

Introduction

- Increasing number of adults with congenital heart disease (CHD)¹
- Increased pregnancies in women with CHD
~35% increase in annual deliveries from 1998-2007²
- Women with CHD have an increased risk of pregnancy related complications
 - heart failure, sustained arrhythmias, and thromboembolic events
- Multiple published risk stratification scores are limited to tertiary referral centers (TRC).
- Delivery outcomes at non-tertiary referral center (non-TRC) has not been reported

Aim

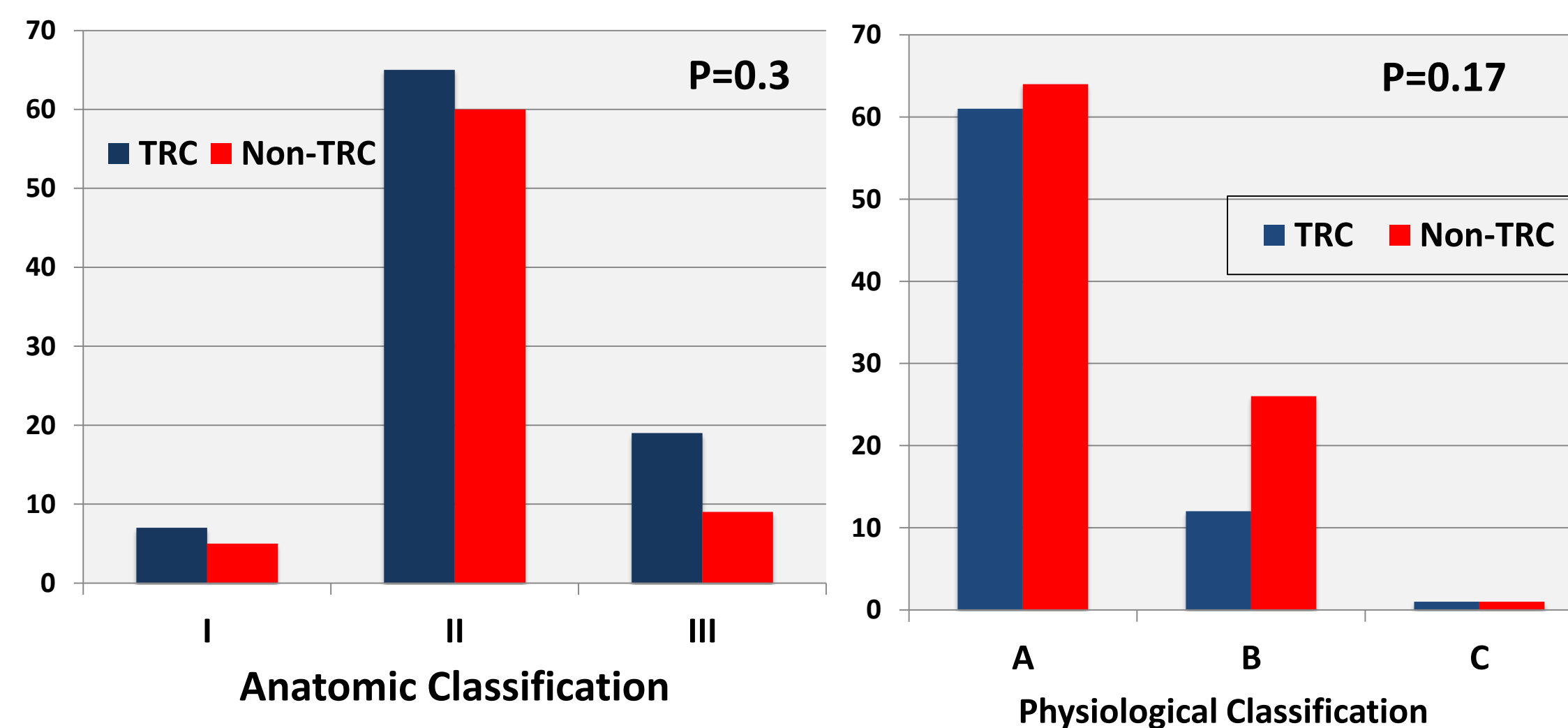
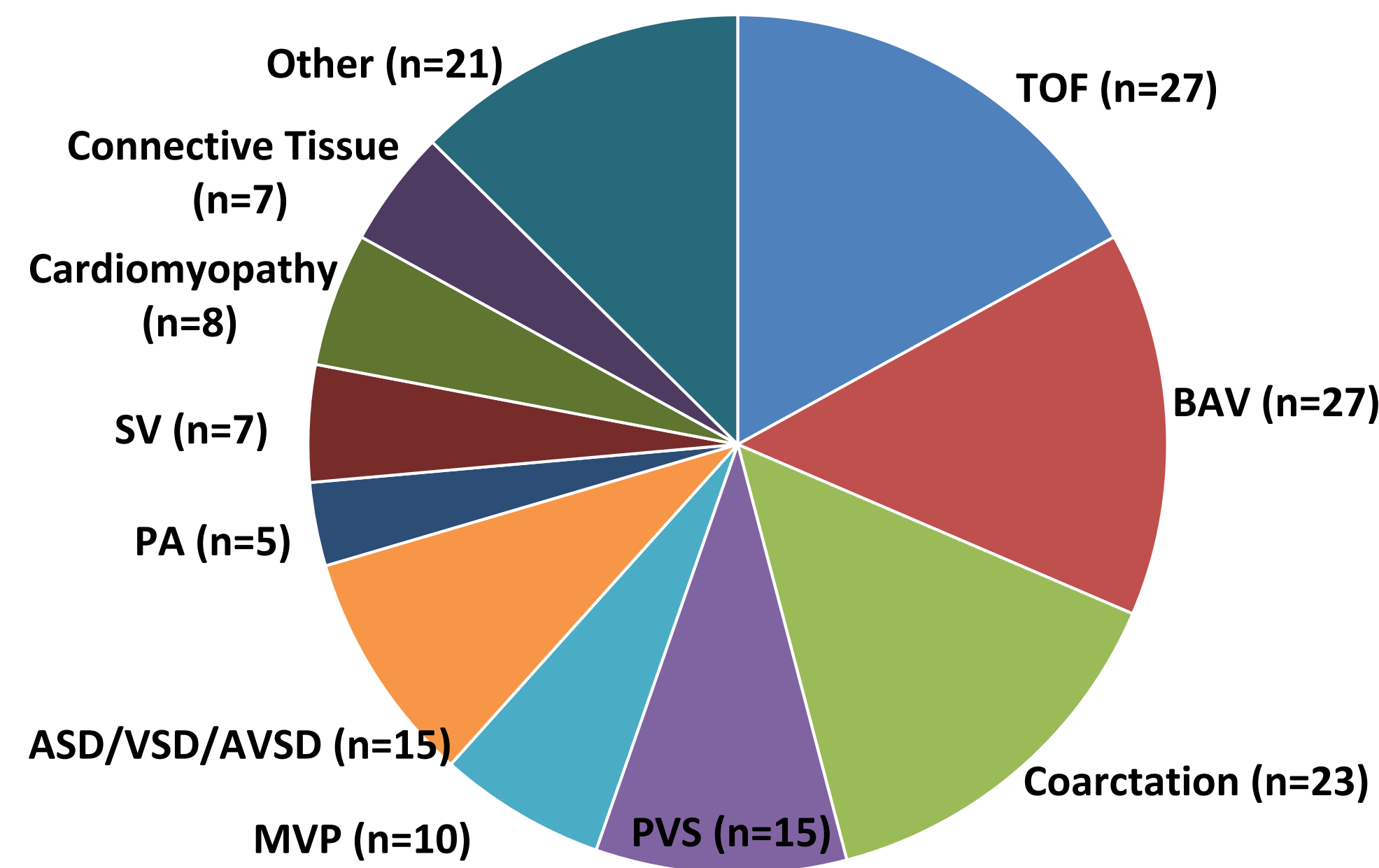
- Assess maternal and fetal outcomes in women with CHD at non-TRC compared to those who delivered at a tertiary referral center

