

Future Validation and Improvement of the AHRQ QI

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Validation

Where we have been

- AHRQ QI team activities
 - Face validity of indicators through panel review
 - Coding validity through chart review of selected PSIs
- Outside research
 - POA
 - Coding validity
 - Resource use

Validation

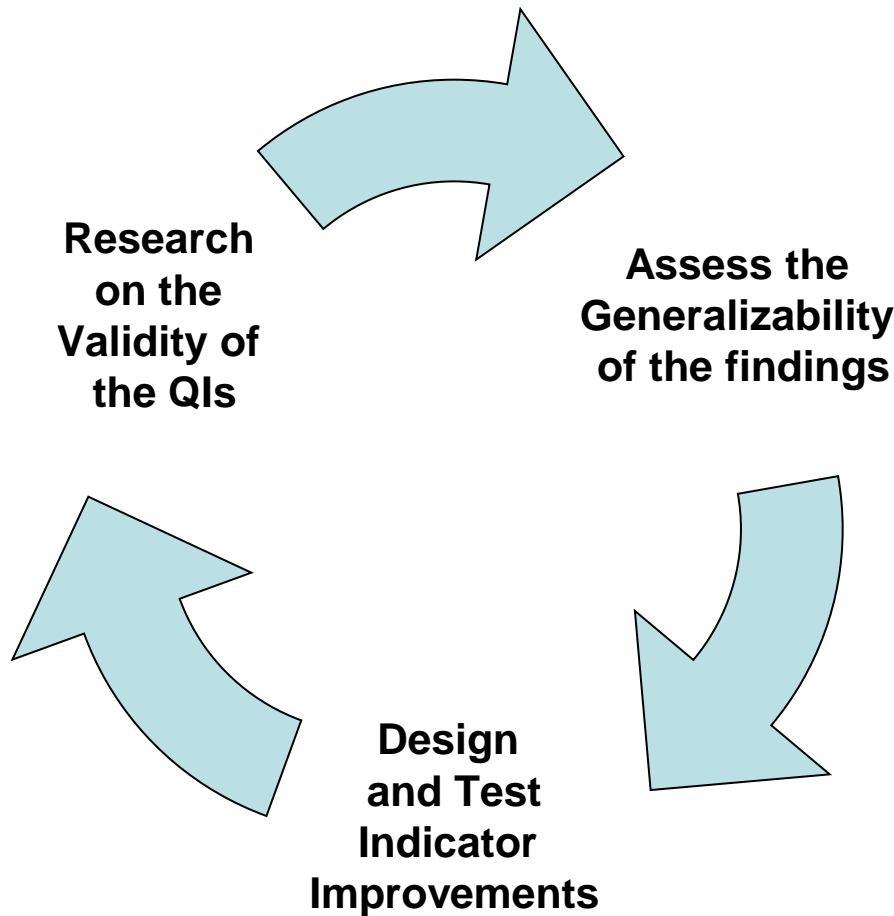
Where we are headed next

- Next up on the AHRQ sponsored validation
 - Continued chart reviews
 - More PSIs, estimating false positives
 - Examination of under-reporting of PSIs
 - Creation of chart review tools
 - PQI Validation
 - Extending the face validity of the indicators through panel review
 - New tools for using the PQIs
 - Additional work on Patient Safety Indicators
 - Assessment of new coding and POA
 - Additional work on Neonatal Indicators/Pediatric Indicators
 - Assessment of coding validity for BSI
 - Risk Adjustment Development and Validation

Our Progress Depends on Collaboration

- Continuous feedback loop from validation work and user feedback creates better indicators
- Spans all sizes of research projects
 - Peer reviewed to individual hospital investigations
- Informs potential feedback, guidance on indicator use, and in some cases indicator reassignment
- Spawns additional validation studies

Research put to work



Examples of Research Feedback Indicator Reassignment

- Complications of Anesthesia
 - Several user reports noted that minor reactions such as pruritis were coded.
 - Investigation of coding guidelines found that E-codes used in this indicator allowed for coding of these minor reactions.
 - No way to “fix” indicator found
 - Indicator will be reassigned as an “experimental indicator”

Examples of Research Feedback Modifying Guidance

- Present on Admission Research
 - Several recent studies have highlighted POA rates in the Patient Safety Indicators
 - Highlighted indicators for which POA is an important data element
 - Guidance to use these indicators only with POA, software modified to require POA in some cases, and NQF endorsement conditional on POA

Examples of Research Feedback Modifying Coding Structure

- Transfusion Reaction
 - Intricacies in coding aren't always obvious in ICD-9-CM coding
 - NACHRI supported research of the PDIs identified cases of transfusion reaction from minor antigens instead of ABO
 - Minor antigens indexed to ABO code
 - Proposal to separate transfusion reactions due to ABO from those due to minor antigens to improve the specificity of this indicator

Examples of Research Feedback

Improving the Indicator

- Respiratory Failure
 - Initial definition relied on diagnosis code for identifying numerator cases
 - VA based study found low sensitivity for dx code
 - Further investigation by VA team identified procedure codes for delayed extubation and post-operative re-intubation improved sensitivity without significantly decreasing specificity
 - AHRQ team investigated generalizability of these findings using the HCUP data and...
 - Added the new procedure codes to the definition
 - But the story doesn't end there...

Examples of Research Feedback Improving the Indicator

- Respiratory Failure
 - Procedure codes were imported into new pediatric indicator
 - NACHRI directed study identified children with expected extended intubations not related to respiratory failure
 - Consulting with experts and through data analysis AHRQ team identified specific operations for which intubation is extended (e.g. tracheal procedures)
 - Some cases generalizable to the adult indicator
 - Continued work with NACHRI team to ensure that the solution truly improves specificity of indicator

The Path for Future Research

- Many user experiences, small and large validation studies happening outside of AHRQ
- These studies allow us to improve indicators and ultimately hospital quality
- Tell us about your research on:
 - Validation (sensitivity and specificity)
 - Quality Improvement Programs
 - Special Populations