Health Care Expenditures in Croatia, 2000–2013: Is Primary Health Care in the Right Position?

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ABSTRACT

The research was undertaken to determine the trends in the amount and the structure of the health care expenditures in Croatia from 2000 to 2013. It is based on routinely collected and publicly available data, The Annual Reports of the Croatian Health Insurance Fund and OECD data. The income of Croatian Health Insurance Fund (CHIF) increased by 66.9%, while total expenditures increased by 62.1%. The fastest growth of expenditure is noticed in expenditures on health care. The hospital and specialist-consultant services have the highest expenditures. Furthermore, the fastest growth is that of other expenses, from 7% of total health care expenditures in 2000, to 26.7% in 2013; which can partly be interpreted as part of hospital care expenses. In the contrast, total expenditures for primary health care decreased, from 22% in 2002, to 13.1% in 2013. The publicly available data are not sufficient enough to drown up any specific conclusions about the underlying reasons for such distribution of the costs.

Key words: health insurance, health care expenditures, Croatia, primary health care

Introduction

By its Constitution Croatia is defined as a social state and all citizens have the right to health care services. Compulsory health insurance, on which the citizens’ rights are based, is mandatory for everyone and based on the principles of solidarity and reciprocity. It is somehow a combination of Bismarck and Beveridge model; mainly based on collecting the revenues from the salaries of working population, peasants and retired persons and partly funded by the Budget for the rest of population1. Faced with the imbalance between the income and over expenditure, an additional voluntary health insurance was introduced in 20022. Co-payment for some services, including the prescribed pharmaceuticals, has always been a part of health care financing, but it has always been small in amount and large population groups were freed. Therefore, a rather high patients’ co-payment was introduced in 20053. Until 2002, the Croatian health insurance fund (CHIF) was independent, but since then it has been under the responsibility of the Ministry of Finance.

A provision of the health care service is based on the contract between CHIF and health care institutions, mainly public hospitals and outpatient specialist-consultants’ service, and primary health care (PHC), mainly based on private doctors as the contractors. Hospital services were funded through monthly allocations of the annual hospital hard budget, planned and controlled by the CHIF. The hospital hard budget had to be accounted for by bills for medical services of a point-based hospital payments system and the diagnostic-related groups systems; referred to as the payment per therapeutic procedures (PPTP). If a hospital exceeded its annually planned budget ceiling, it did not receive funds for the bills provided once the ceiling was reached. For the outpatient specialist-consultants’ service, the same reimbursement scheme based on PPTP and ceiling budgets was applied4.

From the organizational and financial aspects, PHC in Croatia consists of several types of services: family practice (FP) mainly responsible for the adult population, primary pediatrics responsible for preschool children, gynecological service for the specific care for women and dental services. Out-of-hospital emergency service, home care nursing and public nursing are also services belonging to the PHC5. While out-of-hospital emergency service and public nursing service remain completely public, the other PHC services were privatized. In 1996,
family doctors (FD), primary pediatricians, gynecologists and dentists became the private entrepreneurs with the obligation of contracting with CHIF for the provision of services to the patients on their personal lists. In the beginning, the contractual reimbursement was only based on the age-related capitation fees and afterwards the payment related to the diagnostic-therapeutic procedures was introduced, but always under certain conditions. For instance, if the one FD did not achieve a certain amount of reimbursement through capitation fees, then it is possible to obtain 10–15% of amount through the diagnostically-related capitation fees and conditional use of DTP.

Even though PHC in Croatia has always been formally recognized as the basis of health care services, it does not have such a role if we look at it from the financial aspect. A few published researches indicated that the structure of expenditure of public health resources was in favor of hospital sectors. Therefore, this research was undertaken to determine the trends in the amount and the structure of the health care expenditures from 2000 to 2012, based on routinely collected data.

Materials and Methods

The study is observational and retrospective, based on routinely collected and publicly available data. The Annual Reports of the Croatian Health Insurance Fund, from 2000 to 2013, were the basis for data collection.

The data were collected on: total incomes and total expenditures and separately on health care expenditure, compensation for patients on a sick leaves and during the pregnancy and maternity leaves and other expenditures, including the administrative. Related to the structure of health care expenditure, the data on hospital and specialist-consultant service expenditure, as well as the expenditure on pharmaceuticals, primary health care and for other health care expenditure were collected. Other health care expenditures include the expenses for orthopedic devices, particularly expensive drugs, emergency care, transfusion medicine, vaccines, health care of foreign citizens during their stay in Croatia, transplantation programmes, interventional cardiology and neurology, cochlear implants, artificial insemination, home health care and others.

