

Factors Associated With Epidural Anesthesia Use During Labour

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Specific Aims:

1. Review current literature to ascertain the variables influencing a woman's likelihood of receiving epidural anesthesia for vaginal deliveries in the US today.
2. Propose ways to improve the delivery of care, so that all women in labour have the same opportunities to make enlightened choices -- regardless of their race, insurance status, or caregiver.

Background:

Epidural anesthesia is a central nerve block technique achieved by injection of a local anesthetic in the spine, close to the nerves that transmit pain. It has become the most popular form of pain relief in labour, largely due to its effectiveness as an analgesic compared to other methods. Before its introduction, many women received general anesthesia for their deliveries, and thus missed out on the experience of giving birth altogether.

MCH Concern:

Currently in the US some 60% of vaginal births occur with epidural anesthesia in place. Although its association with increased Caesarean rate is controversial, its use has been shown to lengthen labours and increase the risk of forceps- or vacuum aspirator-assisted deliveries {Anim-Somuah, 2005}. Common side effects include a drop in maternal blood pressure (which can require the administration of drugs to raise it again and/or oxygen) and maternal fever (which can lead to the newborn receiving antibiotics, just in case the fever is due to infection and not the anesthesia) {Lieberman, 1997}. Some women state that they are more able to concentrate on the birth of their baby when they are freed from thinking about the pain of labour, but others say they feel a loss of power, control, or active participation in their childbirth experience when epidural anesthesia is in use.

Approach:

A PubMed literature search was done in order to ascertain the known variables associated with a woman's likelihood of receiving epidural anesthesia.

Findings:

Variable	Effect on Epidural Use	Study
Type of insurance	Patients with private medical insurance received about twice the epidurals than did those with HMO, Medicaid, or out-of-pocket	Obst, 2001
Level of hospital	Patients of secondary or tertiary level perinatal hospitals had a 2-fold greater likelihood of epidural than those in a primary level one	Altman, 2006
Health-care provider	Epidural rates of midwifery patients were half that of physicians' patients	Harvey, 1996
Induction of labour	Women having elective inductions had a higher use of epidural anesthesia	Glantz, 2005
Parity	Women having their first baby are more likely to get an epidural	Sheiner, 2000
Childbirth classes	Graduates of prenatal classes had higher epidural use, indicating they had learned more about pain-relief options than coping mechanisms	Fabian, 2005
Religion	Secular patients were more likely to request anesthesia than were religious ones	Sheiner, 1999
Race	Black women and Hispanic women had odds ratios of 0.78 and 0.85 for epidural use when compared to whites	Glance, 2007
Urban vs. rural	39% of rural women received epidurals, compared to 62% of urban parturients	Rust, 2004
Doula present	Only 54% of parturients assisted by doulas used epidurals, compared with 66% of controls	Gordon, 1999
Perceived pain	Women's expression of pain and their caregivers' perception of it was positively associated with epidural use	Sheiner, 2000



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Implications:

Medicaid and HMO patients should be offered the same choices as those with private insurance. Providers should take the time to educate their patients about their options for labour and delivery, including the risks and benefits of their choices. More rigorous research should be carried out on the effect of professional birth attendants on the duration and intensity of labour. Regardless of their race or ethnic background, all parturients should receive the same quality of care.

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