Step 7: Educates Staff in Nondrug Methods of Pain Relief and Does Not Promote Use of Analgesic, Anesthetic Drugs

The Coalition for Improving Maternity Services:

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ABSTRACT

Step 7 of the Ten Steps of Mother-Friendly Care insures that staff are knowledgeable about nondrug methods of pain relief and that analgesic or anesthetic drugs are not promoted unless required to correct a complication. The rationales for compliance and systematic reviews are presented on massage, hypnosis, hydrotherapy, and the use of opioids, regional analgesia, and anesthesia.

Step 7: Educates staff in nondrug methods of pain relief and does not promote the use of analgesic or anesthetic drugs not specifically required to correct a complication.

Nondrug Pain Relief

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<tr>
<th>Rationale for Compliance</th>
<th>Evidence Grade</th>
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<td>In contrast to medication, there is minimal to no risk of adverse side effects from nondrug methods of pain relief. Massage, hypnosis, and hydrotherapy have been shown to provide significant benefits. In addition, the implementation of comfort measures, cognitive strategies, and other self-efficacy techniques can contribute to a woman's sense of mastery over the birth experience and, therefore, her satisfaction with herself and that experience (Lowo, 2002). Nondrug pain relief methods can be used alone or in conjunction with medicinal modes of pain relief and, as such, should be available to all laboring women in all settings.</td>
<td>NEH</td>
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For more information on the Coalition for Improving Maternity Services (CIMS) and copies of the Mother-Friendly Childbirth Initiative and accompanying Ten Steps of Mother-Friendly Care, log on to the organization’s Web site (www.motherfriendly.org) or call CIMS toll-free at 888-282-2467.

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Nondrug Pain Relief

Rationale for Compliance

When compared with similar populations receiving comparable clinical care, massage and encouraging touch had the following benefits:

- reduced maternal pain (Huntley, 2004; Simkin, 2002).
- reduced maternal stress and anxiety (Huntley, 2004; Simkin, 2002).
- women stated that the touch or massage helped them cope with labor, ease their pain, and feel comforted, reassured, accepted, and encouraged (Huntley, 2004; Simkin, 2001).

When compared with similar populations receiving comparable clinical care, hypnosis during labor had the following benefits:

- reduced need for analgesia (Cyna, 2004; Huntley, 2004; Smith, 2003).
- pain less severe than those not using hypnosis (Cyna, 2004; Huntley, 2004).
- greater maternal satisfaction with pain relief (Smith, 2003).
- shorter duration of labor (Cyna, 2004).
- reduced need for augmentation of labor with oxytocin (Cyna, 2004; Smith, 2003).
- increased incidence of spontaneous births (Cyna, 2004; Smith 2003).

Use of hypnosis had no reported adverse effects in any study.

When compared with similar populations, women who used hydrotherapy (warm-water immersion in a tub) had the following results:

- reduced maternal blood pressure (Cluett, 2004, Cochrane).
- reported less anxiety during early labor (Benfield, 2001).
- reported less pain during the first stage of labor (Benfield, 2001; Cluett, 2004, Cochrane; Simkin, 2002).

Quality: A
Quantity: B
Consistency: NA**

Quality: A
Quantity: C
Consistency: NA*

Quality: A
Quantity: A
Consistency: A


INCLUDED STUDIES


EXCLUDED STUDIES

Andersen, B., Gyghagen, M., & Nielsen, T. (1996). Warm bath during labour. Effects on labour duration and...


<table>
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<td>Opioids may cause unpleasant side effects such as drowsiness, nausea, and vomiting [Bricker, 2002; Tsui, 2004].</td>
<td>Quality: B Quantity: A Consistency: B</td>
</tr>
<tr>
<td>Newborns of women who use opioids during labor [Bricker, 2002]:</td>
<td>Quality: A Quantity: A Consistency: A (SR with multiple studies)</td>
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<td>- can experience respiratory depression in the first hours following birth.</td>
<td></td>
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<tr>
<td>- can be less alert in the first hours following birth.</td>
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Step 7: Does not promote the use of analgesic or anesthetic drugs not specifically required to correct a complication

**Opioids**

The opioids commonly used in labor are one of several synthetic derivatives of morphine or morphine itself injected either intramuscularly or intravenously. Derivatives include Demerol/Pethidine/meperidine; Stadol/butorphanol; Nubain/nalbuphine; and Dilauded/hydromorphone.
INCLUDED STUDIES

EXCLUDED STUDIES
None

Step 7: Does not promote the use of analgesic or anesthetic drugs not specifically required to correct a complication: Regional anesthesia/analgesia

**Regional Anesthesia/Analgesia**

Regional anesthesia/analgesia for labor includes the epidural and the combined spinal/epidural.

The research that examines regional anesthesia/analgesia for labor is confounded by the following factors:

- Few studies compare groups using various pain medications with groups that use none.
- Almost all women in published comparative studies have been exposed to drugs, procedures, and restrictions that could also adversely affect the mother, baby, or labor pattern.
- Large percentages of women in many of the randomized controlled trials who are assigned to the “no epidural” group ultimately have epidurals. This reduces the likelihood of detecting differences between groups.
- Background cesarean rates in several randomized controlled trials are much lower than found in reports of conventional obstetric management. This means that factors influencing outcomes, such as timing of epidural initiation and policies and philosophies regarding management of women with epidurals, are not taken into account. Consequently, trial results cannot be generalized to conventionally managed populations.
- Background cesarean rates may be so high that the use or nonuse of epidurals can have little influence.

