

Background

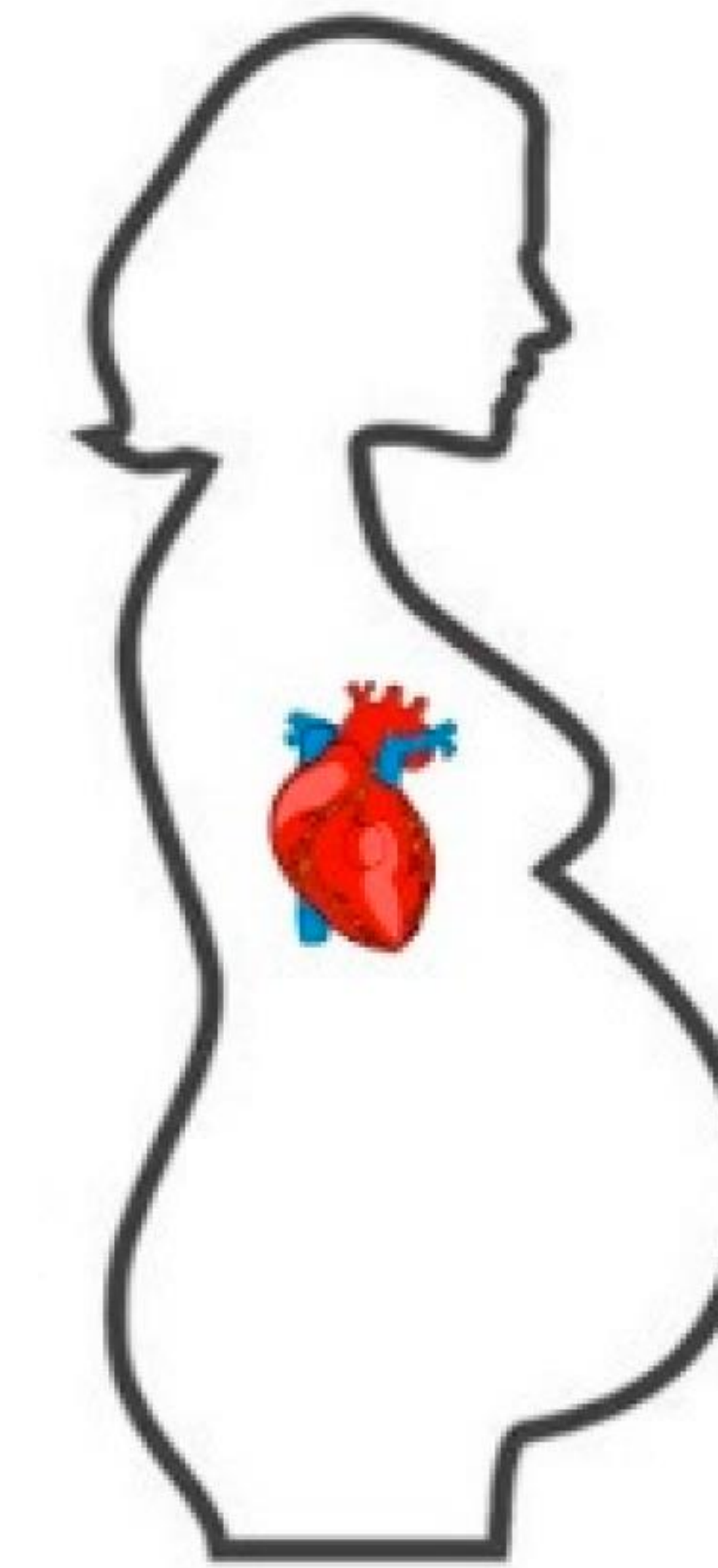
- Valvular heart disease (VHD) prevalence in pregnancy: ~1%
- Left-sided & stenotic lesions may be less well tolerated
- Vaginal deliveries generally preferred for patients with cardiac disease

Aims

Compare morbidity outcomes for vaginal vs. cesarean deliveries in obstetric patients with VHD

