Abstract #: 219

**Measurement And Feedback Of Infection Control Process Measures In The Intensive Care Unit: Impact On Compliance**

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**Objective**: To determine the relationship between the measurement and feedback of selected infection control process measures and compliance to infection control practices.

**Methods**: We measured selected infection control process measures; hand hygiene, femoral catheter use as a proportion of all central line (CL) days and proportion of head of bed elevations (HOBs) in medical (MICU) and surgical (STICU) intensive care units. All data were collected by trained infection control nurses. Baseline data were obtained in April-June, 2004. Baseline hand hygiene data was obtained from May-June. Follow-up observations were from July 2004 through March 2005. Baseline and follow up observations were reported to the ICU medical and nursing directors. The data were analyzed for improvement in compliance with process measures. Differences in proportions were analyzed for statistical significance by the Chi-Square method.

**Results**: There was a non-significant trend in improvement in hand hygiene in the MICU (32% versus 46% \(P = .1\)) and in the SICU (50% versus 53%, \(p=.916\)). However, there was a statistically significant reduction in the use of femoral catheters in both ICUs (\(p < 0.01\)) as well as a statistically significant improvement in the proportion of elevated HOBs (96% versus 75%, \(p < 0.0001\)).

**Conclusion**: Feedback of process measures lowered the use of femoral catheters and improved the proportion of elevated HOBs in both ICUs but there was no significant improvement in hand hygiene. System level changes such as catheter placement and HOB elevation appears to be impacted by feedback whereas individual level practices such as hand hygiene were not affected.

**ABSTRACT**

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**METHODS**

Selected Infection Control Process Measures:

- Hand Hygiene
- Femoral Catheter use as a proportion of CVC days
- Proportion of Head of bed (HOB) elevations in medical (MRICU) and Surgical (STICU) Intensive Care Units

All Data Collected by ICPs

**Baseline data- April-June 2004**

- Follow up data in 3rd, 4th quarters of 2004, 1st quarter 2005
- Baseline and follow up data presented to ICU nurses and Physician staff

Differences in proportions analyzed for significance by Chi-Square Method

**TABLE**

<table>
<thead>
<tr>
<th>Process Measure</th>
<th>MRICU</th>
<th>STICU</th>
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<tbody>
<tr>
<td>14/44 (32%)</td>
<td>31/91 (37%)</td>
<td>33/91 (36%)</td>
</tr>
<tr>
<td>HOB % Opportunities</td>
<td>28/51 (55%)</td>
<td>320/333 (96%)</td>
</tr>
<tr>
<td>Fem. CVC % of Days</td>
<td>195/1093 (18%)</td>
<td>130/769 (16%)</td>
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* Comparison of baseline to Q1-2005

**CONCLUSIONS**

Feedback of process measures:

- Lowered the use of femoral catheters
- Improved the proportion of elevated HOBs in both ICUs
- There was no significant improvement in hand hygiene.
- System level changes such as catheter placement and HOB elevation appears to be impacted by feedback whereas individual level practices such as hand hygiene were not affected.