothing, bed linens, or furniture) that is soiled with wound drainage. Susceptibility to infection depends on factors such as immunity and general state of health. In the past, these staph infections typically have been easy to treat with an inexpensive, short course of one of the penicillins, cephalosporins, or other usually well-tolerated antibiotics. Times have changed and many of these staphylococci are now resistant to penicillin and other commonly used antibiotics.

Here are some facts, summarized by the CDC (Centers for Disease Control and Prevention), in their bulletin released October, 2007. Methicillin-resistant Staphylococcus Aureus (MRSA) is a type of staph that is resistant to certain antibiotics. These antibiotics include methicillin and other more common antibiotics such as oxacillin, penicillin and amoxicillin. Staph infections, including MRSA, occur most frequently among persons in hospitals and healthcare facilities (such as nursing homes and dialysis centers) who have weakened immune systems.

MRSA infections that are acquired by persons who have not been recently (within the past year) hospitalized or had a medical procedure (such as dialysis, surgery, catheters) are known as CA-MRSA infections. Staph or MRSA infections in the community are usually manifested as skin infections, such as pimples and boils, and occur in otherwise healthy people.

The estimated number of people developing a serious MRSA infection (i.e., invasive) in 2005 was about 94,360.
Approximately 18,650 persons died during a hospital stay related to these serious MRSA infections. Serious MRSA disease is still predominantly related to exposures to healthcare delivery:

- About 85% of all invasive MRSA infections were associated with healthcare, and of those, about two-thirds occurred outside of the hospital, while about one third occurred during hospitalization.
- About 14% of all the infections occurred in persons without obvious exposures to healthcare.

According to the CDC, the rates of disease varied between the geographically diverse sites participating in the surveillance, overall rates of disease were consistently highest among older persons (age > 65), blacks, and males. Evaluation of the pathogens causing these infections confirmed that most of the strains associated with these serious MRSA infections were caused by strains traditionally associated with healthcare. However, the strains traditionally associated with transmission in the community are now being identified in healthcare.

Prevention and Control

Originally, MRSA was found only in hospitals and long-term care facilities, such as nursing homes. In the past few years, there have been increasing reports of MRSA not associated with the medical environment. Although most of the serious infections were associated with healthcare exposure, there are a number of measures to help prevent staph infections in our day to day world. Below, we have outlined basic preventive measures to help reduce staph infections in non-healthcare environments. A wealth of information is available online from the CDC. For information on how to prevent MRSA, follow the links below.


For Community-Associated Methicillin Resistant Staphylococcus aureus (CA-MRSA). You can find educational materials and downloadable posters to help prevent MRSA infections: http://www.cdc.gov/ncidod/dhqp/ar_mrsa_ca_prevention.html

Also, Texas Department of State Health Services has a great deal of specific preventive guidelines. See: http://www.dshs.state.tx.us/idcu/health/antibiotic%5Fresistance/mrsa/

Staph Infection Prevention—Day Care Centers

Prevention Strategies

Day care administrators may need to introduce a policy in which parents must inform the day care if their child has a skin infection. With this policy, the facility should have options for assuring that the other children do not have contact with the infected site in the affected child or the contaminated physical environment. These options will need to be customized depending on the age of the infected child and the location of his/her wound. Have the parents sign a release regarding their understanding of the policy and their responsibilities in this matter.

Recommendations for Daycare Administration

- Do not allow employees with draining wounds or infections to have physical contact with children
- Do permit the child or employee to participate in noncontact activities if wounds are covered and the infected person observes good hygienic practices—washing hands, showering, and laundering clothes
• Do permit the child or employee to return to contact activities when the wound has healed. Because MRSA is difficult to treat, this may be a few weeks or longer
• Do arrange to have utensils and dishes washed in the usual manner with soap and hot water or using a standard home dishwasher
• Do wash clothes with the usual detergent in hot water and dry thoroughly using the hottest setting possible
• Do provide clean non-sterile gloves for employees to use when caring for children’s wounds

**Emphasize This To Your Employees, Children And Their Parents:**
Hand Washing is the Single Most Important Behavior in Preventing Infectious Disease.

