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Key Lessons in Obstetrical Malpractice Claims

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Outline

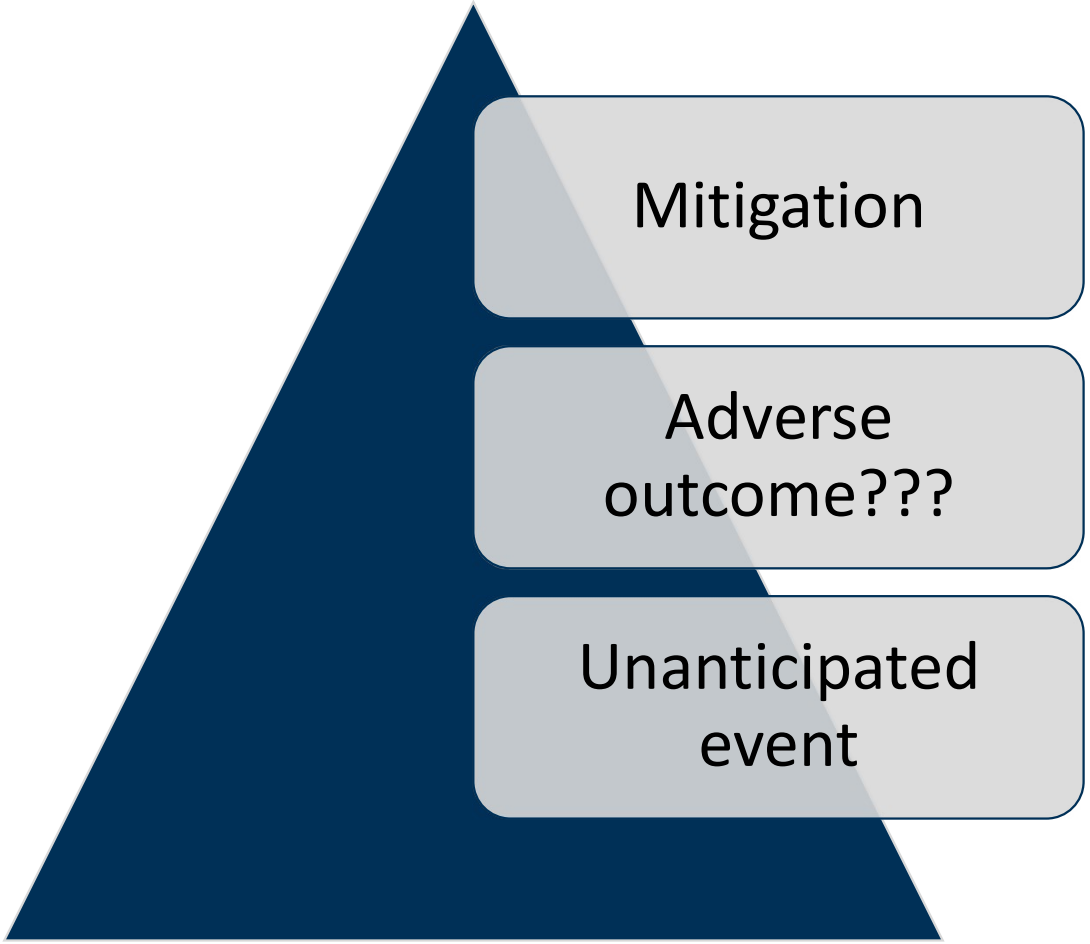
Identify current U.S. trends regarding maternal health outcomes.

Identify current trend in OB malpractice claims.

Review common errors/adverse events in obstetric anesthesia.

Explore ways to mitigate morbidity and mortality for mothers in anesthesia.

