

Regulatory Perspectives

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Objective: Articulate FDA regulatory perspective and regulations regarding clinical development of vaccines used in pregnancy

Abstract: There has been recent renewed interest in maternal immunization to protect the mother and infants from vaccine-preventable diseases. As an example, inactivated influenza vaccines have been recommended for use in women during all stages of pregnancy in numerous countries.¹⁻² In addition, tetanus, diphtheria, and acellular pertussis (Tdap) vaccines are recommended for use pregnant women as an approach to reduce the burden of pertussis disease in infants less than 6 months of age.³ In addition, investigational vaccines such as vaccines to protect against respiratory syncytial virus, and group B Streptococcus (GBS) are in clinical development to protect the newborn and infant from infectious diseases. From a US FDA perspective, pre-licensure studies to evaluate the effectiveness of a vaccine used during pregnancy to protect the infant are needed for the prescribing information to include an indication and usage statement that describes such use. However, clinical development programs with investigational vaccines and/or with vaccines already licensed and recommended for use in pregnancy raise some complex issues. The purpose of this presentation is to discuss regulatory considerations for clinical safety and effectiveness evaluations for vaccines indicated for use in pregnancy.⁴ In addition, this presentation will summarize the deliberations of a recently convened Vaccines and Biologic Products Advisory Committee (VRBPAC) regarding clinical studies and study designs to demonstrate safety and effectiveness of vaccines used in pregnancy to protect the young infant, use of surrogate markers to infer effectiveness, safety evaluation and follow-up of mothers and infants as well as approaches to evaluating interference with regard to the immune response to vaccination among infants born to mothers immunized during pregnancy.

References:

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2. World Health Organization. Vaccines against influenza WHO position paper – November 2012. *Wkly Epidemiol Rec.* 2012 Nov 23;87(47):461-76.
3. Centers for Disease Control and Prevention. Updated recommendations for use of tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine (Tdap) in pregnant women--Advisory Committee on Immunization Practices (ACIP), 2012. *MMWR Morb Mortal Wkly Rep.* 2013 Feb 22;62(7):131-5.
4. Roberts JN and Gruber MF: Regulatory considerations in the clinical development of vaccines indicated for use during pregnancy. *Vaccine.* 2015 Feb 18;33(8):966-72.