Coping With Labor Algorithm: An Innovative Approach to Labor Pain

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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 articulate how the CWLA can support Vaginal Birth and Reduce Primary Cesareans.
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
- CMQCC

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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

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Uterine Pain Pathway

◊ **Sensory Pain**

◊ First stage

◊ Late first stage and into the second stage

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Two Divergent Models

Pharmacologic Model

Non-Pharmacologic Model

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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 physician’s care......Pain management should be offered.”

• The American College of Obstetricians and Gynecologists 2006 Compendium.
• Practice Bulletin Number 36, July 2002.
“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/laborbirth/relaxationtechniques.htm
http://www.collegeofmidwives.org/temporary02/Photographs_%20NormBirth_Dec02.htm

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The Aztec Model

Huichol Indians are descendants of the Aztecs, and live in the mountains of North Central Mexico. During traditional childbirth, the father sits above his labouring wife on the roof of their hut. Ropes are tied around his testicles and his wife holds onto the other ends. Each time she feels a painful contraction, she tugs on the ropes so that her husband will share some of the pain of their child’s entrance into the world.
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
“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.

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.

We all 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
“Here is Edward 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)
A combination Total Quality Management (TQM) process was utilized for this project.

W. Edwards Deming’s PDCA cycle with a FOCUS framework.
Theoretical Framework

FOCUS
Find a process to improve,
Organize a team that knows the process,
Clarify current knowledge of the process,
Understand causes of process variation,
Select the process improvement

PDCA
Plan the improvement
Do the improvement
Check the results
Act to maintain gains.
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 the current knowledge – perform a literature review.

Understand causes of process variation – all team members had over 10 years of experience that added value to understanding of the process.

Select the process improvement – find an acceptable alternative to use of the 0-10 NRS in documenting pain for laboring women.
Figure 2: Deming's PDCA cycle.

Plan:
- Initial design of the Coping Algorithm ©.

Do:
- Model implementation and performance measure for the Coping Algorithm ©.

Check:
- Assess the changes implemented and report the results.

Act:
- Discuss changes needed to improve the Coping Algorithm ©.

Process begins again as changes move through the next cycle.
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
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
### Pain Assessment

#### Patient Response
- Coping
- Not Coping
- No complaints of pain
- Full relief
- Some relief
- No relief
- Other

#### Type
- Labor
- Aching
- Burning
- Crampy
- Crushing
- Dull
- Gnawing
- Pressure
- Sharp
- Throbbing
- Tight
- Other
Pain Assessment
Pain Location
Non Pharmacologic Interventions
Pharmacologic Interventions

- Water injections by Provider
- Counter Pressure
- Movement/amb/pos change
- Birth Ball
- Focus Points
- Rhythmic Breathing
- Change Environment
- Emotional/PsySoc Awareness

**Pharmacologic Interventions**
- IV Pain Medication
- Epidural
- Pudendal
- Anes Notified
- Consult Provider re status

**Sedation level required for IV Narcotics or Epidural**
- 0 = none/alert
- 1 = mild/easily aroused
- 2 = moderate/difficult to arouse
- 3 = severe/unresponsive
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)
**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 limiting it to 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 real.”

Reference: theunnecesarean.com
Retrieved 2/22/2011
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>Documentation</th>
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<tr>
<td>Presence</td>
<td>Intervention</td>
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<tr>
<td>Assessment</td>
<td>Evaluation</td>
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<tr>
<td>Evaluation</td>
<td>Confusion</td>
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<tr>
<td>Nurse</td>
<td>Culture</td>
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<tr>
<td>Annoying</td>
<td>Education</td>
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<tr>
<td>Perception</td>
<td>Simplification</td>
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<tr>
<td>Suffering</td>
<td>Intuitive</td>
</tr>
<tr>
<td>Comfort</td>
<td>Easier</td>
</tr>
<tr>
<td>Preference</td>
<td>Perception</td>
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<tr>
<td>Cues</td>
<td>Satisfaction</td>
</tr>
<tr>
<td>Caring</td>
<td>Control</td>
</tr>
<tr>
<td>Joyous</td>
<td>Woman</td>
</tr>
<tr>
<td>Support</td>
<td>Culture</td>
</tr>
<tr>
<td>Annoying</td>
<td>Quality</td>
</tr>
<tr>
<td>Scales</td>
<td>Improvement</td>
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<tr>
<td>Surge</td>
<td>Understanding</td>
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<tr>
<td>Suffering</td>
<td>Achievement</td>
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<tr>
<td>Control</td>
<td>Validation</td>
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<tr>
<td>Common Sense</td>
<td>Coping</td>
</tr>
</tbody>
</table>

