MAIN BIBLIOGRAPHY—SELECTED ARTICLES AND OTHER RESOURCES RELEVANT TO QI/DISSEMINATION AND IMPLEMENTATION/IMPROVEMENT SCIENCE

4TH ANNUAL APA CONFERENCE

ADVANCING QUALITY IMPROVEMENT SCIENCE FOR CHILDREN’S HEALTH CARE RESEARCH

NOTE: THE MAIN BIBLIOGRAPHY FROM THE 2013 CONFERENCE IS ATTACHED.

PARTICIPANTS MAY ALSO BENEFIT FROM THE BREAKOUT-SESSION SPECIFIC LISTS OF REQUIRED AND RECOMMENDED READINGS FOR ALL 4 CONFERENCES, AVAILABLE AT THE APA QI SIG URL.

CONTENTS:

I. Child-focused QI studies in progress
II. Reviews of QI intervention studies
III. Theory, logic models, conceptual frameworks
IV. Methods guidance and specific evaluation research methods
V. Context
VI. Metrics and measurement
VII. Funding opportunities
VIII. IRB issues
IX. Conferences
X. Journals
XI. Websites
XII. Other
XIII. Opportunities for improvement

SECTION I: CHILD-FOCUSED QI STUDIES IN PROGRESS (E.G., STUDY PROTOCOLS)


- Fiks, A. Pediatric Patient Engagement as a Criterion for Meaningful Use Stage 3


Section II: Reviews of QI Intervention Studies


Cochrane EPOC: Recent Reviews of (mostly) “generic” strategies (topic names are embedded in URLs):

http://summaries.cochrane.org/CD000259/audit-and-feedback-effects-on-professional-practice-and-patient-outcomes

Section III: Theory, logic models, conceptual frameworks


Proctor, E et al. (2013) Implementation strategies: recommendations for specifying and reporting. Implementation Science 8;139.


Section IV: Methods Guidance and Specific Evaluation Methods

Section Iva: Methods guidance

• Also see Ivers Tricco et al. in Section II


Section IVb. CRCTs

• Also see Fretheim under methods guidance


• Krist, AH et al. (2013). Designing a valid randomized pragmatic primary care implementation trial: the my own health report (MOHR) project. Implementation science 8:73. CRCT with a delayed intervention.


• Reeves, R. et al. (2013). Facilitated patient experience feedback can improve nursing care: a pilot study for a phase III cluster randomized controlled trial. BMC Health Serv Res. 4;13:259.


Section IVc. Interrupted Time Series

• Also see Fretheim under methods guidance

• Also see Penfold and Zhang under methods guidance


• Livingood, WC et al. (2013). A quality improvement evaluation case study: impact on public health outcomes and agency culture. Am J Prev Med 44(5):445-452. Focus on childhood immunization. ITS application of covariance was used, but this was essentially an uncontrolled pre-post study.


Section IV.d. RCTs with Health Care Providers as Units of Intervention


Section IV.e. Quasi-experiments with practices as units of intervention and analysis


Section IV.e: QUALITATIVE AND MIXED METHODS

• Also see Powell et al. in Section I.


Section V: Context

Va. Frameworks and models


• Aarons, G., M. Erhart, et al. (2014). "Aligning Leadership Across Systems and Organizations to Develop a Strategic Climate for Evidence-Based Practice


**Vb. Instruments and Methods**


Damschroder, L. and J. Lowery (2013). "Evaluation of a large-scale weight management program using the CFIR." *Implement Sci* 8(51). Of the 31 CFIR constructs assessed, ten constructs strongly distinguished between facilities with low versus high program implementation effectiveness.

Jacobs, R., R. Mannion, et al. (2013). "The relationship between organizational culture and performance in acute hospitals." *Social science and medicine* 76: 115-125. Organizational culture varies across time and is at least in part associated in consistent and predictable ways (i.e., different culture groupings) with a variety of organizational characteristics and routine measures of performance. Used surveys at different time points to collect cultural variables.


Vla. New measures

- Practice improvement capacity rating scale. [http://forces4quality.org/practice-improvement-capacity-rating-scale](http://forces4quality.org/practice-improvement-capacity-rating-scale)

- For publications from the CHIPRA Pediatric Quality Measures Program, visit [http://www.ahrq.gov/policymakers/chipra/index.html#Core2](http://www.ahrq.gov/policymakers/chipra/index.html#Core2). COMING SOON: Lists of measures submitted (with accompanying detail) and measure topics by developer.