OB is a happy place … unless it just isn't



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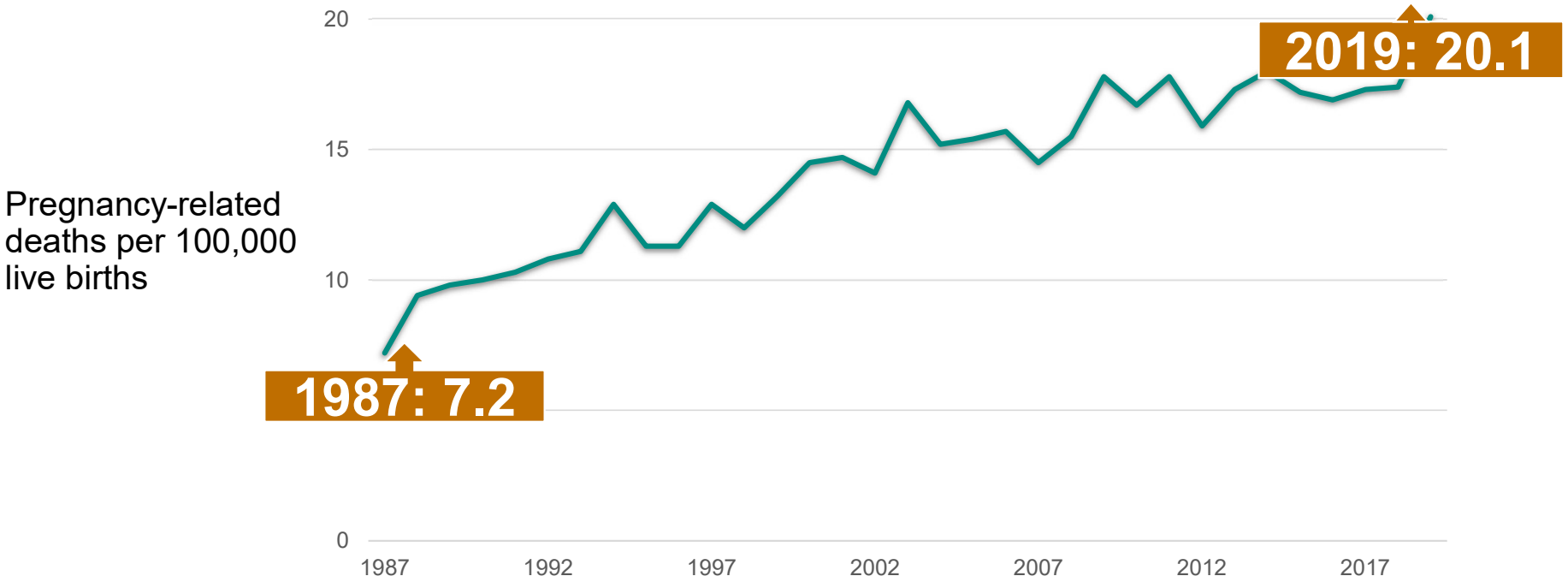
Over the past 30 years in the U.S., Pregnancy-related deaths have increased nearly *3 times*



Pregnancy-related death: Death during pregnancy or within one year of the end of pregnancy from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy. This CDC measure is used in the U.S. only.

Source: https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm Accessed January 11, 2022.

https://www.cdc.gov/nchs/data/hestat/maternal-mortality-2021/maternal-mortality-2021.htm#Table. Accessed January 12, 2022.

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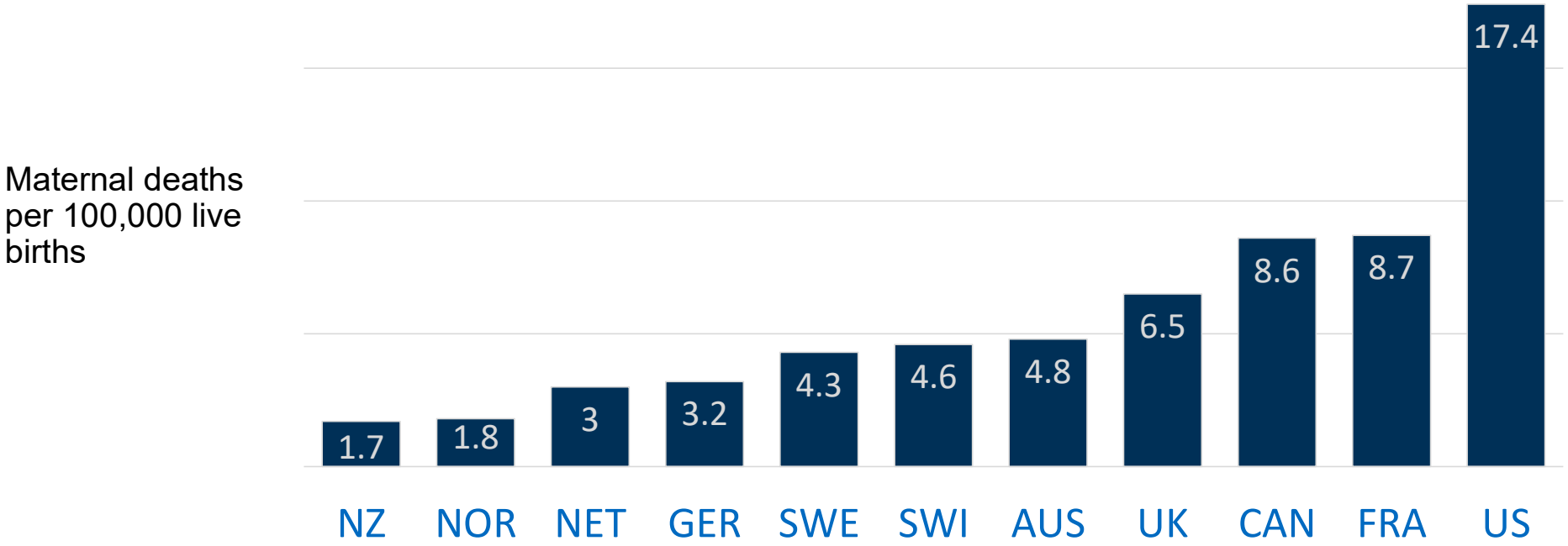
U.S. Maternity Mortality Rate is *More than Double* the Rate of Most Other High-Income Countries



