

LABOUR FORCE MOBILITY AND EMPLOYMENT CRISIS IN HEALTH CARE SECTOR IN ROMANIA

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A*bstract: The economic crisis affected the size and quality of employment in most economic and social activities, but in different proportions. The health care sector faced a lower dynamics of employment diminution, but the personnel flows to better paid jobs continued at a higher rate than before the crisis.*

The failure of some countries to create quality jobs in the public health system caused the migration of specialists to the private sector or other countries. A factor that intensified the flows was the severe austerity policy in the public sector during the crisis, consisting mainly of layoffs and wage diminution. Such anticrisis measures, in cases like Romania, were uniformly taken for the whole personnel paid from the state budget, without taking into account the lasting deficit in employment (in absolute number, but mainly structurally, by specialties) in fields such as health and education.

We intend to present in this paper the main features of the mobility of the medical personnel (focusing on the physician brain drain) and the impact on the human capital and the labour market in Romania. We further identify several political measures to retain specialists in the country of origin and to create quality jobs.

Cuvinte-cheie: physician brain drain, employment, geographical labour force mobility, health sector

Clasificare JEL: J61, J21, F22, O15, H51

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Introduction

The international mobility of health workforce implies both positive and negative aspects. The recognition of diplomas and the free practice right prove the quality of medical education. On the other hand, free movement favours quality employment that ensures medical practice by standards at least decent (medical devices and equipment to enable the provision of proper health services, decent working conditions and pay, and prospects for career development).

In Romania, the quality of employment, associated with poor funding of the field, favours the professional mobility and informal pay to those who decide to stay. The health workforce mobility aggravated the crisis of the national health system, which is facing now severe lack of coherence and consistency with present and long-term realities.

Romania is a country of emigration for the medical personnel and the crisis caused an increase in the flows to developed countries not only on account of comparative material and technological advantages but also on account of the austerity policy enforced uniformly for all state-paid employees (reduction and then limitation of employment, uniform diminution in wages by 25%, and elimination of most specific pays and allowances).

Not only the losses can hardly be compensated for on short term (usually temporary migration turns in most cases into final migration) but long-term effects are significant and have impact on the health condition and the quality of health care services of present and future generations. The remittances made by migrant health workers are not significant as long as mobility is final in most cases and there is no cross-country compensation, even if some less developed countries made such suggestions (Zarocostas, J., 2006, Omar, B.A., 2005).

The health worker migration can be included in the “brain drain” category, which means major investments in education that are lost. Contrary to the general opinion on the mobility benefits to the country of origin (remittances and gain in quality of services by those who return), the specific features of labour in the health care field substantially diminish the comparative advantages, all the more so the difference in development level between the country of origin and the host country is bigger. Here are some relevant aspects of the health care specialists migration from Romania:

- Temporary migration is small; in most cases migration for jobs is final, even if it implies a transitory stage of circular mobility. The physicians’ return is rather an exception to the rule. As for nurses, the temporary mobility is more important and the proportion of those who return is higher.

- Lack of incentives to employ young people and less advantageous conditions for labour insertion (small wages, precarious employment, slow progress in career, poor working conditions, etc.).
- Inequalities in employment and promotion, a “connections-based” system is more important than individual performance.
- Poor conditions for providing health care services: no/poor equipment, no current consumption materials, including medicines.
- Ineffective management of integrated health care services.
- Poor quality of labour technology: team work, tutorial for young graduates, fair competition, etc.

Brief presentation of the health labour market in România

The medical personnel labour market can be characterized by the way of achieving the employment equilibrium by qualification level and specialisations as follows:

- The workforce is specialized in clearly defined domains and inter-specially mobility is limited (medicine domains).
- The practical working abilities and experience decisively define the length of recruitment/re-employment and the quality of the job.
- The work pay significantly depends on personal qualities (knowledge, competence, ability, experience, professional prestige) and supply shortage in the specific market.
- The difference in wage on local/national labour markets are significant (for example, the wage of a specialist physician in Romania in comparison with Germany, the United Kingdom, etc.) and so is the access to employment (the constraints are determined by the demand for employment and the shortage of local labour supply, by specialisation and/or training level).
- The deficit in employment in the host country is a decisive factor for the management and duration of employment procedures (diploma recognition, being familiar with the host country's language, employment level, differences between the wage of native employees and that of immigrants, the package of employment-dwelling advantages, etc.).
- The age of these migrants is older than that of other professional categories of migrants (the schooling time is longer, and work experience is required-especially for nurses).

- Job quality defines the length of employment and the migration period to a greater extent than the wage level (from the very beginning, remuneration is obviously higher than that in the country of origin, although it is generally below the wage earned by natives).
- Social integration and acceptance by the local community are easier and cultural interference is weaker.
- The employment pressure and competition are stronger with other immigrants than with local workforce (which is scarce because of lack of training in the national education system or because of migration from the EU to the USA, Canada, Australia, etc. owing to clearly higher material and professional advantages).

The analysis of labour market dynamics equally implies a survey of the employment level, the employment quality and the employment dynamics (personnel replacement in existing jobs and creation of new jobs) because technological and non-technological progress permanently causes structural changes in the labour market, along with the elimination and creation of job. Therefore, changes in the level and structure of labour demand may have different implications for the employment level.

Job Vacancy Statistics and Labour Force Survey are the main sources to identify changes in the employment level by activity field. We based our analysis of medical professionals mobility and of the implications for the labour market in Romania.

The employment shortage in the health sector is very different among countries and the number of immigrants is larger or smaller depending on several factors:

- a) The development of the national health system and the technological level of the equipment and instruments for specific work.
- b) The national health policy – the package of minimal services, the insurance system and the public funding level.
- c) The professional prestige of the personnel and proved practical performance.
- d) Patients' accessibility to services, including abroad.
- e) The average cost of services compared to other countries.
- f) The competitiveness of services offered on the specific international market.
- g) The quality of services and of the patient-medical personnel relationship.

