Health expenditure in Estonia 2013

Change in Methodology

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Department of Health Statistics

Estonian Health Care Expenditure in 2013 – Change of Methodology

Tallinn

2014

Mission of the Department of Health Statistics:

Public Health and Welfare through Better Statistics and Information

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BRIEF OVERVIEW

1. A new methodology, based on the SHA2011 classification, was implemented to produce the data on Estonia's health care expenditure in 2013.

2. Classifications were changed in connection with the new methodology.

3. The concept of total health expenditure (THE) is not used in the new methodology, but the indicators of current health expenditure on (CHE) and its GDP percentage remained in use.

4. In addition, Estonia applies from 2013 a new methodology for calculating household health expenditure.

5. Estonia's current health expenditure, or briefly 'health expenditure', amounted to EUR 1.13 billion in 2013.

6. Current health expenditure comprised 6.1% of GDP.

7. The expenditure of the Estonian Health Insurance Fund was EUR 746 million.

8. The Health Insurance Fund expenditure comprised 66% of current health expenditure.

9. Central government health expenditure amounted to EUR 109 million.

10. Central government expenditure comprised 9.6% of current health expenditure.

11. Household health expenditure was EUR 255 million in absolute figures.

12. The household health expenditure comprised 22.6% of current health expenditure.

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INTRODUCTION

This analysis is a part of the series “Health Expenditure in Estonia”, published by the National Institute for Health Development. The present analysis provides a brief overview of health expenditure in 2013.

The objective of the analysis is to provide information on how the health care system is financed through different sources of funding, health care services and service providers, using the System of Health Accounts (SHA) methodology developed by the OECD (Organisation for Economic Cooperation and Development)[1].

According to SHA, health expenditure includes such health services as curative, rehabilitative and long-term care, ancillary services, medical products, prevention, and administration of the health care system. However, health expenditure does not include the expenditure on education and training of health care personnel, health research and development, environmental health and other services, where the principal activity is not improvement of health. The analysis only covers expenditure on Estonian residents. It means that the current health expenditure does not reflect the cost of health services provided to foreigners and the cost of medical goods purchased by foreigners.

The report can be used by all institutions and persons with an interest in the sphere of health funding, as well as by the general public. The author would like to thank all the people who provided data and information and contributed to the preparation of this analysis.

[1] The OECD methodology – *System of Health Accounts (SHA)* or *National Health Accounts (NHA) – is used in more than 100 countries*.

1. CHANGE IN THE METHODOLOGY OF ACCOUNTING HEALTH EXPENDITURE

1.1 Introduction

Estonia applied the new SHA2011 methodology to produce the statistics on Estonia's health expenditure in 2013. This methodology has been developed by OECD from the previously used SHA.1.0 method. It is an international standardised framework for systematic estimation of health care expenditure.

The new methodology was promoted by OECD with the aim to increase comparability of data between different countries. The new methodology provides countries with specific instructions on how to classify health expenditure and it will be implemented by all countries involved in estimating their health expenditure.

Used in this text, the words 'new methodology' refer to the SHA2011 methodology. The expression 'old methodology' is used to describe the SHA.1.0 method.

1.2 Differences between the two methodologies in terms of definitions and classifications

An important terminological change was made in the Estonian context. Instead of the previous predominant term 'total health expenditure' (THE), expenditure on health care is now characterised through the concepts of current health expenditure (CHE) or just health expenditure. The term 'current health expenditure' was also included in the previous SHA.1.0 methodology but, as a rule, this indicator was considered less important than total health expenditure. The main difference between the two indicators derived from the fact that capital formation in health care was not part of the current health expenditure but was included in total health expenditure.

Changes were also made in the subdivision of classifications of health expenditure. A comparison of the two methodologies in relation to the classification of health care functions (ICHA-HC) is provided in Annex 1.

Annex 1 indicates that most names and lists of functions remained unchanged. The largest change in the category of health care functions (ICHA-HC) occurred in the group of preventive care functions (HC.6). The subdivision used in the old methodology has been completely renewed.

The changes in the category of health care providers (ICHA-HP) concerned the content of some subdivisions in the classification and wording updates. A comparison of the two classifications is presented in Annex 2. A more detailed list of hospitals is one notable change that deserves to be mentioned. The data published according to the new SHA2011

methodology are based on the list of hospitals specified in the Estonian Government Regulation on the development plan of the hospital network [1].

An important change in definitions was introduced in the description of health care financing (ICHA-HF). The previous term ‘source of funding’ has been replaced in the new methodology by the concept of a ‘financing scheme’. Important changes were also made in the subdivisions of the classification by replacing the previous division between public and private sources with a division into compulsory and voluntary financing schemes. A description of the changes is provided in Annex 3.

