Improving Attribution Models: Project Update

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Summary of Prior Work

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In 2017, NQF released an attribution report which:

- Identified key challenges in attribution

- Developed a set of guiding principles

- Identified elements of an attribution model
  - *Explored strengths and weaknesses*

- Identified recommendations for developing, selecting, and implementing an attribution model
  - *Attribution Selection Guide*

Key Findings

- Best practices have not yet been determined
  - *Existing models are largely built off of previously used approaches*
  - *Trade-offs in the development of attribution models should be explored and transparent*
- No standard definition for an attribution model
- Lack of standardization across models limits ability to evaluate
- Greater standardization among attribution models is needed to allow:
  - *Comparisons between models*
  - *Best practices to emerge*

Key Findings (continued)

- Little consistency across models but there is evidence that changing the attribution rules can alter results.

- Lack of transparency on how results are attributed and no way to appeal the results of an attribution model that may wrongly assign responsibility.

- These products allow for greater standardizations, transparency, and stakeholder buy-in:
  - *Allow for evaluation of models in the future*
  - *Lay the groundwork to develop a more robust evidence base*

Current Efforts

Project Purpose and Objectives

- Develop a white paper to provide continued guidance to the field on approaches to attribution

To accomplish these goals, NQF:

1. Convened a multistakeholder Advisory Panel to guide and provide input on the direction of the white paper
2. Conducted a review of the relevant evidence related to attribution
3. Performed key informant interviews
4. Development of a white paper that summarizes the evidence review, interviews, and recommendations
5. Development of a blueprint for further development of the Attribution Selection Guide
6. Examination of NQF processes for opportunities to address attribution in measure evaluation and selection

What We've Found

Summary of Findings

- Series of six evaluation considerations
  - *Examine key challenges to building an attribution approach*
  - *lay the groundwork for what should be evaluated through a multistakeholder review of attribution models.*
  - *Provide guidance on potential best practices for attribution models*
- Opportunities to improve the Attribution Model Selection Guide
  - *Users suggested algorithms to evaluate decisions, examples of responses to required elements, and opportunities for clarification*

Evaluation Consideration 1

Does the attribution model assign accountability to an entity that can meaningfully influence the results?

- Consideration asks whether or not it assigns accountability to an entity that can meaningfully influence the results and if there is reasonable evidence to support attributing responsibility to that entity.

- Lack of evidence underscores the importance of the conceptual rationale linking the outcome and an intervention that the accountable unit can undertake.

- This evaluation consideration should also review how a model handles expensive and/or complex cases.

- The Panel also explored the implications of team-based care under this evaluation consideration.

Evaluation Consideration 2

How has the model been tested?

- Goal is to determine the effectiveness of the attribution model to approximate the patient and provider relationship.
  - *Testing should quantify the patient and provider interactions*
  - *Evidence should conceptually evaluate whether those interactions can have a meaningful impact on the outcome being measured.*
- Testing of the model should be done through both the performance measure specifications and the program.
- The Panel also discussed the potential for evidence generated by empirical testing.
  - *Sensitivity of the model parameters*
  - *Validity assessed through chart review or face validity*

Evaluation Consideration 3

What data were used to support the attribution model?

- Available data sources and data quality should be considered when designing and selecting an attribution model.

- Different data sources have different pros and cons.
  - *Claims data is commonly used but may not accurately reflect a relationship or have the required granularity.*
  - *Emerging data sources could support improved attribution models*

- Potential challenges include data silos, differing opinions between clinicians and patients, timeliness and availability.

Evaluation Consideration 4

Does the model align with the context of its use?

- Models should be designed and used in the specific program context for which they are intended.

  - *Consider the program goal, whether the program is mandatory or voluntary, the accountability mechanism used (e.g., payment or public reporting), and the intended behavior change.*

- Alignment of the program and measure inclusion criteria and target populations are critical to ensure that proper financial and quality incentives are created.

Evaluation Consideration 5

Have potential unintended consequences of the model been explored and have negative consequences been mitigated?

- Improperly designed attribution models carry a risk of negative unintended consequences to patients.
  - *Should not diminish access to care*
  - *Should not detract from patient-centeredness*
- Attribution models can also have negative unintended consequences for clinicians and providers.
  - *Incorrect results can lead to demoralization, burnout, lack of trust in quality measurement enterprise*
  - *Incorrect models can pose reputational risks and impact payment*
- Attribution models can also have consequences for the healthcare system broadly.
  - *Could drive consolidation as providers seek to gain control over results*
- Panel highlighted the role of appropriate exclusions and risk adjustment to project against unintended consequences

Evaluation Consideration 6

Is the model transparent to all stakeholders?

- Details of attribution model algorithms currently are not available to all affected parties.

  - *Impedes ability to understand results and improve performance*

- Insufficient transparency also prevents patients from knowing who is held accountable for their care and can prevent them from being empowered consumers.

- As part of a multistakeholder review, the details of the algorithm should be made available.

- An appeals process could also increase transparency

  - *Would help foster buy-in and confidence in results*

Recommendations for Improving the Selection Guide, its Dissemination, and Use

Selection Guide Improvement Recommendations

- Divide the current guide into two products:
  - » A guide for specifying and designing an attribution model, and
  - » A guide for evaluating an attribution model.

- The attribution evaluation guide should incorporate algorithms for determining appropriate decisions made in the design of the model based on its use.

- The attribution specification guide should provide examples of responses to the required elements and algorithms to assist with design decision points in developing a model.

- The guide should include more real world examples and highlight potential attribution decisions for specific situations.

Selection Guide Improvement Recommendations (continued)

- Clarify the following questions in the current guide in the context of the evaluation or specification of attribution models:
  - *Elucidate terms such as "multiple units"*
  - *Reduce potential overlap between questions*
  - *Address potential redundancies with NQF's measure submission form*
- Explore automated, online, and other electronic options to make the form easier to use

Path Forward

Evaluation of Attribution Models as Part of Measure Endorsement and Selection

- **Consensus Development Process**
  - *Current NQF evaluation criteria lacks guidance/specific criteria on how to perform a focused, systematic review or evaluation specific to the attribution approach*
  - *Including criteria for the evaluation of attribution models would enhance the NQF evaluation criteria*
- **Measure Application Partnership**
  - *Provide guidance on the selection of performance measures for federal quality initiatives*
  - *Measure Selection Criteria and preliminary analysis algorithm could be revised to consider the attribution of a performance measure in light of its potential use and the attribution model of the program.*

Next Steps

NATIONAL QUALITY FORUM

Feedback Received on the Draft White Paper

- The draft white paper was posted for public comment from April 12-May 14.
- Nine comments were received
- Key themes from the comments include:
  - *Ensuring that a more patient-centered focus is included*
  - *The need to define criteria and specifications for attribution models in NQF's measure endorsement criteria*
  - *Inclusion of further guidance and/or recommendations on best practices to address and minimize the risks and issues associated with attribution*
  - *Inclusion of specific considerations for patients with cancer diagnoses when discussing attribution*

Project Timeline

Next Steps

- Panel will convene for their final call to finalize the white paper on July 10

- Final white paper will be available in September 2018

Discussion

CSAC Discussion

- Does the CSAC have any general reflections on this report?

- Does the CSAC agree with the evaluation considerations put forth by the Improving Attribution Models Advisory Panel?

- Does the CSAC have any thoughts/guidance on potentially incorporating attribution into future measure evaluation criteria?

Project Contact Information

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Questions?