EVIDENCE REVIEW FOR QUALITY IMPROVEMENT INNOVATIONS:

A Test of a Responsive Review Method

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BACKGROUND: CURRENT EVIDENCE REVIEW METHODS DO NOT ADEQUATELY MEET FRONT LINE QUALITY IMPROVEMENT(QI) NEEDS

- Current methods aim to assess whether an intervention is effective BUT improvers need best available science to meet their improvement need, including tools and materials
- Without objective evidence review, innovators
  - May miss previously-tested approaches
  - Rely on biased information
  - Use personal preferences
- Innovators have time and budget limitations
- Implemented changes will directly impact patient care

AIM

- RIER Goal: Meet improvers where they are
  - Not just rapid reviews, but RESPONSIVE reviews
  - Provide relevant, timely and unbiased overviews of available information on a topic of interest to a QI team
  - Not meant to be exhaustive or comprehensive
- Evaluation Goal: Test the RIER process as implemented and assess its usability by QI teams

RIER METHODS

- Developed as part of an Evidence-Based Quality Improvement (EBQI) initiative for implementing the Patient Centered Medical Home (PCMH) primary care model
  - Carried out across six primary care practices networked to three different hospital systems and serving over 40,000 Veteran patients
  - Participants were front line primary care providers and staff
  - QI teams had 3 to 11 members and had designated interdisciplinary leaders
  - Teams generated 60 innovations proposals, 15 were approved by regional leadership
  - 13 of the 15 approved proposal teams requested reviews over 16 months
- Goals:
  - Topics identified and selected by frontline interdisciplinary primary care QI teams
  - RIERs completed within weeks of written requests

RIER PRIMARY COMPONENTS

- Communication with QI teams regarding what they want
  - Initial written evidence review request
  - Additional interactions when questions arose
- Evidence review directed at articles relevant to the proposed innovations or alternative related innovations that could achieve the desired outcomes
  - Use of a parsimonious high specificity search filter
  - Based as much as possible on prior published meta-analyses
- Web-based review of "how to" information on designing and implementing the innovations (Google Scholar)
- Summary of key articles

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PACT PATIENT ALIGNED CARE TEAM

Responsive Innovation Evidence Review REQUEST FORM

Problem, Area of Concern, or Outcome Measure to Improve:

Priority: High.....☐ Medium.....☐ Low.....☐

Date of Request:_____ **Desired Output Date:**_____

Specific Questions:

Innovations Being Considered:

Contact Information:

Name:_____ **Group:** QC...☐ _____ WG...☐ _____

Phone:_____ **Fax:**_____ **Email:**_____

RIER SEARCH STRATEGY

- Search for existing systematic reviews in specialized databases such as Database of Abstracts of Reviews of Effects (DARE) and Clinical Queries in PubMed
- Apply a validated electronic database search filter designed to identify the general topic (PCMH in this case) publications
- Screen online resources such as AHRQ Citations Collections
- Use the Related Citations function in PubMed to identify pertinent articles
- Consult content experts to identify seminal articles

RIER IMPLEMENTATION

- Generated 13 RIERs (the total requested) covering the following topics during the first 16 months of the project
  - Advanced Access, Homelessness, Interactive Communication, Motivational Interviewing, Patient Centered Medical Home (PCMH) Evaluation Measures, Patient Registries, PCMH and Mental Health, Pharmacists, Primary Care Team Functioning, Readmissions, Relational Coordination, Secure Messaging, and Self-Management
- These RIERs took
  - 2 to 6 weeks to conduct
  - 6 to 15 pages per RIER (mean 9 pages)
  - Clinician or clinically savvy reviewer participation

RIER EVALUATION SURVEY

- Completed by 17 of 28 VAIL-PCC innovation leaders (61%) surveyed
- Respondents rated RIERs as useful (81%)
  - Very useful (50%), probably useful (31%)
- QI teams found RIERs very useful for helping them
  - Think more clearly and broadly about their areas of concern (50%)
  - Identify next steps in the innovation process (44%)
  - Gain confidence in how the innovation project fits into established evidence from the literature (56%)
- Some respondents were unclear about the review request process (26%)

