Analysis of JAMA Study April 21, 2015

“95,000 Children ‘Finds No Link Between Autism and Measles Vaccine’”

Title: Autism Occurrence by MMR Vaccine Status Among US Children With Older Siblings With and Without Autism
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“Conflicts of interest alone do not invalidate a study. But they serve as important context in the relentless effort by pharmaceutical interests and their government partners to discredit the many scientists and studies that have found possible vaccine-autism links.”

Eben Plettner:

From a Rocket Scientist, and yes I really am one and I also have a degree in Mathematics, statistics specifically.

As with almost all studies that dispute the link between vaccines and autism, there are two statistical “tricks” that are used to remove association.

– Hiding data, in this case through age of test – Not discussing obvious results and focusing on areas where impact is not seen – Comparing unrelated items to make invalid conclusions

For number 1, Dr. William Thompson of the CDC revealed that the age of the MMR had a large impact. The impact is before 36 months of age. In this study they look at well before (age 2) and well after (age 5). This could mask the problem, especially since you would be looking for a small population size, less than 1% of the total children.

Second, In the initial discussion they reveal that 2% of children had an older sibling with ASD, but only 1% of these children had ASD themselves. This states that the risk of autism in a younger sibling is cut in 1/2. This is extremely significant and brings the question of, what was different with these kids, how did they cut the autism rate in HALF. There is no way these doctors did not notice this. They made it the first sentence of the results, yet the wording is such that it is not obvious on the first reading.

The study then reveals that the MMR vaccine rates were lower and more delayed for the children with siblings with autism. This scream that there is a significant relationship between the two. So how did the study not see it and why did they not discuss this?

That brings us to number three, When they go to look at risk of the MMR they compare against the total population, this has the effect of diluting the connection. The previous findings should have had them compare the MMR rates for children with older siblings with ASD (994) that;

– had ASD (134) – did not have ASD (860)

By doing this I can already tell you there is a statistically significant relationship. Unfortunately the full data set would be needed to prove this and getting that may be difficult.

This is not to say the paper is not true, it just does not tell the whole story and is misleading. A more accurate conclusion should be. For the population of children that are at risk of autism there is a statistically significant risk of autism
John Stone:

Regarding the study it is interesting to note that it was touted as potential clincher by Tom Insel before the OGR last May and he said it was due out in three months – instead it was launched 24 hours ahead of crucial votes in California and Vermont (eleven months on). Of course, it confirms the results of equally dodgy studies like Taylor (1999) and Madsen (2002) co-authored and coordinated by Poul Thorsen. Thorsen’s authorship is not listed in the citation of the Madsen paper and the De Stefano study on which Bill Thompson blew the whistle is not mentioned at all.


This is an incredibly weak study based on the supposition that autism ought to be more prevalent in the group with autistic elder siblings. The data is actually based on billing records (!!!) so information both about vaccine status and autism diagnosis will be incomplete, and both groups are preponderantly vaccinated. The discussion admits considerable limitations, and it is rather hard to understand the design unless it was set up to blur conclusions in the first place.