We faced some difficulties in obtaining the data from CHIF Reports. Some data were missing and others was presented differently throughout years. For example, specialist-consultant services (SCS) cost contained the cost of inpatient and outpatient SCS. From 2000–2005 they were presented separated from hospital costs. In 2006 it was presented as a single cost together with hospital costs. Since 2007, outpatient SCS costs were reported separately, while inpatient SCS costs were still presented together with the cost of hospital care. Therefore, we have summed up these items (hospital, inpatients SCS and outpatients SCS) to make comparison possible. Also, until 2008 expenditure on primary health care included the costs of home care nursing, but from that year on, these costs are presented separately. However, as expenditures for home care nursing come up to only 0.6–0.8% of total funding for health care, it can be said that changing the ways of presenting the costs does not significantly change the trend of the share of primary health care in total health care expenditure. Gradually, by the years, CHIF reports become more detailed so it makes possible to follow the structure of some other health care expenditures. For example, from 2005 on, costs for expensive drugs can be followed separately. Later on, costs for transplantations, interventional cardiology, interventional neurology and transfusion medicine are presented as well.

In annual CHIF reports, primary health care is presented as one whole and it is not possible to split the total expenditure into different primary health care services. For that reason we used the data from the Ordinance on standard and normative in health care from basic health insurance for the year 2013, also published by CHIF. The planned expenditures for PHC for the year 2013 were split on different kinds of PHC service and were presented in the Ordinance. It was only possible way to get inside into the structure of PHC expenditures.

To make a comparison with other European countries, database of the Organization for Economic Co-operation and Development (OECD) was used and the Health Care expenditure in 2012 was obtained. The expenditures for hospital care and ambulatory health care were obtained for 18 European countries, those to which data were complete. For other countries data were missing, including for Croatia. Therefore, the data for Croatia were obtained from the Annual Report of the Croatian Health Insurance Fund, for the same year 2012. Although the data for EU countries and for Croatia are coming from different sources, the expenditure for hospital and ambulatory care are clearly presenting in both sources which make a comparison possible.

The collected data were analyzed using Microsoft Office (Excel) software. The results are presented in the form of money amounts expressed in Croatian currency, kuna (HRK), or percentages, and the trends are displayed graphically as line or column charts.

Results

Results are presented in three parts. The total income and expenses, and the structure of expenditures for certain segments of health care are presented in the first part. In the second part, the planned expenditure on particular segments of primary health care is presented and in the third part the international comparison of the certain kinds of expenditures.

Income and the structure of expenditures

In the reporting period, there was an upward trend in income from 13,965,557,000 HRK in the year 2000 up to
22,582,051,000 HRK in 2009, followed by a gradual slight decline till the year 2013, when the income was 23,301,822,804 HRK. The increase in the reporting period was 66.9% (Figure 1).

Since 2000, when total expenditure of CHIF was 14,929,881,000 HRK, it grew up to 24,202,834,953 HRK in 2013. Over the study period, total expenditures increased by 62.1%. The fastest growth can be noticed in expenditures on health care, which rose from 11,425,707,000 HRK in 2000 to 21,418,831,286 HRK in 2013. Increased spending on health care of nearly 10 billion HRK over the period of the thirteen years makes an increase of 87%.

Different kinds of compensations also increased, from 1,858,989,000 HRK in 2000 to 2,322,646,000 HRK in 2013, while other CHIF expenditures, including expenses for employees, material costs, expenses for repayment of loans, etc., decreased from 642,694,000 in 2000 to 461,357,953 HRK in 2013, containing 4.3% to 1.9% of total expenditures (Figure 2).

The major part of health care expenditures is that on hospitals and specialist-consultant services and it’s presented as a single cost. From 2000 to 2009 there is a steady upward trend, from 6,244,054,000 HRK in 2000 to 9,194,197,000 HRK in 2009, which is an increase of almost 50%. After this period the costs began to decline to the amount of 8,151,534,042 HRK in 2013 (11.4% decrease). The share of hospital and specialist-consultant services in the total health care expenditure in 2013 was 38%.

