Seeking High Reliability Practices to Reduce Transmission of Infections in Long Term Care



Barbara I. Braun, PhD; Salome O. Chitavi, PhD, Linda Kusek, MPH, RN, CIC; Beth Ann Brehm, RN, NHA, SPHR, MBA, MSN; Kristine Donofrio

Background

High reliability organizations have been described as "systems operating in hazardous conditions that have fewer than their fair share of adverse events".1 Outside of health care, nuclear power, aircraft carriers, and air traffic control are examples of industries often considered to be highly reliable. Engaged leadership, strong safety culture, together with standardization, simplification and error-proofing of routine practices are common elements of high reliability organizations. In hospitals, the Comprehensive Unit-based Safety Program has been effectively implemented to reduce healthcare-associated infections over time.² However, little is known about parallel applications of high reliability practices in Long Term Care (LTC) settings.

1. Reason J. Human error: models and management British Medical Journal Mar 18, 2000; 320(7237): 768–770. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1117770/ 2. Pronovost PJ. Goeschel CA. Colantuoni E. Watson, S. Lubomski LH. Bernholtz, SM. Thompson DA. Sinopoli DJ. Cosgrove S. Sexton JB. Marsteller JA. Hvzv RC. Welsh R. Posa P, Schumacher K, Needham D. Sustaining reduction in catheter related bloodstream infections in Michigan intensive care units: observational study. BMJ. 2010 Feb 4;340:c309.

Objectives

This project set out to identify and disseminate examples of practical, high reliability approaches to reducing the transmission of infections in nursing homes and assisted living facilities.

- 1. Identify high reliability practices that can be used to reduce infection transmission in long term care 1a. Scoping literature review
- 1b. Call for effective practices
- 2. Convene a roundtable meeting comprising a panel of topic experts and leaders from long term care organizations to develop practical recommendations for implementation, and
- 3. Prepare professionally developed educational materials to disseminate information resulting from the project.

Partners attending roundtable meeting July 26 2013

Lona Mody, MD, M.Sc*	Nimalie D. Stone, MD	Norma Harrison Atteberry, RN, BS
VA Ann Arbor Healthcare	Centers for Disease Control and	The National Consumer Voice for
Systems	Prevention	Quality Long-Term Care
Ann Arbor, MI	Atlanta, GA	Washington, DC
Daved van Stralen, MD, FAAP*	Racquel Calderon, BS, RRT, RCP	Kathryn A. Berger, RN
Strategic Reliability	Totally Kids® Specialty Healthcare	Life Care Centers of America
Redlands, CA	Redlands, CA	Cleveland, TN
Deb Patterson Burdsall, MSN, RN-BC, CIC*	Marianna Kern Grachek, MSN, CNHA, CALA, FACHCA	Maribeth Bersani, MS (unable to attend)
Lutheran Home/Lutheran Life	American College of Health Care	Assisted Living Federation of
Communities	Administrators	America (ALFA)
Arlington Heights, IL	Alexandria, VA	Alexandria, VA
Jacqueline Vance, RNC, BSN,	Connie March, RN, MSN	Sharon M. Bradley, RN, CIC
CDONA/LTC, FACDONA*	Presence Life Connections	Pennsylvania Patient Safety
American Medical Directors	Mokena, IL	Authority
Association		Plymouth Meeting, PA
Columbia, MD		
Laura Wagner, PhD, RN, GNP*	Lisa Minor, MS, RN	Karen Leimberer, RN, BSN, MA, CM
UCSF School of Nursing	Veterans Health Administration	Pathway Senior Living, LLC
San Francisco, CA	Washington, DC	Des Plaines, IL
Deborah G. Perfetto,	Lance Peterson, MD, FASCP, FIDSA	Cheryl Phillips, MD
PharmD**	NorthShore University HealthSystem	Leading Age
Agency for Healthcare	Evanston, IL	Washington, DC
Research & Quality Rockville, MD		

