



# Panel Reviews of the AHRQ QIs: AHRQ and NQF panels

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# Outline

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- Purpose
- AHRQ Panel Review Methods
- Example of the IQI Panel Review
- NQF Review of the QIs
- Indicators receiving NQF approval
- Take home lessons



# Purpose of the Clinical Panels

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- Panel review establishes face validity of the indicators
- Refine definitions of the indicators
- Standardize available evidence for all AHRQ QIs
  - Establish face validity for one stakeholder group
  - Update evidence



# Methods

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- 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
- Panelists selected in order to form diverse panels
  - Male (80%), academic (71%), Geographic, Rural (18%), Underserved patient population (50%)



# 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

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- Three panels reviewed IQIs prior to NQF review
  - Cardiac, Geriatric,
- Case mix variability
- Reliability
- Volume measures as indirect measures of quality
  - Composite measures



# Cardiac Panel

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- 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)

- 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

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- 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

<b>Indicator</b>	<b>Overall – QI</b>	<b>Overall - Comparative</b>
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)



# 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





# National Quality Forum Review

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- Provides additional evidence of face validity
- Another outside evaluation of available evidence
- Usefulness for comparative reporting as well as quality improvements
- Suggested potential improvements to indicators



# NQF Endorsed Indicators

## ■ IQIs

- Esophageal Resection Volume (#01)\*
- Pancreatic Resection Volume (#02)\*
- Abdominal Aortic Aneurysm (AAA) Repair Volume (#04)\*
- Esophageal Resection Mortality (#08)\*
- Pancreatic Resection Mortality (#09)\*
- Abdominal Aortic Aneurysm (AAA) Repair Mortality (#11)\*
- AMI Mortality (#15 and #32)
- CHF Mortality (#16)\*
- Acute Stroke Mortality (#17)\*
- Hip Fracture Mortality (#19)\*
- Pneumonia Mortality (#20)\*
- Incidental Appendectomy in the Elderly (#24)\*
- Bi-lateral Catheterization (#25)\*

\*NQF endorsed





# NQF Endorsed Indicators

## ■ PDIs

- Accidental Puncture or Laceration (#01)\*
- Decubitus Ulcer (#02)\*
- Iatrogenic Pneumothorax (#05)\*
- Pediatric Heart Surgery Mortality (#06)\*
- Pediatric Heart Surgery Volume (#07)\*
- Postoperative Wound Dehiscence (#11)\*
- Blood Stream Infection in Neonates (#02)\*

## ■ PSIs

- Death among Surgical Inpatients with Treatable Serious Complications (#04)\*
- Iatrogenic Pneumothorax (#06)\*
- Postoperative Hip Fracture (#08)
- Postoperative DVT or PE (#12)\*
- Postoperative Wound Dehiscence (#14)\*
- Accidental Puncture or Laceration (#15)\*
- OB Trauma with and without Instrument (#18 and #19)
- Birth Trauma (#17)\*





# Reasons Indicators are not NQF endorsed

- Some indicators not submitted
  - Needed further development work
  - Similar indicators already NQF endorsed
- Some indicators withdrawn
  - New evidence collected needed further consideration before completing process
- NQF panel concerns
  - Preventability and links between process and outcome



# Examples of changes proposed by NQF

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- Rare indicators to be expressed as counts rather than rates
  - Transfusion reaction, Foreign Body
- Requirements to use POA
  - Decubitus ulcer, Foreign Body
- Harmonization of measures
  - Death Among Surgical Inpatients with Complications (Formerly FTR), Birth Trauma
- Time Limited Endorsements
  - Neonatal indicators





# Conclusion

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- Overall good reception of indicators
- Recommendations considered in context of other validation efforts
- Indicator revisions implemented in Future Releases, in addition to coding and changes from user experience
- Further efforts to improve indicators or develop additional evidence



# Questions?

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