TeamSTEPPS: The Duke Experience
Karen Frush, BSN, MD
Chief Patient Safety Officer
Duke University Health System
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Objectives
- Share our story
- Describe a comprehensive patient safety program
- Discuss culture and its importance in patient outcomes
- Describe how TeamSTEPPS is helping us in our ongoing journey to improve patient safety

Comprehensive Patient Safety Program
- Unit safety teams, Service line teams
- Activities to improve risk identification and mitigation
  - Safety Walkrounds, Automated surveillance, Computerized SRS system, Adverse event analysis
- Address systems issues: fix defects
- Transform the culture
- Monitoring progress
  - Balanced Score Cards, Safety metrics dashboard

Striving to Improve Patient Safety: Design Improvements into the System
- IT systems to enable patient safety
  - CPOE, EMR
  - SRS, Automated Surveillance
  - Bar Coding, Smart Pumps
  - Patient Portal
- Highly advanced tools and system—what about the team?
  - Focus on people who use the tools, work in system

Jesica Santillan
17 yr old young woman with complex heart disease
"botched" heart-lung transplant
Shattered family
Devastated nurses, physicians, entire team
Striving to Improve Patient Safety: Changing our Culture

- Transition from punitive culture to culture of accountability and organizational learning
  - Just Culture
  - Transparency and Disclosure
- Transition from culture of individual experts to collective expertise
  - Communication skills and teamwork behaviors

Team Training: One more initiative??

- Time and workload
  - Adding one more assignment onto everything else
- Best model?
  - Lack of data to demonstrate improved outcomes
  - Many consultants and approaches
- Required for all team members?
  - Logistics: we can’t shut down the unit...
- Cost vs benefit

TeamSTEPPS

- Evidence-based curriculum
- Core content modules
  - Flexible content delivery
  - Highly customizable
- Coaching module
  - “Tool box”
- Performance improvement
  - Assessment and action plan
  - Training and implementation
  - Evaluation/measuring impact

Teamwork Training: Where do we start?

- Assessment: Identify units in need of training through culture survey
  - Culture is local
  - Culture is variable between units
  - Don’t waste time on training in units with effective communication skills and teamwork behaviors
  - Instead, focus on units with lower scores on culture surveys

Culture Surveys

- AHRQ HSOPS: Hospital Survey of Patient Safety
  - 10 domains
  - Teamwork within units; teamwork across units
- SAQ: Safety Attitudes Questionnaire
  - 7 domains
  - Teamwork climate

Teamwork Climate is the consensus of frontline caregiver assessments related to collaboration

Example Teamwork Climate Scale Items:

- In this clinical area, it is difficult to speak up if I perceive a problem with patient care
- Disagreements in this clinical area are resolved appropriately (i.e. not who is right, but what is best for the patient)
- The physicians and nurses here work together as a well-coordinated team
A number of publications now demonstrate a link between culture and patient outcomes.

- Single unit or small scale studies
- Methodological problems
- More recent data provides multi-site (state wide) level of evidence

Why do we care about units with lower scores in teamwork climate?

- Culture is improvable
- Customized training for action at unit level
  - Focus on tools to address unit’s issues
  - “Fluid” teams?/lack of familiarity? consider Morning/Shift Briefings
  - Difficulty speaking up? consider standardizing through SBAR or enhancing assertiveness using Critical Language
Teamwork training in the PICU

- Initiated in 2005
- Our data showed safety events and opportunity to improve teamwork climate score
- Leadership team committed to improving performance
- Needed to improve handoffs from OR to PICU

Teamwork training in the PICU

- Customized training for action at unit level
  - Sterile cockpit to decrease distractions during handoff
  - Checklist tool to standardize communication during handoff
  - Critical language ("I need clarity") to help team members speak up
- Evaluate and measure impact
  - Process measures and outcomes measures

Operational Changes, Improvements in Outcomes

- Handoffs
  - Shortened, more effective handoffs
  - No safety events associated with handoffs since training
- Briefings and debriefings implemented; structured (SBAR) telephone communication
- Decrease LOS and increased throughput
- Patient Satisfaction score exceeded target
- Improving Safety Culture survey score
  - Until recent split of PICU and PC-ICU
- NACHRI BSI collaborative

Dissemination

- Neonatal Intensive Care Nursery
  - Residency work hour violations (rounds):
    - Over nine months decreased late ending rounds from 75% to less than 10%
- Pediatric Bone Marrow Transplant Unit
  - Medication errors
    - Sterile cockpit
- Cardio-Thoracic Surgery
  - Turn-over rates, hierarchy, patient acuity
    - SBAR, "I need clarity", calling each other by name
- Pharmacy
  - Medication safety process
    - SBAR, critical language
Clinical units in DUH and other hospitals within our health system
- Peri-operative
- Labor and Delivery

Patient advocates
- Speaking up: “I need clarity”

Opportunity to impact next generation of health care providers
- School of Medicine and School of Nursing
- Traditional model of training: “silo”
- Newer model: interdisciplinary training

Purpose: to develop and evaluate model of effective interdisciplinary team training for students in the healthcare professions

Customized TeamSTEPPS core content

Advanced TeamSTEPPS instructional modalities
- ARS-based interactive didactic
- Two high fidelity simulation scenarios
- Two role play scenarios

Validated pre & post knowledge test

Validated pre & post safety attitude survey

Improving Patient Safety through Interdisciplinary Teamwork
Training: GSK Collaborative

School of Medicine
School of Nursing

Dissemination

Model for Interdisciplinary Teamwork

Year One: The Event
Patient Safety Team Training
March 6, 2007

- Held on UNC Campus
  - Three buildings
  - 438 students
  - Duke & UNC Schools of Medicine and Nursing
  - 70 faculty
  - 90 volunteers
  - 12 temporary workers

Training Model Year Two

- Two sites, simplified model, focus on education over research
- Didactic core content via webcast prior to session or at beginning of session
- Role play scenarios in groups of 8, with 4 in role and 4 observing, then switch
- Viewing video clips and discussing questions, viewing video clips and rating team skills, debriefing
Conclusions of GSK Study

- Training significantly improved student knowledge of TeamSTEPPS curriculum
  - 12 item knowledge test
  - Post-test scores significantly higher (10.48 vs. 9.22, p<0.0001)
  - Attitudes toward interdisciplinary teamwork
  - CHIRP-attitudes instrument
  - Post-test scores improved significantly (p<0.001)
- Students reported positive experiences and asked for more opportunities for interdisciplinary education

“Year Three”: Post Grant Interprofessional TeamSTEPPS

- Interdisciplinary faculty team (SoM, SoN, PA, PT faculty)
- Revising the same core TS curriculum into a Team Based Learning model: still interactive small groups but less faculty needed
- Re-using the Year Two webcast
- To evaluate knowledge and attitude change using same tools
- Planning further integration of TeamSTEPPS into all SoN and SoM curricula

Summary

- Sharing our story and lessons learned
- Importance of comprehensive approach to improving patient safety, with a focus on culture
- TeamSTEPPS: a customizable approach to improve teamwork climate and safety culture
  - Flexible curriculum that can be delivered across the continuum from Schools to clinical practice
  - Growing evidence to support link between culture and patient outcomes

Duke Center for Training and Research in Patient Safety and Quality

- Bryan Sexton, PhD, Director
- Mission is to:
  - Spread best practices inside and outside of DUHS
  - Generate new knowledge
  - Bring joy back to work
- Courses offered:
  - TeamSTEPPS
  - PSO training
  - Executive walkrounds training
  - Physician leadership in patient safety and quality
  - Bouncing back from burnout