Author's response to reviews

Title: Physician and nurse supply in Serbia using time-series data: A Case Study

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Author's response to reviews: see over
Dear Editor in Chief, Dr Mario Dal Poz,

We are sending the revised Manuscript ID 3963514817345639 entitled “Physician and nurse supply in Serbia using time-series data: A Case Study” by authors Milena Santric Milicevic, Vladimir Vasic and Jelena Marinkovic for publication in Human Resources for Health.

The manuscript has been re-revised in light of the reviewers’ requirements and suggestions. The answers to reviewers comments No: 1884381588736276, 5874770968893758 and 1136660328888784 are attached to the cover letter. The study describes variables that were significantly related to physicians and nurses’ employment in the public healthcare sector of Serbia from 1961 to 2008, and it displayed forecasted physicians and nurses’ requirements for the public healthcare sector of Serbia by 2015. This study may be used as an approach for understanding the health workforce policy making in other settings and to discuss the accountability of HRH governance. Thus, we hope our study methods and results will be found suitable and interesting for publication in your distinguish Journal.

No paper resembling the enclosed article has been or will be published except in your Journal. Both authors declare no conflict of interest. The manuscript has been seen and approved by both authors.

Sincerely,
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Jelena Marinkovic, Professor
Institute of Statistics and Bioinformatics
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Response to the comments of the reviewer 1884381588736276,

Dear reviewer Prof Thomas Ricketts,

We are sincerely grateful for revision, suggested citation and editing of our text. In addition to your comments and suggestions in the first review that helped us improve our paper, this time you have helped us clarify the text. We hope that your work could be acknowledged as of an co-author. Please, find attached our re- revised paper in the light of the second reviewer comments.

Sincerely,
Milena Santric Milicevic, for all authors
Manuscript ID 3963514817345639
Response to the comments of the reviewer 5874770968893758,

Dear reviewer Prof Prof. Basu Ghosh Ph.D,

Thank you for your comments. Please, find our answers below to your comments in italic letters.

**Reviewer's report:**

Re-Review of the Article entitled

“Towards a better approach for physician and nurse requirement planning – learning from the past”

Revised Title of the Article

The changed title of the article reflects that it is a Case Study. But it is not clear to me why a diametrically opposite term “supply” has been used instead of the previously used term, “requirement”. The study deals with “the numbers of physicians and nurses employed” which connotes “realized demand” rather than “supply” (which includes the unemployed).

In Serbia, health care and education at state medical schools and faculties are publicly financed via compulsory taxes. Population needs are differently addressed by the Ministry of Health and Ministry of Education and consequences are seen in rising unemployment of physicians and nurses. That is why this study deals with the number of physicians and nurses employed (“realized public and private sector requirement”), and number of inactive or unemployed workers as parts of their overall supply. This study purpose is to meet the requirement for the inter-sector activity over HRH development set out in the new Health Development Plan for Serbia between 2010 and 2015 period. Seeing this study as the first that explores the past HRH planning approaches (between 1961 and 2008), it discusses the suitability of past planning approaches for development of future HRH. Therefore we used the trend data for forecasting physician and nurse supply by 2015.

**Background**
The authors have not added a paragraph explaining the HRH planning approach used in Serbia prior to 1961, during 1961-1982 and 1983-2008. They have only referred to the use of manpower population ratios as the main basis of estimation of staff requirement.

*The whole article deals with past HRH planning approaches. Besides that sentence you noticed, we have thoroughly explained the planning approaches in the paragraphs 4-10th in the Background section, than in 1st and 2nd paragraph of the Results in the text related to tables 4 and 5, and 1st, 2nd and 3id paragraph of the Discussion section.*

Methods
The authors have accepted almost all the points made in my previous report as “limitations”. With so many limitations, it is difficult to concede that the paper deserves to be published as a case study that other authors can emulate.

*The limitations section was rewritten. Some sentences did not belong to the study limitations section, but were mistakenly placed there; they should have been used as implications for the policy and practice. Some points you raised were studied elsewhere or in our previous research, as referred. In the re-revised text, for some limitations we have provided approximations in methods (private practice size), in result section (assessed impact of population, social, economic, and policy factors) and discussion section (private sector growth, possible emigration impact). Therefore we believe the number of limitations was reduced to a relatively acceptable level for publication.*

I am unable to understand how “student enrollment or graduates” can be used as an input variable to ‘requirement estimation’ while that is only an indicator of potential supply of manpower.

(sd)
Prof. Basu Ghosh Ph.D

*Planning is a complex and difficult task, as you have observed in the first review. No matter how many data and information used and how were used, one may always end up with some options that were not explored. Than, the study results are of limited*
value. Many policy makers rely only on experience and traditional planning method, which are still tied to certain circumstances. That is why authors believe that we in Serbia must learn from history (comparing the current and past events in the country history is repeating in Serbia). Also we had to highlight the importance of actual workforce unemployment problem, and to advocate for its reduction. We looked at it as a consequence of unrevised, historically disintegrated approach HRH planning. We used the supply side to match the requirement side as conceptualized by many HRH experts:


Sincerely,
Milena Santric Milicevic, for all authors
Manuscript ID 3963514817345639
Response to the comments of the reviewer 1136660328888784,

Dear reviewer Ines Fronteira,

Thank you very much for your time and for that you are satisfied with our answers.

Sincerely,
Milena Santric Milicevic, for all authors
Manuscript ID 396351481734563