Reviewer's report

Title: Is new drug prescribing in primary care specialist induced?

Version: 1 Date: 16 January 2008

Reviewer: Tom Walley

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This article is based on a study examining prescribing and other records of patients and GPs in the Netherlands. The database is very interesting and the work seems performed to a high standard. The authors conclude that although there is an influence of medical specialists in some cases, GPs are responsible for initiating a large proportion of new drug prescriptions and do not slavishly follow the specialist lead. They say that this contradicts the idea that diffusion of newly marketed drugs always follows a two-step model with medical specialists as the innovators and GPs as the followers.

As far as these data go, I think the work is well done and the article is well-written.

However, I would take issue with some of their interpretation of the issues. For instance, in this they have described medical specialists as only as (I presume) hospital specialists ignoring the fact that many GPs will have developed specialist interests and therefore may feel able to prescribe new drugs for patients within that area of speciality, e.g. heart disease, hypertension or rheumatology.

They are also unable to track the informal influences exerted by one GP on another and treat each prescribing GP as if he or she is totally independent of all other GPs instead of being part of a general pool of medical knowledge. It may therefore be enough that one patient is prescribed a new drug for a specialist for it to sweep through a whole population of GPs.

In further support of this contention, one has only to look at the marketing practices of pharmaceutical companies who are well aware of the special interest of GPs and well aware who the innovators are. I don't know if it is possible from the data collected in the current study to tell if it is the same GPs who initiate prescriptions with many of the new drugs, or whether it is the case that a GP is an innovator for instance in heart disease but not in asthma.

Finally the authors contend based on their previous work that specialists are likely to see more severely ill patients that are more likely to benefit from new drugs. I think this ignores the whole role of outsourcing to specialists and primary care physicians i.e. the specialist feels obliged to do something new and even knowing that a new drug is of no particular value may simply change a patient's drug for that reason alone. GPs are well aware of this.
I don’t see that it is possible for the authors to explore this within their data and I repeat that as far as their data goes they have interpreted it reasonably. However, there is a wealth of qualitative data, e.g. the work by Jacoby which is referenced and the work by Prosser (published in Family Practice, in Social Science & Medicine and in the British Journal of General Practice) which is not referenced which goes in-depth into these issues. This is an area of where studies of different design must complement one another rather than be interpreted individually, as I feel the current authors have. I would urge them to reconsider this literature and not to reject the traditional model of innovation diffusion as quickly as they have.

**What next?:** Accept after discretionary revisions

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'