

Graham, Laverne

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Sent: Monday, November 29, 1999 11:45 AM
To: 'Robert Davis'
Cc: 'Frank Destefano'
Subject: Thimerosal analysis



Thimerosal2.txt



Thimerosal3.txt

Hi Bob,

After running, re-thinking, re-running, re-thinking... for about two weeks now I should touch base with you I think to see whether you can agree with what I came up with so far. I'll attach the SAS programs hoping you or one of your statisticians can detect major flaws before I jump to conclusions. I'll try to structure my findings:

On the outcomes: their frequency and relation to any of the independent variables is so heterogeneous that I think it only makes sense to look at one diagnosis at a time. As an example I find a negative relationship to thimerosal for 3450 (generalized nonconvulsive epi) and a positive for 3451 (generalized convulsive). Both findings are not surprising and illustrate the potential confounding by specific vaccinations and the potential confounding of the diagnosis (I would assume here that infants more likely to develop epi will be less likely to be vaccinated, the same problem as in the neonatal mortality study). As a result I've done away with the general categories (degenerative, developmental, other and renal).

On the exposure: originally I had over 20 ways of classifying mercury levels: by age (1,2,3,6, and 12 months) and criteria (EPA, ATSDR or quantiles). I narrowed it down to the following four:

1. EPAe: indicates whether or not has ever exceeded the EPA limit (in total over two thirds!)
2. HG2cat12, HG3cat12, HG4cat12: the cumulative exposure level at 12 months divided in two halves, three third and four quarters: the reasoning here is that it would seem reasonable to assume that this is the most objective reflection of the overall exposure and as there is no clear cut-off, I try to identify potential hazard levels by increasing the number of categories.

I know there is particular interest to the exposure nearest to birth, but this is basically identical to HepB vaccination and the effect would never