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Primary healthcare in the developing part of Europe: Changes and development in the former Eastern Bloc countries that joined the European Union following 2004

Authors' Contribution:

- A** Study Design
- B** Data Collection
- C** Statistical Analysis
- D** Data Interpretation
- E** Manuscript Preparation
- F** Literature Search
- G** Funds Collection

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Background:

Summary

Primary care is an important tool to improve global health. This study presents an overview of how targets regarding primary care were realized in ten countries of the former Soviet Bloc that joined the EU since 2004.

Material/Methods:

Demographic, socioeconomic, and mortality-based statistical data are presented, scientific publications from the countries analyzed, and personal experiences of family physicians of these countries compared.

Results:

After the collapse of communism, political changes and healthcare reforms began in these countries. There was economic recession and decline in the first decade. Life expectancies improved and total health expenditures increased to different extents, although governments spent barely more for healthcare. Primary care providers are the main private-sector contributors. The hospital-based structure changed, while the number of outpatient contacts is nearly the same. The ratio between secondary care specialists and family physicians remains too high and there is a shortage of educated nurses. Although new funding systems for primary care were introduced, budgets were mostly redistributed without substantial increases or improvement in outcome. The achievements of reform have rarely been evaluated systematically. Teamwork and praxis communities do not exist. The old style of polyclinics still predominates in some countries. The gate-keeping system is often symbolic or dysfunctional. Health promotion and prevention are rarely supported.

Conclusions:

The implementation of family medicine is not an absolute priority for decision makers. The political situation is often unstable. Despite non-negligible achievements, the health systems in this part of Europe are still in the midst of transition.

key words:

primary care • Central and Eastern Europe • Alma Ata Declaration

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BACKGROUND

"Health for all by the year 2000". That was the ambitious vision of the Alma Ata Declaration (AAD) 30 years ago [1,2]. Under the auspices of the World Health Organization (WHO), an international conference of health experts declared the pivotal role of primary healthcare (PHC). Its importance had been realized earlier in the more developed (Western) countries. The WHO continuously promoted the orientation towards primary healthcare and organized more conferences on this topic [3,4].

Healthcare needs money and investment. Many new medical and paramedical disciplines that have entered healthcare in the past decades require a multidisciplinary approach. In the mid-twentieth century the prevailing belief in the ability of science and technology to solve medical needs resulted in increasing reliance on medical technology and more emphasis on training specialist physicians in many countries [5].

Coherence between primary, secondary, and tertiary care, curative and preventive services, and somatic and mental health care are more difficult to maintain [6]. Transition from a system of hospital services that emphasize curative care and medical specialization towards a GP/FM (General Practice/Family Medicine)-based healthcare system is an important component of the reform process and crucial to implementing cost-effectiveness and prevention [5]. Studies have shown that a strong primary care component in a national health system is associated with reduced risks of hospitalization, shorter length of hospital stay, and decreased costs [7].

The different health systems of different societies have different outputs. There is a sharp divide in life expectancy between Western Europe and the former socialist countries of Central and Eastern Europe, and this gap largely developed in the past two or three decades. High rates of tobacco and alcohol consumption, poor nutrition, and increasing social inequalities also contribute to the poor health and low life expectancy of this population [5]. Until the end of 1980s, the countries of Central and Eastern Europe were strongly influenced by the policy and the economy of the Soviet Union. Healthcare in the region was a public responsibility. The organization, management, and delivery of care were undertaken by state authorities. General practice, that had had a long tradition before World War II, was almost completely abolished. Nearly all inhabitants were entitled to access to healthcare free of charge. Healthcare was financed from general taxation by the state. Finances were regulated by central and regional state administrations. Healthcare was delivered by public service providers. Patients were allocated to local or regional providers according to their place of residence. GPs were employed by polyclinics/health centers or local municipalities in rural areas. Patients had easy or even unlimited access to most outpatient clinical specialists. Informal payment ("tipping") was widespread to obtain better access or higher-quality services [3,5]. District physicians referred a large proportion of them to specialists or hospitals utilizing a high number of hospital beds. It was common to find a low quality of care, low patient satisfaction, rising costs, and a medical staff dissatisfied with the working condition and salaries [3]. These factors were thought to contribute to the excessive prescription of phar-

maceuticals, multiple referrals, overcrowding in hospitals, and increasing costs [5].

