



PREVENT PRETERM BIRTH *by MOVING RESEARCH INTO PRACTICE*

MATERNAL 25(OH)D ≥40 NG/ML ASSOCIATED WITH >60% LOWER PRETERM BIRTH RISK

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New Standard of Care: Vitamin D Screening and Supplementation at the Medical University of South Carolina (MUSC)

Background

- High rate of preterm birth (PTB) nationwide (12%), ~18% at MUSC.
- RCTs demonstrating risk reduction with vitamin D supplementation.
- MUSC started implementation of new standard of care for pregnant women to receive vitamin D testing and supplementation in September 2015 that included:
 - 25(OH)D testing at first prenatal visit with recommended follow-up testing
 - Free vitamin D supplements made available
 - Treatment goal was ≥40 ng/mL

Objective

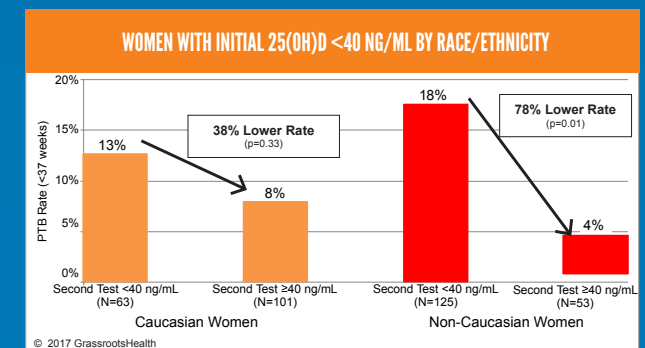
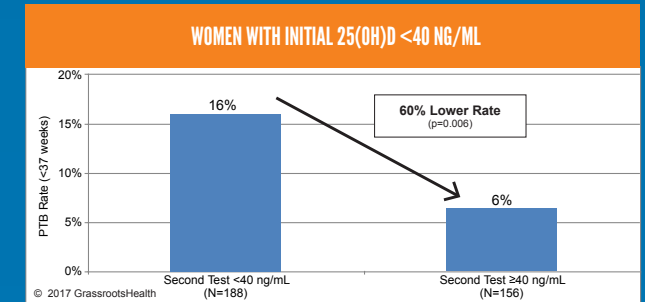
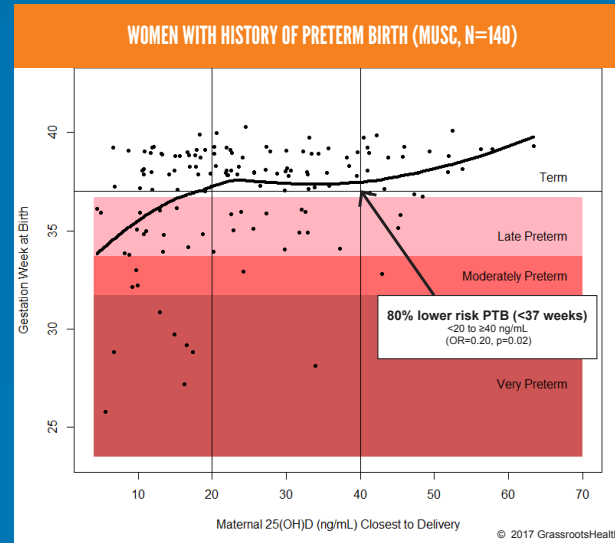
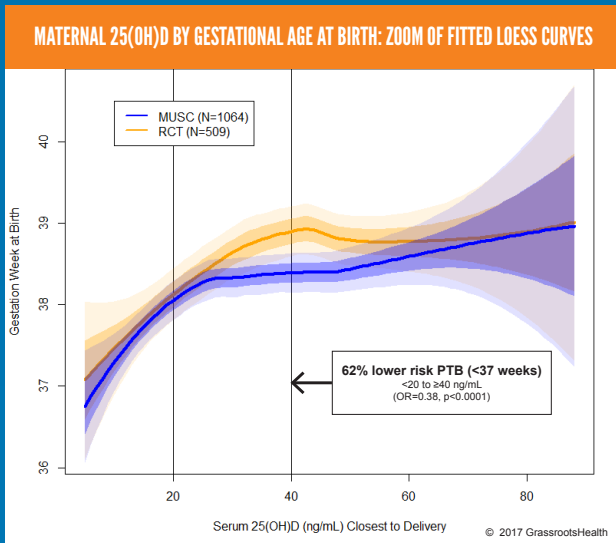
- To determine the association between maternal 25(OH)D and PTB risk within the general obstetrical population at MUSC (ages 18-45) using medical record data.

Results with 1,064 Women

- Overall PTB rate (<37 weeks) is currently 13% among women with a live, singleton birth and at least one 25(OH)D test during pregnancy.

Subgroup Analysis Among Women with History of PTB

25(OH)D Testing & Supplementation Results



- After adjusting for socioeconomic variables, the lower risk of 62% is essentially unchanged (OR=0.41, p=0.002).

Conclusions

- Maternal 25(OH)D ≥40 ng/mL was associated with substantial reduction in PTB risk in a large, diverse population of women.
- Vitamin D status is a key modifiable maternal risk factor for the prevention of PTB.

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