



Investigating the Effectiveness of Programs on Health Financing Based on Audit Procedures

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Abstract

Background: The present paper focuses on approaching the context and the actual manner of applying a method, known to be efficient and with a solid scientific background, on the institutional level of healthcare in Romania.

Methods: The analyses and correlations developed by the author have taken into account the latest editions of the journals and publications of these institutions, such as statistical papers, standards, procedural guidebooks, reports. Most of the data (easily identifiable in the electronic environment) have been selected to enable the subsequent further investigation.

Results: The payments made in 2012 for the audited NHP1-4, have increased by 82 282.66 thousand € (39.2%) as compared to 2010, and by 50578.22 thousand € (20.9%) as compared to 2011. The amounts paid for NHP1-4 have had an ascending trend starting with 2010, but, during 2010-2012, as the contribution of the Ministry of Health from the state budget has decreased from 152590.66 thousand € to 95328.22 thousand €, CNAS's funding from the FNUASS resources has increased by 2.4 times.

Conclusion: Following the analysis conducted on the NHP1-4, the findings based on representative samples are: (i) the specific legal standards related to the development of the NHP1-4, did not provide all the mechanisms that would ensure the certain procurement of medication and medical supplies as needed and did not ensure the efficient use of the allocated funds; (ii) clear discontinuities have been identified in the funding of NHP1-4, etc.

Keywords: Health network, Public health funding, National programmes, External audit

Introduction

The dynamics of the population of Romania (20.1 mil. inhabitants) had evolved against an aging trend, with a life expectancy of 70.1 yr- men and 77.5 yr- women (1). The birth rate has reached 9.4 live births ‰ inhabitants, and the general mortality rate amounts to 12 deaths ‰ inhabitants, with about 25% above the EU-27 average (2).

Overall, Romania has the health profile of developed countries, as chronic conditions have a relatively high weight factor (2), but the epidemiological profile of chronic conditions is more unfavourable than that of EU-27. Given the high frequency of certain infectious diseases (i.e. TBC,

viral hepatitis B and C, HIV inherited prevalence) we can actually identify a double weight of certain conditions among the national population (3), which also accounts for the reason why we have chosen this topic, focusing on four large national programmes directed at alleviating problems with a major impact on health.

The related healthcare services are provided via a complex network of health units (Table 1) from both the public and the private sector. Statistically speaking, we can argue that, in 2012 (4), the health network—which includes over 16250 beds - encompassed a number of 470 hospitals, by 4 hospitals less than in 2009. The development of

the private sector has increased the number of pharmacies and pharmaceutical units (4), their number amounting to 8172 units, by 586 more than in 2009. In terms of the human resources, the system under analysis includes 52.5 thousand doctors (apart from dentists), 13.8 thousand dentists, 15.5 thousand chemists and 124.5 thousand midlevel medical personnel. Thus, for each 10000 inhabitants, there are 24.6 doctors, 6.5 dentists,

7.3 chemists and 58.4 midlevel medical personnel. Healthcare is mainly funded from public funds, and about 85% of these funds are provided through the budget of the Unified National Fund of Social Security and Healthcare (FUNASS), supplemented by the amounts received from the state budget and the state social security budget, as well as by the personal income of the population (5-7).

Table 1: The main healthcare units in Romania (4)

Types of healthcare units	Years			
	2009	2010	2011	2012
Hospitals	474	503	464	470
Hospital integrated and specialised ambulatories	461	472	414	419
Polyclinic	268	311	262	282
Clinics	211	204	187	192
Health care centres	47	40	18	22
TB sanatoria	5	4	2	2
Balneal sanatoria	9	9	9	10
Preventive clinics	4	4	2	2
Free clinics	68	68	64	64
Diagnosis and treatment centres	28	26	29	30
Specialised medical centres	171	188	221	242
General practitioners' offices	1055	1000	990	985
Family physicians' offices	11390	11170	11211	11119
Specialised medical practices	9998	8870	9452	9643
Student medical services	958	1287	1366	1391
Dental practices	11683	12036	12613	12812
Student dental practices	457	453	461	454
Other types of medical practices	437	662	541	530
Pharmacies and drug stores	7586	7926	8293	8172
Medical laboratories	2828	2978	3008	3220
Dental technique laboratories	2226	2209	2227	2246
Day-care centres	287	289	295	313

The state budget is responsible for financing certain specific objectives not covered by the insurance system (8). What we are trying to pinpoint through our research, is the extent to which the specific instruments of the performance audit can help identify certain weaknesses on the institutional level of the healthcare system in Romania and whether certain ideas, conclusions can be generated and enable the improvement of certain special healthcare programmes that the Romanian government is currently developing.

