

Something So Little Causing Problems So BIG...MRSA

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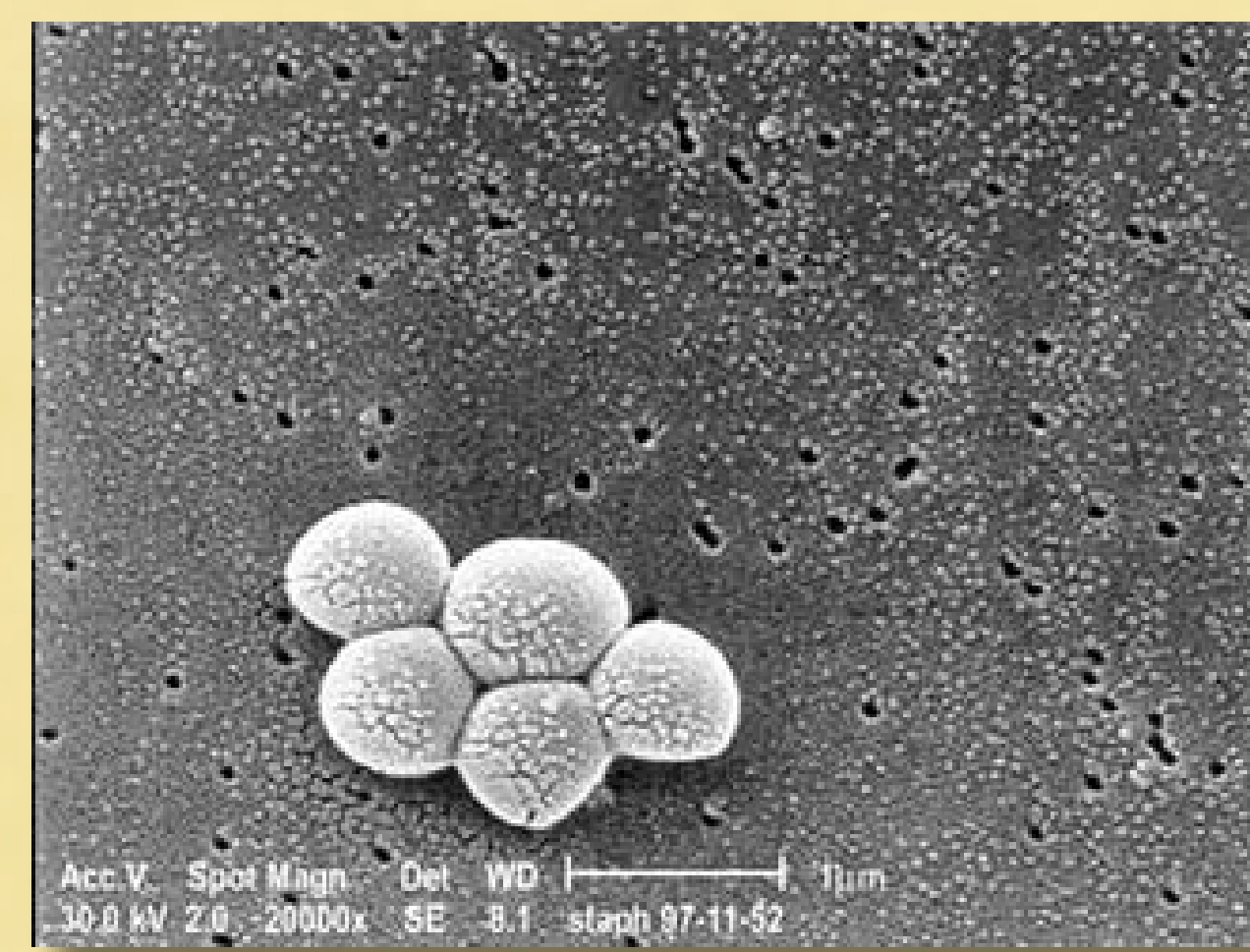
