IMPROVEMENT SCIENCE RESEARCH NETWORK

improving patient outcomes

Addressing the Improvement Research Priorities

KATHLEEN R. STEVENS, RN, EdD, FAAN
Professor and Director
Academic Center for Evidence-Based Practice
Improvement Science Research Network (ISRN)

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EILEEN P. ENGH, MSN, RN-BC, CPN
Manager of Nursing Research and Development Programs, Department of Nursing Research & Quality Outcomes
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ISRN STAR-2 Network Study Site PI

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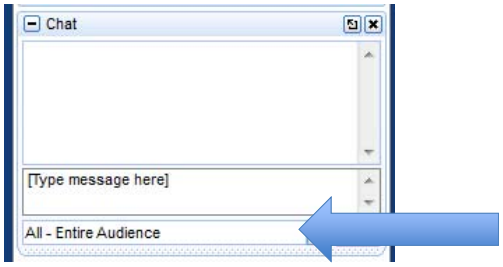
This seminar is supported in part by a grant from the Dean's Scholarly Project Award Program: Scholarship of Teaching Award from the University of Texas Health Science Center San Antonio School of Nursing.

Submitting Questions

- When: Anytime during the presentation
- How: Sending a written question through the Chat window



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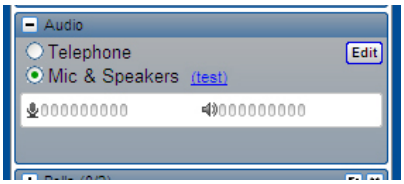

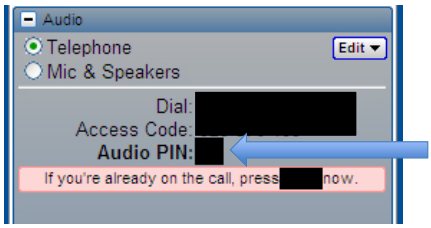

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Presenters

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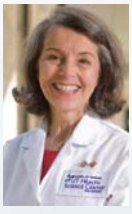
May 23, 2012



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How Do We Know if an Improvement Strategy Works?

What work factors prevent medication errors? Orange vests

What impact does improved team performance have on patient safety?
TeamSTEPPS training

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Gaps in Improvement Science

- Capacity
- Teams
- Infrastructure
- Research Methods

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Improving our work… *is* our work.

Cathy Rick
Chief Nursing Services Officer
Veterans Health Administration
ISRN Steering Council

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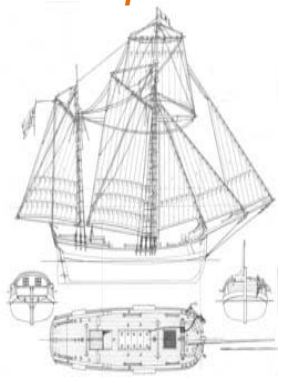
Improvement Science Research Network

Aim –

- Accelerate development and dissemination of improvement science in systems and microsystems contexts
- Provide a large-scale network as a test bed for improvement studies

a tall ship…



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Mission

ISRN mission is to

- increase the scientific foundation of healthcare quality improvement, safety, and efficiency
- through transdisciplinary research focused on
- healthcare systems, patient-centeredness, and integration of evidence into practice.

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Progress of the ISRN

- Developed Stakeholder-based Research Priorities
- Established the ISRN Steering Council
  - 14 nationally acclaimed experts
  - Monthly advisory meetings since December 2009
- Completed building our cyber-infrastructure
- Initiated vibrant communication & community engagement venues
- Engaged 200+ member affiliates- test bed
- Convened research methods conferences July 2010; June 2011 (AHRQ-R13 funded); July 2012
- Launched three multi-site Network Studies—"the test flight"

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Research Strategies

…and a star to steer her by

- MATCH
  - Research priorities
- RIGOR
  - Rigorous research studies
- RELEVANCE
  - Partners engage in improvement studies
- LANDMARK
  - Multi-site *landmark* studies
- VIRTUAL
  - Collaboration through a cyber infrastructure
- SYNERGY
  - Shared capacity

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Project Strategies

…and a star to steer her by

- Research Priorities

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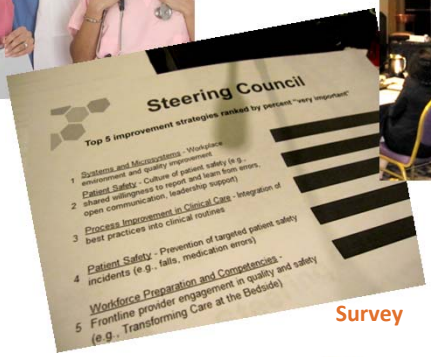
Research Priorities in Improvement Science: *setting the national agenda*

