Achieving a Sustained TeamSTEPPS® Culture of Safety: One Step at a Time

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Spring 2016 634-D – Cohort 4
Introduction

» Past 3 years the Joint Commission (TJC) cites human factors, leadership and communication as top 3 root causes of events. (TJC, 2015)
  ~ Improving teamwork and communication is a top priority

» Agency for Healthcare Research and Quality (AHRQ) collaborated with Department of Defense to create an EBP program (AHRQ, n.d.)
  ~ Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS).
  ~ 4 competencies with specific tools: communication, leadership, situation monitoring and mutual support (refer to green laminated handout).

» Slininger (2015) recognized that communication is the root cause of most medical errors.
Introduction

» Institute of Medicine
   ~ To Err is Human – inadequate safety and quality (IOM, 2000)
   ~ The Quality Chasm (IOM, 2001)
   ~ The Future of Nursing: Leading Change, Advancing Health (IOM, 2010)

Despite these reports, little progress has been made.
Introduction - TeamSTEPPS®
# Introduction - TeamSTEPPS®: Key Principles

<table>
<thead>
<tr>
<th>Team Structure</th>
<th>Delineates fundamentals such as team size, membership, leadership, composition, identification and distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Ability to coordinate the activities of team members by ensuring team actions are understood, changes in information are shared, and that team members have the necessary resources</td>
</tr>
<tr>
<td>Situation Monitoring</td>
<td>Process of actively scanning and assessing situational elements to gain information, understanding, or maintain awareness to support functioning of the team</td>
</tr>
<tr>
<td>Mutual Support</td>
<td>Ability to anticipate and support other team members’ needs through accurate knowledge about their responsibilities and workload</td>
</tr>
<tr>
<td>Communication</td>
<td>Process by which information is clearly and accurately exchanged among team members</td>
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**Introduction – TeamSTEPPS®: Team Effectiveness**

<table>
<thead>
<tr>
<th><strong>BARRIERS</strong></th>
<th><strong>TOOLS and STRATEGIES</strong></th>
<th><strong>OUTCOMES</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>» Inconsistency in Team Membership</td>
<td>Brief</td>
<td>» Shared Mental Model</td>
</tr>
<tr>
<td>» Lack of Time</td>
<td>Huddle</td>
<td>» Adaptability</td>
</tr>
<tr>
<td>» Lack of Information Sharing</td>
<td>Debrief</td>
<td>» Team Orientation</td>
</tr>
<tr>
<td>» Hierarchy</td>
<td>Cross Monitoring</td>
<td>» Mutual Trust</td>
</tr>
<tr>
<td>» Defensiveness</td>
<td>Feedback</td>
<td>» Team Performance</td>
</tr>
<tr>
<td>» Conventional Thinking</td>
<td>Two-Challenge Rule</td>
<td>» Patient Safety!!</td>
</tr>
<tr>
<td>» Complacency</td>
<td>CUS</td>
<td></td>
</tr>
<tr>
<td>» Varying Communication Styles</td>
<td>SBAR</td>
<td></td>
</tr>
<tr>
<td>» Conflict</td>
<td>Call-Out</td>
<td></td>
</tr>
<tr>
<td>» Lack of Coordination and Follow-Up with Co-Workers</td>
<td>Read-Back</td>
<td></td>
</tr>
<tr>
<td>» Distractions</td>
<td>Handoff</td>
<td></td>
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<tr>
<td>» Fatigue</td>
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<tr>
<td>» Workload</td>
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<tr>
<td>» Misinterpretation of Cues</td>
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<td>» Lack of Role Clarity</td>
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</table>
Introduction – TeamSTEPPS®: Planning
Background

» 2011 LLUH introduces TeamSTEPPS

» Summer 2011 LLUBMC introduces TeamSTEPPS

» Summer 2013 LLUBMC Educates Staff
  ~ Didactic with Psychiatric Emergency Scenarios
  ~ TeamSTEPPS Attitude Questionnaire administered pre and post
  ~ Seclusion and Restraint Episodes measured pre and post
  ~ 4 months post training had positive results
  ~ Sustainment short-lived due to high staff turnover
PICOT

For registered nurses on locked inpatient units, will TeamSTEPPS training, compared to no training, improve staff knowledge and perceptions of team performance immediately and 30 days post intervention?
**Review of Literature**

<table>
<thead>
<tr>
<th>JHNEBP Evidence Rating Scales</th>
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</thead>
<tbody>
<tr>
<td><strong>STRENGTH of the Evidence</strong></td>
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<tr>
<td>Level I</td>
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<td>Level II</td>
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<tr>
<td>Level III</td>
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<tr>
<td>Level IV</td>
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<tr>
<td>Level V</td>
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</tbody>
</table>
Review of Literature


Level of Evidence: II B

» Longitudinal repeated measures design.