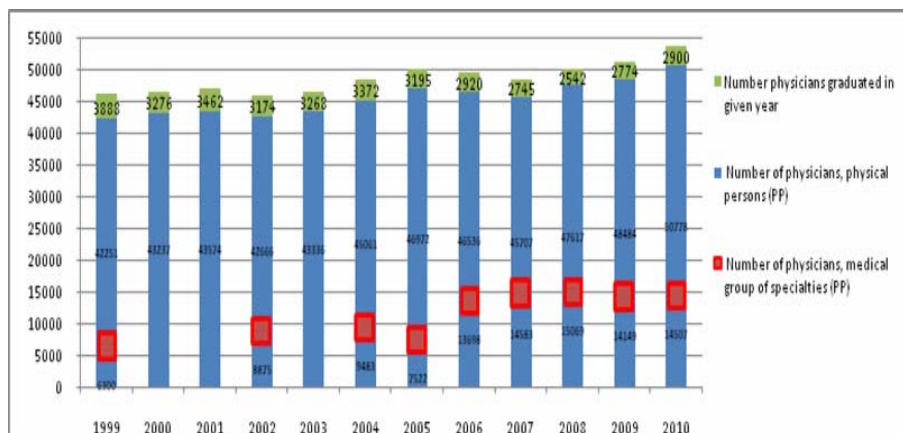
- h) Language barriers and openness towards the use of English or other international languages between the medical specialist and the patient and among the medical staff.
- i) The development level and the quality of related services – health tourism and services to persons accompanying the patients.
- j) The attraction of talents is one of the most permissive forms of employment; in this sector the employment barriers/conditions are minimal, including the youths. The effects of economic cycles do favour employment and not otherwise, especially in developed countries.

Historically, employment in the health sector was slightly dependent on economic cycle fluctuations (Wood, A. C., 2011), having a higher dynamics during the pre-accession, when the stress was laid on the approximation to European standards (negotiations regarding the health dossier, the reform of this sector to adapt to the market economy, the modernisation of infrastructure, and higher quality of employment). Before the crisis, the Romanian health sector saw a positive evolution, although at a lower rate of development, both with regard to investments in the health sector, the quality of employment as well as the development of the private health sector. The unbalanced development of the fields of specialisation and the slow reform of the public health sector maintained the lasting employment deficit, which the crises worsened.

In the last years, the Romanian health sector has faced a higher dynamics of voluntary leave from the system and a slow trend in creating new jobs associated with modernisation and development of specific investments in the health sector. Even if the private sector saw a rising trend, it attracted only a small number of native specialists, because many opted for better offers from abroad. The chance that a specialist works both in the public and the private sector does not facilitate the identification of net losses of individuals from the system for external mobility, in comparison with the dynamics of the domestic health workforce market. Also, the opportunity for cumulation and the unrestricted number and multiple types of contracts that one person can conclude distort statistical data, but they provide a telling picture of the individual effort to find high quality jobs.

Taking into account the need of personnel for the health sector, employment should increase every year by attracting and employing young graduates. That it does not happen even at the specialist level, i.e. physicians, is shown by the graph below.

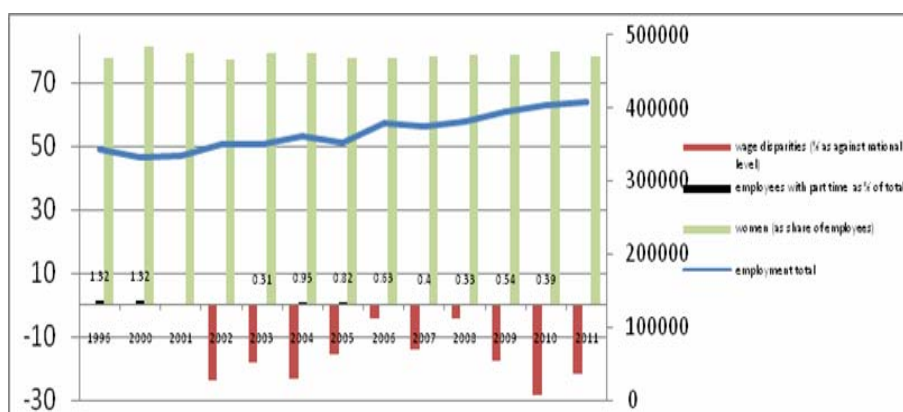
Number of physicians for the labour market in Romania



Source: European Health for All database (HFA-DB), World Health Organization Regional Office for Europe, updated: July 2012.

The level of employment in the health sector saw an oscillating evolution, and so did the forms of employment. The female labour (75-85%) and undetermined time contracts prevail. Wages in the health sector were 30% smaller than the national average in 2010, and this was the main reason why migration intensified during the crisis.

Indicators of the health and social assistance workforce market (CAEN rev 2) in Romania

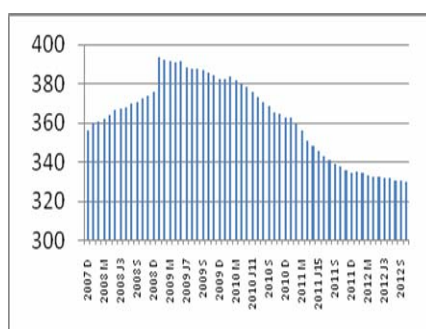


Source: NIS data, Labour Force Survey.

