



Quality Evidence Based Tool: A Multidisciplinary Approach

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Outline

- 1) Background
- 2) Quality Evidence Based Tool (QEBT)
- 3) Actions/Processes
- 4) Metrics
- 5) Data integrity
- 6) Challenges
- 7) Evaluation



Project setting

- Inova Health System's enVision eICU utilizes remote video and voice technology, to assess, evaluate, and treat critically ill patients in multiple ICUs and hospitals from a single location.
- Leveraging critical care physicians and nurses, the eICU strives to improve patient outcomes through the integration of evidence based medicine and collaboration with the hospital-based ICU team.



enVision eICU



Problem addressed

- eMD workflow – reactive vs. proactive
- Healthcare attention on Evidence Based Practice
- Opportunity to intervene and improve patient outcomes

Research

- Hybrid of:
 - Joint Commission Core Measures
 - Medicare no-pay list
 - Internal initiatives of the organization
 - Evidence Based Medicine



Project Objectives



- To develop a standardized and streamlined notification system to alert the eMD when certain patient orders are needed and core measures are not met.
- Working with ICU patients at multiple hospitals, the eICU team set out to develop a tool that would utilize evidence based practice to guide patient treatments and improve outcomes.

Shared Governance Team

- A multi-disciplinary task force was formed to develop a Quality Evidence Based Tool (QEBT) that would identify patient needs and guide practice in the eICU.
 - eICU Intensivists
 - eICU Critical Care nurses
 - IT Quality team

Quality Evidence Based Tool (QEBT)

- An electronic data collection tool based on core measures and evidence based practice
- Collectively, daily QEBTs add to a growing database of information
- Database format allows for easy extraction of data to identify trends and evaluate progress

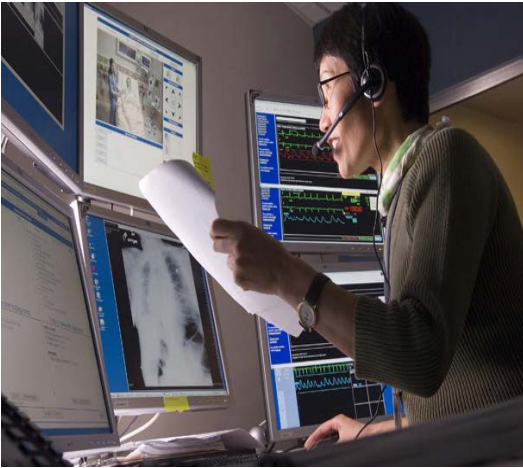
QEBT bundles

- DVT & PUD
- Glucose control
- ACS
- CHF
- VT limitation
- VAP
- ARF
- Sepsis
- C. diff
- UTI
- BSI
- Falls Risk

Sample Bundle

Bundles	eMD Interventions <i>Check all that Apply</i>
<p>DVT/PUD (Highlight if NO pharmacological DVT prophylaxis)</p> <p>SCDs: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Pharmacologic DVT prophylaxis: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>(Highlight if no PUD prophylaxis)</p> <p>Peptic ulcer disease prophylaxis: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Nutrition: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>Check all that apply:</i> <input type="checkbox"/> GIB <input type="checkbox"/> Coagulopathy INR >1.5 or warfarin</p> <p><input type="checkbox"/> Mechanical Ventilation</p>	<p>Order: SCDs: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If No: <input type="checkbox"/> Recent LE revascularization</p> <p><input type="checkbox"/> Thrombus <input type="checkbox"/> BKA <input type="checkbox"/> Other</p> <p>Order: Pharmacological agent: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If No: <input type="checkbox"/> Active Bleeding or bleeding risk</p> <p><input type="checkbox"/> Therapeutically anti-coagulated</p> <p><input type="checkbox"/> History of HIT</p> <p><input type="checkbox"/> Active intracranial process <input type="checkbox"/> Other</p> <p>Order: PUD Prophylaxis: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If No: <input type="checkbox"/> Not Indicated</p> <p><input type="checkbox"/> Contraindicated (allergy)</p>

Actions/Processes



eRN completes daily QEBT assessment

Bundles that need to be addressed are automatically highlighted

eMD runs highlighted bundles report

eMD addresses highlighted bundles and other concerns of hospital-based team

Virtual rounds with hospital-based team

The eMD actions are documented on the QEBT.

