



MRSA in Early Childhood Settings: Separating Fact From Fiction

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MRSA

The Facts

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What is MRSA?

- **Identification:**
Methicillin-Resistant *Staphylococcus Aureus* is commonly seen as impetigo, folliculitis, furuncles, carbuncles, abscesses, and infected lacerations.
- **Infectious agent:**
Commonly known as “staph”
- **Occurrence:**
Worldwide
- **Reservoir:**
Humans, domesticated animals/pets



Origins of MRSA

- First recognized in 1961-one year after antibiotic Methicillin was introduced for treating *S. Aureus* infections
- MRSA is unable to be killed by common antibiotics including all penicillin and cephalosporins



Colonization vs. Infection

- Colonization – state of a microorganism living *in* or *on* a body *without causing disease*.



Colonization vs. Infection

- Infection – condition in which the body is ***invaded*** by a microorganism, the organism multiplies and ***causes injury or illness.***



Spreading MRSA

- Most often spread to others by contaminated hands



Spreading MRSA

- **Colonization:**
20% to 30% of general population are nasal carriers
- **Autoinfection, or self infection:**
Accounts for 1/3 of all cases
- **Most common source of epidemic spread:**
Persons with a draining lesion or purulent (pus) discharge
- **Most common instrument for spread: Hands**
- Airborne spread is rare

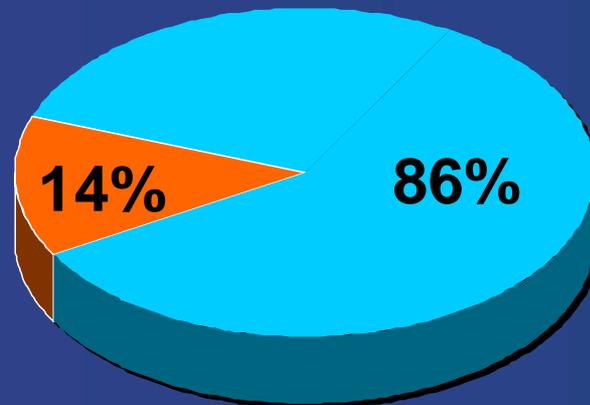


MRSA Infection

- Most infections caused by *S. Aureus* are skin and soft tissue infections
- MRSA has been reported in increasing numbers among healthy persons of all ages - referred to as Community Acquired MRSA



Most Invasive MRSA Infections Are Health Care-Associated



-  Community-Associated
-  Health Care-Associated

Prevention

The CDC has identified “5 C’s” to avoid:

- **Crowding**
- **Contact (Skin-to-skin)**
- **Compromised skin**
- **Contaminated items and surfaces**
- **Cleanliness (Lack of)**



The Importance of Hand Washing



- The most effective method to prevent transmission of MRSA, the common cold and influenza
- There should always be water, soap and paper towels available *NOTE:* Always allow time for frequent and thorough hand washing throughout the day
- For adults, alcohol-based hand sanitizers may be used if soap and water are not available



The Importance of Hand Washing

FIGHT GERMS BY WASHING YOUR HANDS!

1 Wet your hands

2 Soap

3 Lather and scrub - 20 sec

4 Rinse - 10 sec

5 Turn off tap

6 Dry your hands

DONT FORGET TO WASH:

- between your fingers
- under your nails
- the tops of your hands

Common Questions about Child Care Centers and Schools?

- How should my facility be cleaned to prevent MRSA?
- Should my location be closed if someone has MRSA?
- Should I send a letter home each time someone is diagnosed with MRSA?
- Should students or staff with MRSA be excluded?





How should my facility be cleaned to prevent MRSA?

- No special cleaning products or procedures are needed for MRSA
- Appropriate cleaners include a 1 to 100 bleach to water solution or EPA-registered disinfectants*
 - <http://www.epa.gov/oppad001/chemregindex.htm>
- Frequently contacted surfaces (doorknobs, light switches, etc.) should receive special attention
- Be sure to follow the product's instructions closely, including sanitation/disinfecting times

* The formula in the communicable disease manual fits this description - 1/4 cup of bleach to 1 gallon water, and 1 Tbsp to 1 gallon for kitchen utensils, food prep surfaces and toys that can be put into mouth.





Should my location be closed if someone has MRSA?

According to the CDC:

- It is not necessary to close schools or child care centers to disinfect for MRSA
- If you suspect an MRSA outbreak, contact your local health department



Should I send a letter home when someone is diagnosed with MRSA?

YES - the Child Care Rules State:

- Parents must be notified if their child has been exposed to a communicable disease - each program has a policy on how this communication is made - see slide 34





Should students or staff with MRSA be excluded?