With the collapse of communism, healthcare reform started in most Eastern countries at the beginning of the 1990s. Emphasis was on the development of insurance-based financing, decentralization of the organization of healthcare, and, perhaps most importantly, the reintroduction of family medicine as a new specialty. The new democratic governments of Central and Eastern Europe were forced to seek more cost-effective healthcare services that were able to meet society's expectation [3]. PHC reforms towards the GP/FM model were approved by decision makers in all of the countries of the region. Courses for future trainers of new family doctors were organized. Motivated, English-speaking doctors were selected for training in Western universities. After returning they were expected to develop and conduct training courses for their colleagues in their native language [3,8].

Enthusiastic family physicians (FPs) were involved in international scientific collaboration with the World Organization of Family Doctors (WONCA) [9] and its network organizations the European Academy of Teachers in General Practice (EURACT), the European Working Party on Quality in Family Practice, and the European General Practice Research Workshop, later Network (EGPRN) [10]. Specific training in family medicine was introduced, including continuing medical education (CME) courses, which was a quite new terminology in these countries. Future family doctors were expected to have broader knowledge. New attitudes were needed to change from a disease-centered to a patient-centered approach. Residency-based programs were established. Family medicine was recognized as an academic discipline. Nearly all university medical schools have departments of family medicine. Professional organizations, colleges, and scientific associations were established. Quality improvement systems were introduced; guidelines on the management of selected health problems or diseases have been published [3,5,7]. The systems of these countries represent an under-researched area in the global PHC research.

The aim of our study was to present an overview of changes and achievements of the primary health systems of these new European Union member countries and to add some demographical and economic facts to make this insight more complete.

MATERIAL AND METHODS

Only widely respected databases were used as sources of information and reliable data. The main domains and applied statistical data collections were:

Statistics

Demographic, socioeconomic, and mortality-based data on healthcare resources and healthcare utilization and expenditures were analyzed [11]. Characteristic and understandable data were chosen in a limited amount which could reflect the health sector of the respective countries. Although the GDP (gross domestic product) is used more widely, the gross national product (GNP) was chosen to better reflect the economic and historical trends in these countries. Considering their usually lower salaries and prices, purchas-

Table 1. Unemployment rate between 1980 and 2005 of countries joining the European Union following 2004.

	Unemployment rate (%)			
	1990	1995	2000	2005
BUL	1.7	11.1	17.9	12.7*
CZR	0.7	4.0	8.8	7.9
EST	0.8	9.7	13.6	7.9
HUN	1.7	12.0	6.4	7.2
LAT	2.3	6.6	7.8	7.4
LIT	7.3	7.3	16.6	8.3
POL	6.5	17.7	15.1	17.7*
ROM	8.4	9.5	10.5	8.0
SKA	1.5	13.8	18.3	16.2
SLO	4.7	13.9	12.2	10.2

* 2004.

BUL – Bulgaria; CZR – Czech Republic; EST – Estonia; HUN – Hungary; LAT – Latvia; LIT – Lithuania; POL – Poland; ROM – Romania; SKA – Slovakia; SLO – Slovenia.

ing power parity (PPP) was chosen as the second economic indicator presented here. The evaluation periods within the past 30 years were chosen to compare the stations and grades of development in different countries.

Literature search

Available scientific publications were selected from peer-reviewed, ranked, and indexed journals in which prima-

ry care/family medicine and the name of the respective country were both found among the keywords or PubMed MeSH terms.

Personal experience

In a short and easy to manage questionnaire (see Appendix) the personal experiences of FPs were asked. They were all practicing GPs, many of them with academic jobs, as well as the national representatives of EGPRN [10], well informed and active contributors of other international scientific PHC organizations within the respective countries. An English language questionnaire was constructed to avoid linguistic errors during translation. There were very simple (mostly open) questions on the PHC system, educational, scientific, and organizational issues, and their personal experiences. Three questionnaires were sent out (by post or email) to each country (n=30) and 22 of them were analyzed.

RESULTS

Quantitative (economic and financial) data are presented in this section; qualitative data, analysis, and review of the literature are compared in the discussion along with the personal experiences of the family physicians.

Socioeconomic indicators

There was economic recession and decline in almost every former socialist country in the first half of the 1990s. Unemployment (Table 1), which was unknown in the “socialist” era, became an important economic indicator and showed a steep increase in the first half, a moderate increase in the second half of the 1990s, and decreased only after 2000. Table 2 illustrates that the increases in GNP and PPP were very slow in the first part of the 90s, even showing

Table 2. Gross National Product (GNP) and Purchasing Power Parity (PPP) between 1980 and 2005 in countries joining the European Union following 2004.