Wash your hands with soap and water or alcohol-based gel sanitizers. The use of an alcohol based hand sanitizer may be a supplement or a substitute when soap and water are not available. **Follow manufacturer directions** or generally place enough hand sanitizer in the palm of your hand to thoroughly cover your entire hand. Rub hands together until dry.

**Hand Washing Procedure**
1. Use warm running water.
2. Wet your hands and wrists.
3. Use a bar or a thumbnail size dab of liquid soap.
4. Work soap into a lather and wash between fingers, up to wrists and under finger nails for at least 15 seconds.
5. Dry hands thoroughly using a clean cloth towel or paper towel.

**Wash your hands and those of your child:**
• After sneezing, blowing, or touching your nose or wiping your child’s nose
• Before and after close contact with another person
• After using the toilet
• Before and after assisting your child on the toilet or changing diapers
• After arriving home from daycare or other activities

**Other General Precautions**
• Do not share towels or other personal care items
• Do not share soap
• Do not wear artificial nails
• Do keep fingernails short (no longer than the tip of the finger)
• Do use a skin moisturizer to prevent dry, cracked skin
• Do place soiled items in a plastic bag or other waterproof container to be sent home, if laundry is not done at the facility
• Do pre-wash or rinse items that have been grossly contaminated with body fluids. Then wash clothes for a full cycle in hot water and dry on the hottest cycle possible
• Do inform parents of these precautions if laundry is sent home
Precautions For Caregivers at Daycare:

- Carry and use an alcohol-based hand sanitizer when soap and water are not available
- Clean equipment or any part of the activity area that comes in contact with the wound with commercial disinfectant or fresh (daily) solution of diluted bleach (1 tablespoon of household bleach to one quart of water or phenol-containing product such as Lysol® or Pinesol®) before any other person comes in contact with the equipment or area. A phenol-containing spray can also be used to disinfect any cloth or upholstered surface.
- Do not allow children with draining wounds or infections to have physical contact with other children until the wound has stopped draining and has healed.
- Keep the wound covered.
- Change the wound dressings any time that drainage is apparent as directed by the physician.
- The infected individual must have a designated chair or area for sitting. It should have a plastic or similar hard surface or cover for easy disinfection. No one else should sit here until the child’s wound has healed. Put on clean gloves just before touching broken skin.
- Remove gloves promptly and discard after use, before touching uncontaminated items, environmental surfaces, and before touching another person. Wash hands immediately after contact with the wound even if gloves were worn.
- Wash hands between tasks and procedures on the same child (such as putting on a band-aid and helping a child at the toilet) to prevent cross-contamination of different body sites.
- Place disposable items that have come in contact with the infected site in a separate trash bag and close the bag before placing in the common garbage.
- Disinfect reusable items such as scissors or tweezers. Wash visible blood or drainage off with soap and water. Wipe with 70% isopropyl alcohol (rubbing alcohol). Allow to air dry. Do not use these items on any other person.
- Do not share towels.
- Carry laundry away from the body in a plastic or other lined bag that will not allow wet articles to drain through (wash hands after loading soiled laundry into washer).
- Give antibiotics only to infected persons for whom the medication is prescribed. Do not give antibiotics to uninfected children or employees in an effort to prevent infections.
- Use a changing table with an uncovered impervious surface and wipe down with an effective disinfectant between children, OR use a disposable cover and dispose of after each child, OR use a freshly laundered reusable cover and change after each child.

When in doubt of the correct procedure to follow, contact your healthcare provider, your local or regional health department.
Staph Infection Containment in Child Care Facilities—Sample Checklist

Education and Training

- Everyone has received hand hygiene training and can demonstrate procedure.
- Training material is available to everyone.
- Everyone knows the policy on work restrictions for an employee with a skin infection.
- Everyone knows to report new infections or worsening infections to (name) ____________________________.
- Parents of children have been notified.
- Persons responsible for changing bandages know how to change them.
- Verbal training in the appropriate language and educational level has been done.
- Training is documented.

