Complete Summary

GUIDELINE TITLE

Practice guidelines for obstetric anesthesia: an updated report by the American Society of Anesthesiologists Task Force on Obstetric Anesthesia.

BIBLIOGRAPHIC SOURCE(S)

American Society of Anesthesiologists Task Force on Obstetric Anesthesia. Practice guidelines for obstetric anesthesia: an updated report by the American Society of Anesthesiologists Task Force on Obstetric Anesthesia. Anesthesiology 2007 Apr;106(4):843-63. PubMed

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American Society of Anesthesiologists. Practice guidelines for obstetrical anesthesia: a report by the American Society of Anesthesiologists Task Force on Obstetrical Anesthesia. Anesthesiology 1999 Feb;90(2):600-11.

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

Intrapartum and postpartum pain

Note: These guidelines do not address postpartum analgesia for vaginal delivery, analgesia after tubal ligation, or postoperative analgesia after general anesthesia (GA) for cesarean delivery.

GUIDELINE CATEGORY

Evaluation
Management

CLINICAL SPECIALTY

Anesthesiology
Obstetrics and Gynecology

INTENDED USERS

Patients
Physicians

GUIDELINE OBJECTIVE(S)

To enhance the quality of anesthesia care for obstetric patients, improve patient safety by reducing the incidence and severity of anesthesia-related complications, and increase patient satisfaction

TARGET POPULATION

Intrapartum and postpartum patients with uncomplicated pregnancies or with common obstetric problems

Note: These guidelines do not apply to patients undergoing surgery during pregnancy, gynecologic patients, or parturients with chronic medical disease (e.g., severe cardiac, renal or neurologic disease).

INTERVENTIONS AND PRACTICES CONSIDERED

1. Perianesthetic evaluation (history and physical examination, communication system discussed, intrapartum platelet count, blood type and screen or cross-match, perianesthetic recording of fetal heart rate)
2. Aspiration prevention (fasting times for clear liquids and solids for labor and delivery, administration of non-particulate antacids, histamine [H_2] receptor antagonists, and/or metoclopramide for aspiration prophylaxis)
3. Anesthetic care for labor and delivery (neuraxial techniques with or without local anesthetics and/or opioids, continuous infusion epidural, single-injection spinal opioids with or without local anesthetics, pencil-point spinal needles, combined spinal-epidural anesthetics, and patient-controlled epidural analgesia)
4. Removal of retained placenta (anesthetic choices and nitroglycerin for uterine relaxation)
5. Anesthetic choices for cesarean delivery (spinal, epidural, combined spinal-epidural and/or general anesthesia, use of intravenous fluid preloading and ephedrine/phenylephrine as supportive care, and neuraxial opioids for postoperative analgesia)
6. Postpartum tubal ligation and anesthetic options

7. Management of obstetric and anesthetic emergencies (availability of management resources for hemorrhagic emergencies, central hemodynamic monitoring, equipment for airway emergencies, cardiopulmonary resuscitation)

MAJOR OUTCOMES CONSIDERED

- Maternal analgesia
- Maternal, fetal and neonatal anesthetic complications
- Maternal, fetal and neonatal obstetric complications
- Maternal comfort and satisfaction

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases
Searches of Unpublished Data

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Scientific evidence was derived from aggregated research literature, and opinion-based evidence was obtained from surveys, open presentations, and other activities (e.g., Internet posting). For purposes of literature aggregation, potentially relevant clinical studies were identified via electronic and manual searches of the literature. The electronic and manual searches covered a 67-yr period from 1940 through 2006. More than 4,000 citations were initially identified, yielding a total of 2,986 nonoverlapping articles that addressed topics related to the evidence linkages. After review of the articles, 2,549 studies did not provide direct evidence and were subsequently eliminated. A total of 437 articles contained direct linkage-related evidence.

NUMBER OF SOURCE DOCUMENTS

437

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

When sufficient numbers of studies are available for evaluation, the following terms describe the strength of the findings.

