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COLLEGE OF NURSING

Ban the 1-10 Scale:
An Innovative Approach to Labor Pain

Objectives

◊ At the conclusion of the session, participants will be able to articulate the original intent of the JCAHO standard and be able to verbalize alternatives to the 1-10 rating scale.
◊ At the conclusion of the session, participants will be able to describe the Total Quality Management (TQM) Process used to implement an alternative pain measurement tool.
◊ At the conclusion of the session, participants will be able to describe the response of labor and delivery nurses to use of the Coping Algorithm.

Overview

◊ Why we developed the Coping Algorithm
◊ Definition and review of pain
◊ Two divergent models
◊ The Joint Commission Standard
◊ Theoretical Framework
◊ Electronic Charting
◊ Evidence – based
◊ Advantages
The Coping With Labor Algorithm

- PURPOSE
  - Develop and implement a pain assessment, documentation and management program that is unique to the laboring patient and replaces the 0-10 Numerical Rating Scale (NRS).
- QUESTIONS
  - What is Pain?
  - Can all pain be rated?
  - Is all pain bad?
  - Can you have pain without suffering?

Pain

- Pain is defined by the International Association of the Study of Pain (IASP) and the American Pain Society (APS) as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage” (Merskey, 1979, p. 250).
- Perceptions of pain are influenced by social and environmental factors, as well as a person’s experiences and cultural factors (Caton et al., 2002; King & McCool, 2004; McCool, Smith, & Aberg, 2004).

The Experience of Pain

Pharmacologic management of pain during labor and delivery. Gilbert J Grant, MD
**Uterine Pain Pathway**

- **Sensory Pain**
  - First stage
  - Late first stage and into the second stage

**Pain Gate Theory**

- Developed in 1962
- Ronald Melzac & Patrick Wall
- Used to explain why a positive sensation can counteract a negative one

**Fear Tension Pain**

- 1940’s
- Dr. Grantly Dick-Read
- Taught that if we can break the cycle of fear and tension we can reduce pain
Two Divergent Models

- Pharmacologic Model
- Non-Pharmacologic Model

The Pharmacologic Model

Epidural Anesthesia

“there is no other circumstance where it is acceptable for an individual to experience untreated severe pain amenable to safe intervention while under a physicians care……Pain management should be offered.”

- http://adam.about.com/surgery/19172.jpg

- The American College of Obstetricians and Gynecologists 2006 Compendium.
“Unlike other acute and chronic pain experiences, labor pain is not associated with pathology but with the most basic and fundamental of life’s experiences – the bringing forth of new life.”

(Lowe, 2002, p.S16)

The Non-pharmacologic Model

http://www.americanpregnancy.org/labornbirth/relaxationtechniques.htm
http://www.collegeofmidwives.org/temporary02/Photographs_NormalBIRTH_Oct02.htm

The Political Model

CARTOON BY MICHAEL RAMIREZ
The Aztec Model

Alternative pain relief!

Questions

◊ Can all pain be rated?
◊ Is all pain bad?
◊ Can you have pain without suffering?
◊ Why do we care about pain?

Background

◊ TJC – The Joint Commission
  ◊ Joint Commission on Accreditation of Healthcare Organizations

◊ Pain assessment standard
  ◊ Introduced in 1999
The Joint Commission

- "Patients have the right to pain management." (R1.2.160)
- "The hospital defines in writing the data and information gathered during assessment and reassessment." (PC.2.20)
- To maintain The Joint Commission compliance and meet patients needs the Coping With Labor Algorithm was developed.

Justification

- A piece of the Pertinent Element of the JCAHO Assessment Standard (PC.2.20) states:
- "If applicable, separate specialized assessment and reassessment information is identified for the various populations served."

Problem Statement

- Prior to implementing the Coping Algorithm, University hospital’s L&D unit utilized the hospital wide and Joint Commission approved numerical rating system (NRS) for pain assessment and documentation.
- Nurses and Midwives know -
  - It is difficult to quantify the “pain” of labor....
Patients are Confused

- Some patient’s request that they not be asked to rate their pain score
- Patients have stated, “Why are you asking me this?”
- There are reports of confusion as to whether the pain is rated with a contraction or between a contraction.

