Problem 6 years ago / Baseline

- **Leading:**
  - < 90% compliance with vent bundle (HOB, turn, Hi Lo ETT, oral care)

- **Lagging:**
  - Experiencing > 100 VAP cases/year (2006 = 114)
  - Adult ICUs had higher than expected vent LOS (10-11 days)

View:
- Care of vent patients inconsistent
- Lack of evidence based practice
- Silo care versus interdisciplinary
- Not following guidelines for IHI, AACN, SSCM, APIC, NACHRI, and CMS

Root Cause Analysis (RCA)

Assessment:
- Most of our infections preventable
- 2006-2007 VAP reduction became a STRATEGIC focus on quality improvement
  - Initial goal to ↓ VAP by 50%

Structure  Process  Outcomes

Cause  Effect
Actions for Impact

**Structure of Care**
- Process of Care
- Outcomes

**Leading**

**Lagging**

**Actions for Impact**

**Actions for Impact: Recap**

**Process Structure** ➔ **Evidence Based, Best Practice**

**Value of Process** = connect to outcome

**Hardwire Process** ➔ **make right process easy**

**Engagement/Accountability**

**Adherence & Infection rates improve when either**

A (Audit & feedback)
- ADDED to (provider reminder systems)

B (Audit & Feedback)
- ADDED to (organizational change)
- AND (provider education)

**Audit & feedback**

Make delivery of evidence-based, best practice EASY AS POSSIBLE.

Create alerts (reminders, visual aids, peer pressure) to MAKE POOR CARE DELIVERY DIFFICULT.

**Provider Reminder Systems**
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Engagement / Accountability
Hardwire Best Practice

- Changed per level & storage of mouth care kits to assure availability & visual reminder
- Met with anesthesia & CRNA groups: one Hi-Lo ETT for ICU surgery pts
- Share responsibility for mouth care with resp; scheduled sta MAR & task scheduler
- Process of Care
  - Compliance
  - Frequency of care
  - Coordination of care
- Each time SBT not performed per criteria ➞ RT manager (a) giving verbal or written warning
- Vent bundle SAT/SBT guidelines
- Physician credentials
- Structure of Care
- Stock Hi-Lo ETT’s in ER, code carts & with EMS
- Updated ICU beds to include CRT module
- RT assesses vent bundle compliance 3x/week on all pts; deficiencies immediately reported to RN Manager

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Engagement / Accountability

- Display together: shows the “WHY” of measuring
- MCCG Adult ICUs: Avg Vent Time compared to Compliance with SBT

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Engagement / Accountability

- Cause: Compliance
- Effect: Safer / Improved outcomes
- Outcome: # vent days

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Engagement / Accountability

- Communicate ➔ Hardwire “ease the path of EBP”
- Link Care Process & Outcomes

- Communication with Individuals / Link performance to job
  - Med Staff Privileges ➔ vent management: individual or group
  - Employee performance ➔ individual compliance, accountability, warnings, & annual evaluation
  - KB & TN

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Engagement / Accountability
1. Designing Actions for Impact
2. Engagement AND Accountability
3. 2013 & forward

Lagging → patient outcome
Surveillance for Vent Associated Events

- CDC Prevention Epicenters
  http://www.cdc.gov/hai/epicenters
- Critical Care Societies Collaborative
  http://ccsonline.org

Lagging: patient outcomes
Incidence

Vent Associated Pneumonia (VAP) Population
Acute & long-term care hospitals
Inpatient rehab facilities
≥ 18 years old
Mechanical vent time > 3 calendar days

EXCLUSIONS:
- patients on rescue mechanical ventilation (NIV),
- extracorporeal membrane oxygenation (ECMO), &
- mechanical ventilation in prone position

NHSN: National Healthcare Safety Network

Leading: consider these areas

- Vent utilization code status, patient/family communication & education
- Mobility HAPU, Fall prevention, restraint use
- Infection prevention oral care
- Nutrition tube feedings: start time, amount delivered vs. ordered, evidence based management
- Delirium management med management, noise levels, sleep deprivation (bundled care)

2013 & forward
MCCG Adult ICU Vent Utilization Ratio
Comparison FY2010 - FY2012

Data Sources: APACHE IV, PowerChart, Medipac

http://www.ajicjournal.org/article/S0196-6553(11)00373-7/fulltext
2013 & forward

**Awareness** → NHSN - vent utilization
→ Mobility - slow/stop de-conditioning
→ Delirium - age, withdrawal (tobacco, Rx, ETOH)
→ Nutrition - timeliness to start, calories Rx
→ NHSN - Vent Acquired Conditions (VACs) possible & probable pneumonia

Recap

1. **Actions for Impact**
   – Cause → Care → Best Practice
   – Effect → Outcomes → Goals of Care

2. **Engagement & Accountability**
   – Engagement → coordination of care
   → Accountability by caregivers: "where the buck stops"

3. **2013 & beyond**
   – Vent utilization, delirium, mobility, nutrition
   – Vent Associated Conditions (VACs)

Quality Approach

I believe a vision for quality must start with **ownership**.
We cannot just do what we are asked, but we must take it further by **looking for what we can do to improve**.

**Quality must be integrated into our every day caring.**

Betty Brown, MBA, MSN, RN, CPHQ, FNASHQ, VP Quality & PI, TriHealth, Inc.

Recap

1. **Actions for Impact**
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   – Effect → Outcomes → Goals of Care

2. **Engagement & Accountability**
   – Engagement → coordination of care
   → Accountability by caregivers: "where the buck stops"

3. **2013 & beyond**
   – Vent utilization, delirium, mobility, nutrition
   – Vent Associated Conditions (VACs)

Resources
