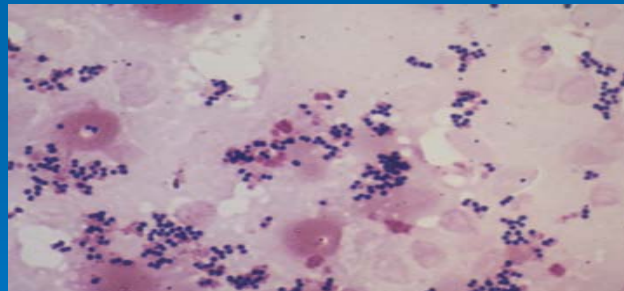



Community Associated MRSA: **Prevention and Control in** **Community Settings**



March, 2008

Disclaimer

The reference to brand names in this presentation does not constitute endorsement by the Wisconsin Division of Public Health




Who Gets CA MRSA

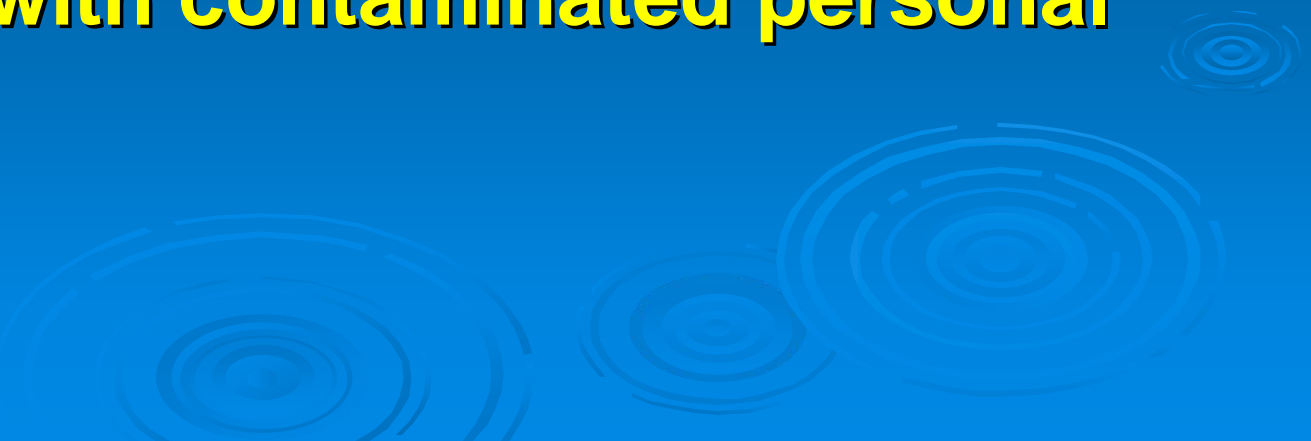
➤ **Anybody--but these groups have a higher rate:**

- **Children**
- **Military recruits**
- **Prisoners**
- **Athletes**


Risk Factors

- **Close skin to skin contact**
 - **Crowded conditions**
 - **Compromised skin**
 - **Contaminated items**
 - **Cleanliness (lack of)**
- 

How CA MRSA is Spread

1. **Skin to skin contact with infected person**
 2. **Contact with a carrier**
 3. **Contact with contaminated personal items**
- 
- The bottom right corner of the slide features a decorative graphic of several concentric, light blue circles resembling ripples on water, set against the dark blue background.

Preventing Spread of CA MRSA

- Hand and personal hygiene
 - Prevention of injuries to skin
 - Early detection of infections
 - Appropriate treatment
 - Exclusion
 - Cleaning/disinfection
 - Management of outbreaks
- 

Hygiene

- Hand hygiene
- Regular showers
- No sharing of personal items (razors, towels, equipment, uniforms, water bottles)
- Do not touch others' wounds
- Liquid soap dispensers
- Alcohol gel



Wound care

- **Wash, cover and contain with clean, dry dressings**
- **Wear gloves and wash hands after touching wounds or dressing**
- **Place bandages/dressings that are saturated with wound drainage in red biohazard bags or sealed plastic bags**

Prevention of skin injuries

- **Protective gear**
- **Inspect playing fields for objects that can cause cuts and abrasions**
- **Treatment of injuries**
 - **Clean with soap and water**
 - **Cover with a bandage or clean, dry dressing**



Early detection

- **Identify athletes with skin infections**
 - **Provide education at team meetings**
 - **Teach athletes to watch for signs/symptoms of infection**
 - **Instruct to report skin infections**
 - **Coaches, trainers perform screenings**
 - **Screen contacts of infected persons**