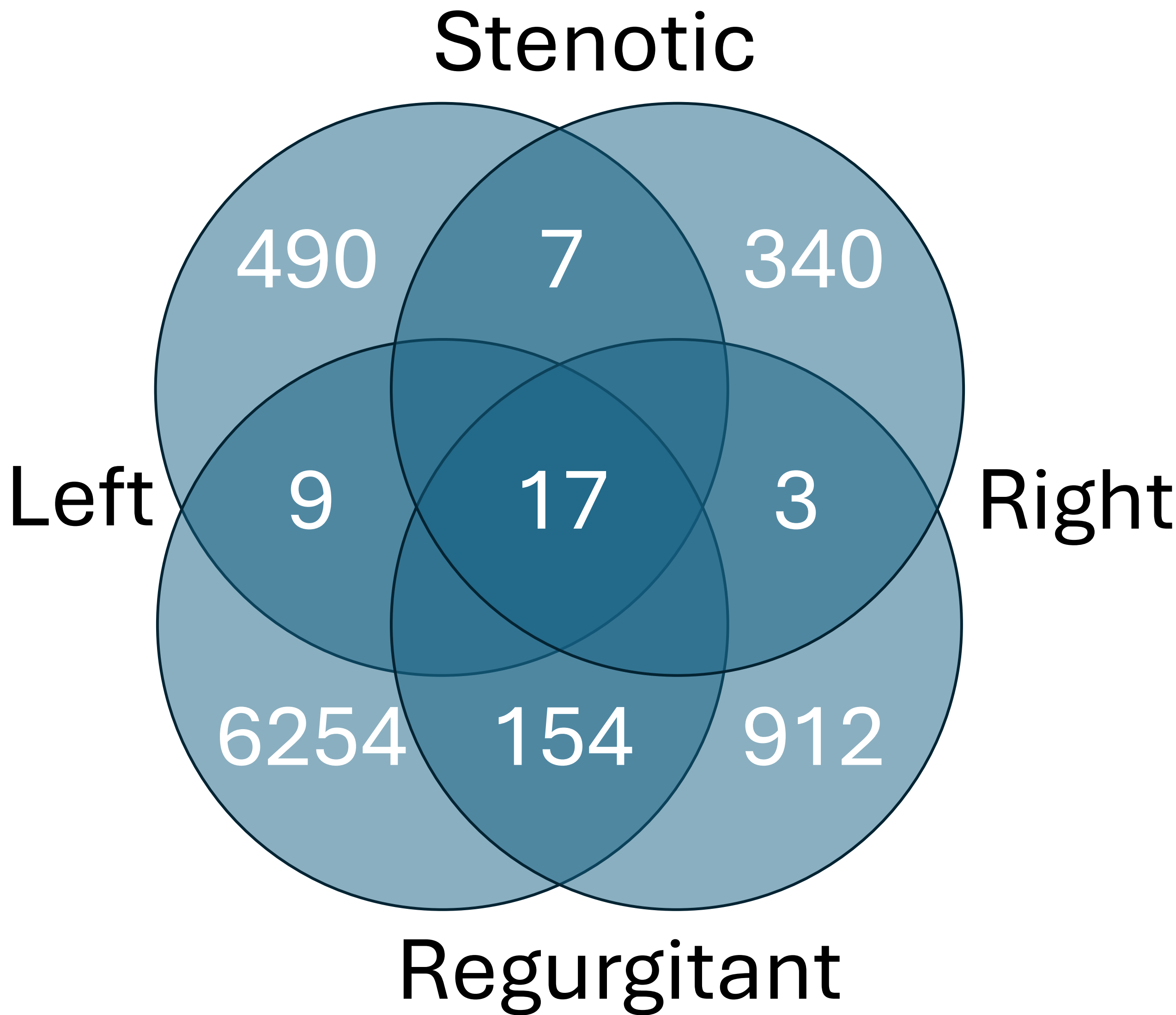
Hypothesis

Trial of labor would not be associated with greater morbidity



Cohort

- Obstetric patients 12-55y
- Delivery 1/1/16 – 9/30/20
- Valvular heart disease



Outcomes

Severe Maternal Morbidity

Blood Transfusion

ICU Admission

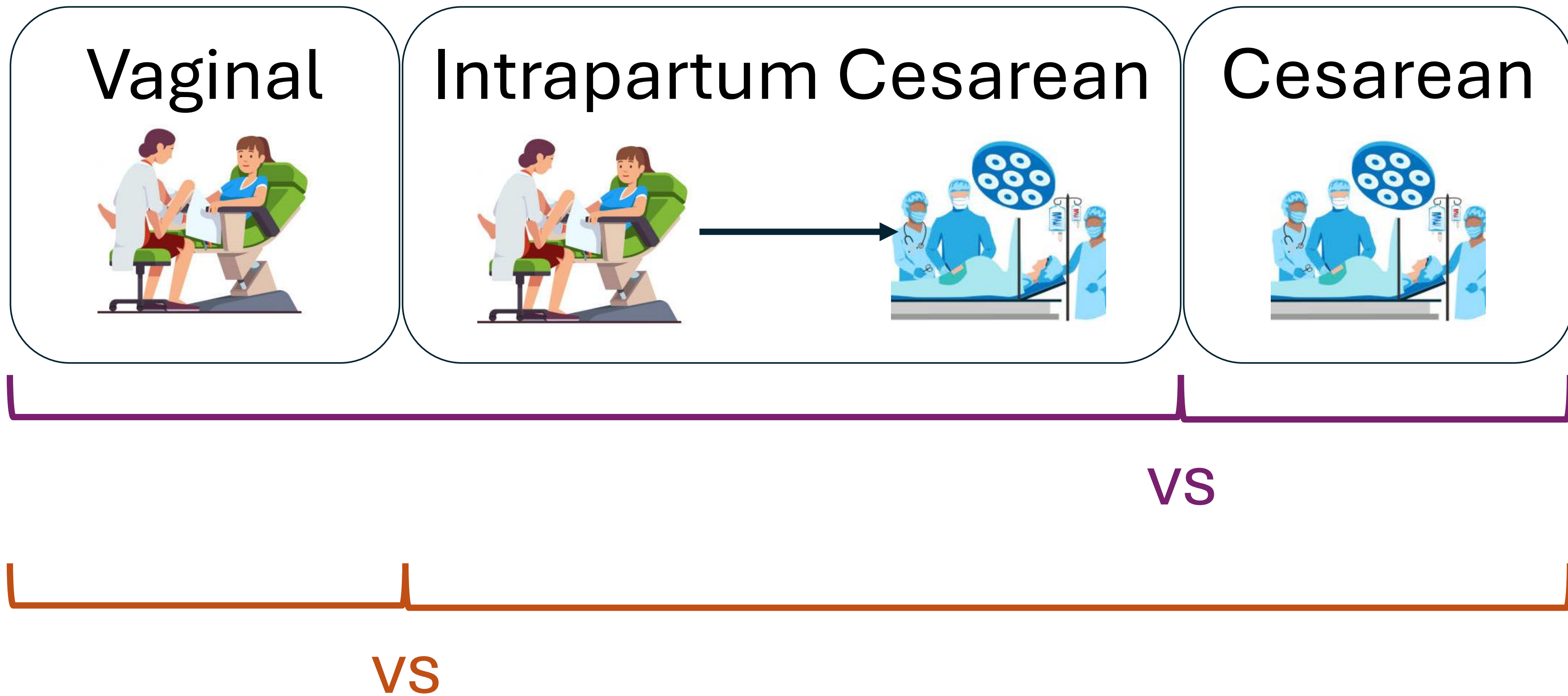
90-Day Readmission

Hospitalization Duration

Analyses

Intention-to-Treat: Intended Deliveries

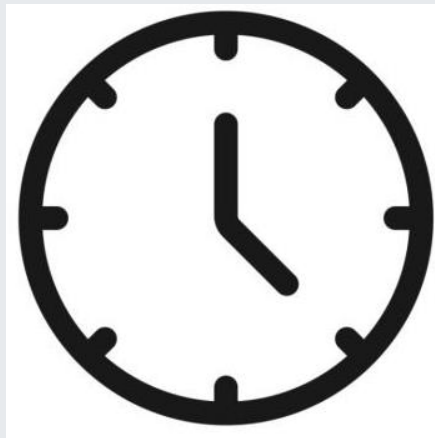
As-Treated: Actual Deliveries



Maternal Outcomes by Mode of Delivery in Pregnant Patients with Valvular Heart Disease: A Retrospective Cohort Study

Results

Outcomes with greater morbidity for cesarean vs. vaginal deliveries

	Intended Deliveries					Actual Deliveries				
										
Left Stenotic			2.41 (1.37-4.24)					3.98 (2.13-7.43)		1.38 (0.62-2.14)
Left Regurgitant		2.09 (1.18-3.71)	1.91 (1.46-2.50)			2.38 (1.73-3.27)	2.42 (1.25-4.69)	2.27 (1.71-3.02)	1.59 (1.16-2.18)	1.08 (0.84-1.32)
Right Stenotic										2.43 (1.44-3.41)