Stakeholders



Survey

RAND Delphi

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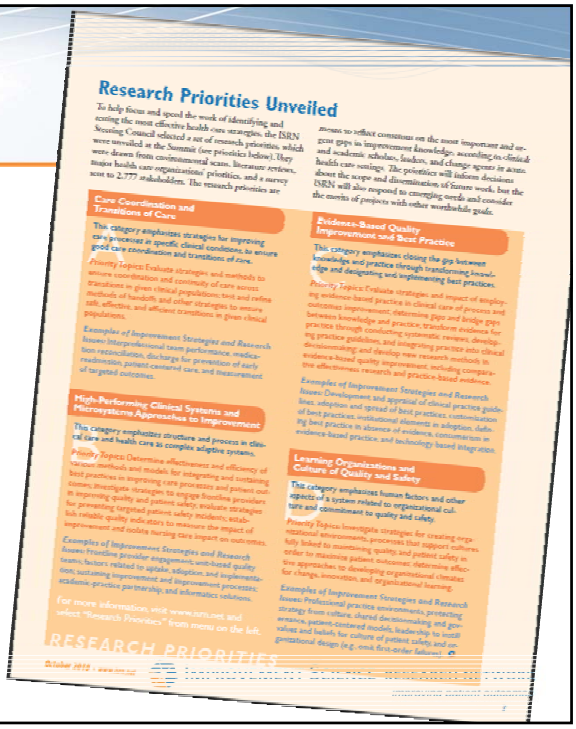
Research Priorities ISRN, July 2010

- First known globally
- Directs limited resources
- Meets crucial needs
- Guides selection of ISRN Network Studies

See www.ISRN.net



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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

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Definition
Collaboratory

Center without walls in which scientists—clinicians and academicians—can work together regardless of physical location.

Features:

- Spans distance
- Supports rich human interaction
- Oriented to a common research area
- Access to data sources and tools

Olson, Zimmerman, & Bos, 2008

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Why a Collaboratory for
Improvement Science

- Complex scientific problems—beyond the realm of single discipline or single scientist
- Collaboration increases quality of research
- Information and Communication Technologies-now cost-effective and reliable

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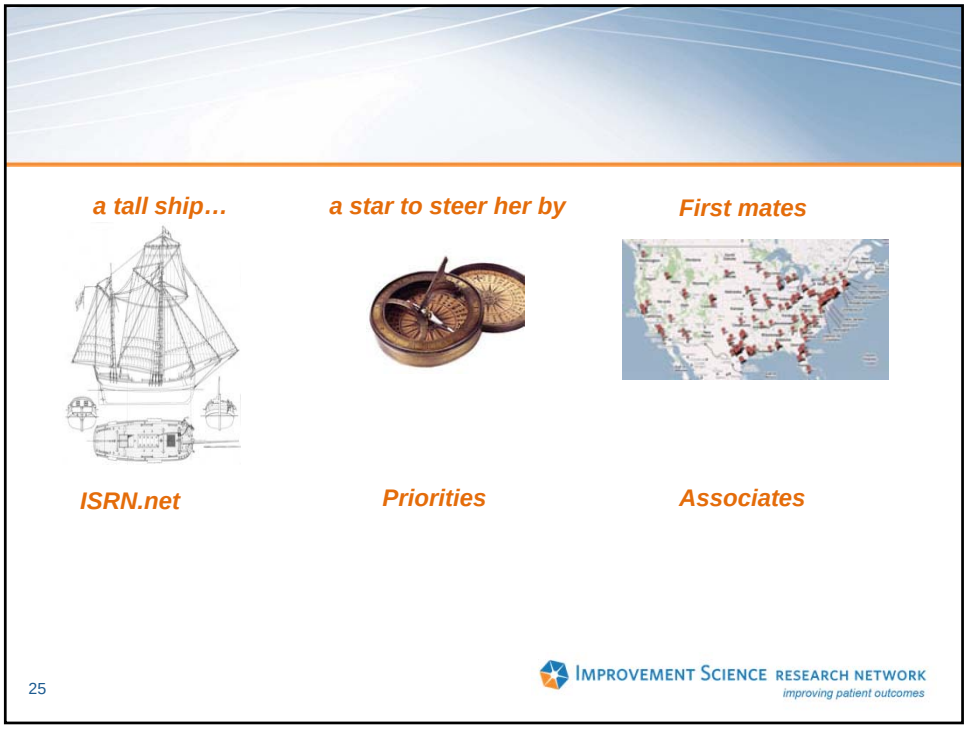
What is the Improvement Science Research Network?
The Improvement Science Research Network is the only National Institutes of Health–supported improvement research network. Our primary mission is to accelerate interprofessional improvement science in a systems context across multiple hospital sites. More...
Spotlight
Dr. Kathleen Stevens, ISRN Principal Investigator, was awarded a $3 million grant from the National Institute for Nursing Research. The grant will support the creation of the first national research network to focus on the collaborative design, testing and dissemination of quality initiatives related to improving bedside care. More...
ISRN Newsletter
Upcoming Events
Web Event
Team Science: Creating Successful Collaborative Teams
Date: May 25, 2011
Time: 2:00 PM. EDT
2nd ANNUAL
Improvement Science Summit 2011
Date: June 28-29, 2011
Location: The Hyatt Regency Riverwalk Hotel in San Antonio, TX
Call for abstracts
10th ANNUAL
Summer Institute on
improving patient outcomes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a star to steer her by
First mates
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Priorities
Associates
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Steering Council