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Secondary Codes

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

♦ COPING
♦ PROCESS
♦ COMMUNICATION
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

- Community Hospital - 17 bed LDRP, 1000 births /year
  - Training received with a poster board
  - 31% response rate. N= 10

- 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)
Baylor University: Louise Herrington School of Nursing - Graduate Project

- Esther Fairchild, RN, WHNP – BC, CNM, DNP
  - Implementing Roberts’s Coping With Labor Algorithm: A Quality Improvement Project
- Used Demings PDCA and Stakeholder Theory
- 18 member RN task force – pre-implementation survey and education prior to this team piloting
  - Created a + influence for use system wide
- Voice over PP for training
- All RN staff (n = 80) used for 4 weeks
Results
Baylor Grad Project

Survey N = 25

1. Is Coping / Not coping algorithm beneficial to the patient?
   ♦ 96% (n = 24) yes

2. Does it provide for a better assessment than the NRS scale?
   ♦ 92% (n = 23) yes

3. Do you feel the new Coping Algorithm© is an improvement in pain assessment?
   ♦ 84% (n = 21) yes
A New Tool

PLAN

1. Identify key administrators who can grant permission to implement the Coping With Labor Algorithm as the Labor and Delivery "pain" assessment tool. (Medical director, nurse manager, nursing administration)

2. Form a team and identify stakeholders (Don't forget IT and the EMR folks)

3. Key decision points:
   - Policy revision
   - Practice change
   - Culture change
   - Charting

4. Identify education strategies (Consider trainings at staff meeting, poster boards, required readings, online trainings etc)

5. Identify project timeline

6. Audit process improvement. Assess pre and post (Consider staff and/or patient satisfaction)

DO

7. Try out the improvement process with a small pilot group

8. Study the results.

9. Make modifications as needed.

ACT

10. Roll out modifications to larger pilot group - and continue this cycle until no further modifications are needed.

11. Monitor for continued improvement.

STUDY

How to initiate the Coping With Labor Algorithm at your institution

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University of Utah College of Nursing
This is what it’s all about!

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Coping with Labor Algorithm

V2

© Clues you might see if woman is NOT coping (May be seen in transition)

- States she is not coping
- Crying (May see with self-hypnosis)
- Sweaty
- Tremulous voice
- Thrashing, wincing, writhing
- Inability to focus or concentrate
- Clawing, biting
- Panicked activity during contractions
- Tense

Observe for cues on admission and throughout labor. Assessment per protocol:

Ask: “How are you coping with your labor?”
- Every shift
- PRN
- At signs of change.

Physiologic. Natural process of labor

Patient desires pharmacological intervention

Interventions as to what would give best relief and is indicated (what does the patient desire):
- IV pain med
- Epidural
- Nitrous Oxide

Patient desires non-pharmacological intervention

- Tub/bath/shower
- Hot pack/cold pack
- Water injections
- Massage/pressure
- Movement/ambulation/position changes
- Birth ball
- Focus points
- Breathing techniques
- Acupuncture
- Self-Hypnosis
- TENS

Physical Environment

Appropriate changes to environment PRN [S]

- Mood
- Lighting
- Music
- Fragrance
- TV/Movie
- Temperature
- Whispering voices

Emotional/ Psychosocial

- One-on-One Support
- Doula
- Midwifery Care being "With Woman"

The nurse should consider:
- Patient's life
- Sexual abuse
- Fear
- Stress
- Interpersonal dynamics

Reassessment

Offer social work consult

Legend

[S] = Sufficient Evidence
[L] = Limited Evidence
[I] = Insufficient Evidence
[*] = No Evidence & No Harm

