Welcome

We appreciate the opportunity to present and learn from our colleagues, both at this session and throughout the VAPP Project.

In the spirit of sharing and continuous improvement, we will tell you about our experience to date at Jones Memorial Hospital.
Infection Control

A unique, dynamic career to be a part of at this time in history.

In our 6 year career as ICP’s, my partner and I have learned about SARS, Smallpox, Monkeypox, Bioterrorism, Pandemic Influenza, etc. These are the more publicized infection control concerns. We all know the more intimate challenges faced each day in the organizations we work in.

Infection Control is an integral part of, not only surveillance, but the healthcare delivery and systems directed toward quality improvement within the hospital.
Jones Memorial Hospital in Wellsville, New York

http://www.jmhny.org/
We are a small hospital that faces both similar and different issues from other size hospitals across the state.

We have:

- 70 bed rural hospital, average daily census of ~25
- 6 bed ICU
- transitioned over the last 5 years from predominantly primary medical doctors (PMD) providing inpatient care to having a 24/7 hospitalist program with only one PMD still providing inpatient care to his clients.
Stumbling block:
The longterm relationship held with the primary MD’s afforded trust and ease of interaction. This was challenged when hospitalists, serving many locations, transition from one facility’s expectations to another. The hospitalist director has expressed firm commitment to our goals. The difficulty lies in communicating with individual hospitalists and receiving their buy-in to the process. Each are provided with an educational folder and encouraged to interact with the ICP’s and staff. Building trust between the ICP’s and hospitalists is ongoing.

Current status:
Recently, our hospital added the role of physician extenders, (NP’s and PA’s ) to work with the hospitalists. This has afforded us an improved communication line and we believe the possibility of greater success.
ICP’s use of time and resources to get issues addressed has moved into the limelight !!!!
History of Pneumonia/VAP at JMH

• We traditionally have had monthly ICC meetings and review all ICP prepared cases for consideration of HAI determination including pneumonia and VAP (using CDC Definitions of Nosocomial Infections as our tool).

• By the end of 2005, we began to gather our pneumonia data into something measurable to facilitate analysis and goal formation. The terminology of “VAP” was being heard more.

• In February 2006, we presented our rates of all HAI’s from 2005 and our 2006 Goals to the Infection Control Committee. The occurrence of pneumonia was identified as an area needing attention.
• The following goals were set for the ICP’s:

* Review of ER/admission data for pneumonia occurrence
* Develop program to inform staff of our pneumonia occurrences
* Report annually to ICC on health-care acquired pneumonia statistics
* Educate all care-givers on the IHI pneumonia initiatives
* Surveil for implementation of initiatives; exhaustive chart review for all healthcare- acquired pneumonias

• IHI Initiatives were being promoted
• Jones Memorial Hospital was approached to participate in the HANYS VAP Initiative. On 11/30/07, newly appointed ICU Coordinator, Scott Swift and this ICP attended the HANYS Ventilator-Associated Pneumonia Prevention Project held at ECMC. We were challenged to commit to a plan. We returned to Jones and presented the oral care and HOB steps to the Infection Control Committee and it was approved for initiation. (Of note, economics and the transition of LIP coverage from primary MD to hospitalist influenced this decision - these two steps are predominantly nurse-driven and added little to no additional expense)
1. It was determined that education was needed to encourage acceptance of the proposed initiative. This memo was sent out on 1/30/08

2. Also, our pneumonia/VAP statistics and chart review discoveries were shared with frontline workers to encourage their enthusiastic participation

To: ICU staff/Respiratory Therapy staff/ Hospitalists and MD’s admitting to the ICU

From: ICN’s Beverly Butts, Brenda Robarts and Scott Swift, ICU Director

Date: January 30, 2008

The ICN’s and the Infection Control Committee have been monitoring healthcare acquired pneumonia for many years at JMH. We have discovered certain trends that we now realize are in other facilities.

