

EXECUTIVE SUMMARY

Between 1999 and 2008, the rate of maternal deaths in California nearly doubled from 8 to 14 per 100,000 live births. In African-American women the rate was approximately four times higher than in all other racial/ethnic groups.¹

Hypertensive disorders of pregnancy are a leading cause of maternal mortality occurring in 12-22% of pregnancies.¹ These disorders are responsible for approximately 17% of maternal mortality in the United States.²⁻⁴ The California Pregnancy Associated Mortality Review (CA-PAMR) from 2002-2004, found a similar incidence of maternal mortality related to preeclampsia and associated syndromes.¹ The overall mortality rate for preeclampsia among the CA-PAMR deaths is 1.6/100,000. In addition, these disorders are one of the leading contributors to premature birth leading to significant neonatal morbidity and mortality.¹ Tragically, all of these deaths were determined to have at least some chance to alter the outcome, and half of those were determined to have a strong-to-good chance to alter the outcome.

A major quality improvement theme that emerged in the analysis of CA-PAMR preeclampsia cases was that despite triggers that clearly indicated a serious deterioration in the patient's condition, health care providers failed to recognize and respond to these signs in a timely manner leading to delays in diagnosis and treatment. In addition, the Preeclampsia Task Force recognized the need to emphasize additional educational efforts on the importance of accurate blood pressure measurement and initiating antihypertensive medications early and aggressively to prevent progression of the disease.

In response to the alarming trends in maternal morbidity and mortality and inconsistent application of evidence based guidelines for managing hypertensive disorders, the California Maternal Quality Care Collaborative (CMQCC) and the Preeclampsia Task Force developed the toolkit, "Improving Health Care Response to Preeclampsia." The toolkit authors represent a multi-disciplinary team of experts from every corner of the state and from both large and low volume Obstetric (OB) units. The editorial process in developing the toolkit was extensive and included peer review and consensus among experts from around the state. One of the most important goals of this project was to provide tools and guidelines gleaned from the "lessons learned" from the CA-PAMR review to assist others in decreasing maternal morbidity and mortality in the future.

Many of the tools and best practices outlined in the toolkit have been developed and recommended by national and international organizations including: American Congress of Obstetricians and Gynecologists (ACOG), National Institute for Health and Clinical Excellence (NICE), United Kingdom, Society for Obstetricians and Gynaecologists of Canada (SOGC).

The toolkit provides a series of articles on best practices for hypertensive disorders that range in topic from diagnostic challenges to appropriate implementation of accepted medical therapy and recognition of institutional limitations in providing care for these complex maternal patients.

Of particular interest, the toolkit addresses the management of severe preeclampsia < 34 weeks, the importance of recognition and treatment of delayed postpartum preeclampsia/eclampsia in the emergency department and early postpartum follow-up upon discharge. In addition, the toolkit provides care guideline summaries (in checklist, flowchart and table chart formats); it is organized into the following sections:

- Compendium of Best Practices: eighteen articles on multiple topics around hypertensive disorders
- Appendices: Collection of all Care Guidelines including tables, charts and forms that are highlighted in Article Sample forms for policy and procedure
- Slide set for Professional Education: slides that summarize the problem of and the best practices for preeclampsia to be used for local education and training

CMQCC and the California Department of Public Health (CDPH), Maternal, Child and Adolescent Health (MCAH) Division collaborated to develop and disseminate this toolkit using Title V MCH funds provided by CDPH-MCAH. The goal of this toolkit is to guide and support obstetrical providers, clinical staff, hospitals and healthcare organizations to develop methods within their facilities for timely recognition and organized, swift response to preeclampsia and to implement successful quality improvement programs for preeclampsia that will decrease short- and long-term preeclampsia-related morbidity in women who give birth in California.

REFERENCES

1. *The California Pregnancy-Associated Mortality Review. Report from 2002 and 2003 Maternal Death Reviews: California Department of Public Health, Maternal Child and Adolescent Health Division.* Sacramento 2011.
2. ACOG. Diagnosis and Management of Preeclampsia and Eclampsia #33. *American Congress of Obstetricians and Gynecologists Practice Bulletin Number 33.* 2002 (Reaffirmed 2012).
3. Clark SL, Belfort MA, Dildy GA, Herbst MA, Meyers JA, Hankins GD. Maternal death in the 21st century: causes, prevention, and relationship to cesarean delivery. *Am J Obstet Gynecol.* Jul 2008;199(1):36 e31-35; discussion 91-32 e37-11.
4. Baker DW, Asch SM, Keesey JW, et al. Differences in education, knowledge, self-management activities, and health outcomes for patients with heart failure cared for under the chronic disease model: the improving chronic illness care evaluation. *J Card Fail.* Aug 2005;11(6):405-413.