Coping with Labor

“Theorem Bear, coming downstairs now, bump, bump, bump on the back of his head, behind Christopher Robin. It is, as far as he knows, the only way of coming downstairs, but sometimes he feels that there really is another way, if only he could stop bumping for a moment and think of it.” (A.A. Milne, Winnie-the-Pooh, p.1)

Theoretical Framework
Theoretical Framework

- A combination Total Quality Management (TQM) process was utilized for this project.
- W. Edwards Deming’s PDCA cycle with a FOCUS framework.

FOCUS Format

Figure 1: FOCUS format.

- Find an improvement - improving pain assessment for laboring women.
- Organize a team - six RN’s and one CNM joined together to create change.
- Clarify current knowledge - perform a literature review.
- Understand causes of process variation - all team members had over 30 years of experience thus adding value to understanding of the process.
- Select the process improvement - find an acceptable alternative to use of the TENS unit for documenting pain for laboring women.
Why “Coping”? 

“Coping, a complex and multidimensional phenomenon, has been found to have cognitive, emotional, and behavioral qualities” (Abushaikha, 2007, p. 35)

“Coping is defined as a stress-specific pattern by which an individual’s perceptions, emotions, and behaviors prepare for adapting and changing” (Abushaikha, 2007, p. 35)

Continuing the Process 

After development
- Core group utilized on L&D
  - Feedback incorporated
  - Rolled out to all L&D staff

Evaluation
- Five yes-no questions
- Opportunity for open-ended elaboration
Results


1. Is Coping / Not coping algorithm beneficial to the patient?
   • 100% yes (both)

2. Does it provide for a better assessment than the NRS scale?
   • July 95% – Dec 100% yes

3. Do you feel the new Coping Algorithm© is an improvement in pain assessment?
   • 100% yes (both)

L&D Nurses Quotes

Nursing comments regarding use of the Coping With Labor Algorithm

COPING
“[We focus more on how the patient feels rather than a number].”
“It is so much easier and [more] logical than the scale because of the complexities of pain and labor.”

PROCESS
“Allows use of nursing process and your own intuition as to what is happening with the patient, rather than being limited by a scale.”
“Doesn’t focus on labor as ‘pain’ but rather a process in which pain isn’t good or bad.”

COMMUNICATION
“Patients understand what I am asking them and respond well to both the initial inquiry and the follow up to interventions.”
“Patients feel like they need to give you a high number in order for their pain to be acknowledged.”

Reference: theunnecesarean.com
Retrieved 2/22/2011

Washington State University Graduate Project

• Robyn Gibson, RNC, BS for particle credit of a Masters degree – completed May 2011
• Convenience sample
• Two L&D units in a 5 hospital system trialed the Coping Algorithm for 2 weeks
  o Community Hospital - 17 bed LDRP, 1000 births/year
    • Training received with a poster board
    • 31% response rate. N = 10
  o Urban Hospital – 14 bed L&D unit, 1600 births/year
    • Hands on training
    • 19% response rate. N = 9
Results
Washington State Grad Project
Survey- 2011, N = 19
1. Is Coping /Not coping algorithm beneficial to the patient?
   • 100% yes
2. Does it provide for a better assessment than the NRS scale?
   • July 79% yes
3. Do you feel the new Coping Algorithm© is an improvement in pain assessment?
   • 100% yes (both)

Qualitative Analysis

◊ Analyze all quotes
◊ Pull out important words
◊ Discover themes

Qualitative Thematic Analysis

◊ 82 comments were analyzed
◊ 50 primary codes
◊ 9 secondary codes
◊ 3 themes emerged
### Primary Codes

<table>
<thead>
<tr>
<th>Communication</th>
<th>Presence</th>
<th>Assessment</th>
<th>Evaluation</th>
<th>Nurse</th>
<th>Annoying Perception Suffering Comfort Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation</td>
<td>Intervention</td>
<td>Evaluation</td>
<td>Confusion</td>
<td>Culture</td>
<td>Education Simplification Intuitive Easier Badgering</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Control</td>
<td>Joyous</td>
<td>Comfort Preference Easier Perception Nursing Process Pain</td>
<td></td>
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### Secondary Codes

