Coordinating Center Leaders

Kathleen R. Stevens, RN, EdD, FAAN, Director
Darpan Patel, PhD, Assistant Professor/Research
Frank Puga, PhD, Assistant Professor/Research
Identified by CTSA Application Reviewer as a “strength”

- $3.2 M to create “a unique infrastructure to accelerate scientific progress in the future”
- R&D 2009-2012
- Demo Test 2011-2013
- Promising business plan
- Recent Events
Catalyst for Improvement Research aka: T3 Research

Generate evidence about what works to make healthcare:

- Safe
- Timely
- Effective
- Efficient
- Equitable
- Patient-Centered

IOM Quality Chasm, 2001
Research about CARE PROCESSES
“healthcare delivery science”

**Improvement Science**

- Healthcare Delivery Research
- Translational Science T3-T4
- Knowledge Translation
- Evidence-Based Practice/CER
- Dissemination and Implementation Science

**GOAL:** Shorten time between discovery and implementation

**ImProofment Science**

SCHOOL OF NURSING
UT HEALTH SCIENCE CENTER
ACER Academic Center for Evidence-based Practice

...improving patient outcomes
A Unique Research Laboratory for T3 Research

What is the Improvement Science Research Network?
The Improvement Science Research Network is the only National Institutes of Health–supported improvement research network. Our primary mission is to accelerate interprofessional improvement science in a systems context across multiple sites. More...

ISRN Blog

Where to Publish Your Results... What’s Your Opinion?

QUESTION: In what journals can articles on translational science, quality improvement initiatives, dissemination and implementation research, delivery systems science and other emerging healthcare fields be published? More...

Call for Abstracts - Submission Closes March 4

Clinicians, Educators and Researchers share your EBP successes. Nurses, MDs, Social Workers, Physical Therapists, Pharmacists and more...
Mission:
To advance the scientific foundation for quality improvement, safety, and efficiency through transdisciplinary research addressing
--healthcare systems,
--patient-centeredness, and
--integration of evidence into practice
Why a Collaboratory for Improvement Science

- Complex scientific problems—beyond the realm of single discipline or single scientist
- Small tests of improvement strategies are insufficient for spread.
- Discovering ‘what works’ in improvement strategies requires rigorous evaluation approaches = improvement science
- Collaboration increases quality of research
- It’s feasible: Information and Communication Technologies—now cost-effective and reliable
Structuring the Improvement Science Collaboratory

Built on:

- **CTSA Principles**
- **Practice Based Research Networks**
  - 20 years of AHRQ development
  - ISRN is registered PBRN with AHRQ
- **Science of Team Science**
  - Research **Collaboratives**
  - Collaboration on the Internet
  - Evidence-Based Assessment and Development
R & D Strategies for the Improvement Science Research Network

- **Shared Vision:** Research Priorities defining the work to be done
- **Relevancy:** Assure academic-practice partnership
- **Collaboration:** Cyber infrastructure hub for interprofessional improvement research
- **Multi-site Studies:** Landmark research studies
- **Essential Support for Rigorous, Rapid Research:** ISRN Coordinating Center within IIMS context
The ISRN includes:

- Mission
- Stakeholder Priorities
- Network Associates
- Steering Council
- Coordinating Center (Base: Academic Center for Evidence-Based Practice, University of Texas Health Science Center San Antonio)
- Network Studies and Research Collaboratives
- Technology infrastructure
- Online Resources

Website: www.isrn.net
New Resource: A Unique Research Laboratory


ISRN Blog

Where to Publish Your Results ... What's Your Opinion?

QUESTION: In what journals can articles on translational science, quality improvement initiatives, dissemination and implementation research, delivery systems science and other emerging healthcare fields be published?

Call for Abstracts - Submission Closes March 4

Clinicians, Educators and Researchers share your EBP successes. Nurses, nurse practitioners, clinical specialists, and allied health professionals who are involved in the development and implementation of evidence-based practice are invited to share your experiences.
STARTED WITH Stakeholders Priorities in Improvement Science: Setting the national agenda
Improvement Research PRIORITIES

A. Coordination and transitions of care
B. High performing clinical systems and microsystems approaches to improvement
C. Evidence-based quality improvement and best practice
D. Learning organizations and culture of quality and safety

Examples of Network Studies

Operational Failures-Engineering  
Patient Safety and Improvement

Prevent medication errors  Cognitive Load

Team performance and patient safety  
TeamSTEPPS training
Network Study Titles

Small Troubles, Adaptive Responses (STAR-2): Frontline Nurse Engagement in Quality Improvement

System Factors that Facilitate Uptake of Team Performance for Patient Safety

Impact of Cognitive Load, Interruptions and Distractions on Procedural Failures and Medication Administration Errors
New Resource: A Unique Research Laboratory

What is the Improvement Science Research Network?

