



MRSA

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Surveillance for Healthcare-Associated and Resistant Pathogens (SHARP) unit

Communicable Disease Division

Outline

- What is the SHARP unit?
- What is Staph?
- What is MRSA?
- MRSA transmission
- MRSA in the workplace
- Symptoms of MRSA
- Infection vs Colonization
- How to prevent spreading MRSA
- Do I need to report MRSA
- How do I keep myself safe?

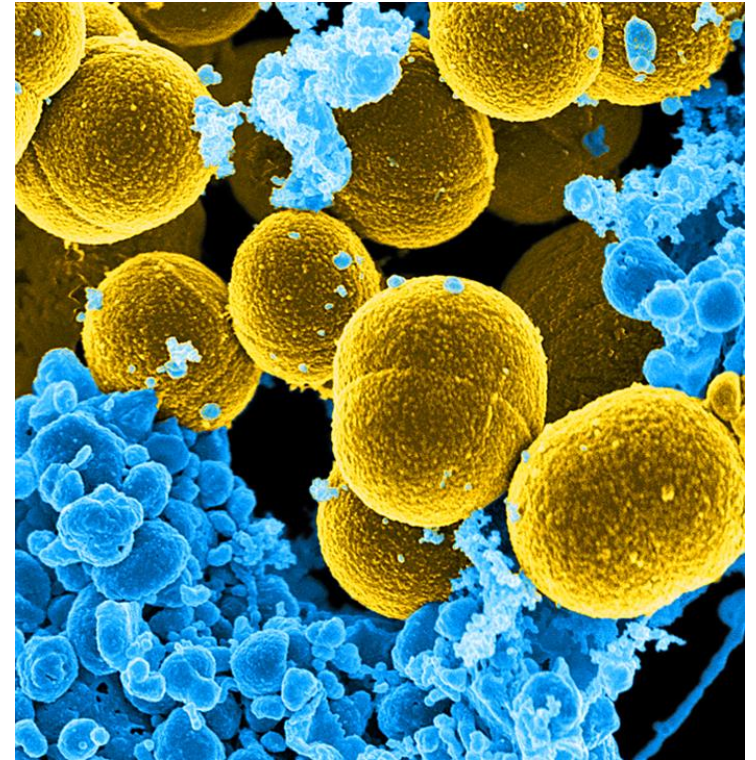
Surveillance for Healthcare-Associated and Resistant Pathogens (SHARP) Unit

- Objectives of the SHARP Unit:
 - Coordinate activities related to Healthcare-Associated Infection (HAI) surveillance and prevention in Michigan
 - Improve surveillance and detection of antimicrobial-resistant pathogens and HAIs
 - Identify and respond to disease outbreaks
 - Use collected data to monitor trends
 - Educate healthcare providers, state and local public health partners, and the public



Staphylococcus aureus

- Common skin bacteria
- 25% of people normally carry staph on their skin without having an infection
- Can cause
 - Skin infections
 - Food poisoning
 - Blood infection
 - Toxic shock
- Transmitted person to person
- Can survive on surfaces for prolonged periods



Methicillin-Resistant *S. aureus* (MRSA)

- 1940's – Penicillin-resistant *S. aureus* first recognized
- 1960's – Methicillin-resistant *S. aureus* first recognized
- 1970's – Multi-drug resistant *S. aureus* emerged
- 1980s – Major clinical and epidemiologic problem in hospitals
- 1990's – Endemic in many hospitals
- 2000 – 55%+ of all HAI isolates were MRSA
- Estimate as many as 100,000 persons hospitalized each year with MRSA infections
- 2 in 100 carry MRSA



MRSA

- Like staph infection, MRSA illness ranges from minor skin infections (pimples, boils), to bone infections, pneumonia, and life-threatening blood infections



Why is MRSA important?



