



Health Reform Monitor

The role of the European Structural and Investment Funds in Financing Health System in Lithuania: Experience from 2007 to 2013 funding period and implications for the future^{☆,☆☆}



Liubove Murauskiene^{a,*}, Marina Karanikolos^b

^a Vilnius University, Faculty of Medicine, Public Health Institute, Vilnius, Lithuania

^b European Observatory on Health Systems and Policies, London School of Hygiene and Tropical Medicine, London, UK

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ABSTRACT

European Structural and Investment Funds (ESIF) are a major source of investments in the newer EU member states. In Lithuania's health sector, the amount for the 2007–2013 funding period reached more than €400 million. In this paper we aim to (i) identify the key areas in the health sector which were supported by ESIF, (ii) determine the extent to which ESIF assisted the implementation of the ongoing health system reform; and (iii) assess whether the use of funds has led to expected improvements in healthcare. We review the national strategic documents and legislation, and perform calculations to determine funding allocations by specific area, based on the available data. We analyse changes according to a set of selected indicators. We find that implementation of programmes funded by the ESIF lacks formal evaluation. Existing evidence suggests that some improvement has been achieved by 2013. However, there are persisting challenges, including failure to reach a broad agreement on selection of health and healthcare indicators, lack of transparency in allocations, and absence of coherent assessment measures of healthcare quality and accessibility.

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1. Background

In Lithuania, as well as in other member states which joined the EU after 2004, European Structural and Investment Funds (ESIF) became a major source of financing [1]. In 2007–2013, the scale of ESIF support in Lithuania amounted to almost a quarter of the country's national annual budget, exceeding €7 billion [2]. The EU structural and investment assistance was then allocated in accordance with the national EU Structural Assistance Strategy under three major operational programmes: Economic Growth, Development of Human Resource, and Promotion of Cohesion [3]. Ten national ministries, including the Ministry of Finance, are in charge of administering the ESIF funds' allocations in the country. A major

part of the ESIF allocations within the health sector was conducted under Promotion of Cohesion programme and administered by the Ministry of Health [4]. The funds were then allocated to five distinct areas:

- Reduction of morbidity and mortality due to cardiovascular diseases (CVDs);
- Early diagnostics and appropriate treatment of cancers;
- Reduction of mortality due to traumas and other external causes of death;
- Optimization of infrastructure of mental health care services;
- Continuity of the health care system reform, which included the development of outpatient care, optimization of inpatient care, and improvements in public health.

According to the situation analysis performed prior to the funding allocation for health sector, Lithuania was facing a number of challenges, including a lack of progress in increasing life expectancy, high levels of risk behaviours and health hazards (e.g. alcohol consumption, drug addiction, traffic accidents), imbalance in the use of inpatient and outpatient services, as well as the lack of administrative capacity. However, these were not explicitly linked with the allocation areas named above. In addition, there also was

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* Corresponding author.

E-mail address: liubove.murauskiene@mf.vu.lt (L. Murauskiene).

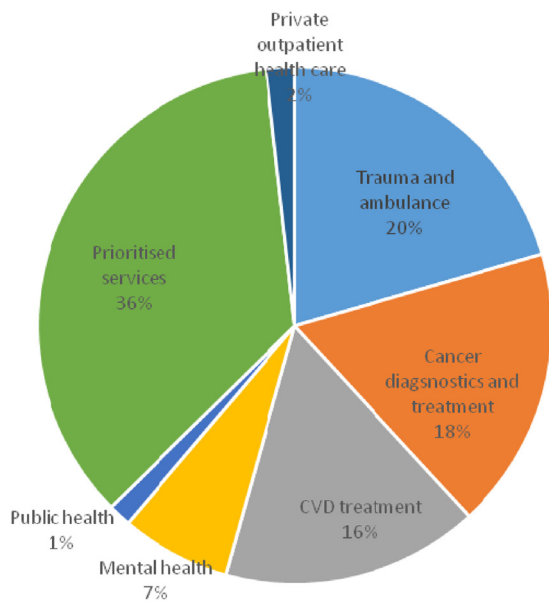


Fig. 1. ESIF allocations administered by the Ministry of Health to health providers, by areas of service (%).

Source: authors' calculations based on the data from the detailed ESIF statistics [5].

no single national strategy on how to implement the ESIF funding in 2007–2013.