The new methodology also introduced new tables for describing the cash flows of the health care system. It should be mentioned for clarification that the data in these tables are not included in CHE and are used as an additional resources to supplement these figures.

The capital formation is published in a separate table under its own classification heading (ICHA-HK) according to the SHA2011 methodology. Two new tables, describing revenues (ICHA-FS) and expense factors (ICHA-FP) of the health care system, have been added. However, as these tables are not directly included in CHE, several countries, incl. Estonia, have not fully developed and implemented a methodology for calculating data for these tables.

1.3 Changes in accounting methodology

1.3.1 Data collection and classification

The procedure of data collection remained similar to the previous methodology. The majority of data is collected from the providers of funding (Estonian Health Insurance Fund, the State Budget, private insurance funds, etc.) and divided according to financing schemes. In a brief summary, this annual process generally comprises three stages. At the first stage, report forms are sent out to respondents. During the next stage, the respondents fill out the relevant forms and have a chance to consult with the representatives of the National Institute for Health Development (NIHD) if they encounter any problems before submitting the completed forms to the NIHD. At the third stage, the analysts of the NIHD verify the reports received and make any corrections and adjustments if necessary in cooperation with the respondents.

In terms of classification, there was an important methodological change in the classification of foreign funding. According to the old methodology, any expenditure financed from foreign sources was always classified under foreign financing sources. In the new methodology, the expenditure managed by a resident structural unit is classified under the financing scheme of the respective structural unit. For example, this applies to foreign-funded projects of the Ministry of Social Affairs where the Ministry is responsible for project implementation.

The category of foreign financing schemes (HF.4) includes only those foreign-financed expenditures, which are paid directly from the financing scheme to health care providers without any local administration.

1.3.2 Changes in the accounting of households expenditure on health

A major methodological change was made in accordance with the changed method for accounting the out-of-pocket payments of households. The former methodology, based on the household budget survey of Statistics Estonia, was replaced with a new method.

The change can be divided in two methodological elements. The first focuses on the accounting of household expenditure on health care services and the second on expenditure on medical goods. A more detailed description of the methodology is provided in the following sections.

1.3.2.1 New methodology of accounting household health expenditure by health care functions

According to the new accounting methodology for household health expenditure, the expenditure is calculated for each of the functional classifications HC.1-HC.4 and for their sub-categories. These functions include the cost of curative care, rehabilitative care, long-term care and ancillary services.

The new methodology is based on the health statistical reports of health care providers, submitted regularly to the NIHD pursuant to a Regulation of the Minister of Social Affairs. These reports cover economic activities related to health care, consultations and home visits by physicians, day care (surgical work Table 6), as well as treatment beds and hospitalisations.

Submission of a report on economic activities in the field of health care is mandatory for all institutions that provide health care services, even if health care is not part of their main activity. In the latter case, institutions do not provide data on all activities of the institution but only on the part related to health care. This report is used to collect information on the amounts paid by patients during the year to the respective health care providers.

Using this report, the amounts collected from patients are divided between different categories of health care providers. Consequently, the division of health care providers is an accurate description of the division of health expenditure of patients between different service providers.

The division of payments from patients to health care providers between different functions is a complex process, as the reports on service provision are collected in an aggregated format, without a possibility of dividing services and patients. In simplified terms, the division of the payments from patients between different functions is based on the work volumes, calculated on the basis of the aforementioned reports (physicians' consultations and home visits, day care (surgical work Table 6), treatment beds and hospitalisations).

Several assumptions have been used to calculate the payments of patients between different health care functions. The largest number of assumptions is associated with the division of services provided at hospitals. The main question about this division concerns the division of payments from patients between outpatient and inpatient care services, because these services have different costs.

The new accounting methodology assumes that the volume services provided at hospitals can be described through outpatient consultations in case of outpatient services and the number of bed days in case of inpatient care [2: p. 60-61]. The price difference between these services is determined by using the service use data from the annual accounts of the Estonian Health Insurance Fund. Looking at the data from a number of years, it could be said that one inpatient care day is roughly four to five times more expensive than one outpatient consultation. Based on a calculated coefficient, the inpatient and day care services at hospitals are assigned greater weights than outpatient health care services [2: p. 63].

By using the results of the NIHD reports and adding weights, the entire amount of payments from patients is divided between different functions. A simplified overview of data sources is provided in Table 1.