Vlb. Measuring Results

Vlb(1) Measuring changes in structure, process and outcomes of care


- Chung, Sukyung PhD; Panattoni, Laura PhD; Hung, Dorothy PhD; Johns, Nicole MPH; Trujillo, Laurel MD; Tai-Seale, Ming PhD. Why Do We Observe a Limited Impact of Primary Care Access Measures on Clinical Quality Indicators? *Journal of Ambulatory Care Management* April/June 2014 - Volume 37 - Issue 2 - p 155-163. doi: 10.1097/JAC.0000000000000026.

Section Vic. Measurement validity


Vld. Commentaries on metrics/measurement


Section VII FUNDING OPPORTUNITIES


- AHRQ Announces Interest in Research on Healthcare Delivery System Affordability, Efficiency, and Quality

- AHRQ. Dissemination and Implementation Research in Health (R01)

Section VIII. IRB Issues


SECTION IX. CONFERENCES/TRAINING

- Call For Abstracts SUMMER INSTITUTES ON QUALITY IMPROVEMENT AUGUST 5-8, 2014; and IMPROVEMENT SCIENCE SUMMIT ON RESEARCH METHODS Aug. 5-6, both SAN ANTONIO, TX https://classic.regonline.com/custImages/31000/310140/2014CallForAbstracts3-19-14pdf.pdf

- The Seattle Implementation Research Collaborative (SIRC) is a three conference series dedicated to facilitating communication and collaboration between implementation research teams, researchers, and community providers. 3rd Biennial SIRC: (TBD 2015). For more information, please contact sirc@u.washington.edu.

- International Forum on Quality and Safety in Health Care. Paris April 2014, but held annually. See for the 2014 brochure:

- Training:

    https://www.regonline.com/TIDIRH2014

  - The Health Foundation Improvement Science Fellowships http://www.health.org.uk/areas-of-work/programmes/improvement-science-fellowships/?dm_i=4Y2,2BXFZ,72LE5F,8GFBT,1


SECTION X. Journals:


SECTION XI. Websites:

- Also see conferences.

- http://www.implementationnetwork.com/
Section XII. OTHER

- Research-Practice Partnerships

SECTION XIII. NEW!! OPPORTUNITIES FOR IMPROVEMENT


Endnotes:

i Grant Number: R18 HS 022689. Fiks, Alexander, CHOP. September 30, 2013 to September 29, 2014. A mixed-methods approach, including the use of surveys of enrolled parents of children with asthma, will be used. Baseline and followup surveys will cover preferences, goals, asthma control, and medication use. The project will use an existing asthma portal that has been developed and tested through a user-centered design process. Although many patient portals are simple vehicles for transferring information about upcoming appointments, test results, or laboratory findings, this portal provides advanced functionality by providing asthma education, collecting patient-reported outcomes, evaluating medication use and side effects, and tracking parents' preferences and goals. The project will provide guidance on how best to implement the MU stage 3 objectives to foster patient engagement and will fill critical knowledge gaps to inform MU policy and practice implementation. http://healthit.ahrq.gov/ahrq-funded-projects/pediatric-patient-engagement-criteria-meaningful-use-stage-3. This is one of twelve projects funded by AHRQ to inform Stage 3 Meaningful Use (MU) requirements through evidence. Patient portals, online health care applications that allow patients to communicate with their health care providers, are potential tools to achieve the patient engagement goals of MU, but the feasibility of using portals and the impact of their use on clinical care across diverse pediatric practice settings has not been established. This project will evaluate the use of an asthma portal focusing on the implementation and health outcomes for children, low-income families, and children with special health care needs.

ii This study will describe:
  - the types of implementation strategies used;
  - how organizational leaders make decisions about what to implement and
  - how to approach the implementation process;
  - organizational stakeholders' perceptions of different implementation strategies; and the potential influence of organizational culture and climate on implementation strategy selection, implementation decision-making, and stakeholders' perceptions of implementation strategies.

iii This literature review provides a comprehensive understanding of determinants of patient satisfaction either dependent or in-dependent variables, and compares the magnitude of the effects of various independent healthcare dimensions on overall patient satisfaction.

iv The immaturity of the research field makes it hard to find substantial evidence for effective lean intervention in healthcare. Call for a shift from cause-effect to conditional attributions in research.

v Highlights 20 studies, 13 of which appeared in peer-reviewed academic journals. Findings are not separated by source. Child findings not highlighted.

vi Half were randomized trials (n = 35). There was moderate evidence for increased prescriptions of controller medications for decision support, feedback and audit, and clinical pharmacy support and low-grade evidence for organizational change and multicomponent interventions. Moderate evidence supports the use of decision support and clinical pharmacy interventions to increase provision of patient self-education/asthma action plans. Moderate evidence supports use of decision support tools to reduce emergency department visits, and low-grade evidence suggests there is no benefit for this outcome with organizational change, education only, and quality improvement/pay-for-performance.