In this paper, we review national strategic documents and legislation, and perform calculations to quantify the scale of funding allocations in specific areas, based on the available data. We analyse changes according to a set of indicators selected by the Ministry of Health, where appropriate. We aim to (i) identify the key services in the health sector which were supported by ESIF, (ii) determine the extent to which ESIF assisted the implementation of the ongoing health system reform; and (iii) assess whether the use of funds has led to expected improvements in healthcare.

2. Funding allocation and policy implementation

In 2007–2013 the total allocation to the health sector reached almost €423 million (more than a quarter of annual public expenditure on health), with 66% of the total support being brought under the mandate of the Ministry of Health (Table 1). The Ministry of Economy was responsible for 14% of the total funding through the investments in renovation of buildings. A further input of 10% came from the Ministry of Labour and Social Security. Major portion of funding support (80%) was directed to health service providers to modernize health infrastructure. Training and e-health were other two areas, with 8% and 6% of the funding, respectively.

In total €280 million administrated by the Ministry of Health has been allocated to health providers. The money were directed towards 12 packages of investments to improve service provision based on the five areas identified in Operational Programme.

Fig. 1 shows that services prioritized in the ongoing healthcare reform, which include day care, outpatient rehabilitation, nursing and terminal care, received 36% of the total funding (€100 mln), followed by treatment of injuries and ambulance (€58 mln), cancer diagnostics and treatment (€49 mln), treatment of CVDs (€45 mln), mental health services (€19 mln), outpatient services delivered by private specialists (€5 mln) and public health activities – according to institutional designation to public health bureaus (€4 mln).

Furthermore, investments for expanding the services prioritized in healthcare reforms reached the largest number of public healthcare providers – 110; an average amount per provider varied from

around €100 thousand (public health) to over €3 million (trauma and ambulance services as well as cancer treatment). Analysis of the funding allocation data shows that major hospitals received substantially larger investments by participating in larger number of projects (six to eight), while smaller providers typically undertook one or two projects. In total, 332 health service providers received ESIF support, a number which considerably exceeds the planned allocation for 110 health providers. In addition, 2.2 million patients potentially benefitted from the ESIF in 2007–2013 [6].

At the same time, there were substantial variations in average allocation per patient across different services. The highest spending per patient was for the development of infrastructure for treatment of cancer (around €9 thousand), often involving the procurement of expensive modern equipment. At the same time, mental health services also attracted high spending, particularly day-care and crisis centres (around €2 thousand per patient).

Another area of ESIF financing (€43 million) was aimed to support professional medical training and improve administrative capacity of the Ministry of Health staff. Of these, €34 million from the Ministry of Social Security and Labour, as well as the Ministry of Education were spent largely on training for medical professionals, and €10 million from the Ministry of Internal Affairs were allocated for improvement of public administration functions (Table 1).

Two other areas of expenditure, exceeding €87 million in total, should also be considered as further investments in the health sector. These are subsidies for E-health projects carried out under the responsibility of the Ministry of Internal Affairs, and investments in renovation of healthcare facilities seeking to reduce energy consumption, administered by the Ministry of Economy. Through the latter, around 80 public healthcare facilities received an average of €760 thousand for building renovations. €10 million were allocated by the Ministry of Social Security and Labour to the integrated social and health care initiatives on treatment and rehabilitation of drug users. A further small amount (totaling €200 thousand) was allocated towards the health sector evaluation programmes and projects.

According to the investigation conducted by the Public Health Innovation and Research in Europe (PHIRE), Lithuania was one of the two EU member states (together with Estonia) who reported active use of the ESIF for public health research, with six projects approved in 2007–2013 [7], with some of the finding being reported as used for research in “administrative capacity and efficient public administration” [8].

3. Outcomes and impact

There is a lack of sound impact evaluation of investments to health sector from the ESIF, partially due to absence of meaningful indicators, but also for other reasons, discussed below. The situation analysis [4] produced a peculiar selection of indicators to establish and monitor the areas of the main health and healthcare concern (Table 2). At baseline in 2004 there were substantial unfavourable differences between Lithuania and the EU averages in terms of both health outcomes and healthcare service indicators [9]. By the end of the assessment period in 2013 improvements have been achieved in reducing the number of hospitals, while gaps in the number of hospital beds and health expenditure between Lithuania and the EU average remained wide. However, a lack of coherence between the established output indicators and the target values should be noted. Improvements of provider infrastructure for cancer, CVDs and mental health did not and could plausibly not result in immediate reduction of general mortality, or increasing life expectancy, therefore it is not possible to infer a direct link between these investments and measures selected. Furthermore, two other indicators were used to monitor ESIF implementation

Table 1
ESIF allocations to the health sector (2007–2013).