The CDC recommends that:

- Students and staff diagnosed with MRSA should be excluded only if the infection can not be covered and contained
- Those with active infections should be excluded from activities with skin-to-skin contact



Protecting Yourself

- Wash cuts, scrapes, lesions, insect bites and sores with soap and water
- Avoid contact with other people's cuts and sores
- Keep lesions clean and dry and cover them with bandages until they are healed



Protecting Yourself

- Change dressings when soiled or damp, place dressings in a plastic bag, then place in the regular garbage
- Do not share personal items (e.g. towels, clothing, and soap)
- Use a barrier (paper, cloth or gloves) between skin and shared equipment



Preventing Transmission

- Cleaning/Sanitize with an EPA registered agent, level “D”. Be sure to follow closely the directions on the sanitizer’s label
- Wipe surfaces of equipment before and after use, especially if the surface has become wet with sweat
- Clean shared equipment surfaces daily



Signs and Symptoms

- Fever
- Local swelling, redness, heat
- Painful lesion or pimple with or without drainage
- Boil-tender red lump with a white “head”



Possible Presentations

- Impetigo
- Folliculitis
- Furuncles – hair follicle infection
- Carbuncles – local, deep skin infection
- Abscesses
- Infected lacerations
- Staphylococcal food poisoning



Impetigo



Boils, Folliculitis, Furuncles, Carbuncles



Draining Abscess



Other Considerations

- MRSA should be considered if skin and soft tissue infections do not heal, despite treatment
- **Primary Therapy:** Incision and drainage
- **Preventing food poisoning:**
wash hands, cook food properly, don't allow a worker to work with draining lesions, keep kitchens clean



Rules and Regulations: A Reminder Course

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Handwashing

From ODJFS Child Care Manual (5101:2-12-15.1)

A handwashing facility requires:

- Liquid soap
- Running water
- Individually assigned or disposable toweling or air dryers shall be provided with all restrooms



Handwashing

From ODJFS Child Care Manual (5101:2-12-15.1)

Employees shall wash hands often, but required:

- Upon arriving at the center
- After toileting or assisting with toileting and changing diapers
- After handling pets, pet cages or other pet objects
- Before eating, serving or preparing food
- After contact with bodily fluids or cleaning up spills
- Before and after administering medication, first aid or completing a medical procedure
- After taking off disposable gloves



Handwashing

From ODJFS Child Care Manual (5101:2-12-15.1)

Children shall be assisted as needed to wash hands:

- Whenever hands are visibly dirty
- After toileting
- Before eating food
- When returning inside after outdoor play
- Following contact with bodily fluids
- After handling pets, pet cages or other pet objects



Basic Precautions

From ODJFS Child Care Manual (5101:2-12-15.1)

- Always wear vinyl gloves during contact with blood or body fluids which contains blood*
- Dispose of bloody materials in a sealable, leak-proof plastic bag
- Place non-disposable items, such as clothing that contain blood, in a sealable, leak-proof plastic bag
- Clean contaminated surfaces with hot, soapy water, and then sanitize with an appropriate bleach solution or acceptable EPA hospital-rated disinfectant

* Note: It is advised that you always wear vinyl gloves if you may come in contact with draining infection, whether or not blood is present.



Diapering and Toilet Training

From ODJFS Child Care Manual (5101:2-12-15.2)

Diapering shall be handled in conformity with the following methods:

- Use disposable separation material on all changing surfaces (and discard after use)
- Provide disposable gloves for diapering
- Clean central diaper changing when visibly soiled and sanitize after each diaper change
- Send soiled children's clothing home without being rinsed in a sealed plastic container
- Dispose of soiled diapers in a plastic, lined receptacle that prevents hand contamination
- Always follow proper laundering procedures for cloth diapers



Managing Illness

From ODJFS Child Care Manual (5101:2-12-33)

- The center shall immediately notify the parent or guardian of the child's condition when a child has been observed with signs or symptoms of illness
- Notify parents, within the next day of center operation, when their child has been exposed to a communicable disease
- MRSA *is* a communicable disease



Managing Illness

From ODJFS Child Care Manual (5101:2-12-33)

Signs indicating need for isolation:

- Axillary Temp of $\geq 100^{\circ}$ F w/other sign of illness
- Diarrhea
- Untreated infected skin patches, unusual spots or rashes
- Stiff neck with elevated temp.
- Sore throat or difficulty swallowing
- Vomiting more than once or when accompanied by any other sign or symptom of illness
- Severe coughing
- Difficult or rapid breathing
- Yellowish skin or eyes
- Redness of the eye or eyelid, thick and purulent (pus) discharge
- Unusually dark urine and/or gray or white stool
- Evidence of untreated lice, scabies, or other parasitic infestation



Preventing Spread of Disease

From ODJFS Child Care Manual (5101:2-12-27)

- Provide proper training for all staff in the process of handwashing and diapering.
- Release employees who have a communicable disease or who are unable to perform their duties due to illness
- Refer to JFS 08087 “Ohio Department of Health Communicable Disease Chart” (rev. 04/2006) for appropriate management of suspected illnesses. Post in a location readily available to center staff and parents.
- Contact your local health department for information if a suspected communicable disease is not listed on the chart.

Other Resources

- www.HealthyChild.net (Healthy Childcare)
Current edition includes article about MRSA in a childcare setting.
See link on right.
- www.ohiopandemicflu.gov/publications
Download a number of ODH support materials, including handwashing and general prevention tips
- <http://www.odh.ohio.gov/alerts/mrsa1.aspx>
Everything you need to know about MRSA
- <http://www.epa.gov/oppad001/chemregindex.htm>
Information about the different classifications of EPA approved disinfectants and other valuable EPA information.



Healthy Child Care Ohio

- www.occrra.org/hcco.htm
For free training on health and safety issues, including handwashing and illness prevention
- jfs.ohio.gov/cdc/childcare/stm
For access to the child care manual and information on state child care regulations