» Improve attitudes & behaviors at shift report and to decrease falls.

» Favorable for all three outcomes.

» Supports the need to assess pre-intervention and post-intervention staff perceptions of teamwork.
Review of Literature


Level of Evidence: III B

> Mixed methods using pre-intervention and post-intervention.

> To evaluate staff perceptions using the Hospital Survey on Patient Safety Culture Survey.

> Improved staff perceptions on patient safety culture as well as a reduction in time to treat emergent C-Sections.

> Repeat in 18 to 24 months to evaluate sustainment.
Review of Literature


**Level of Evidence:** III B

» Cross sectional mixed methods using pre-intervention and post-intervention TeamSTEPPS training.

» To evaluate RN perceptions of teamwork and behaviors using the TeamSTEPPS Teamwork Perceptions Questionnaire.

» Only the leadership domain showed statistical significance.

» Leadership is a catalyst for teamwork (especially bedside leaders).
Review of Literature


Level of Evidence: III C

» Pre-experimental pretest/posttest repeated measures.

» Would TeamSTEPPS training improve attitudes toward teamwork.

» Significant improvement in all 5 domains (team structure, leadership, situation monitoring, mutual support and communication).

» TeamSTEPPS training is beneficial to improve attitudes toward teamwork.
Review of Literature


**Level of Evidence:** V B

» QI Project using pre-post survey.

» Determine if TeamSTEPPS improve team attributes.

» Positive results in 5 of 7 subscales at \( p \leq .01 \).

» TeamSTEPPS training helps to introduce a culture of safety and improve team performance and other team attributes of highly effective teams.
Review of Literature - Summary

» TeamSTEPPS must be continually nurtured to sustain a culture of safety.

» Leaders (Physicians and Management) must embrace and support TeamSTEPPS and be a champion.

» Engaged staff is key for sustainment.

» Re-dosing strategies and training programs for new employees.

» QI tools will mitigate barriers to success.
Theoretical Framework

» Hildegard Peplau’s Four Phases of the Nurse Client Relationship

» Peplau – Factors Influencing the Nurse-Client Relationship
Theoretical Framework

» Kotter’s Eight Stage Change Management Model

1) Increase urgency
2) Build guiding teams
3) Get the vision right
4) Communication for buy-in
5) Enable action
6) Create short-term wins
7) Don’t let-up
8) Make it stick
Project Design

» DNP Project Committee Members (alphabetical order by last name)
  ~ Selena Anderson, BSN, RN – Administrative Charge Nurse
  ~ Yolanda Arroyo, Manager, Process Improvement – Patient Safety and Reliability
  ~ Sarah Gregory, BSN, RN – Relief Charge Nurse
  ~ Paula Herrera, BSN, RN, Administrative Charge Nurse
  ~ Sukh Dev Singh Khalsa, DNP(c), MBA/MSN, RN, PMHNP-BC, PHN – DNP Student & Manager of Education and Clinical Practice
  ~ Sun Min Kim, DNP, FNP, RN – Project Committee Chair
  ~ Philiana Neemia, BSN, RN, Administrative Charge Nurse
  ~ Carlos Samayoa, Patient Safety and Reliability Statistician
  ~ Dr. James Pappas, MD, VP Quality & Patient Safety LLUH, Community Member
  ~ Melissa Pereau, MD, Psychiatrist, Physician Champion
  ~ Julia Slininger, RN, BS, CPHQ, Vice President, Quality and Patient Safety, Hospital Association of Southern California, Community Member
  ~ Karen Watkins, Administrative Assistant – data entry support
  ~ Jeevaka Weerasinghe, BSN, RN Adult Inpatient Services Patient Care Director
Project Design

» Quality improvement project using pre- and post- knowledge testing (5-item multiple choice) with scripted Powerpoint, laminated TeamSTEPPS tools handout.
  • 1.5 hour mandatory sessions
    ~ 1 hour education
    • 15 minutes for test and survey pre and post intervention
    ~ TurningPoint software and hardware used for testing.