Maternal mortality: Death while pregnant or within 42 days of the end of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes. Used by the World Health Organization (WHO) in international comparisons. Data from 2018 (2017 for Switzerland and UK; 2016 for NZ; 2012 for France)
Source: https://www.commonwealthfund.org/publications/issue-briefs/2020/nov/maternal-mortality-maternity-care-us-compared-10-countries Accessed January 11, 2022.

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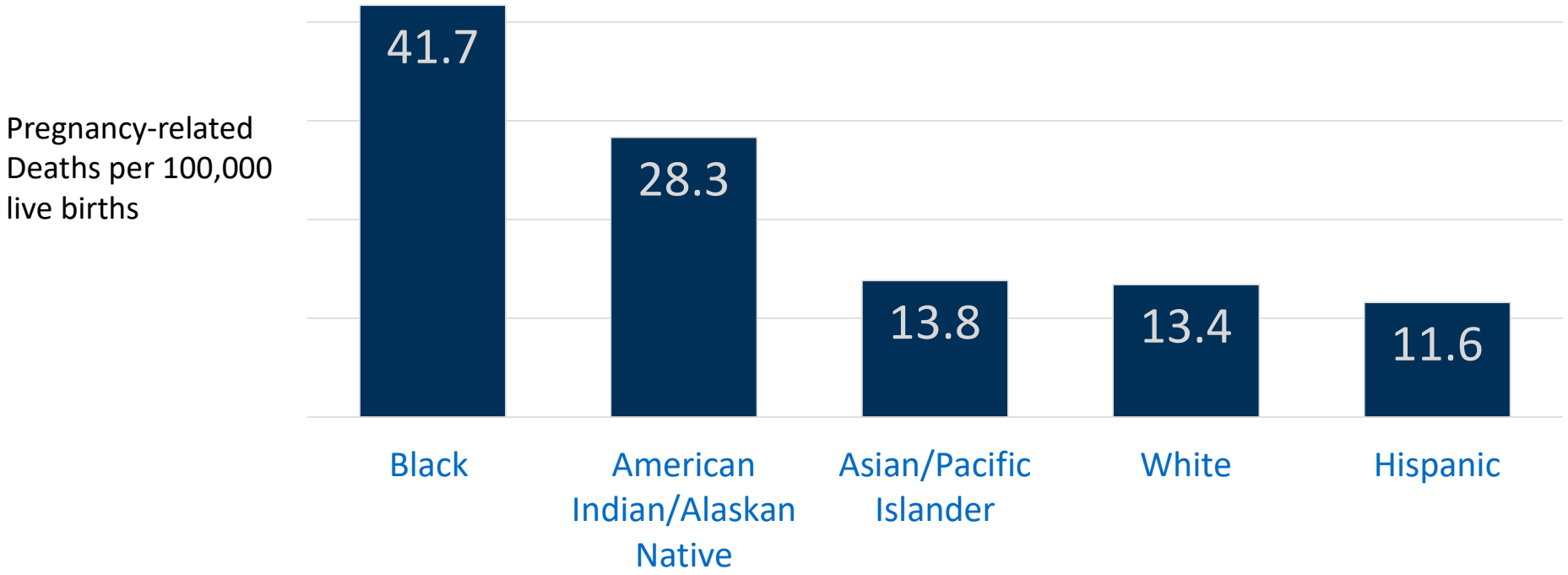
Pregnancy-related Deaths are Preventable

According to the CDC, two out of every three maternal deaths are preventable.

However, significant racial/ethnic disparities in maternal deaths still exist.

The principles of reproductive justice have been brought to attention to highlight the role social determinants of health play in maternal health outcomes for racial/ethnic minorities.

Racial Disparities Exacerbate the U.S. Maternal Health Crisis



Source: https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Freproductivehealth%2Fmaternalinfanthealth%2Fpregnancy-mortality-surveillance-system.htm Accessed January 11, 2022

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Contributing Factors

Individual	Social and Economic	Healthcare
Older maternal age	Access to quality education and jobs	Health coverage before, during and after pregnancy
Health conditions (e.g, CVD, obesity, asthma)	Food security and access to healthy options	Access to comprehensive, affordable and high-quality care
Lifestyle factors (e.g., weight, physical activity)	Adequate housing/Safe neighborhood	Access to linguistically and culturally appropriate care
Pregnancy complications (e.g., preeclampsia, gestational diabetes)	Reliable transportation	
Having multiples	Community engagement	
	Language/Literacy	