Table 1. **Reports used for calculating the percentages of hospital revenue from patients**

Report	**Data collected**	**Unit**
Economic activity	Revenue from patients	EUR
Physicians' consultations and home visits	Number of visits to dentists	No. of visits
Physicians' consultations and home visits	Number of outpatient consultations (excl. visits to dentists)	No. of visits
Day care	Total day care procedures	No. of procedures
Treatment beds and hospitalisations	Total number of bed-days (except bed-days in long-term care)	No. of bed-days
Treatment beds and hospitalisations	Total number of bed-days in long-term care	No. of bed-days

Source: NIHD DHS

The same methodology is used to divide expenditure in long-term nursing care facilities (HP.2.1). However, this methodology is not applied to inpatient mental health and substance abuse facilities (HP.2.2) and other residential long-term care facilities (HP.2.9), because the data on these facilities and their health care expenditure are provided in a report submitted by the Ministry of Social Affairs.

The division of household payments between providers of ambulatory health care (HP.3) and providers of ancillary services (HP.4) is easier than in case of hospitals, because no inpatient care services are provided. Some service providers also offer day care procedures, but such expenditure is not weighed separately in this case. Instead, it is assumed that one ambulatory consultation and one day care procedure have the same cost.

As providers of outpatient health care and providers of ancillary services often provide health care services, which are identifiable according to the type of service provider, it is assumed in the new methodology that household expenditure on health care at a given type of service provider was made for the main service identifying the respective provider. Table 2 presents the assumptions used in case of different health care providers.

Table 2. **Division of revenue from patients to providers of outpatient health care and ancillary services by the type of service**

		HC.1.3.1	HC.1.3.2	HC.1.3.3	HC.2.3	HC.4.1
		General outpatient curative care	Dental outpatient curative care	Specialised outpatient curative care	Outpatient rehabilitative care	Laboratory services
Offices of general medical practitioners	HP.3.1.1	X				
Offices of mental medical specialists	HP.3.1.2			X		
Offices of medical specialists (other than mental medical specialists)	HP.3.1.3			X		
Dental practices	HP.3.2		X	X		
Rehabilitative care facilities	HP.3.3.1		X		X	
Occupational health facilities	HP.3.3.2			X		
Family planning centres	HP.3.4.1			X		
Ambulatory mental health and substance abuse centres	HP.3.4.2			X		
Free-standing ambulatory surgery centres	HP.3.4.3			X		
Other ambulatory centres	HP.3.4.9		X	X		
Medical and diagnostic laboratories	HP.4.2					X

Source: NIHD DHS

The table indicates that a one-to-one correspondence between the type of institution and the type of services is assumed in most cases. It could be said as a comment that the HP classification used for categorising health care providers includes much more details than the classification of providers in this Table 2. The data presented in this table and in the health statistics and surveys database of the NIHD is grouped according to the highest level of classification. This is because some of the lower categories only include a few institutions. Disclosure of such data would be in conflict with the following statistical principle: “Confidential data shall mean data that allow direct or indirect identification of a statistical unit and thereby disclosure of micro-data”. (Official Statistics Act, § 34 (1))

1.3.2.2 New methodology of accounting household health expenditure by medical goods

The methodology used for accounting household expenditure on medical goods (HC.5) is quite different from the methodology applied in case of health care functions. In the methodology for health care functions, payments from households according as stated in the

economic activity reports of service providers were divided between service providers according to specific rules. In the accounting of medical goods, expenditure data are used separately depending on the category of goods, based on the best available sources and the corresponding calculation methodology. [2: p. 72-73]

In general terms, the methodology of accounting expenditure on medical goods can be divided in two parts: accounting of non-durable goods (HC.5.1) and durable goods (HC.5.2). The corresponding expenditure categories are specified in Table 3.

Table 3. **Classification of medical goods, SHA2011**

Code	**Description**
HC.5	MEDICAL GOODS
HC.5.1	..Pharmaceuticals and other non-durable medical goods
HC 5.1.1	....Prescribed medicines
HC 5.1.2	....Over-the-counter medicines
HC 5.1.3	....Other medical non-durable goods
HC.5.2	..Therapeutic appliances and other medical goods
HC.5.2.1	....Glasses and other vision products
HC.5.2.2	....Hearing aids
HC.5.2.3	....Other orthopaedic appliances and other medical goods
HC.5.2.9	....All other medical durable goods, incl. medical technical devices

Source: NIHD DHS

The estimation of expenditure on non-durable goods is based on the data from the Estonian Health Insurance Fund and the Stage Agency of Medicines. The Health Insurance Fund provides statistical data on discount prescriptions, of which this methodology uses the data on household expenditure on prescribed medicines.

