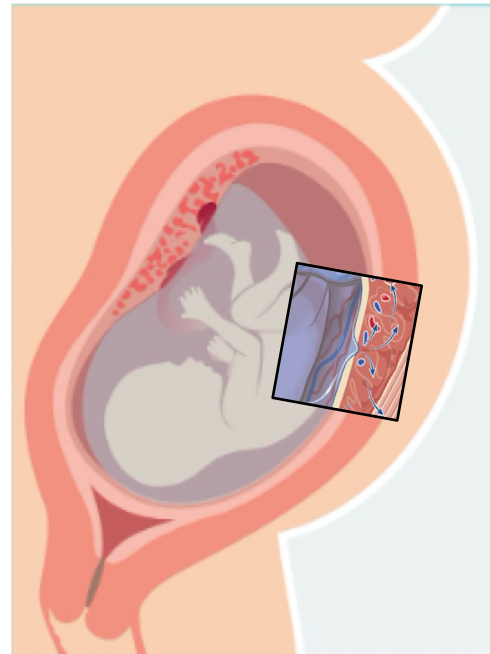


Amniotic Fluid Embolism: A Retrospective Single-Center Observational Description of Anesthetic Management and Outcomes

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Background^{1,2,3}



Amniotic Fluid
Embolism

Pathophysiology

- Maternal response to fetal tissue
- Systemic inflammatory response

Presentation

- Acute pulmonary hypertension
- Cardiovascular collapse
- Coagulopathy

Epidemiology

- Incidence: ~ 1 in 40,000 deliveries
- Mortality rate: 20-60%

Treatment

- Cardiovascular support
- Correct coagulopathy
- Ensure adequate circulating volume

Barriers⁴

Small Case
Series

Large
Database
Studies

Rich Clinical
Information

Large Cohorts

Limited
Accuracy

Limited in size

Limited Clinical
Information

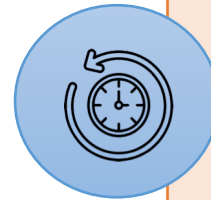
Hypothesis

ICD codes associated with AFE combined with anesthesia records with evidence of cardiopulmonary collapse and acute coagulopathy could identify a cohort of patients to investigate the acute management of suspected AFE.

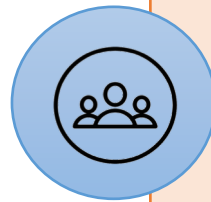
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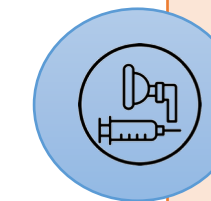
Methods



