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THE HEALTH WORKFORCE OF THE RUSSIAN FEDERATION IN THE CONTEXT OF THE INTERNATIONAL TRENDS

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THE HEALTH WORKFORCE OF THE RUSSIAN FEDERATION IN THE CONTEXT OF THE INTERNATIONAL TRENDS[3]

Having one of the highest physician-population ratios in the world, Russia – paradoxically – also faces shortages of physicians. This paper explores the reasons for this paradox through examining the structural characteristics of the Russian health workforce and its development. In comparing Russia with mainstream European countries and in particular the 'new" EU countries we argue that the shortage of physicians is determined mostly by the prevailing model of health workforce development with its enduring emphasis on quantitative rather than structural indicators. First, the traditional perception of physicians as inexpensive health resources determines the long-term growth of their jobs – irrespective of the new opportunities for substitution and other structural innovations. Second, there is a persistent distortion in the composition of physician supply, of which the most important is the very low share and narrow remit of primary health care providers in comparison to European standards. Third, the international trends in the division of labor between physicians, medical nurses and allied health personnel are not followed in Russia with the result of an inevitable overburden of physicians, the reproduction of a large supply of physicians, while also the paradoxical shortage. Fourth, the system of professional development of physicians does not match international standards. Although with a substantial delay, Russia has now started transition to a workforce model focused on structural characteristics of human resources and so, in the final part of the paper, these new initiatives of the Government are critically assessed.

Keywords: physicians, health workforce, health workforce policy, health care systems, primary care, Russia, health reforms.

JEL Classification: Z

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1. Introduction

Health systems and the health workforces that lie at their core are facing a set of distinctive and rapidly evolving challenges. The demands on health services are undergoing change, as the demographic, cultural, political and socio-economic profiles of their populations evolve and give rise to new user expectations and needs. At the same time, in recent years, the challenge of incorporating new and emerging technologies while delivering efficiency and equity in the austere surroundings of the post-financial crisis world has taken a grip on health sector management. The ability of health systems to respond appropriately to thesemyriad challenges is heavily dependent on the availability of a health workforce with relevant skills, deployed in sufficient numbers, operating in the right geographic locations, with appropriate scope for professional development, productivity enhancement and interaction in an engaging workenvironment.

These workforce challenges are acute in Russia. After the breakup of the Soviet Union in 1991, the Russian health system underwent a significant transition: a shift from budgetary health funding to mandatory health insurance (Twigg, 1999) covering 90% of the population (Balabanova et al, 2003), the decentralization of governance, the emergence of a nascent private sector and shifts in the service delivery system. Notwithstanding the scale of these changes, the reform to financing was not accompanied by a comparable transition in health care delivery, with the legacy of the Semashko health care system persisting, in the form of a sustained low status of primary health care, prioritisation of hospital-based care, delivered by public sector employees working in big polyclinics and bed-dominated hospitals, and receiving low salaries(Popovich et al, 2011).

In recent times, the story is different. The Russian government has actively prioritized the health and health care of the Russian population including, most recently, through the increase of medical workers' remuneration and via the introduction of a new system of professional development (Government of Russian Federation, 2013).

Theseworkforce initiatives, representing the first meaningful attempts at professional medicalservices reform, mark out new territory for Russia. Perhaps inevitably, they have run into as many obstacles and prompted as many questions as they have answered.In particular, what type of structural labour market changes are required to shift health labour market dynamics on to a sustainable trajectory? To what extent is the Russian health workforce model converging on international best practice and how can that convergence be gauged?How should Russian institutional and historical specificitiesserve to shape the process of modernisation and reform? What are the risks of keeping the existing workforce structure unchanged? These questions are also relevant for other post-Soviet countries in transition.

This research addresses these questions and so represents a first pass at viewing the performance of the Russian health system through the lens of the health workforce and its dynamics. We proceed as follows. In section 2, we present a labour market oriented framework for the analysis of health workforce dynamics in a transition country. In section 3, we explain the source of our data, the choices of our international comparators, our descriptive methodology and reflect on the challenges of using cross country statistics for this type of analysis. Having identified health workforce problems in section 3, in section 4 we take a more forward looking and policy oriented view by reflecting on the prospects and priorities for reshaping health workforce policy in Russia. The discussion in section 5 identifies knowledge, data and research gaps and presents an agenda for future research and policy analysis in this area.

2. A health workforce framework for analysis

In the majority of the healthcare system literature, the health workforce is located within the system as one of a number of institutional components, actors, or resources. The specific delineation of the role varies. In its landmark publication, the WHO (2007) conceptualized the health system in terms of six building blocks, of which the health workforce was seen as one. Atun and Menabde (2008), writing in the context of communicable disease, identified the health workforce as being a resource in receipt of payment, but not as one of four core levers having influence over the health system. This reflected the earlier approaches of Hsiao (2003) and Roberts et al. (2003) who each identified the significant roles of the health workforce but equally didn't perceive of it as one of the central pivotal drivers of the health system. Another strand of literature (McPake et al., 2013; Anandand Bärnighausen, 2011; Nicholson and Proper, 2012)situates the health workforce more squarely at the heart of health service delivery, because "all health systems work through health professionals to achieve their goals" (Anand and Bärnighausen, 2011).

While not ignoring the complex interrelations between the health workforce and the other institutional components of the health system, we follow this latter strand of literature in viewing the health system and its performance through the prism of the health workforce. Studying the Russian health workforce developments, we assume that they reflect the prevailing characteristics of the health system itself. The countries of the former Soviet Union inherited a large network of medical facilities from the Soviet-period but the traditional approach of referring primary care patients to specialists and of excessive rates and durations of hospitalisation has been sustained until relatively recently. This legacy endowed the Russian health care system with an excess of beds and physicians per capita but a relative shortfall of nurses and general practitioners. Improving primary care and the modernisation of the health

care infrastructure is seen as the pre-requisite for strengthening workforce development. And on the contrary, the latter process contributes to improving health system performance.