- *Support*: Meta-analysis of a sufficient number of randomized controlled trials* indicates a statistically significant relationship ($p < 0.01$) between a clinical intervention and a clinical outcome.
- *Suggest*: Information from case reports and observational studies permits inference of a relationship between an intervention and an outcome. A meta-analytic assessment of this type of qualitative or descriptive information is not conducted.
- *Equivocal*: Either a meta-analysis has not found significant differences among groups or conditions, or there is insufficient quantitative information to conduct a meta-analysis and information collected from case reports and observational studies does not permit inference of a relationship between an intervention and an outcome.

* A prospective nonrandomized controlled trial may be included in a meta-analysis under certain circumstances if specific statistical criteria are met.

The *lack* of scientific evidence in the literature is described by the following terms.

- *Silent*: No identified studies address the specified relationship between an intervention and outcome.
- *Insufficient*: There are too few published studies to investigate a relationship between an intervention and outcome.
- *Inadequate*: The available studies cannot be used to assess the relationship between an intervention and an outcome. These studies either do not meet the criteria for content as defined in the Focus section of these Guidelines, or do not permit a clear causal interpretation of findings due to methodologic concerns.

METHODS USED TO ANALYZE THE EVIDENCE

Meta-Analysis
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The scientific assessment of these Guidelines was based on evidence linkages or statements regarding potential relationships between clinical interventions and outcomes. The interventions were examined to assess their impact on a variety of outcomes related to obstetric anesthesia.

Initially, each pertinent outcome reported in a study was classified as supporting an evidence linkage, refuting a linkage, or equivocal. The results were then summarized to obtain a directional assessment for each evidence linkage before conducting a formal meta-analysis. Literature pertaining to 11 evidence linkages contained enough studies with well-defined experimental designs and statistical information sufficient for meta-analyses. These linkages were (1) nonparticulate antacids versus no antacids, (2) continuous epidural infusion of local anesthetics with or without opioids versus parenteral opioids, (3) induction of epidural analgesia using local anesthetics with opioids versus equal concentrations of epidural local anesthetics without opioids, (4) maintenance of epidural infusion of lower concentrations of local anesthetics with opioids versus higher concentrations of local anesthetics without opioids, (5) Combined spinal–epidural local

anesthetics with opioids versus epidural local anesthetics with opioids, (6) PCEA versus continuous infusion epidurals, (7) general anesthesia versus epidural anesthesia for cesarean delivery, (8) Combined spinal–epidural anesthesia versus epidural anesthesia for cesarean delivery, (9) use of pencil-point spinal needles versus cutting-bevel spinal needles, (10) ephedrine or phenylephrine reduces maternal hypotension during neuraxial anesthesia, and (11) neuraxial opioids versus parenteral opioids for postoperative analgesia after neuraxial anesthesia for cesarean delivery.

General variance-based effect-size estimates or combined probability tests were obtained for continuous outcome measures, and Mantel-Haenszel odds ratios were obtained for dichotomous outcome measures. Two combined probability tests were used as follows: (1) the Fisher combined test, producing chi-square values based on logarithmic transformations of the reported P values from the independent studies, and (2) the Stouffer combined test, providing weighted representation of the studies by weighting each of the standard normal deviates by the size of the sample. An odds ratio procedure based on the Mantel-Haenszel method for combining study results using 2 X 2 tables was used with outcome frequency information. An acceptable significance level was set at $P < 0.01$ (one-tailed). Tests for heterogeneity of the independent studies were conducted to assure consistency among the study results. DerSimonian-Laird random-effects odds ratios were obtained when significant heterogeneity was found ($P < 0.01$). To control for potential publishing bias, a "fail-safe n" value was calculated. No search for unpublished studies was conducted, and no reliability tests for locating research results were done.

Meta-analytic results are reported in table 4 of the original guideline document. To be accepted as significant findings, Mantel-Haenszel odds ratios must agree with combined test results whenever both types of data are assessed. In the absence of Mantel-Haenszel odds ratios, findings from both the Fisher and weighted Stouffer combined tests must agree with each other to be acceptable as significant.