Methods

Our research focuses on the period 2010-2012, but most references look at the accounting period of the last year included in this time interval. The data and the information we have used are public, and their reliability is guaranteed by their quotation in various papers that we will further explicitly make reference and published under the aegis of some prestigious organisations, such as the Romanian Government, the National Insti-

tute of Statistics, the Court of Accounts, the National Health Insurance Fund (CNAS), etc.

The rigorous nature of the audit is proven in the latest papers of several renowned specialists in the field (9-13); taking into account the European circumstances (14-16). The analyses and correlations developed by the author have taken into account the latest editions of the journals and publications of these institutions, such as statistical papers, standards, procedural guidebooks, reports (1, 2, 4, 17-22). Most of the data (easily identifiable in the electronic environment) have been selected to enable the subsequent further investigation.

Moreover, the CNAS accounts/balance are subject to an annual financial audit by RCA, as the Supreme Audit Institution, and periodically (every three yr), the entire activity of the organisations is subject to a performance audit (17), as is the case of other national entities managing considerable budget resources, reports and summaries posted on the website in due course. Such audit activities require effective deployment only in compliance with the national standards developed on the basis of international auditing standards and the best practices in the profession.

Clearly, the audit consists of specific audit procedures used for the examination of financial and non-financial documents, interviews with various people who have different responsibilities in the field, questionnaires and factual findings concerning the reality of the implementation of the measures taken to improve the performance of the current national healthcare programs (NHP). Moreover, this type of audit also entails questioning some of the patients of the audited NHP₁₋₄, in order to obtain certain data and information and to gather opinions concerning their satisfaction.

The four programmes (NHP₁₋₄) have been selected from 13 such programmes (NHP₁₋₁₃), developed through CNAS during the period under analysis. The funding of the NHP₁₋₁₃ entailed –for the year 2012– 687,867.55 thousand € (0.53% of GNP), of which 292,237.11 thousand € (0.23 % of GNP) were granted to PNS₁₋₄. We use a rate of 1 € = 4.5 Lei.

Results

CNAS operates both in the medical and the economic level, managing the collected funds (FUNASS) and funding the necessary insured health services (18), as a vital component of the social healthcare insurance system.

An important goal is to increase the efficiency of the collection and use of the FUNASS, whose bulk comes from employees, as well as individuals and businesses that employ staff. In 2012, these revenues amounted to 4233217.77 thousand € (19). The contributions for the social health insurance are (20, 21) 5.2% for the quota provided by employers, 10.7% is the premium provided by individuals with an elective insurance, calculated as two minimum gross salaries for a services pack established in the framework agreement, and 5.5% for the other categories of individuals who must pay the premium directly or from other sources.

The expenses with the Health System in 2012 amount to 4074894.00 thousand €, of which (19) – expenses with materials and provision of medical services, amounting to 3999 988.44 thousand €, Fund administration costs, amounting to 77880.66 thousand € and payments made during the previous year and recovered during the current year, amounting to 2975.33 thousand €. The total expenses with the Social Security amounted to 249401.77 thousand €.

Discussion

The performance audit of certain National Healthcare Programs developed by CNAS during 2010-2012, conducted by RCA (21, 22), has consisted (general objective) in (1) measuring the constitution of the necessary budget resources and the involvement of the responsible factors in monitoring the development of the undergoing NHP (Table 2) for the treatment and control of certain conditions that have a major influence on the health of the population, as well as (2) identify the existing disparities recorded during the development of those programmes. NHP₁₋₄

(292237.11 thousand €/2012) have been extracted -for auditing purposes- from the total series NHP₁₋₁₃ (687 867.55 thousand €/2012),

because the conditions they refer to have the greatest impact on the health of the overall population.

