15-22 CA-MRSA

65 Evaluation of a treatment algorithm for Community-Associated Methicillin-Resistant *Staphylococcus aureus* (CA-MRSA) Skin Infections in the Emergency Room

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Background: After an increase in the number of patients presenting to our emergency room (ER) with CA-MRSA skin infections, a treatment algorithm was developed to facilitate patient care.

Objective: To retrospectively review cases of patients with CA-MRSA skin infections presenting to the ER after a treatment algorithm was implemented.

Methods: All patients with CA-MRSA skin infections presenting to the ER from October 2005 to October 2006 were reviewed. In addition, all patients that received prescriptions from the ER for minocycline for these 12 months were also reviewed. Patients who did not meet the CDC criteria of CA-MRSA were excluded. Data collected included demographics, chief complaint, culture results, antibiotic therapy and outcomes.

Results: Electronic records for 41 patients (3 women) were reviewed. Average age was 49 years. Most lesions (71%) were in the upper body. Only eleven patients received a beta-lactam on the first visit to the ED (27%) compared to over 85% before algorithm implementation. Nine of these eleven patients were not considered high risk for MRSA based on the algorithm. Seven of the 11 patients were changed to anti-MRSA agents after cultures results were available and the other 4 patients had resolution of infection even when not prescribed an antibiotic active against CA-MRSA. These 4 patients had incision and drainage of lesions on initial visit. No patients were admitted to the hospital on the first episode. Forty patients reported initial lesions improved or healed and one patient was lost to follow up. A total of 16 patients (39%) were re-treated for MRSA infections, at least once, a median of 3 months after the initial episode. Before the algorithm was in place, only half of the patients were getting cultured in the ER on the first visit and several were admitted for IV vancomycin therapy. About 18% of patients prescribed minocycline were not cultured; however, they were classified at risk for CA-MRSA. Nine percent of patients prescribed minocycline had methicillin-sensitive Staphylococci isolated from wounds instead of MRSA.

Conclusions: CA-MRSA infections are increasingly common. A treatment algorithm increased the number of patients having cultures performed on the original visit to the ER and most that qualified for empiric CA-MRSA treatment received it on the initial visit. A treatment algorithm can facilitate timely treatment of patients with CA-MRSA and may decrease the number of hospital admission for IV antibiotics. Over treatment for CA-MRSA is possible but appears warranted when over 90% of the *S. aureus* isolates from the ER suspected to be MRSA, were in fact MRSA.

66 The Epidemiology of Methicillin-resistant *Staphylococcus aureus* (MRSA) at a University Hospital in a Rural State

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Background: In urban areas, the prevalence of USA300 has increased dramatically among persons with community-associated MRSA (CAMRSA) infections and is emerging among nosocomial MRSA (NMRSA). Fewer data are available from rural areas. In addition, investigators have not assessed the molecular epidemiology of community-onset healthcare-associated MRSA (COHAMRSA) infections.

Objective: To study the epidemiology and molecular epidemiology of nosocomial MRSA (NMRSA), CAMRSA, and COHAMRSA infections.

Methods: We examined medical records for 194 consecutive patients (pts) evaluated for MRSA infection at UIHC between 10/21/2004 and 9/10/2005. MRSA were typed by pulsed field gel electrophoresis (PFGE). SCCmec typing and Panton Valentine Leukocidin (PVL) gene detection were performed by polymerase chain reaction (PCR).
An infection was defined as NMRSA if signs/symptoms developed > 48 hours after admission, COHAMRSA if community-onset but the pt had hospital, long-term care facility, antimicrobial, dialysis or other healthcare (HC) exposure in the prior year, and CAMRSA if community-onset and pt had limited or no HC contact.

Results: Of 194 infections, 64 (33%) were NMRSA, 47 (24%) were CAMRSA, and 83 (43%) were COHAMRSA. The table shows the distribution of the USA types for 131 isolates available for typing.