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Retreat June 2011

Core Business= Conducting Research

2014 Strategic Vision

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NETWORK STUDIES
Addressing the ISRN Priorities

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

"We want to know what interventions will work. All hospitals and regions have unique features, but we want to know what will work in every setting. The network study will allow us to create a national conversation about preventing medication errors."

LILY THOMAS, PHD, RN, VICE PRESIDENT, SYSTEM NURSING RESEARCH, INSTITUTE FOR NURSING, NORTH SHORE LONG ISLAND JEWISH HEALTH SYSTEM

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System Factors that Facilitate Uptake of Team Performance for Patient Safety

"Through the Improvement Science Research Network, we will learn how organizations effectively integrate teamwork principles into practice for sustained improvement. Which organizational factors are critical for success?"

HEIDI KING, MS, FACHE, DEPUTY DIRECTOR, DEPARTMENT OF DEFENSE PATIENT SAFETY PROGRAM

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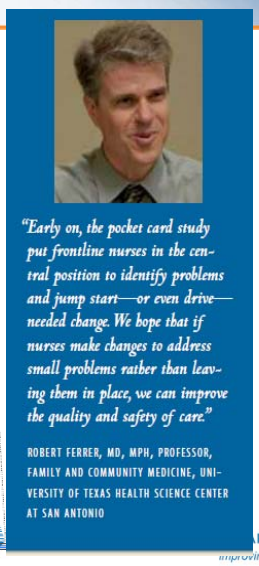
Small Troubles, Adaptive Responses (STAR-2): Frontline Nurse Engagement in Quality Improvement


Network Studies Launched

Network Study: Frontline Engagement in Quality Improvement



"Early on, the pocket card study put frontline nurses in the central position to identify problems and jump start—or even drive—needed change. We hope that if nurses make changes to address small problems rather than leaving them in place, we can improve the quality and safety of care."

ROBERT FERRER, MD, MPH, PROFESSOR, FAMILY AND COMMUNITY MEDICINE, UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO

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STAR

Small Troubles, Adaptive Responses (STAR-2):

Frontline Nurse Engagement in Quality Improvement

NETWORK INVESTIGATIVE TEAM
Kathleen R. Stevens, EdD, RN, ANEF, FAAN
Robert L. Ferrer, MD, MPH

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WEB SEMINARS-build capacity for studies

"Go to the unit that wants to work on the problem and give them resources and time."

ANITA L. TUCKER, DBA, ASSOCIATE PROFESSOR, HARVARD BUSINESS SCHOOL

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Research Problem

In frontline nursing,
workarounds are a response to
first order operational failures
exposing patients to errors and
creating inefficiencies in care.

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Example: Missed Learning Opportunities

"We never told the pharmacy when we got a dose of medicine that was more than we requested. We just squirted out the extra because we figured they were busy, they had not intended to make the mistake, and they wouldn't do anything about it anyway."-
Nurse Hosp #8

Tucker, 2008

Example: Missed Learning Opportunities

"…It was sad really because we weren't letting them have the information so they could fix their own problems."
– Nurse Hosp #8

Tucker, 2008

What We Know

- Failures occur about one per hour per nurse on hospital units and 95% of problems are managed through workarounds. (Observational, Tucker)
- Detection of first order operational failures provides opportunities to fix problems and contributes to organizational learning.

