Pain Management Redesign Utilizing Failure Mode Effects Analysis to Improve HCAHPS Performance and Care Delivery

Michelle Freitag, BSN, RN, CPHQ
Meghan Bauler, BSN, RN
Elizabeth Hale, BSN, RN

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Conflict of Interest Disclosure

• Conflicts of Interest for ALL listed contributors.
  • M. Freitag, No conflict of interest
  • M. Bauler, No conflict of interest
  • E. Hale, No conflict of interest

A conflict of interest is a particular financial or non-financial circumstance that might compromise, or appear to compromise, professional judgment. Anything that fits this should be included. Examples are owning stock in a company whose product is being evaluated, being a consultant or employee of a company whose product is being evaluated, etc.


Objectives

• The participant will be able to discuss the role of a Failure Mode Effects Analysis (FMEA) in quality improvement
• The participant will be able to discuss how the Brief Pain Inventory was utilized as a tool for collecting baseline data
• The participant will be able to describe how pain is assessed with the Defense and Veterans Pain Rating Scale (DVPRS)
• The participant will be able to discuss how the quality improvement process is used to implement pain strategies.
Background

- Fall 2011 ROPH Patient Safety Committee identified pain management as a strategic priority
  - HCHAPS
  - Physician feedback
- Interdisciplinary team convened to evaluate current pain management practices through use of a Failure Mode Effects Analysis

FMEA and Quality Improvement

Failure Modes and Effects Analysis (FMEA)

- Systematic and proactive tool used to:
  - Evaluate a process to identify where and how it might fail
  - Assess the impact of failures
  - Identify process steps in need of change

FMEA Process

Map the Process

Steps in sequential order

Identify Failure Modes

What can go wrong? Why?

Assign a Risk Score

How likely is it this will happen? How likely is it the failure will be detected? If this fails happens, what is the severity of harm?

Analyze the Results

Identify high risk issues

Plan Improvements

Likely to Occur | Likely to be Detected | Likely to Cause Harm
---|---|---
Plan Improvements

- Likely to Occur
  - Consider a function that makes error impossible
  - Add a step
  - Modify Process to eliminate the cause

- Unlikely to be Detected
  - Add alert flags
  - Add a verification step

- Likely to Cause Severe Harm
  - Early warning signs
  - Drills, Simulations
  - Provide immediate resources at the POC

The Process Improvement Cycle

Plan
- Who
- What
- When
- Where
- Why
- How

Do
- Implement the Plan
- Collect Data

Act
- Study
- Monitor and measure any indicators

- Implement
- Make Changes
- Hold Gains

FMEA Results

FMEA results used to plan improvements for “high risk” processes:
1. Lack of standardized assessment and patient report of pain
2. Indirectly/not asking patients if they are in pain
3. Inconsistent re-assessment of pain after intervention
4. No schedule for tests and therapies-pain relief intervention may not be given prior
Baseline Data Collection

- Baseline data was collected utilizing the Brief Pain Inventory with permission from MD Anderson
  - Objective data to crosswalk with FMEA findings
- Point Prevalence Survey
  - Evaluate patients’ understanding/ability to quantify pain severity through use of the 0 – 10 pain scale
  - Evaluate patients’ past and current pain severity and degree of relief from current plan of care
  - Evaluate how patients’ current pain affects ADLs, Sleep, Mood

Brief Pain Inventory Analysis

Pilot Unit BPI with NRS: Current Pain (n = 20)

- Numeric Rating Scale
  - Respondents rated pain as none, mild-scale, or severe

Defense and Veterans Pain Rating Scale

**What?**

- Pain rating scale developed by the United States Department of Defense and Veterans Health Administration for comprehensive pain management that is holistic, interdisciplinary, and multimodal
- Standardizes evaluation & patient report of pain
Who?

• All patients who are able to use the tool

• Administered by staff whose scope of practice includes assessment of pain (MD, NP, RN, PT/OT, etc.)

