Author's response to reviews

Title: The future prospects of Lithuanian family physicians: a 10-year forecasting study

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Version: 2 Date: 31 August 2005

Author's response to reviews: see over
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Version: 1
Date: August 31, 2005
Author's response to reviews: see over
Response to Reviewers: August 31, 2005  
Re: MS: 1341959341721285 - The future prospects of Lithuanian family physicians: a 10-year forecasting study

We highly appreciate the helpful suggestions of the reviewers and believe that their comments have been very constructive and have contributed to the improvement of the manuscript. Our responses are detailed below:

Reviewer’s report
Title: The future prospects of Lithuanian family physicians: a 10-year forecasting study
Version: 1
Date: 14 August 2005
Reviewer: Donald Pathman
Reviewer’s report:

General
I find this paper interesting and important because it provides a 15-year update on the family physician workforce in a country that started with none and has had a national policy to create a FP workforce de novo. The analytic approach is reasonable for the field and the data reasonably solid.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

It is striking that 85% of Lithuania’s FPs are women, yet this demographic was not mentioned in the supply side calculations. It should be. How should be retirement rates, work/non-work rates, mortality rates, productivity and other estimates be modified to account for the heavy female composition of the workforce (in the U.S., women physicians are much more likely not to be working or to work only part time, and even when working full-time they see fewer patients each day than male physicians).

The following paragraph was changed in the Methods section: “Annual mortality rate. There was no accessible data on the annual mortality rate of FPs, therefore we used a weighted average of the age-specific (25-64 years) and the gender-specific (84.9% women and 15.1% men) mortality rates of the general Lithuanian population obtained from the Department of Statistics [1]. This assumption tends to underestimate the annual mortality rate, since according to other studies the physician mortality rate is usually somewhat higher [10, 14].”

The following paragraph was changed in the Results section: “Annual mortality rate. The mortality of women in the 25-64 age group was 0.37% and the mortality of men was 1.06% in 2004. The weighted average of mortality in the 25-64 age group adjusted by gender (84.9% women and 15.1% men) was 0.47% [1].”

The following paragraph was added to the Discussion section: “While family medicine in Lithuania has been dominated by women (84.9%), unlike other countries, women do not tend to work part-time or see fewer patients than male physicians, mainly due to an unfavourable payment system [7]. Maternal leave is also basically limited to one year due to financial disincentives to prolong it. The gender composition of medical school graduates has remained quite steady over the last decade, and it is unlikely that the number of women FPs will change in the
future [2]. Therefore, in our projections we did not forecast any changes in the proportion of women in family medicine or their working patterns within the next ten years.”

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

I was confused in the abstract and throughout the manuscript about the “optimistic”, “medium” and “pessimistic” scenarios. It wasn’t until late in the paper that it became clear that three levels of both requirements and supply were used. This should be made clear in the abstract and early on in the body of the paper. Further, it seems inappropriate to me to call the Delphi approach the “optimistic” scenario, when theoretically the authors couldn’t have known if its estimates would prove higher or lower than the other estimates. Similarly how the other requirements would play out should not have been known in advance. Thus, it seems inappropriate to label them with their outcomes: instead why not simply refer to them as three requirement estimates each made with a different approach.

Supply scenarios were renamed into the first, the second and the third scenarios. Requirement scenarios were also renamed into the first, the second and the third scenarios. These changes were applied throughout the whole paper.

I find the Background section very interesting in the history it relates. Nevertheless, it is rather long and rambling. I suggest the authors recraft this into a shorter “Introduction” section followed by a “Background” section were more of the details of the history and trends can be placed. Alternatively, some of the trend details could be moved to the Discussion section.

We were advised by the Editors not to split Background section into two parts, therefore we moved several paragraphs into Discussion section, as advised by the reviewer.

The terms “retraining course” and “interruptive” residency need to be clarified for the reader when they are first introduced. I do not know what they are but they are central to understanding the paper and the authors’ recommendations.

The following sentences were added to the Background section: “In 1992, retraining courses for practicing district physicians and paediatricians to become family physicians were launched. However, these courses had limited success due to the lack of teachers in the field. Significant changes in the system started in 1994, when regulations for FPs’ training in residencies were adopted. In parallel with regular residency programs, interruptive residency programs for retraining physicians to become FPs were started at Kaunas University of Medicine and Vilnius University. The aim of interruptive residency programs was to retrain practicing district physicians and paediatricians into FPs, using well-structured 10-month program. It was broken down into blocks of 2 weeks to ensure that physicians did not have to leave their jobs for a long period of time.”
No where in the paper is the reader told that current FPs are busy in their practices, that is the population wants to use their services and, presumably, there would be a demand for additional FPs in the future as advocated by the authors.