Operational Failures

1. Detect

2. Intervene

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POCKET CARD STUDY

Small Problems in Providing Care Today

Today's Date:___/___/___ Shift:_____
Unit:_____ Title:_____

Equipment/Supplies	Description	THL
1.		
2.		
3.		
Physical Unit/Layout	Description	THL
1.		
2.		
3.		
Information/Communication	Description	THL
1.		
2.		
3.		
Staffing/Training	Description	THL
1.		
2.		
3.		
Medication	Description	THL
1.		
2.		
3.		
Other	Description	THL
1.		
2.		
3.		

See the back for examples/definitions

DETECTION

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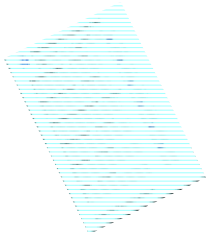
POCKET CARD STUDY



Research Questions:

1. What first-order operational failures do nurses self-detect?
2. Do self-detected first-order operational failures correlate with observed failures?
3. What factors are correlated with self-detection?

NEXT: Design intervention

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SUMMIT STAR-2 Network Study Invitation
Robert Ferrer
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From the STAR-2 Research Collaborative
Partners Speak…..
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Addressing the Research Priorities for Improvement Science

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Our STAR-2 Engagement Story

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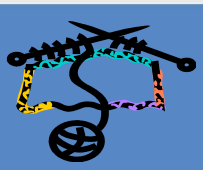
Casting On:



- Meeting Dr. Stevens and Discovering the Improvement Science Research Network
- Becoming a Research Associate Member
- Making the Case to include Pediatrics
- Announcement of the STAR-2 Study
- Preparing a Letter of Intent

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STAR-2 Study Team

Raven Wiggins, BSN, RN
Catherine Williams, MS, RN

Christine Harris, BSN, RN, CPN
Catherine Williams, MS, RN

Sharon Bostic, BSN, MBA, RN
Kathleen Stevens, RN, EdD, MSN, ANEF, FAAN

Also Co-Investigators
Pam Hinds, PhD, RN, FAAN
Debbie Freiburg, MS, RN

Amy Burke, BSN, RN-BC, CPN
DeDe Colevas, MSN, RN

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The Synergy of Collaboration:

- The Practicality of Generating New Knowledge
- How to Use New Knowledge
- The Outcomes of Using New Knowledge
- What it Takes to Conduct a Study

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Practical Benefits

- Rigorous Research Plan
- The Protocol Implementation Tool Kit
- Webinars
- Telephone Consultation
- Expert Guidance
- Collaboratory Progress Meetings
- Technical Protocol Implementation Guidance

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Local Knowledge …..

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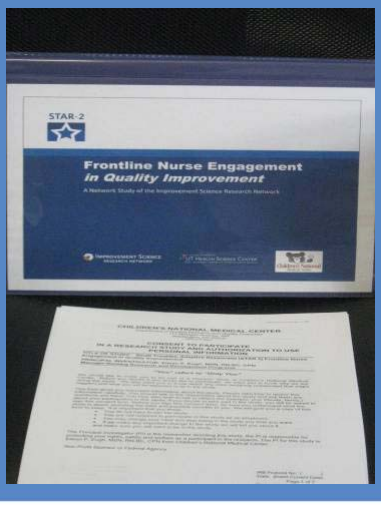
What it Takes:



Javan Ngaii, BSN, RN

Staff Nurse, Neuroscience Unit

Children's National Medical Center

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Taking Full Advantage To Host

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Questions and Comments

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Next ISRN Web Seminar

Transitions in Care

June 27, 2012
1:00 PM CST

Visit www.ISRN.net to register.

Mary D. Naylor, PhD, FAAN, RN
Marian S. Ware Professor in Gerontology
Director of the New Courtland Center for Transitions and Health
University of Pennsylvania School of Nursing

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Closing Remarks

- ISRN Mission
  - To enhance the scientific foundation for quality improvement, safety, and efficiency through transdisciplinary research addressing healthcare delivery, patient-centeredness, and integration of evidence into practice.

- For information on the ISRN or to become a member please visit our website: www.ImprovementScienceResearch.net

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