HOT TOPICS IN PREOPERATIVE ASSESSMENT

Preoperative Assessment SPG
ASPAN’s 32nd National Conference
Chicago, IL
April 17, 2013

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OBJECTIVES

- Discuss computer physician order entry in the preoperative assessment setting
- Discuss use of a standardized preoperative testing tool for patient preparation

COMPUTERIZED PHYSICIAN ORDER ENTRY (CPOE)

- What is CPOE?
  - Computer application for physician orders – nearly every patient care intervention involves physician orders
  - Replaces hand-written order sheets or prescription pads
  - Improves medication safety
  - Reduces unnecessary variation in care
  - Allows for use of institutionally approved protocols / order sets
  - Improves efficiency of care delivery
  - Not just medication order system
    - Impacts care planning, communication and documentation

CPOE - BENEFITS

- Eliminates legibility issues – no more guessing what the handwriting says
- Minimizes telephone orders and potential communication errors. MD can enter orders from remote location.
- Decrease in transcription errors
- Decrease in adverse drug events
  - Automated drug calculations
  - Identify possible drug interactions
  - Automated warning of drug allergies
CPOE - BENEFITS

- Improved efficiency of care delivery
  - Orders go directly to department
  - Decreased turnaround of medications
- More efficient scheduling of tests and procedures
- Cost savings
  - One adverse drug event can cost $2500 (related to increased length of stay, exclusive of litigation costs)

CPOE - CHALLENGES

- Work-space design
  - Environments designed prior to computer use may not accommodate new hardware
  - Mobile computers have limited counter space to accommodate paper charts
- Program design
  - Ease of use – how many "clicks" does it take to create an order
  - Page layout – is the information in a logical sequence and easy to find
- Order sets vs individual orders
- Change in practice
  - Reluctance to embrace new technology – "computer phobes"
  - CPOE does not decrease time required to create orders
  - May need to enter more information than was previously required
  - Time saving achieved through decrease in time spent answering calls to clarify orders etc

CPOE - CHALLENGES

- Technology evolution – constant need for upgrading, reconfiguring and re-training
- New types of errors
  - Human error – entering of wrong information, selecting incorrect orders
- System failure
  - Network failure
  - Prolonged loss of power

PREOP TESTING

- Preop lab and ekg testing should be based on patient’s history, physical status and the risk of the surgical procedure
- Routine & age-based tests are no longer reimbursed by the Centers for Medicare and Medicaid Reimbursement
- Likelihood of abnormal results increases with age
- The more tests performed, the more false positives likely to occur (1 in 13)
- Legal risk of not following up on abnormal results is greater than not performing test at all if not indicated.
PREOP TESTING

- Routine testing should not be used to screen for disease
- Repetition should be avoided – don’t repeat recent normal results
  - EKG valid for 1 year unless event (chest pain, ICD activity etc.)
  - Lab results valid for 30 days
- Healthy patients may not require any testing
- Minimally invasive procedures (i.e. cataracts) may not require any testing

PREOP TESTING

- Regulatory Agencies
  - Joint Commission
    - No mandate for routine preoperative testing
    - Requires only what is necessary to determine patient’s needs
  - CMS
    - Does not determine what needs to be done
    - Does not reimburse for routine screening or age-related testing

PREOP TESTING

- Indications for testing
  - CBC
    - Major surgery
    - Chronic cardiovascular, pulmonary, renal, or hepatic disease, or malignancy
    - Anemia, bleeding disorders, myelosuppression
    - Age <1 year
    - *my facility does Hgb only not CBC. We add platelet count for malignancy/hepatic & renal disease. Also do high for BMI>35
  - PT/INR & aPTT
    - Anticoagulant therapy
    - Hepatic disease
    - Bleeding disorders
    - *my facility does either PT/INR or aPTT based on anticoagulant. Repeated on day of surgery

PREOP TESTING

- Indications
  - Electrolytes and Creatinine
    - Hypertension
    - Renal disease
    - Diabetes
    - Psychiatric or adrenal disease
    - Digenic or diabetic (or other medications affecting electrolytes)
    - *my facility also orders for steroids (> 3 months use), seizure disorders and BMI>35
  - Fasting glucose
    - Diabetes (baseline and repeat on day of surgery)
    - *my facility: age>70, steroids (> 3 months use), seizure disorders
  - Pregnancy Testing
    - Only routine test generally required (may be required by law)
    - *my facility: age 18 – 55 unless has IUD, total hysterectomy or hysterectomy
**PREOP TESTING**

- **Indications**
  - Electrocardiogram
  - Hypertension
  - Cardiac disease
  - Diabetes
  - Other risk factors for cardiac disease (may include age)
  - Generally if using age as a risk factor, 60 is recommended
  - Subarachnoid or intracranial hemorrhage, cerebral vascular accident, head trauma
  - History of COPD or previous head trauma, BMI > 35, age 70 or over
- Chest X-ray
  - Cardiac or pulmonary disease
  - Malignancy
  - *My facility – no CXR required

**STANDARDIZED PREOP TESTING TOOL**

- Creating a tool
  - Identify required testing
  - Identify rationale for testing
  - Create grid
  - Include signature, date & time
  - Ensure policy & procedure in place to govern use of tool
  - Regular review of testing requirements versus regulatory and reimbursement criteria
  - Annual approval / sign-off by Anesthesia department or Medical Director

**BIBLIOGRAPHY**

QUESTIONS

THANK YOU!

To obtain a copy of the handout, please email
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