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Intended for healthcare professionals

## Editorials

# Measles: neither gone nor forgotten

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## Measles vaccination - is anyone worried about shorter term maternally derived antibodies via vaccinated mothers?

In his rapid response JK Anand says "Of course I know that measles vaccine was effective."

But are we absolutely sure of the long-term effectiveness of measles vaccination, i.e. over coming generations?

A few years ago I came across a paper in The Journal of Infectious Diseases[1,2] which summarises the results of a study comparing highly vaccinated general populations against unvaccinated orthodox Protestant communities in the Netherlands. The abstract concludes: "Children of mothers vaccinated against measles and, possibly, rubella, have lower concentrations of maternal antibodies and lose protection by maternal antibodies at an earlier age than children of mothers in communities that oppose vaccination. This increases the risk of disease transmission in highly vaccinated populations."

The discussion part of the paper provides more detail: "Our observations suggest that mass vaccination with MMR shortens, in due time, the duration of protection by maternal antibodies against measles, mumps, and rubella. Our study was conducted 20 years after introduction of the MMR vaccine, in 1987, when about 25% of women of childbearing age were vaccinated with MMR vaccine when they were young. This proportion of women of childbearing age who have been vaccinated with MMR will increase rapidly in the coming years because the vaccination coverage of each age cohort is >90%. We expect that this will further shorten the duration of protection against measles and rubella by maternal antibodies in infants and that a decreasing duration of protection against mumps by maternal antibodies will become more detectable among infants in the near future.

From my layperson's perspective, it seems that mothers naturally infected with measles will pass on maternally derived antibodies of longer duration than mothers who have been vaccinated with the MMR vaccine. It seems children of vaccinated mothers may become vulnerable to disease sooner. I find this very alarming. It seems nature provides protection for babies of naturally infected mothers until an age when they may be more likely able to fight the

disease themselves. But artificial interference with vaccination could have repercussions over coming generations as the children of vaccinated mothers may become vulnerable to disease at a younger age, when they may be ill-equipped to deal with the disease, with possibly disastrous consequences.

I make no pretence to having any expertise in this area, but the implications of this paper are very concerning from a big picture, long-term view perspective re vaccination for future generations. Are any 'authorities' thinking about the big picture here?

References:

1. Sandra Waaijenborg et al. Waning of Maternal Antibodies Against Measles, Mumps, Rubella and Varicella in Communities With Contrasting Vaccination Coverage. The Journal of Infectious Diseases. First published online 8 May 2013:

<http://jid.oxfordjournals.org/content/early/2013/04/29/infdis.jit143.long>

2. Also see Editorial Commentary: Loss of Passively Acquired Maternal Antibodies in Highly Vaccinated Populations: An Emerging Need to Define the Ontogeny of Infant Immune Responses: <http://jid.oxfordjournals.org/content/early/2013/04/29/infdis.jit144.ful...>

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