	NMRSA	COHAMRSA	CAMRSA	Totals
USA100	32 (80%)	35 (61%)	9 (26%)	76
USA300	5 (13%)	19 (33%)	20 (59%)	44
USA400	1 (3%)	2 (4%)	4 (12%)	7
USA other	2 (5%)	1 (2%)	1 (3%)	4
Totals	40	57	34	131

The median age was 25.5 years for pts with CAMRSA infections and 46 years for pts with either NMRSA or COHAMRSA infections. Pts with NMRSA infections were significantly more likely than those with COHAMRSA infections to have: 1) had surgical procedures 2) used antipseudomonal penicillins, metronidazole, and vancomycin; 3) treatment with medical devices (i.e., ventilators; urinary and central venous catheters) in the prior year. In contrast, pts with NMRSA infections and pts with COHAMRSA infections were equally likely to have: 1) been admitted from a LTCF or another hospital; 2) had prior admissions to the UIHC or an outside hospital; 3) had prior exposure to any antimicrobial agents. Compared with pts who had NMRSA infections, pts with either CAMRSA or COHAMRSA infections were significantly less likely to have an MRSA bloodstream infection. Skin and soft tissue infection was more common among pts with CAMRSA infections (51%) than among pts with COHAMRSA infections (23%), or pts with NMRSA infections (6%) ($p < 0.01$ for all comparisons).

Conclusions: At present, USA300 rarely causes NMRSA infections but causes 33% of COHAMRSA and 59% of CAMRSA infections seen at the University of Iowa. The epidemiology of COHAMRSA shares features with both NMRSA and CAMRSA. Therefore, the emergence of USA300 among COHAMRSA greatly increases the risk for repeated introductions of USA300 into the HC environment.

67 The Prevalence of Community-Associated Methicillin-Resistant Staphylococcus aureus (CA-MRSA) Colonization among End-Stage Renal Disease Patients

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Background: Colonization with CA-MRSA has been associated with increased subsequent infections compared with other strains of S*taphylococcus aureus* (SA*)*. We have documented the emergence of CA-MRSA strains causing infections among dialysis patients. The frequency of CA-MRSA colonization among dialysis patients is unknown.

Objective: To determine the prevalence of CA-MRSA colonization among dialysis patients.

Methods: All dialysis patients admitted to our institution during November 2006 were eligible for the study. Nasal cultures were performed on all patients within 72 hours of admission and rectal swabs were performed on all who approved. Patient information collected included demographics, underlying conditions, previous hospitalizations and antibiotic use. Isolates were analyzed for SA growth using colony morphology, catalase and coagulase production. All *SA* isolates were analyzed for methicillin-resistance. All MRSA isolates had staphylococcal cassette chromosome (SCC) *mec* typing and analysis for Panton-Valentine Leukocidin (PVL) genes using PCR.

Results: A total 130 dialysis patients were admitted from 11/01/2006 to 11/30/2006. Ten were excluded (two refused, four were unable to consent and four were discharged prior to contact). All but one patient had been hospitalized within the past year for an average of 5.4 admissions per patient; 52.5 % were female. Five (4.2%) had been admitted for SA infection. A total of 40 (33.3%) patients had nasal colonization with *SA,* including 26 (65%) with MRSA and 14 (35%) with MSSA. Colonized patients were older (63.2 ± 2.6 vs. 54.8 ± 2.0 years; mean ± SE; t-test p = .012) and 85% were diabetic (no SA, 50.0%; Chi Square p < .0005). Of 15 patients who consented to rectal cultures, the two (13.3%) colonized with *SA* also had concomitant nasal colonization. Among the 26 MRSA isolates, 16 (61.5%) were SCC *mec* type II, 7 (26.9%) were type IV and 3 (11.5%) were untypable. All SCC *mec* type IV isolates carried the gene for PVL. No differences in any collected patient information were detected when MRSA-colonized patients were compared to MSSA-colonized patients. In addition, there were no differences seen among the patients colonized with SA isolates that were SCC *mec* type II versus type IV.

Conclusions: Dialysis patients colonized with MRSA were older and more likely to have diabetes mellitus compared with those colonized with MSSA. Among the patients colonized with MRSA, a significant number were colonized with typical CA-MRSA strains (SCC *mec* type IV and PVL positive). There were no differences in the underlying patient characteristics among those colonized with CA-MRSA isolates compared with other strains.