Objective 1a: Methods

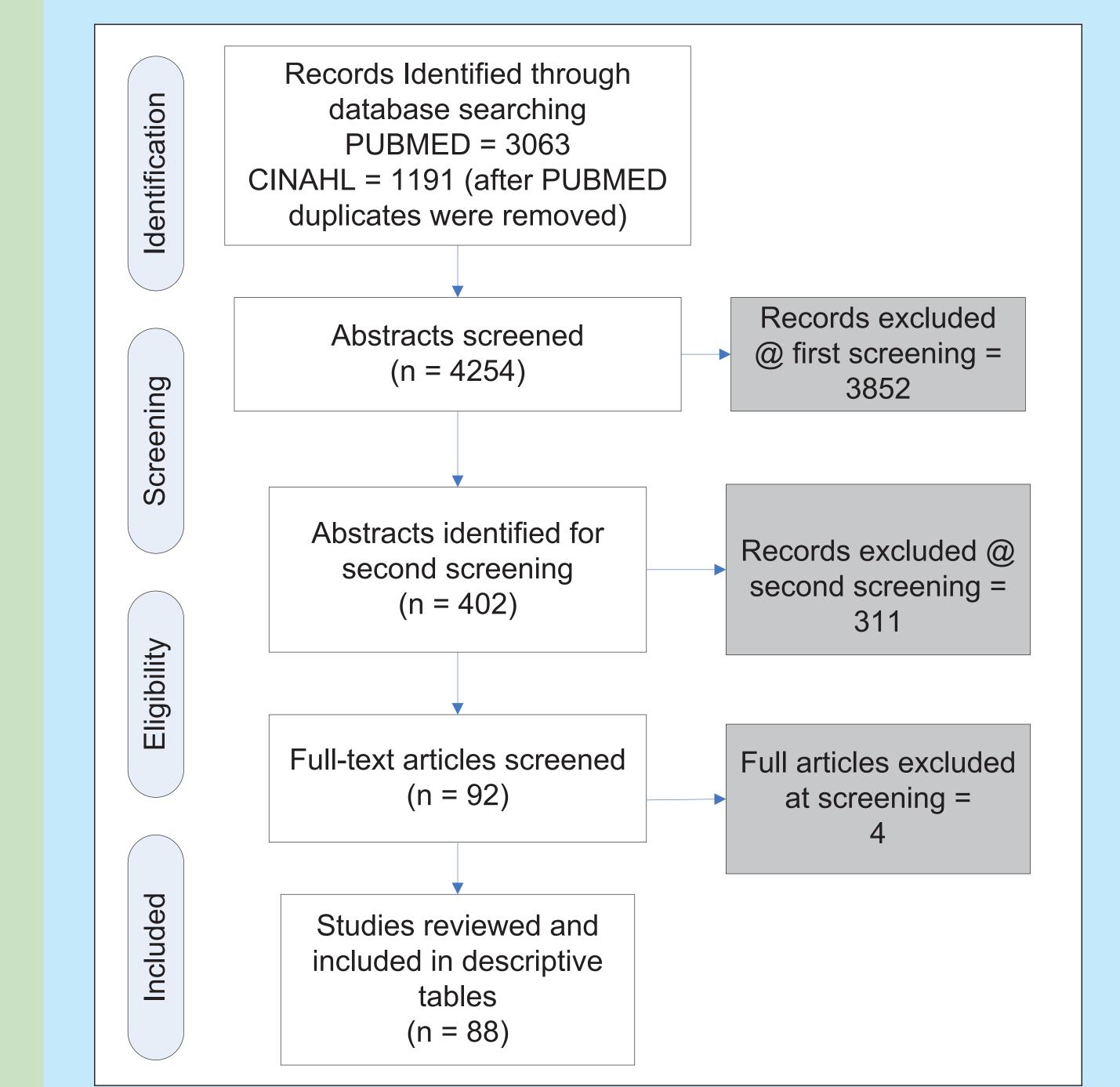
Scoping Literature Review Sources

- Peer reviewed
- PUBMED
- CINAHL
- Guidelines and position papers
- Guidance documents and toolkits
- Grey literature
- Stakeholder websites (associations, research organizations, foundations)
- State and federal agency websites (AHRQ, CDC, CMS)