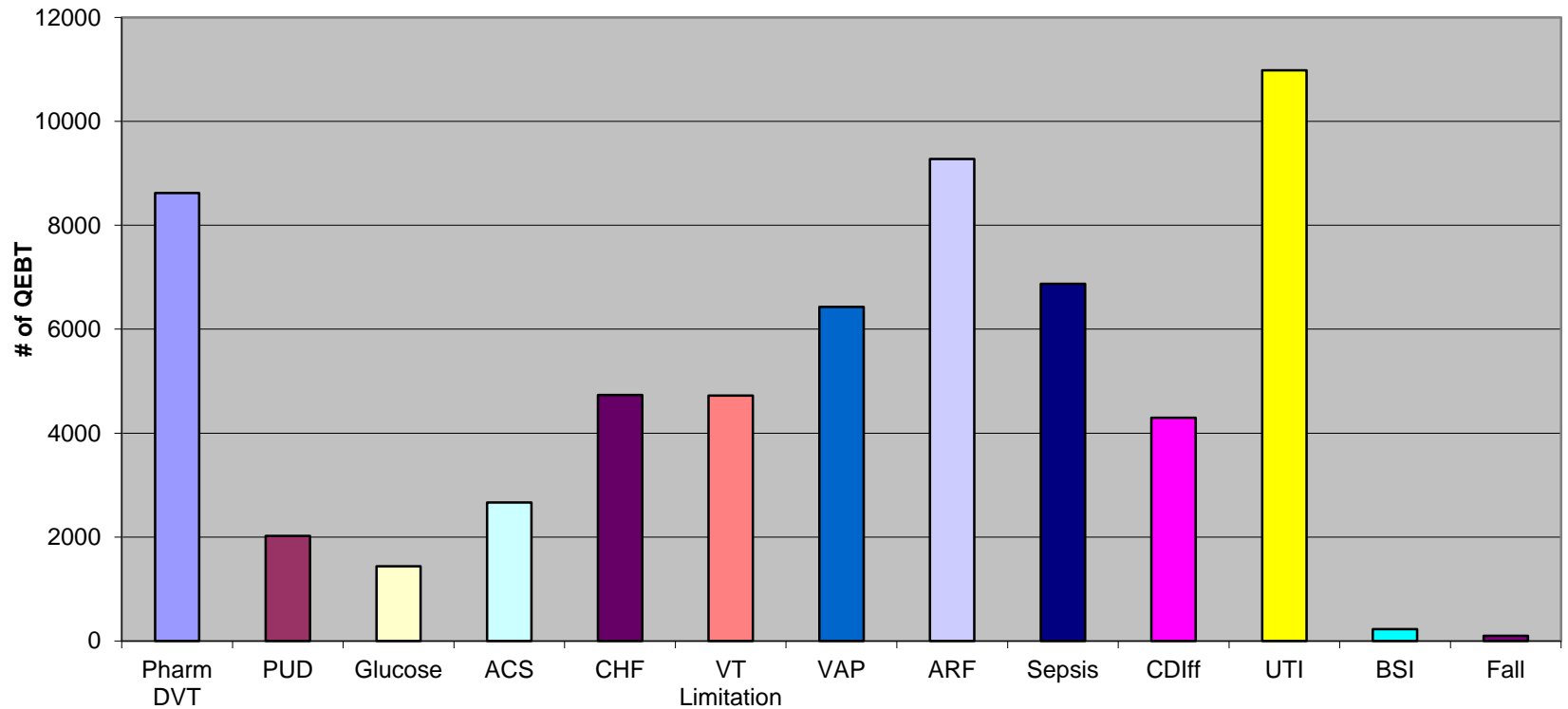
Reports run periodically for assessment and evaluation

Reports/Metrics

- Reports were developed from QEBT data
- Identify patient needs and outcomes based on eMD interventions
- Assess our strengths and areas of opportunity for improvement
- Share data with hospital team