68 Community-Acquired Methicillin Resistant *Staphylococcus aureus* (CA-MRSA) in a Women's Collegiate Basketball Team

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Background: CA-MRSA infections are becoming increasingly frequent, and participation in organized sports is a well recognized risk factor for colonization and infection.

Objective: To present a case of CA-MRSA infection in a female basketball player and describe the results of team surveillance testing

Methods: Clinic charts were reviewed and the basketball team underwent testing for colonization, with positive cases receiving nasal mupirocin. All team members underwent repeat surveillance testing.

Results: In July 2006 an 18 year old healthy female basketball player presented with a painful, pruritic 3 x 4.5 cm erythematous papule on the left shin. She was initially treated conservatively, but returned two days later with increasing pain and enlargement of the lesion to a 3 x 6 cm furuncle. She was then placed on cephalexin and instructed to use warm compresses. Seven days later, she returned with minimal change in her exam, except that her lesion had started spontaneously draining. At that time a culture of the lesion was taken and the patient was empirically placed on trimethoprim-sulfamethoxazole. Her culture subsequently grew MRSA and her lesion responded to the change in antimicrobial therapy with complete resolution at follow up less than one month later. The entire basketball team underwent testing for MRSA colonization. Of the thirteen players tested, 4 players were nasal culture positive (including the player with active infection). All of these players underwent decolonization with nasal mupirocin, and received counseling on prevention of transmission. Interestingly, another player who tested positive had a history of recurrent skin and soft tissue infections and had a cutaneous abscess that was not cultured

shortly before she was found to be colonized. Pulsed field gel electrophoresis revealed that both players were colonized with the USA 300 CA-MRSA strain. The two other colonized players had unrelated MRSA isolates. Three months later, repeat nasal screening cultures revealed that all players were negative and no additional infections were identified.

Conclusions: This investigation revealed several relatively unique features: (1) this CA-MRSA cluster involved female athletes (over 90% of previously described cases have been in male athletes), (2) most outbreaks have involved sports with more intense body contact and/or skin injury (e.g., wrestling and football), and (3) multiple MRSA strains were involved.

69 Increase in Burden of Skin and Soft Tissue Infections (SSTI) as Measured by Emergency Department (ED) Visits, 23 Hour Observations and Ambulatory Surgical Center Visits, Tennessee (TN) 2000-2004

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Background: Community-associated methicillin-resistant *Staphylococcus aureus* (MRSA) accounts for a large and increasing proportion of SSTI.

Objective: To describe the changing burden of SSTI in Tennessee.

Methods: We evaluated outpatient discharge data collected by the Tennessee Department of Health (TDH), Division of Health Statistics. This includes data from all emergency department visits, outpatient surgeries, and 23-hour observations, from all licensed healthcare facilities located in TN. Only TN resident visits were counted. Up to 9 ICD-9 codes were coded for each visit. Population estimates derived from direct methods were also provided by the TDH, Division of Health Statistics and used as denominators in rate calculations of different types of SSTI visits (e.g., cellulitis/abscess [CA], carbuncle/furuncle [CF], impetigo) per 100,000 person-years for 2000-4. If a person had a diagnostic code for both CA and CF, they were classified as CF. We also calculated rates of the diagnosis of MRSA with any SSTI, CA, CF and impetigo. In addition we determined the proportion of patients with SSTI who also had diabetes (DM).

Results: In 2004, there were 1,207 SSTI-related visits/100,000 population. This represents a 2 fold increase in SSTI compared to 2000 (Table 1). The number of visits for any cause increased 1.2 fold in the same time period. There was a 2-fold increase in CA and a 3-fold increase in CF. The diagnosis of MRSA with CA or CF increased 16-fold. In contrast, SSTI caused predominately by non-Staphylococcal pathogens (e.g., impetigo) experienced only a 1.4 fold increase. CA and CF rates at some body locations (e.g., buttocks) were greater than others (e.g., leg), and greater among females than males. The proportion of patients with SSTI and DM remained constant (6.6% vs. 6.4%) between 2004 and 2000 respectively.

Conclusions: Rates of MRSA with SSTI are probably significantly underestimated, as cultures may not be performed, and if performed, may not be recorded because patients are discharged before results are available. Nevertheless there has been a 16-fold increase in the number of visits to EDs with a recorded diagnosis of MRSA and CA or CF over a 5-year period. The burden of SSTI in EDs is increasing, driven

by a dramatic increase in community-associated MRSA.