Interobserver agreement among Task Force members and two methodologists was established by interrater reliability testing. Agreement levels using a kappa statistic for two-rater agreement pairs were as follows: (1) type of study design, kappa = 0.83–0.94; (2) type of analysis, kappa = 0.71–0.93; (3) evidence linkage assignment, kappa = 0.87–1.00; and (4) literature inclusion for database, kappa = 0.74–1.00. Three-rater chance-corrected agreement values were (1) study design, Sav = 0.884, Var (Sav) = 0.004; (2) type of analysis, Sav = 0.805, Var (Sav) = 0.009; (3) linkage assignment, Sav = 0.911, Var (Sav) = 0.002; and (4) literature database inclusion, Sav = 0.660, Var (Sav) = 0.024. These values represent moderate to high levels of agreement.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The American Society of Anesthesiologists (ASA) appointed a Task Force of 11 members to (1) review the published evidence, (2) obtain the opinion of a panel of consultants including anesthesiologists and nonanesthesiologist physicians concerned with obstetric anesthesia and analgesia, and (3) obtain opinions from practitioners likely to be affected by the Guidelines. The Task Force included anesthesiologists in both private and academic practices from various geographic areas of the United States and two consulting methodologists from the American Society of Anesthesiologists Committee on Standards and Practice Parameters.

The Task Force developed the Guidelines by means of a seven-step process. First, they reached consensus on the criteria for evidence. Second, original published research studies from peer-reviewed journals relevant to obstetric anesthesia were reviewed. Third, the panel of expert consultants was asked to (1) participate in opinion surveys on the effectiveness of various peripartum management strategies and (2) review and comment on a draft of the Guidelines developed by the Task Force. Fourth, opinions about the Guideline recommendations were solicited from active members of the American Society of Anesthesiologists who provide obstetric anesthesia. Fifth, the Task Force held open forums at two major national meetings (International Anesthesia Research Society, 80th Clinical and Scientific Congress and Society of Obstetric Anesthesia and Perinatology 38th Annual Meeting) to solicit input on its draft recommendations. Sixth, the consultants were surveyed to assess their opinions on the feasibility of implementing the Guidelines. Seventh, all available information was used to build consensus within the Task Force to finalize the Guidelines (appendix 1 of the original guideline document).

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Consensus was obtained from multiple sources, including (1) survey opinion from consultants who were selected based on their knowledge or expertise in obstetric anesthesia or maternal and fetal medicine, (2) survey opinions solicited from active members of the American Society of Anesthesiologists (ASA), (3) testimony from attendees of publicly held open forums at two national anesthesia meetings, (4) Internet commentary, and (5) Task Force opinion and interpretation. The survey rate of return was 75% (n = 76 of 102) for the consultants, and 2,326 surveys were received from active American Society of Anesthesiologists

members. Results of the surveys are reported in tables 5 and 6 and in the text of the Guidelines.

The guidelines were submitted for publication October 31, 2006, accepted for publication October 31, 2006, and were approved by the House of Delegates on October 18, 2006.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

I. **Perianesthetic Evaluation**

- Conduct a focused history and physical examination before providing anesthesia care
  - Maternal health and anesthetic history
  - Relevant obstetric history
  - Airway and heart and lung examination
  - Baseline blood pressure measurement
  - Back examination when neuraxial anesthesia is planned or placed
- A communication system should be in place to encourage early and ongoing contact between obstetric providers, anesthesiologists, and other members of the multidisciplinary team
- Order or require a platelet count based on a patient's history, physical examination, and clinical signs; a routine intrapartum platelet count is not necessary in the healthy parturient
- Order or require an intrapartum blood type and screen or cross-match based on maternal history, anticipated hemorrhagic complications (e.g., placenta accreta in a patient with placenta previa and previous uterine surgery), and local institutional policies; a routine blood cross-match is not necessary for *healthy and uncomplicated* parturients
- The fetal heart rate should be monitored by a qualified individual before and after administration of neuraxial analgesia for labor; *continuous* electronic recording of the fetal heart rate may not be necessary in every clinical setting and may not be possible during initiation of neuraxial anesthesia