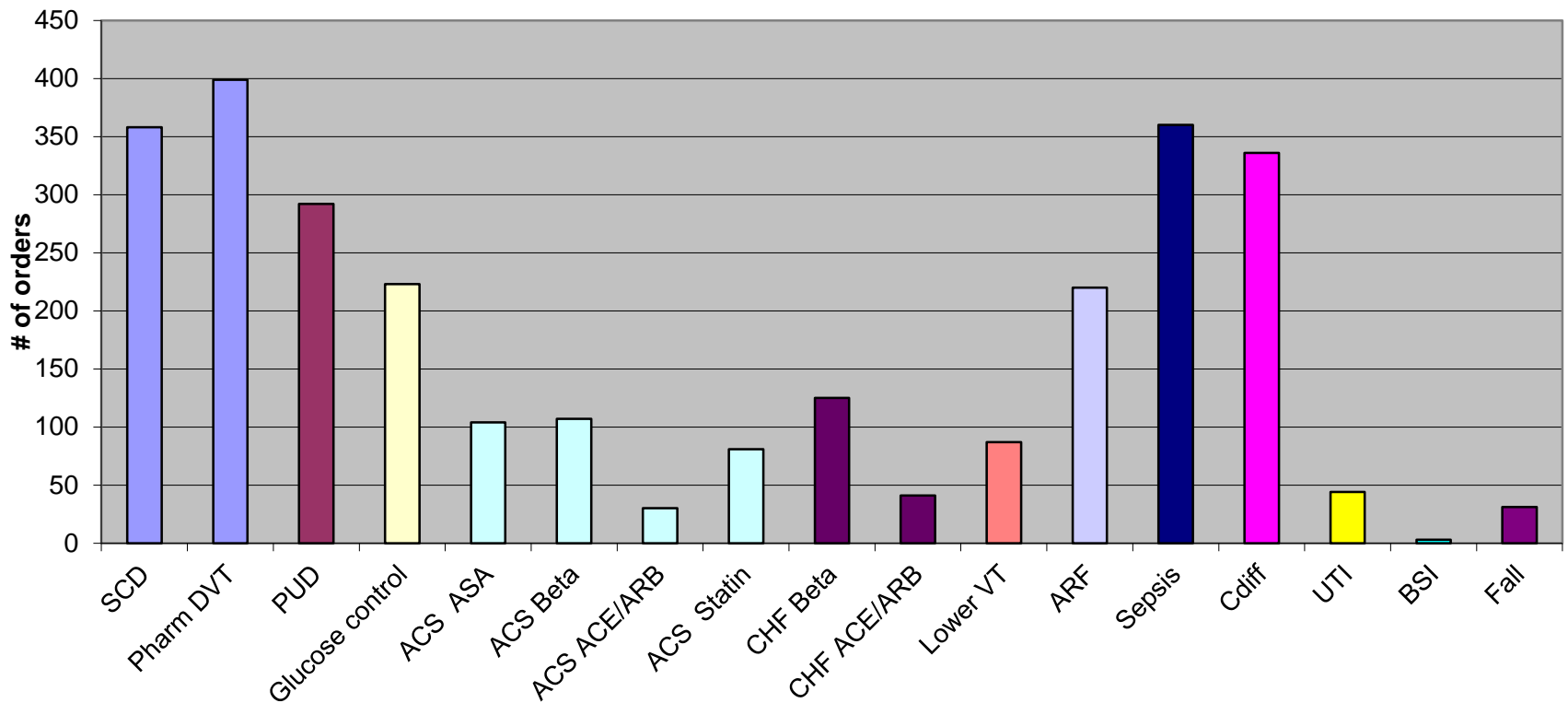
Report: Highlighted Bundles

Highlighted Bundle by System (2009)
Total # of quality tools = 15701



Report: eMD Interventions

eMD Interventions (2009)