Another body of literature addresses the issues of structural changes in health workforce as the reaction to the new challenges and a new situation in health workforce markets. In most of the EU countries, including post-Soviet countries, in the 2000s there was a substantial growth of the number of physicians and nurses per 10 000 population (Kuhlmann et al, 2015). Although the rates of growth varied across countries, this general trend gave ground for many commentators to formulate a shift in the focus of health workforce policy – from 'extensive' increases in the numbers of health workers to structural changes. A new context of workforce planning has emerged: not only to ensure the necessary growth of physician and nurse numbers but also to improve the structural dimensions of workforce supplythrough a set of health policy interventions. Asurveyofhealthpolicyleadersof29OECD countries in 2012-13 indicated thatthe major concern is the inefficient distributionofphysiciansupply (28% respondents)) – substantially higher that the concerns about maintaining the current level of physician supply (only 4%), meeting increasing demand (7%) or maintaining the current share of GPs (12%)(Pearson, 2013). Similar interest in structural changes has been shown in Russia and some other post-Soviet countries (Sheiman&Shevsky, 2014).

Indeed, in Russia, the new mechanisms of health workforce policy to cope with structural distortions are increasingly discussed, including the regulation of physicians training and re-training, overcoming a geographically poor distribution of physicians and nurses and introducing long-term planning with special focus on structural changes. These relatively new developments extend the framework for health workforce analysis – from traditional measures of health workers supply and demand to the qualitative analysis of structural changes. This structural framework is very relevant for Russia.

Against this background we seek in this empirically descriptive paper to take stock of the state of Russian health workforce development in comparative perspective. Specifically, we describe time-series data on what we interpret as important proxies for structural development: i/ the physician-population ratio; ii/ the share of GPs among primary care physicians; iii/ physicians as a proportion of the health workforce; iv/ the role of nurses in the modern health system. We choose indicators in these areas because the expected changes and developments in these time-series crudely proxies the expected and needed reform of the health workforce that the post-Soviet context requires.

3. Empirical Evidence: The Russian health workforce

For the purposes of our descriptive empirical analysis we draw on data from the WHO Health for all data base augmented, where appropriate, with OECD data. The information on the Russian Federation is limited or incomplete in these databases and therefore, subject to the constraint of sustaining comparability, we call on data from the Russian National Statistics office. In order to keep the analysis tractable, we limit our comparative analysis to a small number of individual countries and 2 groups of countries. As our principal individual comparator countries we selected Estonia (former Soviet Union) and Czech Republic (central European) as post-communist countries that have undergone significant health reforms and have experienced differing health challenges, having started with similar legacies, in the transition period. Our group comparisons are with the pre- and post-2004 European Union countries.

i/ The physician-population ratio

Cross-country measurement of the number of physicians is complicated by the variance in their definition across country. Official Russian data includes dentists and other categories of medial worker that are not normally included in the WHO database and so we draw on this broader category of physicians and dentists, in order that Russian and international data can be compared. Even so, there remains some overestimation of the number of physicians in Russia due to the inclusion of non-practicing physicians, including those who work in health administration.[4] This overestimation does not affect the trends in physicians supply.

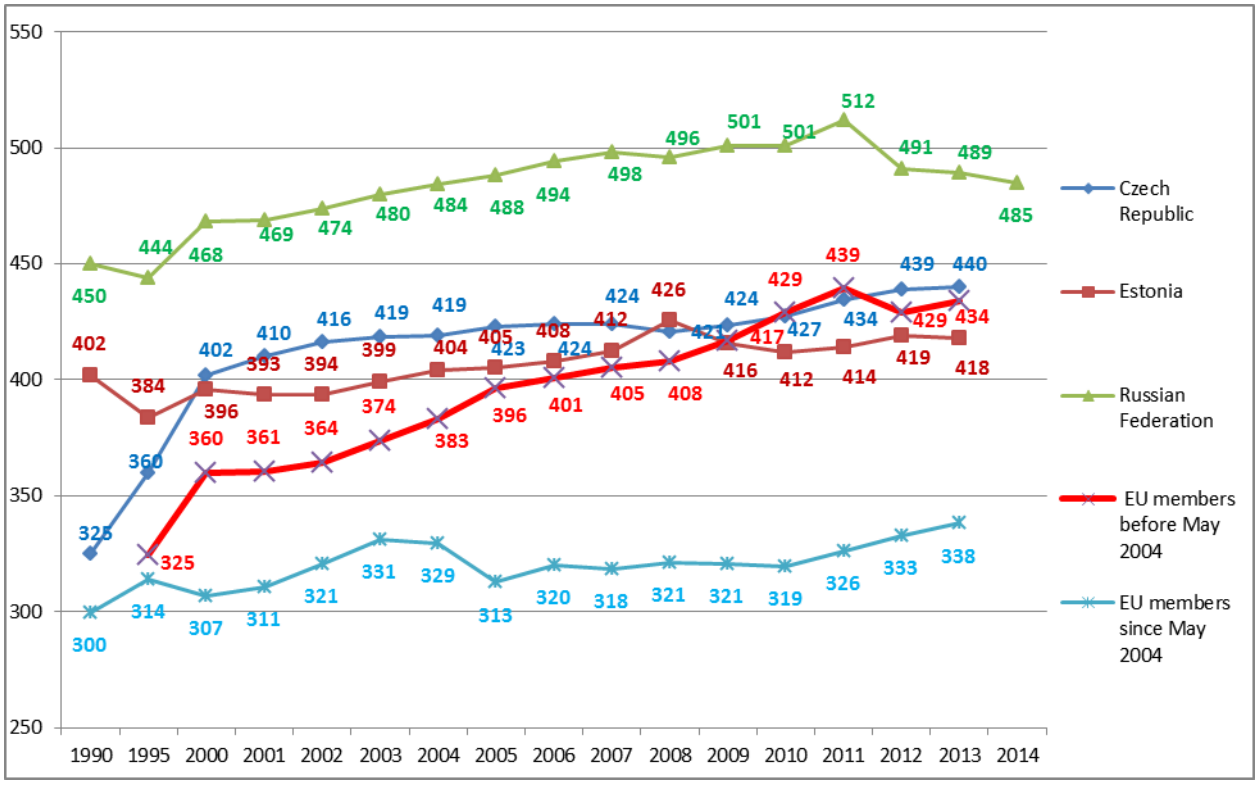
Figure 1 demonstrates a universal trend of increasing physicians through until approximately 2011-12, when the numbers per 100,000 start to decline in Russia and in the pre-2004 EU. As explained above, the post-Soviet countries inherited a large number of physicians per capita. Russia continues to have one of the highest levels of physicians per capita in the WHO European Region, although by 2014 the gap with the other countries had begun to narrow. Czech Republic and the pre-2004 EU countries had the biggest increases in physicians over thisperiod, starting as they did from relatively low levels. It is not shown in figure 1, but although the other former Soviet countries started with a similar number of physicians (only 9% lower than in Russia) they did not experience the increase that Russia did during the 1990s and 2000s (Popovich et al., 2011).