II. **Aspiration Prophylaxis**

- Oral intake of modest amounts of clear liquids may be allowed for uncomplicated laboring patients
- The uncomplicated patient undergoing elective cesarean delivery may have modest amounts of clear liquids up to 2 hours before induction of anesthesia
- The volume of liquid ingested is less important than the presence of particulate matter in the liquid ingested
- Patients with additional risk factors for aspiration (e.g., morbid obesity, diabetes, difficult airway) or patients at increased risk for operative delivery (e.g., nonreassuring fetal heart rate pattern) may have further restrictions of oral intake, determined on a case-by-case basis
- Solid foods should be avoided in laboring patients

- Patients undergoing elective surgery (e.g., scheduled cesarean delivery or postpartum tubal ligation) should undergo a fasting period for solids of 6–8 hours depending on the type of food ingested (e.g., fat content)
- Before surgical procedures (i.e., cesarean delivery, postpartum tubal ligation), practitioners should consider timely administration of nonparticulate antacids, histamine (H_2) receptor antagonists, and/or metoclopramide for aspiration prophylaxis

III. Anesthetic Care for Labor and Delivery

Neuraxial Techniques: Availability of Resources

- When neuraxial techniques that include local anesthetics are chosen, appropriate resources for the treatment of complications (e.g., hypotension, systemic toxicity, high spinal anesthesia) should be available
- If an opioid is added, treatments for related complications (e.g., pruritus, nausea, respiratory depression) should be available
- An intravenous infusion should be established before the initiation of neuraxial analgesia or anesthesia and maintained throughout the duration of the neuraxial analgesic or anesthetic
- Administration of a fixed volume of intravenous fluid is not required before neuraxial analgesia is initiated

Timing of Neuraxial Analgesia and Outcome of Labor

- Neuraxial analgesia should not be withheld on the basis of achieving an arbitrary cervical dilation, and should be offered on an individualized basis when this service is available
- Patients may be reassured that the use of neuraxial analgesia does not increase the incidence of cesarean delivery

Neuraxial Analgesia and Trial of Labor after Previous Cesarean Delivery

- Neuraxial techniques should be offered to patients attempting vaginal birth after previous cesarean delivery
- For these patients, it is also appropriate to consider early placement of a neuraxial catheter that can be used later for labor analgesia or for anesthesia in the event of operative delivery

Early Insertion of Spinal or Epidural Catheter for Complicated Parturients

- Early insertion of a spinal or epidural catheter for obstetric (e.g., twin gestation or preeclampsia) or anesthetic indications (e.g., anticipated difficult airway or obesity) should be considered to reduce the need for general anesthesia if an emergent procedure becomes necessary

    - In these cases, the insertion of a spinal or epidural catheter may precede the onset of labor or a patient's request for labor analgesia

Continuous Infusion Epidural (CIE) Analgesia

- The selected analgesic/anesthetic technique should reflect patient needs and preferences, practitioner preferences or skills, and available resources
- Continuous infusion epidural may be used for effective analgesia for labor and delivery
- When a continuous epidural infusion of local anesthetic is selected, an opioid may be added to reduce the concentration of local anesthetic, improve the quality of analgesia, and minimize motor block
- Adequate analgesia for uncomplicated labor and delivery should be administered with the secondary goal of producing as little motor block as possible by using dilute concentrations of local anesthetics with opioids
- The lowest concentration of local anesthetic infusion that provides adequate maternal analgesia and satisfaction should be administered

Single-injection Spinal Opioids with or without Local Anesthetics

- Single-injection spinal opioids with or without local anesthetics may be used to provide effective, although time-limited, analgesia for labor when spontaneous vaginal delivery is anticipated
- If labor is expected to last longer than the analgesic effects of the spinal drugs chosen or if there is a good possibility of operative delivery, a catheter technique instead of a single injection technique should be considered
- A local anesthetic may be added to a spinal opioid to increase duration and improve quality of analgesia

Pencil-point Spinal Needles

- Pencil-point spinal needles should be used instead of cutting-bevel spinal needles to minimize the risk of post-dural puncture headache

Combined Spinal–Epidural (CSE) Anesthetics

- CSE techniques may be used to provide effective and rapid analgesia for labor

Patient-controlled Epidural Analgesia (PCEA)