Based on our findings, we decided to join the HANYS VAP (Ventilator Associated Pneumonia) Project.

In the HANYS VAP Project there are 8 evidence-based bundle elements that are being promoted to decrease the incidence of VAP.

<table>
<thead>
<tr>
<th>Oral Care</th>
<th>Sedation Vacation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of Bed Elevation</td>
<td>Readiness to Wean</td>
</tr>
<tr>
<td>PUD</td>
<td>Activity/Mobility</td>
</tr>
<tr>
<td>DVT</td>
<td>Daily Goals/Rounding</td>
</tr>
</tbody>
</table>

At this time, we will be concentrating on compliance with the first 2 of these elements. Please find enclosed a copy of the protocols.
1. At JMH, we formed a task force: the ICU Coordinator, ICP’s and ICU staff.

2. A chart review was done to determine a baseline for documented measures to support the VAP initiatives; little discoverable data was found. ICU Staff assured the ICP that HOB elevation and oral care were being done. However, when the ICP measured, documentation did not support staff observations.

This is a not an unusual finding in healthcare... and a challenge to use data to enable change.
3. We looked at existing forms for documentation (this being key to our ability to show the steps of oral care and HOB elevation were being done).

4. The current oral care products in stock were reviewed to determine if they were adequate for the study guidelines.

5. Dialog was held with present ICU staff re: their current practice and the need for a culture change.
A target date of 2/1/08 was selected, recognizing that we were uncertain when our first patient would arrive who required a ventilator.

An educational folder was created and approved by the Infection Control Committee. It was given to the ICU Manager, with a list of all staff who needed to complete the review. The manager was to ensure all staff read the material and addressed questions/concerns to the ICP’s or himself. Any resistance issues were discussed and re-education given.

The folder included the following items:
We at JMH are participating in a HANYS VAP (Ventilator Associated Pneumonia) Project.

There are 8 evidence-based bundle elements that are being promoted to decrease the incidence of VAP.

- Oral Care
- Head of Bed Elevation
- PUD
- DVT
- Sedation Vacation
- Readiness to Wean
- Activity/Mobility
- Daily Goals/Rounding

At this time, we will be concentrating on compliance with the first 2 of these elements.

**Oral Care:**

2. Suction swab every two (odd hours). Apply mouth moisturizer to oral mucosa. Chart as G=toothette swab, green label
3. Oral swabs every two (even hours) to clean mouth and teeth. Chart as P= pink swab
4. Replace Yankauer every 24 hours or use single use devices for mouth care.(Ready Care Oral Suction Kit from Kimberly Care seen on left below)

**Elevated HOB Protocol**

1. During each interaction with the patient check digital display of height setting on the bed, maintain at 30 degrees elevation, document hourly
2. Educate all members of the team to raise the bed or alert the nurse ASAP
3. Educate the staff, patient and family to be vigilant monitors of bed elevation
JMH Elevate Head of Bed (HOB) Protocol for prevention of Ventilator Associated Pneumonia

**Introduction**
Elevation of the head of the bed has been correlated with reduction in the rate of ventilator-associated pneumonia.

**Assessment**
1. Is the patient intubated or have a trach?
2. Evaluate the patient for contraindications for elevated HOB protocol.
   - Physician orders which conflict with HOB ↑30° protocol

**Intervention**
3. If the patient is intubated or has a trach,
   - During each interaction with the patient check digital display of height setting on the bed, maintain at 30 degrees elevation, document hourly
   - Educate all members of the team to raise the bed or alert the nurse ASAP
   - Educate the staff, patient and family to be vigilant monitors of bed elevation

**Patient Teaching**
4. Inform patient and family of rationale to decrease risk of complications.

**Documentation**
5. Insert a premade label (provided in the packet) in Box 10 of the "hemodynamic status"care section of the ICU Flow work sheet. All HOB notes are documented on the 24 hour flow sheet in that area.
**JMH Oral Care Protocol for prevention of Ventilator Associated Pneumonia**

**Introduction**

Most bacterial healthcare acquired pneumonias occur by aspiration of bacteria colonizing the oropharynx or upper gastrointestinal tract of the patient. Intubation and mechanical ventilation alter first-line patient defenses, thus greatly increasing the risk for healthcare acquired bacterial pneumonia. Frequent oral care can decrease the risk of acquiring ventilator acquired pneumonia (VAP).