However, while these data suggest that there may be a surplus of physicians per capita in Russia, the reality on the ground is suggestive of the problems that we face in using aggregates such as these, which disguise the composition and distribution of the different categories of medical worker included. Indeed, within Russia it is accepted that there is actually a shortage of

[4]These groups of medical workers are not counted in WHO data base as physicians.

physicians of the right category in the right location i.e. there are vacancies. An official estimate suggested the total shortage stood at around 148 000 or 24% of the total number (Government of Russian Federation, 2012B). The new positions of physicians are not always filled or, when they are, they are filled by existing physicians working overtime in an additional job. According to the national survey of physicians, more than 20% of them worked in more than one position in 2013 (Shishkin et al, 2013). These additional positions are typically in the same medical facility and are often deliberately created by the facility managers in order to give physicians a chance to earn additional money by taking on more than one job. Official estimates suggest that the ratio between the number of jobs (full-time equivalents) and the actual physicians (head counts) is around 1.6:1(Rosstat, 2014). This is consistent with the notion that there is a shortage, that the physicians are not in the same location as the jobs and that the jobs are created artificially to boost the income earning potential of the existing physicians.

Figure 1: Physicians and dentists per 100 000 population, 1990-2014 (or nearest year)



Sources: WHO (2015); Rosstat(2001, 2005, 2015)

A similar estimate of the ratio of full-time equivalent jobs to actual physicians was made for a number of countries and the average ratio for the new EU countries, in 2012, is 1.25:1. Some countries of this group have made substantial progress in decreasing the incidence of holding more than one job. In Estonia and Czech Republic, the respective ratio now is lower or

close to one. Thus in these countries the problem of the extensive increase of physicians jobs irrespective of their actual stock is relatively less relevant.

This seemingly paradoxical combination of an exceptionally high physician-population ratio alongside an absolute shortage of physicians (as well as the phenomena of holding more than one job) in the RF can be explained by a number of factors. First, this is the result of a low population density, and a relatively high share of rural population (around a third). The combination of a vast landscape, highly dispersed small towns and rural areas, along with different demographic profiles, means some regions need relatively more physicians per capita, and in some cases their increase is formally initiated by the government to improve care in these areas.

While there is some truth in this explanation, there is a much more fundamental explanation which relates to the legacy of the Soviet period, discussed above. There remains an enduring perception of the physician as a relatively inexpensive resource. In 2012 the average salary of the physician was only 26 % higher than the average in the economy (Rosstat, 2014), while in most of the pre-2004 EU countries it is 1.7 to 3.4 times higher for self-employed GPs and 1.7-5.0 times higher for specialists (OECD, 2013). Most of the "new" EU countries have substantially increased this ratio over the last two decades. For example, in Estonia the salaried specialists now earn 2.1 more than the average, salaried GPs; while the equivalent figures for Slovenia and Czech Republic range from 1.6 to 2.6(OECD,2013).Tijdens et. al (2013), exploring health workforce wages across 20 countries, find that doctors salaries are the lowest in Russia and Ukraine.

The relatively low "price" of physician labour in Russia is a strong driver for increasing their number. Every new service initiated by the government is usually developed through opening new physician jobs irrespective of the content of this job. For example, the attempt to strengthen preventive care made in 2010 brought to life new entities - "centers of health" that were staffed predominantly by physicians. Alternatives, such as expanding the functions of the current stock of physicians (with higher remuneration) or extending the role of nurses was not even discussed.

Additionally, the employment status of physicians as employees of state owned facilities has not significantly changed since the Soviet period. Physicians are fully dependent on their managers in terms of the organization of care and sometimes even in clinical areas. The size of their salary is determined by a schedule of salaries set by regional governments and typically, those of the same age and category will have a similar salary regardless of performance. There are limited opportunities for assuming responsibilities or motivation for professional development.

The combination of these factors, has therefore given rise to this paradox: there is both a surfeit and a shortage of physicians in Russia. But the reality is that there is a disjoint in the professional status, the salaries and the opportunities for professional development, which give rise to the category of 'physician worker' taking on a somewhat different meaning than it does in most European Union countries.

