REQUIRED AND SUGGESTED READINGS
BREAKOUT SESSIONS

APA Conference for Pediatric Quality Improvement
Methods, Research and Evaluation
May 5, 2017
San Francisco, CA

Breakout Session #1: 10:30am – 12:00pm

The Anatomy of a Quality Measure – Rita Mangione-Smith, MD, MPH

Required Pre-Reading:

1. Byron, S.C., Gardner, W., Kleinman, L.C., Mangione-Smith, R., Moon, J., Sachdeva, R., Schuster, M.A., Freed, G., Smith, G., Scholle, S.H. Developing Measures for Pediatric Quality: Methods and Experiences of the CHIPRA Pediatric Quality Measures Program Grantees. Acad Pediatr. 2014; 14(5 Suppl):S27-32 http://www.sciencedirect.com/science/article/pii/S1876285914002344

2. Mangione-Smith, R., Onstad, K., Wong, L., Roski J. Deciding Not to Measure Performance: the Case of Acute Otitis Media. The Joint Commission Journal on Quality and Safety; 2003; 29(1): 27-36. (Dr. Mangione-Smith will provide a copy in advance to session participants)

Additional Readings of interest (not required reading prior to session)

3. Mangione-Smith R. "The Challenges of Addressing Pediatric Quality Measurement Gaps". Pediatrics, 2017; 139 (4):e20170174 http://pediatrics.aappublications.org/content/139/4/e20170174?utm_source=highwire&utm_medium=email&utm_campaign=Pediatrics_etoc

The Fundamentals of Quality-Improvement – Part I – Matthew Niedner, MD

Required Pre-Reading

1. Niedner, MF, "Quality Improvement Science in the Pediatric Intensive Care Unit." Wheeler DS, Shanley TP, Wong HR, eds. Pediatric Critical Care Medicine: Basic Science and Clinical Evidence. Mar 2014. pp. 83-99

Interrupted Time Series – Robert Penfold, PhD

Required Pre-Reading

1. Shadish W, Cook T, Campbell D. Chapter 6. *Experimental and Quasi-Experimental Designs for Generalized Causal Inference.* Boston: Houghton Mifflin Company; 2002.

2. Penfold RB, Zhang F. Use of interrupted time series analysis in evaluating health care quality improvements. Academic Pediatrics. 2013;13(6 Suppl):S38-44. http://www.sciencedirect.com/science/article/pii/S1876285913002106

Additional Readings of interest (not required reading prior to session)

3. Sen B, Blackburn J, Morrisey MA, Kilgore ML, Becker DJ, Caldwell C, et al. Did copayment changes reduce health service utilization among CHIP enrollees? Evidence from Alabama. Health Serv Res. 2012;47(4):1603-1620.

Introduction to Qualitative and Mixed Methods in Implementation and QI Research – Clarissa Hsu, PhD and Sarah Ronis, MD, MPH

Required Pre-Reading

1. Sofaer S. Qualitative methods: what are they and why use them? Health Serv Res. 1999 Dec;34(5 Pt 2):1101-18.

2. Fetters MD, Curry LA, Creswell JW. Achieving Integration in Mixed Methods Designs – Principles and Practices. Health Serv Res. 2013 Dec 1;48(6 Pt 2):2134-56. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4097839/

Additional Readings of interest (not required reading prior to session)

3. Tong, A., P. Sainsbury, and J. Craig, Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007 19(6): p. 349-57.

Introduction to Statistical Process Control – Maria Britto, MD, MPH

Required Pre-Reading

1. Nolan TW, Provost LP. Understanding variation. Quality Progress, May 1990: 2 – 10. *An overview of process variation including common and special cause.*

2. Benneyan JC, Lloyd RC, Plsek PE. Statistical process control as a tool for research and healthcare improvement. Quality and Safety in Health Care. 2003 Dec;12(6):458-64.

Additional Readings of interest (not required reading prior to session)

3. Carey R. Improving Health Care with Control Charts: Basic and Advanced SPC Methods and Case Studies. ASQ Quality Press, Milwaukee, 2003 (pp 3-24).

4. Provost LP, Murray S. The Health Care Data Guide: Learning from Data for Improvement (Chapters 3 – 6) Jossey-Bass, 2011.