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Causes of Pregnancy-Related Deaths in the U.S. 2008-2017

Condition	Percent
Other cardiovascular conditions	15.5%
Infection or sepsis	12.7%
Cardiomyopathy	11.5%
Hemorrhage	10.7%
Thrombotic pulmonary or other embolism	9.6%
Cerebrovascular accidents	8.2%
Hypertensive disorders of pregnancy	6.6%
Amniotic fluid embolism	5.5%
Anesthesia complications	**0.4%**
Other noncardiovascular medical conditions	12.5%
Unknown cause of death	6.7%

Source: https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm

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Leading underlying causes of pregnancy-related deaths, overall and by race-ethnicity, data from 14 maternal mortality review committees, 2008-2017.

	Total		non-Hispanic Black		non-Hispanic White	
Condition	N	%	n	%	n	%
Cardiovascular Conditions	58	13.8	22	13.9	27	13.4
Hemorrhage	55	13.1	17	10.8	27	13.4
Infection	48	11.4	16	10.1	25	12.4
Embolism	40	9.5	16	10.1	16	8.0
Cardiomyopathy	39	9.3	22	13.9	16	8.0
Mental Health Conditions	37	8.8	—	—	30	14.9
Preeclampsia and Eclampsia	35	8.3	18	11.4	13	6.5

Source: https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/mmr-data-brief.html

Education does not Provide a Protective Effect against Disparities related to Pregnancy-related Deaths

Black college graduates were 5.2 times more likely to die related to pregnancy compared to white college graduates.

Black college graduates were 1.6 times more likely to die related to pregnancy compared to whites without high school degree.

Source: https://www.cdc.gov/mmwr/volumes/68/wr/mm6835a3.htm

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Anesthesia Safety in Maternal Care

- Anesthesia-related maternal mortality has declined significantly over the last half-century.
  - Currently, estimated at 1.0 per million live births (a 59% reduction from the period of 1979 to 1990).

- Complication of neuraxial anesthesia are often associated with rare but potentially life-threatening anesthesia-related morbidity and mortality:
  - Neurologic injuries
  - Meningitis (due to neuraxial blockade)
  - Spinal epidural abscess
  - Arachnoiditis (has been reported after injection of sulfite-containing preservatives in local anesthetic solutions)
  - Spinal cord or nerve root injury

- Anesthesia professionals are instrumental in preventing and managing hemorrhage, hemodynamic instability, critical illness, and sepsis.

Source: https://www.uptodate.com/contents/serious-neurologic-complications-of-neuraxial-anesthesia-procedures-in-obstetric-patients

Medical Malpractice

Liability

- In order for the plaintiff to prevail with a medical malpractice
- Must prove that the injury resulted from failure of the anesthesia provider to follow accepted standard of care

What Are the Four Elements of Medical Malpractice?

- **Duty: The duty of care owed to patients.**
- **Dereliction: Or breach of this duty of care.**
- **Direct cause: Establishing that the breach caused injury to a patient.**
- **Damages: The economic and noneconomic losses suffered by the patient as a result of their injury or illness**.

Source: https://www.uptodate.com/contents/serious-neurologic-complications-of-neuraxial-anesthesia-procedures-in-obstetric-patients

What Are the Four Elements of Mitigating a Malpractice?

- **Compassion**
- **Communication**
- **Competence**
- **Charting**

Source: https://www.uptodate.com/contents/serious-neurologic-complications-of-neuraxial-anesthesia-procedures-in-obstetric-patients

MEDICAL MALPRACTICE CASE REPORT: $4.5 MILLION FOR FAILURE TO PROPERLY MONITOR LABOR AND FETAL STATUS AND FAILURE TO TIMELY PERFORM A CESAREAN SECTION

April 2008

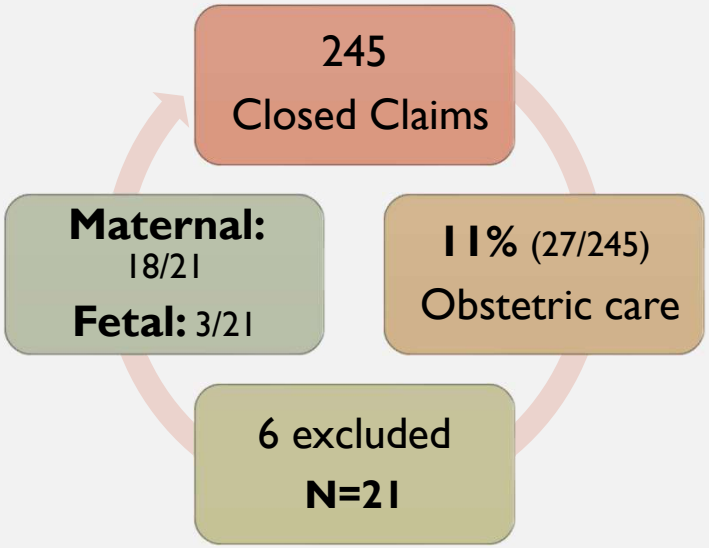
Reached a medical malpractice settlement of $4.5 million on the behalf of a newborn baby and family in a case involving a failure to properly monitor maternal and fetal status; failure to promptly notify physician of fetal status; failure to timely perform a cesarean section delivery so as to avoid serious and permanent injury; and failure to inform patient of the risks associated with not performing a timely cesarean section delivery. Read the following *Minnesota Case Report*, Volume 27, Number 2, April 2008.