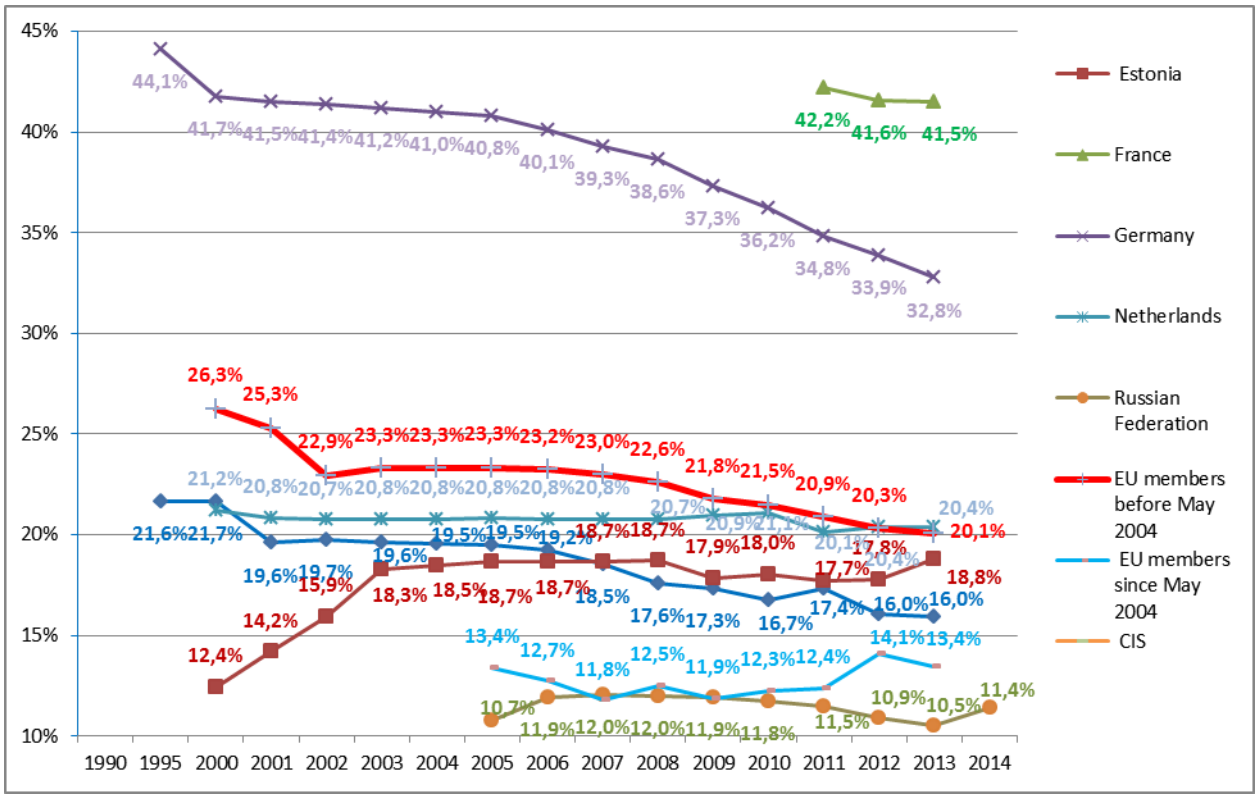
ii/ GPs as a proportion of physicians

In contrast to the countries of the European Union, a major provider of primary care in Russia is the so-called district physician (DP), who work as salaried employees in multispecialty polyclinics (for adults and children separately). During the 1970s, there was a sustained attempt to 'support' DPs by increasing the number of outpatient specialists in the polyclinics. This served to narrow the range of clinical activity with which the DP would engage before referring their patients to specialists, and in turn to result in a proliferation of very narrowly defined specialists. The DPs refer 30-35% of their first contact patients to specialists (Potapchik et al, 2011), while in most European countries, the corresponding indicator is only 10-15% and in some countries even lower (Wilson et al, 2015). As a further consequence, patients have grown to increasingly mistrust the DPs because of their narrow area of clinical activity and the physicians themselves have ceded individual responsibility for the supervision of the enrolled population. There is instead a form of collective responsibility shared across the entire staff of polyclinics and the patient therefore has no direct contact responsible for them (Sheiman and Shevski, 2014).

The sustained role of the DP in Russia has reduced the impetus for a shift to the general practitioner (GP) model. Indeed, the number of GPs in 2012 was only 0.7 per 10,000 residents compared to an average of 8.7 in the pre-2004 EU and 4.6 in the post-2004 EU. Most of the new EU countries started the shift to the GP system in the 1990s and now, often by re-educating former DPs as well as directly increasing the number of GPs, have their primary care units staffed by practitioners with much broader function responsibility than the Russian DPs (Lember et al, 2015). For example, in Estonia and the Czech Republic there are now more than 7.0 GPs per 10,000 residents, a number that is converging on the 'old' EU country average (WHO, 2014). In parts of the 'new' EU this process has been driven by privatisation. In Czech Republic, Slovakia, the Baltic countries and the former Yugoslav countries, polyclinics have been restructured into free-standing general practices, in which most GPs are self-employed and act as private contractors of health insurance funds (Lember et al, 2015). Even when these countries have subsequently moved back towards bigger entities, the self-employed status of physicians has not been questioned(Ettelt et al, 2009). This has endowed GPs in most of the post-Communist world with very different professional profiles to those of the Russian DP.

Figure 2 confirms these observations. Even when incorporating both DPs and GPs in the Russian data, the proportion of GPs among total physicians barely scales double figures, compared to figures of well over 20% for the pre-2004 EU countries and approaching 20% for the post-2004 EU countries. Combined with figure 1 therefore, we can conclude that there are too many physicians and not enough of them have professional profiles or opportunities equivalent to the 'western' GP.

Figure 2: Share of GPs in the total number of physicians, 1995-2014 (or nearest year)



Sources: WHO (2015); Rosstat(2001, 2005, 2015). Note: for the RF these figures include general practitioners and district physicians (district therapists and pediatricians)

A knock on and reinforcing effect of this profile is that the incentives to become a GP are reduced. According to Lember et al., (2015) the average percentage of students that choose to become GPs across 31 European countries is 17%, while in Russia this figure is barely 10%. As a result, DPs are always in short supply – our 'back of the envelope' estimates suggest that there is a shortage of around 30%.[5] As a result, the DPs are heavily overburdened and often forced to hold more than one position. Indeed, the average population served by one DP is, according to our estimate, 2530 patients – about 50% higher than the standard set by the Federal Ministry of Health. Accordingly, patients have to wait for long periods to be seen and their level of

[5]The estimate is based on the "normatives" (standards) of the enrolled population – 1700 for district therapist and 800 for district pediatrician. To meet these standards, the country needs 90.6 thousand DPs, but their current number is only 60.6 thousand.

satisfaction is low. Roszdravnadzor (an agency reporting to the Ministry of Health), reported that only 14% of respondents are satisfied with their DPs (Sheiman and Shevski, 2014). Similar estimates made for European countries (including some post-Soviet countries) indicate that 80-90% of respondents are satisfied with their GPs (Wilson et al, 2015).

The government has made some attempt to attract physicians into primary care. The National Priority Project for Health, starting in 2005, gave rise to substantial salary increases for physicians, while a "Rural physician" initiative was launched in 2012 to attract physicians to rural areas. These measures have served to divert resources in the anticipated way but there have not been accompanied measures substituting DPs for GPs or restructuring polyclinics. The result is that, almost 25 years after the end of the Soviet period, the required shift towards a GP framework in primary care has barely started and the perplexing combination of both a high physician-population ratio and a physician shortage will continue into the future.

