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Publishing Title: **Seasonality of MRSA Infections - Depends On Where You Look and When You Look**

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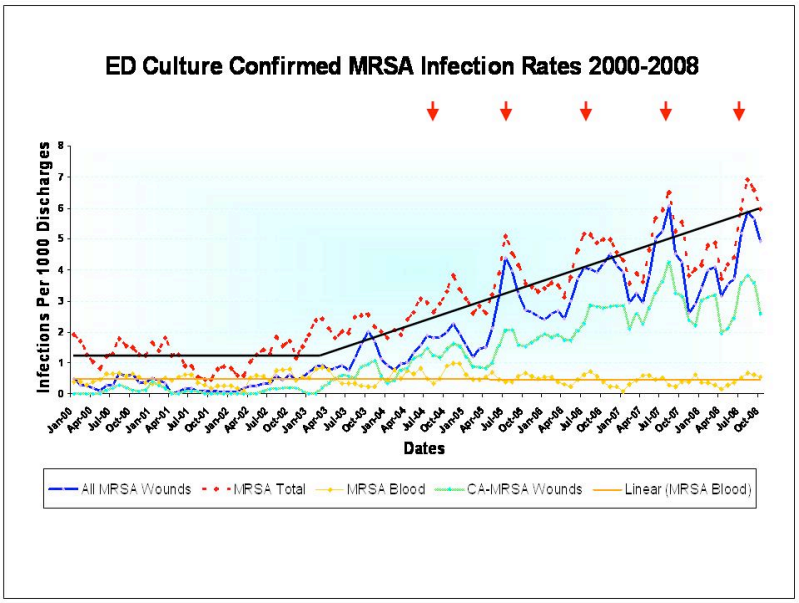
Abstract Body: **Background:** Little is known about the seasonal variation of Community- and Hospital-Associated Methicillin Resistant *Staphylococcus aureus* (CA-MRSA, HA-MRSA) infections.

Methods: This is a 9 year retrospective study of ED visits at a tertiary care University Medical Center in the Chicago area from 2000-2008. MRSA positive cultures (wound/sputum/ blood/urine) from unique ED patients were identified via electronic Microbiology files. Isolates were phenotypically categorized as CA-MRSA and HA-MRSA based on antibiotic sensitivities.

Results: We reviewed 438,865 ED visits from 2000-2008 and identified 1,312 unique patient encounters with positive MRSA cultures. Wounds accounted for 69% of all isolates. The incidence in MRSA infections from the first quarter of 2000 to the last quarter of 2008 increased by 211%. The proportion of wound isolates to the total number of MRSA isolates also increased from 29% in 2000 to 84% in 2008. Seasonality in the first 4 years of our study was negligible. In the final 5 years there was a substantial increase in the number and proportion of CA-MRSA isolates, and seasonality was quite marked, with peaks in the late summer/early fall months. From 2004-2008, the risk of developing MRSA wound infections in the 3rd quarter of the year was 27% greater than during the 1st quarter ($p=0.009$), and 31% greater than during the 2nd quarter ($p=0.002$). In contrast, MRSA bacteremia remained steady throughout the study (Figure 1).

Conclusion: Our 9-year study showed the incidence of MRSA isolated from ED patients increased dramatically (211%). Seasonal predominance in the summer months was seen in the last 5 years as the incidence of phenotypic CA-MRSA infections increased.



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R. Durazo-Arvizu, None. J. P. Parada, Pfizer Role(s): Speaker's Bureau, Received: Speaker Honorarium. Merck Role(s): Scientific Advisor (Review Panel or Advisory Committee), Received: Consulting Fee. Virapharma Role(s): Speaker's Bureau, Received: Speaker Honorarium.