disease. If problems are denied, solutions will not be accepted. This is exactly what is being done by describing the complications of mumps [1]. In summary, one must view immunization in two ways, one for individual protection by personal prophylaxis and two for public health purpose for control or elimination of an infection. A beginning has to be made and let it be with personal prophylaxis. Presently the only possible course open to us is to immunize all infants whose parents can afford the vaccine till the government learns to spend its fund wisely. Why let our children suffer from diseases that are eminently preventable? It is the (ethical, moral, scientific, epidemiological and economical) duty of the nation to offer this advantage to the adults of tomorrow.

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Reply

Say Yes and No to MMR; 'Theory of Relativity'!!

Dear Editor,

It will clearly take many years of sustained cohort immunization to achieve desired level of artificially induced herd immunity. Meanwhile, prior to this desirable state of affairs, the changes in epidemiological patterns of infection induced by vaccination are not always beneficial. Rubella and mumps are clear examples because of the risk of congenital rubella syndrome (CRS) and the occurrence of orchitis in post-pubertal males. Any level of vaccination coverage will reduce the incidence of infection but by increasing the average age at which those still susceptible acquire infection, certain levels of coverage may increase the incidence of disease. The important question is whether the increase in the proportion of cases in older people will result in an increase in the absolute number of cases of serious disease.

The problem has resulted in the adoption of different vaccination programmes against rubella (to control CRS) in different countries [1]. Until the introduction of MMR vaccine in UK in 1988, only girls were vaccinated at an average age of around 12 years, so as to allow rubella virus to circulate in males and young females and create naturally acquired immunity in the early years. By contrast, it has always been the case in the USA for both boys and girls to be vaccinated around 2 years of age, with the aim of blocking rubella transmission.

Mathematical models predict that the USA policy is best if very high levels of high vaccination (80-85% of each yearly cohort) can be achieved at a young age, while the earlier UK policy is better if this cannot be guaranteed. A mixed policy is predicted to be of additional benefit over the selective policy alone if moderate to high levels of vaccine uptake among boys and girls can be achieved at a young age (>60%) [2]. Data from Finland, show the need to continue schoolgirl vaccination until the cohorts with high level immunity through infant vaccination span the entire high fertility age groups [3].

As for mumps vaccination, during infancy, mathematical models show that there is little benefit to be obtained by vaccination at less than 60%, and indeed vaccination at anything less than 70% coverage is potentially hazardous when considering risk of orchitis. Such a phenomenon is a direct result of the combination of increased age at infection and the risk of complications with age [1]. Though major strides have been made in immunization programmes in our country, only 42% children aged between 12 and 23 months have received all recommended vaccinations [4]. The largest increase in immunization coverage has been for polio vaccination but still 37% of children did not receive the recommended 3 doses. In this scenario introduction of MMR during infancy in our country will be amateurish. The problem is not only lack of finances but the sheer numbers to be covered; not only of cost but cost efficiency and cost benefit. Nothing is absolute; everything is relative.

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