Table 1

Visits per 100,000	2000	2004	Prevalence ratio (2004/2000)
All visits	42,621.9	50,777.1	1.2
SSTI	565.1	1,207.2	2.1
CA	439.5	958.8	2.2
CF	13.9	42.2	3.0
Impetigo	34.5	48.2	1.4
MRSA with SSTI	0.4	5.1	13.7
MRSA with CA or CF	0.3	4.6	16.5
MRSA with Impetigo	0.0	0.05	--
CA: Buttock	13.1	74.2	5.6
CA: Leg	111.5	267.9	2.4
CF: Buttock	1.9	7.9	5.8
CF: Leg	2.3	7.8	3.4
CA or CF Buttock in Females	15.3	95.4	6.2
CA or CF Buttock in Males	14.7	67.9	4.6

70 MRSA Infections in Athletics: Perceptions and Practices of Certified Athletic Trainers

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Background: Methicillin-resistant *Staphylococcus aureus* (MRSA) infections have increasingly been reported among athletes. Certified Athletic Trainers (CATs) need to recognize, manage, and prevent these infections.

Objective: To estimate the number of MRSA infections in athletics and assess perceptions and practices of CATs regarding these infections.

Methods: A web-based survey was administered by the National Athletic Trainers' Association (NATA) to member CATs for three weeks in fall 2006 via the NATA Web site. Only one response per facility was allowed.

Results: Of the 364 respondents the majority (59%) were male, had a median of 9 (range 0-35) years of experience, and practiced in high school (56%), college (35%), professional (4%), and clinical (19%) athletic settings. Most (92%) reported treating an athlete for a skin infection caused by any organism (median treated in past 12 months=7.5, range 1-100), whereas 53% reported treating an athlete for an MRSA skin infection (median=3, range 1-50). More CATs reported having treated MRSA infections in male (m) than in female (f) athletes (86% v. 35%, $p<0.01$) mostly in football (65%), basketball (21%), and wrestling (20%). Infections occurred on the lower leg (38%), forearm (31%), and knee (29%). For athletes with suspected MRSA skin infections, CATs reported applying a bandage (97%) or warm compress (84%), and cleaning the infection site (83%). They referred athletes to another healthcare provider to prescribe a systemic (98%) or topical (76%) antibiotic, obtain a nasal (97%) or wound (96%) culture, or perform incision and drainage (92%). CATs were more likely to wash their hands with soap and water or use an alcohol-based hand sanitizer after seeing an athlete than before (both $p<0.01$); during athletic events CATs were more likely to use an alcohol-based hand sanitizer between athletes than to wash their hands with soap and water ($p=0.002$). CATs were more likely to believe that MRSA is a problem

nationally than it is in their practice ($p<0.01$) and that their athletes are at risk for an MRSA infection than they thought their athletes would believe ($p<0.01$).

Conclusions: CATs, particularly those caring for male athletes participating in contact sports, may encounter patients with MRSA infections, and their practices and perceptions related to MRSA are varied. Targeted educational interventions for CATs and athletes are needed to increase awareness and improve prevention and management of these infections.

71 Nosocomial Transmission of Community-Associated Methicillin Resistant *Staphylococcus aureus (USA300)* in a Canadian Burn Unit: Cross-Border Trading

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Background: Community-acquired methicillin resistant *Staphylococcus aureus* (CA-MRSA) has become associated with skin and soft tissue infections and necrotizing pneumonia. In Canada, documented transmission of CA-MRSA has been limited to specific populations, including drug users, incarcerated persons, and the homeless. In 2006, an outbreak of hospital-associated CA-MRSA (USA300 clone) occurred in a Canadian, 14-bed, regional referral, adult burn unit.

Objective: To document the emergence of CA-MRSA (USA300 clone) as a healthcare-associated pathogen in a Canadian burn unit.