	GNP (USD per capita)				PPP (USD per capita)			
	1990	1995	2000	2005	1990	1995	2000	2005
BUL	2,210	1,330	1,610	3,450	4,700	4,604	5,110	8,075***
CZR	2,700*	3,870	5,690	11,220	11,531	12,371	13,802	19,408
EST	3,970*	2,394	4,070	9,060	6,438	4,068	10,066	14,555
HUN	2,750	4,120	4,650	10,070	7,446	8,976	12,204	16,814
LAT	2,270	2,270	3,190	6,770	6,457	3,297	7,043	11,653
LIT	1,900	1,900	3,170	7,210	4,913	3,843	7,106	13,107
POL	1,700	2,790	4,430	7,160	4,900	7,003	9,529	12,974
ROM	1,640	1,480	1,680	3,910	2,800	4,431	6,423	8,480
SKA	2,200*	2,590	3,870	7,950	7,681*	8,916	11,279	14,623
SLO	7,612	8,200	10,630	17,440	9,156**	12,510	17,367	20,939

* 1991; ** 1993; *** 2004.

BUL – Bulgaria; CZR – Czech Republic; EST – Estonia; HUN – Hungary; LAT – Latvia; LIT – Lithuania; POL – Poland; ROM – Romania; SKA – Slovakia; SLO – Slovenia.

Table 3. Healthcare resources data (number of hospital beds, general practitioners, and nurses per 100,000 inhabitants) between 1980 and 2005 in countries joining the European Union following 2004.

	Number of hospital beds			Number of GPs			Number of nurses		
	1980	1995	2005	1980	1995	2005	1980	1995	2005
BUL	885	1037	642	46	80	68	513	607	404
CZR	1085	922	838	68	70	71	731	891	851
EST	1246	837	548	46**	58	63	615	634	657
HUN	917	879	785	47	63	65	754*	773	877
LAT	1389	1119	768	2**	7	55	800	609	545
LIT	1206	1109	812	39	36	86	763	945	742
POL	667	629	523	na	na	na	422	548	468
ROM	877	764	658	na	74	68	368	432	373
SKA	857	856	689	40	36	43	632	708	631
SLO	695	574	476	28	43	48	442	640	752

* 1990; ** 1992, na – data not available.

BUL – Bulgaria; CZR – Czech Republic; EST – Estonia; HUN – Hungary; LAT – Latvia; LIT – Lithuania; POL – Poland; ROM – Romania; SKA – Slovakia; SLO – Slovenia.

Table 4. Life expectancy at birth (in years) between 1980 and 2005 in countries joining the European Union following 2004.

	1980	1995	2000	2005
BUL	71.1	71.0	71.6	72.6
CZR	70.3	73.3	75.2	76.2
EST	69.2	67.8	71.0	72.9
HUN	69.1	70.1	71.9	73.0
LAT	69.1	66.3	70.6	71.1
LIT	70.5	69.1	72.3	71.3
POL	70.4	72.0	74.0	75.1
ROM	69.2	69.4	71.2	72.2
SKA	70.5	72.5	73.5	74.3
SLO	72.2*	74.8	76.3	77.6

* 1985.

BUL – Bulgaria; CZR – Czech Republic; EST – Estonia; HUN – Hungary; LAT – Latvia; LIT – Lithuania; POL – Poland; ROM – Romania; SKA – Slovakia; SLO – Slovenia.

a decrease in some countries. This trend changed only in about 2000, differently in the listed countries.

Healthcare resources

The hospital-based structure of the health systems has changed markedly (Table 3). The largest reduction was carried out in the Baltic states, where one third to almost one half of hospitals beds were eliminated. These changes were less drastic in Poland and Hungary. The number of GPs increased significantly in the Baltic countries and

Slovakia, but decreased in Romania. According to the available data, the percentage of nurses working in hospitals varies between 44–69%. Despite reductions in the hospital sector, the number of nurses increased in the Czech Republic, Hungary, and Slovenia. There were only minimal changes in the other countries.

Mortality-based indicators

The estimated life expectancy improved differently, as seen in Table 4. The highest was in the Czech Republic (+6 years in 2005 compared with 1980), lower in other countries (+4–5 years), and lowest in the Baltic states (+1–2 years).

Healthcare utilization and expenditure

These data were calculated according to the new formula of WHO and presented only as the first and last available years in Table 5. Total health expenditures increased differently in each country. They doubled in Bulgaria and Slovakia, increased by 60–80% in the Baltic countries, and were lowest in Romania. There was a limited overall change in the percentage of private contributions to all health expenses. This source of contribution increased almost everywhere, with marked increases in Estonia and Bulgaria and slight decreases in Poland and Romania. In Slovenia a considerable (50%) decrease was reported. Governments spent on average only 1–2% more than before on healthcare. From the beginning of the healthcare reform there was only a limited change (more often an increase) in the number of outpatient contacts, except in Romania.