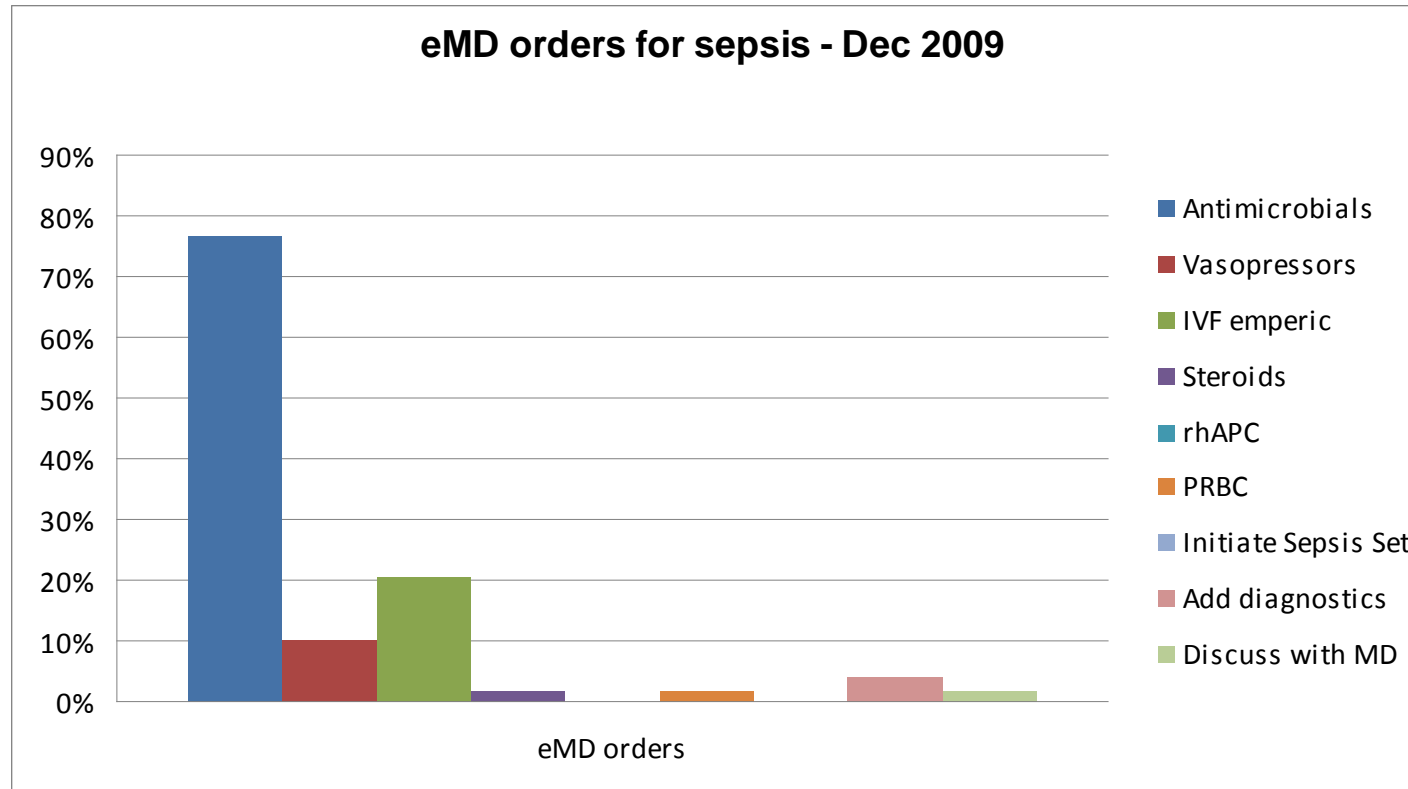


Report: VAP bundle

VAP bundle (2009)