Methods: Active, prospective surveillance methods (admission, prevalence, and discharge screening, review of clinical isolates, and patient history) were used to identify MRSA colonization and/or infection. Pulsed-field gel electrophoresis (PFGE) and polymerase chain reaction (PCR) were used to confirm the phenotype and genotype of the MRSA isolates. Precautions were used for all direct patient care regardless of MRSA status and included use of mask, eye protection, gown, and gloves. All burn unit patients are accommodated in single rooms. The measures implemented to prevent and control transmission were MRSA admission and discharge screening, weekly prevalence screens during periods of increased MRSA patient load and/or periods with nosocomial transmission and close monitoring of cleaning protocols.

Results: In 2006, 17 patients with MRSA were identified in our burn unit. Ten (59%) MRSA isolates resembled the CA-MRSA genotype, (matching the CDC type strain USA-300 clone) and were found by PCR to have SCCmec type IV and to have the Panton-Valentine leukocidin (PVL) gene. Six (35%) were nosocomially acquired and all 6 were the CA-MRSA strain. The mean age of the patients with CA-MRSA was 41, and the mean total body surface area burned was 30%. The nosocomial cases were on the unit a mean of 29 days prior to their first MRSA positive culture. The 4 cases who acquired CA-MRSA prior to admission were transferred from healthcare facilities in the United States. CA-MRSA infection developed in 8 (80%) and presented as wound infections, graft failures and/or aggressive pneumonia. There have been no new cases or further transmission of CA-MRSA for the last 2 months.

Conclusions: We have established that CA-MRSA (USA-300 clone) has emerged as a significant healthcare-associated pathogen in our Canadian burn unit. Nosocomial transmission was documented, but routine use of aggressive control measures including screening and meticulous attention to hand hygiene and contact precautions contributed to controlling transmission. MRSA typing using PFGE accurately identified cases of nosocomial transmission and acted as an indicator of compliance with infection prevention and control measures.

72 The Changing Susceptibilities of Methicillin-Resistant *Staphylococcus Aureus* at a Midwestern Hospital: The Emergence of “Community-Acquired” MRSA

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Background: Community-acquired methicillin-resistant *Staphylococcus aureus* (CA-MRSA) is an emerging pathogen, with increasing prevalence compared to traditional healthcare-associated MRSA (HA-MRSA).

Objective: Although the emergence of CA-MRSA has been well described, few studies have reviewed long-term hospital wide data, comparing the prevalence of CA- and HA-MRSA.

Methods: All cultures positive for MRSA from 1996-2005 were abstracted from the hospital microbiology database. The first positive culture per patient per visit with antibiotic sensitivities was included. MRSA were categorized as community-acquired if susceptible to both clindamycin and trimethoprim/sulfamethoxazole (TMP/SMX), otherwise they were considered healthcare-associated. Additional data including gender, age, race, zip code of residence, and time to culture were collected from the hospital informatics database. Patient's home zip code was linked to median household income from 1999 US census data, and low socioeconomic status (SES) was defined as income >$25,000. Chi-square for trend and linear regression analyses were performed.

Results: The annual prevalence of CA-MRSA has increased significantly in the past 10 years [43 (8.9%) of 507 MRSA cultures in 1996 to 672 (39.6%) of 1697 MRSA cultures in 2005, $p<0.01$]. Data on time to positive MRSA culture followed a similar trend, with the proportion of MRSA cultures taken within 48 hours of hospital admission increasing from 50.5% to 79.5% ($p<0.01$). In the CA-MRSA subset, the percent of cultures taken within 48 hours of admission increased from 53.5% to 92.1% ($p<0.01$). The median age of patients with MRSA decreased, from 60 to 49 years ($p<0.01$). This trend was driven by the CA-MRSA patients, whose median age decreased from 51 to 40 years ($p<0.01$). Among the CA-MRSA patients, a trend was also observed in race, with the proportion of non-Caucasian patients increasing from 30.2% to 60.4% ($p<0.01$). A trend was also seen in the SES of the CA-MRSA patients, with the proportion of patients categorized as low SES increasing from 25.6% to 35.6% ($p<0.01$). Significant consistent trends were not observed for patient gender or body sites of the cultures.

Conclusions: An increasing number of MRSA isolates that are susceptible to both clindamycin and TMP/SMX occurred in the last 10 years. The trend of increasing proportion of MRSA cultures within 48 hours of admission suggests a community source of these isolates. In addition, patterns of decreasing age, increasing non-Causcasian races, and decreasing SES were observed.