The Improvement Science Research Network is the only National Institute of Health-supported improvement research network. Our primary mission is to accelerate interprofessional improvement science in a systems context across multiple sites. More...

ISRN Blog

Where to Publish Your Results... What's Your Opinion?

QUESTION: In what journals can articles on translational science, quality improvement initiatives, dissemination and implementation research, delivery systems science and other emerging healthcare fields be published? More...

Call for Abstracts - Submission Closes March 4

Clinicians, Educators and Researchers share your EBP successes. Nurses, physicians, educators, pharmacists, social workers, policy makers, and other clinicians are encouraged to submit proposals. More...
ISRN Associates

1. 200 Members/Agencies
2. Capacity Building SUMMIT (AHRQ R13 Grants x 2)
3. Online Resources
4. Research Study Support via virtual collaboratory
ISRN Steering Council

Heidi King, MS, FACHE, BCC, CMC, CPPS
TRICARE Management Activity

Vivian Low, MPH, BSN, RN-BC, FPCNA
El Camino Hospital

Gail Mallory, PhD, RN, NEA-BC
Oncology Nursing Society

Jack Needleman, PhD, FAAN
UCLA School of Public Health

John Övretveit, BSC (HONS), MPHIL, PhD, CPSYCHOL, CSCI, MIHM
The Karolinska Institutet, Stockholm

Wilson Pace, MD, FAAFP
University of Colorado, Denver

Michael Parchman, MD, MPH
MacColl Center for Health Care Innovation

Cathy Rick, RN, PhD, NEA-BC, FACHE, FAAN
Department of Veterans Affairs

Mary Salisbury, RN, MSN
The Cedar Institute, Inc.

Lily Thomas, PhD, RN
North Shore-Long Island Jewish Health System

Anita Tucker, DBA
Harvard School of Business
ISRN Coordinating Center Team
New Resource: A Unique Research Laboratory

Improvement Science Research Network... improving patient outcomes

What is the Improvement Science Research Network?
The Improvement Science Research Network is the only National Institute of Health-supported improvement research network. Our primary mission is to accelerate interprofessional improvement science in systems context across multiple sites. More...

ISRN Blog

Where to Publish Your Results... What's Your Opinion?

QUESTION: In what journals can articles on translational science, quality improvement initiatives, dissemination and implementation research, delivery systems science and other emerging healthcare fields be published? More...

Call for Abstracts - Submission Closes March 4

Clinicians, Educators and Researchers share your EBP successes. Nurses, physical therapists, social workers, care managers, and other high-impact practitioners share your successes.

Receive ISRN news!

Enter your email address.

Sign Up
DEMONSTRATION STUDY

National Network Study of Operational Failures in Frontline Nursing

Small Troubles, Adaptive Responses (STAR-2): Frontline Nurse Engagement in Quality Improvement
Note that each Network Study is open for ISRN members to become Site Investigators.

<table>
<thead>
<tr>
<th>Study</th>
<th>Priority</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAR-2</td>
<td>B-Microsystem</td>
<td>PHASE 2 ACTIVE: Currently building research collaborative with 12 hospitals. Phase 1 complete in 14 hospitals. 20,000+ data points gathered and analyzed.</td>
</tr>
<tr>
<td>Medication Errors and Cognitive Load</td>
<td>B-Microsystems</td>
<td>PHASE 2 ACTIVE: Currently building research collaborative with 4 hospitals. Phase 1 near finalizing data entry. Data analysis currently underway</td>
</tr>
<tr>
<td>STAR-RT</td>
<td>B-Microsystem</td>
<td>IN DEVELOPMENT: Project is under development by Network PI. Call for interested hospitals to participate in this study will be released 1st quarter of 2014.</td>
</tr>
<tr>
<td>TeamSTEPPS®</td>
<td>B-Microsystems, D-Macrosystems</td>
<td>IN DEVELOPMENT: Project is under development by Network PI. Call for interested hospitals to participate in this study will be released 1st quarter of 2014.</td>
</tr>
<tr>
<td>Care Coordination</td>
<td>A-Transitions and Coordination in Care</td>
<td>In DEVELOPMENT: Archived Web Seminar August 2012 to activate ISRN member interest. Potential intervention identified for Network testing.</td>
</tr>
<tr>
<td>Care Transition</td>
<td>A-Transitions and Coordination in Care</td>
<td>IN DEVELOPMENT: Archived Web Seminar July 2012 to activate ISRN member interest.</td>
</tr>
<tr>
<td>STAR-3</td>
<td>B-Microsystems</td>
<td>IN DEVELOPMENT: Project to test interventions for STAR-2 are currently being developed.</td>
</tr>
<tr>
<td>Improvement Collaborative</td>
<td>C-Uptake of Evidence-Based Practice</td>
<td>IN DEVELOPMENT: Project is on the drawing board</td>
</tr>
<tr>
<td>“Your Study Here”</td>
<td>A, B, C, or D</td>
<td>You are invited to design a Network Study for launch across our 200+ member network.</td>
</tr>
</tbody>
</table>
A Framework for Collaborative Research

