

California Study Analyzes Causes of Pregnancy-Related Mortality and Proposes Preventive Measures

by HENCI GOER

Main EK, McCain CL, Morton CH, Holtby S, Lawton ES. Pregnancy-related mortality in California: causes, characteristics, and improvement opportunities. *Obstet Gynecol.* 2015;125(4):938-47.

A RECENT ANALYSIS REVIEWED all 207 cases of pregnancy-related deaths in California between 2002 and 2005 to ascertain, as the study title states, “causes, characteristics, and improvement opportunities.”

Pregnancy-related mortality rates in black women were shockingly high. Their mortality rate was 40 per 100,000 live births versus 6 to 10 per 100,000 in the other racial/ethnic groups.

The 5 leading causes of death were cardiovascular disease, preeclampsia, hemorrhage, venous thromboembolism, and amniotic fluid embolism, comprising 70% of the 207 deaths. Investigators confined the rest of the analysis to these 5 causes.

The role played by cesarean surgery weaves throughout the analysis. Among deaths from venous thromboembolism, 64% were repeat cesareans. Seventy percent of hemorrhage deaths were

due either to abnormal placental attachment, uterine lacerations, or uterine rupture, all of which, as with venous thromboembolism, are more likely with—or, in the case of lacerations, only occur during—current or previous cesarean. Among women with BMI equal to or more than 40 who died of venous thromboembolism, 89% were cesarean deliveries, which raises the question of the degree to which care provider belief about the ability of plus-sized women to birth vaginally results in avoidable cesareans that put them at excess risk.¹

Inductions are indicted as well. Among women dying of amniotic fluid embolism, 53% were induced compared with 21% of women dying of other causes. The authors note other studies finding the same association in the discussion section.

Factors contributing to preventable deaths include delayed response, suboptimal treatment, poor coordination of care, lack of patient education regarding warning symptoms, and overweight, which led study authors to make the following recommendations:

- cardiovascular disease:** Provide pre-pregnancy counseling to improve heart health, including

losing weight sensibly.

- preeclampsia:** Improve and standardize management of high blood pressure and educate women to recognize symptoms.

- hemorrhage:** Standardize care to ensure effective response.

- venous thromboembolism:** Approaches in addition to universal use of sequential compression devices on the legs of post-cesarean patients are under discussion.

- amniotic fluid embolism:** “Massive transfusion protocols with copious coagulation factors and intensive cardiovascular support may improve outcomes” (p. 946), which tells you the extreme danger of AFE and how little can be done about it.

Notably absent is any recommendation to reduce use of cesarean surgery and labor induction. I therefore propose an addition:

- Strive to achieve vaginal birth whenever safely possible and limit use of induction to medical indications, because while addressing the problem is good, minimizing the possibility of it happening in the first place is infinitely better. ●

References

1. Vireday P. Welcoming Families Series: Welcoming Women of Size and Promoting Optimal Birth Outcomes. 8 Nov 2012. Available from: <http://www.scienceandsensibility.org/welcoming-all-families-series-welcoming-women-of-size-promoting-optimal-birth-outcomes/>

*Henci Goer, award-winning medical writer and internationally known speaker, is an acknowledged expert on evidence-based maternity care. Her first book, **Obstetric Myths Versus Research Realities**, was a valued resource for childbirth professionals. Its successor, **Optimal Care in Childbirth: The Case for a Physiologic Approach**, has won the American College of Nurse-Midwives “Best Book of the Year” award. Goer has also written **The Thinking Woman’s Guide to a Better Birth**, which gives pregnant women access to the research evidence, as well as consumer education pamphlets and articles for trade, consumer, and academic periodicals. Goer’s latest project is **Childbirth U**, a website selling narrated slide presentations at modest cost that will help pregnant women make informed decisions about care.*

Reprinted with permission from “Childbirth U: News from around the Web.” Links to issues of CBU’s e-newsletter may be found at <https://www.facebook.com/ChildbirthU>.



MICRAY/MOON/CC-BY-3.0