Selection Criteria

- 1. Setting is nursing home or assisted living facility AND
- 2. Pertains to infection prevention
- 3. High reliability/ safety culture/ learning culture
- Excludes:
- Rehabilitation hospitals
- Long term acute care hospitals
- Home care
- Acute Care

Literature Review Process and Results



Objective 1a: Literature Review Findings

- 88 articles
- 28 guidelines
- 50 guidance documents
- Only 2 articles used the term high reliability; instead many referred to safety culture, person-centered care and transformational change which are the focus of many LTC initiatives

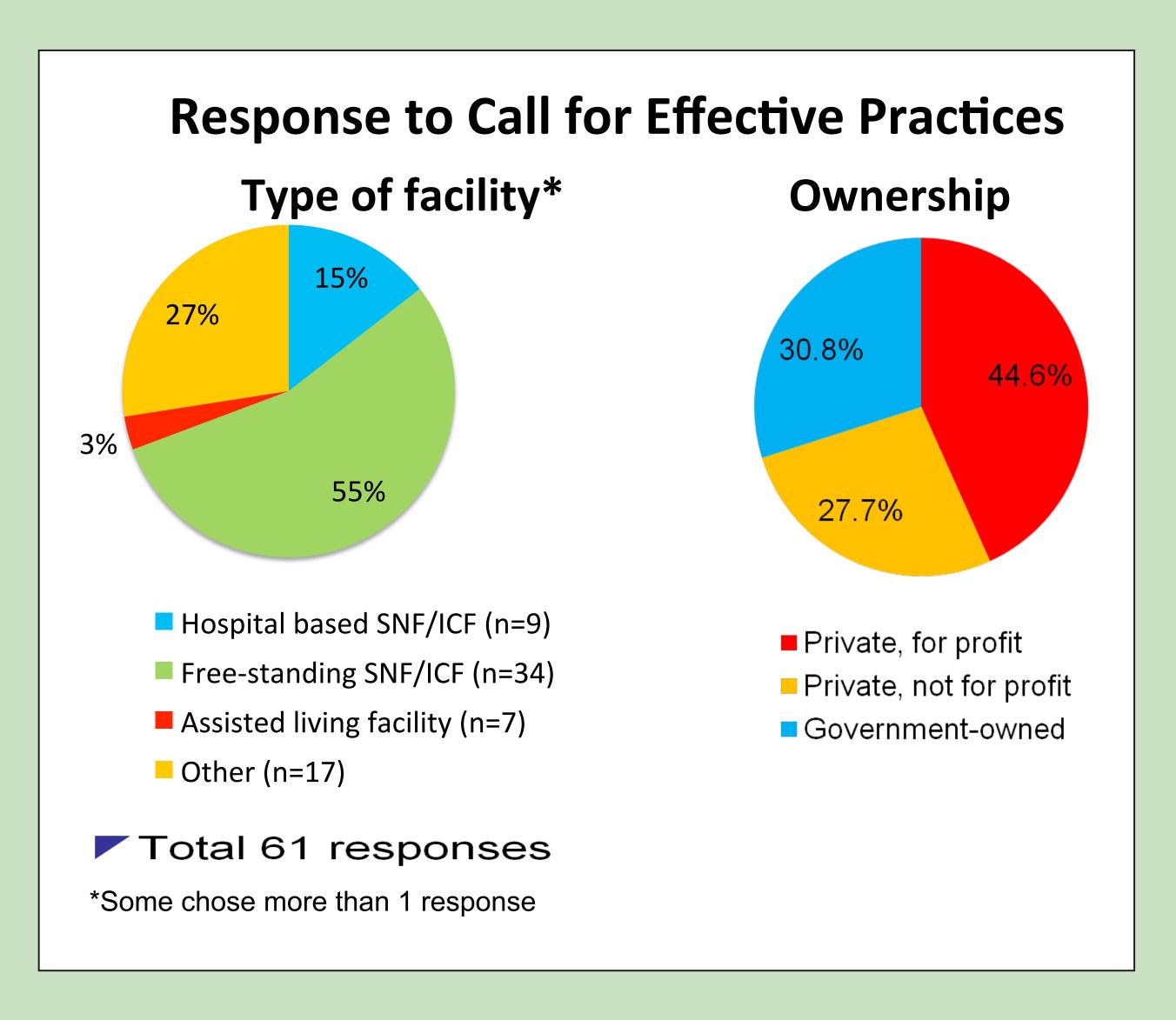
Objective 1b: Methods

Call for Effective Practices

Cross-sectional survey of nursing homes and assisted living facilities

Survey distribution channels

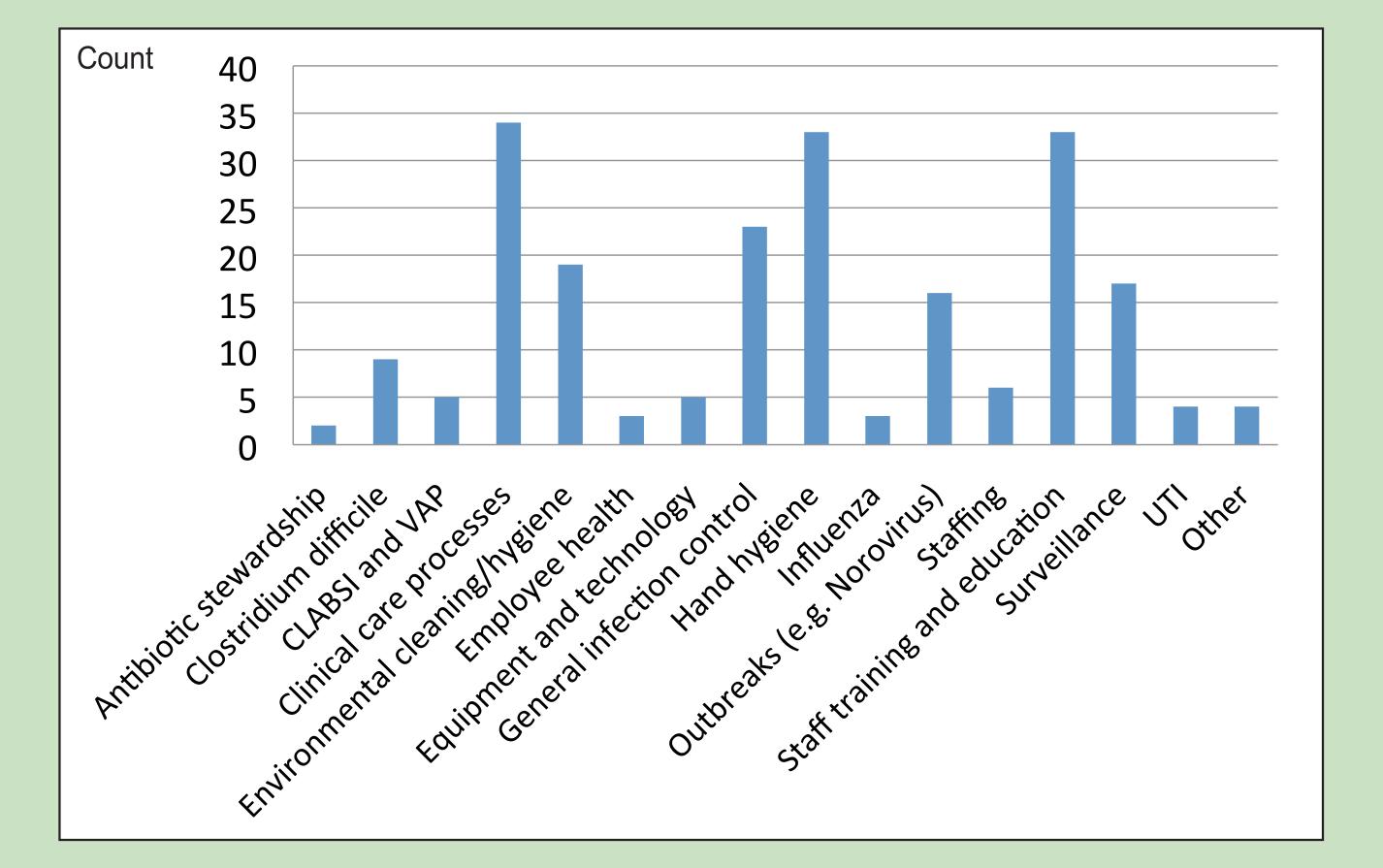
- 30,000+ recipients of *Joint Commission On-Line* list serve May-July 2014
- Email to accredited LTC organizations
- Roundtable partners
- Project team categorized responses by infection prevention topics and quality improvment and high reliability themes