Table 2: Payments for NHP₁₋₄ (2010-2012) (22)

Programme Name	Annual payments		
	2010	2011	2012
PNS ₁ - Oncology	153 321.11	175 842.88	248 041.77
PNS ₂ – HIV treatment	39 822.00	44 761.77	29 306.67
PNS ₃ - Transplant	9 098.45	12 772.45	14 888.67
PNS ₄ – Cardiovascular conditions	7 712.88	8 281.78	-
Total	209 954.44	241 658.88	292 237.11

-Thousand € -

The specific objectives of the respective audit entailed the assessment of:

- (1) The actual development of NHP₁₋₄, in terms of efficiency, in a given legal context;
- (2) The justification of the budget allocated to the development of NHP₁₋₄;
- (3) The lawfulness of the procedures to assign the medication procurement contracts;
- (4) The settlement of the medication, within the approved budget and in compliance with the principles of economy, efficiency and effectiveness in the use of the funds (3E);
- (5) The CNAS monitoring of the funds used in the procurement of medical supplies by the suppliers of medical services and by the open circuit pharmacies;
- (6) The completion of the objectives of the NHP₁₋₄, and the completion of the physical and efficiency indicators.

In terms of value, the payments made in 2012 for the audited NHP₁₋₄, have increased by 82 282.66 thousand € (39.2%) as compared to 2010, and by 50578.22 thousand € (20.9%) as compared to 2011. The amounts paid for NHP₁₋₄ have had an ascending trend starting with 2010, but, during 2010-2012, as the contribution of the Ministry of Health from the state budget has decreased from 152590.66 thousand € to 95328.22 thousand €, CNAS's funding from the FNUASS resources has increased by 2.4 times, i.e. from 82752.66 thousand € to 198680.00 thousand € (22). In terms of the specific objectives, following

the analysis conducted on the NHP₁₋₄, the findings based on representative samples are:

- The specific legal standards related to the development of the NHP₁₋₄, did not provide all the mechanisms that would ensure the certain procurement of medication and medical supplies as needed and did not ensure the efficient use of the allocated funds;
- Clear discontinuities have been identified in the funding of NHP₁₋₄;
- The procurement procedures used for NHP₁₋₄ did not enable the economical use of the allocated resources, as the procurement prices for the same type of medication in the region have fluctuated for each medical unit;
- The control conducted by CNAS did not entirely enable the economical, efficient and effective use of the financial resources in NHP₁₋₄, and, even though the medical units and open circuit pharmacies have been audited and certain errors caused damage were identified, these controls did not help prevent the occurrence of such errors in the future;
- The indicators reported by the CNAS county level subunits have not been monitored, analysed and assessed quarterly in the first 30 working d of the month following the quarterly reporting; moreover, there have been no efforts to observe the average costs/treated patient/year established through the technical standards related to the development of NHP₁₋₄ and no

agreement has been made between the reporting of the physical and efficiency indicators conveyed in printed form and the reporting made via a special computerised programme (SIUI).

Audit recommendations (7): adjusting the specific legal standards of NHP₁₋₄ to the requirements related to the completion of the objectives, justifying the NHP₁₋₄ budget, by taking into account the approved physical and the efficiency indicators as well as the level of the debts recorded during the previous year etc.

Conclusion

Approaches the CNAS audit of certain healthcare programmes massively funded by the Romanian government (treatment of oncology and cardiovascular conditions, HIV or transplant research), reveals the presence of certain aspects related to inefficiency and identifies an entire array of drawbacks impeded the completion of the indicators related to NHP₁₋₄. After completing the required methodological steps, justified by the application of the external public audit standards, we have pinpointed the necessary improvements made in the system under analysis. Such improvements would lead to a more reasonable confinement of the errors and the frauds concerning the settlement of the amounts due to the providers of medication and medical supplies in the NHP₁₋₄.

Ethical Considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the author.

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