Methods

- Pregnancies managed in the Wisconsin Adult Congenital Heart Disease Program (WATCH) program between 2013-2019
- Risk Stratification
 - Zahara, WHO, CARPREG-II³
 - 2018 ACHD A/P Classification⁴
- Stratified by delivery location
TRC= FMLH
Non-TRC = community based hospital
- Adverse Maternal Events Recorded:
 - Heart Failure
 - Arrhythmias
 - Aortic Dissection
 - Cardiac Intervention
 - Mortality
- Adverse Fetal Events Recorded:
 - IUGR
 - Preterm Delivery (<37 wks EGA)
 - Fetal Demise
 - Birth weight (<2500g)
 - Fetal anomaly
 - Fetal CHD

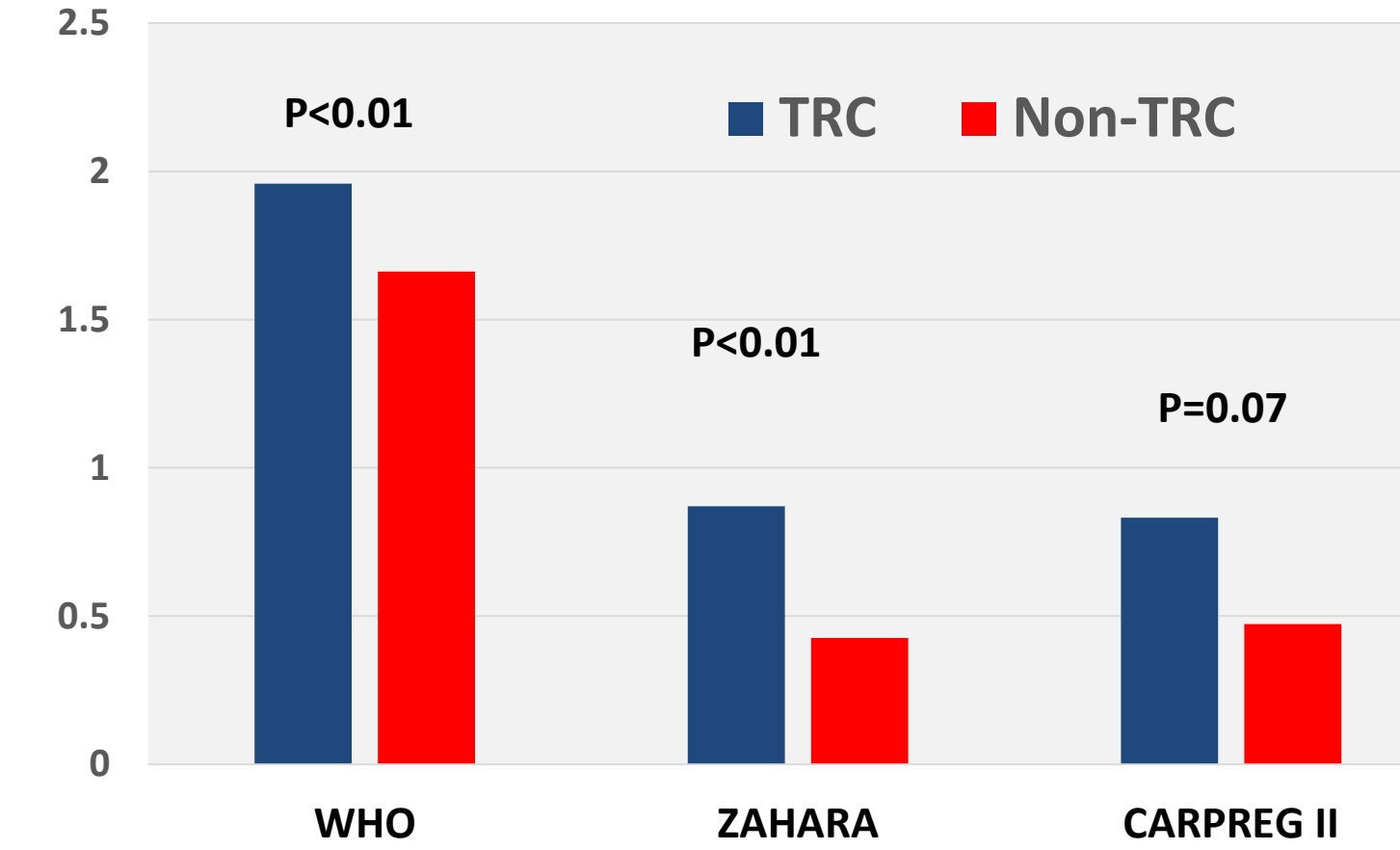
Results

Demographics	Total	TRC	Non-TRC/Regional	P value
Patients	137	79	58	
Pregnancies	165	91 (65%)	74 (45%)	
Maternal Events	7	4 (6%)	3 (3%)	0.3
Fetal Events	36	22 (28%)	14 (24%)	0.5
Age	28.9 yrs	28.6 yrs	29.1 yrs	0.7
Arrhythmias	11	9	2	0.07
Hypertension	40	25	15	0.3
NYHA				0.8
I-II	162	89	73	
III	3	2	1	
IV	0	0	0	

