

Building Capacity and Collaboration for Research in Improvement Science

Kathleen R. Stevens, RN, EdD, FAAN, Principal Investigator
Darpan Patel, PhD, Grace Willard, RN, PhD, and Frank Puga, Collaborators

PROBLEM

As a relatively new competency in health science, the nation's research capacity to study quality improvement falls well behind the need to discover 'what works.' In addition, there are few research collaboratives and little infrastructure to advance the field through the conduct of landmark studies.

PROJECT

This grant supported the 2nd Annual Improvement Science Summit conference to advance research methodology and national collaboration in improvement research.

Goal: To move forward the thinking, research methods, infrastructure, and national research collaboration capacity to conduct rigorous improvement research, capitalizing on the new Improvement Science Research Network.

BACKGROUND

Better healthcare through quality improvement and patient safety initiatives is a national priority. Yet in this field, there is insufficient research, insufficient rigor, and too few scientists engaged in studies to demonstrate which initiatives are effective, amenable to spread, and sustainable. Moreover, there are few opportunities to extend professional development skills through specialty research methods conferences in the field.

SIGNIFICANCE

Bringing together a cadre of health improvement scientists has the potential to advance collective thinking among academic and practice scientists about the methods, design, and theories that are most useful in evaluating, sustaining, and spreading improvement innovations and strategies for better healthcare quality and safety.

CAPACITY BUILDING

MULTIPLE APPROACHES

- Annual Summit
- Web Seminars
- IRB Assistance
- eReading Room
- eLearning Room
- Common Terminology
- Protocol Development
- Collaborative Field Guide
- Protocol Implementation Support
- Network News - Official ISRN Newsletter
- Virtual Research Collaboratory



MORE THAN A RESEARCH METHODS CONFERENCE



This grant supported the 2nd Annual Improvement Science Summit as an open-to-all, 1 ½ day conference to advance methodology, topics, and collaboration in improvement research.

Leveraging the momentum created by the nationally-funded Improvement Science Research Network (Stevens, 2009a) this Summit contributed significantly to national capacity of healthcare delivery scientists and practice scholars to rigorously evaluate improvement strategies.

National and global experts discussed key topics:

- Research Collaboratives: Applying the Science of Team Science
- Evaluating Quality Improvement Interventions
- Building ISRN Research Collaboratives for Multi-Site Studies
- Using National Measures to Study Quality and Patient Safety

Conference materials are being widely disseminated through a variety of channels. Distribution venues include streaming video recordings of key presentations, conference proceedings, and publications.

PHOTOGRAPH

Global experts describe research methods for improvement studies.



The Research Protocol Implementation Kit for the first ISRN Network Study was introduced to Collaborative Teams.

ISRN VIRTUAL RESEARCH LABORATORY

The ISRN Coordinating Center is housed within the Academic Center for Evidence-Based Practice at the University of Texas Health Science Center San Antonio. Founded on this longstanding commitment to evidence-based quality improvement, the ISRN Coordinating Center partners with the Institute for Integration of Medicine and Science to strengthen the science of quality improvement.

Contact the Improvement Science Research Network:

Email: ImprovementScienceResearch@ISRN.net Phone: 210.567.5813 Website and Virtual Laboratory www.ISRN.Net

IMPACT ON IMPROVEMENT RESEARCH

Summit activities connected academic and clinical scholars to conduct "landmark" studies across the national test bed of agencies. Collaborative teams were forged during the Summit to conduct three studies with the support of the ISRN Coordinating Center, creating a new community of learning and idea exchange.

Network studies currently recruiting multiple sites include:



Small Troubles, Adaptive Responses (STAR-2): Frontline Nurses Engaged in Quality Improvement



Impact of Cognitive Load, Interruptions and Distractions on Procedural Failures and Medication Errors



Team Performance for Patient Safety

NETWORK ASSOCIATES



130 of the 240 Network Associates engaged in:

- Multi-site collaboration on patient safety and QI research
- Further defining research technology and resources
- Forming the ISRN Speakers Bureau
- Expanding the member-only section of the ISRN website
- Recognition of the value of membership

REFERENCES

1. Stevens, KR. (2009). Improvement Science Research Network. Project abstract. http://www.improvementscienceresearch.net/documents/ISRN_Project_Abstract.pdf Accessed June15, 2010.
2. Stokols, D., Hall, K.L., Taylor, B.K., & Moser, R.P. (2008) The science of team science: Overview of the field and introduction to the supplement. *American Journal of Preventive Medicine*, 35, 77-89.
3. Berwick DM. (2008). The science of improvement. *JAMA*, 299, 10, p. 1182-1184.

ACKNOWLEDGEMENTS

Thank you to the ACE Team members who contributed to planning and implementing the Summit: Kandice Hall, Joan Feller, Tiffany Luna, and Ellen Hanks.

The 2ND Improvement Science Summit was supported by ARHQ Grant 1 R13 HS020742-01.

The ISRN infrastructure development is supported by NINR/NIH RC2NR011946.

This content is the sole responsibility of the authors and does not necessarily represent the official views of the funding agencies.