- Nursing Process
- Pain/Coping
- Common Sense
- Education
- Quality Improvement Process
- Choices
- Communication
- Satisfaction
- Presence

### Themes

- COPING
- PROCESS
- COMMUNICATION
Coping With Labor Algorithm

Implementation of the Coping Algorithm

- Created a Guideline for L&D nurses
- Describes Philosophy of Pain Care…..
  - “To recognize the uniqueness of the laboring experience and that the characteristic of this pain is individual, subjective and intensely personal in nature.”
Implementation of the Coping Algorithm

- Defines vocabulary used for documentation purposes
- When the Coping Algorithm is used
- Frequency of assessment
- When to transition to the 1-10 NRS or when it should be implemented

Charting

- University of Utah, Philips OB TraceVue and the Coping Algorithm

Patient Response
Grade Definition Suggestions for Practice

A The USPSTF recommends the service. There is high certainty that the net benefit is substantial. Offer or provide this service.

B The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is to substantial. Offer or provide this service.

C The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient.

D The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. Discourage the use of this service.

I The USPSTF concludes that the current evidence is insufficient to assess the balance of benefit and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined. Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefit and harms.

Grading the Evidence

<table>
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<tr>
<th>Grade</th>
<th>Definition</th>
<th>Suggestions for Practice</th>
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<th>Study or Review (Year)</th>
<th>Comments</th>
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**One on One Support**

**Pros**
- Emotional/physical needs met
- Consistent person
- Greater benefit if begins early in labor
- Most effective with familiar lay person or a doula
- Better Outcomes

**Cons**
- Not always available
- Can be difficult for support person if labor is long

Evidence Grading: Sufficient

References: Simkin, 2004; Hodnett, 2007; Albers, 2007; NICE, 2007; Essex, 2010

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**Hydrotherapy**

**Pros**
- Easy to use
- Non Pharmacologic
- Reduces perception of pain and medication use

**Cons**
- Timing of entry, duration and water temp are important for effect
- Not always available
- Sometimes practice standards don’t allow

Evidence Grading: Sufficient

References: Lowe, 2002; Simkin, 2004; Hodnett, 2007; NICE, 2007; Cluett, 2002

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**Intradermal Water Injections**

**Pros**
- Reduces lower back pain
- Can be administered more than once
- Relief for up to two hours
- Easy to administer
- Minimal risks

**Cons**
- Not all practices have knowledge
- Stinging at the injection site

Evidence Grading: Sufficient

References: Simkin, 2004; Albers, 2007; Simkin, 2003; Gupta, 2004
**Movement/Ambulation/Position**

**Pros**
- May decrease labor and pain with lateral or upright position
- Mom has control of what is comfortable for her
- Widens the pelvis

**Cons**
- Possible increase in blood loss with upright positions
- Not always possible with certain interventions

**Evidence Grading:** Sufficient

*References:* Simkin, 2004; Albers, 2007; Simkin, 2003; Gupta, 2004

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**Massage / Acupressure**

**Pros**
- Reduces pain during pregnancy
- No evidence of harm
- Subjective benefit

**Cons**
- Can be hard for support person in long labors

**Evidence Grading:** Insufficient

*References:* Simkin, 2004; NICE, 2007; Huntley, 2004; Field, 2008; Smith, 2006; Trout, 2004; Tournaire, 2007

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**Acupuncture**

**Pros**
- Lower pain intensity
- Increased relaxation

**Cons**
- Not always available

**Evidence Grading:** Sufficient

*References:* Fan, 2006
Rhythmic Breathing

Pros
- No indication of harm
- May assist a woman to cope
- Any type will work if its working for mom

Cons
- Some patterns are too complicated
- Hyperventilation

References: Simkin, 2004; NICE, 2007; Huntley, 2004; Smith, 2006; Simkin 2010

Evidence Grading: Insufficient

Hot and cold Packs

Pros
- No harm in most cases
- Perceived decrease in pain
- Easy to make if none are available