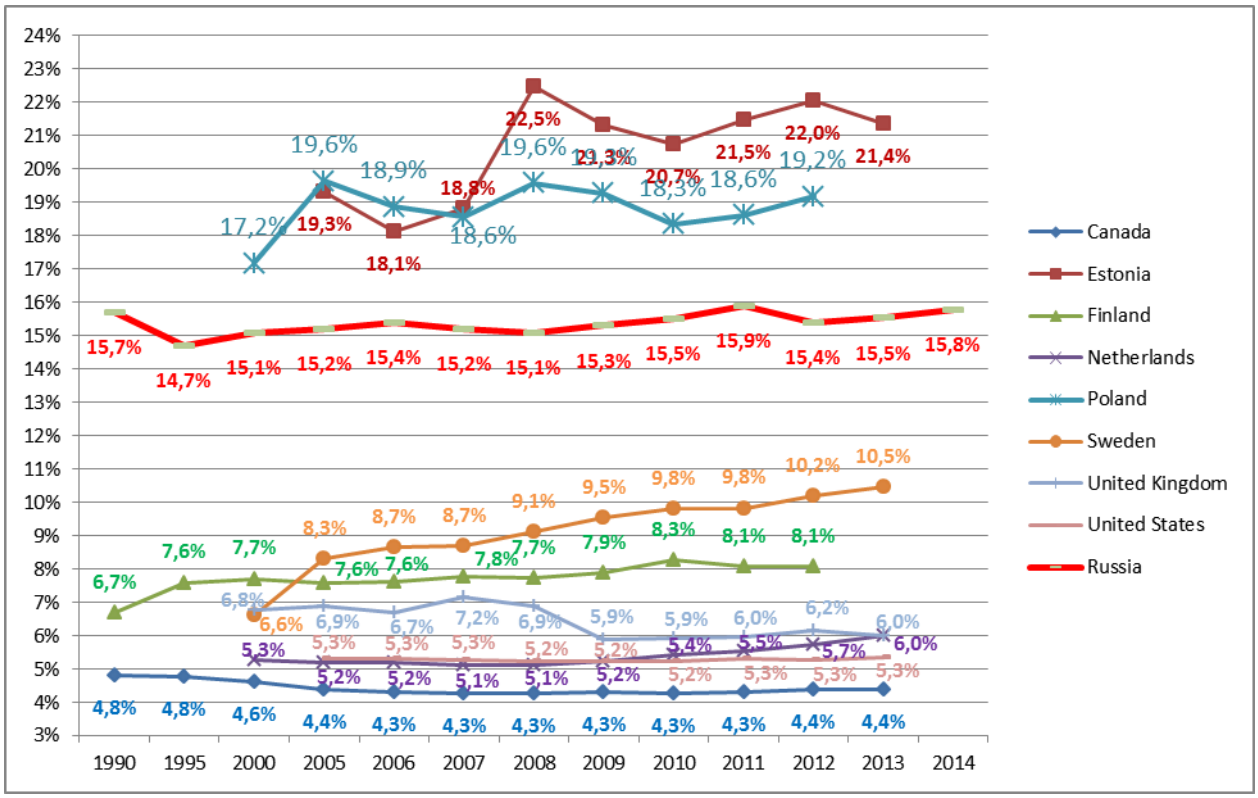
iii/ The division of labour in the health workforce

A further reform failure in Russia relates to the inadequate division of labour in the Russian health system. In European health systems many simple and routine GP functions are delegated to medical nurses and there is an increasing substitution of physicians for nurses in treating simple cases. This is particularly important given the new health challenges facing advanced societies. The increasing incidence of chronic diseases and co-morbidity drives the demand for new services (e.g. home care), most of which can be provided by nurses (Dubois et al, 2006; Maynard, 2006). These trends are accompanied by developments in the nursing profession which see new specialities and sub-specialities emerging, new training and education requirements and new opportunities in professional development. There is a substantial body of literature that provides evidence of the high clinical performance of nurses in managing simple cases and an associated patient satisfaction level that exceeds that obtained by a purely physician based approach (Kinnersley et al,2000; Lenz et al,2004; Mundinger et al, 2000). Alongside this, the so-called "allied health specialists", who support the work of physicians and nurses, and whose number include physician and nurse assistants, technicians, administrative and support personnel, are growing rapidly. In Germany and the UK they amount to around 65% of health workers (WHO, 2014).

Globally, these developments serve to strengthen the role of physicians in the health system. They have moved to the tip of the health workforce pyramid and are served and supported by numerous categories of other medical and non-medical personnel. It is true that, to some extent, a division of labour has now started to take place in Russia, albeit to a substantially lower degree. The predominant perception of nurses has been as an assistant to the physicians,

and this has not changed much over recent decades. Therefore, the major characteristics of nurses' professional capacity have remained - the absence of theoretical knowledge, poor understanding of service delivery organization and management, and a limited area of practical skills. This is in contrast to the western trends described above. The transformation in western countries has taken several decades and helps explain why physician numbers are on the increase (figure 1), why the share of GPs within the body of physicians is on the decrease (figure 2) and why the share of physicians in the total health workforce is lower in the western world than in Russia (figure 3).Putting this differently, understanding the aggregate cross-country comparisons in figures 1-3 requires an appreciation of how the different professional classifications have been interpreted, implemented and reformed in particular contexts.

Figure 3: Share of physicians in the total health workforce, 1990-2014 (or nearest year)



Sources: Database OECD (2015); Rosstat(2001, 2005, 2015)

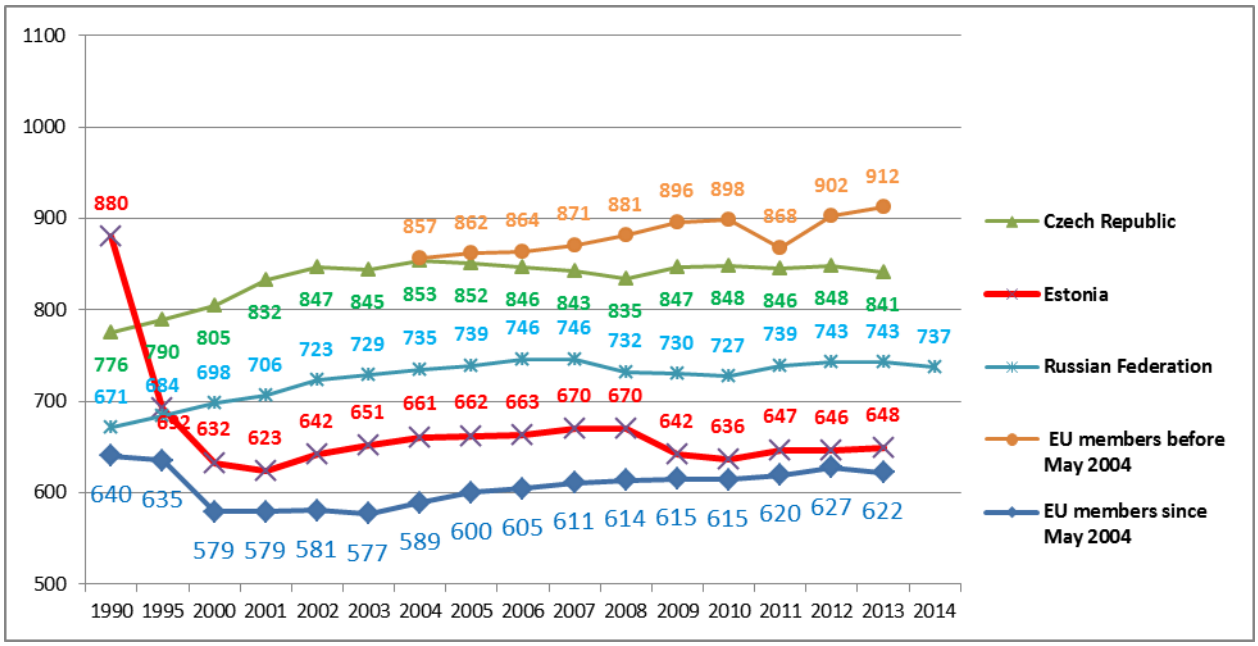
In Russia, the allied health specialists are more likely to be administrative personnel than medical technicians, IT specialists, repair personnel or other professionals that determine the effective use of medical equipment. To the extent that the latter categories prevail, their professional training is provided mostly by companies that supply the medical equipment rather than through education in the universities and medical schools (Tarasenko, 2015). The absence of any substantive division of labour, mirroring that which has emerged in the west, results in the

