AHRQ Quality Validation Pilot Process and Tools

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AHRQ QI Users Meeting

Bethesda, MD; September 28, 2007

AHRQ Validation Pilot: Goals

- Gather evidence on the scientific acceptability of the patient safety indicators (PSIs)
  - medical record reviews, data analysis, clinical panels, evidence reviews
- Consolidate the evidence base
- Improve guidance on the interpretation and use of the data
- Evaluate potential refinements to the specifications

Pilot goals continued

- Develop medical record abstraction tools
  - review potentially preventable adverse events
  - identify potential opportunities for improvement
- Develop mechanisms for conducting validation studies on a routine basis
  - collaborating with other organizations
  - data collection and analysis
  - ongoing evaluation and refinement

Patient Safety Indicators

Phase I	Phase II
Accidental puncture and laceration	Foreign body left in during procedure
Iatrogenic pneumothorax	Postoperative hemorrhage or hematoma
Postoperative pulmonary embolism (PE) or deep vein thrombosis (DVT)	Postoperative physiologic and metabolic derangement
Postoperative sepsis	Postoperative respiratory failure
Selected infection due to medical care	Postoperative wound dehiscence

Pilot timeline

- Collaborator recruitment
  - September 2006 to October 2006
- Collaborator training; protocol and tool development and testing (Phase 1)
  - November 2006 to March 2007
- Data collection application development and testing; data reporting (Phase 1)
  - April 2007 to September 2007
- Analysis and assessment (Phase 1)
  - July 2007 to November 2007

Data Collection

- Chart abstraction by collaborators
- Trained via webinar
- Administrative data
  - Cases were assigned based on a sampling probability using AHRQ QI software
- Medical record abstraction tools & guidelines
  - Accidental puncture and laceration
  - Iatrogenic pneumothorax
  - Postoperative pulmonary embolism (PE) or deep vein thrombosis (DVT)
  - Postoperative sepsis
  - Selected infection due to medical care

Guidelines in tool development

- Literature search – evidence based
- Alignment with related QI projects & initiatives
  - Ex. Surgical Care Improvement Project (SCIP)
- Professional & regulatory guidelines
- Ease of use

Guidelines in tool development

- Ongoing expert review process
  - Healthcare and medical practitioners
  - Quality experts
- Consultation with other experts as needed
- Local alpha testing and refinement
- Feedback from collaborator training
- Learnings from national pilot testing

Recognizing limitations

- Chart review
  - Not all data elements of interest are available
  - Ex. hand washing, mask use & environmental factors
- Time constraints (burden on collaborators)
  - Some items of interest are too time consuming to abstract (e.g., lowest urine output)
- Reliability of certain data elements/differences in practice
  - Ex. incentive spirometry & sequential compression devices
- Variability between healthcare systems
  - Admission weights, temperature documentation in OR

Generic structure of the data abstraction tool

- Section 1: Abstractor details
- Section 2: Record identification/validation
- Section 3: Ascertainment of the event(s)
  - Was the patient eligible for the indicator?
  - Did the indicator event happen?

Structure of collection tool continued

- Section 4: Risk factors
- Section 5: Evaluation and management
  - Characterization of the event
  - Potential preventability of the event
- Section 6: Outcomes
  - Impact of the event on the patient

Section 1: Abstractor details

1.1 Date abstraction completed

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1.2 Abstractor identifier

P A Z _ _ _ _

Section 2: Record identification/validation

- Demographics
- AHRQ study ID, patient identification code, DOB, gender, dates of admission and discharge
- Criterion validation
  - Was the correct chart abstracted (correct PSI, patient and admission)?
  - Link to administrative data

Section 3: Ascertainment of event

- Criterion validation - whether cases flagged did or did not have the clinical event
- Inclusion and exclusion criteria from the Patient Safety Indicator Technical Specifications
- Confirmation of the event and date
- Ascertainment of multiple procedures/events per discharge

Ex. Iatrogenic pneumothorax

3.1 Was the patient's admission associated with any of the following conditions or procedures (before the date of the pneumothorax diagnosis)? Check all that apply.

- ☐ Pregnancy, childbirth or puerperium
- ☐ Chest injury or trauma
- ☐ Pleural effusion
- ☐ Diaphragmatic surgery or repair
- ☐ Thoracic surgery (excluding bronchial procedures)
- ☐ Cardiac surgery
- ☐ Lung or pleural biopsy
- ☐ Operations on the esophagus
- ☐ Anterior thoracic spinal fusion or thoracic duct surgery
- ☐ None of the above

If YES to any of the above conditions, please describe the condition or procedure that apparently led to a pneumothorax in the TEXT BOX below and then END the abstraction.