For those prescribed medicines, which are not compensated by the Health Insurance Fund, the data on the expenditure of funding sources from the State Agency of Medicines and health expenditure data is used. The expenditure through other financing schemes, including the Estonian Health Insurance Fund, the central government and the aforementioned cost-sharing of individuals in paying for discount prescribed medicines, is subtracted from the total amount of expenditure on prescribed medicines as disclosed by the State Agency of Medicines. The resulting balance is added to the previously calculated amount of households' contribution to the expenditure on prescribed medicines.

A similar logic is applied to over-the-counter medicines. The State Agency of Medicines provides data on the annual revenue of pharmacies from the sale of over-the-counter medicines. The expenditure of various financing schemes on over-the-counter medicines, as disclosed in different health expenditure reports, is then subtracted from this total revenue. The remaining balance describes annual household expenditure on over-the-counter medicines.

An important assumption is used in case of other medical non-durable goods (HC.5.1.3). This is caused by the fact that Estonia does not currently have a data source capable of describing household expenditure on this product group with a sufficient degree of accuracy. One of the closest possible data sources is the revenue from the sale of other goods, measured by the State Agency of Medicines, but this includes many other products that are not medical goods.

For this reason, a coefficient is used to estimate household expenditure on other medical non-durable goods. This coefficient is based on the results of the household budget survey of Statistics Estonia and it has been applied to the pharmacies' revenue from the sale of other goods as reported by the State Agency of Medicines.

1.3.2.3 Comparison of the current and previous methodologies

The main difference between the two methodologies lies in the fact that the new methodology for estimating household health expenditure provides much more information. In addition, the new methodology seems to be significantly more accurate in estimating the health expenditure of households. This is made possible by the fact that Estonian health care institutions report exhaustive data on all revenues from patients in relation to service categories HC.1 to HC.4.

The previous methodology, which used the household budget survey results as a source, required a number of transformations in order to obtain data divided by service classifications and service providers. In addition, various previously introduced coefficients were used to estimate expenditure.

A comparison of the division of classifications between health care services and service providers according to the new and old methodology is provided in Annex 4. The Annex indicates that, in the new methodology, household expenditure is divided between a much greater number of services and service providers.

In terms of expenditure on medical goods, the two methodologies use the same sub-divisions for estimating household expenditure. The old methodology used only data from the household budget survey to describe household expenditure, but the new one supplements the household budget survey with as many other data sources as possible, including administrative data sources, which provide a much more accurate estimate of expenditure.

1.3.2.4 Comparison of results obtained with the two methodologies

A numeric comparison of the two methodologies for estimating household health expenditure is provided in Annex 5. The comparison in this annex is based on the mean change of household expenditure during the period 2005-2011, calculated according to the old and new methodology. A summary of the results in Annex 5 is presented in Table 4.

Table 4. **Differences between household expenditures according the new and the old methodology, mean difference for the period 2005-2011, thousand EUR, %**

SHA2011		Absolute difference (thousand EUR)	Relative difference (%)
HC.1	CURATIVE CARE	28 841	78,6
HC.1.1	..Inpatient curative care	8 169	566,4
HC.1.3	..Outpatient curative care	19 337	56,4
HC.1.3.2	….Dental outpatient curative care	7 689	27,5
HC.1.3.3	….Specialised outpatient curative care	13 401	2 853,3
HC.2	REHABILITATIVE CARE	-6 294	-48,3
HC.2.1	..Inpatient rehabilitative care	-11 926	-97,6
HC.3	LONG-TERM CARE	3 702	63,6
HC.3.1	..Inpatient long-term care	3 702	63,6
HC.4	ANCILLARY SERVICES	-4 339	-97,5
HC.5	MEDICAL GOODS	1 762	33,0
HC.5.1	..Pharmaceuticals and other non-durable goods	-4 017	31,8
HC 5.1.1	....Prescribed medicines	-13 169	-20,0
HC 5.1.2	....Over-the-counter medicines	8 378	28,1
HC 5.1.3	....Other medical non-durable goods	774	78,4
HC.5.2	..Therapeutic appliances and other medical goods	5 779	49,5
	CURRENT HEALTH EXPENDITURE	23 672	14,6

Source: NIHD DHS

Table 4 indicates that expenditure increased significantly, both on the absolute and relative scale, in the category of specialised outpatient curative care (HC.1.3.3). This has two main reasons. Firstly, the names of the categories were changed, with two categories of the previous SHA.1.0 methodology combined in one in the new methodology. Secondly, the previous methodology for estimating household health expenditure was not capable of dividing expenditure between services with sufficient accuracy. The previous methodology, based on the household budget survey, did not enable a division of expenditure between general medical and diagnostic outpatient services (HC.1.3.1) and specialised outpatient curative care (HC.1.3.3). As a result, the household expenditure on general medical and diagnostic services was overestimated, while expenditure on specialised outpatient curative care was underestimated.

