Measles-Rubella Campaign: Could Things Have Been Done Differently?

The Measles-Rubella (MR) vaccine campaign has stirred a hornet's nest and the reasons for this controversy need to be analyzed scientifically. The campaign aims to wipe out the last pockets of measles and also hit congenital rubella with a single shot. The aim is indeed wonderful, but there are a few controversies:

There is robust data that two doses of measles-containing vaccine (MCV) are adequate and the government paper clearly states that while a dose of measles vaccine given at 9 months gives 89% protection, the same dose given beyond 12 months gives 99% protection (the actual protection in the field is slightly lower at 85% and 95%, respectively) [1]. Hence a child who has received a MCV at 9 and 15 months does not need any additional dose. The story about rubella is even more interesting. A single dose of a rubella containing vaccine generates sufficient antibodies (95% at 9 months and 99% beyond 12 months) [1].

The government is attempting to target the population who has not received two doses of a MCV and one dose of a rubella containing vaccine. Most patients who follow up with private practioners have taken not just two but actually three doses of a MCV–at 9 months, 15 months and 5 years–and 2-3 doses of a rubella containing vaccine at the same time. They are clearly protected adequately and do not need additional dose of MR vaccine.

There is a real risk, however small, of an adverse effect to a vaccine. Hence if parents approach the pediatrician with a query whether this vaccine is scientifically needed for her child and whether it will give her any additional protection even after the normal immunization schedule has been followed, it becomes their duty to present the scientific facts to parents. The fact that the child must participate in the drive with the benefit of the community at large in mind may not be an acceptable explanation for all the parents. The parents also question that if it is necessary and beneficial, why is it not there in our routine vaccination schedule or in the vaccination schedule of any other country in the world? The correct approach, though logistically tougher, should have been to allow the private pediatrician to assess the vaccination status and issue a letter regarding the need of the vaccine. In the absence of this safeguard, this seems to be an interesting idea that seems to have backfired.

Has this campaign also become a missed opportunity? If you look at the epidemiology, mumps is a major issue with respect to waning immunity after the MMR vaccine at 15 months along with the poor coverage of the second MMR dose at 5 years. In this setting, omitting the mumps component from this vaccine seems irrational. It was a golden opportunity to target all three diseases in the same campaign at some additional cost.

The IAP stand on this issue was spelt out clearly some time ago when it stated that "mumps poses a significant burden so both mumps and rubella are eligible as targets for control and elimination", "complications of mumps can be profound", "logistics also support the use of MMR vaccine instead of MR because with the same effort, money and manpower, three common infectious diseases could be eliminated instead of two"!!! [2]. Taking the same argument forward, I see no reason to repeatedly tweak the immunization schedule and question the age old practice that had been followed by a lot of pediatricians who had been giving a measles vaccine dose at 9 months and the MMR at 15 months and 5 years ensuring adequate early as well as long lasting protection against all the three diseases.

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