

Preterm Birth and I7P Efficacy

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Introduction

- Preterm birth (PTB) increases risk for infant health problems, developmental issues, and mortality as compared to infants who are born full-term.
- The most significant risk factor for PTB is a history of preterm labor¹.
- Several small trials suggest the administration of progesterone as an effective intervention to prevent sequential preterm labor.
- 17-alpha-hydroxyprogesterone caproate (I7P) is a synthetic form of progesterone administered in weekly injections beginning between weeks 16-20.
- Despite the positive effects of I7P and the successes its implementation has shown, there still exists barriers to its referral and adherence.
- **This poster aims to highlight those successes and barriers, and the March of Dimes initiatives that aids in the reduction of preterm birth.**

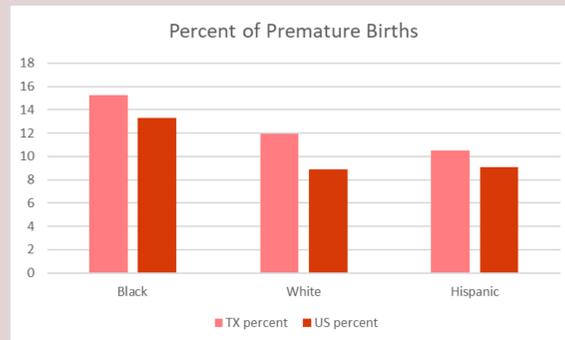


Figure 1. Graph depicting percentages of premature births in Texas and the United States. Data from National Center for Health Statistics and Texas Department of Health and Human Services.

Materials and Methods

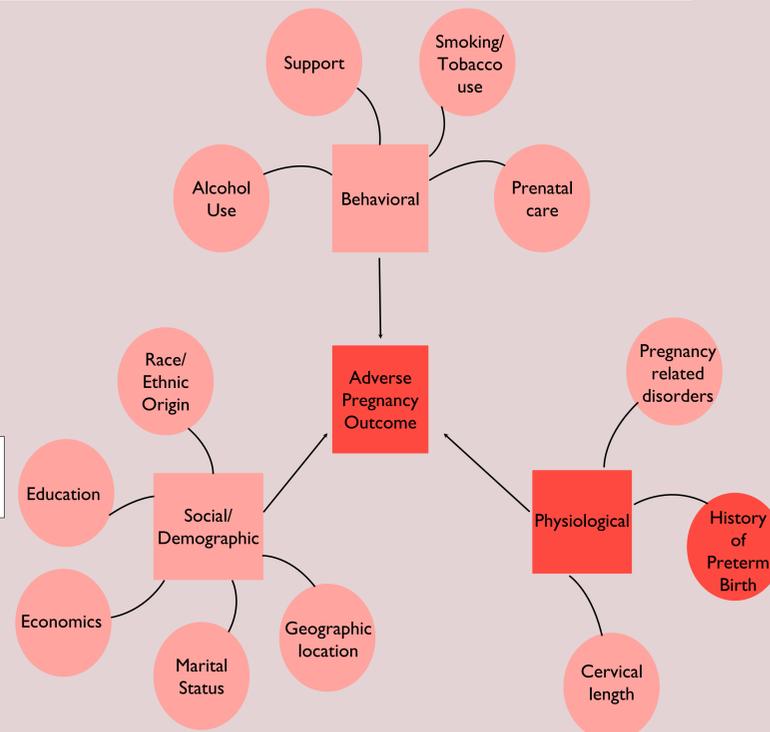
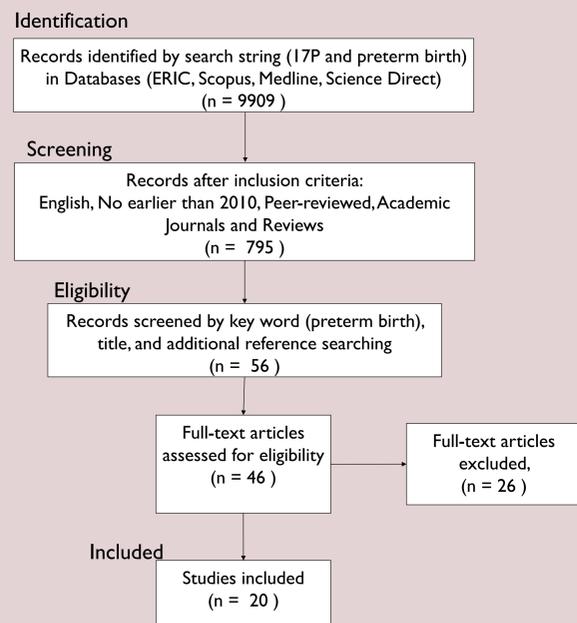


Figure 3. Diagram of Factors contributing to adverse pregnancy outcomes. Adapted multifactorial conceptual model.

Results

- In the selected studies, the recurrent preterm birth rate of women taking I7P was between 24% to 39.6%
- Overall, I7P has been shown to reduce PTB <32 or <34 weeks, but not always <37 weeks.
- I7P can reduce the rate of recurrent preterm birth even with partial compliance and late entry.
- Women with early 17-alpha hydroxyprogesterone caproate initiation had lower rates of major neonatal morbidity than those with later 17-alpha hydroxyprogesterone caproate initiation (1.5% vs 14.3%, P = .005).
- Non-Hispanic Black women were significantly less likely to be adherent to I7P (OR=0.16, CI 0.04-0.65). Public insurance was identified as a significant interaction placing Non-Hispanic Black women at increased risk of non-adherence (OR= 0.16, 95% CI 0.05-0.52).

Barriers to I7P Access and Implementation

- Payment
- Prior authorization
- Makena vs. compounded I7P
- Administrative
- Additional paperwork discourages usage
- Patient or Practitioner hesitation
- Different policies by healthcare plans
- Late entry to prenatal care

Successes in I7P Access and Implementation

- Continued education of providers
- Creation of a statewide surveillance program to monitor I7P access through perinatal quality collaboratives
- Streamlining the ordering process for Makena/ I7P
- Faster identification of patients that are eligible for progesterone treatment

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Figure 4. Successes and Barriers that affect I7P access and implementation and the prevalence of preterm birth.



Conclusion

- I7P is currently considered an effective and recommended intervention for the recurrence of preterm birth in women with a history of PTB.
- Public health entities, workers, educators must still work to break down barriers to access to ensure progesterone treatments are fully implemented and effectively administered during high-risk pregnancies.

Acknowledgements

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Figure 2 . Process of Inclusion of studies during the Systematic Literature Review. Adapted from PRISMA flow diagram.