Responsible Ministry	Service providers infrastructure	Training	Public agencies	E-Health	Other related	total, mln. €	%
Health	276.1		4.2		0.2	280.5	66.4%
Social Security and Labour		32.9			9.8	42.7	10.1%
Internal Affairs			9.7	26.7		36.5	8.6%
Education	1.7	0.6				2.3	0.6%
Economy	60.8					60.8	14.4%
total, mln €	338.6	33.5	13.9	26.7	10.0	422.7	100%
%	80.1%	7.9%	3.3%	6.3%	2.4%	100.0%	

Note: authors' calculations, based on the data from the detailed ESIF statistics [5]. Results have been obtained through identifying the total expenditure attributed to specific projects and categorized by the responsible Ministry.

Table 2
Key areas of concern highlighted by the Ministry of Health.

Indicator	Year ^a	Lithuania	EU15	% Difference (LT vs EU15)
Mortality per 1000 population	2004	12.0	9.76	+23%
	2012	13.7	9.53	+44%
Life expectancy at birth	2004	72.06	79.1	-9%
	2012	74.16	81.7	-9%
Number of hospital beds per 100,000 population	2004	843.30	591.60	+43%
	2013	728.2	497.82	+46%
Total health expenditure (as% of GDP)	2004	6.03	9.21	-35%
	2013	6.24	10.26	-39%
Number of hospitals per 100000	2004	5.27	3.11	+69%
	2013	3.35	3.1	+8%

Source: Ministry of Finance [4]; WHO Regional Office for Europe [10].

^a Pre-implementation data from 2004 (Lithuania) and 2003 and 2004 (EU15); post implementation data from 2012 and 2013 (Lithuania) and 2013 (EU15).

in health sector: (i) a number of health providers supported; and (ii) a number of patients benefiting from the improved accessibility and quality of services. More specific and/or meaningful outcome indicators, such as cancer survival, hospital re-admission rates for patients with myocardial infarction and stroke, or even inpatient admission rate would have been of added value when assessing the impact of funding allocation.

Support for outpatient services provision, e.g. establishment better physical conditions for delivering so called "prioritized services" in primary care as well as support for private specialists working in underserved areas was considered as a precondition for decreasing excessive hospital capacity. However, despite some progress achieved in development of primary care and increasingly used day-care, overreliance on inpatient sector was not overcome, with acute hospital admissions remaining around 21 per 100,000 population, which is above the goal of 18 per 100,000, set out and later abandoned over the course of the health system reform, which started in 2004 and is still ongoing [11].

It is difficult to assess implicit decisions made on selection of particular ways to achieve ambitious and broad goals in improving population health and rationing healthcare provision. Nevertheless, efforts to prioritize investments according to health system's weaknesses are encouraging, given the lack of robust prioritization process under the State Investment Programme when allocating funds for urgent repair and replacement of equipment in public health facilities.

While there is a lack of specific and more relevant measures of service quality and availability, the report on the evaluation of the EU Structural Assistance Impact on Quality of Life, Social Exclusion and Poverty Reduction in Lithuania commissioned by the Ministry of Finance noted broadly that investments in health sector led to improvement in accessibility of mental health services, development of out-patient and nursing care, and had a wider positive impact on improvement of quality of life as a whole [12].

Moreover, it suggested that the EU structural assistance for health sector infrastructure together with expanding non-communicable disease and drug addiction prevention programmes mitigated the impact of severe economic crisis on population health.