Implementation of Containment Procedures—INFECTION CARE

- (name) is responsible for keeping a daily log of infected persons.
- Everyone with draining infections that cannot be contained by simple bandages is being seen by a healthcare provider.
- Infected persons who have fever are excluded from childcare facility until readmission criteria are met.
- Infected persons, who are not specifically excluded, are restricted from situations that might bring the infection or drainage into contact with other persons or personal items or that would result in the infected area becoming exposed, wet (wading pools, water parks, other water play) or soiled.
- Infected persons, who are not specifically excluded, always have infections securely covered with a clean, dry bandage. Clothing should cover the bandage if possible.
- Persons responsible for changing bandages have access to all needed supplies including clean, non-sterile gloves, soap, water, bandage, plastic trash bags, and, if prescribed by a physician, topical medications.
- Physician-prescribed antibiotics are stored as described on the label or as instructed by the pharmacy.
- _______________________________________ (name) is responsible for giving accurate dose of antibiotic at prescribed time.

Implementation of Containment Procedures—HYGIENE

- Everyone performs hand hygiene at appropriate times and places.
- Hand washing facilities are located in accordance with city/county health codes.
- Liquid soap and paper towels are available and accessible.
- Persons do not share personal items (towels, soap, stuffed animals, blankets, utensils).
- Children’s sleeping mats or other linens are used by only one child, stored separately, and sent home for disinfecting weekly or when soiled.
- Infected persons use a designated chair that is easily disinfected (not upholstered).
- Precautions are taken to prevent any situations that might bring the infection or infection drainage into contact with companion animals.

Implementation of Containment Procedures—LAUNDRY (if onsite laundry facilities are provided)

- Infected person’s clothing and linens are washed separately from uninfected person’s laundry.
- Clothing and linens are washed with detergent appropriate to water temperature.
- Bleach is used when possible.
- Clothing and linens are dried thoroughly at highest heat fabric can tolerate.
Implemention of Containment Procedures—ENVIRONMENTAL SURFACES

- (name) is responsible for cleaning and disinfection.
- Initial thorough cleaning and disinfecting of all environmental surfaces (toys, diaper changing areas, bathroom and kitchen surfaces, door knobs, mats, tables, chairs) in affected classrooms have been done with an EPA-hospital grade germicide.
- Diaper changing tables and straps are disinfected after each use.
- Environmental surfaces (equipment, toys, linens, sleeping equipment, diaper changing areas, bathroom and kitchen surfaces, table tops, furniture, and other similar equipment used by children) are disinfected daily and as needed.
- Cleaners and disinfectants are available but out of reach of children.
- Trash receptacles are accessible for disposal of cleaning materials.
- Items that cannot be disinfected (cracked seat pad, cracked mats) have been discarded.
- Cleaning log is kept.

SIGNS in the Appropriate Language and Educational Level are Posted Prominently Around the Facility

- Reminding persons to wash hands.
- Reminding persons to disinfect shared items (chairs, cribs, toys, sleeping equipment, kitchen utensils, common area benches) prior to use.
- Informing persons where to direct complaints about possible contamination of facilities or equipment.
Staph Infection Containment in Schools—Sample Checklist

**Education and Training**

- Everyone has received hand hygiene training and can demonstrate procedure.
- Everyone knows to report new infections or worsening infections to (name) ___________ ___________.
- Training material is available to everyone.
- Everyone knows the policy on work restrictions for an employee with a skin infection.
- Parents of minor children have been notified of the infections with due respect to student’s privacy as outlined in the Federal Educational Rights and Privacy Act (FERPA).
- Persons responsible for changing bandages know how to change them.
- Verbal training in the appropriate language and educational level has been done.
- Training is documented.