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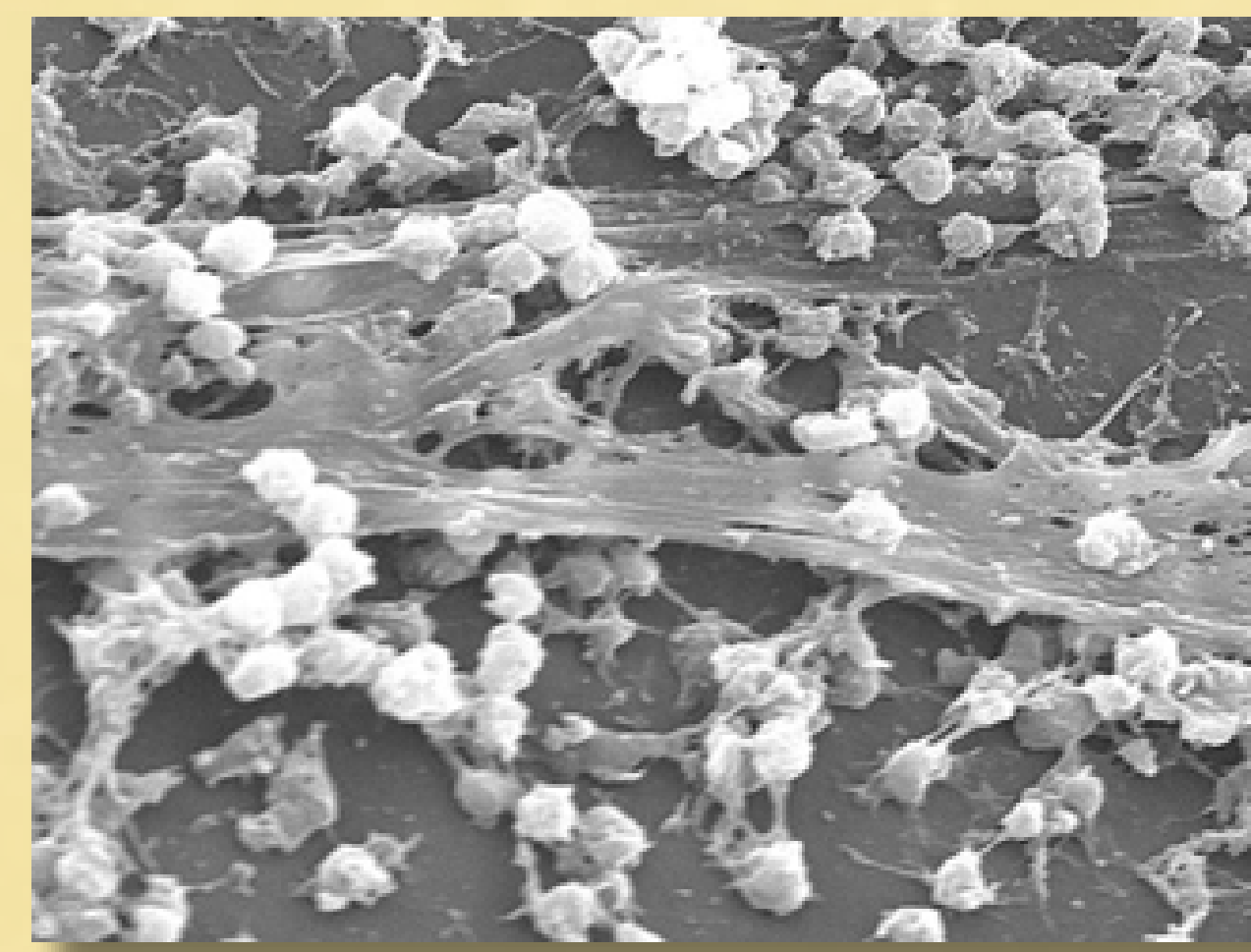
Something So Little Causing Problems So BIG...MRSA