Report: Sepsis



Hospital outcomes

- Length of Stay (LOS)
- Ventilator days

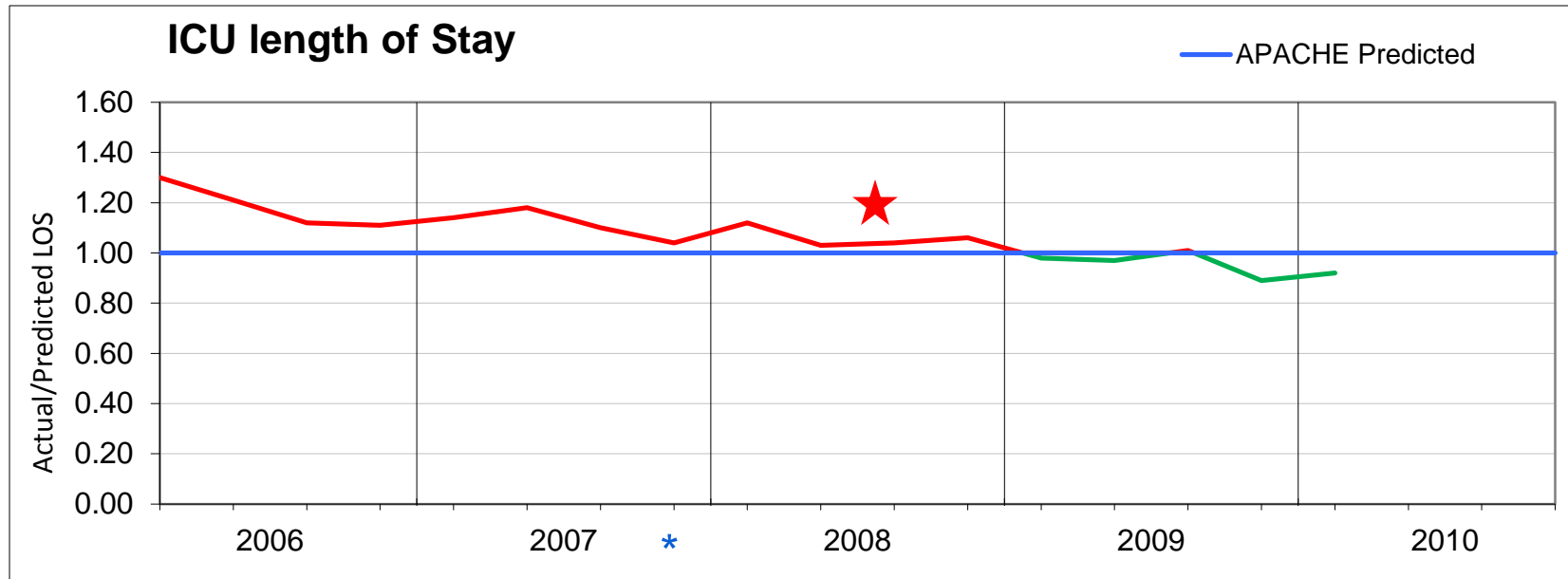
- The effect of the eICU and the QEBT on hospital outcomes is difficult to measure

October 2004: eICU implemented

July 2008: QEBT implemented on paper

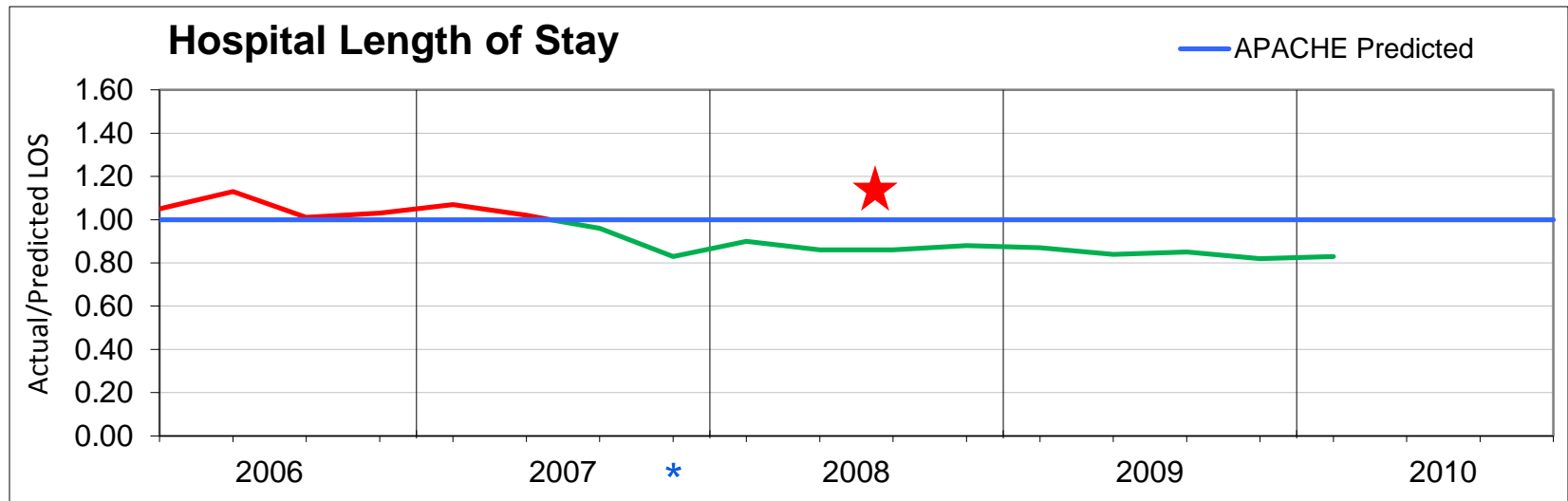
February 2009: Electronic QEBT implemented