**Implementation of Containment Procedures—TREATMENT**

- (name) is responsible for keeping a daily log of infected persons.
- Persons with draining infections that cannot be contained by simple bandages are being seen by a healthcare provider.
- Infected persons who have fever are excluded from school until readmission criteria have been met.
- Infected persons, who are not specifically excluded, are restricted from situations that might bring the infection or drainage into contact with other persons (contact sports) or personal items or that would result in the infected area becoming exposed, wet, or soiled.
- Infected persons, who are not specifically excluded, always have infections securely covered with a clean, dry bandage. Clothing should cover the bandage if possible.
- Persons responsible for changing bandages have access to all needed supplies including clean, non-sterile gloves, soap, water, bandage, and plastic trash bags.
- Physician-prescribed antibiotics are stored as described on the antibiotic label or as instructed by the pharmacy.

**Implementation of Containment Procedures—HYGIENE**

- Everyone is required to perform hand hygiene at appropriate times and places.
- Hand washing facilities are located in accordance with city/county health codes.
- Liquid soap and paper towels are available and accessible.
- Alcohol-based hand sanitizer is provided where soap and water are not available.
- Persons do not share personal items (towels, soap, razors, nail clippers, make-up, shampoo).
- Precautions are taken to prevent any situations that might bring the infection or infection drainage into contact with companion animals (classroom pets).

**Implementation of Containment Procedures—ENVIRONMENTAL SURFACES**

- (name) is responsible for cleaning and disinfecting.
- Initial thorough cleaning and disinfecting of all environmental surfaces have been done with an EPA-approved disinfectant.
- Cleaners and disinfectants are available.
- Trash receptacles are accessible for disposal of cleaning materials.
- Exam table cover in school nurse’s office is removed or table top is disinfected between students.
- All high touch surfaces (door knobs, counter/tops, phones, etc.) are thoroughly cleaned and disinfected daily with an EPAapproved disinfectant.
- All high touch surfaces (exercise equipment, door knobs, counter/desk tops) are thoroughly cleaned and disinfected daily with an EPA-approved disinfectant.
- Items that cannot be disinfected (cracked seat pad) are discarded.
- A cleaning log is kept.

**SIGNS in the Appropriate Language and Educational Level are Posted Prominently Around the Department**
- Reminding persons to wash hands.
- Reminding persons to disinfect shared items prior to use.
- Informing persons where to direct complaints about possible contamination of facilities or equipment.
Staph Infection Containment in Athletic Departments—Sample Checklist

**Education and Training**

- Everyone has received hand hygiene training and can demonstrate procedure.
- Everyone knows to report new infections or worsening infections to (name) _____________________________.
- Training material is available to everyone.
- Everyone knows the policy on work restrictions for an employee with a skin infection.
- Parents of minor children have been notified of the infections in accordance with FERPA.
- Persons responsible for changing bandages know how to change them.
- Verbal training in the appropriate language and educational level has been done.
- Training is documented.

**Implementation of Containment Procedures—TREATMENT**

- (name) is responsible for keeping a daily log of infected persons.
- Persons with draining infections that cannot be contained by simple bandages are being seen by a healthcare provider.
- Infected persons who have fever are excluded from school until readmission criteria have been met.
- Infected persons, who are not specifically excluded, are restricted from situations that might bring the infection or drainage into contact with other persons (contact sports) or personal items or that would result in the infected area becoming exposed, wet, or soiled.
- Infected persons, who are not specifically excluded, always have infections securely covered with a clean, dry bandage. Clothing should cover the bandage if possible.

- Persons responsible for changing bandages have access to all needed supplies including clean, non-sterile gloves, soap, water, bandage, and plastic trash bags.
- Physician-prescribed antibiotics are stored as described on the antibiotic label or as instructed by the pharmacy.

**Implementation of Containment Procedures—HYGIENE**

- Everyone is required to perform hand hygiene at appropriate times and places.
- Hand washing facilities are located in accordance with city/county health codes.
- Liquid soap and paper towels are available and accessible.
- Alcohol-based hand sanitizer is provided where soap and water are not available.
- Persons do not share personal items (towels, soap, razors, nail clippers, make-up, shampoo).
- Everyone showers at least daily and after participating in athletic activities, especially those with physical contact (wrestling, football).
- Precautions are taken to prevent any situations that might bring the infection or infection drainage into contact with companion animals (mascots).