» Populations:
  ~ Inpatient RNs at LLUBMC

» TeamSTEPPS Teamwork and Perceptions Questionnaire (T-TPQ)
  ~ Pre- and post-intervention
  ~ 30 Days post-intervention
  ~ Modified T-TPQ 15- item survey for inpatient units
Project Design

» Project Participants
  ~ LLUBMC Inpatient RNs
    • Immediate pre and post intervention
      ~ N = 36
    • 30 days post intervention
      ~ N = 16
IRB-Ethics and Human Subjects Protection

» LLUBMC Research Committee Approved pending formal IRB clearance.

» LLU Nursing Research Committee Approved

» LLU IRB - Project did not qualify as human subjects research.
IOWA Model Relationship

» Problem-focused trigger
  ~ Need to standardize communication during handoff opportunities

» Priority for organization
  ~ Medical Staff
  ~ Quality Council
  ~ Nursing Clinical Leadership
  ~ Patient Safety and Reliability

» Team formation and evidence review after literature synthesis.

» Key nurse-driven strategies identified in literature:
  ~ Handoff Communication*
  ~ Briefings, Huddles and Debriefings
  ~ Call Outs and Read backs
  ~ Communicating concerns (CUS and DESC)
IOWA Model Relationship

» Literature and Institutional Priorities
   ~ (internal and external) supported the need for action.

» Change in practice:
   ~ Face to face education

» Dissemination
   ~ Department leaders and staff
   ~ Local and national conference
   ~ Publication
Timeline of Project

9/2016~11/2016
- Stage 1 - Establishing a Sense of Urgency
- Stage 2 - Creating the Guiding Coalition
- Stage 3 - Developing a Vision and Strategy
- Multidisciplinary Team formed to plan TeamSTEPPS® Training

12/2016~2/2016
- Stage 4 - Communicating the Change Vision
- Stage 5 - Empowering Employees for Broad-Based Action
- Stage 6 - Generating Short-Term Wins
- Met with Leadership Teams to Plan strategies
- IRB Approval at LLUBMC and LLUH
- Pre-Post Knowledge Assessment and T-TPQ Survey

- Stage 7 - Consolidating Gains and Short-Term Wins
- Stage 8 – Anchoring New Approaches in the Culture
- 30 Day Post T-TPQ Survey (2 weeks in March)
- Data Coding and Analysis
TeamSTEPPS Teamwork Perceptions Questionnaire (T-TPQ)

» Literature review identified need to develop individual perceptions of teamwork.

~ AHRQ’s Hospital Survey on Patient Safety (HSOPS) – not sensitive to specific teamwork domains.
~ TeamSTEPPS Teamwork Attitudes Questionnaire (T-TAQ) does not measure current perceptions only individual attitudes.
~ 35 Questions 5 point Likert Scale
  • 7 questions for each domain
~ Revised tool to 3 questions for each domain – 15 questions
Issues of Implementation

» Narrowing the scope of the project

» TurningPoint software – end user error

» Timeline crunch prevented implementation to all inpatient RNs

» Decreased T-TPQ response rate from original participants

» Time constraints prevented the collection of clinical outcomes
Data Analysis - % of Respondents by Unit

- Unit 100 – Chemical Dependency: 11.31%
- Unit 200 - Seniors: 3.8%
- Unit 200a - Pediatrics: 4.11%
- Unit 300 - Adults: 13.36%
- Unit 400 - Adolescents: 5.14%
Data Analysis- # of Years Employed at LLUBMC

- Dept. Years Less than one year: 11
- Dept. Years 1-5 years: 22
- Dept. Years 6-10 years: 1
- Dept. Years 11-15 years: 2

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Data Analysis- Primary Shift

- AM Shift: 53%
- NOC Shift: 47%

Legend:
- Blue: AM Shift
- Red: NOC Shift
Q1. How does TeamSTEPPS provide higher quality, safer patient care?

a) Increasing team awareness and clarifying team roles and responsibilities.

b) Resolving conflicts, improving information sharing, and eliminating barriers to quality and safety.

