DYNAMICS OF THE NURSING WORKFORCE MARKET IN BULGARIA

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INTRODUCTION
At present Bulgaria, as many countries in the world is in a critical period for health workforce [1,2]. The shortage of qualified nurses is one of the biggest obstacles for improving the health-system performance [3,4]. In our country the challenges of the nursing workforce market are interlinked with the challenges of the healthcare reform [5].

Since 1989 the Bulgarian economic system was transformed from command to mixed economy. In the health system a structural reform in the hospital sector was initiated and a new health insurance model was introduced. Healthcare managers throughout Bulgaria began reducing expenditures in an effort to eliminate budget deficits and reduce their alarmingly high debt burden. As part of this deficit-fighting period, hospital managers reduced expenditure levels quite dramatically through large staff layoffs – mainly of nurses. A lot of hospitals were closed down. The recent problems in the nursing labour market could be attributed to this hospital downsizing era [6].

The joining of Bulgaria to the EU in 2007 made us a part of the single market. On the one hand it gave the Bulgarian nurses many opportunities to work in the EU because of the shortage of nurses there, but on the other hand that is an actual threat to the supply of nurses for the national health system [7].

The current situation of the Bulgarian nursing workforce market is influenced by the complex effect of various environmental factors of the transforming health-system - socio-economic, legal, political, demographic, cultural, as well as specific factors for the profession [5].

Those factors could be divided in two main groups. In the first one are the demand side factors such as demographic and epidemiological trends, models of medical care consumption in terms of health-system reform and macroeconomic conditions. In the second group are the supply side factors such as trends of the market for nurses in terms of health-system reform, status of the remuneration funds, emigration and immigration of nurses, capacity for training of nurses, licensing and other barriers for entering the nursing profession and professional realization [8].

In fact there are so many variable factors that affect nursing workforce market today that true equilibrium is more of an idea that is helpful for creating working models, but lacks real-world validation. As the market mechanism is unable to reduce the negative effects of the above mentioned factors and attain market equilibrium the Bulgarian government is urged to get involved in workforce planning and initiate actions and strategies for producing and retaining the highly qualified nurse professionals in Bulgaria.

BACKGROUND. Bulgaria, as many countries in the world is experiencing a critical period for the health workforce. The shortage of qualified nurses is one of the biggest obstacles for improving the health-system performance. Lack of strategic planning based on profound market research and elaboration of scientifically based prognosis further deteriorate the current nursing labor market disequilibrium.

THE AIM of the study is to explore the main factors influencing the nursing market disequilibrium in Bulgaria and to make an evidence-based forecast of the future needs for nurses in order to suggest relevant workforce development strategies.

MATERIAL AND METHODS. The study employs a combination of sociological and statistical methods. The analysis is based on the official statistical data on Bulgarian nursing personnel up to 2012. Primary information is collected through self-administered questionnaires distributed among 337 practicing nurses from April 2007 to December 2012. Data are processed with the packages MS Office Excel 2010 and SPSS v. 13.

RESULTS. Results indicate that a decrease in the demand for nursing labour caused large staff layoffs during the first stage of the restructuring period (1990-2000) followed by a severe drop in the number of nurses due to emigration and exodus from the profession. There are also educational and qualification problems along with unattractiveness of the nursing practice due to high workload and low remuneration. With the mean age of 49 severe nursing workforce’s deficit is expected in 10-15 years due to retirement. According to our estimations the deficit of nurses will account for 3162 specialists by 2030.

CONCLUSION. The Bulgarian nursing labor market disequilibrium is due to long-term structural imbalances. As the market mechanism is unable to attain equilibrium Bulgarian government should be urgently involved in workforce planning and initiate actions and strategies for producing and retaining the highly qualified nurse professionals in Bulgaria.

Keywords: nursing workforce market, Bulgaria, disequilibrium, factors.

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forecast of the future needs for nurses in order to suggest relevant workforce development strategies.

**MATERIAL AND METHODS:**

The study is based on critical analysis of the statistical data for nurse professionals in Bulgaria and empirical sociological inquiry conducted in the period April 2007 – December 2012. Official nursing personnel data are taken from the annual reports of the National Statistical Institute of Bulgaria [9] and the Bulgarian Association of Health Professionals in Nursing (BAHPN). Specifically for this study the nursing association provided data on its members by specialty, gender, age group, employment status, foreign certificates etc. with reference date of December 2012. Primary information was collected through direct group self-administered questionnaires distributed to 337 nurses – students in baccalaureate and master programs in Healthcare management at the Medical University of Pleven. The majority of them were staff nurses (63%) and 37 per cent were nurse managers. Data were processed and analyzed with the packages MS Office Excel 2010 and SPSS v. 13.