The following two sentences were added to the Discussion section, together with 2 references: “FPs currently have very busy practices, allocating an average of 10 minutes to each patient. Recent studies indicated that total job satisfaction of family physicians in Lithuania was relatively low. Compensation, high job demands, social status, and high patient load were among the key factors that caused their dissatisfaction and were significant predictors of psychosocial stress. Unfavourable job environment can also reduce the attractiveness of the profession and result in talented medical graduates choosing other medical or non-medical specialties [20-21]”.

The reader would also benefit from learning something about how much primary care service is provided by Lithuania’s specialist physicians.

The paragraph on number of FP visits in the Discussion section was supplemented with the following information: “During the same period the number of visits to specialist physicians working in the primary health care setting decreased from 4.8 million in 2001 to 4.2 million in 2003”.

Page 3, bottom. It would be helpful to the reader to provide some international comparison data on FP per population ratios and overall physician per population ratios in Lithuania and other countries.

The following two sentences were added to the Discussion section together with one table and one reference: "Even though the number of FPs has increased very rapidly during the last fifteen years reaching 48.6 per 100,000 population in the beginning of 2005, FPs as percentage of all physicians was only about 12%. In the other countries of the European Union, this percentage was much higher (with exception of Latvia where it was 15%) – the United Kingdom and Germany were around 30%, and the average of 25 countries of the European Union was 23%. Interestingly enough, Lithuania has one of the highest physician to 100,000 population ratios in the EU, while having one of the lowest FPs to 100,000 population ratios (Table 1) [5-6]”.

Table 1 - Number of FPs and physicians per 100,000 population in 1997 and 2003

<table>
<thead>
<tr>
<th>Country</th>
<th>FPs per 100,000 population</th>
<th>Physicians per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1997</td>
<td>2003*</td>
</tr>
<tr>
<td>Lithuania</td>
<td>7.0</td>
<td>48.6</td>
</tr>
<tr>
<td>Latvia</td>
<td>16.1</td>
<td>45.2</td>
</tr>
<tr>
<td>Estonia</td>
<td>52.3</td>
<td>62.9</td>
</tr>
<tr>
<td>Germany</td>
<td>109.6</td>
<td>104.3</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>60.4</td>
<td>62.8</td>
</tr>
<tr>
<td>EU-25</td>
<td>56.2</td>
<td>64.1</td>
</tr>
</tbody>
</table>

*or the latest available year
Page 4, second full paragraph. How are “services provided by family physicians” defined? What is a service? An office visit? A hospital visit too? A lab ordered?

*Services provided by family physicians are defined as office visits. The term “services” was changed to term “visits”.*

Page 9. In this part of the Discussion the authors indicate which assumptions/estimates had the greatest effects on the estimates and which had little influence. This information should be presented in the Results section, preferably in some sort of table or figure so the reader can see for him/herself how estimates varied with changing the various parameters.

*The information was moved to the Results section and complemented; variables / assumptions and their influence on estimated losses / gains to the profession of FPs in 2006-2015 are presented in the table: “All three supply projections were equally influenced by the annual mortality rate (Table 3). The biggest differences in supply scenarios were caused by different migration rates, enrolment numbers in training programs and the retirement age. If the retirement age was set at 66 years, 110 FPs could be expected to retire during 10-year period, compared with only 40, if retirement was 71 years. If migration remained stable at the current rate, 381 FPs could be expected to leave Lithuania in 2006-2015. The rise in the supply curves until 2008 was mainly caused by the higher annual number of graduates than in the consecutive years (Fig. 1.). In addition to the graduates of regular residency programs (30-46 depending on scenario), it included graduates of interruptive residency programs (around 65 each year). Later fall was related to discontinued admission to these programs since 2004. The drop out rate from training programs is also reflected in the number of graduates, but due to very small numbers it had little influence on the future supply of FPs.”*