Right Regurgitant			1.61 (1.02-2.55)			2.65 (1.55-4.53)	3.56 (1.35-9.42)	2.61 (1.62-4.22)		



Adjusted Odds Ratio (95% CI)



Mean Difference (95% CI)

 UNIVERSITY OF MICHIGAN



Conclusions

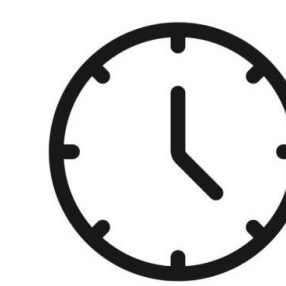
- Greater morbidity:
 - Cesarean deliveries > vaginal deliveries
 - Actual cesarean > intended cesarean

- Most common morbidity among all lesions for both analyses: ICU admission



- Morbidity by VHD lesions:

- Left Regurgitant:



- Right Regurgitant:



- Left Stenotic:



- Right Stenotic:



Discussion

- Trial of labor not associated with greater morbidity
- Intrapartum cesarean deliveries at higher risk
- Supports vaginal deliveries for patients with VHD when clinically feasible
- Patients may benefit from delivering in care center with ICU capabilities
- Importance of individualized, lesion-specific delivery planning



References:

- Curr Treat Options Cardiovasc Med 2023; 25(10):587-604
- Cardiol Clin 2021; 39:151-61
- Obstet Gynecol 2019; 133(5):e320-56
- Anesth Analg 2023; 136(4):728-37