Thematic Analysis of Obstetric Anesthesia Cases From the AANA Foundation Closed Claims Database

Beth Ann Clayton, DNP, CRNA
Marjorie A. Geisz-Everson, PhD, CRNA
Bryan Wilbanks, PhD, DNP, CRNA

Clayton, B; Geiz-Everson, M; Wilbanks, B. (2018). Thematic Analysis of Obstetric Anesthesia Cases from the AANA Foundation Closed Claims Database. *AANA Journal*. 86(6), p 464-470.

AANA Obstetric Closed Claims Analysis



- **Inclusion criteria**
  - Malpractice claims involving obstetric and/or neonatal events which occurred during or immediately post-delivery
  - Reviewed claims 2003-2012
- **Exclusion criteria**
  - Non-anesthesia related adverse outcomes
  - Dismissal of anesthesia provider
  - Insufficient evidence correlating the negative outcome to anesthesia care

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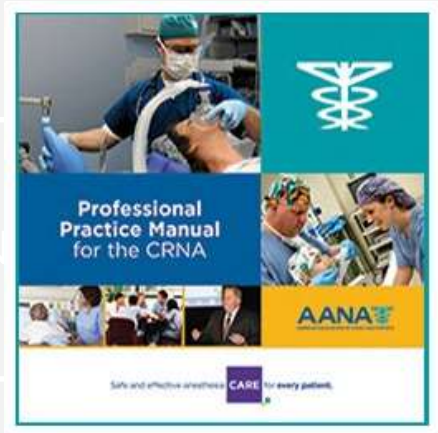
Standards for Nurse Anesthesia Practice

The American Association of Nurse Anesthesiology (AANA) *Standards for Nurse Anesthesia Practice* provide a foundation for Certified Registered Nurse Anesthetists (CRNAs) in all practice settings. These standards are intended to support the delivery of patient-centered, consistent, high-quality, and safe anesthesia care and assist the public in understanding the CRNA's role in anesthesia care. These standards may be exceeded at any time at the discretion of the CRNA and/or healthcare organization.

These standards apply where anesthesia services are provided including, but not limited to, the operating room, nonoperating room anesthetizing areas, ambulatory surgical centers, and office-based practices. The standards are applicable to anesthesia services provided for procedures, including, but not limited to surgical, obstetrical anesthesia, diagnostic, therapeutic, and pain management.

In addition to general anesthesia for surgery and procedures, CRNAs provide anesthesia and analgesia care that does not require the extent of monitoring as delineated in standard 9 (e.g., obstetrical analgesia, chronic pain management, regional anesthesia). The AANA also provides guidance for these practice areas: *Analgesia and Anesthesia for the Obstetric Patient, Guidelines*, *Chronic Pain Management Guidelines*, and *Regional Anesthesia and Analgesia Techniques - An Element of Multimodal Pain Management, Practice Considerations*.

Although the standards are intended to promote high-quality patient care, they cannot ensure specific outcomes. There may be patient-specific circumstances (e.g., informed consent for emergency cases that may be difficult to obtain, mass casualty incident) that require modification of a standard. The CRNA must document modifications to these standards in the patient's healthcare record, along with the reason for the modification. When integrating new technologies or skills into practice, the CRNA will obtain any necessary education and evidence competency.