However, there still is lack of comprehensive evidence on the impact of the ESIF funding on the health sector in Lithuania. Evaluation commissioned by the Ministry of Health in 2015 focused on establishing the impact of investments from the ESIF on better management of injuries [13] (an area where major concerns were raised by researchers regarding the service quality and performance [14]) noted some improvements in the quality of pre-hospital trauma care and patient transportation, as well as in organization of major trauma centres with designated teams. At the same time, little change has been seen in the overall provision of urgent care. Another evaluation in 2010 concluded that ESIF funds allocated to inpatient care reform and centralization process resulted in improved efficiency whereby specialized services became more concentrated in regional hospitals, however, there was some risk of inefficient use of the acquired medical equipment. [15]

4. Challenges

There are numerous benefits for the country from the ability to access the ESIF. However, a number of challenges still exist. First, there still is a considerable reliance of Lithuanian health sector on external source of financing [16]. Second issue was raised by some policy-makers and experts in relation to the access to finances from the EU for the private providers, who suggested private sector faced unfair competition. As mentioned above, 38 private providers received about 2% of the total funding administered by the Ministry of Health, in contrast to 308 providers from the public sector receiving the bulk of the financing. While much of the guidance mentions that a bid could be done on public, private, NGO or individual initiative alike, often it is only public sector

institutions which ultimately receive the funding. A third major concern relates to potentially not cost-effective process of public procurement, whereby investments are allocated to the cheapest rather than better value-for-money bid, or where provider cannot ensure maintenance and upgrading of expensive equipment or service. Further evidence of the existence of inefficient and preferential allocations and lack of strategic management was reflected in the recent President's speeches regarding the 2014–2020 ESIF investment cycle, which warned that positive impact of financial assistance can be damaged by fraud, corruption, failures in strategic planning and bureaucratic barriers [15].

The indicators used for monitoring of the progress achieved in health sector due to the EU assistance were subject to substantial criticism with calls for more specific and comprehensive measures, clear calculations, and accurate interpretation. [16].

5. Recent developments and conclusions

Expert consultations preceding 2014–2020 round of allocations suggested that in the future more attention should be paid to measuring quality and accessibility of services, as well as to further development of social care, taking into account the country's demographic trends [17]. In 2013, an evaluation commissioned by the Ministry of Health and aimed at establishing priorities in health care to be supported by investments from the ESIF proposed three major areas for future actions: management of NCDs, health at work, and improvement in healthcare safety and quality [18]. Later on, in 2014, two main directions for investments to health sector have been identified: first being reduction of inequalities in population health and health care, while the second focused on healthy ageing. Selected strategies for both suggest that the health sector should move from more straightforward investments in premises and equipment to implementation of complex and comprehensive policies and interventions which could achieve better long term health outcomes [19,20].

In response, preparations including consultations with experts and work groups proceedings for implementation of about two dozens of interventions are currently underway. These involve prevention and treatment of stroke, tuberculosis, cancer, and drug use; some of the initiatives focus on specific population groups like children, elderly and people with disabilities, while a few are linked to the types of care, for instance, ambulance services.

2014–2020 Operational Programme directs 8% of total allocation for promoting social inclusion and combating poverty. Under this priority, an objective to improve health-care quality and accessibility for target groups and reduce health inequalities is set for the health sector. The document presents two target output indicators: (i) a number of upgraded public healthcare facilities [20]; and (ii) a number of population covered by improved health care services (1 million). Further indicators include age-standardised premature mortality rates from ischaemic heart disease, stroke and cancer, as well as mortality from injuries. These are targeted for geographical areas with mortality indicators exceeding the national averages. Service indicators include the difference between physician visits per capita in urban and rural areas [21].

The 2014–2020 cycle which is currently in progress has already shown that implementation of the plans does not progress smoothly. Initial policy decisions are followed by numerous revisions. Furthermore, funding simple interventions which tick bureaucratic boxes is frequently favored to innovative and more sophisticated pilot proposals.

Three key lessons could be drawn from the 2007–2013 round. First, there is the need for a broad and comprehensive agreement on goals and prioritized actions in health sector as a prerequisite for effective use of investments. Second, more transparent funding

allocation could lead to investing in high quality and cost-effective services. Third, there still is a lack of coherent and reliable indicators which would be relevant for monitoring and assessing of the results of the investment and reform processes.

Despite multiple lessons learned in the previous stage, the decision-making process is still rather implicit and often is not based on coherent measures or cost-benefit analysis. Therefore while there is a big potential to gain from the new ESIF cycle, not sufficiently substantiated decision-making process and lack of relevant monitoring indicators could potentially undermine benefits from these investments.