**Assessment**

1. Is the patient intubated or have a trach?
2. Evaluate the patient for contraindications for every 2 hour oral care protocol.
   - Hemodynamically unstable (vagal stimulation)
   - Massive oral trauma
   - Physician orders which conflict with every 2 hour oral care
   - Patient: alert and able to brush own teeth

**Intervention**

3. If the patient is intubated or has a trach, perform every 2 hours
   - Suction toothbrush bid with Perox-A-Mint solution. Chart as **T**=toothbrush, orange label
   - Suction swab every two (odd hours). Apply mouth moisturizer to oral mucosa. Chart as **G**=toothette swab, green label
   - Oral swabs every two (even hours) to clean mouth and teeth Chart as **P**= pink swab
• Replace Yankauer every 24 hours or use single use devices for mouth care. (Ready Care Oral Suction Kit from Kimberly Care seen on left below)

Patient Teaching 4. Inform patient and family of rationale to decrease risk of complications.

Documentation 5. Insert a premade label (provided in the packet) in the oral care section on the “ventilation: area of the ICU Flow work sheet. All oral care is documented on the 24 hour flow sheet.

An Oral Care Protocol continued
A sheet of stickers that could be added to the current ICU charting form

Stickers were created as a template to add to the existing charting document used in ICU

Insert this in the box for Oral care
Facts to date (February 1, 2008- June 30, 2008)

We have had 5 patients on ventilators with a total of 23 ventilator days.

The staff have used the educational handbook, and have consistently documented the needed data.

Staff have also been in dialogue with each other and the ICP’s re: the additional indicators and are proactively working with the MD’s to accept/ enact them.

Documentation has been present 100% of the time to support HOB elevation and oral care; documentation review data is supporting our ability to report on additional indicators.
Lessons Learned

- As team leaders, we must facilitate a change of culture: we must support initiatives to prevent infection.
- We needed accurate denominator data; a new form was developed and implemented in the ICU.

<table>
<thead>
<tr>
<th># of Patients, Name, Central Line?, Urinary Catheter?, Vent?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recorded each night at 3 am</td>
</tr>
</tbody>
</table>
• We involved and educated the frontline workers: ICU and Cardiopulmonary staff, along with hospitalists/midlevels.

• We used existing resources (i.e. forms, toothettes)

Of note, I have been gathering data on all the indicators from the start and am now more confident to go forth with adding others.
Ventilator-Associated Pneumonia

Healthcare-Acquired Pneumonia

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Healthcare-acquired Pneumonias</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>15</td>
</tr>
<tr>
<td>2005</td>
<td>12</td>
</tr>
<tr>
<td>2006</td>
<td>5</td>
</tr>
<tr>
<td>2007</td>
<td>6</td>
</tr>
<tr>
<td>2008 TO DATE</td>
<td>2</td>
</tr>
</tbody>
</table>

Of note, the criteria has changed over time.

Known data in 2007: 106 ventilator days

Ventilator-Associated Pneumonia

<table>
<thead>
<tr>
<th>Year</th>
<th>Number/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1</td>
</tr>
<tr>
<td>2006</td>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>2</td>
</tr>
<tr>
<td>2008 to date</td>
<td>0</td>
</tr>
</tbody>
</table>
Brenda Robarts, RN, BSN
Infection Control/Employee Health
Jones Memorial Hospital
191 N. Main St.
Wellsville, NY 14895
585-596-4067
Robartsb@jmhny.org

or Scott Swift, ICU Coordinator
swifts@jmhny.org
Questions???
Comments???