c) Producing highly effective medical teams that optimize the use of information, people, and resources to achieve the best clinical outcomes for patients.

d) All of the above
Q2. TeamSTEPPS is:

a) A flight of stairs
b) Developed by Department of Commerce’s Patient Safety Program in collaboration with the Agency for Patient Safety and Quality.
c) A team specifically designed to improve teamwork
d) An evidence-based teamwork system to improve communication and teamwork skills among healthcare professionals.
Q3. All of the following are TeamSTEPPS tools except:

a) Brief  

b) CUS  

c) Shift Report  

d) Call - Out
Q4. Which of the following TeamSTEPPS tools listed below supports feedback that is designed to improve team performance and effectiveness:

a) DESC  
b) SBAR  
c) CUS  
d) Debrief
Q5. Which of the following TeamSTEPPS tools listed below provides mutual support when discussing delicate situations with staff.

a) CUS
b) Call-Out
c) SBAR
d) DESC
Data Analysis – Crohnbach’s Alpha

<table>
<thead>
<tr>
<th>T-TPQ Domain</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Structure</td>
<td>0.730</td>
</tr>
<tr>
<td>Leadership</td>
<td>0.832</td>
</tr>
<tr>
<td>Situation Monitoring</td>
<td>0.585</td>
</tr>
<tr>
<td>Mutual Support</td>
<td>0.776</td>
</tr>
<tr>
<td>Communication</td>
<td>0.787</td>
</tr>
</tbody>
</table>
Data Analysis – Means and Friedman’s test

<table>
<thead>
<tr>
<th>T-TPQ Domain</th>
<th>Immediate Pre Mean N= 36</th>
<th>Immediate Post Mean N= 36</th>
<th>30-day mean N = 16</th>
<th>Significance Friedman’s test $(p &lt; 0.05)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Structure</td>
<td>3.97</td>
<td>4.01</td>
<td>4.25</td>
<td>0.074</td>
</tr>
<tr>
<td>Leadership</td>
<td>4.01</td>
<td>4.01</td>
<td>4.35</td>
<td>0.016*</td>
</tr>
<tr>
<td>Situation Monitoring</td>
<td>3.92</td>
<td>3.98</td>
<td>4.06</td>
<td>0.544</td>
</tr>
<tr>
<td>Mutual Support</td>
<td>3.72</td>
<td>3.94</td>
<td>4.10</td>
<td>0.031*</td>
</tr>
<tr>
<td>Communication</td>
<td>3.96</td>
<td>4.00</td>
<td>3.90</td>
<td>0.210</td>
</tr>
</tbody>
</table>
Data Outcomes

» Knowledge Assessment – overall scores improved

» T-TPQ Survey Results - Inpatient RNs
  • Statistical significance
    ~ Team Structure – no statistical significance
    ~ Leadership- staff input, discussion, takes time to meet with staff
    ~ Situation Monitoring – no statistical significance
    ~ Mutual Support – re-evaluation of patient care goals
    ~ Communication – no statistical significance
  • Overall means improved with exception of 30 days results in communication domain
Process Outcomes

» Handoff reporting adopted in the electronic health record for adult inpatient units
  ~ Overview report
    • 100% compliance in April (example next slide)
  ~ Youth inpatient units are beginning the process
    • Badge buddies with defined handoff elements
  ~ Debriefing tools for staff and clinical reviews are being piloted (second slide following this slide)
  ~ Structured Interdisciplinary Rounding with scripts for each discipline and timeframes established
Process Outcomes – EHR Handoff Report
Process Outcomes – Debriefing Tools

**POST INCIDENT STAFF DEBRIEFING FORM**

A short staff debriefing will be completed immediately after each incident. All personnel involved in the incident should be included in this meeting. It will be conducted by either the unit charge nurse, the unit nurse manager, or the hospital supervisor in charge at the time of the incident.

**DATE** ________________ **TIME** ________________ **UNIT** ________________

**PATIENT NAME** ____________________________________________

**Staff Members Involved:**

________________________________________

________________________________________

Identified Lead Interventional:

Unit Charge Nurse

Documentation completed?

Were any injuries sustained?