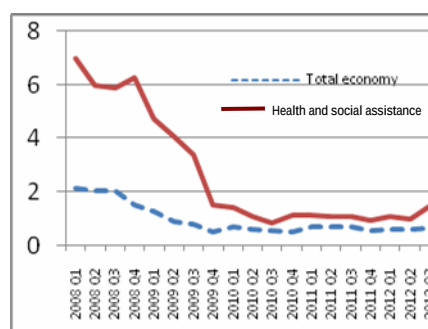
The number of wage earners in the health sector significantly diminished during the crisis, followed by a slight attenuation of diminution in 2012, partially because of migration and partially by re-filling the vacancies in the public sector in proportion of 1 to 7. The number of vacancies was constantly above the national average, which showed a deficit in employment, as the diminution during the crisis was artificial due to the blocking of employment as an austerity measure. The diminishing employment increased the propensity of the those who remained at home for migration because of the worsening conditions for practicing their profession and implicitly because of the lowering quality of services rendered to patients.

Indicators of employment in the health and social assistance sector in Romania

Number of employees, end of the month
(thou persons)



Job vacancy rate (%)



Source: NIS data, tempo online database.

While the dynamics of employment during the crisis saw a significant evolution in some fields and EU countries, the high-qualified personnel became autonomous because of diverse specific developments in level and intensity. In Romania, the health workforce market saw an increasing dynamics strongly differentiated by categories of personnel and professions/specialties. The private sector reacted to the weaknesses of the public sector as regards the quality of employment and the wage level and developed and modernized in areas with a great demand for health services from native and foreign patients. The uniform wage cut by 25% for all categories of employees paid from the state budget "motivated" most of the medical

personnel to migrate (partially or totally) to the private sector (part-time employment or leaving the public system) or to migrate abroad. The slim chance to find a job in the public sector (job blocking or low replacement rate of 1 to 7 imposed for financial austerity reasons) directed the new generations of physicians towards the private system or the external market, thus causing deficits in personnel by age group with a major medium-term impact on the employment in the health system.

According to some specialists, the vulnerability of the national health system increased during the crisis. The migration of physicians as well as of nurses has become a matter of national security (Astarastoe, V., 2011). According to data supplied by Prof. Astarastoe, President of the College of Physicians, 8,000 physicians migrated between 2007 and 2010, 95% them leaving for a better wage. This trend continued, as confirmed by the increasing number of applicants for current professional certificates to work abroad: 2,779 in 2010, 2,841 (data available with the Romanian College of Physicians – this represents the preliminary mandatory step to find a job abroad in accordance with the training level). Even if not all of them leave immediately, the propensity for emigration poses a major problem to the Romanian health system that might fall for lack of human resources.

Health workforce mobility. Characteristics for Romania

The mobility of the Romanian physicians is a long-lasting phenomenon, while the accession to the EU and the crisis only caused increasing flows and partially a change in route and intensity. In 2000, Romania was ranked 21st in the world by number of migrant physicians amounting to 2.3 thou. persons (Bhargava, A., Docquier, F., and Moullan, Y., 2010), the first being India, with 20.3 thou. persons. Among the NMS, Poland was the twelfth, with 4 thou. persons. Favorite destinations were Germany, France, Italy, the USA and recently the United Kingdom, Sweden, and Belgium. The number of Romanian migrants in total number of foreign physicians differs by country of destination. Most of the Romanian physicians work in the USA, where their share in the total foreign trained physicians was about 1%. But they hold a relatively significant share in France (11.7% in 2004), Italy (7.7% in 2006), and Germany (5.7% in 2005). In 2012, 11,200 Romanian physicians worked in OECD countries only. They left after 2007 and the cost, i.e. losses related to education and training, amounted to 3 billion lei, which Romania cannot recover at all (Astarastoe, V., 2012)¹.

¹ http://www.paginamedicala.ro/stiri-medicale/Portretul-_robot_-al-medicului-de-spital-din-Romania_prezentat-la-Adunarea-Generala-a-CMR-2012_16420/1.

**Stock of physicians and nurses working in host countries
who have been trained in countries of the WHO European Region**

Country	Year	Physicians working in host countries who have been trained in countries of the WHO European Region	% of all foreign trained physicians	Nurses working in host countries who have been trained in countries of the WHO European Region	% of total foreign trained
United States	2006	2 687	1.08	...	...
Germany	2005	824	5.7	...	...
United Kingdom	2007	644	2.7	...	...
France	2004	568	11.7	...	...
Italy	2006	389	7.7	...	...
Canada	2005	158	1.15	236	1.23
Denmark	2005	58	2.7	3	0.1
Belgium	2005	35	1.0	24	0.8
New Zealand	2006	25	0.38	...	...
Netherlands	2007	16	0.5	8	0.6
Finland	2005	7	0.4	...	...
Poland	2005	4	0.5	...	...
Ireland	2007	...	...	22	0.9

Source: Based on Dussault, G., Fronteira, I., and Cabral, J., 2009, Migration of health personnel in the WHO European Region, Instituto de Higiene e Medicina Tropical, Lisbonm, WHO Europe, http://www.euro.who.int/__data/assets/pdf_file/0010/95689/E93039.pdf.

Following the accession to the EU, the attraction of medical specialists by developed countries with sequential employment deficit was easier (due to diploma recognition and free practice permit granting by simpler procedures) and stimulated by recruitment companies or by other means (bilateral agreements for personnel specialized in the health care field, agreements between universities for training Romanian students or medical practice - with Belgium, Italy, etc.). France recorded a considerable increase in number of Romanian employed specialists (1,160 in 2009), similarly in Belgium (174 in 2007, 819 in 2008 and 1,160 as at 1st January 2009) (CNOM 2009), Germany (927 in 2008) (German Federal Physicians Chamber, 2009), Italy (555 in 2008-09)(EMN 2009) and in the U.K. with 671 new comers between 2003-2008 (GMC Medical Register, 2009) (WHO, 2011). According to the same source, in 2009, 73% of the physicians from new member countries registered with CNOM come from Romania. Their presence in a larger number in the above countries is justified by the training level, knowledge of that language and the relatively close vicinity to Romania.

