Author's response to reviews

Title: Factors related to treatment intensity in Swiss primary care

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Dear Sirs

Thank you for reviewing our paper entitled “Factors related to treatment intensity in Swiss primary care” for publication in BMC Health Services Research. We revised the paper according to the comments of the reviewers. The following manuscript changes were made:

Reviewers Starfield & Groenewegen

The abstract was changed in order to provide a more adequate description of the results.

We added a sentence describing effects of competition among physicians in the conclusion of the paper.

We discussed an alternative spatial model i.e. cantons in a new paragraph in “Strength & Limitations”. We also included an additional reference in this context.

However, we are unable to use a better need indicator than mortality in our models. There are currently no such data available at the small area level in Switzerland. Nationwide data of health surveys and from other sources of information are characterised by considerable sampling variability and are also incomplete in some areas.
Reviewer Cooper

The reviewer focuses his comments almost entirely on the correlation analyses which provide only a univariable picture of our data. Based on this limited point of view we would also support the hypothesis that supply - respectively treatment volume per patient - reflects effective needs of the population and not necessarily competitive effects between GP’s, specialists, hospitals and other non-need related factors. However, the advantage of multivariable analyses, denoted in the review as “fancy statistics” is that factors, which are not of primary interest - in this case mortality- can be held constant. Multivariable analyses can therefore provide valid estimates of competitive factors adjusted for different levels of need (if mortality is considered as a valid measure of need). We consider the results of these multivariable analyses as the key findings of our study and not the correlation analyses and we therefore don’t agree with Dr. Cooper that our data document the fact that supply is solely driven by need. Our second statistical model aimed at different patient numbers of GP practices further supports the interpretation, that treatment volume is not driven by need alone, as practices with large patient numbers provide significantly fewer services per patient; which would imply - according to the reviewer- that these practices have patients with lower levels of need. The results of these analyses are also not considered in the review.

To strengthen our interpretation of the data, we provided an additional analysis aimed at urban-rural differences of GP and specialist supply and regional mortality, respectively. And these data show that particular specialist supply does not reflect effective needs of populations. Specialists do not gravitate to locales where there is greater need for their services in Switzerland, as assumed by the reviewer.

All changes in our manuscript are made visible in an accompanying document (BMC_Treatment_intensity_6_rev.doc). We are aware that these few changes do not comply with the requirements of BMC Health Services Research to provide point to point answers to the comments of Dr. Cooper; but this would result in a very different interpretation of our data that we are not willing to accept. Moreover, it is important to note that his review does not provide any indication, that our methods were flawed and we are also careful with our final interpretation stating that volume of supply in Swiss primary care is not driven by medical needs alone. We leave it therefore to an editorial decision whether to accept or reject this paper in its present form.

With best regards

Prof. André Busato