vii Source: John Ovretveit, personal communication.

viii The report outlines approaches to address the challenges of conducting systematic reviews of complex multicomponent interventions.

ix We reanalyzed the data from a cluster-randomized controlled trial (C-RCT) of a quality improvement intervention for prescribing antihypertensive medication. Our objective was to estimate the effectiveness of the intervention using both...
interrupted time-series (ITS) and RCT methods, and to compare the findings. RESULTS: The estimates of absolute change resulting from the intervention were ITS analysis, 11.5% (95% confidence interval [CI]: 9.5, 13.5); C-RCT, 9.0% (95% CI: 4.9, 13.1); and the controlled ITS analysis, 14.0% (95% CI: 8.6, 19.4). CONCLUSION: ITS analysis can provide an effect estimate that is concordant with the results of a cluster-randomized trial. A broader range of comparisons from other RCTs would help to determine whether these are generalizable results.

x “Despite international attempts to improve methods in cluster randomised trials, important quality limitations remain amongst these trials in residential facilities. Statistician involvement on trial teams may be more effective in promoting quality than further journal endorsement of the CONSORT statement. Funding bodies and journals should promote statistician involvement and co-authorship in addition to adherence to CONSORT guidelines.”

xi Significant improvements in 4 core measures were realized in stable environments (less nurse turnover).

xii Four Health Foundation staff worked with 4 different improvement project teams in 2 different areas of the UK to explore the use of organizational techniques such as learning communities and communities of practice, to help them learn collectively and to examine how the learning process and the enhancement of quality could be better deployed in future improvement initiatives. Findings: 3 different but interrelated types of skills were discerned (technical, soft, and learning skills) as being essential; difficulties ensued when any of these were inadequate. Authors conclude that part of the reason why QI is so hard to achieve may be that those involved in leading QI programmes (sic) need to deploy these 3 different but interrelated types of skills—employing the techniques of “improvement science” is not enough.

xiii Note: measurement tools were constructed for the study by the study team; attempt to link factors to patient outcomes was unsuccessful. No general conclusions about the impact of the characteristics of QI teams on the quality of healthcare can be drawn, but support of the management and active, inspirational team leadership appear to be important.

xiv Reliability or validity of the measures should not be inferred.

xv The aim of this study was to develop and validate an index to assess the implementation of quality management systems (QMSs) in European countries.

xvi The study assessed the effects of enhanced primary care access and continuity on clinical quality in a large, multipayer, multispecialty ambulatory care organization with fee-for-service provider incentives. The difference-in-differences estimates indicate that access to own primary care physician is a statistically significant predictor of improved clinical quality, although the effect size is small such that clinical significance may be negligible. Reduced time for own primary care physician appointment and increased enrollment in electronic personal health record are positive predictors of chronic disease management processes and preventive screening but are inconsistently associated with clinical outcomes. Challenges in identifying relationships between access and quality outcomes in a real-world setting are also discussed.

xvii Authors explain the Billings algorithm and how it can be applied to physician practices, and present illustrative data from 2 years of Medicare claims from 5 states.

xviii Lists domains of primary care as PC shifts from only patient-centered care to integration with public health, and possible sources of metrics from existing measures. Not child specific. Very short on disparities/equity measures.

xix Suggests a consensus document and guidance from HHS is needed for QI trials, for which the prospects are very exciting.

xx Based in part on a literature review, this article describes research approaches that have the potential to reduce “the research-practice gap”. It gives evidence- and experience-based guidance for choosing and establishing a partnership research process, so as to improve partnership relationship-building and more actionable research.
Note: Since the First Annual APA Conference, the literature in healthcare quality improvement has grown dramatically. This bibliography is necessarily selective and highlights recent additions to the literature, as well as very selected classics with general guidance, and required and suggested reading for the breakout sessions. We have tried to emphasize pediatric examples. Previous bibliographies are still available, both for the conference breakout sessions and the supplementary bibliographies. Suggestions for additions to the bibliography can be shared with members of the Conference Planning Committee.

SECTION I: SOME USEFUL WEBSITES AND LISTSERVs

- Implementation Network e-Newsletter – contact Wynne E. Norton, PhD Assistant Professor University of Alabama at Birmingham wynne.norton@gmail.com
- UK Health Foundation – Inspiring Improvement – evidence reviews, job announcements, and more http://www.health.org.uk/
- Improvement Science Research Network. www.isrn.net
- Training in Dissemination and Implementation Research in Health (TIDIRH) online training site sponsored by NIH. http://tidirh2011.ning.com/

SECTION II: Journals that publish QI research

- Implementation Science
- International Journal of Healthcare Quality and Safety
- BMJ Quality and Safety
- eGEMS. http://repository.academyhealth.org/ege ms. A pragmatic approach to building a learning health care system, eGEMS aims to disseminate innovative ideas about how electronic clinical data can be leveraged in comparative effectiveness research, PCOR and quality improvement.

