AHRQ IQI Clinical Validation Panels

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Outline

- Purpose
- Composition and Recruitment
- Rating Process
- Overall themes
- Indicator results
- Take home lessons

Purpose of the Clinical Panels

- **IQIs and PQIs**
  - Developed 1999-2001
  - Based on established indicators
  - Did not undergo panel review
- **Panel review establishes face validity of the indicators**
- **Standardize available evidence for all AHRQ QIs**
  - Establish face validity for one stakeholder group
  - Update evidence
- **Panel review for IQIs considered for NQF endorsement**

Methods

- Modified RAND/UCLA Appropriateness Method (Nominal Group Technique)

- Physicians of various specialties/subspecialties and other health professionals were recruited with the assistance of relevant organizations

- 22 contacted organizations nominated
  - 103 clinicians nominated → 60 accepted → 45 eligible

- Panelists selected in order to form diverse panels

Panelists

- Female: 18%
- Academic: 71%
- Geographic
  - East: 44%
  - West: 29%
  - Other: 27%
- Practice setting
  - Urban: 67%
  - Suburban: 42%
  - Rural: 18%
- Funding of primary hospital:
  - Private: 44%
  - Public: 27%
- Underserved patient population: 56%

Panel methods: Ratings

- **Initial ratings**
  - Packet of information summarizing evidence
  - Approx. 10 questions
    - Tailored to the indicator type
    - 9 point scale
    - Overall usefulness for quality improvement, comparative reporting
  - Compiled ratings provided to panelists
- **Conference call**
  - Discuss differences
  - Consensus on definition changes
- **Final ratings**
  - Empirical analyses provided
  - Using same questionnaire as initial ratings

Results: Overarching themes

- Case mix variability
- Reliability
- Volume measures as indirect measures of quality
  - Composite measures

Cardiac Panel

- Reviewed 5 indicators:
  - AAA Volume/Mortality
  - Pediatric Heart Surgery Volume/Mortality
  - Bilateral Catheterization
- 11 clinicians: vascular surgeons, pediatric cardiologists, pediatric cardiovascular surgeons, interventional cardiologists, pediatric ICU nurse, surgical nurse

Cardiac Panel

Indicator	Overall – QI	Overall - Comparative
AAA Mortality	Acceptable (7)	Unclear (6)
AAA Volume	Acceptable (7)	Acceptable (7)
Bilateral catheterization	Unclear (5)	Unclear with disagreement (5)
Pediatric heart surgery volume	Acceptable (8)	Acceptable (8)
Pediatric heart surgery mortality	Acceptable (8)	Acceptable (8)

Cardiac Panel

Indicator	Overall – QI	Overall - Comparative
AAA Mortality	Acceptable (7)	Unclear (6)
AAA Volume	Acceptable (7)	Acceptable (7)

- Case mix variability

    - Ruptured vs. unruptured; endovascular vs. open

    - Bias: Slight overadjustment for endovascular (12%) and underadjustment for ruptured (12%)

- Total volume (ruptured and unruptured) best predictor of outcomes

- Stratify by surgical approach (endovascular vs. open)

Cardiac Panel

Indicator	Overall – QI	Overall - Comparative
AAA Mortality	Acceptable (7)	Unclear (6)
AAA Volume	Acceptable (7)	Acceptable (7)

- Case mix variability

  - Ruptured vs. unruptured; endovascular vs. open

  - Bias: Slight overadjustment for endovascular (12%) and underadjustment for ruptured (12%)

- Total volume best predictor of outcomes

- Stratify by surgical approach (endovascular vs. open)

Cardiac Panel

Indicator	Overall – QI	Overall - Comparative
Pediatric heart surgery volume	Acceptable (8)	Acceptable (8)
Pediatric heart surgery mortality	Acceptable (8)	Acceptable (8)

- Case mix variability

  - Supported use of RACHS

  - Correlations of hospital volume for each RACHS complexity are robust (r = 0.74 – 0.95)

  - Best predictor of outcome is total volume, rather than by complexity

Cardiac Panel

Indicator	Overall – QI	Overall - Comparative
Bilateral catheterization	Unclear (5)	Unclear w/ disagreement (5)

- Modification: Expand list of appropriate indications for bilateral catheterization