Cons
- Contraindicated with regional anesthesia

References: Simkin, 2004

Evidence Grading: Insufficient

Audio Analgesics

Pros
- Perceived reduction of pain
- Easy to provide
- Relaxes mom
- No indication of harm

Cons
- Availability of player

References: Simkin, 2004; NICE, 2007; Smith, 2006; Tsukano, 2007

Evidence Grading: Insufficient
### Aroma Therapy

**Pros**
- May decrease anxiety
- Easy to use
- Scents can evoke positive emotions
- No indication of harm

**Cons**
- Hospitals policy against use due to allergies
- Expertise & Understanding
- Some fragrances are contra-indicated for labor
- Essentials oils are the recommendation

**Evidence Grading:** Insufficient

References: Simkin, 2004; NICE, 2007; Smith, 2006; Tournaire, 2007

### IV Medication

**Pros**
- Shorter Acting
- Sedation in between contractions
- Takes off the edge
- Anecdotally can be effective in transition

**Cons**
- Doubts about efficacy for pain control
- Cross the placental barrier
- Maternal side effects
  - Nausea
  - Vomiting
  - Sedation

**Evidence Grading:** Limited Evidence

References: McCool, 2004; Leighton, 2002; Lieberman, 2002

### Epidural

**Pros**
- Provides effective pain relief

**Cons**
- Limited mobility
- Increase 2nd stage, instrumental delivery, maternal fever, maternal hypotension, posterior position
- Decreased NSVD

**Evidence Grading:** Sufficient

**Hypnotherapy**

**Pros**
- Mother directed
- Incorporates other pain relief methods
- Lifeskill

**Cons**
- Must be learned and practiced
- Occasional lack of support in birth facility

Evidence Grading: Sufficient

**References:**

**TENS**

**Pros**
- Perceived pain reduction
- Patient satisfaction

**Cons**
- Requires equipment

Evidence Grading: Insufficient

**References:**

**Birth Setting**

**Alternative vs Traditional**

**Pros**
- Less pain medication used
- Increases maternal relaxation
- Increased breastfeeding rates
- Possible in hospital setting to do some modification

**Cons**
- Often dictated by insurance
- Not always available with higher risk

Evidence Grading: Limited Evidence

**References:** Barrett. 2010
### Nitrous Oxide

<table>
<thead>
<tr>
<th><strong>Pros</strong></th>
<th><strong>Cons</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal effect on baby</td>
<td>Requires equipment not always available</td>
</tr>
<tr>
<td>Commonly used in other countries</td>
<td>Takes the “edge off” but doesn’t eliminate pain</td>
</tr>
<tr>
<td>Less expensive than epidural medication</td>
<td>Limits ability to move</td>
</tr>
<tr>
<td>Allows personal control</td>
<td>Some maternal side effects</td>
</tr>
</tbody>
</table>

- **Evidence Grading:** Limited Evidence


### Excerpts

I was pleasantly surprised to get this email back about the algorithm and coping. It was an excellent article and exactly what I have been trying to explain to our pain management council.

I would like to extend a tremendous amount of awe and admiration to you and your team for the development of the much needed “Coping Algorithm”

You just tapped a very sore spot for me! This has been my pet peeve for years. How does anyone expect the pain scale to work in Labor/Delivery?

I’ve believed for many years that asking a laboring pt what her pain number is frequently hinders her coping skills

Everyone involved in this process deserves a “Nobel prize”!

I have frequently felt frustrated that the tools we had available for assessing pain in laboring women didn’t work very well. What a great tool you have come up with!

I would like to present this article and coping algorithm to my staff, colleagues, and director. Rating the laboring patients pain on the scale of 0-10 has been frustrating and often ineffective for my patients and staff in this specialty field of nursing.

### Advantages

- Allows for specialized assessment and reassessment of the laboring women as a specialized population.
- Care measures are Evidence-Based.
- Teaching tool for new staff.
- Allows women to achieve goals of certain birthing plans while adhering to hospital criteria for documentation.