

# Select Maternal and Fetal Outcomes in Penicillin Allergy

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## BACKGROUND

- 10% of the US population reports a penicillin (PCN) allergy<sup>1</sup>
- The negative implications of the PCN allergy label (PAL) have been well demonstrated in inpatient populations<sup>1</sup>
- There are limited data regarding the effects of the PAL on maternal and fetal outcomes<sup>2</sup>

## METHODS

- Live births from 2013-2018 occurring at 3 hospitals within Rochester Regional Health were identified through the electronic health record (Epic Hyperspace, WI)
- We examined the association of the PAL with select outcomes:
  - **Maternal:** Group B *Streptococcus* (GBS) colonization, C-section rate, labor duration, and length of stay (LOS)
  - **Neonatal:** Gestational age, LOS, antibiotic therapy, 5 min APGARs, neonatal intensive care unit (NICU) admission, oxygen therapy, and birthweight
- We also examined these same outcomes in GBS-positive women only

## RESULTS

- There were a total of 20,267 live births analyzed, with 1,819 (9%) of women with a PAL
- There was no difference in the select maternal and fetal outcomes in women with and without the PAL
- There was no difference in the same outcomes in GBS-positive women with and without the PAL

## DISCUSSION

- We hypothesize our negative study is due to our sample size and that a larger sample size would show differences in select outcomes or that differences would exist in outcomes not examined
- Given the potential benefits of PCN allergy de-labeling in the obstetric population and the unquestionable benefits of de-labeling in other populations, PCN allergy evaluations should be a part of all medical care

## REFERENCES

1. Shenoy ES. JAMA. 2019 Jan 15;321(2):188-99.
2. Desai SH. Perm J. 2017;21:16-080.

# ROCHESTER REGIONAL HEALTH

In penicillin allergic pregnant women, a **penicillin allergy label** was **not** associated with:

- ✓ Higher C-section rates
- ✓ Labor duration
- ✓ Increased maternal antibiotic therapy
- ✓ NICU admissions
- ✓ Length of stay

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Table 1. Baseline Demographics

Total live births	20,267
<b>No PCN allergy</b>	<b>18,448 (91%)</b>
Median age, years (IQR)	31 (27-35)
<b>PCN allergy</b>	<b>1,819 (9%)</b>
Median age, years (IQR)	32 (28-36)

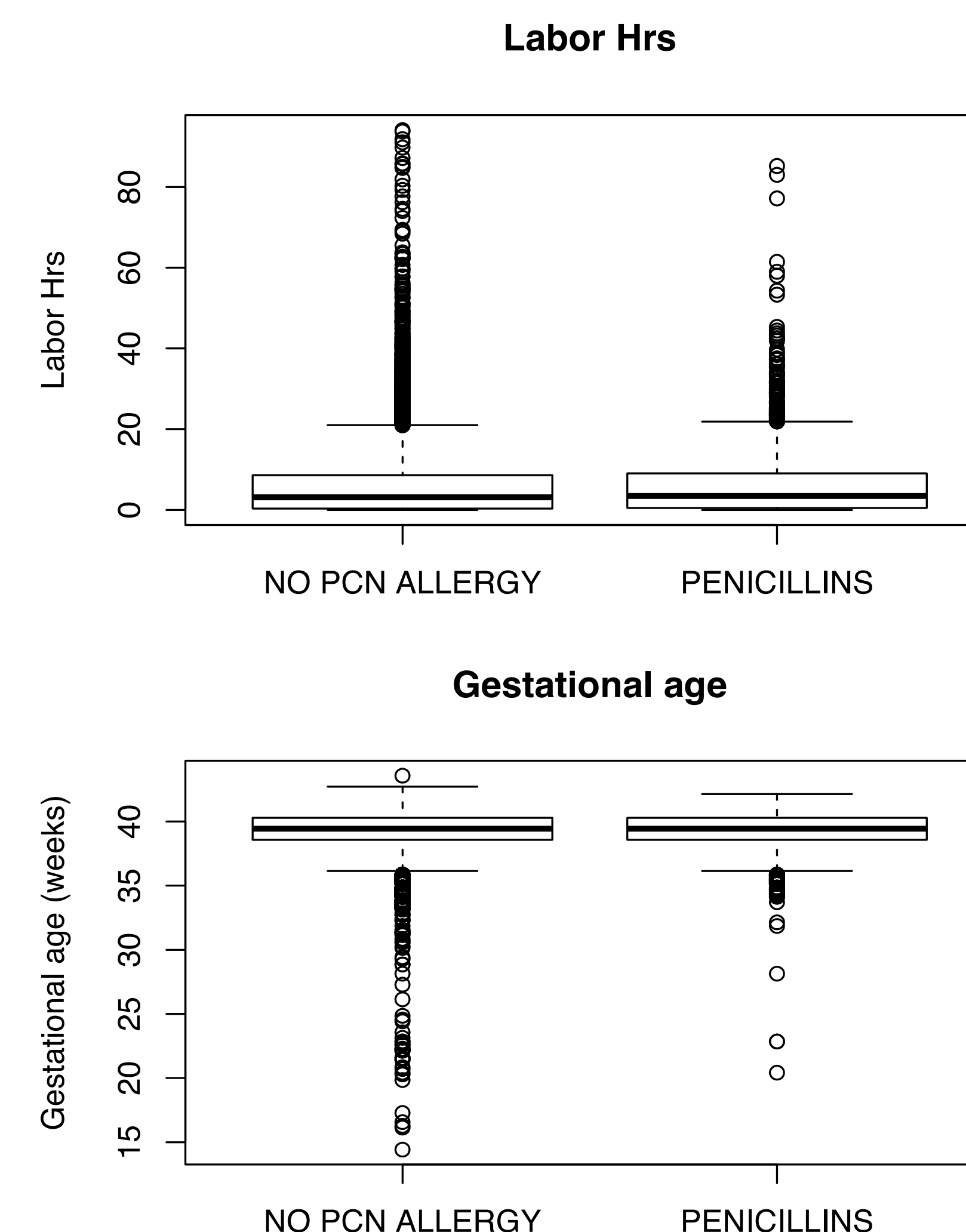


Table 2. Select Maternal and Fetal Outcomes

Outcome	All patients (n=20,267)			GBS-positive patients (n=3,265)		
	No PAL (n = 18,448)	PAL (n = 1,819)	p value	No PAL (n=2,974)	PAL (n=291)	p value
GBS + freq (%)	2974 (22)	291 (22)	0.98	NA	NA	NA
C-section, freq (%)	5783 (32)	575 (32)	0.70	943 (32)	95 (33)	0.60
NICU freq (%)	2061 (11)	176 (11)	0.14	331 (11)	34 (12)	0.52
Labor, hrs (mean,IQR)	6.13 (0.32-8.58)	6.51 (0.46-9.03)	0.10	6.18 (0.27-8.67)	7.48 (1.12-9.78)	0.06
Mat. Abx freq (%)	1812 (10)	174 (10)	0.76	294 (10)	34 (12)	0.38
Mat. LOS, (mean,IQR)	2.71 (2.00-3.00)	2.76 (2.00-3.00)	0.12	2.83 (2.00-3.00)	2.93 (2.00-3.00)	0.41