



International Alliance for  
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*Europe*



**Workshop on Assessing Consequences  
of Maternal Immunization on Foetal Outcomes**  
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**Title: Is a different methodology needed for RCT's and non RCT data sets?**

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The basic principles of analysis of a non-randomised study of an intervention (NRSI) such as vaccination should be dependent on its design. For typical cohort studies of vaccination in pregnancy, there is a conceptual "target trial" that can be envisaged. Analysis should reflect the best methods of analysis of the equivalent RCT. This includes taking into account the time from vaccination to birth, allowing for the fact that "time at risk" varies with the timing of vaccination.

The choice of a comparator group has several issues. If an alternative vaccination is used as control, then the period of follow-up for each group is clearly defined. If an unvaccinated group is the control, there is no defined time of vaccination. This can lead to major bias in the analysis if the "immortal time" is not allowed for correctly. Typically, this should use a time-updated Cox model. There will be other confounding variables and selection biases which should be accounted for and the inherent uncertainty in the results must be acknowledged.