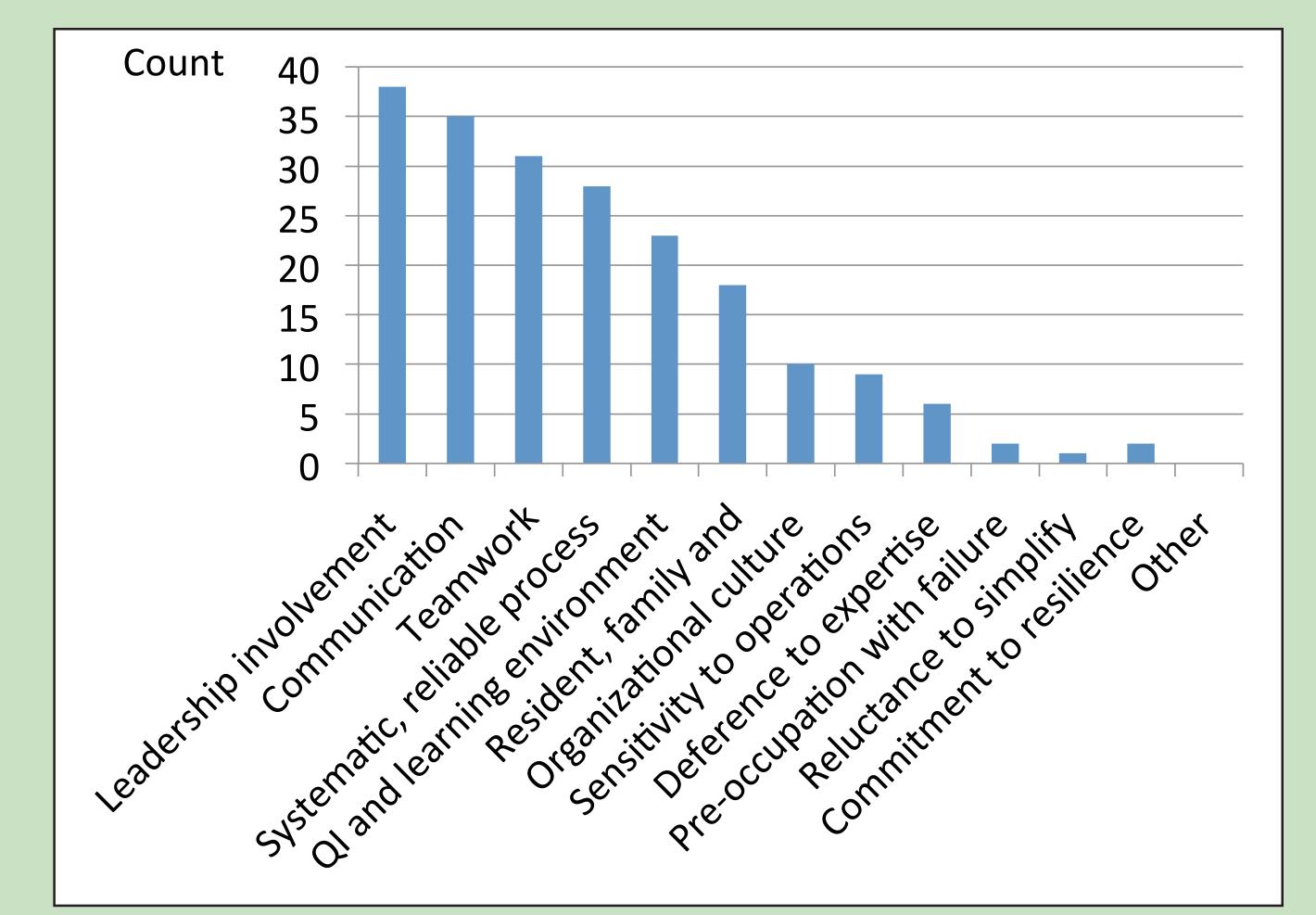
Author Affiliations

Division of Healthcare Quality and Evaluation, The Joint Commission

Infection Prevention Topics



Quality Improvement and High Reliability Themes