Pneumothorax continued

3.2 Did the patient have a pneumothorax or suspected pneumothorax at the time of admission?

- ☐ Yes
- ☐ No

If YES, STOP as this is an exclusion criterion. Please describe the circumstances surrounding this pneumothorax at admission in the TEXT BOX below and then END the abstraction.

Ex. Postoperative Pulmonary Embolism or Deep Vein Thrombosis

3.3 Did the patient experience a pneumothorax during this admission?

- ☐ Yes
- ☐ No

If NO, STOP as this is required for study inclusion. Please describe any abnormality or condition that might have been misinterpreted as a pneumothorax, such as pneumomediastinum or subcutaneous emphysema in the in the TEXT BOX below and then END the abstraction.

3.4 Document the date the pneumothorax was diagnosed. Use the earliest date in the event of multiple pneumothoraces.

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Section 4: Risk Factors

- Confounding - whether there are confounding factors that might be important for improving indicator specifications and for interpreting and using the AHRQ PSI rates

Example: Selected Infections due to Medical Care

4.1 Did the patient have any of the following immunosuppressive conditions on admission? Check all that apply.

- ☐ Cancer
- ☐ HIV/AIDS
- ☐ Severe malnutrition
- ☐ Lupus or other autoimmune disease
- ☐ Sickle cell disease
- ☐ Nephrotic syndrome or chronic renal failure
- ☐ Short gut syndrome
- ☐ Immunoglobulin deficiency
- ☐ Transplant
- ☐ Other immunodeficiency (specify)

Section 5: Evaluation and Management

- Processes of care/process improvement
- Eligibility for interventions
- Did the patient receive interventions?
- How was the patient diagnosed?
- How was the complication managed once it occurred?

Ex. Postoperative Deep Vein Thrombosis or Pulmonary Embolus

5.7 How was the venous thrombosis diagnosed?

- ☐ Duplex ultrasonography
- ☐ CT scan
- ☐ Contrast venography
- ☐ By clinical suspicion alone

Ex. Postoperative Deep Vein Thrombosis or Pulmonary Embolus

5.8 What specific segment(s) of the venous system was/were identified to have thrombus? Check all that apply.

- ☐ Inferior vena cava
- ☐ Iliac veins
- ☐ Femoral veins
- ☐ Popliteal vein
- ☐ Deep lower extremity veins distal to the popliteal
- ☐ Superficial lower extremity vein(s)
- ☐ Superior vena cava
- ☐ Brachiocephalic (innominate) veins
- ☐ Internal jugular vein
- ☐ Superficial neck vein
- ☐ Subclavian or axillary vein
- ☐ Deep upper extremity veins distal to the axillary vein
- ☐ Superficial upper extremity vein
- ☐ Critical documentation missing
- ☐ Other (specify):

Ex. Postoperative Deep Vein Thrombosis or Pulmonary Embolus

5.9 Was the thrombus occluding or non-occluding?

5.10 Based on diagnostic test documentation, how is the acuteness or age of the DVT reported.

5.12 '…..was the PE or venous thrombosis detected as a result of routine screening?'

5.13 …. 'signs and symptoms present 48-hours prior to diagnostic studies'.

Section 6: Outcomes

- Impact on the patient
- The abstractor is asked to assess the documentation and render a judgment on the impact of the complication
  - Ex. Causative factor related to death, readmission, increased length of stay, and/or transfer to a higher level of care.

Ex. Selected Infection due to Medical Care

6.1 Does the chart suggest that the patient suffered any adverse effects or consequences from this infectious or inflammatory process? Check all that apply.

- ☐ Additional pain or discomfort
- ☐ Extended length of hospital stay
- ☐ Underwent an operating room procedure to treat infection (e.g., incision and drainage, excision)
- ☐ Residual disability or impairment of normal function (at discharge)
- ☐ Readmission
- ☐ Death
- ☐ None or the above or not specified

Last question of every tool

If there are special circumstances or comments related to this case that you feel are important that were not captured in the survey, please state in the TEXT BOX.

DVT/PE example: The patient experienced a postoperative PE-but is was from a septic emboli.

Guidelines

Guidelines for Validation of Selected AHRQ Quality Indicators

(Version 6.2_04/5/2007)

PSI 6: **Guideline for Iatrogenic Pneumothorax**