NEEDED IMPROVEMENTS

- Five written survey comments similar to those below suggested more interaction between review requesters and producers at the beginning of the process:
  - "Have the innovation team talk directly to those conducting the rapid review in order to get a sense of context for the overall innovation project."
  - "Now that I see what they do, I am more inclined to communicate with them and bounce ideas back and forth starting in the beginning phases of an innovation."
- Comments indicated a need for clearer "marketing," reminders, and brief training in review methods (even though 71% of respondents reported having used PubMed before)
- Overall, the reviews themselves seemed to hit the mark, but it took teams some time to catch on
  - "The rapid reviews are very helpful. The ability to request a rapid literature review is an important asset in expediting project or program development."
  - "Thank you for this wonderful resource. We will try to use it more effectively."

OTHER OUTCOMES

- RIER was an important component of a multi-site Evidence-Based Quality Improvement (EBQI) initiative aimed at accelerating and improving implementation of the Patient Centered Medical Home (PCMH) model in primary care
- Overall, the EBQI project of which the RIERs were a part:
  - Resulted in 80 front line generated proposals for QI innovations over 3 years, showing continued front line demand/interest for participation in improvement throughout the project
  - Showed positive impacts on increasing non-face to face care, continuity of care, patient perceptions of the quality of their communication with their providers, and provider burnout both pre-post and in comparison to non-EBQI sites in the region

BOTTOM LINE

- Responsive Innovation Evidence Reviews (RIERs) can be incorporated into quality improvement projects to facilitate evidence-based care using the outlined model
  - This preliminary test of the method is a promising case study among 13 different frontline interdisciplinary QI teams
  - Further improvements can be made, especially in structuring interactions with teams
- User responses indicate a compelling need for responsive reviews as part of QI
- Research is needed to assess the comparative quality of RIERs and the impact on specific quality improvement innovations

REFERENCES AND FUNDERS

The RIER project built on learning from a prior project funded by the Robert Wood Johnson Foundation and RAND (see relevant publications below) and on a large Evidence-Based Quality Improvement intervention for accelerating adoption of the Patient Centered Medical Home, funded by the Veterans Health Administration (publications available upon request)

- Danz MS, Hempel S, Lim YW, Shanman R, Motala A, Stockdale S, Shekelle P, Rubenstein L. Incorporating evidence review into quality improvement: meeting the needs of innovators. *BMJ Qual Saf.* Nov 2013;22(11):931-939.
- Hempel S, Rubenstein LV, Shanman RM, Foy R, Golder S, Danz M, Shekelle PG. Identifying quality improvement intervention publications - A comparison of electronic search strategies. Implement Sci. 2011;6:85.
- Rubenstein, L.V., Hempel, S., Farmer, M., Asch, S., Yano, E., Dougherty, D. & Shekelle, P. (2008). Finding order in heterogeneity: Types of quality improvement intervention publications. *Quality and Safety in Healthcare, 17(6),* 403-8.
- Danz MS, Rubenstein LV, Hempel S, Foy R, Suttorp M, Farmer MM, Shekelle PG. Identifying quality improvement intervention evaluations: is consensus achievable? Qual Saf Health Care. Aug 2010;19(4):279-283.
- Rubenstein L, Khodyakov D, Hempel S, Danz M, Salem-Schatz S, Foy R, O'Neill S, Dalal S, Shekelle P. How can we recognize continuous quality improvement? *Int J Qual Health Care*. Dec 4 2013
- Hempel S, Shekelle PG, Liu JL, Danz MJ, Foy R, Lim YW, Motala A, Rubenstein LV. Development of the Quality Improvement Minimum Quality Criteria Set (QI-MQCS): a tool for critical appraisal of quality improvement intervention publications