everyday overburden of physicians, who have to absorb a lot of the routine functions, including medical documentation (HSE, 2013).

iv/ The role of nurses

The nurse-population ratio has an upward tendency – from 671 per 100000 residents in 1990 to 737 in 2014. However, the current level of this ratio is 15% lower than in the "old" EU countries (868) and 12% lower than the average for the other FSU countries. Relative to the "new" EU countries, it is 20% higher (620), which can be attributed to the low level of this indicator at the starting point. In the following decades the countries of this group had diverse tendencies – upward for Czech Republic and downward for Estonia – but with an average downward trend (figure 4).

Figure 4: Nurses per 100 000 population, 1990-2014 (or nearest year)



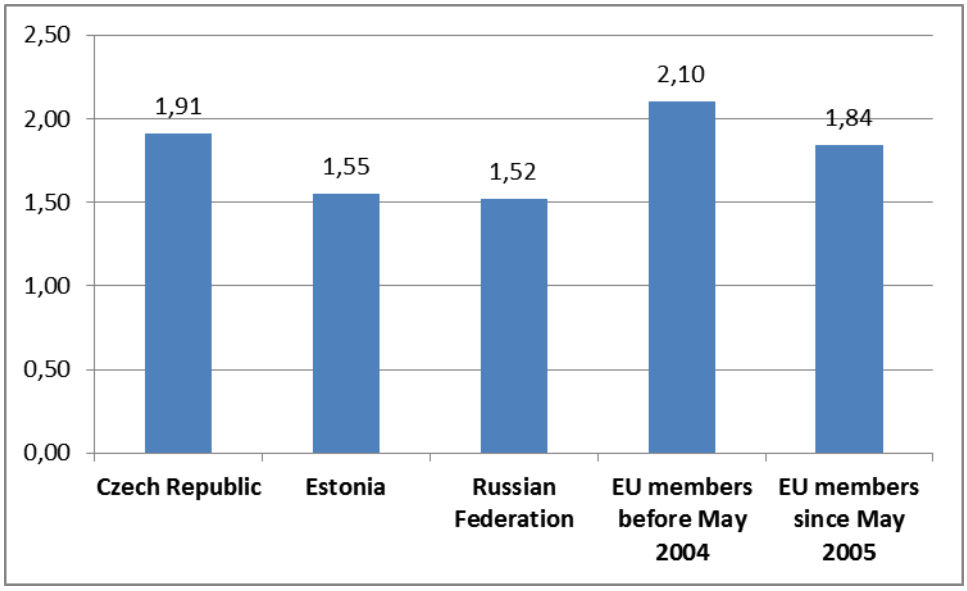
Sources: WHO (2015); Rosstat(2001, 2005, 2015)

The nurse-to-physician ratio in the RF is substantially lower than in the "old" and the "new" EU, as well as the average for other FSU countries (figure 5). This is the result of the relatively high physician-population ratio rather than the low nurse-population ratio in the RF– there are too many physicians and they are not augmented by an adequate quantity or quality of nurses. Such disproportion results in the overburden of physicians.

Thus the mainstream of health workforce development is delegation of services to nurses, their growing involvement in the provision of new services, some substitution of physicians for nurses, the growth of new categories of medical and non-medical personnel with the resulting

decrease in the share of physicians in the total number of health workforce. The intensity of these developments differs across countries and the RF falls outside of this mainstream.

Figure 5: Nurse-physician ratio in selected countries, 2014 (or nearest year)



Sources: WHO,2015; Rosstat, 2015.

4. New horizons of health workforce policy: prospects and priorities

The number of physicians is strongly affected by their professional capacity. Low qualification determines low quality of care and, subsequently, excessive utilization of care – including additional physicians visits, emergency care, re-admissions and problems related to low adherence to medication. This in turn generates additional demand for physicians. Thus a profound education of physicians and their extensive post-graduate training can contribute to overcoming physicians' shortage. Ignoring this causal link, results in the conservation of the shortage in spite of the increase in the supply of physicians.

The cornerstone of the Semashko model was in ensuring access to care. The extensive increase of physicians and nurses coupled with the constitutional principle of free care contributed to reaching this goal (Popovich et al, 2011). However, the opposite side of the extensive growth is the decrease in the requirements to the level of professional skills of physicians and their professional development. In Western countries, the training of specialists takes 12-14 years, and then they improve their skills continuously. In Russia training takes 7-8 years, including medical school (6 years) anda one-year internship or two-years residency.

The concept of continuous professional improvement has been unknown in the RF for decades. The general requirement for physicians is to upgrade the qualification once during 5 years. The course lasts from 2-3 weeks to 3-4 months. This training is provided by special

institutions. Physicians can't select medical facilities for upgrading their skills. In addition, the requirements for the certification of graduates are low by Western standards: conducted without independent professional expertise; and therefore practically all graduates pass the exams and receive the certificates. Additionally, the route to the sub-specialization in Russia is shorter and easier than in most Western countries. An international survey of medical specialization indicates that in most Western countries the major condition for achieving a narrow specialty is to have substantial experience in the general specialty (and to be certified in the general area) (Policies and Procedures, 2014). This condition is not met in the RF. Practically all interns and residents are certified, although most of them have very limited clinical practice.