ICU Length of Stay



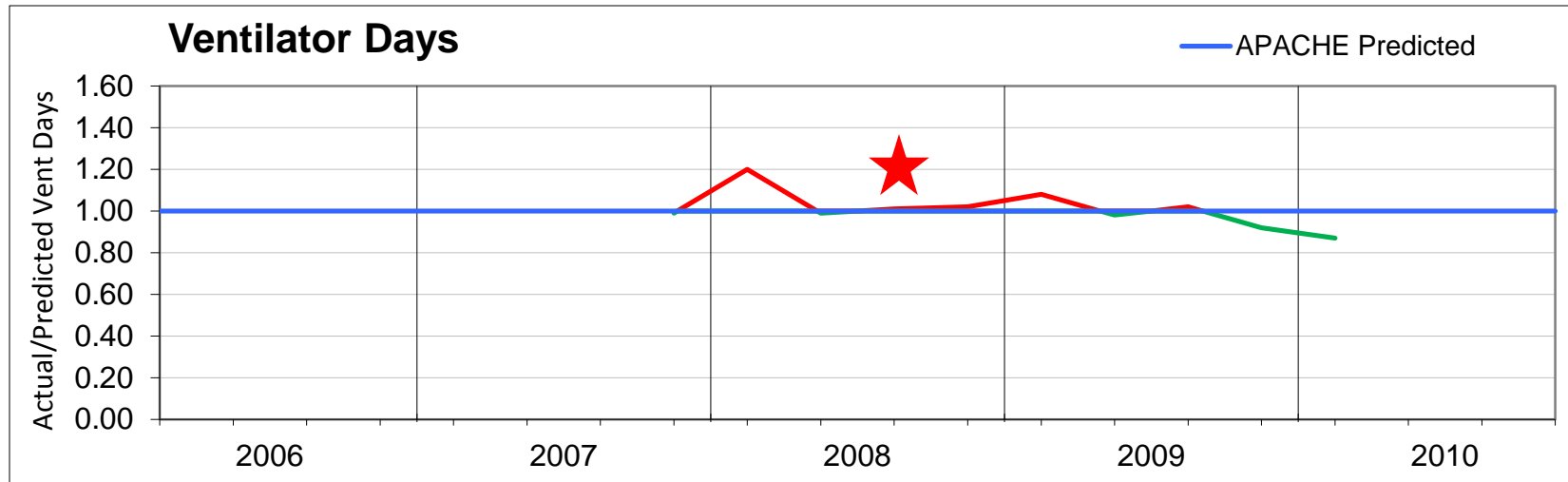
★ QEBT implemented

Hospital Length of Stay



★ QEBT implemented

Ventilator Days



★ QEBT implemented

Data Integrity

- Audit process
 - Quarterly
 - Accuracy
 - Coaching & Feedback



The Hawthorne Effect

- “Generally accepted psychological theory that the behavior of an individual or a group will change to meet the expectations of the observer if they are aware their behavior is being observed.”

Challenges

- Buy-in
 - eMD involvement
 - Bedside physician acceptance
 - Shared Services
- Communication between clinical eICU staff and Quality IT team
- Interpretation of Interventions (VAP)

Evaluation

- Streamlined the communication process between the eRN and the eMD
- Organized focused plan for virtual rounds.
- Electronic reports help to identify the impact made on the patients, as well as areas where we could intervene more frequently to make a significant difference

Summary

- There was a need for a streamlined and collaborative approach when treating multiple complicated patients
- The QEBT in conjunction with virtual rounds is an innovative use of technology to enhance patient care

Questions?