SECTION III: Books

SECTION IV: SPECIAL ISSUES OF JOURNALS, SUMMARIES OF QI PROJECTS

- Forthcoming special issue from *Academic Pediatrics on Pediatric QI* – commentaries, research methods, QI education, site-specific QI. (expected Nov-Dec 2013).


  [http://www.rwjf.org/content/dam/farm/reports/program_results_reports/2012/rwjf73230](http://www.rwjf.org/content/dam/farm/reports/program_results_reports/2012/rwjf73230). This report summarizes the process and outcomes of an array of projects aimed at improving evaluation frameworks, quality improvement measures, and data collection and methodology. The projects were part of an RWJF program costing $1.5 million over 48 months, from August 2007-August 2011.


- Papers from the epistemology of improvement research meeting, UK, April 12-16. *BMJ Quality and Safety*. 2011; 12:(suppl 1). [http://qualitysafety bmj.com/content/20/Suppl_1](http://qualitysafety bmj.com/content/20/Suppl_1)


SECTION V: THEORY AND LOGIC MODELS IN HEALTHCARE QUALITY IMPROVEMENT


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1 See below for systematic evidence reviews


SECTION V. CONTEXT AND IMPLEMENTATION PROCESSES IN HEALTHCARE QUALITY IMPROVEMENT INTERVENTIONS


• Beehler, G., & et al. (2013). Developing a measure of provider adherence to improve the implementation of behavioral health services in primary care: a Delphi study. Implementation Science, 8(19).


- Green, L.W., Glasgow, R.E. Evaluating the relevance, generalization, and applicability of research: Issues in external validation and translation methodology. Eval Health Prof. 2006; 29:126. http://ehp.sagepub.com/content/29/1/126


SECTION VI. SPECIFIC RESEARCH DESIGNS AND METHODS FOR EVALUATING QUALITY IMPROVEMENT INTERVENTIONS-- FOCUS ON INTERNAL VALIDITY

- Statistical Process Control (SPC)

- Interrupted Time Series


- Stepped Wedge
  - Kotz et al., Use of the stepped wedge design cannot be recommended: a critical appraisal and comparison with the classic cluster randomized controlled trial design. 2012 Journal of Clinical Epidemiology 65:1249-1252.

- Mdege ND, Mana M, Taylor CA, Torgerson DJ. Systematic review of stepped wedge cluster randomized trials shows that design is particularly used to evaluate intervention during routine implementation. Journal of Clinical Epidemiology. 2011; 64:936-948.


- Realist Evaluation

- Cluster Randomized Controlled Trials
  - James W. Stout, MD, MPH; Karen Smith, MD; Chuan Zhou, PhD; Cam Solomon, PhD; Allen J. Dozor, MD; Michelle M. Garrison, PhD; Rita Mangione-Smith, MD, MPH. Learning
from a Distance: Effectiveness of Online Spirometry Training in Improving Asthma Care. ACADEMIC PEDIATRICS 2012;12:88–95


- Multiple case study approach

• Randomized controlled trials with health care professionals as unit of intervention

• Cluster, stepped non-randomised study

SECTION VII. FORMATIVE RESEARCH AND DISCOVERY CAPACITY


SECTION VIII. MEASURING OUTCOMES OF QI RESEARCH


SECTION IX. STATISTICAL ISSUES OF NOTE

• Oakes M. Effect identification in comparative effectiveness research. eGEMS 1(1). http://repository.academyhealth.org/egems. Makes points appliable to observational research beyond CER.
  o Thomas L, Peterson ED. The value of statistical analysis plans in observational research. JAMA 2012 308(8):773-4.
  o Beachell, E., Monda, M. A primer for enumerative vs. analytic studies: Using caution
SECTION X. REVIEWS OF QI INTERVENTION STUDIES


- Scott A, et al., The effect of financial incentives ont eh quality of health care provided by primary care physicians. Cochrane Database Syst Rev. 2011 Sep 7;(9). (included RCT, controlled before and after studies [CBA], and ITS study designs.


SECTION XI. OTHER

- Shojania, K., & Thomas, E. (2013). Trends in adverse events over time: why are we not improving? Quality and Safety in Health Care, 22, 273-277


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i Contact denise.dougherty@ahrq.hhs.gov

ii http://www.ambpeds.org/specialInterestGroups/sig_quality_improvement.cfm
Note: Inclusion of a publication under a specific study design does not mean that we evaluated whether the study met all desirable characteristics of the study design. We relied on the description in the study abstract.