The drawbacks of medical education and post graduate training, together with the low remuneration level provide the context in which there is a lack of motivation for the professional development of physicians. The attractiveness of the medical profession is falling. A survey of the Federal MoH in 2013 indicates that only 14% of physicians are satisfied with their work, 22% plan to go abroad for additional training, 11% of medical school graduates don't plan to go to the medical profession and prefer to work in pharmaceutical companies and elsewhere (Migratcia, 2013). To this extent, the low level of physicians' professional development undermines the substantial efforts to increase their supply and does not address their shortage. It is clear that the extensive growth of human resources can't compensate for their inadequate quality.

Over the last few years, several governmental documents on health labour policy have been issued, including the Decree of President on the new targets of medical workers salary (Ukaz, 2012), the Government Decrees on remuneration policy in state budgetary facilities and health workforce development (Government of RF, 2012 A; Government of RF, 2013), as well as a number of regulations of the federal and regional health authorities. The major innovation of these documents is that the traditional perception of physicians and nurses as inexpensive resources has been re-considered and the decisions have been made about the phased out increase of their salaries. The average size of physicians' salary is planned to increase from 126% of the average salary in the economy in 2012 to 200% in 2018, (that is, physicians in 2018 will earn twice as much as the average in their regional economies), the salary of nurses – from 75 to 100% (Ukaz, 2012). The targets apply to the employees of state owned medical facilities which comprise the bulk of the total number of providers.

It is particularly important that the traditional policy of the periodic indexing of the salary is giving way to performance-related remuneration. A set of performance indicators is recommended centrally and then further specified by medical facilities for the various groups of medical workers. Each worker is contracted for clearly specified functions with two components

of the salary - permanent ("basic") and variable ("stimulating"). This new remuneration policy is the priority of the Federal and regional governments, therefore all targets are met in nearly all regions. The average salary of physicians in 2014 was 142% of the average salary in the economy, the nurses –80% - even higher than targets for this year (respectively 131 and 76%) (Rosstat, 2014). There is therefore progress albeit from a low base. Indeed, even the targets are still much lower than the actual ratios in the "new" EU countries, let alone the "old" members.

Contrary to the Western countries, where the basic salary makes the bulk of the remuneration and there are concerns about too much focus on P4P bonuses in some countries (Busse and Mays, 2008), in the RF the size of basic salary is prohibitively low. The size of bonuses is increasing but they are not enough to affect the motivation of physicians. The national survey of physicians in 2013 indicates that only 20% of them are ready to work more effectively with the available bonuses and that most of them are seeking a higher level of basic salary (Shishkin et al, 2013). This perception has been taken into account by the recent recommendations of the Federal MoH to increase the share of basic salary to 85-90% (including payment for the special conditions of work).

The current economic crisis poses serious challenges to the increase of the salary. However, the targets have not been questioned. The government looks for additional sources of funding at the level of medical facilities themselves – through merging hospitals and polyclinics, closing the most inefficient facilities, making the length of hospital stay shorter and firing excessive personnel. Thus the new labour policy has encouraged service delivery restructuring. It is not clear yet if the savings from this process will be enough to provide additional resources for increasing the salary.

It is also planned to decrease the supply of physicians from 410 per 100000 population in 2013 to 402 in 2018 (Government of RF, 2012 B). This is the first attempt to reverse the long-term trend of their extensive growth. Moreover, some regions have started physicians' jobs cutting and their firing. The most radical changes are taking place in Moscow. They are strongly opposed by physicians. The policy of restructuring has become a hot issue of the current political agenda.There are also attempts to promote structural shifts in workforce supply. The number of nurses is planned to increase by 50% in 2013-2018. This will allow an increase in the nurse-to physician ratio from around 2 to 3, which will bring convergence to the level of many European countries.

Finally, there are also significant activities planned to strengthen the quality of physicians' education and post-graduate training, including:

- new educational standards in medical universities that will focus on developing practical skills, re-equipping university clinics, using the educational programs of

the leading international medical schools, strengthening the qualification and remuneration of trainers;

- shift to 2-5 year internships;
- continuous postgraduate training to replace periodic education;
- the choice for physicians of medical facilities for upgrading their qualifications;
- developing a new system of physicians' accreditation/certification, as well as the system of approvals of the possible areas of practice. This system will start operating in 2016 and cover all physicians by 2022;
- strengthening medical associations and delegating the functions of accreditation to them (Government of RF, 2012 B).

Notwithstanding all of these ambitious objectives, the new health labour policy does not take into account some international trends and does not solve some of the indicated problems. First, there are no special activities to overcome structural disproportions in physicians supply, particularly the low share of PHC physicians and their shortage. Second, the model of district physicians with limited clinical and organizational functions as the major provider of PHC is not questioned. Third, it is still not clear how to overcome the disproportion between the excessive number of physicians in hospitals and their shortage in polyclinics, as well as the disproportions between the categories of specialists (the shortage of some of them co-exists with the excessive number of others – primarily those that serve private patients) and between city and rural areas (Sheiman&Shevski, 2014 B). Fourth, there are no solutions yet regarding the problem of physicians and nurses working in more than one job. It is proclaimed that the new labour contract will be focused on the higher remuneration for the work on one job but it is still unclear how this will be achieved. Fifth, the international trend of expanding the allied health workers has remained unnoticed in the new strategies. Quite on the contrary, the categories other than physicians and nurses are seen as the area of potential cutting to obtain savings in the health system. Moreover, no new salary targets are set for this category of personnel. Last but not the least, the employment and legal status of physicians as the employees of public medical facilities with limited individual responsibility is not questioned even conceptually. We are far from thinking that privatization of state owned entities is a "magic tool". But there is one area where it can be useful – general practice. The relatively low attractiveness of this area among medical students and physicians limits the effectiveness of the usual methods of labour policy (provision of subsidies to students, new positions of interns, encouraging work in rural areas, etc). Promoting private general practices, commissioning them the services currently provided by state owned polyclinics may ensure additional incentives, of which the most import is

managerial independence of physicians. The Russian government should look to explore this option.