Questionnaire

The answers to the questionnaire from the respective countries were similar. PHC as an academic discipline with the opportunity of qualification is accepted in all countries, but until now



Table 5. Data on healthcare utilization and expenditure in the first and last available years in countries joining the European Union following 2004.

	Total health expenditure*		Private payment**		Public sector***		Outpatient#	
	1998	2004	1998	2004	1998	2004	1995	2005
BUL	278	671	31.7	41.6	9.1	11.6	5.5	5.4
CZR	904	1,412	8.2	10.3	13.9	14.6	14.7	15.2
EST	476	752	13.2	21.3	12.3	11.3	5.9	6.9
HUN	774	1,368	22.3	25.0	10.1	11.6	10.4	13.0
LAT	435	852	40.0	42.7	9.4	11.1	4.8	5.2
LIT	490	843	23.0	24.2	14.6	13.8	7.1	6.7
POL	556	814	34.6	28.1	8.1	10.0	5.4	6.1
ROM	331	433	35.0	31.7	8.1	11.1	8.0	5.9
SKA	559	1,061	8.4	10.8	11.6	13.7	12.4	12.5
SLO	1,137	1,815	19.2	9.6	14.3	13.8	7.2	7.2

* Total health expenditures [PPP \$/ capita] WHO estimates; ** Private households' out-of-pocket payment on health as% of total health expenditure; *** Public sector expenditure on health as% of total governmental expenditures; # Number of outpatient contacts per person per year.

BUL – Bulgaria; CZR – Czech Republic; EST – Estonia; HUN – Hungary; LAT – Latvia; LIT – Lithuania; POL – Poland; ROM – Romania; SKA – Slovakia; SLO – Slovenia.

no university departments have been established in Romania and Lithuania. CME courses are available in each country, but they are not compulsory for GPs in Estonia. In the questionnaire the FPs rated the gate-keeping system of their own countries as good only in Bulgaria, Estonia, and Slovenia, whereas as just symbolic or theoretical in the other health systems. Overworking of GPs was also mentioned in Estonia, Hungary, Lithuania, and Slovenia among the answers of the questionnaire. The living circumstances of GPs and that of the general population were rated better than it was 15 years before.

DISCUSSION

Human resources, under- and postgraduate education

In the former socialist countries, the physician workforce that was often too large, dominated by specialists, and poorly prepared for the transition to primary healthcare. At the same time, two methods were employed to prepare physicians rapidly for PHC: retraining existing physicians for the short-term and establishing training programs in the faculties of medicine to train family/general practitioners (GPs) among recently graduated doctors. After more than a decade of independence, there is still a struggle to have a physician workforce with the right numbers, the right specialty mix, and practicing in the right locations [12].

In the Soviet Union, a huge number of doctors was educated, two to three times more than in Western Europe [3]. In Romania and the Baltic states the limited number of trained family doctors is a source of the existing human resources problems [13,14]. Postgraduate or vocational training lasts 3–5 years in these countries [15]. While the number of nurses increased in some countries, a shortage of educated nurses remained characteristic [5]. The skills and practices of nurses in the new role of primary care should be developed [16].

Issues of the future status of polyclinics and children's and women's health centers as well as the optimal ratio between family physicians and specialists remain to be resolved in Bulgaria [17].

There is a negative perception of family medicine among Polish students and doctors because of its long working hours, insufficient diagnostic possibilities, monotony, and less time for the family. FM is chosen because of a lack of other possibilities, difficulties in employment, and the opportunity to become a "specialist" in a short time [18].

Socioeconomic and financial changes

Eastern governments were unable to spend more money for healthcare because of economic recession in the 1990s. After 2000, a minimal increase could be observed. Structural reforms in PHC, without discernible financial contributions by governments, started only in the second half of the 30 years that had passed since the AAD. Health staff was traditionally underpaid under socialism. GPs became self-employed because of a more rational use of economic budgeting. In Estonia the finances were, however, redistributed without a substantial increase in PHC budgets [18]. Reform was introduced through the creation of a new funding system for primary care services [20]. Nowadays, a state (Beveridge) health system model and one insurance fund (mostly government controlled) exist in most of these countries, based on the Bismarck model [6]. The Czech Republic and Slovakia are exceptions, where more insurance companies were established with private investment.

Structural changes in healthcare

Since the beginning of the 1990s, healthcare reform projects have been implemented in many of the former Communist countries, but these projects have rarely been evaluated systematically [21]. The changes brought about by the recent reform processes are generally considered favorably. The

lack of integration of health services under the current system, however, causes various problems [22]. Health policy and health service planning should reflect the known disparities in health explained by geographical or economic factors [23]. The utilization of the private sector has remained low in Bulgaria as well [24,25].

