



# Management of Postpartum Hemorrhage and Anaphylaxis in Teen Pregnancy: A Case Report

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## • BACKGROUND: Maternal Morbidity & Risk Factors

- U.S. has highest maternal mortality in developed nations
- >60,000 women/year experience severe maternal morbidity (SMM)<sup>1</sup>
- Disproportionately affects<sup>2</sup>:
  - Women <20 or >40 years
  - Black, Hispanic, and low-income populations
- Teen mothers<sup>3</sup>:
  - 35% lack prenatal care in 1st trimester
  - Higher risk of hemorrhage, preterm birth, infections

Severe Maternal Morbidity	
Demographic Factors	Pregnancy-Related Factors
<ul style="list-style-type: none"><li>• Maternal age</li><li>• Black or Hispanic</li><li>• Low socioeconomic status</li></ul>	<ul style="list-style-type: none"><li>• Nulliparity</li><li>• Pre-existing medical conditions<ul style="list-style-type: none"><li>◦ Obesity</li><li>◦ Hypertension</li></ul></li></ul>



1. US Centers for Disease Control and Prevention. Severe maternal morbidity in the United States | CDC. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html>  
2. National Institute of Health. Maternal Morbidity and Mortality: What Do We Know? How Are We Addressing It? 2020. [www.nih.gov/women/maternalhealth](http://www.nih.gov/women/maternalhealth).  
3. Debiec KE, Paul KI, Mitchell CM, Hitti JE. Inadequate prenatal care and risk of preterm delivery among adolescents: a retrospective study over 10 years. *Am J Obstet Gynecol*. 2010;203(2):122.e1-122.e6. doi:10.1016/j.AJOG.2010.03.001

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## • CASE: 15 year old female G1P0 at 40w6d

### • Pregnancy complicated by:

Psychosocial factors	Physiologic factors
<ul style="list-style-type: none"><li>- Teen pregnancy</li><li>- Child in foster care</li><li>- Depression</li><li>- History of trauma/violence</li></ul>	<ul style="list-style-type: none"><li>- Severe obesity (BMI 45)</li><li>- Iron deficiency anemia</li><li>- Asthma</li></ul>

### • Timeline

Time	Event
Admission to L&D	<ul style="list-style-type: none"><li>- Declined analgesia</li><li>- Opted for unmedicated vaginal delivery</li></ul>
+12 hours	<ul style="list-style-type: none"><li>- Prolonged FHR deceleration → operative vaginal delivery</li><li>- Uterine atony</li></ul>
Immediately post-partum	<ul style="list-style-type: none"><li>- <b>Severe PPH</b> (EBL 3150mL), large clot burden</li><li>- No epidural; unable to tolerate bimanual massage</li></ul>
GA for D&C	<ul style="list-style-type: none"><li>- Propofol + succinylcholine → intubation</li><li>- +20 mins: <b>Rocuronium</b> → <b>refractory hypotension + urticaria</b> → <b>anaphylaxis</b></li></ul>
Post-op	<ul style="list-style-type: none"><li>- Epinephrine, dexamethasone, diphenhydramine, famotidine</li><li>- Intubated overnight in ICU → full recovery → allergy referral on discharge</li></ul>

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## • LESSONS FROM A COMPLEX DELIVERY

- **Social determinants** (e.g. age <20, foster care, ethnicity) significantly increase:  
→ risk of SMM and postpartum complications
- **Teen mothers** face **2–3x higher** risk of poor outcomes
- **Neuraxial use lower in minorities<sup>4</sup>**:  
→ White: 60%, Black: 50%, Hispanic: 35%
- **Neuraxial** labor analgesia reduces SMM risk by 14% (*OR 0.86*)<sup>5</sup>
- *Earlier* epidural might have avoided GA → prevented anaphylaxis
- **Proactive communication** is critical in vulnerable patients

4. Rust G, Nembhard WN, Nichols M, et al. Racial and ethnic disparities in the provision of epidural analgesia to Georgia Medicaid beneficiaries during labor and delivery. *Am J Obstet Gynecol*. 2004;191(2):456-462. doi:10.1016/J.AJOG.2004.03.005

5. Guglielminotti J, Landau R, Daw J, Friedman AM, Chihuri S, Li G. Use of Labor Neuraxial Analgesia for Vaginal Delivery and Severe Maternal Morbidity. *JAMA Netw open*. 2022;5(2). doi:10.1001/JAMANETWORKOPEN.2022.0137