73 Epidemiology of Community Associated MRSA Infections at a Massachusetts Tertiary Care Center

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Background: There has been a marked increase in the incidence of community associated methicillin-resistant *Staphylococcus aureus* (CA-MRSA) during the last 10 years. While the clinical features of these infections have been well defined, there is limited information on demographic characteristics.

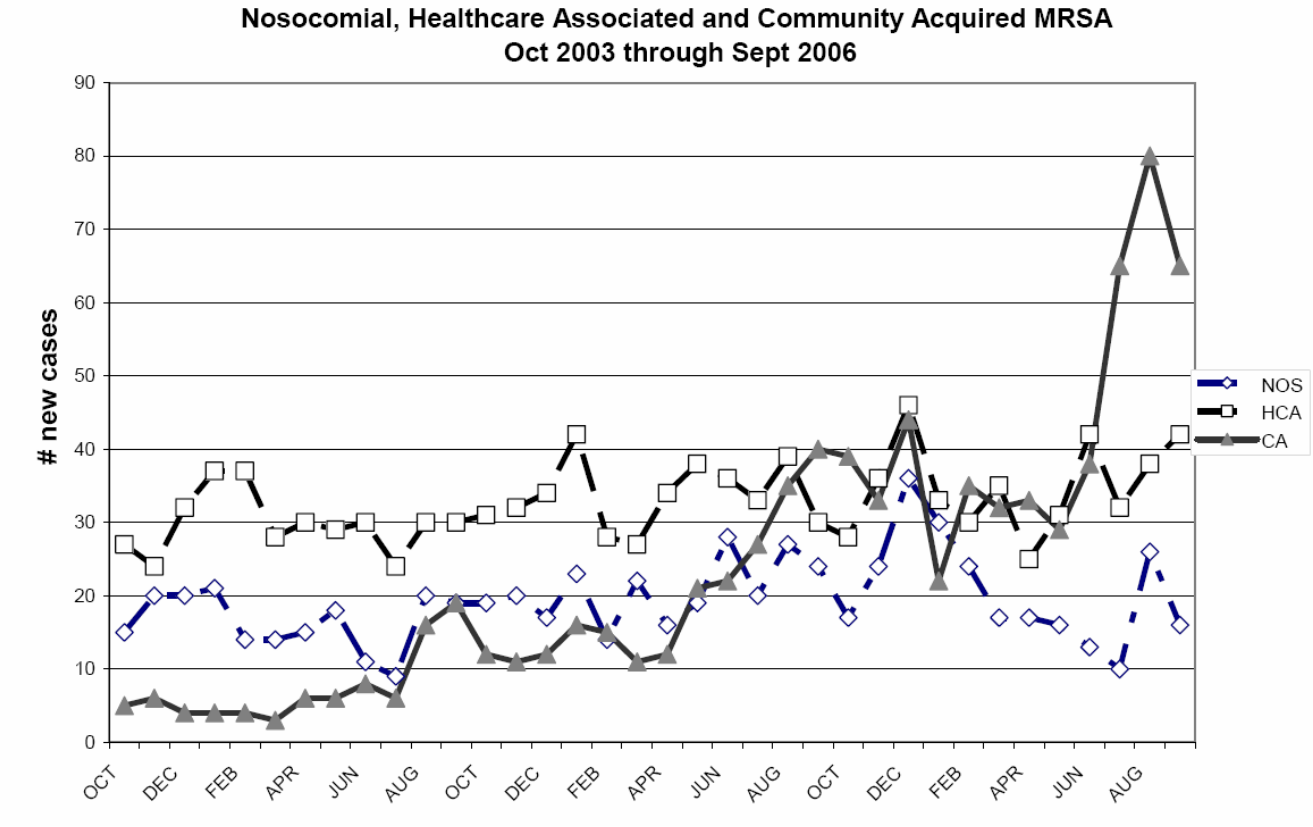
Objective: We undertook a retrospective study to identify demographic features associated with acquisition of CA-MRSA as compared to healthcare-associated (HCA) or nosocomially acquired (Nos) MRSA.

