



*University HealthSystem Consortium*

# **Examining Deep Vein Thrombosis and Pulmonary Embolism in Academic Medical Centers**

## **A UHC Benchmarking Project**

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THE POWER OF COLLABORATION

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# **The University HealthSystem Consortium (UHC)**

- **Formed in 1984**
- **An alliance of 97 academic medical centers and 153 of their affiliated hospitals**
- **Representing nearly 90% of the nation's non-profit academic medical centers**
- **An idea-generating and information-disseminating enterprise**
- **Designed to pool resources, create economies of scale, improve clinical and operating efficiencies, and influence the direction and delivery of health care**



## **Mission**

*To advance knowledge, foster collaboration,  
and promote change to help members succeed  
in their respective markets*

## **Vision**

*To be a catalyst for change,  
accelerating the achievement of clinical  
and operational excellence*

# The Benchmarking & Improvement Services Program

Offering a continuum of resources for...

- JCAHO
- CMS
- NQF
- AHRQ
- Leap Frog
- Benchmarking Coordinator Survey



**Identifying  
Improvement  
Opportunities**

- Benchmarking projects (10-12/year)
- Focus on key performance measures for specific diagnoses, procedures, functional areas
- 30-60 AMCs participating
- Performance Opportunity Summary
- Knowledge Transfer meetings



**Measuring  
Progress**

- HQMR & QSMR
- Clinical Outcomes Report
- Core Measures Report Cards
- Performance Updates
- Clinical Data Base (CDB)



**Implementing  
New Strategies**

- Better Performer Best Practices
- Commit to *ACT*ion Rapid-cycle Improvement Collaboratives
- Operational Implementation Collaboratives
- Networking Collaboratives and Conference Series

# The Benchmarking Process

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- ↓ Regularly monitor performance
  - ↓ Determine processes to be studied
  - ↓ Identify relevant performance measures
  - ↓ Gather data from multiple hospitals through data collection tools and site visits
  - ↓ Analyze data to compare performance
  - ↓ Identify focal areas for improvement
  - ↓ Identify “Better Performers” and explore their strategies for success
  - ↓ Facilitate adoption of best practice processes and implement change
  - ↓ Restart the cycle (back to top)

# Benchmarking: What are we trying to do?

- **Evaluate compliance** to established evidence based practice standards, guidelines, and/or expert consensus
- **Explore correlations between operational processes and consistency of care** administered at the **patient level**
- **Identify** focal areas where **opportunity** for improvement exists
- **Identify better performing organizations to share** successful strategies and learn from experiences in best practice performance
- Provide compelling data to **drive improvement** initiatives in an ongoing process



# 2007 DVT/PE Benchmarking Project

## Methods/Inclusion Criteria

- Retrospective medical record review of a target of 60 cases meeting enrollment criteria
  - 15 cases meeting the specific inclusion criteria\* for each of 4 cohorts:
    - ✓ *Surgical patients with DVT or PE*
    - ✓ *Surgical patients without DVT or PE*
    - ✓ *Medical patients with DVT or PE*
    - ✓ *Medical patients without DVT or PE*
- Patients meeting the inclusion criteria for each cohort were randomly selected from eligible cases discharged during Q1/2006 through Q1/2007

## Exclusion Criteria for all patients:

- Patients with ICD-9-CM codes for DVT/PE in the principal diagnosis field
- (MDC 14) A primary diagnosis or reason for admission related to pregnancy, childbirth or puerperium
- Admitted for comfort care only or comfort care only ordered on the first day of admission

\* Specific inclusion/exclusion criteria for each cohort defined on the following slides



# Surgical Cohort Enrollment Criteria

## Inclusion Criteria for All Surgical Patients

- Adult patients  $\geq$  18 years of age
- Surgical patients identified via the AHRQ Patient Safety Indicator SAS software documentation 3.1 (March 12, 2007) (all surgical discharges defined by specific DRGs and ICD-9-CM codes for an elective operating room procedure)

***Cohort #1 Surgical patients with DVT or PE*** – Include only cases with ICD-9-CM codes for DVT or PE in any secondary diagnosis field

***Cohort #2 Surgical patients without DVT or PE*** – Exclude cases with ICD-9-CM codes for DVT or PE in any diagnosis field

## Exclusion Criteria for All Surgical Patients

- A procedure for interruption of vena cava is the only operating room procedure
- A procedure for interruption of vena cava occurs before or on the same day as the first operating room procedure

# Medical Cohort Enrollment Criteria

## Inclusion Criteria for All Medical Patients

- Adult patients  $\geq$  18 years of age
- Patients in one of the following product lines: Cardiology, Gastroenterology, HIV, Medical Oncology, General Medicine or Neurology
- LOS > 2 Days
- SOI score of moderate, major or extreme

***Cohort #3 Medical patients with DVT or PE*** – Include only cases with ICD-9-CM codes for DVT or PE in any secondary diagnosis field

***Cohort #4 Medical patients without DVT or PE*** – Exclude cases with ICD-9-CM codes for DVT or PE in any diagnosis field

## Exclusion Criteria for All Medical Patients

- LOS  $\leq$  2 days
- SOI score of “minor”

# Focus of Performance Measures

Appropriate screening for increased risk for DVT/PE

Administration of appropriate guideline-directed DVT prophylaxis

Early ambulation and/or use of physical therapy

Prompt recognition of early warning signs

Use of appropriate diagnostic testing

Rapid intervention following diagnosis of DVT/PE

Reduction of related readmission within 30-60 days of discharge

# AHRQ PSI Postoperative DVT/PE Validation Testing

Medical Record **chart review** for all study cases:

Does this patient have documentation / ICD-9-CM diagnosis code for DVT and/or PE as a secondary diagnosis for this admission?

- Yes
- No

If Yes, specify (check all that apply):

- Patient had **history** of DVT or PE in past
- DVT or PE was **present on admission**
- DVT or PE occurred as a **complication of this admission**
- None of the above is true for this patient (**no DVT/PE**)

Note: Utilized the CMS definitions for history of event, present on admission, and complication of admission

# Preliminary Stats

- **34 AMC hospitals** submitted patient-level data
- **2,100 patient encounters** are included in the analysis
  - **1,022 Surgical Cases**
  - **1,078 Medical Cases**
    - ✓ False positive rate of DVT/PE complication observed in both Medical and Surgical “with DVT/PE” cohorts
    - ✓ False positive rate in Medical cases > Surgical cases

## Next Steps

- Continued analysis of study data
- Select site visits to “Better Performer” hospitals
- Preparation for Knowledge Transfer Meeting conference
- DVT/PE Benchmarking Project **Knowledge Transfer Meeting** on **November 30, 2007** in Oak Brook Illinois

# 2007 Postoperative Respiratory Failure Benchmarking Project

## Project Design

- Patient population will consist of elective surgical cases identified with postoperative respiratory failure (PRF) via the AHRQ Patient Safety Indicator SAS software documentation 3.1 (March 12, 2007)
- Explore patient characteristics; hospital course and relevant clinical care provided prior to diagnosis of PRF; location and timing of diagnosis
- Will evaluate the sensitivity/accuracy of the AHRQ software in identifying cases with PRF

## Timeline

- ✓ Steering Committee met September 20, 2007
- ✓ Project development and preparation: October – November 2007
- ✓ Data collection: December 2007 – January 2008
- ✓ Data analysis and conference preparation: February – April 2008
- ✓ Knowledge Transfer Meeting: May 2008



# *The Power of Collaboration*

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