MRSA: Methicillin-Resistant Staphylococcus aureus
What is *Staphylococcus aureus*?

- *Staphylococcus aureus*, often referred to as “Staph”, are bacteria commonly carried on the skin or in the nose of healthy people.

- 25% - 30% of the population is colonized with Staph in the nose.

- Colonization refers to when bacteria is present but not causing an infection.

- Staph bacteria are one of the most common causes of skin infections in the United States.

- Sometimes Staph can cause an infection. Staph infections can be minor or serious, and are rarely fatal.
Minor Vs. Serious Staph Infections

- Minor: Will appear as a pimple, boil or skin rash
  - Usually treated without antibiotics.
  - Treated by using antimicrobials or antibacterials

- Serious: Surgical wound infections, urinary tract infections, bloodstream infections, pneumonia
  - Treated with antibiotics

Staphylococcus aureus
What is MRSA?

- Methicillin- Resistant Staphylococcus aureus is a type of Staphylococcus bacteria that is resistant to the beta-lactam type of antibiotics.

- Beta-lactams include methicillin and other more common antibiotics such as oxacillin, penicillin and amoxicillin.

- 25% - 30% of the population is colonized with Staph.

- 1% of population is colonized with MRSA.
Who is at-risk for Staph or MRSA Infections?

- Healthcare facility patients such as:
  - Hospital patients; nursing home patients and dialysis center patients

- Patients with compromised immune systems such as organ-transplant patients, HIV-positive patients, Chemotherapy patients.

- Community-Acquired situations such as Military personnel, college students, athletes, school-age children, and prisoners
Are Staph and MRSA infections common?

- Staph bacteria are common and are a common cause of pneumonia, surgical wound infections, and bloodstream infections.

- The majority of MRSA cases occur in healthcare facilities, however, community-acquired infections are becoming more common.

- 12% of clinical MRSA infections are community-associated, however, this varies by geographic region and population.
In What Settings Do MRSA Skin Infections Occur?

- MRSA skin infections can occur anywhere.
- Some settings have factors that make it easier for MRSA to be transmitted.
  - These factors, referred to as the 5 C's, are as follows:
    - Crowding,
    - Frequent skin-to-skin Contact,
    - Compromised skin (i.e., cuts or abrasions),
    - Contaminated items and surfaces,
    - Lack of Cleanliness.

- Locations where the 5 C's are common include schools, dormitories, military barracks, households, correctional facilities, and daycare centers.
What does Staph infection look like?

- Staph bacteria, including MRSA, can cause skin infections that may look like a pimple or a boil.

- The area may be red, painful or swollen.

- There may be pus or other drainage.
Where do Staph and MRSA Skin Infections Usually Occur?

- Staph and MRS skin infections commonly occur at:
  - Sites of visible skin trauma, such as cuts and abrasions.
  - Areas of the body covered by hair (e.g., back of neck, groin, buttock, armpit, beard area of men).
What should you do if you think you have a Staph or MRSA Infection?

- Make an appointment to see your healthcare provider or seek treatment in an Emergency Department.
Are Staph Infections treatable?

- YES! Most Staph and MRSA infections are treatable with antibiotics.

- If you are given an antibiotic, complete the entire course of antibiotics, even if you feel better or your skin infection appears better.
  - Complete the entire course of antibiotics unless your healthcare provider advises you otherwise.

- Many Staph infections can be treated by draining the pimple or boil and may not require antibiotics.
  - Drainage of a boil or an abscess should only be performed by a healthcare provider.
If you have Staph or MRSA, what can you do to prevent others from getting infected?

You can prevent spreading Staph or MRSA skin infections to others by following these steps:

- **Cover your wound:** Keep wounds that are draining or have pus covered with clean, dry bandages. Follow your healthcare provider’s instructions on proper care of the wound. Pus from infected wounds can contain Staph and MRSA, so keeping the infection covered will help prevent the spread to others. Bandages or tape can be discarded with the regular trash.

- **Clean your hands:** You, your family, and others in close contact should wash their hands frequently with soap and warm water or use an alcohol-based hand sanitizer, especially after changing the bandage or touching the infected wound.
If you Staph or MRSA, what can you do to prevent others from getting infected?

- **Do not share personal items:** Avoid sharing personal items such as towels, washcloths, razors, clothing, or uniforms that may have had contact with the infected wound or bandage.

- Wash sheets, towels, and clothes that become soiled with water and laundry detergent. Drying clothes in a hot dryer, rather than air-drying, also helps kill bacteria in clothes.

- **Speak to your doctor:** Tell any healthcare providers who treat you that you have or had a Staph or MRSA skin infection.
How can Staph and MRSA infections be prevented?

- Practice good hygiene:
  - Keep your hands clean by washing thoroughly with soap and water or using an alcohol-based hand sanitizer.

- Keep cuts and scrapes clean and covered with a bandage until healed.

- Avoid contact with other people’s wounds or bandages.

- Avoid sharing personal items such as towels or razors.
Prevention Tips!

Don’t give bacteria a free ride.

Washing your hands with soap and water is one of the best ways to prevent diseases.

www.cdc.gov/mrsa

Sharing isn’t always caring.

Sharing personal items like towels, razors, or tweezers can spread diseases.

www.cdc.gov/mrsa

Don’t open the door to infection.

Any opening in your skin increases the risk of infection.

Keep your cuts, scrapes, and scratches clean, dry, and covered!

www.cdc.gov/mrsa
Cleaning Recommendations

- Listed below are samplings of some products that meet the criteria for destroying the MRSA bacteria. Read all labels of cleaning supplies to determine other cleaning agents.

- Mr. Clean Antibacterial Multi-Surface spray states it kills MRSA.

- A bleach: water solution of 1:10 (3/4 cup bleach in 1 gallon of water) kills MRSA and is effective for bathrooms and locker rooms, *but this bleach solution only remains effective for 24 hours after mixing*, so should be discarded at the end of the day. The solution can be put in a spray bottle and the area sprayed with the solution and allowed to dry to kill MRSA.
Cleaning Recommendations

- A bleach: water solution of 1:100 (1 Tablespoon bleach in 1 quart of water) can be used effectively to clean areas less likely to be as contaminated (kitchens) as above.

- Hand soaps are effective in washing off the germs when used correctly. The important thing to remember is to wash your hands vigorously with warm soapy water for at least 15 seconds.

- Sani-Cloth Plus Hard Surface Disinfectant, Super Sani-Cloth Germicidal Disposable Cloths, Sani-Cloth HB, Sani-Dex ALC, and Vionex wipes kill MRSA.

- Hibiclens soap kills MRSA.

- Keep bleach and all other cleaning products away from children. Bleach should be used in a well ventilated area. Wear gloves when mixing the bleach solution.
Resources

- Centers for Disease Control and Prevention
  - CDC.GOV

- Mayo Clinic
  - MAYOCLINIC.COM

- Nassau County Department of Health
  - www.nassaucountyny.gov/agencies/Health/
Questions?

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