Skin examinations

➤ When

- Periodically
- During outbreaks of skin infections
- Before athletic events

➤ Where

- Private area with good lighting


➤ How

- Ask athlete if he/she has skin problems
- Systematic exam from head to toe

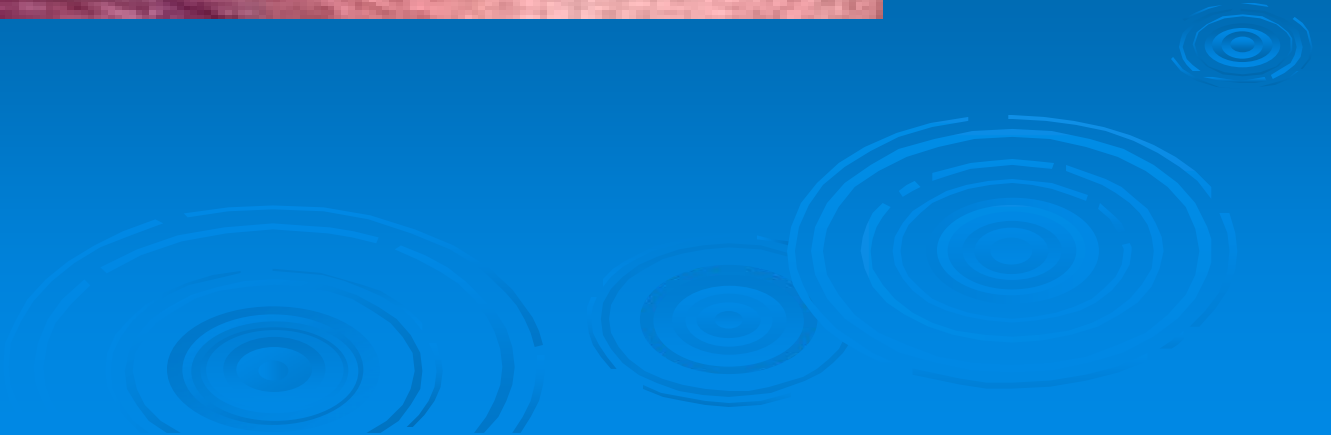
Skin examinations

<http://www.health.state.mn.us/divs/idepc/dtopics/athlete/skinhcp.pdf>

Signs/symptoms of staph infections

- Pustules, boils, abscesses
 - Redness, swelling
 - Pain
 - Pus, drainage
 - Appearance of “spider bite”
- 





CDC / Bruno Coignard, MD; Jeff Hageman, MHS

FIGURE



This 2005 photograph shows a cutaneous abscess, located on the hip of a prison inmate, which has begun to drain. The abscess was caused by methicillin-resistant *Staphylococcus aureus*.





Appropriate treatment

- **Abscesses and boils are usually drained**
- **Purulent material is cultured**
- **Antibiotics may or may not be prescribed**
 - **Clindamycin**
 - **Trimethoprim sulfamethoxazole**
 - **tetracyclines**

Exclude from activities

➤ When to exclude

- Appropriate hand/personal hygiene cannot be assured
- Wounds cannot be kept covered/wound drainage contained

➤ Persons with active infections or open wounds should be excluded from whirlpool use, swimming pools

Keeping a clean environment

- **Wrestling mats**
 - **Athletic equipment**
 - **Uniforms, towels**
 - **Locker room surfaces**
 - **Whirlpools**
- 

Keeping a clean environment

- **Establish regular cleaning schedule**
- **Remove soil first by cleaning, then disinfect**
- **Change water, mops, cleaning cloths when dirty**
- **Clean from cleanest surfaces to dirtiest**
- **Follow disinfectant manufacturer's directions for contact time**

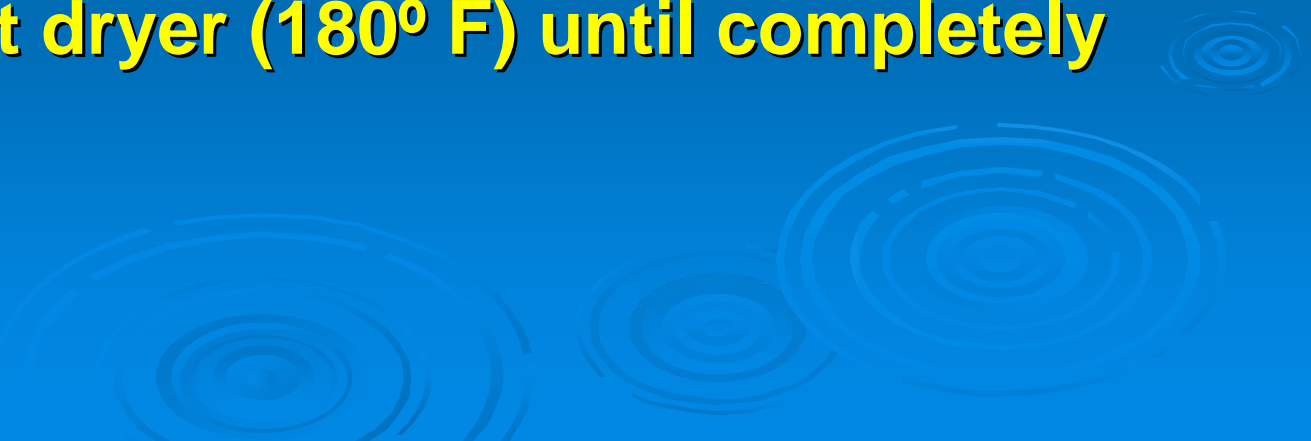
Keeping a clean environment

- **Wrestling and gymnastic mats**
 - **Disinfect daily and when visibly soiled**
 - **Use low-grade disinfectant**
 - **example: Lysol™ quaternary ammonium disinfectant**
 - **Allow to air dry**

