American Society of Anesthesiologists

MARK A. WARNER, M.D.
President

1501 M Street, N.W. • Suite 300 • Washington, D.C. 20005 • (202) 289-2222 • Fax: (202) 371-0384 • mail@asawash.org

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Agency for Healthcare Research and Quality
Office of Communications and Knowledge Transfer
540 Gaither Road, Suite 2000
Rockville, MD 20850

To Whom It May Concern:

Thank you very much for the opportunity to comment on the Effective Health Care Program's proposed research entitled "Comparative Effectiveness of Nitrous Oxide for the Management of Labor Pain". As an organization of physicians providing pain relieving therapy for over half of the deliveries in the U.S. each year, the American Society of Anesthesiologists (ASA) is uniquely qualified to provide insight into the advantages and disadvantages of the use of nitrous oxide. A complete summary of the available evidence has been posted by the ASA on the EHCP's Key Questions website.

This letter will serve to summarize several issues which the ASA believes must be addressed by any proposed research or study if wider use of nitrous oxide for labor pain is to be considered.

- *Occupational exposure of health care personnel.* Outside of a surgical operating room environment, there is currently no effective means of scavenging nitrous oxide. As nitrous oxide is not metabolized to any appreciable extent, all nitrous oxide administered outside an operating room will be released into the immediate vicinity, likely exposing numerous individuals to levels in excess of current recommendations. In 1994 NIOSH published an alert warning health care providers about the potential effects of occupational exposure to nitrous oxide (http://www.cdc.gov/niosh/noxidalr.html).
- *Unknown effects of occupational exposure.* Previous research has indicated increased rates of spontaneous abortion and decreased fertility rates among dental assistants exposed to nitrous oxide in the workplace. The effects on the fetus of exposure during labor have received little attention by researchers.
- *The quality of nitrous oxide labor analgesia.* Most of the current published data indicates that nitrous oxide is little or no better than placebo at relieving labor pain. Any initiative to expand the use of nitrous oxide for labor analgesia should weigh the eventual cost of implementation (medication, infrastructure, training, etc.) against the benefit achieved and other alternatives.
- *Environmental impact of widespread use of nitrous oxide for labor analgesia.* In a time of heightened concern for the environment, the impact on the environment of wider use of nitrous oxide on the increased release of a known greenhouse gas and ozone-depleting pollutant (http://www.sciencemag.org/content/326/5949/123.full?sid=0f029161-04ab-4c19-8638-3485be477f6b) should be considered.

Thank you again for the opportunity to comment on this important issue. The American Society of Anesthesiologists offers our full assistance and cooperation in addressing this important initiative.

Sincerely,

Mark A. Warner, M.D.
President
American Society of Anesthesiologists