The physician migration was significant and at a high level throughout the entire transition period. Experienced physicians left Romania, and lately graduates look for internship abroad. Since outflows by specialisation field depend first on the host country's demand, Romania faces a deficit in number and a lasting structural deficit in medical staff. International mobility of physicians and nurses affects not only the deficit in number but also the average quality of the medical staff training on the labour market, since those who left are the best performing ones, trained in Romania or the best trained young specialists. Even if those who leave are the best specialists and the most gifted youths, their career advancement – although easier than in Romania – is more restricted if compared to the natives' opportunities. The opportunities for practice and financial advantages partially compensate for losses in mobility. The most important loss is that migrants are usually overqualified for the jobs they are offered in the host country. Another problem is posed by social integration, because profession and qualification level define, in general, the limits of social integration, especially when there are no large communities of migrants.

Medical staff migration – A major limit put on the reform of the Romanian health system

The migration of physicians and specialized personnel (including nurses) from the health system is a major risk to the quality of employment in the health sector of the countries of origin. Migration from less developed countries to developed countries is a continuous flow (WHO, 2006), which differs by country in relation to the comparative advantages. The brain drain of health professionals is a difficult problem to manage in less developed countries having poor health systems undergoing reforms.

Due to the major role of specialists in improving the health condition of the population and their contribution to the economic and social development, the impact of migration is, therefore, very important. According to Prof. Dr. Vasile Astarastoe, in Romania there is a shortage of specialties, and the most urgent need of doctors is in the radiotherapy field (below 50% of the needed staff). The fifty-five specialties approved by the Ministry of Health are covered only in Bucharest. At present, there is 1.85 physician per one thousand people, while in the EU there are 3.4¹.

¹ http://www.paginamedicala.ro/stiri-medicale/Portretul-_robot_-al-medicului-de-spital-din-Romania_-_prezentat-la-Adunarea-General-a-CMR-2012_16420/1 accesat la data de 5 febr 2013.

Total losses are significant but caused not only by lack or poor quality of health care services but also by the failure to recover the investment in education – only for academic medical courses the state pays minimum 8,000 euro per student. If we only refer to the human potential on which the national health system is based, it is worth mentioning that Romania's performance related to the rate of allocation per 10,000 inhabitants is poor: only 19 physicians and 42 nurses, if compared to 54 physicians in Greece and 163 nurses in Norway. If compared to world average, the figures are higher but below the average in countries with a medium development level in the case of physician distribution and only a little above average in the case of nurses.

**Health workforce and infrastructure
(density per 10,000 population) - 2000-2009**

	Physicians	Nursing and midwifery personnel	Dentistry personnel	Pharmaceutical personnel	Hospital beds
Romania	19	42	2	<0.5	65
Romania rank in the selected countries (EU 27)	last	24	last	last	11
Highest value/country	54 Greece	151 Netherlands	13 Greece	16 Malta	83 Germany
European Region	33	68	5	5	63
Gap against European region level (times)	1.74	1.62	2.50	<32	0.97
Gap against highest value/country (times)	2.84	3.59	6.50	<10	1.28
Ranges of country values					
Minimum	<0.5	<0.5	<0.5	<0.5	2
Median	11	27	2	2	26
Maximum	64	163	18	19	139
Income group					
Low income	4	10	<0.5	1	15
Lower middle income	10	14	1	4	18
Upper middle income	24	40	7	4	39
High income	28	81	10	10	58
Global	14	28	3	4	27

Source: <http://www.who.int/whosis/whostat/2010/en/index.html> based on: WHO Global atlas of the health workforce. Geneva, World Health Organization, 2009 (www.who.int/globalatlas/); European health for all database (HFA-DB). Copenhagen, WHO Regional Office for Europe, 2009 (<http://data.euro.who.int/hfad/>).

The situation – not favouring the construction of a performing health system – worsened during the crisis because of the budget austerity policy that stimulated

the migration of specialist physicians in the first place. It is worth mentioning that Romania allocated for health some amounts from the public funds considered insufficient for a decent quality of health care services (shortage of current consumption materials and medicines in hospitals, low allocation of funds for investment, even by attracting structural funds or other external sources). Again, we are ranked at the bottom by financial allocation from public sources as well as by total expenditure on health per person.

**Health expenditures, Romania, EU region,
world and highest levels in EU27 (2007)**

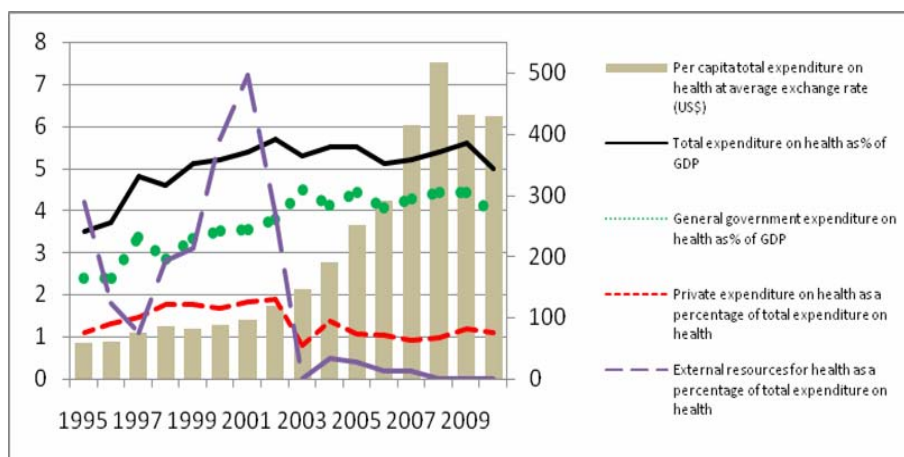
	Romania	European Region	World	RO rank in EU27	Highest level/ country (EU27)
Health expenditure ratios					
Total expenditure on health as % of GDP	4.7	8.8	9.7	Last	11.0 France
General government expenditure on health as % of total expenditure on health	80.3	76.0	59.6	8	90.9 Luxembourg
Private expenditure on health as % of total expenditure on health	19.7	24.0	40.4	20	54.5 Cyprus
General government expenditure on health as % of total government expenditure	10.3	15.3	15.4	24	29.9 Slovakia
Social security expenditure on health as % of general government expenditure on health	83.2	49.5	41.2	10	93.4 France, Netherlands
Out-of-pocket expenditure as % of private expenditure on health	98.8	66.5	43.9	1	98.9 Romania
Private prepaid plans as % of private expenditure on health	1.1	24.3	45.0	25	63.9 France
Per capita health expenditures					
Per capita total expenditure on health at average exchange rate (US\$)	369	2035	802	Last	5551 Denmark
Per capita total expenditure on health at average exchange rate (PPP int. \$)	592	1875	863	Last	5734 Luxembourg
Per capita government expenditure on health at average exchange rate (US\$)	296	1546	478	26	6763 Luxembourg
Per capita government expenditure on health (PPP int. \$)	475	1401	493	Last	5212 Luxembourg

