

# 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>:

2.

3.

35% lack prenatal care in 1st trimester

**David Geffen** 

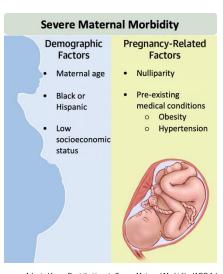
Higher risk of hemorrhage, preterm birth, infections

School of Medicine

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US Centers for Disease Control and Prevention. Severe maternal morbidity in the United States | CDC. https://www.cdc.gov/reproductivehealth/maternalin fanthealth/severematernalmorbidity.html

National Institute of Health. Maternal Morbidity and Mortality: What Do We Know? How Are We Addressing It? 2020. www.nih.gov/women/maternalhealth

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# CASE: 15 year old female G1P0 at 40w6d

• Pregnancy complicated by:

Psychosocial factors	Physiologic factors
<ul> <li>Teen pregnancy</li> <li>Child in foster</li></ul>	<ul> <li>Severe obesity</li></ul>
care <li>Depression</li> <li>History of</li>	(BMI 45) <li>Iron deficiency</li>
trauma/violence	anemia <li>Asthma</li>

#### Timeline

Time	Event
Admission to L&D	- Declined analgesia - Opted for unmedicated vaginal delivery
+12 hours	<ul> <li>Prolonged FHR deceleration → operative vaginal delivery</li> <li>Uterine atony</li> </ul>
Immediately post-partum	- <b>Severe PPH</b> (EBL 3150mL), large clot burden - No epidural; unable to tolerate bimanual massage
GA for D&C	<ul> <li>Propofol + succinylcholine → intubation</li> <li>+20 mins: Rocuronium → refractory hypotension + urticaria → anaphylaxis</li> </ul>
Post-op	- Epinephrine, dexamethasone, diphenhydramine, famotidine - Intubated overnight in ICU $\rightarrow$ full recovery $\rightarrow$ allergy referral on discharge





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### LESSONS FROM A COMPLEX DELIVERY

- Social determinants (e.g. age <20, foster care, ethnicity) significantly increase:</li>
   → risk of SMM and postpartum complications
- Teen mothers face 2-3x higher risk of poor outcomes
- Neuraxial use lower in minorities<sup>4</sup>:

 $\rightarrow$  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  $GA \rightarrow$  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