The Science of Team Science (SciTS):

- Evidence base for scientific teams
- Benefits of collaboration
- Factors that contribute to success
- Systematic approach to building a research collaborative

Falk-Krzesinski et al., 2010

Evidence-Based

Field Guide for Collaboration
Training and Research Opportunities

Notable Events and Speakers
- Kenneth Shine
- AAMC representation
- AcademyHealth
- Carolyn Clancy (AHRQ)
- Jim Battles (AHRQ)
- Special Interest Groups
- Student Program
- Research Collaborative meetings
Improvement Science Research Network
Student Opportunities

- Conduct landmark studies
- Advance *Improvement Science* to transform healthcare
- Multi-site research collaboration
- Access to ISRN collaboratory resources
- Access to training modules on evidence-based practice and improvement research methods
- Engage with improvement scientists
- Student program at Summit program
- Developed Post Doctoral program with AcademyHealth
Immediate Future - Science

- Complete analysis and report on
  - 24,000 data points from STAR-2 Study
  - 10-hospital study of Medication Errors
- Expand studies
  - Add 10 sites to each; focus Texas
  - Extend STAR-2 to Respiratory Therapy
- Design and invite collaborative for team performance study
- Engage Network PI: Falls study; Readmission study
Immediate Future - Sustainment

- Formalize contractual agreements and revenue streams
- Anchor ‘virtual-ness’ in HSC informatics infrastructure
- Continue work through translational science and CTSAs in HSC and Texas
- Competitive grant to the trans-NIH Dissemination and Implementation FOA
- Competitive grant to PCORI
- Connect practice contracts with research


Stevens, K. R. (2009). *Essential competencies for evidence-based practice in nursing (2nd ed.).* San Antonio, TX: Academic Center for Evidence-based Practice (ACE) of the University of Texas Health Science Center San Antonio.


Resources-Other

- ISRN Research Agenda available at [http://www.isrn.net/research](http://www.isrn.net/research).
- Network News. ISRN Newsletters, chronicling the development and projects of the ISRN. [http://www.isrn.net/newsletter](http://www.isrn.net/newsletter).
- Building Successful Research Collaboratives for Healthcare Improvement is an evidence-based guide based on best practices for research collaboration in investigative teams.
- Adventures in Evidence-Based Practice: Accelerating Discoveries to Outcomes. A 38-minute streaming video highlighting knowledge transformation and improvement science. [http://www.acestar.uthscsa.edu/](http://www.acestar.uthscsa.edu/)
  - Improvement Science Summit. The first national research methods conference highlighting the unique and expanding designs and statistics used in improvement science, implementation research, and quality improvement projects.
  - Summer Institute on Evidence-Based Quality Improvement. The nation’s leading interprofessional conference dedicated solely to moving research into practice.
Contact Information

- www.ISRN.net
- 210-567-1480
- ImprovementScienceResearch@ISRN.net
- StevensK@uthscsa.edu
- PatelD7@utscsa.edu
- PugaF@uthscsa.edu
Acknowledgements

This work was supported by

FUNDING

• National Institute of Nursing Research-Grand Opportunities ARRA
  • 1RC2NR011946-01
  • 3RC2NR011946-01S1
  • 3RC2NR011946-01S2
• RWJF INQRI grant ID: 63510
• National Center for Research Resource Clinical and Translational Science Award UL1RR025767

This content is solely the responsibility of the authors and does not necessarily reflect the official views of the funding agency.

PEOPLE

• Thanks to ISRN Coordinating Center team for their essential support.
• Thanks to ISRN associates who form the ISRN and Network Study Research Collaboratives.
• Thanks to the ISRN Steering Council who saw the ISRN on a “blank page.”