Note: A new PPP series resulting from the 2005 International Comparison Project (ICP) estimated by the World Bank has been used since World Health Statistics 2008. In countries where this is not available, PPPs are estimated by WHO.

Source: <http://www.who.int/whosis/whostat/2010/en/index.html> based on WHO National Health Accounts (NHA) Country health expenditure database. Geneva, World Health.

The gap related to Europe's performance has widened in the last years, when lower values of budget allocation has been recorded.

Evolution of government expenditure indicators for Romania



Source: <http://www.who.int/whosis/whostat/2010/en/index.html>, country database.

An important factor that intensified physician brain drain after 2004 and in the crisis period was the wage differential (WHO, 2006). Outgoings followed not only the traditional routes to developed countries (France, Germany, Italy, etc.) but also to Northern countries and even EU10 (Poland and Hungary), in the latter case, for covering the deficit caused by the nationals' migration to EU15 or other developed countries – replacement mobility. Small wages, infrastructure, working conditions and work relationships stimulated mobility (especially of the youths), but they are considered by specialists as the main cause of the intensification of the flows towards the EU area in the last years. In Romania, the monthly average wage of an intern is over 200 euro, and that of a specialist physician is 495 euro. The EU average is 1,100 euro for an intern physician and 7,995 euro for a specialist physician¹.

¹ The Romanian College of Physician provided a study on the status of a hospital physician. Briefly speaking, incomes are very low and they have no opportunity and are tired. Also, there are no opportunities for specialization. http://www.paginamedicala.ro/stiri-medicale/Portretul_robot_al_medicului-de-spital-din-Romania_prezentat-la-Adunarea-Generala-a-CMR-2012_16420/1.

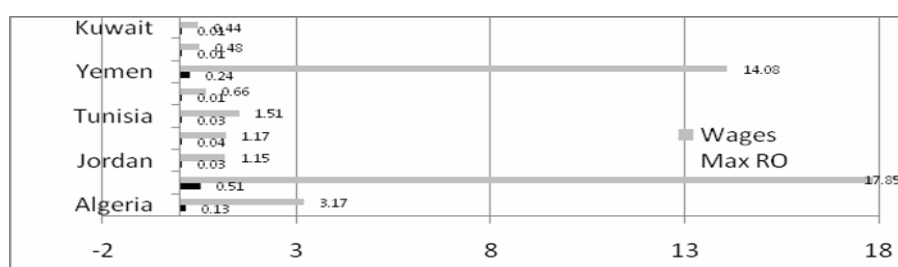
**The relative minimum and maximum wages of physician emigrants
between some sending and receiving countries**

EU receiving countries	Relative minimum wage				Relative maximum wage			
	RMin Romania	RMin Bulgaria	RMin Hungary	RMin Poland	RMax Romania	RMax Bulgaria	RMax Hungary	RMax Poland
Austria	0.01	0.11	0.06	0.26	0.30	0.11	0.32	0.34
Denmark	0.00	0.03	0.01	0.06	0.06	0.02	0.07	0.07
Finland	0.00	0.08	0.04	0.19	0.17	0.06	0.18	0.19
France	0.01	0.12	0.06	0.28	0.17	0.06	0.18	0.19
Germany	0.00	0.07	0.04	0.18	0.11	0.04	0.12	0.12
Italy	0.00	0.08	0.04	0.19	0.19	0.07	0.21	0.21
Luxembourg	0.00	0.07	0.04	0.17	0.19	0.07	0.21	0.21
Norway	0.00	0.04	0.02	0.11	0.12	0.04	0.13	0.13
Portugal	0.01	0.19	0.10	0.45	0.35	0.13	0.38	0.40
UK	0.00	0.06	0.03	0.15	0.17	0.06	0.18	0.19

Sources: Driouchi, A. et al, 2012 based on ILO, 2011; International Labor Organization (ILO) Geneva (Laborsta Labor Statistics Database); Institut National de la Statistique et des Etudes Economiques (INSEE, 2002); The British Medical Journal (1997) and The French Ministry of Health Statistics (2008).

Even with these very small wages, if compared to other new EU members (10+2), Romanian physicians enter the EU health labour market in competition for comparative advantages provided by smaller wages with immigrants from countries like Algeria, Egypt, Jordan, Morocco, Tunisia, Turkey, Yemen, Bahrain and Kuwait. In this case, the comparative advantages are related to education (including the diploma recognition procedures), to the legal system regulating the free practice right and knowledge of the language spoken in the country of origin

**Minimum and maximum relative wages between some MENA
countries and Romania**



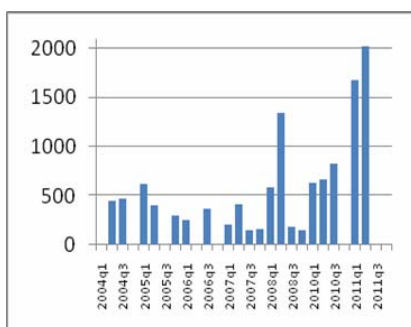
Sources: ILO (2011); <http://medecinsmaroc.xooit.com/t805-a-propos-du-salaire.htm>; <http://www.djazairess.com/fr/lexpression/80470>; <http://www.djazairess.com/fr/lexpression/80470>; http://www.businessnews.com.tn/details_article.php?t=519&a=19911&temp=1&lang=&w=; http://webcache.googleusercontent.com/search?q=cache:http://www.marochbdo.press.ma/MHInternet/Archives264/html_264/Article4.html&hl=fr&strip=1; <http://www.yabiladi.com/forum/salaire-medecinavocat-dentiste-maroc-1-1913927-1914738-quote=1.html#REPLY>.