- Primarily a resource indicator

- Charting of indications may be poor

- May result in decrease of appropriate uses

Surgical Resection Panel

- **Reviewed 4 indicators:**
    - Esophageal Resection Volume/Mortality
    - Pancreatic Resection Volume/Mortality
- **13 clinicians: thoracic surgeons, general surgeons (including GI and oncology), oncologists, internist, gastroenterologists, surgical nurse**

Surgical Resection Panel

Indicator	Overall – QI	Overall - Comparative
Esophageal resection mortality	Acceptable (7)	Acceptable (7)
Esophageal resection volume	Acceptable (7)	Acceptable (7)
Pancreatic resection mortality	Acceptable (7)	Acceptable (7)
Pancreatic resection volume	Acceptable (7)	Acceptable (7)

Surgical Resection Panel

Esophageal resection

- Case mix variability

  - Risk adjustment performs well. Underestimates risk for patient with middle esophageal and unspecified site cancer (22%, 37%).

Pancreatic resection

- Case mix variability

  - Over-estimates risk for total pancreatectomy (68%), lesser extent underestimates risk for Whipple (15%). Issue raised with 3M.

- Low rates

Geriatric Panel

- Reviewed 4 indicators:
  - Acute Stroke Mortality
  - Hip Fracture Mortality
  - Hip Replacement Mortality
  - Incidental Appendectomy

- 14 clinicians: internists (including geriatrics and hospital medicine), neurologists, general surgeon, interventional radiologist, orthopedic surgeons, neurosurgeon, diagnostic radiologist, nurse, physical therapist

Geriatric Panel

Indicator	Overall – QI	Overall - Comparative
Acute stroke mortality	Unclear (6.5)	Unclear with disagreement (5)
Incidental appendectomy	Acceptable (7)	Unclear (6)
Hip fracture mortality	Acceptable (7)	Acceptable (7)
Hip replacement mortality	Unclear due to disagreement (7)	Unclear (6)

Geriatric Panel

Indicator	Overall – QI	Overall - Comparative
Acute stroke mortality	Unclear (6.5)	Unclear with disagreement (5)
Incidental appendectomy	Acceptable (7)	Unclear (6)
Hip fracture mortality	Acceptable (7)	Acceptable (7)
Hip replacement mortality	Unclear due to disagreement (7)	Unclear (6)

- Case mix variability: Stroke type (hemorrhagic, ischemic, subarachnoid)

  - Risk adjustment accounts for almost all difference in risk

- Patient factors such as delay in presenting for care

Geriatric Panel

Indicator	Overall – QI	Overall - Comparative
Acute stroke mortality	Unclear (6.5)	Unclear with disagreement (5)
Incidental appendectomy	Acceptable (7)	Unclear (6)
Hip fracture mortality	Acceptable (7)	Acceptable (7)
Hip replacement mortality	Unclear due to disagreement (7)	Unclear (6)

- Exclude patients with hip fracture

- Case mix variability

    - Risk adjustment somewhat overestimates risk for revision

- Rates very low, reliability concerns

Geriatric Panel

Indicator	Overall – QI	Overall - Comparative
Acute stroke mortality	Unclear (6.5)	Unclear with disagreement (5)
Incidental appendectomy	Acceptable (7)	Unclear (6)
Hip fracture mortality	Acceptable (7)	Acceptable (7)
Hip replacement mortality	Unclear due to disagreement (7)	Unclear (6)

- "Is it still being done?"

- "If it is still being done, it shouldn't be done. Then it is a good indicator"

- "I am having a hard time getting excited about this indicator"

Geriatric Panel

Indicator	Overall – QI	Overall - Comparative
Acute stroke mortality	Unclear (6.5)	Unclear with disagreement (5)
Incidental appendectomy	Acceptable (7)	Unclear (6)
Hip fracture mortality	Acceptable (7)	Acceptable (7)
Hip replacement mortality	Unclear due to disagreement (7)	Unclear (6)

- Limit to the elderly

- Case mix variability

  - Risk adjustment accounts for both repair type and fracture location

Conclusion

- Overall good reception of indicators

- Recommendations considered in context of other validation efforts

- Indicator revisions implemented in February 2008

- Further efforts to improve indicators or develop additional evidence

Questions?