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Preview of New Data

- 300 Requests to use of the Coping with Labor Algorithm
- Survey sent to 265 participants.
- 90 returned emails
- 175 Successfully sent
- 44 returned surveys (3 Incomplete)

- Yes 56% (23)
- No 44% (18)
Successful Implementation

- **Educational Strategies used:**
  - Most Successful: Training at staff meetings
  - 2nd: Training at staff meetings
  - 3rd: Tie between Training at staff meetings; Poster boards and PP presentation
  - 4th: Required readings
Facilitators
Barriers Encountered

- Biggest: Electronic record documentation
- 2\textsuperscript{nd} biggest: Documentation concerns: how to chart in a new way
- 3\textsuperscript{rd} biggest: Tie btw Org. climate, Org capacity for change, Unit capacity for change, Lack of management support, and Lack of nursing support
- 4\textsuperscript{th} biggest: Tie btw Org. climate, L&D Unit culture, Unit capacity for change, other
Part Two: Looking at the Evidence

www.soulprintsphotography.com/.../ Retrieved 4/25/09
## Grading the Evidence

<table>
<thead>
<tr>
<th>Grade</th>
<th>Definition</th>
<th>Suggestions for Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>The USPSTF recommends the service. There is high certainty that the net benefit is substantial.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>B</td>
<td>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 moderate to substantial.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>C</td>
<td>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.</td>
<td>Offer or provide this service only if other considerations support the offering or providing the service in an individual patient.</td>
</tr>
<tr>
<td>D</td>
<td>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.</td>
<td>Discourage the use of this service.</td>
</tr>
<tr>
<td>I</td>
<td><strong>Statement</strong> The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.</td>
<td>Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.</td>
</tr>
</tbody>
</table>

[http://ahrq.hhs.gov/clinic/uspstf/grades.htm#post](http://ahrq.hhs.gov/clinic/uspstf/grades.htm#post)
<table>
<thead>
<tr>
<th>Care Measure</th>
<th>Algorithm Arm</th>
<th>Evidence for Use</th>
<th>Study or Review (Year)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-on One Support</td>
<td>Emotional /Psychosocial</td>
<td>Sufficient</td>
<td>Simkin (2004)(^9)</td>
<td>Most effective with lay person or trained doula. Greater benefit if began in early labor versus active labor.</td>
</tr>
<tr>
<td></td>
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<td>Albers (2007)(^7)(^24)</td>
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<td>NICE (2007)(^7)(^25)</td>
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<tr>
<td>Tub / Bath / Shower</td>
<td>Physiologic / Natural Process of Labor</td>
<td>Sufficient</td>
<td>Hodnett (2007)(^7)(^23)</td>
<td>In first stage of labor reduces a woman's perception of pain and use of anesthesia. Timing of entry, duration and water temperature are important.</td>
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<tr>
<td>Hydrotherapy</td>
<td>Non-pharmacologic</td>
<td></td>
<td>Cluett (2002)(^7)(^26)</td>
<td></td>
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<tr>
<td>Intradermal Water Injections</td>
<td>Physiologic / Natural Process of Labor</td>
<td>Sufficient</td>
<td>Huntley (2004)(^7)(^27)</td>
<td>Reduces low back pain severity. Provides relief for up to 2 hours. Stinging at the injection sites.</td>
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<tr>
<td></td>
<td>Non-pharmacologic</td>
<td></td>
<td>Mårtensson (2008)(^7)(^28)</td>
<td></td>
</tr>
<tr>
<td>Movement / Ambulation / Position Change</td>
<td>Physiologic / Natural Process of Labor</td>
<td>Sufficient</td>
<td>Albers (2007)(^7)(^24)</td>
<td>May shorten labors and ↓ pain with lateral or upright position. Possible ↑ in blood loss with upright posture.</td>
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<tr>
<td></td>
<td>Non-pharmacologic</td>
<td></td>
<td>Simkin (2003)(^7)(^29)</td>
<td>Encourage position of comfort.</td>
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<td></td>
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<td></td>
<td>Gupta (2004)(^7)(^30)</td>
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<tr>
<td>Massage / Pressure</td>
<td>Physiologic / Natural Process of Labor</td>
<td>Insufficient evidence</td>
<td>Simkin (2004)(^7)(^9)</td>
<td>Massage can reduce leg and back pain during pregnancy. No evidence of harm. Potential subjective benefit. Based on the Neuromatrix Theory of Pain should be considered as viable alternative therapies.</td>
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<tr>
<td>(Acupressure)</td>
<td>Non-pharmacologic</td>
<td></td>
<td>NICE (2007)(^7)(^25)</td>
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<td></td>
<td></td>
<td></td>
<td>Huntley (2004)(^7)(^27)</td>
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<td></td>
<td>Field (2008)(^7)(^31)</td>
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<td>Smith (2006)(^7)(^32)</td>
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<td></td>
<td>Trout (2004)(^7)(^33)</td>
<td>Note: Although Acupuncture is not in the algorithm lower levels of pain have been reported with its use.</td>
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<td>Tournaire (2007)(^7)(^34)</td>
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<tr>
<td>Care Measure</td>
<td>Algorithm Arm</td>
<td>Evidence for Use</td>
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<tr>
<td>Rhythmic Breathing</td>
<td>Physiologic / Natural</td>
<td>Insufficient evidence</td>
<td>Simkin (2004) ^9</td>
<td>No indication of harm and may assist a woman with her ability to cope in labor.</td>
</tr>
<tr>
<td></td>
<td>Non-pharmacologic</td>
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<td>Huntley (2004) ^27</td>
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<td>Smith (2006) ^32</td>
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<td>Smith (2006) ^32</td>
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<td>Tournaire (2007) ^34</td>
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<td>McCool (2004) ^36</td>
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<td>Leighton (2002) ^37</td>
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<td></td>
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<td></td>
<td>Lieberman (2002) ^38</td>
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</tbody>
</table>
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;
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
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, 20003; 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
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
# Acupuncture