The medical personnel mobility for work abroad is mainly on medium term and long term and in most cases it turns into final migration (emigration).

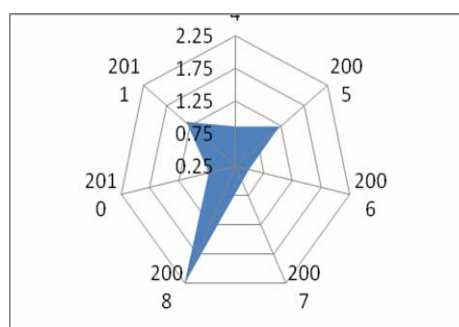
If we consider only the segment of individuals who decided to leave for 6-12 months for limited period contracts, we find out that the workforce migrating from the health and social assistance field (CAEN rev. 2, Labour Force Survey data) represents less than 2.5% of the total temporary migration from Romania, on the decrease in the crisis period. But in absolute number of persons, the temporary mobility of the personnel employed in the health and social assistance sector increased after 2008 and was mainly based on nurse mobility.

**Labour migrants for 6-12 months, employed, pertaining
to the health and social assistance sector ¹
between 2004 and 2011**

Quarterly data, total persons



As share in total temporary labour migrants at national level (%)

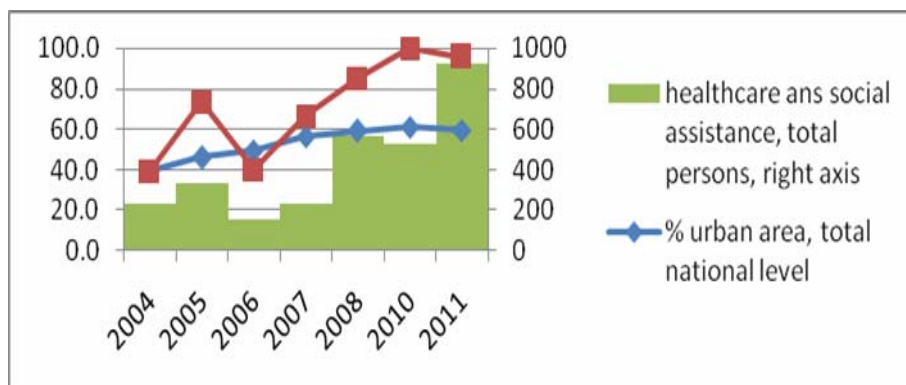


Source: Labour Force Survey, quarterly, NIS.

Most outgoings were from urban area and in a significantly higher proportion than at the national level, which can be explained as follows: an acute shortage of medical personnel in rural areas and the closing/re-distribution (reorganising) of hospitals in urban areas (the largest number of outgoings included hospital nurses, usually with good training and practical experience).

¹ Code 15, CAEN rev. 1 and Code 33 CAEN rev. 2.

Temporary labour migrants (6-12 month),
total and urban area, national level and health care
and social assistance sector



Source: Labour Force Survey, NIS.

The distribution of medical personnel by EU countries is asymmetrical by training level: Romanian migrant physicians are more numerous in developed countries, while nurses are more numerous in less developed EU 15 countries. For example, in Italy, in 2008, 25% of immigrant nurses came from Romania (8,497 persons), while physicians were only 555, i.e. 3.7% (EMN, 2009).

Among the peculiarities of labour mobility identified for the workforce from Romania (C. Boboc, V. Vasile, S. Ghita, 2011, V. Vasile, 2012) is the fact that the education differential considered for employment is also important for medical personnel mobility and is associated with the labour pay limits. Migration is not always associated with quality employment as very often people accept transitory solutions for a job requiring training below the level attained by the migrant (physicians work as nurses, and nurses as auxiliary medical personnel). Overqualification is maintained up to diploma recognition and/or granting of free practice certificate (for physicians) and then it depends on demand and the availability of jobs according to qualification. If this transition to an adequate job does not take place, then in most cases a circulatory migration follows (to another job abroad). The income differential for physicians is considerable (for intern physicians starting from over ten times, and for specialist physicians it is even greater).

Physicians brain drain effects on the health care sector development in the countries of origin

Physician migration means net benefits for the host country by covering the deficits in employment by speciality in the health sector, substantial savings related to investments in human resources, significant savings related to the cost of medical services (smaller wages), gains from the stimulation of the innovative potential of immigrant specialists (they want professional recognition and to progress in career).

The effects on the country of origin are controversial; a win-win relation should be established for the health sector of the host country and the country of origin, but the behavioural features of migrants and the policies for the health sector promoted by the two countries have a major impact on the net final effect in the country of origin. We present below only few effects having a significant impact on Romania as a country of emigration for physicians:

- Migration follows labour demand in the host country and often affects specialisations needed in the country of origin as well; unemployment is not always diminished and structural deficits increase; shortage of some specialisations and worsening deficits cause the emigration even of those who remained at home or those with complementary specialisation (anaesthesiologists, radiologists or surgical nurses, for example (B. Rechel, C-A. Dubois, M. McKee, 2005).
- Migration attracts the best trained ones, and the health sector in the country of origin is affected by medical performance worsening (S. Dodani, R.E. LaPorte, 2005; J. Dwyer, 2007; L.O. Gostin, 2008), while the host country gains.
- The youths with a higher potential for performance and a long time horizon for mobility migrate; they are more inclined to change temporary mobility into final migration as soon as possible.
- Physician mobility can stimulate cooperation between the two countries (A. Driouchi et al., 2012), but practically such effects rarely occur and become important and cooperation occurs rather in relation to the mobility of highly competent specialists who from the very beginning get jobs enabling them to develop cooperation networks; attracting internes ensures lasting individual advantages but the professional cooperation with the country of origin occurs later or not.