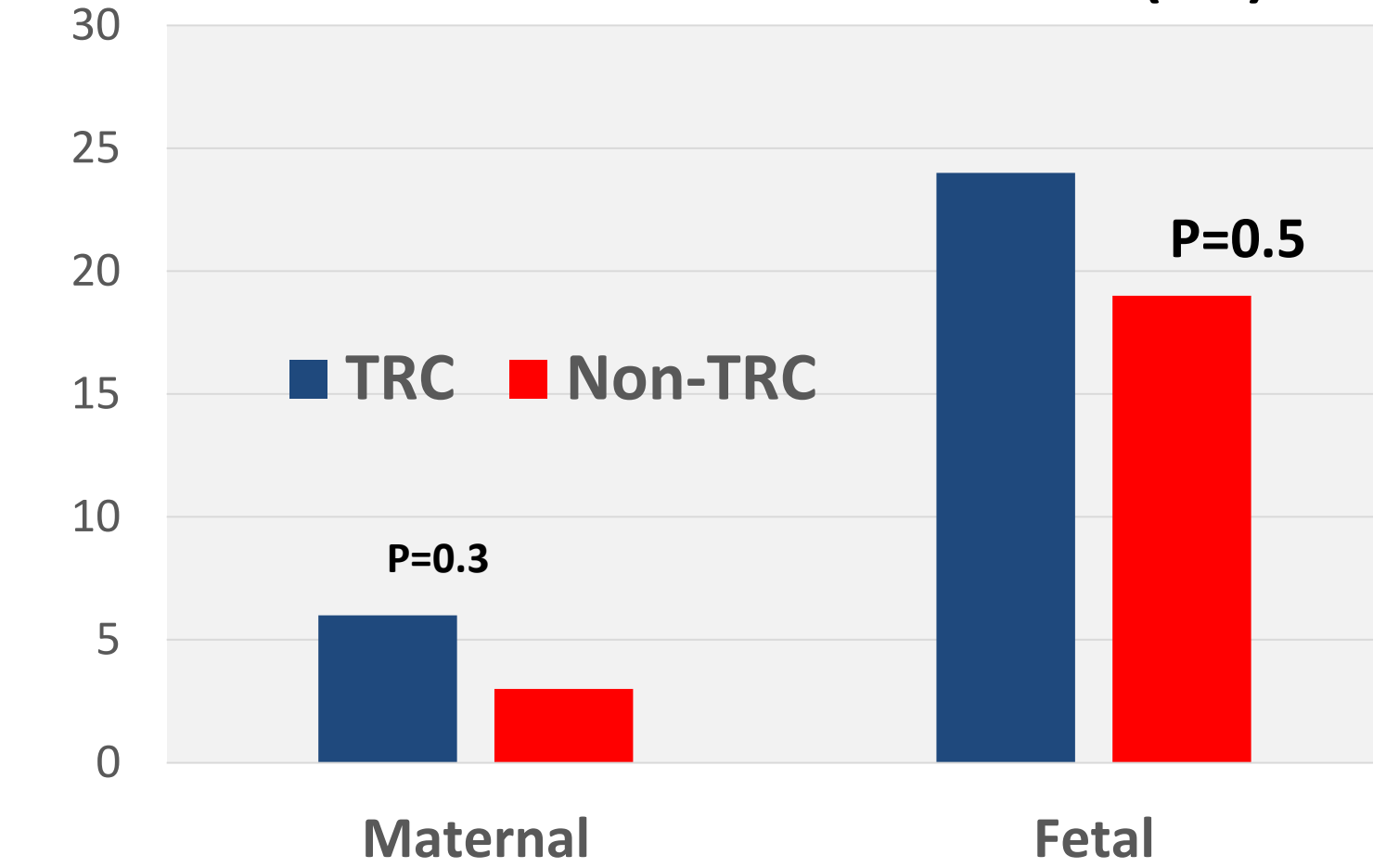


Results

Risk Stratification



Adverse Events (%)



Adverse Maternal Events

Adverse Fetal Events

	TRC (n=4)	NON-TRC (n=3)		TRC (n=22)	NON-TRC (n=14)
Mortality	1	0	Preterm Delivery	9	8
CHF	2	3	Fetal Demise	3	1
Arrhythmia	2	0	BW <2500g/ IUGR	7	9
			Other	2	0

Discussion

- There was not increased maternal cardiac or fetal complications when delivery occurred at non-TRC
- Despite similar disease complexity (A/P classification), traditional pregnancy risk assessment may help identify women with CHD who are appropriate candidates for safe delivery at non-TRC
- Neonatal resources should be considered at non-TRC due to the high frequency of neonatal complications

References

- Marelli A., Gilboa S., Devine O., et al. (2012) Estimating the congenital heart disease population in the United States in 2010: what are the numbers? *J Am Coll Cardiol* 59:E787.
- Opatowsky AR, Siddiqi OK, D'Souza B, et al. Maternal cardiovascular events during childbirth among women with congenital heart disease. *Heart*. 2012;98:145-151.
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- 2018 AHA/ACC Guideline for the Management of Adults With Congenital Heart Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *J Am Coll Cardiol* 2018;Aug 16