

# Low-Dose Aspirin Usage during Pregnancy: A Retrospective Structured Electronic Medical Record Data Study

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## Abstract

The American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal-Fetal Medicine (SMFM) currently recommend low-dose aspirin (81 mg/day) prophylaxis for women at high risk for preeclampsia; however, various aspects of low-dose aspirin usage in pregnancy remain understudied.

## Objectives

To examine the impact of reminder software to prescribe low-dose aspirin when indicated at the point-of-care on aspirin prescription in high-risk individuals.

## Study Design

- Retrospective study of eligible low-dose aspirin candidates during pregnancy (ACOG guidelines, 2019-2023, Connecticut).
- Data extracted from Dorsata Prenatal with Care Plan technology in athenahealth EMR.
- Limited analysis to individuals meeting ACOG criteria for low-dose aspirin.
- Primary outcome: low-dose aspirin prescription.
- Secondary outcomes: preterm delivery (<32 weeks, <28 weeks), postpartum hemorrhage, cesarean delivery, eclampsia, gestational hypertension, preeclampsia, and low birthweight.
- Used logistic regression for crude odds ratio (cOR) with 95% confidence intervals.

## Results

Table 1. Comparison of care plan acknowledged with not acknowledged

	Acknowledged	Not Acknowledged	P-value	crude OR (95%CI)
<b>N</b>	23258	18705		
<b>Aspirin</b>	5857 (25.2)	1028 (5.5)	<0.001	5.79 (5.40-6.20)
<b>Preterm delivery &lt;32 weeks (n=23247/18636)</b>	850 (3.7)	1528 (8.2)	<0.001	0.42 (0.39-0.46)
<b>Preterm delivery &lt;28 weeks (n=23247/18636)</b>	633 (2.7)	1349 (7.2)	<0.001	0.36 (0.33-0.40)
<b>Postpartum hemorrhage</b>	246 (1.1)	256 (1.4)	<0.01	0.77 (0.65-0.92)
<b>Cesarean (n=22256/16429)</b>	8211 (36.9)	5792 (35.3)	<0.001	1.07 (1.03-1.12)
<b>Eclampsia</b>	4 (0.02)	2 (0.01)	0.58	1.61 (0.29-8.78)
<b>GHTN</b>	669 (2.9)	415 (2.2)	<0.001	1.32 (1.16-1.49)
<b>Preeclampsia</b>	254 (1.1)	179 (1.0)	0.17	1.14 (0.94-1.39)
<b>Low birthweight (n=20382/15009)</b>	1415 (6.9)	1046 (7.0)	0.92	1.00 (0.92-1.08)

Abbreviations: GHTN (gestational hypertension), OR (odds ratio) , 95%CI (confidence interval)

- Of 41963 individuals, 23258 had their Care Plan acknowledged and 18705 did not.
- Compared to individuals whose Care Plan was not acknowledged Individuals with an acknowledged Care Plan had:
  - Increased odds of:
    - Being started on low-dose aspirin (cOR 5.79 [5.40-6.20])
    - cesarean delivery (cOR 1.07 [1.03-1.12])
    - and gestational hypertension (cOR 1.32 [1.16-1.49])
  - Decreased odds of:
    - preterm delivery<32 weeks (cOR 0.42 [0.39-0.46])
    - preterm delivery <28 weeks (cOR 0.36 [0.33-0.40])
    - and postpartum hemorrhage (cOR 0.77 [0.65-0.92]).

## Conclusion

Dorsata Prenatal Care Plan can enhance the prescription of low-dose aspirin for individuals who meet the criteria for low-dose aspirin..

## References

- Low-dose aspirin use during pregnancy. ACOG Committee Opinion No. 743. American College of Obstetricians and Gynecologists. Obstet Gynecol 2018;132:e44-52. doi: 10.1097/AOG.0000000000002708