- PCEA may be used to provide an effective and flexible approach for the maintenance of labor analgesia
- PCEA may be preferable to continuous infusion epidural for providing fewer anesthetic interventions, reduced dosages of local anesthetics, and less motor blockade than fixed-rate continuous epidural infusions
- PCEA may be used with or without a background infusion

IV. **Removal of Retained Placenta**

- In general, there is no preferred anesthetic technique for removal of retained placenta
  - If an epidural catheter is in place and the patient is hemodynamically stable, epidural anesthesia is preferable
- Hemodynamic status should be assessed before administering neuraxial anesthesia
- Aspiration prophylaxis should be considered
- Sedation/analgesia should be titrated carefully due to the potential risks of respiratory depression and pulmonary aspiration during the immediate postpartum period
- In cases involving major maternal hemorrhage, general anesthesia with an endotracheal tube may be preferable to neuraxial anesthesia
- Nitroglycerin may be used as an alternative to terbutaline sulfate or general endotracheal anesthesia with halogenated agents for uterine relaxation during removal of retained placental tissue
  - Initiating treatment with incremental doses of intravenous or sublingual (i.e., metered dose spray) nitroglycerin may relax the uterus sufficiently while minimizing potential complications (e.g., hypotension)

V. **Anesthetic Choices for Cesarean Delivery**

- Equipment, facilities, and support personnel available in the labor and delivery operating suite should be comparable to those available in the main operating suite
  - Resources for the treatment of potential complications (e.g., failed intubation, inadequate analgesia, hypotension, respiratory depression, pruritus, vomiting) should be available in the labor and delivery operating suite
  - Appropriate equipment and personnel should be available to care for obstetric patients recovering from major neuraxial or general anesthesia
- The decision to use a particular anesthetic technique should be individualized based on anesthetic, obstetric, or fetal risk factors (e.g., elective vs. emergency), the preferences of the patient, and the judgment of the anesthesiologist
  - Neuraxial techniques are preferred to general anesthesia for most cesarean deliveries
- An indwelling epidural catheter may provide equivalent onset of anesthesia compared with initiation of spinal anesthesia for urgent cesarean delivery
- If spinal anesthesia is chosen, pencil-point spinal needles should be used instead of cutting-bevel spinal needles
- General anesthesia may be the most appropriate choice in some circumstances (e.g., profound fetal bradycardia, ruptured uterus, severe hemorrhage, severe placental abruption)
- Uterine displacement (usually left displacement) should be maintained until delivery regardless of the anesthetic technique used
- Intravenous fluid preloading may be used to reduce the frequency of maternal hypotension after spinal anesthesia for cesarean delivery
- Initiation of spinal anesthesia should not be delayed to administer a fixed volume of intravenous fluid

- Intravenous ephedrine and phenylephrine are both acceptable drugs for treating hypotension during neuraxial anesthesia
    - In the absence of maternal bradycardia, phenylephrine may be preferable because of improved fetal acid-base status in uncomplicated pregnancies
- For postoperative analgesia after neuraxial anesthesia for cesarean delivery, neuraxial opioids are preferred over intermittent injections of parenteral opioids

VI. **Postpartum Tubal Ligation**

- For postpartum tubal ligation, the patient should have no oral intake of solid foods within 6–8 hours of the surgery, depending on the type of food ingested (e.g., fat content)
- Aspiration prophylaxis should be considered
- Both the timing of the procedure and the decision to use a particular anesthetic technique (i.e., neuraxial vs. general) should be individualized, based on anesthetic risk factors, obstetric risk factors (e.g., blood loss), and patient preferences
- Neuraxial techniques are preferred to general anesthesia for most postpartum tubal ligations
    - Be aware that gastric emptying will be delayed in patients who have received opioids during labor and that an epidural catheter placed for labor may be more likely to fail with longer postdelivery time intervals
- If a postpartum tubal ligation is to be performed before the patient is discharged from the hospital, the procedure should not be attempted at a time when it might compromise other aspects of patient care on the labor and delivery unit