**Implementation of Containment Procedures—LAUNDRY (if onsite laundry facilities or contract laundry services are provided)**

- Infected team member’s clothing and linens are washed separately from other team members’ laundry.
- Uniforms and towels are washed with detergent appropriate to water temperature.
- Bleach is used when possible.
- Uniforms and towels are dried thoroughly at highest heat fabric can tolerate.
Implementation of Containment Procedures—ENVIRONMENTAL SURFACES

- (name) is responsible for cleaning and disinfecting.
- Initial thorough cleaning and disinfecting of all environmental surfaces has been done with an EPA-approved disinfectant.
- Cleaners and disinfectants are available.
- Trash receptacles are accessible for disposal of cleaning materials.
- Exam table cover is removed or table top is disinfected between athletes.
- All high touch surfaces (exercise equipment, door knobs, counter/desk tops) are thoroughly cleaned and disinfected daily with an EPA-approved disinfectant.
- Items that cannot be disinfected (cracked seat pad, cracked mats) are discarded.
- A cleaning log is kept.

Signs in the Appropriate Language and Educational Level are Posted Prominently Around the Department

- Reminding persons to wash hands.
- Reminding persons to disinfect shared items prior to use.
- Informing persons where to direct complaints about possible contamination of facilities or equipment.
Staph Infection Containment in Dormitories—Sample Checklist

**Education and Training**
- Everyone has received hand hygiene training and can demonstrate procedure.
- Everyone knows to report new infections or worsening infections to (name) ________________
- Training material is available to everyone.
- Everyone knows the policy on work restrictions for an employee with a skin infection.
- Parents of minor children have been notified of the infections.
- Persons responsible for changing bandages know how to change them.
- Verbal training in the appropriate language and educational level has been done.
- Training is documented.

**Implementation of Containment Procedures—INFECTION CARE**
- (name) is responsible for keeping a daily log of infected persons.
- Persons with draining infections that cannot be contained by simple bandages are being seen by a healthcare provider.
- Infected persons are restricted from situations that might bring the infection or drainage into contact with other persons or personal items or that would result in the infected area becoming exposed, wet or soiled.
- Infected persons have infections securely covered with a clean, dry bandage. Clothing should cover the bandage if possible.
- Persons responsible for changing bandages have access to all needed supplies including clean, non-sterile gloves, soap, water, bandage, and plastic trash bags.
- Physician-prescribed antibiotics are stored as described on the antibiotic label or as instructed by the pharmacy.

**Implementation of Containment Procedures—HYGIENE**
- Everyone performs hand hygiene at appropriate times and places.
- Hand washing facilities are located in accordance with city/county health codes.
- Liquid soap and paper towels are available and accessible.
- Alcohol-based hand sanitizer is provided where soap and water are not available.
- Persons do not share personal items (towels, soap, razors, nail clippers, make-up, shampoo).
- Everyone showers at least daily.
- Uninfected persons do not use the same bed as an infected person.
- Infected persons use a designated chair that is easily disinfected (not upholstered).
- Precautions are taken to prevent any situations that might bring the infection or infection drainage into contact with companion animals.

**Implementation of Containment Procedures—LAUNDRY**
- Persons have access to a functioning washer and dryer, laundry detergent and bleach.
- Clothing and linens are washed with detergent appropriate to water temperature.
- Bleach is used when possible.
- Clothing and linens are dried thoroughly at highest heat fabric can tolerate.
- Infected person’s clothing and linens are washed separately from uninfected person’s laundry.
Implementation of Containment Procedures—ENVIRONMENTAL SURFACES

