Aspirin Prescribing and Adherence Patterns for Pregnant Patients in a Safety-Net System

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OBJECTIVE

- Review patient demographics, prescribing, and adherence patterns of aspirin (ASA) in pregnancy in a safety-net hospital system
- Inform future ASA implementation strategies in patient populations high-risk for preeclampsia (PE)

STUDY DESIGN

- Retrospective cohort study of 921 deliveries at risk for PE from January – November 2024 at three safety-net hospitals in Southern California
- Subjects were categorized into 3 adherence groups: **low adherence** as <50%, **moderate adherence** as 50-74.9%, and **high adherence** as ≥75% of their obstetric visits based on self-report
- A multinomial logistic regression model was used

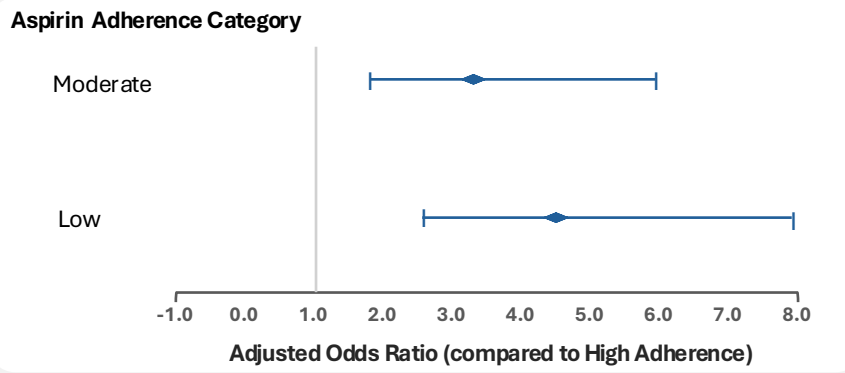
RESULTS

- 59% of those prescribed ASA are high-risk for PE due to multiple moderate risk factors
- High adherence was best when ASA was prescribed <12 weeks than at 12-16 weeks and >16 weeks
- Compared to high adherence, PE risk was higher in the low (aOR=4.53, 95% CI: 2.61-7.93) and moderate adherence groups (aOR=3.32, 95% CI: 1.86-5.94)

RESULTS

Almost 2/3 of patients in a safety-net system are high-risk for preeclampsia but by taking aspirin ≥75% of their pregnancy, they were 70% less likely to develop preeclampsia

Figure 1. Adjusted odds ratios for preeclampsia risk across aspirin adherence categories



CONCLUSION

- Most pregnant patients in our safety-net system are high-risk for PE
- High adherence to ASA (≥75%) was associated with lower odds of PE
- ASA adherence was highest when prescribed <12 weeks gestation
- Early prescription and early tailored counseling should be prioritized with consideration for universal implementation in high-risk patient populations to improve adherence and lower prescription barriers

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RESULTS

Table 1. Comparison of gestational age at aspirin prescription, adherence, and demographics

Gestational Age at Prescription	<12 w (n=150)	12-16w (n=229)	>16w (n=148)	p-value
Adherence				<0.001
Low	26 (17.3%)	45 (19.7%)	81 (54.7%)	
Moderate	21 (14.0%)	89 (38.9%)	58 (39.2%)	
High	103 (68.7%)	95 (41.5%)	9 (6.1%)	
Risk Status				<0.001
High	99 (66.9%)	131 (57.7%)	76 (51.4%)	
Moderate	49 (33.1%)	96 (42.3%)	72 (48.6%)	
Mean Maternal Age	32.7	32.4	32.0	<0.001
Race/Ethnicity				0.09
Hispanic	102 (68.0%)	143 (62.4%)	90 (60.8%)	
Black	25 (16.7%)	25 (16.7%)	34 (23.0%)	
Asian/Pacific Islander	5 (3.3%)	9 (3.9%)	8 (5.4%)	
Other	3 (2.0%)	6 (2.6%)	7 (4.7%)	
White	15 (10.0%)	10 (4.4%)	9 (6.1%)	
Publicly Insured				0.382
No	10 (6.7%)	14 (6.1%)	4 (2.7%)	
Yes	140 (93.3%)	215 (93.9%)	144 (97.3%)	
Nulliparous				<0.001
No	97 (64.7%)	125 (54.6%)	73 (49.3%)	
Yes	53 (35.3%)	104 (45.4%)	75 (50.7%)	
Advanced Maternal Age				0.039
No	85 (56.7%)	136 (59.4%)	73 (49.3%)	
Yes	65 (43.3%)	93 (40.6%)	75 (50.7%)	
Obesity				0.231
No	35 (23.3%)	73 (31.9%)	44 (29.7%)	
Yes	115 (76.7%)	156 (68.1%)	104 (70.3%)	
Pre-existing Hypertension				<0.001
No	100 (66.7%)	174 (76.0%)	125 (84.5%)	
Yes	50 (33.3%)	55 (24.0%)	23 (15.5%)	
Pre-existing Diabetes				<0.001
No	84 (56.0%)	156 (68.1%)	92 (62.2%)	
Yes	66 (44.0%)	73 (31.9%)	56 (37.8%)	