Keeping a clean environment

- **Athletic equipment (helmets, shoulder pads, other non-washable gear)**
 - **Clean/disinfect before use by others**
 - **Check with manufacturer to determine safest disinfectant for equipment**
 - **Commercial products/systems**
 - **Example: Esporta**
http://www.esporta.ca/products/Esporta_detergents.htm

Keeping a clean environment

- **Wash uniforms, towels, and other washable equipment between use**
 - **Laundry in hot water (140° F) and detergent or warm water and bleach (1/2 cup per large load)**
 - **Dry in hot dryer (180° F) until completely dry**
- 

Keeping a clean environment

➤ Locker room surfaces

- Benches, showers, floors, toilets, sinks, weight room equipment
- Clean/disinfect regularly
- Locker rooms should have easy to clean surfaces such as tile on floors instead of carpeting

Keeping a clean environment

➤ Whirlpools

- Whirlpool: 3.0 ppm minimum free chlorine residual or 7.0 ppm total bromine
- Whirlpool with stabilizer: 4.0 ppm minimum free chlorine residual
- Drain and disinfect surfaces after each use
- Clean and disinfect jets routinely
- Prohibit persons with open sores from using

Disinfectants

- **Should be EPA registered**
 - <http://www.epa.gov/oppad001/chemregindex.htm>
- **Can also use 1:10 or 1:100 bleach solution**
- **Use all disinfectants at correct strength and for contact time specified by manufacturer**

Disinfectants


- **Low grade disinfectants used for surfaces not soiled with blood or body fluids (EPA list H)**
 - **Lysol**
 - **SC Johnson phenolic disinfectant**
 - **Sani-cloth wipes**
 - **1:100 bleach solution made up daily**

Disinfectants

- **For blood/other body fluid clean up (EPA list E)**
 - **Virex TB or 256**
 - **Dispatch**
 - **Cavicide, Caviwipes**
 - **Citrix**
 - **1:10 bleach solution**

Disinfectants on both lists are effective against MRSA

Managing outbreaks

- **Outbreak: three or more cases of confirmed MRSA among close contacts**
 - **Contact local health department**
 - **Begin active screening for more cases**
 - **Distribute informational materials to parents, students, staff**
- 

Gymnasiums/health clubs/spas

- Hand hygiene
- Liquid soap dispensers/alcohol gel
- Air dryers or disposable paper towels
- Protective clothing
- Cover wounds—do not visit if cannot
- Shower after exercise
- Do not share items
- Clean equipment surfaces
- Launder towels/linens and dry in hot dryer

Day care centers

- **Hand hygiene**
- **Standard precautions—wear gloves when touching someone's wounds**
- **Cover lesions/wounds**
- **Exclude attendees/staff who cannot contain wound drainage**
- **Routine cleaning of environment/shared items**

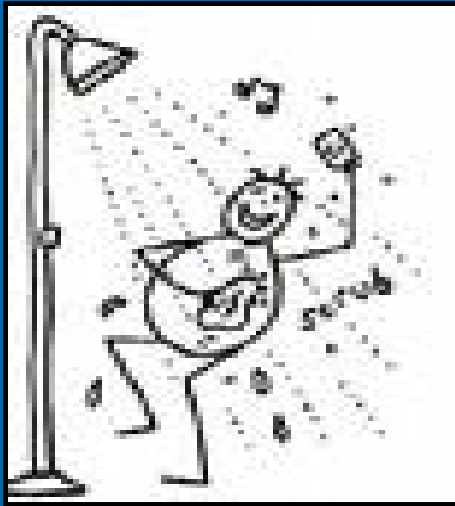
Households

- **Hand and personal hygiene**
- **Cover wounds**
- **Gloving/hand washing when doing wound care**
- **Do not touch others' wounds**
- **Do not share towels, personal items**
- **Laundry contaminated items in hot water and dry in hot dryer**
- **Clean areas contaminated with wound drainage**
- **Dispose of soiled dressings in sealed bag**

Us vs. MRSA



Keep skin clean



Keep skin intact





Moisturize and maintain proper pH



Do not share personal items



Keep environment clean



Main Messages about CA MRSA

- **Most infections are mild skin infections**
- **Infections are treatable**
- **Risk of infection can be reduced by keeping skin clean and healthy**

CA MRSA

Guidelines for Clinical Management

CA MRSA Patient Pamphlet

**Guidelines for Controlling Transmission
among Students and Athletes**

**[http://dhfs.wisconsin.gov/communicable/
Communicable/HlthProvider.htm](http://dhfs.wisconsin.gov/communicable/Communicable/HlthProvider.htm)**

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