We may also mention that, when national policies favour the stay of young specialists in their own country, the previous brain drain could cause brain drain in the country of origin (M. Beine, F. Docquier, H. Rapoport, 2008). It is assumed that migration may encourage the youths to seek excellency training in the country of origin or abroad, and if it ends in insertion into the medical labour market of the country of origin then it becomes brain drain due to the gain in quality and performance¹. Although it is theoretically possible, practice did not confirm, at least in Romania, these cases, since the jobs offered at present to young graduates within the national health system are below expectations (as professional performance, work conditions and benefits). A balance should be achieved between training personnel for the national health sector and for export, and if the purpose is employment by emigration, then we have to develop professional cooperation networks to partially reduce net losses in investment in education. Article 13 of the Universal Declaration of Human Rights defines the workers' right to emigrate, and to retain the specialists in the national labour market it is necessary to develop both classic employment forms (remuneration, career) and innovative ones (temporary exchanges of specialists/graduates for medical practice/research, bilateral agreements and joint projects receiving European funding, etc.).

Conclusions

Medical personnel migration is mainly based on high-skilled personnel migration and physician brain drain and affects the economic development of health and education sectors in the first place, the general health status of the population and employment level in the country of origin (Driouchi et al., 2009 and A. Driouchi, M. Kadiro 2010).

The factors determining physician migration from Romania may be summed up as follows:

- The funding of the health sector is the smallest in Europe, below 3% of GDP, while other countries spend 5-6% of GDP²; poor equipping of medical units not only with apparatuses but also with current consumption materials, and the shortage of medicines for treatment in hospitals is associated with a

¹ According to WHO 2011, in the last ten years, the number of medical students doubled in Romania and almost tripled in Poland.

² CMR, 28 Oct 2011, <http://www.ziare.com/articole/medici+romani+strainatate>.

distribution of money per specialisation, category of medical units, etc. inconsistent with the demand for services and real needs.

- No coherent strategy for the health sector reform, funding prioritizing on an integrated basis, low efficiency of allocated funds.
- Smaller wages if compared to EU countries that recruit workforce. Differences are ten times bigger for similar positions. In Germany, a physician earns 8 – 10,000 euro monthly, while in Romania, for the same length of service and training, a physician receives up to 500 euro¹.
- Wages for professional insertion below the subsistence threshold. A graduate earns 900 - 1000 lei per month in Romania (around 220-230 euro) and up to 2-3000 euro per months abroad².
- Dependence on “connections” for employment, career, proper health care services.

As for Romania, we consider that the following are the major and long-lasting effects of medical personnel mobility:

- a) Precarisation of the health condition of the population due to diminishing access to quality services as a whole, per specialisation and at regional/local level;
- b) Higher risk in rendering medical services, lack of specialists that reduces the potential of performance in the medical service; delaying health care system reform and modernisation increase the risk of high-skilled personnel mobility;
- c) Net loss in public investment in graduates’ training. For each emigrant doctor, the state loses on average 8,000 euro for investment in training in the faculty of medicine (in France it was 14,000 euro, for example, Sinescu, I., 2011), which at present means a heavy loss for Romania due to medium and long-term effects on human potential in the health sector.

The labour market is structurally, quantitatively and qualitatively adjusted, chronic deficits increase (by specialisation, age group), the quality of jobs and

¹ “Romania, without physicians: 4000 doctors left the country in the last two years” online, 24th February 2010, available at <http://www.ziare.com/articole/medici+romani+strainatate>.

² The Askepios Clinic in Germany offers jobs for Romanian interns”, online, 14th October 2009; even in the crisis period physicians were recruited for Germany, France, Sweden, Norway, online 5th May 2011, available at <http://www.ziare.com/articole/medici+romani+strainatate>.

employment quality diminish, the dynamics of vacant jobs is imbalanced and not correlated (either with the dynamics of the health sector development or with the supply on the specific educational market). The diminution in average quality and the quality of human resources performance because of high skilled migration does not cause only losses for good in the investment in human capital (through education) but also affects the level of technical endowment of labour associated with job quality, working condition and work relationships, or even international cooperation. The absorption of new technologies is more difficult and costs are higher (additional expenditure on education). Alternative policies are required to diminish outflows of health professionals, especially physician brain drain in the context of a new economics of skilled labour migration (EU, 2008, A. Driouchi et al., 2012). Romania has to take urgent measures to restore minimum equilibrium relations in the health sector, based on what we can manage – human capital. Medium and long-term effects are more important and quite difficult to alterate than short-term benefits (lower pressure on unemployment, higher potential remittances).

Employment structural deficit in health sector is increasing in Romania both by leaving the system (voluntary layoffs of high-skilled personnel) and graduates emigration. The effects of physician and medical (specialist) personnel brain drain and their magnitude on the equilibrium of the health sector labour market in the country of origin and on the quality of health care services are difficult to quantify. It is certain that emigration of health specialists generate costs and qualitative disequilibrium with multiplying effects on medium term and the lack of policies to alternate effects or/and diminish the propensity for emigration favour and facilitate the recruitment agencies' activity and allow them to recruit personnel at relatively small costs, including smaller wages. The flows need to be managed, as they are an effect of the national policy shortcomings, and recruitment of specialists should be based on jointly assumed rules (Codes of Practice for Ethical Recruitment¹) (CEC, 2008, MMIN, 2010).