Navigating the IRB for QI And Implementation Science Projects – Jonathan Finkelstein, MD, MPH, Judith Shaw, EdD, MPH, RN, and Daniel Hyman, MD

Required Pre-Reading

1. Finkelstein JA, Brickman AL, Capron A, Ford DE, Gombosev A, Greene SM, Iafrate RP, Kolaczkowski L, Pallin SC, Pletcher MJ, Staman KL, Vazquez MA, Sugarman J. "Oversight

on the borderline: Quality improvement and pragmatic research". Clinical Trials, Oct. 2019, vol. 12, 5: pp.457-466

Techniques for Assessing the Impact of System Interventions and Other Innovations on Disparities – Casey Lion, MD, MPH

Required Pre-Reading

1. Darling EK, Ramsay T, Manuel D, Sprague AE, Walker MC, Guttmann A. "Association of Universal Bilirubin Screening With Socioeconomic Disparities in Newborn Follow-up". Academic Pediatrics 2017; 17: pp.135-143

2. Lion KC, Raphael, JL. "Partnering Health Disparities Research With Quality Improvement Science in Pediatrics". Pediatrics, Feb 2015, 135 (2) 354-361.

Breakout Session #2: 1:10-2:40pm

Advanced Statistical Process Control in QI Research – Maria Britto, MD, MPH and Terri Byczkowski, PhD, MBA

Required Pre-Reading

1. Benneyan JC, Number-Between g-type statistical quality control charts for monitoring adverse events. Healthcare Management Science, 2001 4, 305 – 318.

   http://www1.coe.neu.edu/~benneyan/papers/g_charts.pdf

2. Provost LP, Murray S. The Health Care Data Guide: Learning from Data for Improvement (Chapter 7) Jossey-Bass, 2011

Choosing the Right Methods to Design and Evaluate Improvement Projects to Yield Credible Results – Donald Goldmann, MD

Required Pre-Reading

1. Perla, R.J. and Parry, G.J. The epistemology of quality improvement: it's all Greek. BMJ Quality and Safety. 2011; 20(Suppl 1): i24-i27

2. Parry, G.J., Carsen-Stevens, A., Luff, D.F., McPherson, M., Goldmann, D.A. Recommendation for evaluation of health care improvement initiative. Academic Pediatrics. 2013; 13: S23-S30.

Additional Readings of interest (not required reading prior to session)

3. http://www.ihi.org/communities/blogs/_layouts/ihi/community/blog/itemview.aspx?List=7d1126ec-8f63-4a3b-9926-c44ea3036813&ID=96

Creating and Measuring Value in Pediatric Care – Raj Srivastava, MD, MPH, and Christopher Maloney, MD, PhD

Required Pre-Reading

1. James BC, Savitz LA. "How Intermountain Trimmed Health Care Costs Through Robust Quality Improvement Efforts". Health Aff, June 2011, vol. 30, no. 6, pp. 1185-1194. https://www.ncbi.nlm.nih.gov/pubmed/21596758

2. Keren R, Luan X, Localio R, Hall M, McLeod L, Dai D, Srivastava R. "Prioritization of comparative effectiveness research topics in hospital pediatrics". Arch Pediatr Adolesc Med. 2012 Dec;166(12):1155-64. doi: 10.1001/archpediatrics.2012.1266 https://www.ncbi.nlm.nih.gov/pubmed/23027409

The Fundamentals of Quality-Improvement: How to do QI – Part II – Matthew Niedner, MD

Required Pre-Reading

1. Niedner, MF, "Quality Improvement Science in the Pediatric Intensive Care Unit." Wheeler DS, Shanley TP, Wong HR, eds. Pediatric Critical Care Medicine: Basic Science and Clinical Evidence. Mar 2014. pp. 83-99

Interrupted Time Series – Robert Penfold, PhD

Required Pre-Reading

1. Shadish W, Cook T, Campbell D. Chapter 6. *Experimental and Quasi-Experimental Designs for Generalized Causal Inference.* Boston: Houghton Mifflin Company; 2002.

