Reviewer's report

Title: Rate of first recorded diagnosis of autism and other pervasive developmental disorders in United Kingdom general practice, 1988 to 2001

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Reviewer: peter szatmari

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The objective of this paper is to look at the incidence of autism and other pervasive developmental disorders as identified in United Kingdom general practices. The incidence data are based on cases ascertained by clinical services. The main outcome measures were rates of diagnosis by year of diagnosis, year of birth, gender and geographic region. The data indicate a substantial increase in incidence over the study time period which is largely though not wholly, accounted for by an increase in the incidence of PDD’s other than autism. There is also substantial variation in incidence rates by geographic region. The authors conclude that the increase in incidence is likely due to changes in diagnostic practices although a real increase cannot be excluded.

While similar data have been reported before, this paper does represent probably the most comprehensive and definitive approach to the problem. Previous studies have used smaller sample sizes, have not looked at other pervasive developmental disorders, and have not been based on a national sample so that geographic variation could be assessed.

I think this is an excellent study and the data are presented clearly and appropriately. The methodology is excellent and the conclusions are appropriate given the available data. Appropriate statistical tests were carried out.

I have only two minor comments. First, the validation of the cases by perusal of medical records is an extremely important aspect of the methodology and I think should be placed there rather than in the conclusion section. Three hundred and eighteen of four-hundred and forty-six records were available. What is the agreement between the psychologist and psychiatrist? It would have been nice to look at the records of other developmentally disabled children and to blindly record those diagnoses. The submitted publication by EF seems to be an extremely important part of the methodology to this study and perhaps should not be assessed separately and independently. Since one of the main points of this study (and certainly one of the most interesting) is that the increase in non-autism diagnoses was quite substantial. However, the extent to which this distinction was made reliably and accurately by the diagnostic records which high reliability and accuracy is not known. Therefore, the validity of this finding is uncertain.

The second point is that while the estimates of geographic variation show heterogeneity by a chi-squared test, the 95% confidence intervals around the estimates in each region are quite similar. It is not really until we get to the West Midlands that the confidence intervals of Wales do not overlap with those of the other regions. Can the authors offer an explanation as to why West Midlands and the South east should have such radically different incidence rates than the other regions? If it were possible to correlate incidence rates with the number of physicians in that region it would be extremely helpful.

Other than these two points I think the incidence data contained in this paper is extremely interesting and has very important implications for planning of clinical services.