**Association Between Prenatal Smoking and Low Birth Weight Babies**

**Background**
- FDA has conducted an analysis on the economic impact of Graphic Warning Labels (GWL).
- FDA analysis omits the impact of GWL on tobacco consumption by pregnant women.
- There is very strong link between the occurrence of low birth weight babies and smoking while pregnant.
- Low birth weight babies generate much higher hospital costs and social costs than normal birth weight babies.
- By omitting the impact on pregnant women, the FDA analysis underestimates the economic benefits from the GWL.

**Efficacy of Graphic Warning Labels**
- Huang et al. 2013: Graphic Warning Labels result in 5.3 to 8.6 million less smokers in 2013.
- There is very strong evidence that Graphic Waning Labels reduce smoking by 12.6 percent to 20.4 percent.
- GDPgenerated by GWL.
- Economic impact of GWL.
- Reduced prenatal smoking leads to fewer low birth weight babies.

**Study Aims**
- This study quantifies the national medical care cost and other cost savings from the reductions in prenatal smoking that will arise if GWL are implemented in the US.

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**Conceptual Framework**

**Simulation and Cost Savings**

**Simulation and Statistical Analysis**
- Simulations: What would the prevalence of LBW if smoking among pregnant women decreased by 12% and 20%? (estimates found in the literature, we calculate the monetary savings that arise from GWL for this population.)

- Costs of first year hospitalization from the decrease in LBW Babies
  - Longer term Hospitalization Costs
    - The annual hospital utilization by LBW children aged 3-5 result in an incremental cost per child of $280 and an aggregate incremental cost of approximately $245 million in 1988 dollars.
  - The annual hospital utilization by LBW children aged 6-10 result in an incremental cost per child of $470 and an aggregate incremental cost of approximately $410 million in 1988 dollars.

- Special Education Costs
  - LBW children are more likely to repeat a grade in school than normal birth weight children: about 31% of LBW children will repeat a grade by grade 10 compared with about 26% of normal birth weight children.

**Results and Conclusion**
- Through decreased smoking by pregnant women, GWL will protect the health of newborns and lead to substantial cost savings for society. Our results indicated that GWL for this population will lead to cost saving of approximately 86 million dollars annually.