The shift from a hospital bed-based system towards PHC is a detectable achievement in these countries. Nevertheless, encounters with specialists or, especially, hospitals mean a change of sector from a private to the state-owned (public) level, where only minimal structural changes were reported [3,5,18]. There is no teamwork in PHC and praxis communities and group practices practically do not exist. The old style of polyclinics still predominates in Romania, Bulgaria, and Estonia [3,5]. Primary healthcare centers had been a characteristic in the former Yugoslavian healthcare system that was introduced widely in Slovenia. Transition brought about a poorly managed process of introducing private provision. Furthermore, the monopoly position of the Insurance Fund affected their situation. Preserving their public health functions, increasing efficiency, and establishing clearly defined relations with private providers are the challenges of the future [26].

Lack of financial interest could be an explanation why the GPs of some of the countries rated their gate-keeping function as just symbolic or theoretical in the questionnaire [18]. Incentives for comprehensive services, diverting funds from secondary services, and decentralized management to establish a "gatekeeper" function were declared as the purpose of reforms [5]. In most countries the patients still have free access to specialists without referral [3].

There is a consensus among PHC experts in Central and Eastern European countries that the key areas of concern are atomization of practices, an unsatisfactory payment system, lack of academic infrastructures, and unsatisfactory continuous professional development [27].

Changes in morbidity, mortality, and life expectancy

Life expectancies increased, mortality decreased, and a higher percentage of illnesses were discovered at an earlier stage with screening, whereas the incidence of preventable diseases decreased minimally in each country we discussed [11]. There is no single reason explaining the health gap between countries. Contributing factors include the increasing prevalence of major risk factors in lifestyle and environment and the low efficiency and effectiveness of the healthcare systems [28,29].

Reorientation towards a primary care system emphasizes health promotion and preventive services. Most of the population has not recognized the importance of a healthy life style. The expectation of people to improve their health comes from the health care staff. There are practically no state-financed health-maintenance programs. There is no governmental support for changing unhealthy life styles. Although several strategies have been planned to reduce the risk of preventable diseases, they are hardly financed [3,5,6]. The bulk of patients who had contact with their family doctor were satisfied with his work following the introduction of new PHC systems [30]. The living circumstances of GPs and that of the general population were rated better in the

questionnaire, mainly due to the economic growth of the countries and the advantages of self-employed status.

Global health provides a special challenge for primary care and general practice, which will become increasingly important in the future as the prevalence of multimorbidity increases with increasing likelihood of survival from acute manifestations of illness, as populations age, and as the costs of care increase with the increasing availability of technological interventions. Primary care physicians need to take up the challenge before it becomes a crisis [31].

Governmental initiatives

Obviously, less effort in the Eastern than in the Western Europe has been made to follow the suggestions of the AAD to modify their health structures. Therefore the AAD has been subjected to the ideological clash between communism and capitalism [1]. Almost nothing happened in the Eastern Bloc in the 1980s during the so called "stagnation" of the Brezhnev era. Although there are differences between the countries, in general the implementation of family medicine as part of healthcare reform is not an absolute priority for decision makers. It is rather a tool for a more effective use of resources and not to increase the quality of care. The unstable political situation and frequent change of decision makers create a long series of problems in the former socialist states. The governments in most countries were a coalition of parties which were often changed, including health ministers.

CONCLUSIONS

"Health for all by 2000". The turn of the century seemed so far ahead in 1978. Despite the unimaginable development in health technology and therapy, the achievements are not open for everybody, even thirty years later. After the collapse of the Soviet Union that brought freedom and independence to these countries, they have had little time and few resources to change their health systems. Most of them are still in the midst of transition [32].

Study limitations

Different sources of information and the complexity of the data try to present the achievements of these 10 countries, but cannot estimate what would happen without the mistakes, pitfalls, political battles, and economic crises. Other limitations are that only those dates are presented which have a common international and validated source, while local, country-specific scientific publications in the respective languages were not available and analyzable.

Contributors

IR planned the study, collected and reviewed the literature, and corresponded with the questionnaire. LK structured the manuscript and made the data analysis and some literature search. Both authors contributed in the development of the final version.

Conflict of interest statement

We declare that we have no conflict of interest. The authors did not receive any financial support for this study.

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APPENDIX

Questions

Are there in your country Department(s) of Family Medicine?

Is it an opportunity in your country to be qualified in FM?

Are there in your country compulsory CME courses for GPs?

Have the GPs a real gate-keeper function in your health system?

Are your personal living conditions better than 15y before?

Other comment, remarks:

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