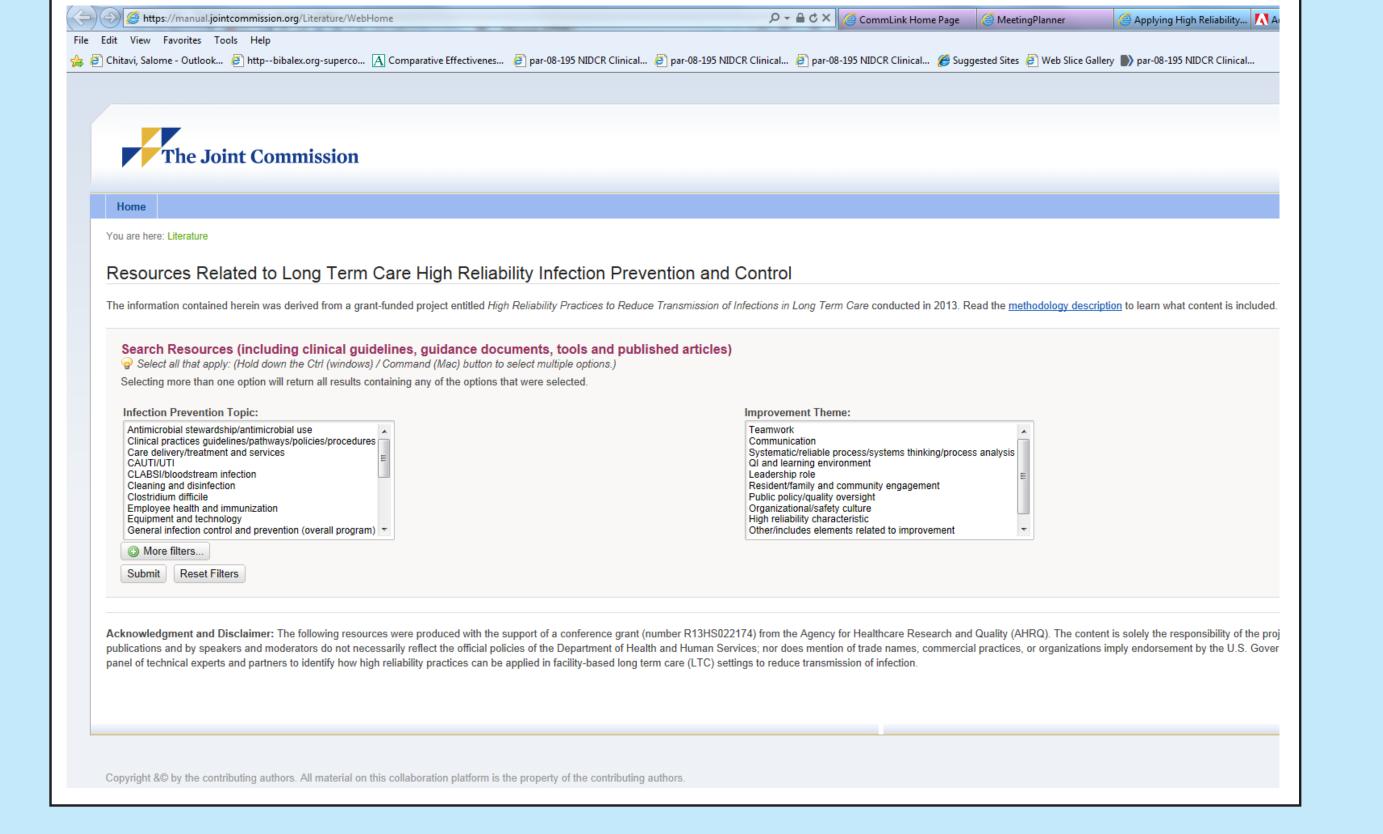


Objective 1b: Call for Effective **Practices Findings**

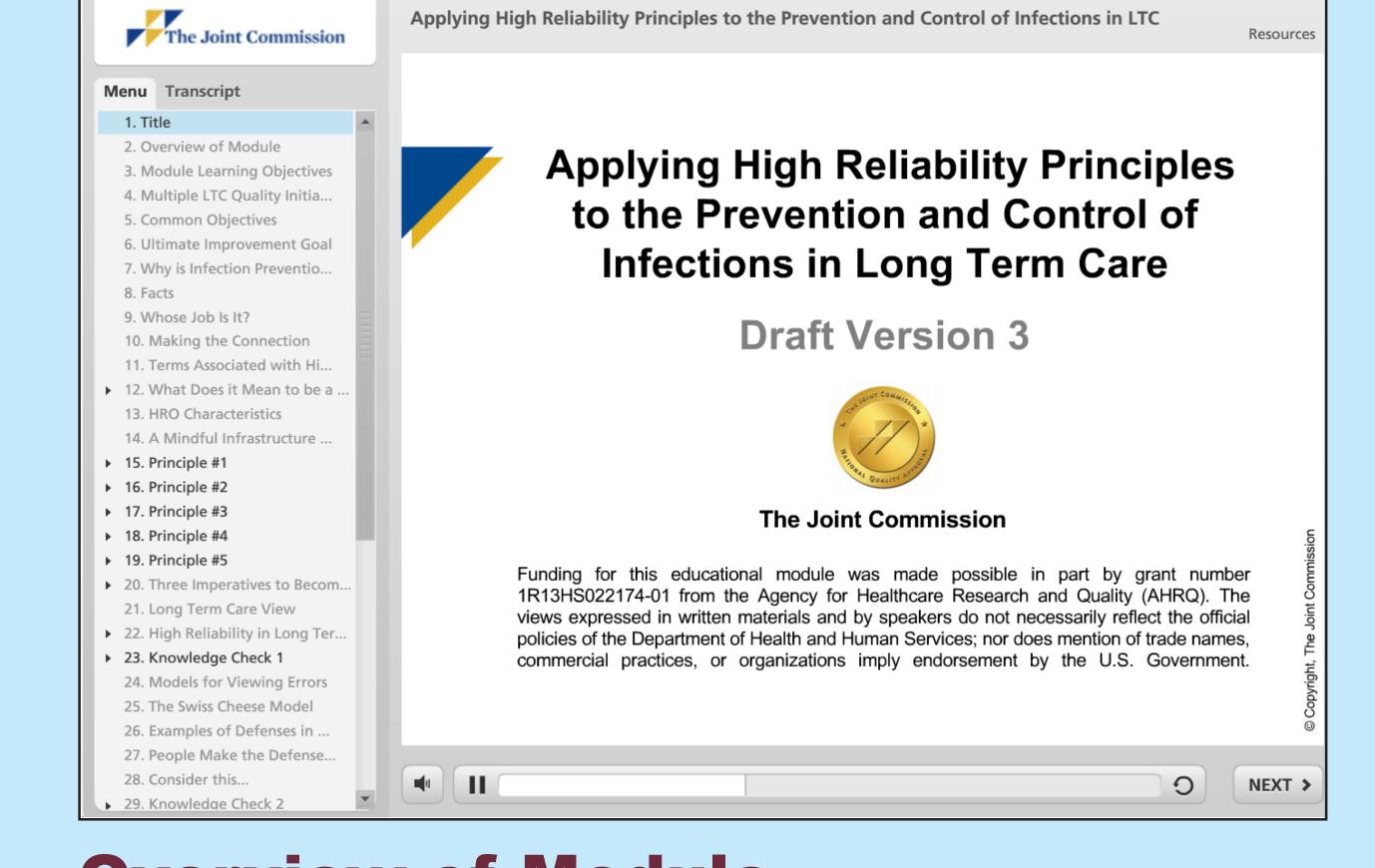
- Many infection prevention topics related to clinical care processes, hand hygiene, and staff training and education
- Common quality improvement themes were leadership involvement, communication and teamwork
- Relatively few responses mention high reliability themes