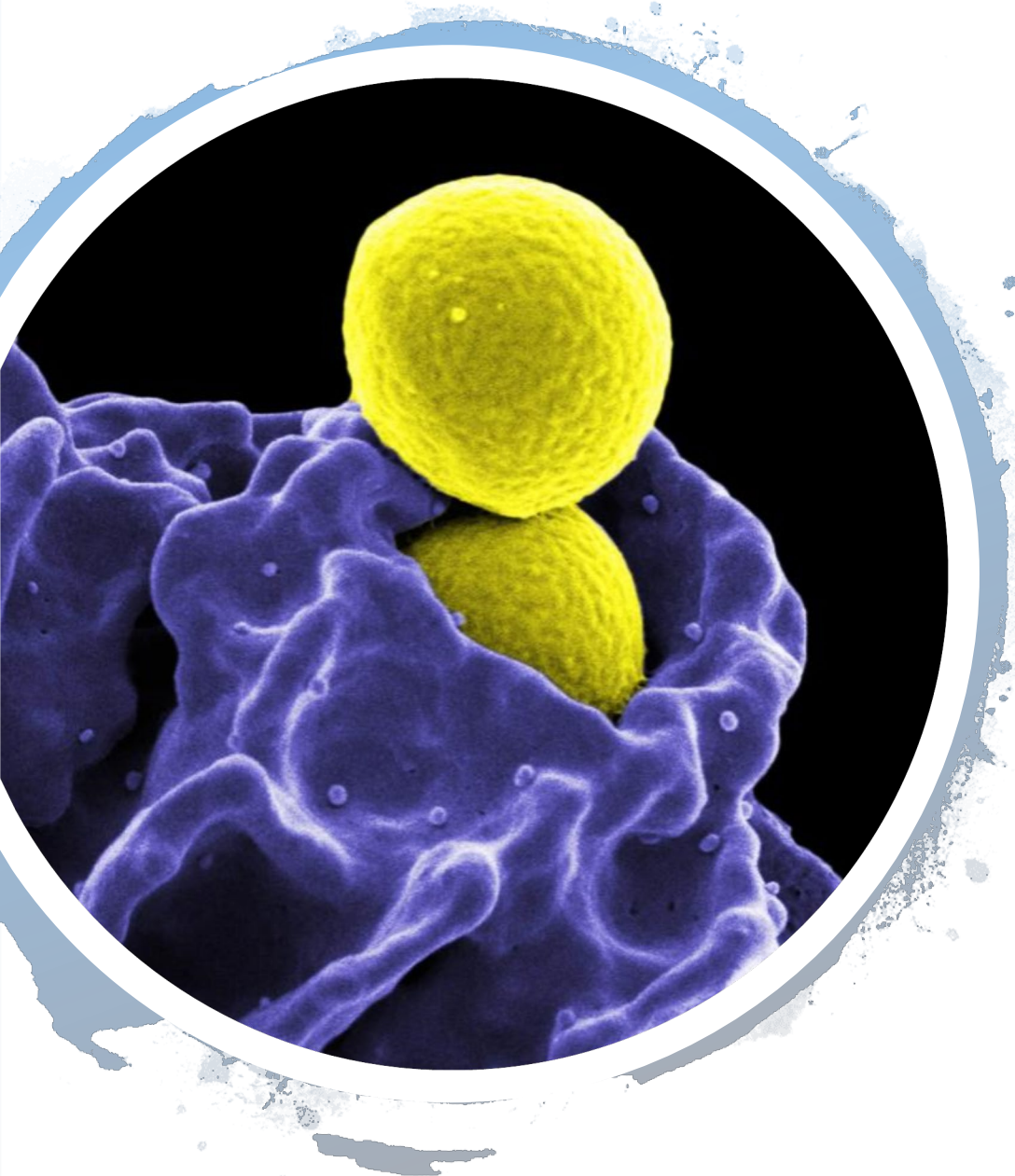
Adds to overall *S. aureus* infection burden



Represents failure to contain drug-resistant bacteria



Learning how to successfully control MRSA will have benefits that extend to other pathogens



MRSA- Transmission

- Most often spread to others by contaminated hands
- Skin and mucous membranes are effective barrier against infection
- Persons who are immunocompromised are vulnerable to infection

MRSA in the Workplace

- Sources of possible transmission in the work place
 - Infected persons
 - Contaminated surfaces
- MRSA outbreaks
 - Most frequently transmitted direct skin-to-skin contact



MRSA Risk Factors

- Close skin-to skin contact
 - Infected wounds
- Touching contaminated items and surfaces
- Inadequate personal hygiene
 - Shared personal items
- Openings in the skin like cuts or scratches
- Shared equipment
 - Needles
 - Athletes
 - Daycare facilities
- Hospitalizations, surgery, dialysis
- Indwelling medical devices
- Crowded living conditions
 - Correctional facilities
 - Dorms

MRSA Skin Infection- Symptoms

- Red
- Swollen
- Painful
- Warm to touch
- Drainage
- Fever



Photo Credit: Gregory Moran, M.D.



Accessed on pintrest 02/05/2019



Accessed 2/5/19 https://tattoos.lovetoknow.com/image/209051~mrsa_tattoo.jpg

Infection vs. Colonization

Infection

- Pathogen in host results in infection
- Immune response
- Physical response
- Sickness

Colonization

- Part of the body's normal flora
- No immune response
- No clinical signs or symptoms

Decolonization?

- Treat infection, not colonization
- Can create increased resistance of organism
- However- IF:
 - An outbreak cannot be controlled in a reasonable time with appropriate case therapy and infection control
 - An individual continues to re-infect self or others after appropriate therapy and implemented infection control measures
- Then decolonization is considered

MRSA Prevention and Control

- **Wash your hands often**
 - Soap and water
 - Alcohol-based hand sanitizer
- Keep wounds covered and clean!
 - Dry bandages
- Do not share personal items
 - Towels
 - Washcloths
 - Razors
 - Body art equipment



Disinfectants

- Any disinfectant effective against *Staphylococcus aureus* or staph
- Read the label to check for:
 - How to apply
 - Contact time
 - Rinse needed?
 - Dilution
 - Personal precautions prior to use
- Wash clothes, towels and sheets with water and laundry detergent

MRSA Reporting to Public Health

- Only outbreaks/clusters are reportable
 - 3 or more lab-confirmed, epi-linked cases
- Report to local health department
- Recommend that lab isolates be saved for genetic testing at MDHHS Bureau of Labs

Keep Yourself Safe

- Wash your hands!
- Wipe down high touch surfaces
- Cover wounds



What should you do?

- I have MRSA. Do I have to tell my coworkers?
- My employee has MRSA. Now what?
- Someone in my office has MRSA. HELP!



Thank you!

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