

Unreasonable doubt



A 'vaccine court' case on autism could have disastrous consequences if people confuse its verdict with scientific consensus.

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Why are there so many more cases of autism now than there were 30 years ago? It's a question the best scientific minds have been unable to answer. But I'm afraid a US court now looking at that question may settle it on the basis of emotion rather than science.

The parents of thousands of autistic children think that the routine measles-mumps-rubella (MMR) vaccine and the mercury-based vaccine preservative called thimerosal damaged their healthy children's brains and made them autistic — and they're now suing the US government for damages. On Monday, three 'special masters' of the US Court of Federal Claims began hearing testimony in the first of nearly 5,000 such cases, some of which have been pending for years.

I sympathize with these parents and can understand their need to find a reason for their children's suffering. But I trust in science, and I can't ignore the fact that so many peer-reviewed studies — and every scientific panel entrusted with evaluating those studies — has come to the same conclusion: neither the MMR vaccine nor thimerosal is associated with autism.

Perhaps understandably suspicious, some of the families believe there is a conspiracy to hide or muddle the evidence. Again, I can sympathize. But these studies and panels have been led by reputable, independent scientists from all over the world.

For example, Danish scientists looked at the records of more than 500,000 children born over eight years and found no association between the MMR vaccine and autism¹. A large study of more than 5,000 children in the United Kingdom came to the same conclusion². A prestigious panel of the US Institute of Medicine met over four years, heard from dozens of experts and reviewed more than 200 studies, and in 2004 also dismissed a link between the vaccines and autism³.

Even when the United States bowed to public pressure over autism, despite the lack of evidence, and in 2001 started to phase out thimerosal from nearly all vaccines, rates of autism have continued to climb. No one knows why, although it is apparent that parents, doctors and teachers have all become more adept at spotting autism, and the condition's definition has been expanded to include several other disorders, boosting diagnoses.

Matter of law

What I find frightening is that none of this may matter in the courtroom.

In this 'vaccine court' of the Court of Federal Claims, set up 20 years ago by the US Congress to settle vaccine-related claims, all parents have to show is that a link between vaccines and the disorder is 'legally plausible' — a far cry from the burden of proof that science is held to.

If the court rules in the families' favour, here's what could happen: parents of children with autism will see — and endlessly cite — the ruling as validation, even proof absolute, that vaccines cause autism. Other terrified parents will refuse to immunize their kids. Already litigation-wary companies will run even further away from making vaccines. And the diseases the vaccines protect against will make a dangerous comeback.

Think I'm exaggerating?

In 1998, British researcher Andrew Wakefield and his colleagues published a report in *The Lancet* implicating the MMR vaccine in autism⁴. The study was tiny, based on just 12 children, but in the media blitz that followed, Wakefield suggested that the triple jab should be split into three individual vaccines. Most of the scientific establishment was outraged and, in March 2004, 10 of the paper's 13 authors issued a retraction of their original interpretation⁵.

The damage was done, however. Rates for MMR vaccination in the United Kingdom, where the vaccines are not a requirement for attending school as they are in the United States, dropped to 80% nationwide and 62% in some parts of London. Measles has once again become a problem in many parts of the country.

Weighty issue

There's a lot more stake in this case than the health of children in the United States and the United Kingdom. Thimerosal is still an ingredient in vaccines across much of the developing world because it allows for multiple-use vaccine vials, which are far cheaper than single-use vials. A legal ruling against such vaccines in the United States is sure to have a ripple effect in these countries.

The court will hear from about 20 experts over the coming weeks, and should deliver a verdict within months. Should they find no legally

plausible link, I doubt it will silence the conspiracy theories. Should they find such a link, families will be recompensed from a federal fund; but the damage to public health will be huge.

Outside the courts, scientists are instead focussed on finding the real culprit behind the autism epidemic, and a cure for the devastating disease. I think the interests of public health, and even of the children who have already been diagnosed with autism, are much better served by that.

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