5. Discussion

The comparative analysis can be summarized in the form of two patterns of health workforce development - extensive and intensive models. The extensive model is characterized by the absolute growth in human resources without major changes in their structure and professional potential. New challenges to the health system and its new problems are solved primarily by increasing physicians-to-population ratio and other quantitative indicators. The intensive model, in contrast, is focused on improving the structure of the workforce, encouraging professional development and motivating providers to improve their performance. In this latter paradigm, adopted across Europe, new challenges and problems of the health care system can be settled without a substantial growth of quantitative indicators.

Of course, practically, no country has either only and extensive or intensive approach. Quantitative growth is often important and desirable but it is always coupled with some structural changes. Our simple typology characterizes the prevailing pattern of development. Every country varies the prevailing model in each period of time depending on the range of factors determining demand and supply of the workforce as well as the general economic situation.

This typology can be further developed through the specification of six important criteria: 1) employment status of physicians, 2) the size and the form of remuneration, 3) education and professional development of physicians, 4) the dominant trend in physicians' jobs, 5) their structural characteristics, 6) the degree of labour division. Emphasis here is placed on the characteristics of physicians but a corresponding detailed analysis is possible for other categories of health personnel.

In the "new" EU countries, taken together, there are signs of the transition from an extensively-oriented to an intensively motivated development model - the growth of physician remuneration in relation to the average for the economy, the expansion of self-employment in outpatient care, the relatively low growth rate of the physician-population ratio, a growing proportion of GPs in the total number of doctors, a GP dominated provision of PHC and a relatively high nurse-to-physician ratio. Particularly significant progress has been reported in Estonia. In the FSU countries, these processes are not so intensive.

The impact of the extensive model of health labour development on the health system in the RF is a special issue. The following are its major negative outcomes:

i/ Reproducing the shortage of physicians. The low proportion of PHC physicians, limited clinical and organizational functions of district physicians, the slow pace of transition to a model of general practitioners, the excessive specialization of PHC, separation of specialty outpatient and inpatient care by different providers, a weak division of labour between doctors and nurses - all this generates demand for additional numbers of physician jobs. To meet this demand with such characteristics of health workforce model is extremely difficult, therefore a shortage of physicians will most likely remain in the future, at least in the mid-term. This shortage will be aggravated by factors that limit enhancing the "quality" of human resources. The absence of continuous professional improvement and independent accreditation/certification of physicians together with the low level of their basic remuneration reduce the motivation for professional development and therefore require the growth in their number. Unless a new health labour policy starts working, this extensive growth is inevitable. The burden on the economy will be an increasing one.

ii/ Reproducing disproportions in health care delivery. There is a direct and inverse relationship between the structure of service delivery and the structure of health labour. A relatively weak PHC sector and the dominance of inpatient care, as permanent features of the Russian system of care (Sheiman&Shevski, 2014), cause distortions in the structure of health labour. Inversely, disproportions of health labour significantly complicate restructuring service delivery. Over the last decade the Federal MoH has been implementing the strategy of downsizing hospital bed capacity and reducing utilization of inpatient care with the obvious positive results. The number of bed-days per capita decreased from 3,41 in 2000 to 2,71 in 2012. But this indicator is still considerably higher than the average for the "old" EU countries (1,54) and in the "new" EU countries (1,60).[6] A further decrease in inpatient care utilization will most likely create significant tension in the health system due to the shortage and limited capacities of PHC providers. Another line of the reverse effect: the separation of specialists as providers of only outpatient or only inpatient care will conserve the relatively lower qualification of outpatient providers with the resulting higher demand for hospital admissions. The same factor contributes to the increase in the average LOS in hospitals. The qualification gap jeopardizes the continuity of care after hospital discharge, including through lowering adherence to medication, therefore hospital physicians have to keep patients longer. Thus the extensive model of health workforce development contributes to the dominance of the inpatient health sector.

iii/ Limiting technological development. The dominant employment status of physicians as employees of public institutions, poor focus of their education on practical skills, the absenceof continuous professional improvement and independent accreditation together with the

[6] These figures are derived from WHO (2014) and Rosstat (2014).

low level of physician remuneration limits their motivation for professional development, therefore hinders the development of new medical technologies. In recent years, the Government has implemented a number of large-scale projects designed to upgrade the technical level of medical facilities. According to an official report, Moscow hospitals now are equipped by Western European standards. But the effective use of new technology is constrained by a shortage of qualified physicians. The problem of disproportion between material and human resources can be tackled only through the transition to an intensive model of workforce development.

iv/ Limiting free care provision. The comprehensiveness of medical benefits for the population is a traditional advantage of the RF health system. But it is also negatively affected by the prevailing model of labour development. The lack of highly qualified physicians does not allow for the implementation of the full set of commitments the Government makes regarding free care. Patients are increasingly seeking qualified physicians working mostly in hospitals, and are ready to pay, including informally. Thus the system of government guarantees is gradually undermined by the extensive model of labour development.

6. Conclusion

The long-term health workforce trends in the RF differ substantially from the international mainstream. First, there are substantial differences in the level of physician remuneration, their employment status and malpractice responsibility facing their profession. The traditional perception of physicians as an inexpensive resource determines the stable long-term growth of their jobs – irrespective of new factors of physicians' substitution and structural changes. Second, there are many structural disproportions of physicians' supply, of which the most important is a very low share of PHC providers and their narrow functions. This results in a permanent growth of demand for specialists and determines the shortage of physicians. Third, the international trends in division of labour between physicians, medical nurses, other medical and non-medical personnel are not followed in the RF with the resulting overburden of physicians and their (paradoxical) shortage. Fourth, the system of professional development of physicians does not match international standards, which is another factor driving the growth in their number in order to meet the medical needs of the population.

Taken together, these characteristics determine the prevalence of the extensive model of health workforce development that is based on the human resources quantitative growth without major changes in their structure and professional potential. The major risks of leaving this model unchanged are: reproducing the shortage of physicians, aggravating disproportions in health care delivery, constraining technological development and limiting free care provision.

In the group of the "new" EU countries there are signs of a transition from the extensive to intensive model of health workforce development. The major characteristic of this process is a re-consideration of physicians' remuneration, professional development and division of labour. Although with a substantial delay, the RF has also started this transition, as evidenced by the recent initiatives to increase the remuneration of health professionals and to improve the skills of physicians and nurses, the process is inconsistent and only partially committed to. Indeed, some international best practices that would benefit Russian healthcare are largely ignored and the risks associated with an orientation towards the extensive health labour policy model will remain in Russia for some time.

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