<table>
<thead>
<tr>
<th><strong>Pros</strong></th>
<th><strong>Cons</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower pain intensity</td>
<td>Not always available</td>
</tr>
<tr>
<td>Increased relaxation</td>
<td></td>
</tr>
</tbody>
</table>

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

Evidence Grading: Insufficient

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

Evidence Grading: Insufficient

References: Simkin, 2004
### Audio Analgesics

<table>
<thead>
<tr>
<th><strong>Pros</strong></th>
<th><strong>Cons</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived reduction of pain</td>
<td>Availability of player</td>
</tr>
<tr>
<td>Easy to provide</td>
<td></td>
</tr>
<tr>
<td>Relaxes mom</td>
<td></td>
</tr>
<tr>
<td>No indication of harm</td>
<td></td>
</tr>
</tbody>
</table>

**Evidence Grading:** Insufficient

**References:** Simkin, 2004; NICE, 2007; Smith, 2006; Tournaire, 2007
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
  - Expensive
  - Harder to find

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 2\textsuperscript{nd} 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

<table>
<thead>
<tr>
<th><strong>Pros</strong></th>
<th><strong>Cons</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Less pain medication used</td>
<td>• Often dictated by insurance</td>
</tr>
<tr>
<td>• Increases maternal relaxation</td>
<td>• Not always available with higher risk</td>
</tr>
<tr>
<td>• Increased breastfeeding rates</td>
<td></td>
</tr>
<tr>
<td>• Possible in hospital setting to do some modification</td>
<td></td>
</tr>
</tbody>
</table>

**Evidence Grading:** Limited Evidence

References: Barrett. 2010
Nitrous Oxide

- **Pros**
  - Minimal effect on baby
  - Commonly used in other countries
  - Less expensive than epidural medication
  - Allows personal control

- **Cons**
  - Requires equipment not always available
  - Takes the “edge off” but doesn’t eliminate pain
  - Limits ability to move
  - Some maternal side effects
    - Nausea
    - Dizziness
    - Grogginess

Evidence Grading: Limited Evidence

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.
Page 91 of the CMQCC

ACNM Healthy Birth Initiative – Reducing Primary Cesareans – Promoting Comfort in Labor Bundle

Questions?

www.soulprintsphotography.com/.../ Retrieved 4/15/09