Methods: Beginning in October 2003, all newly identified individuals receiving care at UMass Memorial Medical Center who were colonized or infected with MRSA were categorized epidemiologically as having CA-MRSA, HCA-MRSA, or Nos-MRSA. A retrospective review of electronic medical records was performed on 879 matched cases of CA-MRSA, HCA-MRSA and Nos-MRSA from the 2950 total confirmed cases of MRSA identified through September 30, 2006. Information collected included age, gender, ethnicity, healthcare setting where culture was obtained, site of culture, and amount of healthcare exposure prior to infection.

Results: During this 36 month period there was a sustained increase in the incidence of CA-MRSA rising

from 5 cases/month in October 2003 to >50 cases/month in the summer of 2006 (Figure). In contrast, the incidence of HCA-MRSA and Nos-MRSA remained stable with approximately 33 and 19 cases/month respectively. Patients with CA-MRSA were younger than patients with HCA-MRSA or Nosocomial MRSA (mean age 37 yrs vs 61 and 56.6 yrs respectively; p<0.0001 each comparison). Patients with CA-MRSA were more likely to be of non-caucasion ethnicity (30% vs 19% and 20%; P=0.003). The site from which MRSA was isolated differed between the 3 groups with skin/soft tissue cultures being predominant for CA-MRSA cases, skin/soft tissue or urine for HCA-MRSA cases, and respiratory cultures for Nos-MRSA. CA-MRSA cases were significantly more likely to have had < 6 days of care within the UMMMC system in the preceding 12 months (67% vs 21% vs 6%; P<0.001). The percentage of CA-MRSA patients with < 6 days of care progressively increased from 58% to 72% to 77% during each successive 12 month period ($P \leq 0.025$).

Conclusions: The incidence of CA-MRSA has increased markedly at this tertiary care medical center and now consistently surpasses the incidence of both HCA-MRSA and Nos-MRSA. CA-MRSA appears to be affecting a younger and more ethnically diverse population; and primarily presenting in association with skin and soft tissue infections. The decreasing level of prior contact with the UMMMC system noted in CA-MRSA patients suggests that the strain is becoming increasingly established in the community. This will have major implications for efforts to control its spread.



74 Epidemiology and Outcomes of Methicillin Resistant *Staphylococcus Aureus* (MRSA) Infections in a Large, Multi-Center Cohort of Community Hospitals

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Background: MRSA is a common pathogen that leads to poor patient outcomes. However, the epidemiology of MRSA infections has often been limited to single-center experiences at large tertiary

academic institutions. In community hospitals, the epidemiology and outcomes of MRSA infections is less clearly understood.

Methods: Patients with a culture positive for MRSA were prospectively identified at 24 community hospitals from 12/1999 to 4/2006. Patient demographics and clinical data were prospectively obtained for the cohort by the study team. Cultures obtained from the nares and from stool were excluded thus restricting the analysis only to clinically important anatomic sites.

Results: Over the duration of the study period, 10,766 episodes of infection or colonization due to MRSA were identified; 7,447 episodes were classified as MRSA infections after excluding cultures obtained from the nares and from stool. Patients with MRSA infection had a mean age of 62.5 (standard deviation 21.2). The majority of patients with a MRSA infection were admitted from home (63.2%); 1,765 (23.6%) were admitted from a nursing home or convalescent facility and only 2.4% of patients were transfers from an outside hospital. Common comorbid conditions present in patients with MRSA infection included diabetes (39%), chronic obstructive pulmonary disease (COPD) (23.3%) and the presence of a decubitus ulcer (15.4%). Only 697 (9.3%) of the patients had been admitted to a hospital during the prior 3 months. A vast majority (70.6%) of the MRSA infections were non-nosocomial; only 1,229 (16.4%) were nosocomial. The most common sites of infection were pulmonary (24.4%), urinary tract (13.1%) and the bloodstream (13.0%). 1,534 (20.5%) required treatment in the intensive care unit (ICU). 1,043 (13.9%) patients died or transferred to hospice care prior to discharge.

Conclusions: In rural and community hospitals, MRSA is a common pathogen associated with high mortality rates. Among patients with MRSA infections, comorbid conditions such as diabetes, COPD, and decubitus ulcers are commonly present. The vast majority of MRSA infections seen in community hospitals are non-nosocomial.