Unlike other fields, the health sector was less affected by the crisis as regards the recruitment of personnel and the dynamics of vacant jobs, which revealed the relative autonomy of this sector if related to the economic situation in economically developed countries/countries of destination. Therefore, in the countries of origin, the issues concerning the health workforce management that

¹ Global Code of Practice on the International Recruitment of Health Personnel, adopted in Geneva on May 20, 2010 by the World Health Association.

have impact on the attraction and the employment in the country of origin refer to the following:

- a) employment in accordance with the training level and opportunities for advancement in career;
- b) a fair wage, based on performance incentives;
- c) team work with specialists in the field and access to highly performant instruments;
- d) evaluation by proved individual performance and equitable promotion;
- e) no discrimination and no system based on “connections”;
- f) opportunities and undiscriminated access to continuous training, specialisation programmes, etc.

The identification of specific factors that stimulate international mobility and promotion of policies to diminish/attenuate/eliminate their action is the only mechanism to lower the mobility trend. Finally, the responsibility for the health condition should be borne on a national scale, and in less developed countries the problem can be managed first by investment in assets, in education of health specialists, in creation of quality jobs and promotion of stimulating wage packages. The population health is a public asset and the state is responsible for efficient management and funding of the health sector, just as it is responsible for providing funds for the education of citizens.

The training of generations of graduates for the health sector and their migration put medium and long-term pressure on the public education and the health system, and the money invested in education cannot be recovered by employment in the national health system. In 2011 only, the loss from the education system caused by medical graduates migration exceeded 22 million euro (at an average cost of 8,000 euro per student, paid by the state for schooling in medicine, Sinescu, I., 2011). Since those who migrate are the best trained and specialized in deficient fields/specialisations in the country of destination, the structural deficit in allocating specialists by health fields worsens in the country of origin, even if the educational supply was adjusted to the potential national demand. The adverse effect of quality education supply, the diploma recognition system and the health condition at the national level becomes stronger at the same time with increasing recognition of the quality of specialists on the international markets (more employment offers, head hunting, brain circulation, etc.). In early 2013, in Romania, the number of registered free practice physicians decreased below the critical limit of 40,000 (39,813 physicians as compared to 41,799 in 2012 and 55,000 in 1990 – CMR, 2013). To

prevent such effects, we need a mix of employment policies and tax incentives for the employer and the employee at the national level, as the additional financial effort supported by the public budget can be diminished on medium term and indirectly by a better health care culture of the beneficiaries (balancing between funding preventive treatment and treatment services for chronic diseases, etc., a better system of medical insurance based on personal medical risk) and of higher quality medical performance (based on high tech and innovative medical services).

There is further need to develop this field and the quality of changes is a priority, especially at present when measures are taken to deeply reform the health sector in Romania. Considering the new direction for reforming the sector, employment is a priority problem. The quality of human resources ultimately defines the quality of health services; in our opinion, it is as important as the provision of medical equipment and apparatuses. While in the case of highly performing equipment the cost mainly depends on market prices and available funds, in the case of human capital, the measures should be more diverse, more flexible and, comparatively, more economical, when investments in human resources are made on medium and long time horizon.

Just as school training is relatively longer than other business specialisations, the training of specialists and high performance practitioners in the health field can be achieved only on medium and long term. Young graduates from medical specialisations, either nurses or physicians, need a relatively longer practice, and the investment in competence and skills has effects on the quality of health services after a longer period of medical practice. Their training in the first period of employment (probation, internship) cannot be achieved without working in teams with experienced physicians. Moreover, after specialisation, high quality employment and a total quality human resources management are top priorities for preventing mobility from the public sector to the private one or international mobility, when advantages clearly exceed the conditions offered in Romania as regards both labour quality and wages. Quality in the health sector is hard to acquire and costs time and money, but benefits are multiple if adequate conditions are ensured for: infrastructure, working conditions, high quality labour relationships and fair remuneration. Therefore, decent working conditions in the health sector (job quality employment) mean employment performance & quality of services and have to be a priority of the national policies in the field, as a guarantee for value added in the health sector materialized in improved health condition of the population.

Health labour market priorities in Romania may be summed up as follows:

- School training for components required by the health labour market, focused on strengthening the connection between theoretical knowledge and the quality of medical practice (in well-performing and properly equipped hospitals).

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- Tax incentives for employing young graduates along with medium-term employment.
 - Easier access of the best performing ones to launch a career. In Romania, the need of medical personnel could be an opportunity for attracting and permanently employing young graduates, along with making career easier.
 - International cooperation in specialized fields by easier access to funding for projects and programmes in international partnership for the health sector. Access to European funds which allows not only for investment in infrastructure and professional training/specialisation but also for substantial savings by integration into international teams to implement projects (relative savings related to training costs, improved practical expertise, transfer of high-performance procedures and techniques, etc.).
 - Promoting a performing management of human resources at the health unit level.
 - Increasing employment in preventive medicine and development of individualized programmes for health condition monitoring by type of patient and category of chronic diseases of high incidence, at the regional and the national level.
 - Reconsideration and qualitative reform of the management of the medical personnel-patient relationship, both at the family doctor level and at the specialist level (for chronic diseases). On medium and long term, a new model of cooperation between the physician and the patient may reduce the average cost of nursing and save working hours.
 - Promotion of remuneration forms based on performance in medical practice, focused on the quality of the medical service and not on quantity (number of treated cases).
 - Development of integrated models of attending patients (intra, inter and trans); a patient is treated in accordance with the complexity of his health condition and not with only one disease, the classic treatment is combined with an alternative one, and traditional methods with innovative ones.
 - Balancing job structure in health care based on: prevention/treatment services types, national peculiarities of risk for diseases, recognised national medical performance for some specialties (for development of exports of medical services)

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