

Maternal prenatal vaccinations and their child's immunization status

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UMMS Capstone for Impact

Branch: Systems Based, Hospital Based

Project Summary

Currently, it is recommended that pregnant women receive the Tetanus, diphtheria and pertussis (Tdap) vaccination during each pregnancy, ideally at 27-36 weeks and during the appropriate influenza season, the influenza vaccine. According to the Centers for Disease Control and Prevention, during the 2015-2016 influenza season, 67.6% of pregnant women reported receiving provider recommendation and offer for the influenza vaccine. Ultimately, 49.9% of pregnant women in the United States received the flu vaccine. For children, by one year of life, they should receive Hepatitis B, Rotavirus, DTap, Hib, Pneumococcal conjugate, inactivated poliovirus, and influenza (CDC 2016). In 2015, the vaccination rates ranged from 72.2%-93.7% for the different vaccinations available for children from 19-35 months of age and the percentage of children who have received no vaccinations has been stable at 0.8% over the last five years (Hill et al. 2015). Many factors have been explored as reasons for early childhood vaccination refusal such as socioeconomic status, maternal education status, and race (Kim et al. 2007). A recent study showed that mothers who self-reported receiving the prenatal influenza vaccination had a higher rate of vaccine series in their children (Fuchs 2016). Although an abundant amount of research has been done in evaluating vaccination rates in pregnant women and immunization rates of children independently, there is currently little data in the literature regarding the relationship between maternal vaccination status during pregnancy and the eventual immunization status of her child.

This project will be a secondary data analysis to assess the relationship between maternal influenza vaccination status and the eventual immunization status of her child at one year of age at the University of Michigan Health System from September 2015-September 2016.

This study will provide data on the correlation between maternal prenatal vaccination status and the eventual immunization status of her child at one year of life. Data from this study could provide further opportunities to facilitate earlier conversations between providers and mothers addressing concerns about vaccinations and stressing the importance of vaccines and could ultimately make an impact in child immunization rates.

Action Items/Outcome

Our data was just submitted for data analysis, but we hope to have results soon. We are looking to see if there is a correlation between mothers who refuse prenatal vaccinations and the eventual immunization status of their child at 2 years of age.

These are the research aims we seek to answer:

1. Determine the relationship between maternal vaccination rate and child immunization status at one year
2. Describe the characteristics of children and their mothers who refused vaccinations
3. Describe the documentation of conversations mothers had with their providers regarding their prenatal vaccination
4. Describe the documentation of conversations between mothers and providers regarding their child's immunization schedule

Conclusion/Reflection

We are waiting for the data analysis to make our conclusions, but we are hoping to find a correlation between mothers who refuse TDap and/or influenza vaccinations during their prenatal period and the immunization status of their child at the 2-year mark. We hope to use this data as a launching point to collaborate with physicians in specialties, such as Pediatrics, Ob/Gyn and Family Medicine, to develop more education surrounding vaccinations with the goal of having conversations about vaccines sooner with families as they make their decisions about immunizations.