

# Have MRSA on Me: The Growing Challenge of Resistant Bugs in Public Safety

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# MRSA: Methicillin Resistant Staph Aureus

- A strain of staph that is resistant to the standard antibiotics used to treat this bacteria.



# Is this an Impending Calamity?

In 2006, a  
pandemic  
AVIAN FLU  
was going to kill  
us all!!!

In 2007, it was  
MRSA!!!!



# 2007 Media Panic

MRSA is at  
epidemic  
proportions and  
turns healthy folks  
into zombies  
immediately upon  
infection!!!!



# How Will I Recognize MRSA???

By it's  
appearance.....

Once you've seen  
MRSA, it's easy  
to recognize.....



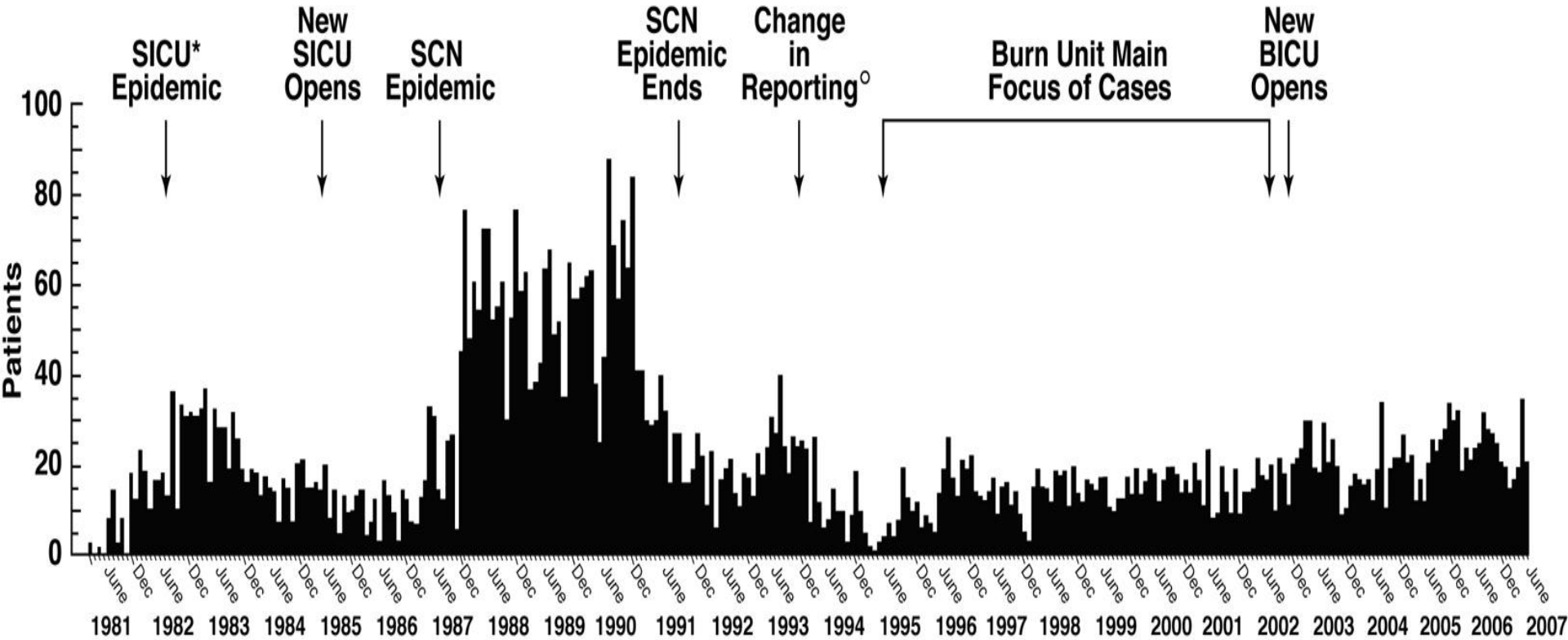


# Which of our patients have MRSA??

Best to  
assume: all  
of them.



# MRSA EPIDEMIC AT PHHS<sup>‡</sup>



\* Surgical Intensive Care Unit

† SpecialCare Nursery

° Chart review of all patients with MRSA + cultures. Patients counted only if MRSA acquired at PMH.