Patient injuries:

________________________________________

________________________________________

Employee injuries

List 3 things that were done successfully for this incident

________________________________________

________________________________________

List 3 things that may have made prevented this event for a more successful outcome:

________________________________________

________________________________________

________________________________________

Comments:

________________________________________

________________________________________

________________________________________

COMPLETED BY: ____________________________________________

**CLINICAL REVIEW – Debriefing**

To comprehensively analyze the incident, a clinical review will be completed within 24 hours after the incident (ordinarily during the next treatment team meeting). The review will be conducted by the unit Patient Care Manager, or other qualified treatment team member. Unless clinically contraindicated, the patient and family members will be invited to participate. This review is in addition to the “Post Debriefing” that occurs within 24 hours of the episode.

**REVIEW DATE** ________________ **TIME** ________________

Describe what led up to the intervention: (What happened?)

________________________________________

________________________________________

What were the triggers or other factors? (Known and unknown at the time of the incident)

________________________________________

________________________________________

What choices (less restrictive interventions or measures) offered to the patient?

________________________________________

________________________________________

For Psychiatric Emergencies was the Rapid Response Team called?

Yes – what happened:

No – explain:

Describe the imminent risks that necessitated physical intervention:

________________________________________

________________________________________

What were the staff members feeling during this event?

________________________________________

________________________________________

Were PRN medications available at the time of the incident?

________________________________________

Were PRN medications administered?

When?

Comments:

________________________________________

________________________________________

COMPLETED BY: ____________________________________________

Return to Patient Care Manager of the unit involved.
Evaluation of Structure and Process

Structure
~ Test software each time to mitigate risk
~ Include all disciplines

Process
~ Consider not to modify validated tools that have established psychometric properties
~ Project management
~ Rewards for participation to improve 30 days results.
~ Adopt technology for surveys
Strengths and Limitations

**Strengths**

~ Leadership support from multiple departments
~ Captive audience afforded high response rates for immediate pre/post data.
~ Staff motivated to embrace change and implement change
  
  • Debriefs and handoffs
~ Set stage for full T-TPQ survey
~ Physician champion to adopt into structured interdisciplinary rounds (call outs)

**Limitations**

~ Small post 30 day sample size
~ Homogeneous sample for inpatient units
~ Proximity of pre-test and post-test intervention
~ Clinical outcomes will take time to measure (quarterly and annually).
  
  • Difficult to measure what does not happen (errors prevented).
~ Time limitations to administer original T-TPQ
~ Joint Commission Triennial Survey prior to project implementation.
Projections for Future Work

Structured Interdisciplinary (non)Bedside Rounds  BMC Adult Services

Start Times: 0800  Duration: 90 min

1. Introduce
   2. Update hospital course since dayshift
      a. Brief intro to patient history
      b. Review active problems and response to treatment
      c. Abuse risk factors/Reporting

2. Review current status
   a. Interactions with other patients, visitors and staff
   b. ADLS

3. Update current status/ Review Quality-Safety Measures
   - Mental status, behaviors, and risks
   - Specific abnormal vital signs/pain over 24 hours
   - Percentage of meals eaten over 24 hours
   - Administration, amount and response to emergency or prn medications over 24 hours
   - Labs/tests (abnormals and drug levels)
   - Number of groups attended over 24 hours
   - Hours of sleep overnight
   - Planned procedures
   - Orders (needed, clarified, cleaned up)
   - 8250, GD, DTS, DTC, Vol status

4. Update current status:
   a. Current events not already discussed
   b. Discharge disposition and any barriers
   c. Family Collateral
   d. Additional Abuse Risk Factors/Reporting
   e. Legal issues (custody, court hearings, WRTs, Resies or TCONS)

5. Update current status:
   a. Is PMP/IOP covered/Co-pay
   b. Days Authorized
   c. Special treatments authorized (ECT, MRI, CD, etc)
   d. Special programs/support available through insurance/payer
   e. Medical necessity concerns
   f. MD Peer to peer review required for Authorization

6. Synthesize plan using all inputs
   a. Propose Plan-for-the-Day & assign responsibilities
   b. Propose Plan-for-Transfer
      c. Transfer/Discharge needs & next site of care

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## Projections for Future Work

<table>
<thead>
<tr>
<th>Suppliers</th>
<th>Inputs</th>
<th>Process</th>
<th>Outputs</th>
<th>Customers</th>
<th>Needs</th>
<th>Requirements</th>
<th>Measures</th>
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<td>M</td>
</tr>
</tbody>
</table>

- **Person or Organization** SUPPLYING the: **Thing**
  That goes through these steps to be converted into **The Thing** that gets delivered to: **A Person or Organization**

- **What the Customer wants or needs from the Output**
  "I Want _______"

- **Specifications or standards of the Customer!**
  "What we have to do."