Standard 1: Patient's Rights

Standard 2: Preanesthesia Patient Assessment and Evaluation

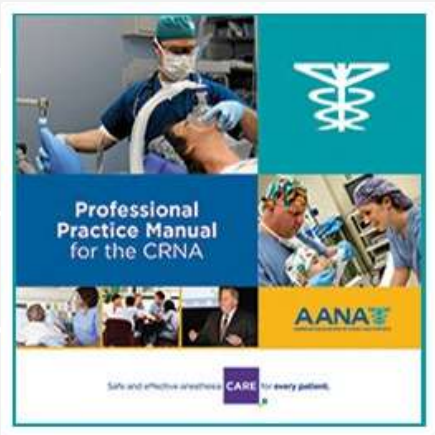
Standard 3: Plan for Anesthesia Care

Standard 4: Informed Consent for Anesthesia Care and Related Services

Standard 5: Documentation

Standard 6: Equipment

Standard 7: Anesthesia Plan Implementation and Management



Standard 8: Patient Positioning

Standard 9: Monitoring, Alarms

Standard 10: Infection Control and Prevention

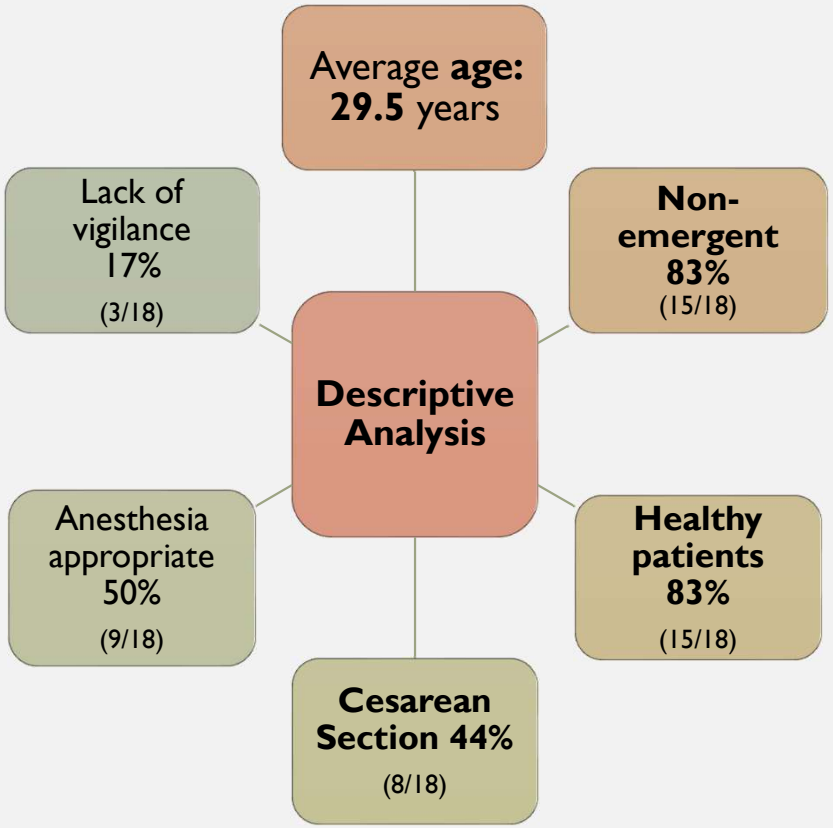
Standard 11: Transfer of Care

Standard 12: Quality Improvement Process

Standard 13: Wellness

Standard 14: A Culture of Safety

Obstetrical Closed Claims Analysis



Majority cases:
Non-emergent, healthy women

Clayton, B; Geiz-Everson, M; Wilbanks, B. (2018). Thematic Analysis of Obstetric Anesthesia Cases from the AANA Foundation Closed Claims Database. *AANA Journal*. 86(6), p 464-470.

Obstetrical Closed Claims Analysis

Significant Adverse Maternal Outcome: Patient **DEATH** (8/21)

Morbidity
10 Claims

- Peripheral nervy injury (4/10)
- Back pain
- Brain damage
- Emotional distress
- Epidural abscess
- Headache
- Respiratory Complications

Mortality
8 Claims

- Hemorrhage (3/8)
- Cardiac failure (2/8)
- Amniotic fluid embolus
- Meningitis
- Neuraxial opioid

Clayton, B; Geiz-Everson, M; Wilbanks, B. (2018). Thematic Analysis of Obstetric Anesthesia Cases from the AANA Foundation Closed Claims Database. *AANA Journal*. 86(6), p 464-470.

Obstetrical Closed Claims Analysis

Precipitating Events Leading to the Obstetric Claims		
Event	**Frequency**	**Causative Factor**
Cardiac Failure	2	Delayed treatment of hypotension following epidural dosing
		Pre-existing cardiomyopathy
Emotional Distress	1	Failed neuraxial anesthesia, failure to provide general anesthesia
Epidural Abscess	1	Possibly omission of chlorhexidine for skin prep (utilization of betadine); break in sterility
Meningitis	1	
Hemorrhage	3	Failure to recognize hemorrhage; delayed resuscitation
Respiratory	2	Extended time to secure airway
		Right main stem intubation leading to barotrauma
Spinal Hematoma	1	Delayed identification and treatment
Wet Tap	1	Failure to recognize and treat postdural puncture headache
Wrong medication/dose	1	Magnesium infusing to epidural catheter Neuraxial opioid overdose

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Obstetrical Closed Claims Analysis

Neonatal Adverse Outcomes

Morbidity
2 Claims

- Permanent Brain Injury
- Hypoxic Encephalopathy

Mortality
1 Claim

- Hypoxia

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Obstetrical Closed Claims Analysis

Thematic Analysis
Provides opportunity to identify patterns of injuries, precipitating events & interventions to improve care.