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Staphylococcus Aureus



http://www.lib.uiowa.edu/hardin/md/pictures22/staph/617_lores.jpg



<http://phil.cdc.gov/phil/details.asp>

Lehigh Valley Health Network Regional Burn Center:

- 18 bed State of the Art, Regional Burn Center;
- 650 admissions per year; full time dedicated staff
- Constructed with:
 - Positive pressure rooms
 - Controlled heat and humidity
 - All private rooms
 - Anti-fungal paint
 - Seamless flooring
 - Limited surface areas for dust prevention
 - Encased blinds, no curtains
 - Encased wiring of electronics
 - 2 barcode scanners, in and out of patient room



May 2009 - September 2009

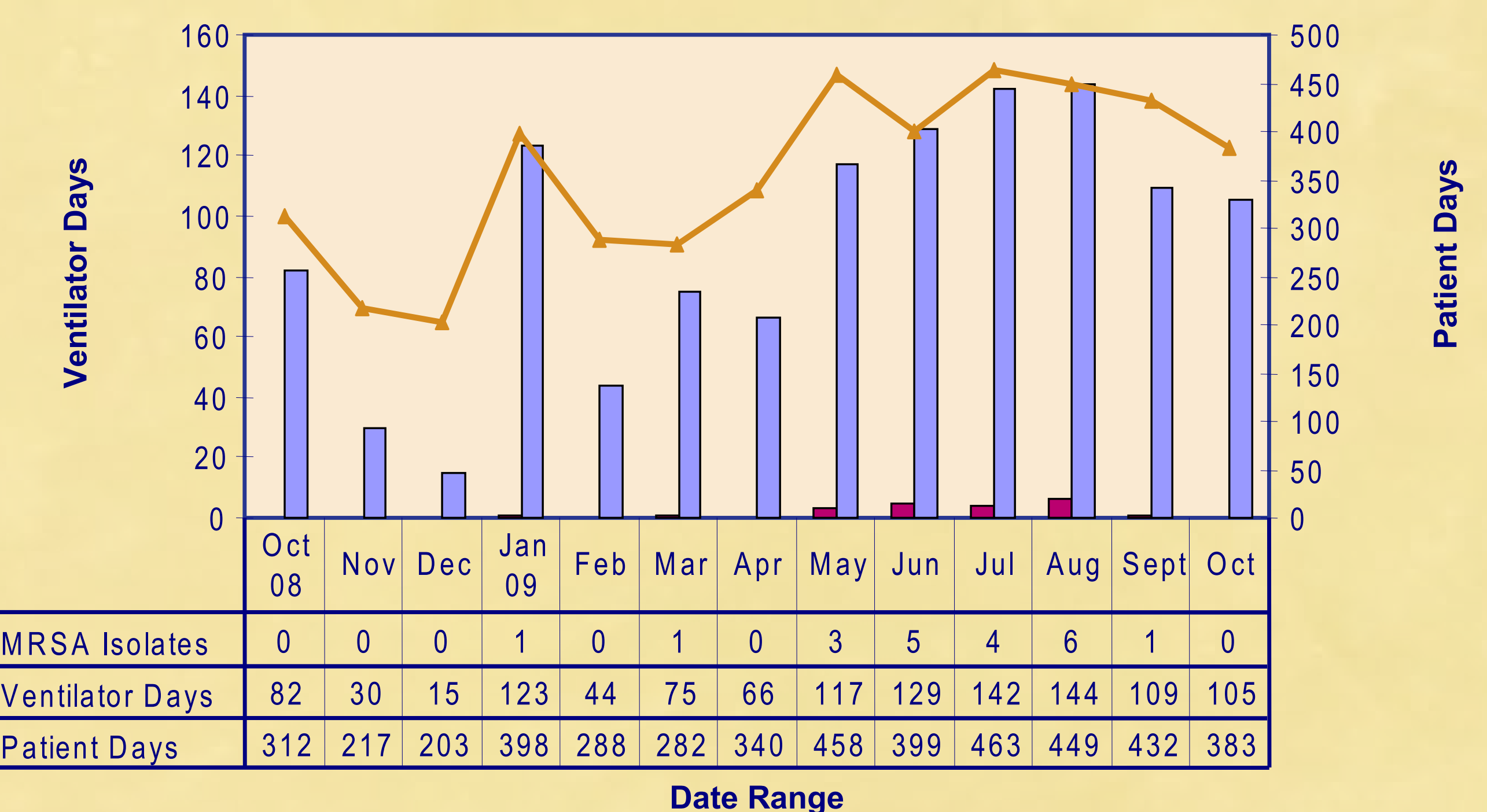
Surveillance:

- 18 patients identified with Healthcare-acquired Methicillin resistant *Staphylococcus aureus*
- 17 of 18 patients had negative nasal screens

Significance:

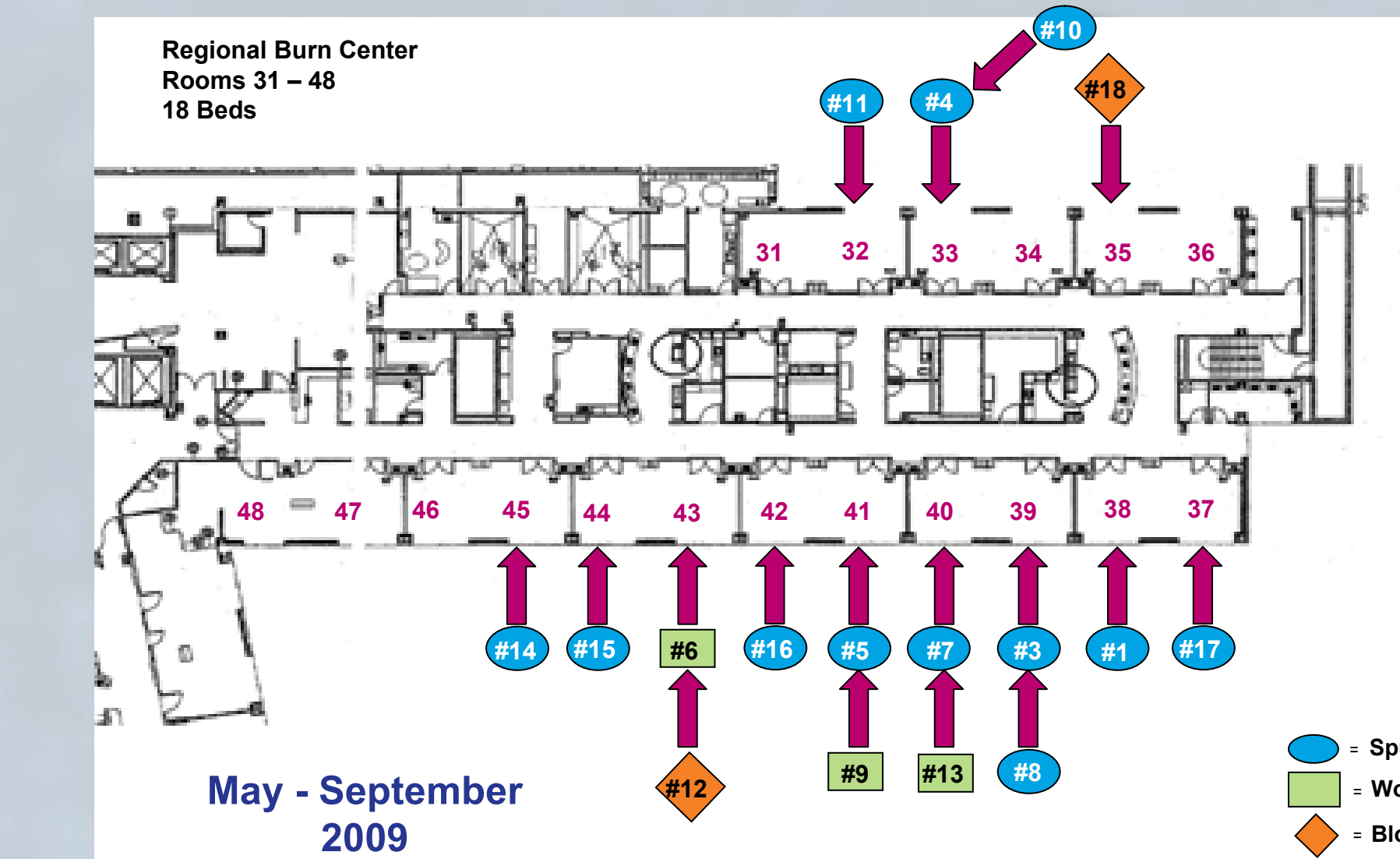
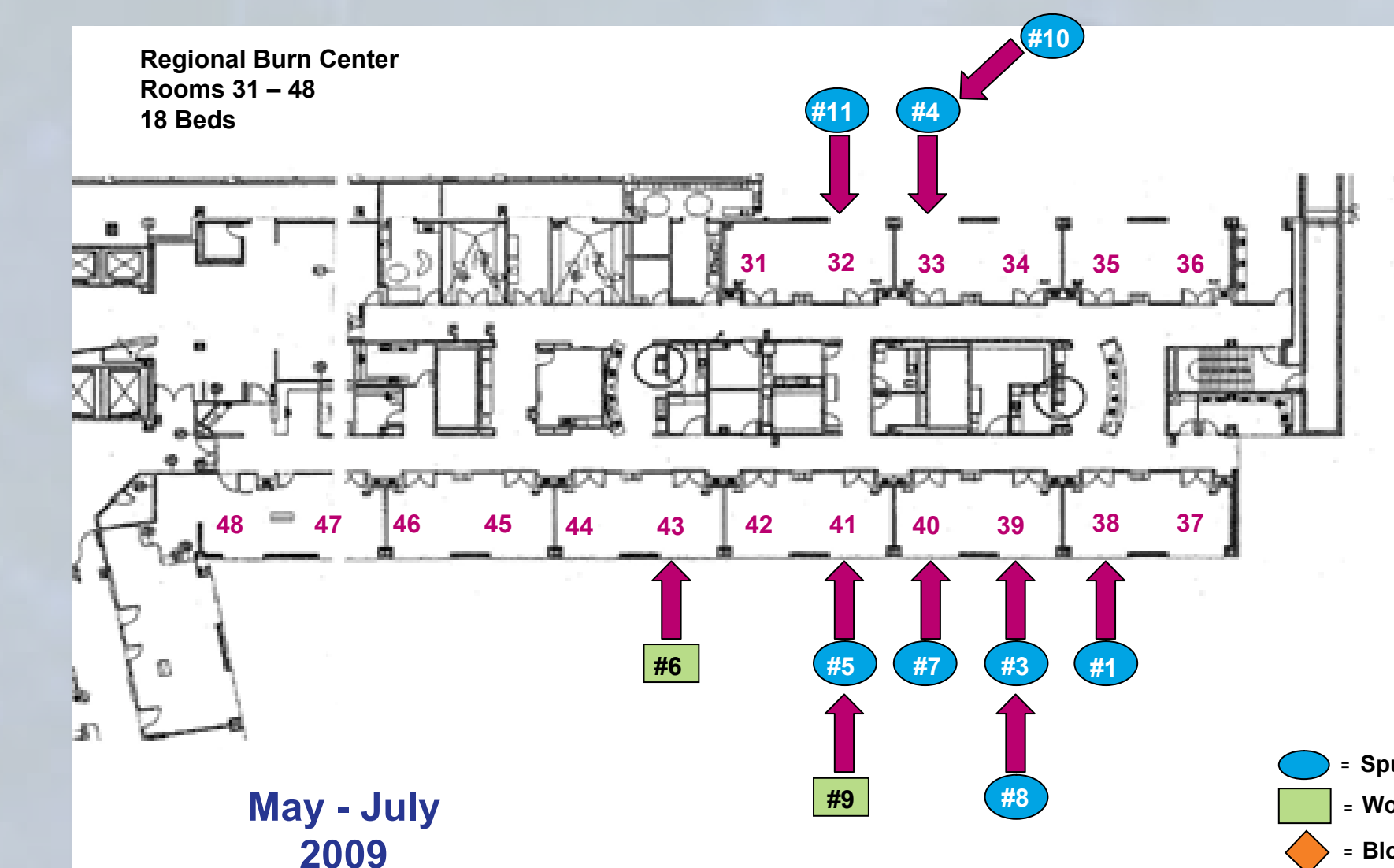
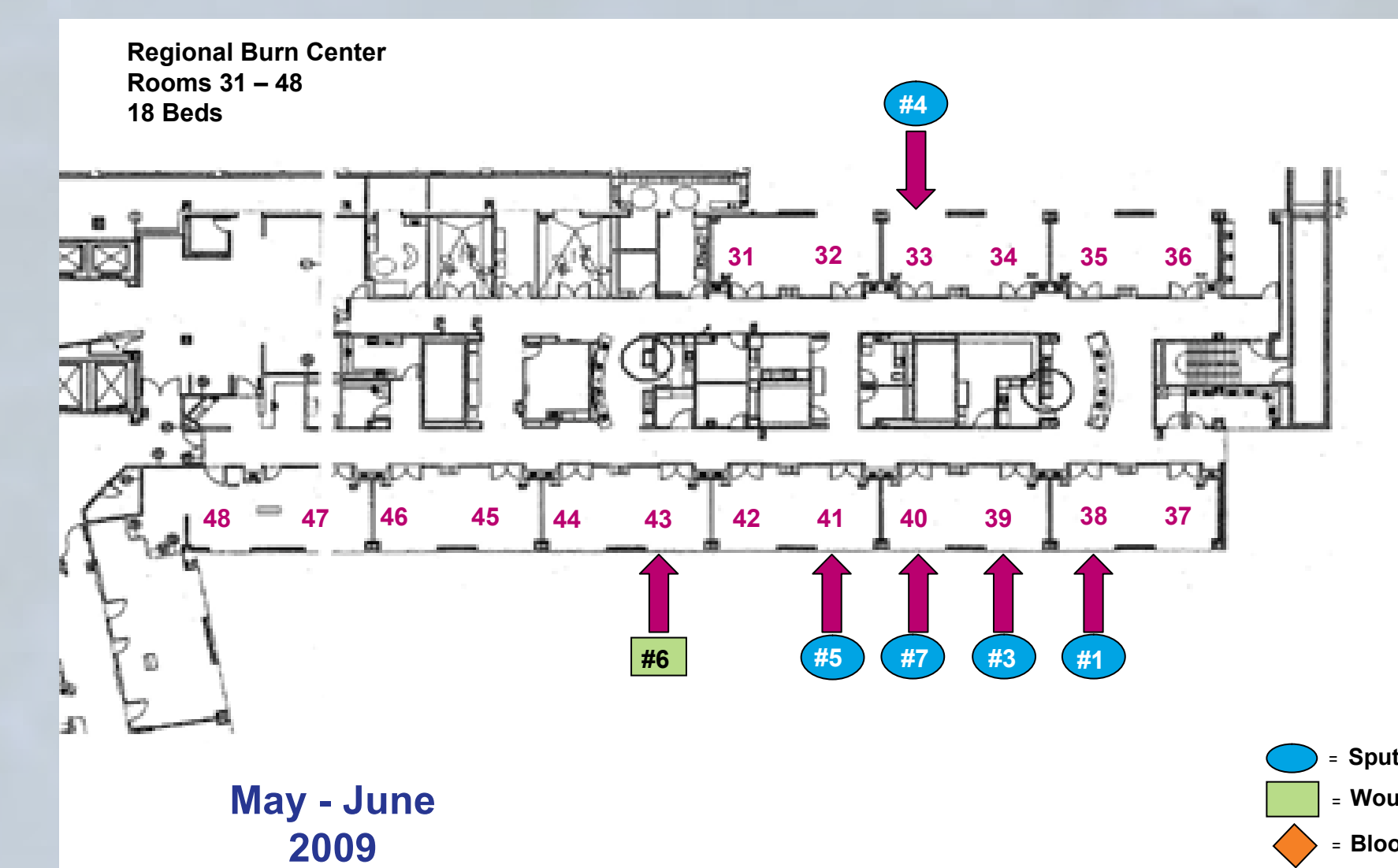
- 3 ventilator associated pneumonias
- 4 central line associated bacteremias
- 2 line sepsis
- 1 primary bacteremia

