MOLECULAR ANALYSIS OF 35 RELATED ISOLATES OF METHICILLIN RESISTANT *STAPHYLOCOCCUS AUREUS*

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ABSTRACT

Contraction of an infectious disease in a long-term health care setting presents a difficult patient care issue. Often times, patient comfort becomes secondary to necessary aggressive containment strategies. Such containment strategies may include a total population surveillance, contact isolation, treatment for carriers, screening of new admits, and staff education. Costly containment strategies versus costs for health care to patients contracting nosocomial infections is a serious contemporary health care issue. Molecular epidemiological studies provide a means for monitoring appropriate containment strategies. However, often times, the health care facility lacks trained personnel and facilities to carry out such labor intensive analyses.

This study is a molecular analysis of 35 methicillin resistant *Staphylococcus aureus* clinical isolates. The molecular analysis is based on restriction endonuclease patterns of the organism's chromosome and plasmid content. Plasmid DNA was purified from clinical isolates using a modified alkaline lysis procedure. Restriction endonuclease patterns were examined by agarose gel electrophoresis. Analysis indicated the presence of reoccurring plasmid restriction endonuclease patterns. However, complete molecular analysis will be based on the culmination of the chromosomal and plasmid comparisons for each isolate.