

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form ([see an example](#)) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Mapping English GP prescribing data: a tool for monitoring health-service inequalities
AUTHORS	Lawson, Euan ; Rowlingson, Barry; Taylor, Benjamin; Diggle, Peter

VERSION 1 - REVIEW

REVIEWER	Lyn Colvin Research Officer Telethon Institute for Child Health Research Australia
REVIEW RETURNED	18-Jul-2012

GENERAL COMMENT S	<p>The manuscript, "Mapping English GP prescribing data: a tool for monitoring health-service inequalities" highlights the usefulness of the open source data provided by the NHS. The authors have outlined their methodology clearly.</p> <p>I have a few points for consideration in the discussion section:</p> <ol style="list-style-type: none">1. An important issue with using large population-based prescribing datasets is the assumptions made concerning the indication for the use of the drugs. Methylphenidate, for example, may also be used in the treatment of narcolepsy. ADHD may be treated with other drugs, and methylphenidate may be used to treat other conditions. The discussion should outline clearly that there are these sorts of limitations.2. The NHS website cites 3 medicines used in the treatment of ADHD: methylphenidate, dexamphetamine, and atomoxetine. (http://www.nhs.uk/Conditions/Attention-deficit-hyperactivity-disorder/Pages/Treatment.aspx) Why did you not include these other drugs used to treat ADHD?3. Methylphenidate is not recommended in children under 6 years of age. It may also be used in teenagers and adults. Your analyses included all children under 14 years of age which is not the same comparison group. (http://www.nhs.uk/medicine-guides/pages/MedicineOverview.aspx?condition=Attention-deficit%20hyperactivity%20disorder&medicine=Methylphenidate%20hydrochloride)4. The NHS website has a correction issued for one of the datasets. Did you take this into account? NOTE: The address file for September 2011 released on 14 December contained erroneous information in the 7th column (the one prior to the postcode) for approximately 3,000 of the 10,000 practices in the file. We are not aware of any other problems with the original file. This error has been corrected and the file replaced on 13 January 2012. (http://www.ic.nhs.uk/services/transparency/prescribing-by-gp-practice)
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	Also: Page 3, Line 43: "... data is for August 2010, and so we use this ..." should read "... data is for August 2010, and so we used this ..."?
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REVIEWER	Edgar Samarasundera Positions and institutions: Lecturer in GIS and Human Geography (Kingston University) and Honorary Research Officer (Imperial College London) Country: United Kingdom Competing interests: None
REVIEW RETURNED	03-Aug-2012

THE STUDY	The supplemental documents (e.g. appendix) seem appropriate to and match the transcript.
RESULTS & CONCLUSIONS	There is no real discussion of previous evidence in this domain but then there is a rather limited literature base on the subject, at least to my knowledge. Nevertheless I think the following could have been referred to in the discussion section:- 1. Cheng et al (2011). Using spatial analysis to demonstrate the heterogeneity of the cardiovascular drug-prescribing pattern in Taiwan. BMC Public Health 11:380. 2. Sargen et al (2012). Geographic variation in pharmacotherapy decisions for U.S. medicare enrollees with diabetes. Journal of Diabetes Complications 26:301-7.
GENERAL COMMENTS	A solid methods piece has been submitted here. I felt the maps were well-designed and the use of an appendix for the spatial analysis technicalities was helpful in terms of main manuscript flow.

VERSION 1 – AUTHOR RESPONSE

Comments from reviewer Lyn Colvin

Thanks for these comments which have been very useful in tightening up and clarifying issues in the discussion section as recommended.

Points 1 and 2

It is a fair and important point that methylphenidate can be used in other conditions. Methylphenidate is the first line treatment in the UK but it is true that other medications may be used and are suggested as options by NICE in more complex cases. We have taken a look at the data for atomoxetine and for dexamfetamine and they are rarely used - we have added a comment to the discussion emphasising that these data should be interpreted with this in mind.

3. It is entirely accurate that methylphenidate is not recommended in children under 6 years of age and can be used in over 14s and into adulthood. However, it is still being prescribed in this group and we were limited by the age group categories in the GP data. We've added a comment to highlight this limitation as well.

4. We did take this correction into account and the corrected dataset has been used.

Page 3, line 43 – has been corrected as highlighted

Comments from reviewer Edgar Samarasundera

Thanks for these comments and we would agree with the opinion expressed that there is a rather limited literature base on the subject. However, the reviewer has highlighted two useful papers and we have added comments to the discussion and included these.

1. Cheng et al (2011). Using spatial analysis to demonstrate the heterogeneity of the cardiovascular drug-prescribing pattern in Taiwan. *BMC Public Health* 11:380.

2. Sargen et al (2012). Geographic variation in pharmacotherapy decisions for U.S. medicare enrollees with diabetes. *Journal of Diabetes Complications* 26:301-7.