Table 3 - Variables / assumptions and their influence on estimated losses / gains to the profession of FPs in 2006-2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual mortality rate</td>
<td>0.47%</td>
<td>88</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>At the age 71 years</td>
<td>40</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>At the age of 66 years</td>
<td>110</td>
<td>-</td>
</tr>
<tr>
<td>Annual retirement rate</td>
<td>0.6%</td>
<td>116</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1.1%</td>
<td>207</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2.2%</td>
<td>381</td>
<td>-</td>
</tr>
<tr>
<td>Annual migration rate</td>
<td>Decreased by 20%</td>
<td>-</td>
<td>444</td>
</tr>
<tr>
<td></td>
<td>At the level of 2004</td>
<td>-</td>
<td>503</td>
</tr>
<tr>
<td></td>
<td>Increased by 20%</td>
<td>-</td>
<td>569</td>
</tr>
<tr>
<td>Enrolment in residency programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1%</td>
<td>5</td>
<td>-</td>
</tr>
</tbody>
</table>
Discretionary Revisions (which the author can choose to ignore)

Page 6, middle of page. Please add a sentence or two about the Delphi approach, as most readers will not dig back to a previous paper to understand its methods.

The following paragraph was added to the Methods section: “The first approach was based on the survey conducted in 2000 by use of the Delphi survey technique. To determine the goal of FP workforce planning that should be reached by 2015, we surveyed the deans of the Faculties of Medicine, members of the National Board of Health, county chief physicians, directors of the Territorial Sickness Funds and the State Sickness Fund, and representatives of the Ministry of Health and the WHO Liaison Office. Out of a total of 34 questionnaires sent out, 23 were completed and returned in the first round. In the second round, the questionnaires were sent only to the 23 respondents of the first round, of whom 15 responded [2].”

Figure 1. It would help the reader to understand why there is a bend in the curves in 2008. Why does this happen?

This was explained in the Results section: “The rise in the supply curves until 2008 was mainly caused by the higher annual number of graduates than in the consecutive years (Fig. 1.). In addition to the graduates of regular residency programs (30-46 depending on scenario), it included graduates of interruptive residency programs (around 65 each year). Later fall was related to discontinued admission to these programs since 2004.”

Page 10, last paragraph. I am interested in the “non-financial incentive system” the authors envision. Examples?

The following information was added: “Another recommendation would be to increase retention rates in the profession, via implementing reformed and significantly improved financial and non-financial incentive system (the examples would include increased per capita reimbursement for FPs mixed with fee-for-service payments, better working conditions, lower patient load, improved access to continuous medical education courses, etc.).”

Quality of written English: Needs some language corrections before being published

The revised version of the manuscript was approved by one of the authors Jack Reamy, who is a native English-language speaker.
The authors present an interesting paper on the topic of manpower planning in the field of primary health care, more precisely in General practice. The issue is a very challenging one for all transition countries. Inspite of there not being a single solution to the problem, the paper brings an interesting concept, whose limitations are mostly defined by the stakeholder setting in Lithuania that still appears to depend a lot on the state. In view of the difficulties in obtaining reliable data, the results are quite impressive and offer a good base for policy decisions. Although medical workforce was very strong in the former socialist countries that in itself did not provide enough supply for some crucial services, like general or family practice, best evidenced by the findings of this study.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
None

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
None

Discretionary Revisions (which the author can choose to ignore)

I would suggest authors to formulate their final recommendations a bit more firmly and more concisely as I believe there is enough evidence in their work to support that. That is important since there will obviously be a gap between the real projections and needs expressed also by the demographic changes.

The Conclusions section was restructured as follows: “Family medicine in Lithuania will face several challenges in coming years. There will likely be a lack of approximately 9 FPs per 100,000 (or 300 FPs for the whole population) in 2015, which should be considered as increased duties and responsibilities are assigned to them. Job satisfaction of FPs is relatively low, with compensation, high job demands, social status, and high patient load as key factors in causing dissatisfaction and psychosocial stress.

We recommend that the enrolment in residency programs be increased by 20% at least for the next three years. Special attention should be paid to monitoring of retirement and retention rates in profession. Every fifth graduate was not practicing in Lithuania, as he / she either chose a better paid job or moved to another country. A better retention program would reduce training requirements to achieve the desired workforce supply. Achieving a balance between the supply and the requirements is very complex, but important task in order to ensure the appropriate and efficient functioning of the health care system in the future. Requirement and supply projections should continue to be monitored annually, and be amended, if new trends in any of the FP characteristics emerge or projection assumptions change. Without some more comprehensive registry or means to link the existing databases, complete
information on the FP workforce in Lithuania will remain difficult if not impossible to obtain.”