Objective 3: Educational Products

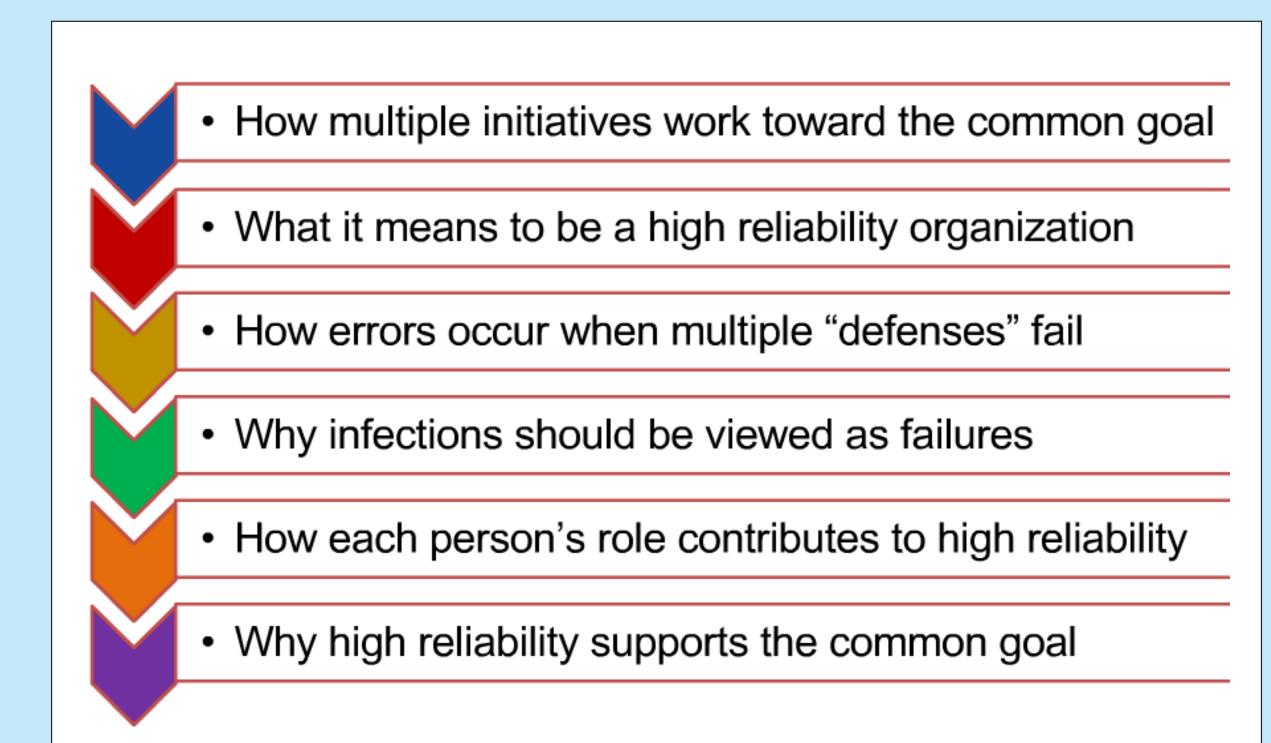
1. Searchable summary literature database



2. One hour Education Module



Overview of Module



Target Audience

All personnel working in nursing homes and assisted living facilities, including administrators, nurses, certified nursing assistants, physicians and staff working in environmental services, therapy, dietary and activities.

Dissemination of **Educational Products**

- Hosted on Joint Commission website
- Outreach through the roundtable partners
- Social Media
- Conferences

Conclusions

While the term high reliability is relatively unfamiliar to the long term care field, many of the concepts and practices are already incorporated into ongoing quality improvement initiatives.

Implications for Policy, **Delivery or Practice**

It is important to highlight the commonalities across long term care quality improvement models and strategies to avoid confusion and to promote the adoption of a learning environment and quality improvement mindset among persons expected to implement the practices.

Primary Funding Source

The project is funded through a conference grant from the Agency for Healthcare Research and Quality (Grant number: 1R13HS022174-01). The conclusions and opinions expressed in this presentation are those of the authors and do not reflect the official position of AHRQ or the United States Department of Health and Human Services.