Growth was also recorded in the consumption of prescription drugs. In 2002 the costs for prescription drugs were 2,017,466,000 HRK, and grew up to 5,436,581,830 HRK in 2013 (increase from 17.7% of total expenditure in 2002, to 25.4% in 2013).

Primary health care costs increased from 2,289,949,000 HRK in 2000 to 3,318,022,000 HRK in 2009, when they were the greatest. Since then, expenditure on PHC was in decline and in 2013 it was 2,813,172,420 HRK. In the year 2013 the PHC share was only 13.1% of health care expenditures.

The largest growth can be seen in other expenditures, which made up only 7% of total health care expenditures in the year 2000, but grew seven times by 2013. These costs now represent significant 26.7% of the share and are hence shown separately (Figure 3).

Other costs include expenses for orthopedic devices, particularly expensive drugs, emergency care, transfusion medicine, vaccines, health care of foreign citizens during their stay in Croatia, transplantations programmes, interventional cardiology and neurology, cochlear implants, artificial insemination, home health care and others. The costs for orthopedic devices increased, from 352,937,000 HRK in 2000, to 858,958,154 HRK in 2013. This makes an increase of 143%. Costs for particularly expensive drugs can be followed from 2005 and they also rose from 16,996,978 HRK to 608,650,665 HRK in 2013. Transplantations costs in 2006 were 45,878,017 HRK and rose up to 126,152,160 HRK in 2013. Transfusion medicine costs were 40,381,450 HRK in 2008 and rose up to 162,513,353 HRK in 2013 (Figure 4).
During the observing period, the largest share (22%) of total funding for health care was allocated to primary health care in the year 2002. Since then, the share of primary health care is in constant decline and in 2013 it was only 13.1% (Figure 5).

A structure of planned expenditures for Primary Health Care

As annual CHIF reports do not show expenses by different types of primary health care services, the assumed share is presented according to the data on planned allocation of funds for 2013, taken from Ordinance on standard and normative in health care from basic health insurance for the year 2013. According to the Ordinance, the total amount of 3,045,000,000 HRK was planned for primary health care in 2013, 39.5% of which for family medicine, 32.7% for dental medicine, and the rest for specific care for women, preschool children and other aspects of primary health care (Figure 6).

International comparison

For comparison with other European countries, two data sets were used. The data for Croatia were used from Annual Report of the Croatian Health Insurance Fund for the year 2012. The data for other countries were used from OECD database (OECD database, Health, Health Care expenditure, Main indicators, Health care service by providers. Data extracted from OECD.StatExtracts).

Fig. 5. Primary health care share in total health care expenditures.

Fig. 6. Expenditures for different primary health services planned for 2013 (data from Ordinance on standard and normative in health care from basic health insurance).

Fig. 7. Family medicine share in total health care expenditures in 2013.

Fig. 8. Hospital expenditure (in % of total health care expenditure) in selected European countries (OECD data) in comparison with Croatia (CHIF Report) for 2012.

Fig. 9. Ambulatory health care expenditure (in % of total health care expenditure) in selected European countries (OECD data) in comparison with Croatia (CHIF Report) for 2012.
In 18 selected countries for which data were complete, the expenditures for hospital service in 2012 are varying, from 26.4% of total health care expenditure in Slovakia to 49.9% in Greece, while in Croatia it was 40% in 2012 (Figure 8).

In 2002, for the provision of ambulatory health care it was spent between 19.0% in the Netherlands and 35.2% of total health care expenditures in Finland. In Croatia, in 2012, it was spent only 15% of total health care expenditure. For medical goods dispensed to out-patients and the services connected with dispensing, it was spent in between 8.2% of total health care costs in Switzerland and 35.4% in Hungary. In 2012, it was spent 20.4% in Croatia.