‡ This graph includes only hospital associated cases



# PMH Personnel MRSA Cultures

| Year    | Number | # + (%)   | Epidemic   |
|---------|--------|-----------|------------|
| 1981-82 | 447    | 23 (5.1%) | SICU       |
| 1985    | 34     | 7 (20.6%) | Ped. Wards |
| 1988-89 | 620    | 20 (3.2%) | SCN        |
| 1996    | 222    | 5 (2.3%)  | BICU       |
| Total   | 1323   | 55 (4.2%) |            |



EXIT

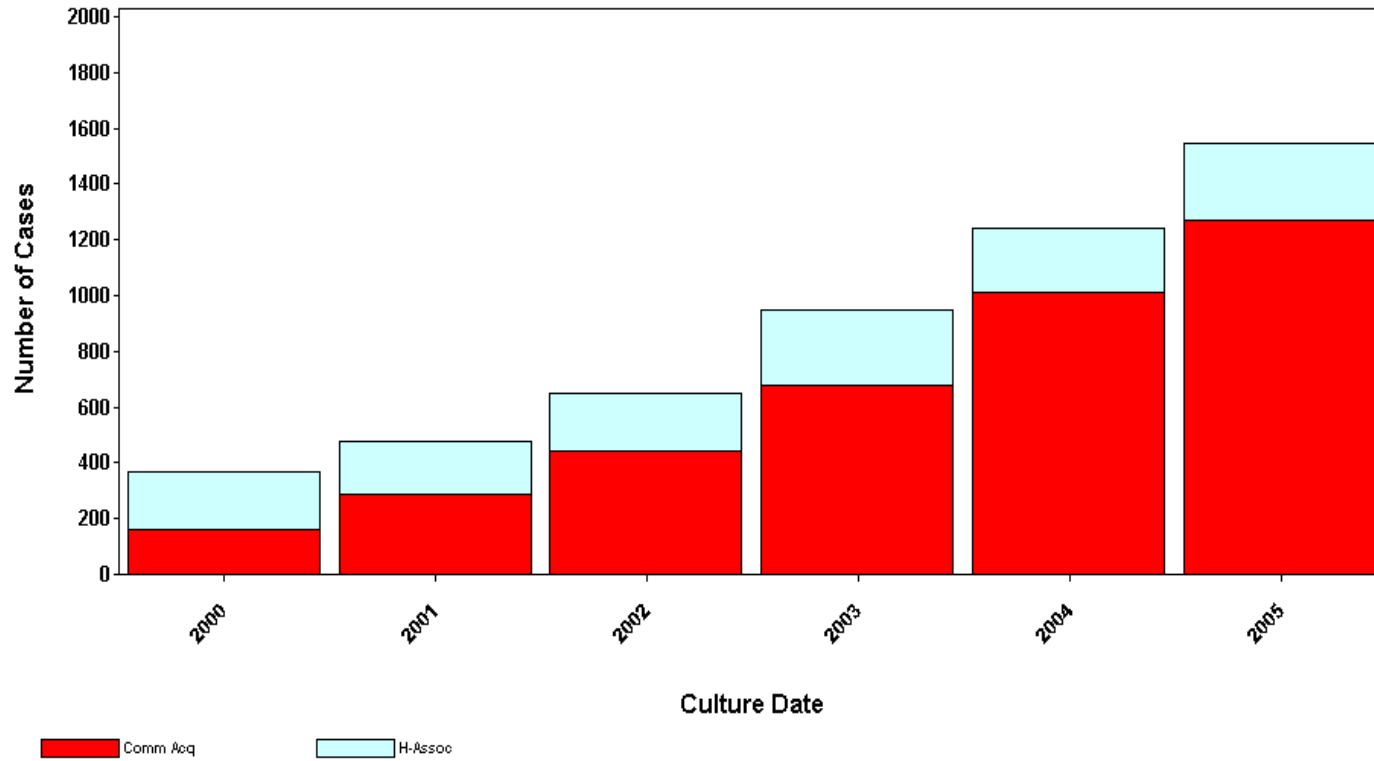


EXIT

While there are no studies, does anyone think it doesn't live here?



PARKLAND HEALTH & HOSPITAL SYSTEM  
Comparison of Community Acquired vs Hospital Associated MRSA by Year





# What is the Target Population of Those at risk of Acquiring MRSA?



- Kids
- Athletes
- Immunocompromised
- Diabetics
- Hospitalized patients
- Healthcare workers
- IVDU
- Paramedics, EMT's and firefighters
- Those living together in close quarters
- Those attending EAGLES X

# MRSA in Athletes

- Wrestling, rugby (forwards)
- Football risk factors (CID 2004; Vol. 39)
  - Player position (cornerbacks and wide receivers)
  - Turf burns
  - Body shaving
  - Sharing the whirlpool. Sharing unwashed bath towels, balms and lubricants.
- Bringing the epidemic to a close
  - Covering infected sites. Disinfecting the whirlpool. Use of dispensers of liquid soap with antibacterial properties.

