OSUMC Emergency Medicine

Trends of MRSA/ORSA from 2000-2013, Cerner Data Base.

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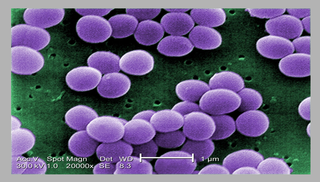
INTRODUCTION

- *Staphylococcus aureus* infections have become a worldwide threat.
- Numbers of total hospital acquired infections with MRSA/ORSA have decreased since the introduction of appropriate infection control procedures.
- However, the ability of *Staphylococcus aureus* to adapt has lead to increasing rates of community acquired infections despite reduction in the rates of Hospital-acquired infections.



METHODS

Purpose:

- Trend the Prevalence of resistant *Staphylococcus aureus* infections in patients presenting to medical facilities across four geographically distinct areas of the United States
- Compare the incidence of resistant *Staphylococcus aureus* infections between pediatric and adult populations

Study Design:

- Retrospective data review and longitudinal analysis of 82,500 adult charts and 15,215 pediatric charts from the Cerner electronic record database.

Inclusion criteria:

- Infections classified as “community acquired” between 2000-2013
- Patients from both sexes, all ages, all payer types.

Exclusion criteria:

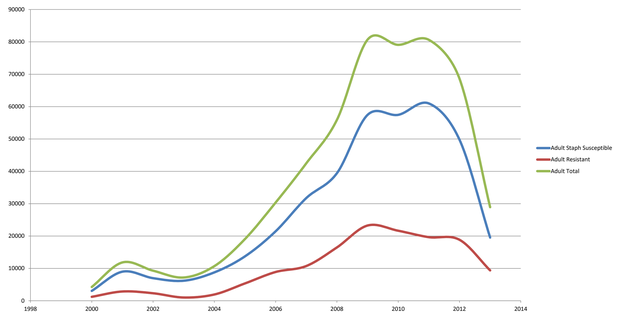
- Infections classified as “hospital-acquired” between 2000-2013
- Incomplete data (i.e. records missing such as age, sex, payer type, Staphylococcal infection isolate)

Statistical Tests:

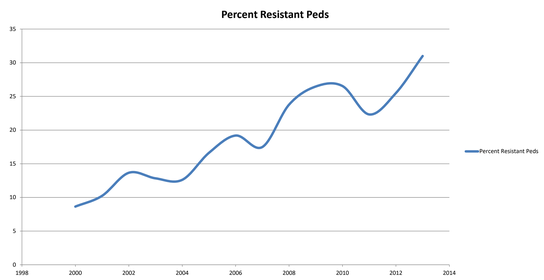
- Descriptive statistics using Microsoft Excel

RESULTS

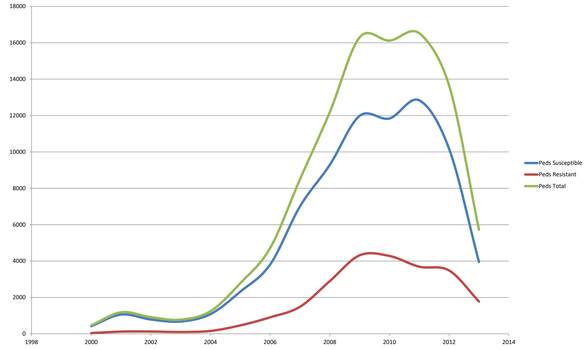
Adult MRSA/ORSA Cases from 2000-2013



Percent MRSA/ORSA in Pediatric cases

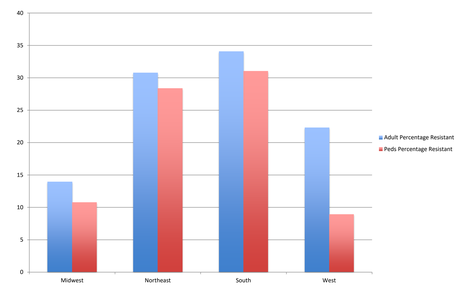


Pediatric MRSA/ORSA Cases from 2000-2013



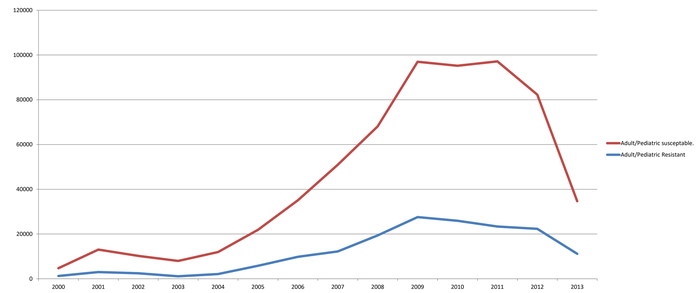
Data suggests the rate of resistant infections in the pediatric population increased from 2000 to 2013. It has risen from 8.6% of cases in 2000 to 30.9% of cases in 2013.

Percent resistant per region



- As suggested by previous research we also were able to see that the data from Cerner showed an overall declining trend among total number of *Staphylococcus aureus* infections in both the resistant and susceptible groups from 2000 -2013.
- The Southern region shows the highest rate of MRSA/ORSA infections in both adult and pediatric populations.
- Demographic information to help better define these populations was not pulled during initial questioning

Total *S. aureus* infections in adult and pediatric populations by year



CONCLUSION

- Cerner data supports a declining trend in total recorded MRSA/ORSA infections from 2000 to 2013.
- The percentage of MRSA/ORSA infections has increased in all populations, especially in the pediatric population and in southern regions.
- Multiple factors that can lead to the spread of Staphylococcus in the community based population.
- To gain a better understanding of the data trends showing a percentage increase in the MRSA infections of pediatrics further research evaluating the risks is needed.

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ACKNOWLEDGEMENTS

Cerner electronic data base