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References

- [1] McCarthy M. Health and the European Structural Funds in the new member states. *European Journal of Public Health* 2013;23(June (3)):522–3.
- [2] Ministry of Finance. EU Structural Assistance to Lithuania; 2016, 30/06/2016; Available from: <http://www.esparama.lt/2007-2013/en/eu-structural-assistance-to-lithuania>.
- [3] Transport Investment Directorate. EU Assistance to Lithuania in 2007–2013; 2016, 30/06/2016; Available from: <http://www.tid.lt/en/eu-assistance-to-lithuania-in-2007-2013>.
- [4] Ministry of Finance. Operational Programme for Promotion of Cohesion for 2007–2013; 2016, 30/06/2016; Available from <http://www.esparama.lt/2007-2013/en/eu-structural-assistance-to-lithuania>.
- [5] Ministry of Finance. Detailed Statistics on the Use of the EU Financial Assistance; 2016, 30/06/2016; Available from <http://www.esparama.lt/barometras>.
- [6] Ministry of Finance. Strategic report on the implementation of the European Union Structural Funds assistance 2012 (Lietuvos 2007–2013 m. Europos Sąjungos struktūrinės paramos panaudojimo strategijos konvergencijos tikslui įgyvendinti įgyvendinimo strateginė ataskaita). Vilnius, 2012.
- [7] McCarthy M, Zeegers Paget D, Barnhoorn F. National action for European public health research. *European Journal of Public Health* 2013;2(November (23 Suppl)):43–6.
- [8] McCarthy M. Public health research support through the European structural funds in central and eastern Europe and the Mediterranean. *Health Research Policy and Systems/Biomed Central* 2012;10:12.
- [9] Ministry of Finance. Quality and Access to Public Services – Indicators of Real Cohesion; 2016, 30/06/2016; Available from <http://www.esparama.lt/2014-2020-laikotarpis/viesosios-diskusijos-lietuvoje/vpk>.
- [10] World Health Organization Regional Office for Europe. European Health for All database (HFA-DB); 2016, 30/06/2016; Available from <http://www.euro.who.int/en/data-and-evidence/databases/european-health-for-all-database-hfa-db>.
- [11] Karanikolas M, Murauskienė L, van Ginneken E. Pursuing health care efficiency in Lithuania. *Eurohealth* 2013;19(3):44–7.
- [12] Ministry of Finance. Evaluation of EU Structural Assistance Impact on Quality of Life, Social Exclusion and Poverty Reduction in Lithuania; 2014.
- [13] UAB. Eurointegracijos projektai. The Evaluation of the Effect of Measures, Administered by the Ministry of Healthcare of the Republic of Lithuania on the 'golden hour'. Vilnius: Ministry of Health; 2015.
- [14] Lunevicius R, Rahman MH. Assessment of Lithuanian trauma care service using a conceptual framework for assessing the performance of health system. *European Journal of Public Health* 2012;22(February (1)):26–31.
- [15] The President of the Republic of Lithuania. The President's Annual Speech 2013; 2013.
- [16] ESTEP. Evaluation of the Relevance and Effectiveness of Cohesion Programme Monitoring Indicators Administered by the Ministry of Health of the Republic of Lithuania (Sveikatos apsaugos ministerijos administruojamų Sanglaudos skatinimo veiksmų programos priemonių įgyvendinimo stebėsenos rodiklių sistemos tinkamumo ir efektyvumo vertinimas). Vilnius: Europe's social, legal and economic projects; 2011.
- [17] Ministry of Finance. Discussions on Assigning the Eu Financial Assistance to the Improvement in Public Services; 2012, 30/06/2016; Available from <http://www.esparama.lt/naujiena?id=090bdd538013949f>.
- [18] MTVC. Strategic Evaluation of Health Sector Priorities for the 2014–2020 EU Structural Assistance Cycle. Vilnius: Ministry of Health; 2013.
- [19] Ministry of Health. Order on the Approval of the Action Plan Regarding the Reduction of Health Inequalities in Lithuania in 2014–2023. Vilnius: Ministry of Health; 2014.
- [20] Ministry of Health. Order on the Approval of the Action Plan Regarding the Assurance of Healthy Ageing in Lithuania in 2014–2023. Vilnius: Ministry of Health; 2014.
- [21] Ministry of Finance. Operational Programme For The European Union Funds' Investments In 2014–2020. Available from <http://www.esinvesticijos>.