

**Study of rubella infection among children in the community and factors associated with susceptibility to rubella during pregnancy**

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This study was carried out to determine the seroprevalence of rubella antibodies in children 1- 11 years of age and pregnant females, and factors associated with rubella seroprevalence in the Kalutara district of Sri Lanka. The proportion of women in the child bearing age group and the community susceptible to rubella infection in selected years for different immunisation strategies was estimated. The average percentage of children protected against rubella was 13 per cent (range 6 per cent-25 per cent) whereas 76 per cent (range 71 per cent-82 per cent) of the pregnant females were found to be protected against rubella. The findings of the community survey indicated that the susceptibility to rubella infection among children was significantly associated with age, ethnicity, schooling (where school children were less likely to be susceptible to rubella than children not attending school), year in school, birth order of the child, number of children in the family, father's education and number of persons in the family. However, in the multivariate model only age, father's education and number of persons in the household were significant predictors of seroprevalence. The average annual risk of natural infection was estimated to be 2-3 infections per 100 susceptible in the population based on seroprevalence data of children. The median age of natural rubella infection estimated from the average annual risk of infection was 25 years. Based on the results of the simulation studies, it is recommended that the strategy of selective immunisation of females at 12 years of age for 10 years and immunisation of all children at 1 1/2 years be adopted. This strategy may be supplemented or modified depending on the feasibility of implementing such a strategy and the objective and needs of the programme.