2. Penfold RB, Zhang F. Use of interrupted time series analysis in evaluating health care quality improvements. Academic Pediatrics. 2013;13(6 Suppl):S38-44. http://www.sciencedirect.com/science/article/pii/S1876285913002106

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Publishing QI Research: What you need to know – Lori Rutman, MD, MPH

Required Pre-Reading

1. Goodman D, Ogrinc G, Davies L, et al., "Explanation and elaboration of the SQUIRE (Standards for Quality Improvement Reporting Excellence) Guideline, V2.0: examples of SQUIRE elements in the healthcare improvement literature". BMJ Qual Saf 2016;0:1-24 http://qualitysafety.bmj.com/content/25/12/986

2. SQUIRE 2.0 (*S*tandards for *QU*ality *I*mprovement *R*eporting *E*xcellence): revised publication guidelines from a detailed consensus process. http://qualitysafety.bmj.com/content/early/2015/09/10/bmjqs-2015-004411.full?sid=a89deb16-b7c0-402c-b04f-a998b0b1c5fb

3. Bennett B, Provost L. "What's Your Theory?". Quality Progress, July 2015, pp. 36-43

Works-in-Progress – Session I – Jonathan Finkelstein, MD, MPH, Alex Kemper, MD, MPH, MS, and Lawrence Kleinman, MD, MPH, FAAP

Required Pre-Reading

1. SQUIRE 2.0 (*S*tandards for *QU*ality *I*mprovement *R*eporting *E*xcellence): revised publication guidelines from a detailed consensus process. http://qualitysafety.bmj.com/content/early/2015/09/10/bmjqs-2015-004411.full?sid=a89deb16-b7c0-402c-b04f-a998b0b1c5fb

Afternoon Session #3: 2:50-4:20pm

The Anatomy of a Quality Measure – Rita Mangione-Smith, MD, MPH

Required Pre-Reading:

1. Byron, S.C., Gardner, W., Kleinman, L.C., Mangione-Smith, R., Moon, J., Sachdeva, R., Schuster, M.A., Freed, G., Smith, G., Scholle, S.H. Developing Measures for Pediatric Quality: Methods and Experiences of the CHIPRA Pediatric Quality Measures Program Grantees. Acad Pediatr. 2014; 14(5 Suppl):S27-32 http://www.sciencedirect.com/science/article/pii/S1876285914002344

2. Mangione-Smith, R., Onstad, K., Wong, L., Roski J. Deciding Not to Measure Performance: the Case of Acute Otitis Media. The Joint Commission Journal on Quality and Safety; 2003; 29(1): 27-36. (Dr. Mangione-Smith will provide a copy in advance to session participants)

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Bridging Classical Statistics & QI Research – Terri Byczkowski, PhD, MBA and Jonathan Finkelstein, MD, MPH

Required Pre-Reading

1. Fretheim A, Tomic O. Statistical process control and interrupted time series: a golden opportunity for impact evaluation in quality improvement. *BMJ quality & safety.* 2015;24(12):748-752.

http://qualitysafety.bmj.com/content/24/12/748.full.pdf+html

2. Mohammed M, Worthington P, Woodall W. Plotting basic control charts: tutorial notes for healthcare practitioners. *Quality and Safety in Health Care.* 2008;17(2):137-145. https://www.researchgate.net/profile/William_Woodall/publication/5468089_Plotting_control_charts_Tutorial_notes_for_healthcare_practitioners/links/00b49521d1165f1f49000000.pdf

3. Parry G, Power M. To RCT or not to RCT? The ongoing saga of randomised trials in quality improvement. *BMJ quality & safety.* 2015:bmjqs-2015-004862. http://qualitysafety.bmj.com/content/early/2015/11/05/bmjqs-2015-004862.full.pdf+html

4. Shojania KG, Grimshaw JM. Evidence-based quality improvement: the state of the science. *Health affairs.* 2005;24(1):138-150. http://content.healthaffairs.org/content/24/1/138.full.pdf+html

Additional Readings of interest (not required reading prior to session)

1. Speroff T, O'Connor GT. Study designs for PDSA quality improvement research. *Quality Management in Healthcare.* 2004;13(1):17-32. http://innovationlabs.com/r3p_public/rtr3/pre/pre-read/PDSA%20QI%20Research.Speroff.2004.pdf

Cluster Randomized Trials (CRTs) in QI Research – Michelle Garrison, PhD

Required Pre-Reading

1. Curley MA, Wypij D, Watson RS, Grant MJ, Asaro LA, Cheifetz IM, Dodson BL, Franck LS, Gedeit RG, Angus DC10, Matthay MA, and Pediatric Acute Lung Injury and Spesis Investigators (PALISI) Network for the *RESTORE* Study Investigators; Protocolized sedation vs usual care in pediatric patients mechanically ventilated for acute respiratory failure: a randomized clinical trial. *JAMA*. 2015 Jan 27;313(4):379-89. doi: 10.1001/jama.2014.18399. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4955566/