MRSA isolates Related to Regional Burn Center Acuity
October 2008 - October 2009



Action Plan:

- Cultures from patients and environment sent for pulse field gel electrophoresis
- Bronchoscope cultures obtained
- Burn operating room cultures obtained
- Healthcare worker screening conducted
- Monthly performance improvement monitoring and updates



Results:

- 8 patients / 9 isolates submitted for testing
- 1 patient had 2 different MRSA strains
 - 1 matched another patient
- 8 out of 178 Healthcare workers found to be positive for MRSA (4.50%)
- 3 Healthcare workers matched 3 patients

Healthcare Worker:

- Confidential screening
- Positive MRSA screen
 - Mupirocin Ointment for 5 days
 - Chlorhexidine body wash
 - No work restrictions
- Unit scrub attire provided to ancillary team members
- Cover gowns required outside unit
- Observation of staff and personal accountability
- Mandatory education for multidisciplinary team



Process:

- Hand hygiene compliance
- Dressing change and glove change with each site
- Ventilator circuits changed weekly on affected patients
- Ventilator circuit breaks minimized
- Patient decolonization on admission
- Trash / Linen disposal process altered
- Plastic barrier for portable x-ray plates and barcoding scanners



Environment:

- Environmental cleaning with single use system utilizing a bleach product
- Hand sanitizer and gloves placed within patient rooms
- Personal protective equipment required in contact isolation rooms
- Traffic control enforced
- Ultraviolet disinfection of rooms after ten step cleaning process