Discussion

The obtained results have indicated to several important facts relating to the health care expenditures. In the reporting period, the income of the Croatian Health Insurance Fund increased by 66.9%, while total expenditures increased by 62.1%. The fastest growth of the expenditure is noticed in expenditures on health care. The hospital and specialist-consultant services have the highest expenditures, especially if the parts of other expenses are added. The costs for particularly expensive drugs, transplantation programs, interventional cardiology and neurology programmes can be interpreted as part of hospital care expenses. Furthermore, the fastest growth is that of other expenses, from 7% of total health care expenditures in 2000, to 26.7% in 2013. Particular increase can be seen in costs for orthopedic devices. In contrast to mentioned increases, total expenditures for primary health care decreased, from 22% in 2002, to 13.1% of total health care expenditures in 2013. Structure of the expenses for different parts of primary health care cannot be specified; we can only make estimation based on planned resources. Planned costs for family medicine, the most significant part of primary health care, come up to 6% of total expenditures. In comparison, costs for orthopedic devices in 2013 added up to over two thirds of all family medicine costs, and costs for dental services, emergency care and home nursing care considerably exceeded the costs for basic segments of primary health care (family medicine, pediatrics and gynecology together). Similar structure of health care expenditure was presenting by Zrinščak. According to data from the Statistical Yearbook, from 1996 to 2005, the highest share of health care expenditure was that of hospitals, followed by the expenditure for the prescription drugs, specialist-consultants and the lowest was PHC expenditure. Independently from the source of information, the structure of the health care expenditure remains the same from the beginning of 1990 until today.

However, many health activities are nowadays redirected towards primary care being less costly option in comparison to hospital care, but according to the results of this study, financial resources are not reallocated accordingly. The vast majority of health care expenditure is still spent on hospital and specialist-consultant service while the amount of resources allocated to primary care has been decreasing during last decade. International comparison shows that Croatia belongs to the countries with high share of hospital expenditures and it occupied the lowest place related to the primary care expenditures. The share of hospital expenditure was also lower in surrounding countries. In Slovenia, it was around 31%, and in Bosnia and Herzegovina under 30%. The share of PHC expenditure in Bosnia and Herzegovina was between 24% to 30%, in comparison to Croatian 22% to 13.1%. Additionally, the share of PHC expenditures in Croatia expressed a decreased trend, in comparison, for example, to Austria, Slovakia or Czech Republic in which the expenditure for PHC were over 25% and remain stable during the years. But in others countries, for instances, in Iceland, the expenditure for hospital care came down from 59.1% in 1980 to 35.5% in 2012, while the expenditure for outpatient or primary care rose from 16.9% in 1980 to 31.0 in 2012. In Poland, the expenditure for primary care raised up from 19.9% in 1999 to 30.7 in 2012.

The strengths of this study come from the fact that it is based on official and publicly available data during the period of fourteen years. A time is long enough for determining the trends in main health care expenditure. However, the CHIF data that are available in public has proven insufficient for a detailed cost analysis; some data are missing and data are differently presented throughout years. Therefore, in the future, a special attention should be paid to the separation of hospital and specialists’ services, even more they are separately contracted with CHIF. The data on the primary care expenditure should also be separated according to different services within the primary care, which are separately contracted too. It would be helpful to see if the contacted services are along the planned expenditures as well. Furthermore, it seems that continuous debts in hospital expenditure which were usually covered from the budget, were not included in the CHIF Annual Reports as the regular expenditures (they were usually mentioned within the textual summary) therefore they are not analyzed in this study. Džakula and colleagues, in their Croatian health system review from 2014, also pointed out the problem of data accuracy. They said: «While the regular health care expenditures within the health care budget are presented transparently, certain health care costs are hidden as arrears unpaid overdue debt. For instance, approximately HRK 3 billion (around € 0.4 billion) has been allocated to capital debt repayment in 2013 only. The consolidation of health care accounts, which started in 2011 and is planned to be concluded in 2014, will improve the transparency of health expenditure data.» Additional study limitation could also be the different data sets, OECD database for EU countries and CHIF Reports for Croatia. This was the reason for making a comparison only on the most important parts of health care expenditures, those on hospital and ambulatory services.
Regardless of the limitations, the results of this study might help decision makers in health care planning; to pay attention to the rising hospital and specialist-consultant services expenditure and decreasing expenditure for primary health care. Special attention should be paid to raising cost of pharmaceuticals, and to other costs, including orthopedic devices, particularly expensive drugs, interventional cardiology and neurology and others. It is a question if those costs could be partly incorporated within the hospital costs since some of them were obviously spent on hospitalized patients. It would be also of public interest to have the more precise reporting of the data related to health care, including the expenditures.

Conclusion

The study results constantly indicate to steady increase in the health care expenditures, especially those for hospital and specialist services, prescription drugs and so called «other costs». They also indicated to steady decrease in the expenditure on primary health care. But, the publicly available data are not sufficient enough to drown any specific conclusions about the underlying reasons for such structure of the expenditure; therefore the new researches are needed for better understanding of the cost effectiveness and sustainability of the health care system.

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