2. Kolko DJ1, Campo J, Kilbourne AM, Hart J, Sakolsky D, Wisniewski S. Collaborative care outcomes for pediatric behavioral health problems: a cluster randomized trial. *Pediatrics*. 2014 Apr;133(4):e981-92. doi: 10.1542/peds.2013-2516. Epub 2014 Mar 24. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3966503/

Additional Readings of interest (not required reading prior to session)

3. Garrison MM, Mangione-Smith R. Cluster randomized trials for health care quality improvement research. *Acad Pediatr*. 2013 Nov-Dec;13(6 Suppl):S31-7. doi: 10.1016/j.acap.2013.07.008.

4. van Breukelen GJ, Candel MJ. Calculating sample sizes for cluster randomized trials: we can keep it simple and efficient! *J Clin Epidemiol*. 2012 Nov;65(11):1212-8. doi: 10.1016/j.jclinepi.2012.06.002. Available at: http://www.sciencedirect.com/science/article/pii/S0895435612001692

5. Weijer C, Grimshaw JM, Eccles MP, McRae AD, White A, Brehaut JC, Taljaard M; Ottawa Ethics of Cluster Randomized Trials Consensus Group. The Ottawa Statement on the Ethical

Design and Conduct of Cluster Randomized Trials. PLoS Med. 2012;9(11):e1001346. doi: 10.1371/journal.pmed.1001346. Epub 2012 Nov 20. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3502500/

Context in Quality Improvement Research – Evaline Alessandrini, MD, MSCE, and Heather Kaplan, MD, MSCE

Required Reading

1. McDonald, K. (2013). "Considering Context in QI Interventions and implementation: Concepts, Frameworks, and Application." Academic Pediatrics **13**(6S) (open access)

Recommended Reading

2. Frameworks:
   a) MUSIQ:
      - Kaplan, H., L. Provost, et al. (2012). "The Model for Understanding Success in Quality (MUSIQ): building a theory of context in healthcare quality improvement." BMJ Qual Saf **21**: 13-20.
   b) CFIR
      - Damschroeder, L.J., D. Aron, et al (2009). Ostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. Implement Sci. 4;50.
      - CFIR Technical Assistance Website (Tools, Background Information, Resources): http://cfirguide.org/
   c) PARiHS
      - Kitson A, G Harvey, et al. (1998) "Enabling the implementation of evidence based practice: a conceptual framework." Qual Health Care. 7:149-158.

Developing a Portfolio in Safety Research: Methods and Considerations – Michael Rinke, MD, PhD

Required Pre-Reading

1. Bettmann M. Choosing a research project and a research mentor. Circulation. 2009;119(13):1832-5.
   a. https://www.ncbi.nlm.nih.gov/pubmed/?term=19349336
   b. http://circ.ahajournals.org/content/119/13/1832.long

2. Anders Ericsson K, Prietula MJ, Cokely ET. The making of an expert. Harvard Business Review. 2007;85(7-8):114-21, 193.
   a. http://www.ncbi.nlm.nih.gov/pubmed/17642130
   b. https://hbr.org/2007/07/the-making-of-an-expert

Introduction to Qualitative and Mixed Methods in Implementation and QI Research – Clarissa Hsu, PhD and Sarah Ronis, MD, MPH

Required Pre-Reading

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2. Fetters MD, Curry LA, Creswell JW. Achieving Integration in Mixed Methods Designs – Principles and Practices. Health Serv Res. 2013 Dec 1;48(6 Pt 2):2134-56. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4097839/

Additional Readings of interest (not required reading prior to session)

3. Tong, A., P. Sainsbury, and J. Craig, Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007 19(6): p. 349-57.

Works in Progress – Session II – Lori Rutman, MD, MPH, Alex Kemper, MD, MPH, MS, and Lawrence Kleinman, MD, MPH

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1. SQUIRE 2.0 (*S*tandards for *QU*ality *I*mprovement *R*eporting *E*xcellence): revised publication guidelines from a detailed consensus process. http://qualitysafety.bmj.com/content/early/2015/09/10/bmjqs-2015-004411.full?sid=a89deb16-b7c0-402c-b04f-a998b0b1c5fb