**RESULTS AND DISCUSSION.**

There is a downward trend of the nursing workforce in Bulgaria. In the period 1990-2000 we experience severe drop in the number of nurses by 47% due to the structural reform in the hospital sector and the new health insurance model. This resulted in reaching the level of about 30 000 nurses which is an absolute minimum for the health-system functioning. As no further nursing staff reductions were possible the last 12 year period is characterized by a stabilization trend (figure 1).

Another parameter with a critically low level is the nurse: physician ratio (1.2:1), which is two times lower than the mean level for the EU and is a problem for the adequate health-system performance.

There is unequal geographical distribution of the nursing personnel among the 28 administrative regions in Bulgaria (figure 2). The highest provision with nurses is found in the large regional centers where medical universities and most of the health establishments are located. The mean nurse: population ratio for the country is 44 nurses per 10 000 population.

The comparative analysis reveals that nurse: population ratio in Bulgaria is below the mean value for the Central and Southeastern Europe (50 nurses) and about twice lower than the mean ratio for the Western Europe - 100 nurses per 10 000 population. Hence the conclusion is that the overall provision with nurses in Bulgaria is much lower than in the whole EU. The most alarming fact is that the nurses: population ratio in our country is far behind even from the EU-member states that rank last – Spain, Portugal and Greece.

There is also unequal organizational distribution of the nursing personnel in Bulgaria as 61% of all nurses work in hospitals and only 39% are occupied in out-patient care facilities. This is in contrast to the general trend.
towards changing the focus from secondary and tertiary to primary care and has a negative effect on the access and quality of the out-patient care. In his sector, especially, the largest nursing deficits are expected in terms of increase demand for personalized health care by the consumers.

Bulgaria, as most of the industrialized countries is characterized by an aging nursing workforce. The mean age of the Bulgarian nurses according to the BAHPN is 49 years (fig.3). This means that in 10-15 year period when these nurses are due to retire a substantial shortage is expected. According to the survey respondents the shortage of nurses is one of the basic problems of the nursing workforce market in our country (fig.4).

This study identified financial remuneration as more important to nurses than all other factors we measured. This concurs with the literature suggesting that compensation constitutes the most basic influence on retention of nursing professionals [10, 11, 12, 13, 14]. Bulgarian nurses earn less than €250 per month, compared to an average of €1500 in the EU. While 47% report an unlikelihood to emigrate, only 10% of the respondents think that working as a nurse in Bulgaria is financially satisfying. An alarming result is that the salary of 59% of the nurses included in our survey is below the mean work salary for the country which is ineligible for highly-qualified personnel. According to 90% of the respondents their remuneration is not adequate to their workload and responsibilities.

This low remuneration results in one major disturbing outcome – emigration. Almost 60% of the respondents declare their willingness to emigrate and this is not just an intention but a fact proved by the growing number of work certificates issued by BAHPN (fig.5). The continuous emigration process is aggravated even further by the fact that nurses who leave the country are the youngest and the most efficient ones.

Emigration is one of the main factors for downsizing of the Bulgarian nursing workforce. According to the participants in our study the most important factors for emigration are: the price of the nursing labour, workload, work conditions, continuous training opportunities and professional development (fig.6).

Emigration destinations that are preferred by Bulgarian nurses are the UK and the Western EU countries which can satisfy the emigrating nurses’ demand for higher incomes (92%), better work and living conditions (50%), enhancing qualification (14%) and gaining experience (31%).

Emigration has certain positive effects on individual level but it has a major negative impact on national level. It contributes to the growth of nursing shortage along with retirement and exodus from the profession. According to our estimations the deficit of nurses will account for about 3162 specialists by 2030. Failure to deal with it is likely to lead to failure to maintain or improve health care.

**CONCLUSION:**

On the supply side Bulgarian health system has got the capacity for providing enough nurses to meet the market needs but the demand side does not provide adequate job opportunities and remuneration for nurses. The shortage of nurses that exists in our country is not a physical deficit of persons with nursing
qualification but lack of individuals motivated to practice nursing.

The Bulgarian nursing labor market disequilibrium is due to long-term structural imbalances. As the market mechanism is unable to attain equilibrium Bulgarian government should be urgently involved in workforce planning and initiate actions and strategies for producing and retaining the highly qualified nurse professionals in Bulgaria.

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