VII. **Management of Obstetric and Anesthetic Emergencies**

- Institutions providing obstetric care should have resources available to manage hemorrhagic emergencies
    - In an emergency, the use of type-specific or O negative blood is acceptable
    - In cases of intractable hemorrhage when banked blood is not available or the patient refuses banked blood, intraoperative cell-salvage should be considered if available
    - The decision to perform invasive hemodynamic monitoring should be individualized and based on clinical indications that include the patient's medical history and cardiovascular risk factors
- Labor and delivery units should have personnel and equipment readily available to manage airway emergencies, to include a pulse oximeter and qualitative carbon dioxide detector, consistent with the American Society of Anesthesiologists (ASA) Practice Guidelines for Management of the Difficult Airway
    - Basic airway management equipment should be immediately available during the provision of neuraxial analgesia
    - Portable equipment for difficult airway management should be readily available in the operative area of labor and delivery units

    - The anesthesiologist should have a preformulated strategy for intubation of the difficult airway
    - When tracheal intubation has failed, ventilation with mask and cricoid pressure, or with a laryngeal mask airway or supraglottic airway device (e.g., Combitube®, Intubating laryngeal mask airway (LMA) [Fastrach™]) should be considered for maintaining an airway and ventilating the lungs
    - If it is not possible to ventilate or awaken the patient, an airway should be created surgically
- Basic and advanced life-support equipment should be immediately available in the operative area of labor and delivery units
- If cardiac arrest occurs during labor and delivery, standard resuscitative measures should be initiated
    - Uterine displacement (usually left displacement) should be maintained
    - If maternal circulation is not restored within 4 minutes, cesarean delivery should be performed by the obstetrics team

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

Scientific evidence was derived from aggregated research literature, and opinion-based evidence was obtained from surveys, and other activities (e.g., Internet postings).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate anesthesia care for obstetric patients by reducing the incidence and severity of anesthesia-related complications and increasing patient satisfaction

POTENTIAL HARMS

- Maternal complications related to epidural or spinal local anesthetics include hypotension, systemic toxicity, high spinal anesthesia, motor block, and post-dural puncture headache
- Maternal complications related to epidural or spinal opioids include pruritus, nausea and respiratory depression

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Practice guidelines are systematically developed recommendations that assist the practitioner and patient in making decisions about health care. These recommendations may be adopted, modified, or rejected according to clinical needs and constraints and are not intended to replace local institutional policies. In addition, practice guidelines are not intended as standards or absolute requirements, and their use cannot guarantee any specific outcome. Practice guidelines are subject to revision as warranted by the evolution of medical knowledge, technology, and practice. They provide basic recommendations that are supported by a synthesis and analysis of the current literature, expert opinion, open forum commentary, and clinical feasibility data.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Patient Resources

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

American Society of Anesthesiologists Task Force on Obstetric Anesthesia. Practice guidelines for obstetric anesthesia: an updated report by the American Society of Anesthesiologists Task Force on Obstetric Anesthesia. Anesthesiology 2007 Apr;106(4):843-63. PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1999 (revised 2007 Apr)

GUIDELINE DEVELOPER(S)

American Society of Anesthesiologists - Medical Specialty Society

SOURCE(S) OF FUNDING

American Society of Anesthesiologists

GUIDELINE COMMITTEE

Task Force on Obstetrical Anesthesia

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American Society of Anesthesiologists. Practice guidelines for obstetrical anesthesia: a report by the American Society of Anesthesiologists Task Force on Obstetrical Anesthesia. Anesthesiology 1999 Feb;90(2):600-11.

GUIDELINE AVAILABILITY

Electronic copies: Available from the Anesthesiology Journal Web site.

Print copies: Available from the American Society of Anesthesiologists, 520 N. Northwest Highway, Park Ridge, IL 60068-2573.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

The following is available:

- Planning your childbirth: pain relief during labor and delivery.

Available from the American Society of Anesthesiologists Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This summary was completed by ECRI on May 31, 1999. The information was verified by the guideline developer on July 14, 1999. This NGC summary was updated by ECRI Institute on June 26, 2007. The updated information was verified by the guideline developer on July 5, 2007.

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