- (name) is responsible for cleaning and disinfecting.
- Initial thorough cleaning and disinfecting of all environmental surfaces (counter tops, appliances, railings, tables, remote controls, electronics) have been done with an EPA-approved disinfectant.
- All sheets, blankets, pillows, towels, and rugs are laundered as soon as an infection is identified.
- Cleaners and disinfectants are available but out of reach of children.
- Trash receptacles are accessible for disposal of cleaning materials.
- Daily, thorough cleaning and disinfecting with an EPA-approved disinfectant is being done on all high touch surfaces (door knobs, counter/desk tops, phones).
- All high touch surfaces (door knobs, counter/desk tops, phones, toys, remote controls, utensils) are thoroughly cleaned and disinfected daily with an EPA-approved disinfectant.
- Items that cannot be disinfected (cracked seat pad) have been discarded.
- Cleaning log is kept.

**SIGNS in the Appropriate Language and Educational Level are Posted Prominently Around the Facility**

- Reminding persons to wash hands.
- Reminding persons to disinfect shared items (exercise equipment, kitchen utensils, common area benches) prior to use.
- Informing persons where to direct complaints about possible contamination of facilities or equipment.
Staph Infection Containment in Gyms and Spas—Sample Checklist

**Education and Training**
- Everyone has received hand hygiene training and can demonstrate procedure.
- Training material is available to everyone.
- Everyone knows the policy on work restrictions for an employee with a skin infection.
- Everyone knows what action to take if infections are observed in clients.
- Everyone knows to report new infections or worsening infections to (name) ____________________________.
- Verbal training in the appropriate language and educational level has been done.
- Training is documented.

**Implementation of Containment Procedures—INFECTION CARE**
- (name) is responsible for keeping a daily log of infected persons.
- Persons with draining infections that cannot be contained by simple bandages are being seen by a healthcare provider.
- Infected persons have infections securely covered with a clean, dry bandage. (Clothing should cover the bandage if possible.) Infected persons are restricted from situations that might bring the infection or drainage into contact with other persons or personal items or that would result in the infected area becoming exposed, wet (whirlpools, ice tubs, swimming) or soiled.
- Physician-prescribed antibiotics are stored as described on the antibiotic label or as instructed by the pharmacy.

**Implementation of Containment Procedures—HYGIENE**
- Everyone performs hand hygiene at appropriate times and places.
- Hand washing facilities are located in accordance with city/county health codes.
- Liquid soap and paper towels are available and accessible.
- Alcohol-based hand sanitizer is provided where soap and water are not available.
- Persons do not share personal items (towels, soap, razors, nail clippers, make-up, shampoo).
- Everyone showers at least daily and after participating in athletic activities.

**Implementation of Containment Procedures—LAUNDRY (if onsite laundry facilities or contract laundry services are provided)**
- Infected persons’ clothing and linens are washed separately from other uninfected persons’ laundry.
- Uniforms and towels are washed with detergent appropriate to water temperature.
- Bleach is used when possible.
- Clothing and linens are dried thoroughly at highest heat fabric can tolerate.

**Implementation of Containment Procedures—ENVIRONMENTAL SURFACES**
- (name) is responsible for cleaning and disinfecting.
- Initial thorough cleaning and disinfecting of all environmental surfaces have been done with an EPA-approved disinfectant.
- Cleaners and disinfectants are available.
- Trash receptacles are accessible for disposal of cleaning materials.
- All high touch surfaces (exercise equipment, door knobs, counter/desk tops, phones) are thoroughly cleaned and disinfected daily with an EPA-approved disinfectant.
- Facility procedures designate what high touch surfaces are to be cleaned daily.
- Items that cannot be disinfected (cracked seat pad, cracked mats) have been discarded.
- Cleaning log is kept.
Why The Hanover?

The Hanover is a leading Property and Casualty insurance company dedicated to achieving world-class performance. Our commitment is to deliver the products, services, and technology of the best national companies with the responsiveness, market focus, and local decision making of the best regional companies. This powerful combination has been a proven success since our founding in 1852, and is backed by our financial strength rating of “A” (Excellent) from A.M. Best.