- Care Delay
- Failed Communication
- Documentation
- Hemorrhage
- Lack of Provider Vigilance

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Theme 1 – Delay in Care

Delayed Recognition:

Maternal spinal hematoma resulted in development of chronic motor deficit

- Motor dysfunction noted 4hrs after delivery
- MRI not ordered until 12hrs after delivery

Delayed Diagnosis:

Epidural site infection resulted in extensive epidural abscess requiring laminectomy

- Lower back pain & rash w/in 24hrs of epidural
  5 days post-op, severe back pain and fever
  Epidural abscess diagnosis 14 days post-epidural procedure

Delayed Treatment:

Cardiovascular collapse during labor resulted in maternal and fetal death

- ACLS with perimortem C/S C/S - 45 minutes after ACLS initiation

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Theme 2 –Failed Communication

Miscommunication among providers delayed delivery & possibly led to neonatal cerebral palsy

- C/S, urgent vs. emergent
  CRNA understood urgent and placed neuraxial anesthesia; OB provider claimed emergent and accused anesthesia provide of delaying delivery

Important **medical history not conveyed** (spina bifida & removal of spinal tumor)

Epidural attempted ⇢ short-term paraplegia and unilateral residual weakness post delivery

- **Failed communication** bt. anesthesia providers and anesthesia provider and patient

Clayton, B; Geiz-Everson, M; Wilbanks, B. (2018). Thematic Analysis of Obstetric Anesthesia Cases from the AANA Foundation Closed Claims Database. *AANA Journal*. 86(6), p 464-470.

Theme 3 Documentation

Conflicting documentation:

Led to CRNA being blamed for poor outcome

- Contradictory timing of maternal intubation recorded; Neonate suffered cerebral palsy & alleged delay in maternal intubation blamed

Quality Documentation:

CRNA not held legally liable accusation of neonatal esophageal intubation

- After transfer to medical team, infant cyanotic & reintubated

  Prior to transfer, ETT placement documented by CRNA & pediatric team

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Theme 4 –Maternal Hemorrhage

Unexpected Hemorrhage resulted in maternal death

- Pt w/fetal demise & placenta previa underwent C/S
  Massive hemorrhage ⇢DIC

Unrecognized Hemorrhage after difficult C/S led to maternal death

- N/V in PACU, followed by hypotension & tachycardia
  Treated with antiemetics and vasopressors
  2 hours later determined low H/H

Clayton, B; Geiz-Everson, M; Wilbanks, B. (2018). Thematic Analysis of Obstetric Anesthesia Cases from the AANA Foundation Closed Claims Database. *AANA Journal*. 86(6), p 464-470.

Theme 5 –Lack of Provider Vigilance

Unaware of large blood loss during hysterectomy resulted in death

- CRNA claimed unable to visualize suction canisters & blood hidden in drapes

Medication Error led to permanent neuropathic pain

- SRNA administered magnesium sulfate via epidural infusion; Ropivacaine intended infusion

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LESSONS LEARNED

- Identification of patient risks and practice of emergency readiness skill drills can improve preparedness for safe and effective delivery of care.
- Anesthesia providers should be knowledgeable of and utilize protocols and algorithms.
- Effective teamwork and communication can help prevent mistakes and facilitate care.
- Situational awareness of potential hemorrhagic event allows for early recognition and intervention.
- Knowledge of common neuraxial complication manifestations may facilitate timely identification and treatment.

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Practice Considerations

- Recognize the presence of abnormal triggers for immediate evaluation, diagnosis and treatment:
  - Systolic <90 or >160mmHg
  - Diastolic >100mmHg
  - Heart rate <50 or >120
  - Respiratory rate <10 or >30
  - Oxygen saturation <95%
  - Oligura <35mL/hr $\geq$ 2 hours
  - Maternal agitation, confusion or unresponsiveness
  - Hypertension with non-remitting headache or shortness of breath
- Utilize oxytocin protocols to prevent postpartum hemorrhage risk.
- Utilize standardized protocols to manage postpartum hemorrhage and patient blood.
- Utilize safety bundles (e.g., the American College of Obstetricians and Gynecologists, the American College of Nurse-Midwives, and the Association of Women's Health, Obstetric, and Neonatal Nurses).
- For additional considerations, review the AANA Analgesia and Anesthesia for the Obstetric Patient Practice Guidelines.