# MRSA In Professional Football Players (NEJM Vol. 352:468)

- 2003 St. Louis Rams. Eight MRSA infections among 5 of the 58 players
- Associated with turf-abrasion sites, lineman or linebacker positions and higher BMIs
- MSSA recovered from 35/84 nasal swabs, whirlpools and taping gel
- MRSA strains from the epidemic had typical antibiotic resistance patterns, carried the PVL and SCC mec type IVa genes and by PFGE typing belonged to clone USA300-0114

# MRSA Decolonization

- Feasibility. Is it worthwhile to attempt?
- Five day regimen
  - Sulfatrimethoprim 1 ds tab BID
  - Rifampin 300 mg BID
  - Mupirocin ointment daily to the anterior nasal vestibule
  - Daily baths with chlorhexidene
- Test 3 or more days after completion of regimen by culture of the anterior nasal vestibule



# How do you treat MRSA in the Hospital?

Get rid of the  
offensive  
area???



# In the Prehospital Setting

- Treat patients exactly as you treat them now!
- Always use universal precautions.
- Wash your hands or use sanitizing agent before AND after EACH & EVERY Patient.
- Treat all wounds as if they are infected with MRSA.



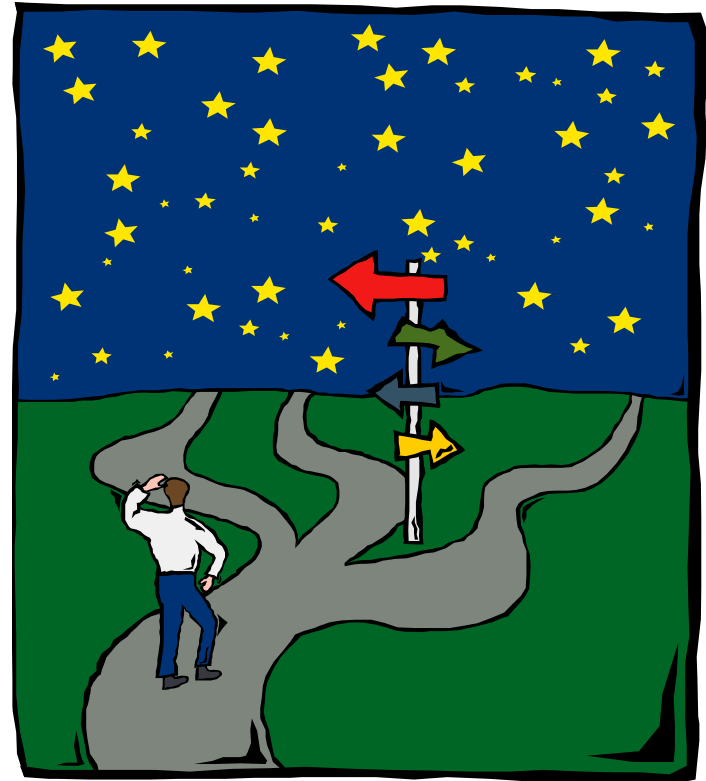
# Something smells not right!

- What about the fire/EMS station???
- Is there MRSA in these stations???
- What habits/traditions should we change in the living quarters of these stations?
- How do we eliminate MRSA from these stations if an outbreak of MRSA were to occur?



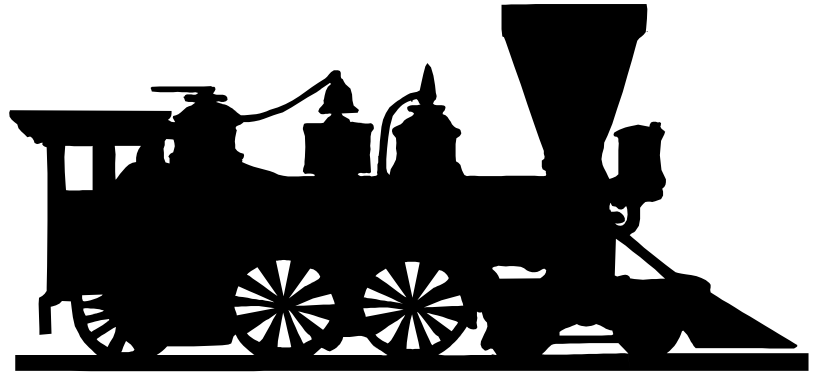
# Where Do We Go From Here?

- Don't panic!
- Increase infection control efforts.
- Be vigilant about hand washing.
- Change some casual habits in the fire/EMS stations.
- Visit the Myclens booth



# Training

- Train, train, train...
- Studies have shown that the more we remind folks of the need for universal precautions and hand washing, the better our compliance will be.



# The Safety Net for the US Healthcare System

In order to maintain the integrity of the safety net, we have to protect ourselves!



# Just A Thought...

We work in an inherently  
dangerous environment!

Some risks are obvious.

Some are not!

Protect your patients, your staff  
and **YOURSELF!!!**

Thank you for your attention!

