

Vaccination associated adverse events by sex in children and adolescents: A literature review

Background:

Most approved medicines, including vaccines can be associated with adverse events. A vaccine adverse event is defined as any untoward medical occurrence which follows vaccination, but which does not necessarily have a causal relationship with the administration of the vaccine.

Methods:

The objective of this structured literature review is to analyse the adverse events reported with Human Papilloma Virus Vaccine, Hepatitis B Vaccine and Measles-Mumps-Rubella Vaccine in children and adolescents by sex. We searched the Cochrane Database, Medline (Pubmed) and Embase using predefined terms.

Results:

Of the 417 publications retrieved from searches in the 3 databases, 89 (21%) were identified as potentially relevant to the review, 40 of them satisfied the criteria for inclusion in the analysis. Serious adverse events related to vaccinations were rare. We found some possible sex and age related vaccine adverse events. Few trials however reported adverse events by age and sex and very few analyses evaluated the observed differences.

Conclusions:

Despite earlier calls for sex-specific analyses of clinical studies, we found that vaccine trials were rarely reported and published by age and sex. Prospectively collated vaccine safety data in children and adolescents should be analysed by age and sex, so that clinical trial results can form an evidence base for vaccine practice recommendations.