**Regional Anesthesia/Analgesia**

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| Compared with epidural anesthesia without the addition of intrathecal opioids, babies in utero of women receiving a combined spinal/epidural (with intrathecal opioids) may be more likely to experience bradycardia (Lieberman, 2002; Mardirosff, 2002). | Quality: B  
Quantity: A  
Consistency: B |

A = good, B = fair, C = weak, SR = systematic review  
Quality = aggregate of quality ratings for individual studies  
Quantity = magnitude of effect, numbers of studies, and sample size or power  
Consistency = the extent to which similar findings are reported using similar and different study designs

(Continued)
Compared with epidural anesthesia without the addition of opioids, women receiving a combined spinal/epidural (with opioids):

- can experience severe itching (Mayberry, 2002).
- may be more sedated (Mayberry, 2002).

Compared with women randomly assigned to using no pain medication or exclusively opioid pain medication during labor, women randomly assigned to having epidurals:

- may experience a longer first-stage labor (Alexander, 2002; Anim-Somuah, 2006; Lieberman, 2002; Sharma, 2004).
- can experience a longer second-stage labor (Alexander, 2002; Anim-Somuah, 2006; Feinstein, 2002; Lieberman, 2002; Liu, 2004; Sharma, 2004).
- have increased likelihood of malposition of the fetal head (Anim-Somuah, 2006; Lieberman, 2002).
- have increased likelihood of oxytocin use (Alexander, 2002; Anim-Somuah, 2006; Liu, 2004; Sharma, 2004).
- have increased likelihood of hypotension (Anim-Somuah, 2006).
- have increased likelihood of instrumental vaginal delivery (Alexander, 2002; Anim-Somuah, 2006; Lieberman, 2002; Liu, 2004; Sharma, 2004).
- have increased likelihood of third- and fourth-degree tears associated with the increased incidence of instrumental vaginal deliveries (Lieberman, 2002).
- may have increased likelihood of cesarean section for fetal distress (Anim-Somuah, 2006; Liu, 2004).
- may have increased likelihood of having a cesarean for dystocia (Anim-Somuah, 2006; Feinstein, 2002; Liu, 2004).
- have increased likelihood of fever during labor (Anim-Somuah, 2006; Lieberman, 2002).\(^a\)

The newborns of women who had a fever in labor may be more likely to experience seizures in the neonatal period (Lieberman, 2002).

Compared with babies in utero of women not using pain medication, the fetuses of women having epidurals may have increased incidence of transient heart-rate abnormalities (Lieberman, 2002).\(^a\)
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Regional Anesthesia/Analgesia

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| Compared with newborns of women who did not receive intrathecal narcotics, the newborns of women who did receive intrathecal narcotics may experience more difficulty breastfeeding during the first hours/days after birth, in direct proportion to the amount of intrathecal narcotic the mother received (Beilin, 2005; Jordan, 2005; Lieberman, 2002; Radzyminski, 2003, 2005). | Quality: B
Quantity: C
Consistency: B |
| Compared with the newborns of women not using pain medication, the newborns of women having epidurals have increased likelihood of jaundice (Lieberman, 2002). | Quality: B
Quantity: B
Consistency: B |
| Epidural placement before 4 cm dilation may increase (Lieberman, 2002):  
- the likelihood of fetal malposition. | Quality: B
Quantity: C
Consistency: C |
|  
- the likelihood of instrumental vaginal delivery. | Quality: B
Quantity: B
Consistency: B |
|  
- the likelihood of cesarean section. | Quality: B
Quantity: A
Consistency: C |
| Women whose epidurals are discontinued late in labor (rather than after birth) do not demonstrate a decreased incidence of the adverse delivery outcomes associated with epidurals (Lieberman, 2002; Torvaldsen, 2004). | Quality: B
Quantity: B
Consistency: NA* |
| Women having epidurals may be more likely to experience hemorrhage immediately after birth. (Lieberman, 2002). | Quality: B
Quantity: B
Consistency: B |
| Women having epidurals may be more likely to experience difficulty urinating in the first few hours after birth (Anim-Somuah, 2006; Lieberman, 2002). | Quality: B
Quantity: B
Consistency: B |

A = good, B = fair, C = weak

Quality = aggregate of quality ratings for individual studies
Quantity = magnitude of effect, numbers of studies, and sample size or power
Consistency = the extent to which similar findings are reported using similar and different study designs

*only one study

Because newborns are especially vulnerable to infection, babies born to mothers who run fevers in labor are likely to be separated from their mothers for observation in the nursery, undergo septic workups, and possibly have prophylactic IV antibiotic therapy until cultures rule out infection. This subjects the baby to painful, unpleasant procedures; interferes with bonding and establishing breastfeeding; and can greatly increase parental anxiety.

Wong (2005), an excluded study, has been cited as evidence that early epidural placement, as compared with later placement, does not affect cesarean rates. It is not included as evidence for this rationale because this trial did not actually compare early to late epidurals. Women in the “early epidural” arm were given spinals/epidurals. Most did not receive the epidural component until 4 cm dilation or later, the same timing as the “late epidural” group. Spinal opioid, in contrast to epidural anesthetic, has not been shown to affect labor progress. Klein (2006) observes that neither previous nor current Cochrane reviewers of epidural versus nonepidural analgesia evaluated the effect of late versus early epidural initiation. If they had, Klein notes they would have found that early epidural placement more than doubled the likelihood of cesarean delivery OR 2.59 (95% CI 1.29–5.23).

REFERENCE

INCLUDED STUDIES


EXCLUDED STUDIES


This "review" used articles relatively easy to find in Medline and CINAHL (but no other database), because the authors wanted to see what kind of data busy clinicians might be likely to encounter. There are better-quality data in Anim-Somuah (2006).


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