- **How or Where Measurement is taken for the standards**

<table>
<thead>
<tr>
<th>Personal Noun</th>
<th>Noun</th>
<th>Verb + Noun</th>
<th>Noun</th>
<th>Personal Noun</th>
<th>Adverb / Adjective</th>
<th>Specification or Goal</th>
<th>Operational Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>6</td>
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<td>8</td>
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</tbody>
</table>
## Project name

<table>
<thead>
<tr>
<th>Team</th>
<th>Start Date</th>
<th>Consultant</th>
</tr>
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</table>

### TARGETS (Desired Situation)
- Diagram similar to the current condition, showing how the new (future) state procedure/process will be done
- Expected improvement should be predicted specifically and quantitatively

### CHECK
- **Target**
- **Results**
- **Eval**

### PROBLEM/NEED
- Problem or business statement: define objective/why change is needed

### BACKGROUND
- Can combine background & Current Situation areas
- How does process fit with Strategic plan or department goals/policy/procedures
- Can list number or % of errors/amount of work that is value added

### CURRENT SITUATION
- Can be labeled Current Condition/Current State/Before
- Value Stream or Gantt Summary
- Stick Figure Illustrations of process
- Layout Diagram/Spaghetti diagram, communication circle
- Photographs

### ROOT CAUSES
- 5 whys, Ishikawa, affinity diagram: Identify Causes
- (can be picture of board with Stick notes from brainstorming)
- Correct it, reduce it or eliminate the root cause
- Can be labeled: Cause Analysis or Root Cause Analysis

---

### Project Plan
- **PLAN**
- Improvement or Implementation Plan
- Key Concepts to be implemented
- Specify outcome, content, sequence and task of work activities. Eliminate loops, workarounds, and delays.
- Add other items, such as cost, that are relevant to the implementation.
- DO can be combined & labeled: Action Plan

### RESULTS/GRAPHS
- Countermeasures
- Can be combined with DO and labeled as: Follow up/After Effect Confirmation section provides proof of outcome
- Success Measures/Result Measures

### Remaining issues/Action Items

### REFLECTIONS
- Can be labeled as Key Learnings
- Insights

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## Process/Methods

<table>
<thead>
<tr>
<th>Materials</th>
<th>Process/Methods</th>
<th>People</th>
<th>Machines</th>
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</thead>
</table>

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## Problem Statement
- During (time), Pareto accounted for 50% of problem which was 3x higher than desired

## DO
- Action
- Who
- When
- Part of Plan: list what must occur to realize target condition
- Process: how you will implement/ed Plan
- Can include Future State goals

## ACT
- Future Action
- Who
- When
- Can be called Recommendations
- Issues & Ideas that came up that were not addressed

---

## Reflections
- Can be labeled as Key Learnings
- Insights
Conclusions

» Participants demonstrated improved knowledge in the pre and post knowledge self-assessments.

» Statistical significance was achieved in two of the TeamSTEPPS domains.

» Additional T-TPQ surveys can be deployed to involve all disciplines in all departments at regular intervals to help drive and sustain a TeamSTEPPS culture of safety.
  ~ Results can help drive department specific action plans targeting priority domains/questions.

» With leadership support, staff will embrace change and drive change to improve safety, teamwork and communication.
Acknowledgements

» God for strength, creativity, and unconditional love
» Norie Bencito for bringing me aboard the LLUBMC leadership team and supporting my academic journey and mentorship
» Dr. Kim and all of the LLU faculty for spiritual and academic support
» All project team members for support despite organizational challenges
  ~ Joint Commission Survey and Post-Response action plans
» Jeevaka Weerasinghe for supporting last minute changes in a chaotic and unpredictable environment
» Carlos Samayoa and Andrea Champlin for initial statistical analysis
» Karen Watkins for data entry
» Julia Slininger, Yolanda Arroyo, and Dr. James Pappas for TeamSTEPPS expertise
» To my entire family that has supported my life-long learning journey
References


References


References