Why?

• Decreases variation in how patients are instructed to report pain

• Reduces practitioner subjectivity by helping patients quantify and qualify pain for effective intervention

• Promotes consistency in pain assessment

• Increases patient understanding of pain in terms of severity and impact on function (ADLs, Sleep, Mood, Stress)
When?

- When to utilize
  - Admission
  - Hourly Rounds
  - New onset and reassessment of pain
  - Prior to any procedure or intervention that might cause increased pain severity (dressing changes, therapy, etc.)
  - Immediately before discharge

How?

- Several options on the pain scale
  - Descriptors
  - Zero to Ten
  - Color Bar
  - Faces
  - Stop Light Steps (Green, Yellow, Red)
  - No Pain, Mild, Moderate, Severe

- GOAL = assist patient to identify the most appropriate number on the Zero to Ten scale

<table>
<thead>
<tr>
<th>Pain Scale Types</th>
<th>Convert to Zero-Ten Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptors</td>
<td>Each descriptor correlates to a number</td>
</tr>
<tr>
<td>Color Bar &amp; Faces</td>
<td>Falls between 2 numbers; When possible, use Descriptors to help patients identify most appropriate severity</td>
</tr>
<tr>
<td>Stop Light Steps &amp; No Pain, Mild, Moderate, Severe</td>
<td>When possible, use Faces/Color Bars to narrow range to 2 numbers then use descriptors to assign severity score</td>
</tr>
</tbody>
</table>
Pain Management Pilot

Plan | Do
---|---
Standardize assessment & patient report of pain | Defense and Veterans Pain Rating Scale
Reduce need to ask for pain relief & improve assessment post intervention | Intentional Hourly Rounding

- Bedside Tent Cards
- Room Signs
- Unit clerks play music every hour to cue rounding from 8am – 9pm

Pain Management Pilot

Plan | Do
---|---
Directly ask patients about pain & make known comfort is our goal | *Key Words for each conversation are “Pain” and “Always”
Improve communication to ensure adequate pain relief before activities that increase pain | Use “Today’s Appointments” in EHR

Brief Pain Inventory Analysis

- Numeric Rating Scale
  - Respondents rated pain as none, mid-scale, or Severe
- Defense and Veterans Pain Rating Scale (DVPRS)
  - More variation in response between no pain and mid-range, fewer responses for severe pain
Pilot Unit Pain CAHPS Results

Rush Oak Park Hospital Pain Pilot Unit

Action Plan Adjustments

• Equipment Failure
  • CD player
  • Egg timer
• Pain Call Light Log
  • Drop in scores; drill down to determine further opportunities
  • Shift? Staffing? High volume/surgeries?
• Pain Captain
  • Reverting back to old behavior/workflow
• Post Overall Pain Satisfaction Score in Hallway
  • Re-focus and prioritize
• PCT Pain Row
  • Support interdisciplinary approach
  • Communicate among team if patient was asked about pain
• “Today’s Appointments”
  • Inconsistent use
• Tent Cards

Personal Comfort and Pain Control Options
Personal Comfort and Pain Control Options

Hospital-Wide Implementation

- Monthly team meetings
- Hourly rounding
  - Hardwiring efforts ongoing
- DVPRS used hospital-wide
- Personal Comfort and Pain Control Options
- Hospital-wide education
  - Nurses
  - Patient care technicians
  - Therapies
  - Chaplains
- Pain Resource Nurse

Ongoing Analysis

ROPH CAHPS: Pain Management Overall by Quarter
10/1/11 – 6/30/13

- ROPH Average
- National Average
- State of Illinois Average
### Conclusion

- Implementation of Key action plans have had a positive impact on pain management:
  - Intentional Hourly Rounding
  - DVPRS
  - Personal Comfort and Pain Management Options Menu
  - Interdisciplinary Team
  - Staff Education

- Opportunities for Improvement:
  - Hardwiring processes
  - Pharmacological management

### References