Medical Mortality:Key Considerations

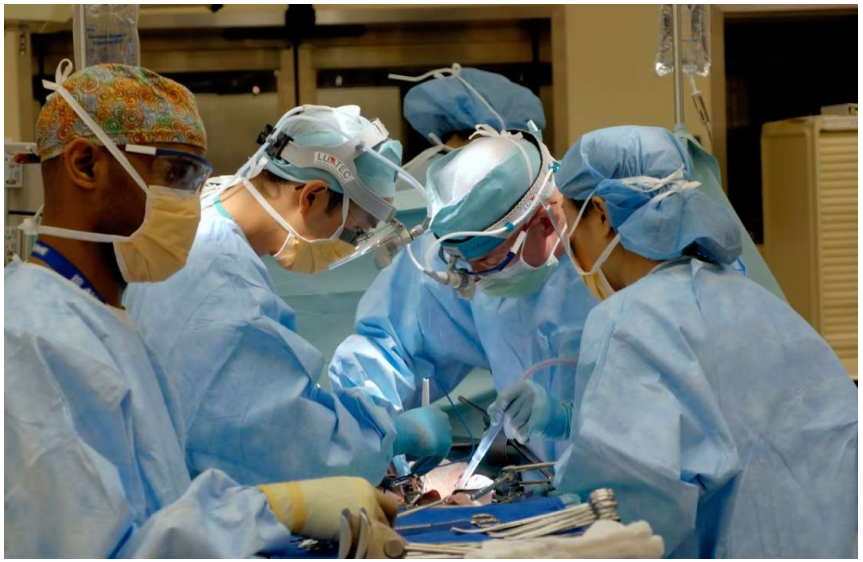
- Increase in C/S rates
- Obesity
- Maternal Age
- More complex patients with increased number of co-morbidities.
  - CV disease
  - Hypertension
  - Embolic Disease (PE& AFE)
  - Infection

Davies, J; Stephens, L. (2017). Obstetric Anesthesia Liability Concerns. *Clinical Obstetrics and Gynecology*. 60(2), p 431-466.

Prevention & Practice Considerations

Prevention of medical errors & adverse outcomes focus on:

- Safety culture of the organization
- Communication
- Teamwork
- Use of protocols and checklists



Summary

- The U.S. is faced with maternal health crisis.
- Racial disparities compound this crisis.
- Although anesthesia-related mortality has drastically declined in the last 50 years, growing disparities continue to negatively affect maternal health outcomes.
- Anesthesia professionals can play an important role in reducing these disparities by implementing various strategies into practice:
    - Effective communication
    - Culturally competent care
    - Reliance on outcomes data and standardized protocols, and
    - Recruitment of diverse personnel.

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Professional Practice Guidelines

AANA Analgesia and Anesthesia for the Obstetric Patient, Practice Guidelines

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Analgesia and Anesthesia for the Obstetric Patient
Practice Guidelines

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ASA and ACOG have joint Practice Guidelines:

1. Guidelines for Neuraxial Anesthesia in Obstetrics

2. Practice Guidelines for Obstetrical Anesthesia

American Society of Anesthesiologists

Optimal Goals for Anesthesia Care in Obstetrics

Committee of Origin: Obstetric Anesthesia

(Approved by the ASA House of Delegates on October 17, 2007, and last amended on October 13, 2021)

ABSTRACT: Good obstetric care requires the availability of qualified personnel and equipment to administer general or neuraxial anesthesia. The extent and degree to which anesthesia services are available varies widely among hospitals. However, for any hospital providing obstetric care, certain optimal anesthesia goals should be sought. These include:

I. Availability of a licensed practitioner who is credentialed to administer an appropriate anesthetic whenever necessary. For many women, neuraxial anesthesia (epidural, spinal, or combined spinal epidural) will be the most appropriate anesthetic.

II. Availability of a licensed practitioner who is credentialed to maintain support of vital functions in any obstetric emergency.

III. Availability of anesthesia and surgical personnel to permit the start of a cesarean delivery in a timely manner in accordance with clinical needs and local resources.

IV. Because the risks associated with trial of labor after cesarean delivery (TOLAC) and uterine rupture may be unpredictable, the immediate availability of appropriate facilities and personnel, (including obstetric anesthesia; nursing personnel; and a physician capable of monitoring labor and performing cesarean delivery, including an emergency cesarean delivery) is optimal. When resources for immediate cesarean delivery are not available, patients considering TOLAC should discuss the hospital's resources and availability of obstetric, anesthetic, pediatric, and nursing staff with their obstetric

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Potential Solutions (AANA)

- Recognize the role racism and discrimination play in maternal health outcomes.
- Be a patient advocate
- Be aware of one's own implicit bias
- Embrace cultural humility
- Be aware of your community's needs
- Accommodate literacy needs and linguistic barriers of your patients
- Incorporate education on cultural competency in your practice
- Collect health outcomes data
- Develop, implement and maintain anti-racist/anti-discrimination policies at your facility
- Encourage diversity in nurse anesthesiology profession

Source: The CRNAs' Role in Addressing Racial and Ethnic Disparities in Anesthesia Care

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Thank you!

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CRNA focused. CRNA inspired.