Retrospective chart review from 1/1/2000 –
1/31/2024 using AFE ICD9/10 codes

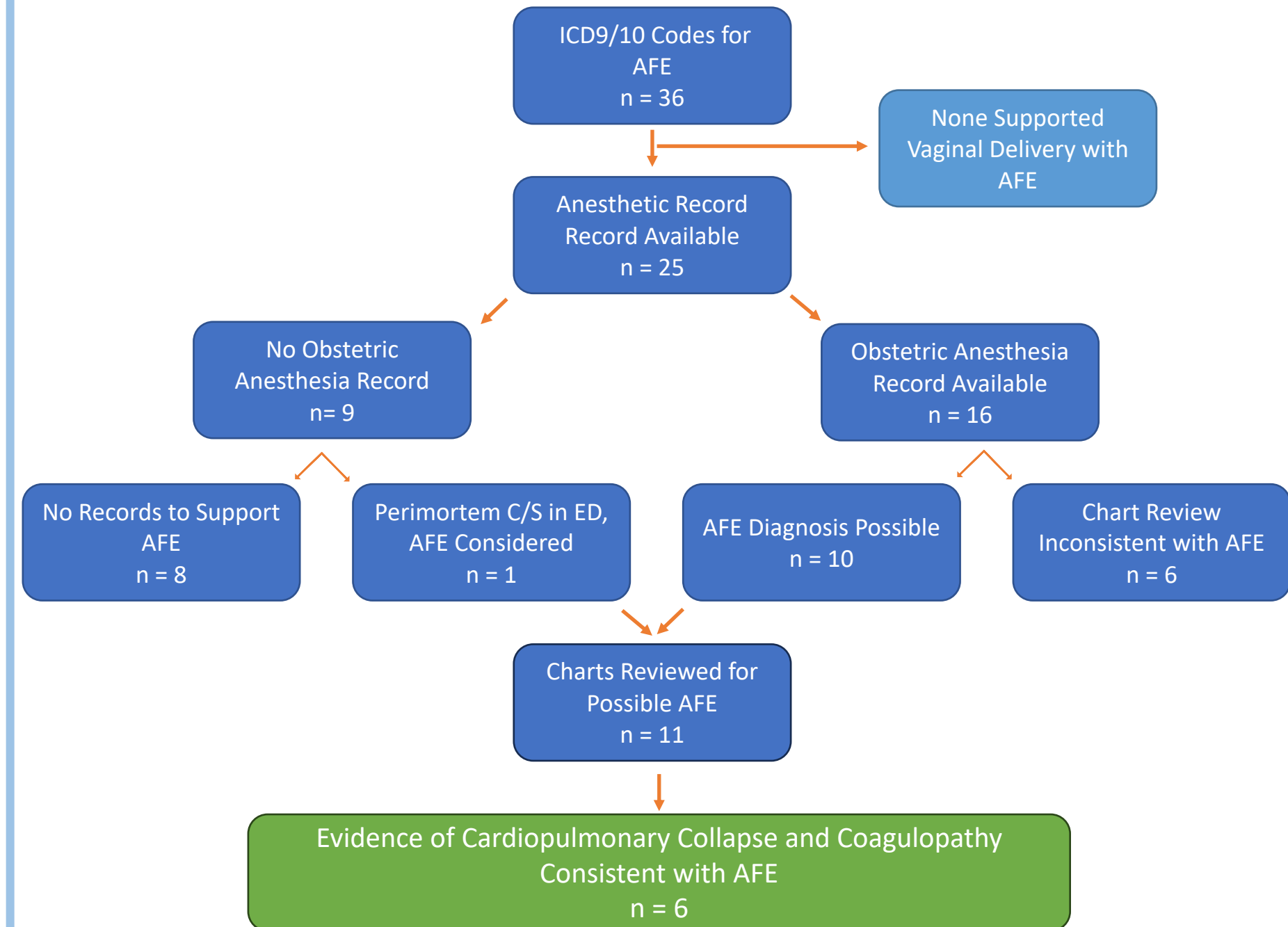


3 reviewers confirmed cardiopulmonary
collapse and coagulopathy



Collected data on anesthetic
management and patient outcomes

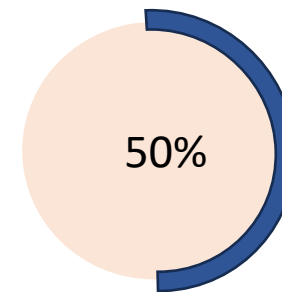
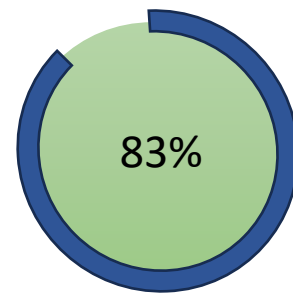
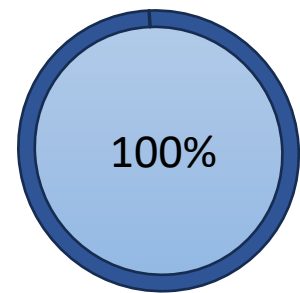
Patient Selection



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Results



Management

Intubated
Arterial Line
Vasopressor Support
Blood Products

Central Line
Inotropes

ECMO

Outcomes

Survival to Discharge
(average stay = 17 days)

Unplanned Hysterectomy
AKI

Table 1

Anesthetic management and outcomes in patients with suspected amniotic fluid embolism.

Patient	1	2	3	4	5	6
Demographic Information						
Age (years)	42	40	30	28	37	22
BMI (kg/m ²)	32	27	32	33	28	31
Nulliparous	Yes	No	No	No	Yes	Yes
Mode of Delivery	D&C	Vaginal	Intrapartum C/S	Intrapartum C/S	Intrapartum C/S	Perimortem C/S
Gestational Age	18w5d	39w1d	34w5d	39w2d	39w0d	25w
Cardiopulmonary Support						
Intubation	Yes	Yes	Yes	Yes	Yes	Yes
Chest Compressions	Yes	No	No	No	No	Yes
Arterial Line	Yes	Yes	Yes	Yes	Yes	Yes
Central Line	Yes	Yes	Yes	No	Yes	Yes
Vasopressors	Yes	Yes	Yes	Yes	Yes	Yes
Pulmonary Vasodilators	No	No	No	No	Yes	No
Transesophageal Echocardiography	Yes	No	Yes	No	Yes	Yes
Extracorporeal Membrane Oxygenation	Yes	No	Yes	No	No	Yes
Blood Product Administration and Hemostatic Agents						
Blood Products	Yes	Yes	Yes	Yes	Yes	Yes
Red Blood Cells (units)	8	21	35	7	18	2
Fresh Frozen Plasma (units)	5	17	31	11	4	0
Platelets (apheresis units)	3	3	10	2	8	1
Fibrinogen Concentrate (g)	0	6	9	8	15	0
Cryoprecipitate (units)	0	0	15	0	0	0
Tranexamic Acid (grams)	0	1	1	2	1	0
Patient Outcomes						
Unplanned Hysterectomy	No	Yes	No	Yes	Yes	No
Acute Kidney Injury	Yes	No	Yes	No	Yes	Yes
Length of Stay (days)	34	5	1	11	15	37
Survival to discharge	Yes	Yes	No	Yes	Yes	Yes

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Conclusion