At 8.1 million euros, the other major difference in both absolute and relative figures was observed in the category of inpatient curative care (HC.1.1). To explain this, we need to remember the assumptions used in the new methodology, i.e., it is assumed that the cost of inpatient care, day care, long-term care and inpatient rehabilitative care services is always the same for the individual. The estimates calculated according to the new methodology diverge from reality to an extent that the actual prices of these services differ from one another. [2: p. 89]

In terms of total figures, the household health expenditure over the period 2005-2011 is 24 million higher according to the new methodology compared to the old methodology. This difference is largely caused by increased expenditure in the category of curative care.

1.3.2.5 Conclusion on the comparison of the new and old methodology

In conclusion, it could be said that the new methodology is more accurate in describing household health expenditure, as it uses actual registered accounting data from health care providers, not approximate statements from patients.

This was the main weakness of the methodology, based on the household budget survey. As the survey had a relatively small sample size and the questions on health expenditure constituted only a limited part of the survey, the resulting estimates were often quite variable between different years, depending on individuals included in each particular sample.

The second weakness of the household budget survey as a data source is the fact that the survey is not conducted on an annual basis. Consequently, an estimate based on previous surveys has to be used for years in which the survey is not conducted.

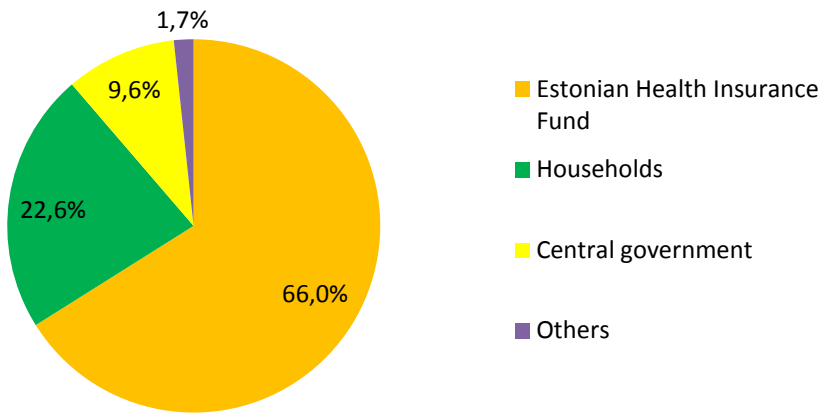
2. FUNDING OF HEALTH EXPENDITURE IN ESTONIA

2.1 Funding of health expenditure in Estonia in 2013

Estonia's current health expenditure in 2013 was 1.13 billion euros. CHE constituted 6.1% of GDP.

The distribution of Estonian health care expenditure between financing schemes is shown on Figure 1. The Figure indicates that the majority of expenditures were made though three financing schemes: Estonian Health Insurance Fund, households' out-of-pocket, and central government. This amounted to 98.3%.

Figure 1. **Estonia's current expenditure on health in 2013**



Source: NIHD DHS

Voluntary schemes for health care financing are represented with a rather low percentage in Estonian health expenditure, amounting to 0.5% in 2013. The share of foreign funding is also low at 0.1%. This can also be explained by a methodological reason, described in section 1.3.1. It means that all foreign-funded health expenditures, which are administered by the Estonian public sector, are accounted under the corresponding financing scheme.

The expenditure of the Estonian Health Insurance Fund comprised 66.0% of total current expenditure. A more detailed division of health care expenditure of the Health Insurance Fund is presented in Table 5.

Table 5. **Current health expenditure by the Estonian Health Insurance Fund, 2013**

	2013	
	thousand EUR	%
CURATIVE CARE	498 606	66,8
..Inpatient curative care	269 981	36,2
..Day care	22 432	3,0
..Outpatient curative care	204 797	27,4
….General medical and diagnostic outpatient services	152 370	20,4
REHABILITATIVE CARE	11 388	1,5
LONG-TERM CARE	20 607	2,8
ANCILLARY SERVICES	88 233	11,8
OUTPATIENT MEDICAL GOODS	111 716	15,0
....Prescribed medicines	103 391	13,9
PREVENTIVE CARE	7 936	1,1
GOVERNANCE AND HEALTH SYSTEM ADMINISTRATION	7 937	1,1
CURRENT HEALTH EXPENDITURE	**746 423**	**100**

Source: NIHD DHS

In absolute figures, the current health expenditure of the Estonian Health Insurance Fund amounted to 746 million euros. At 36.2%, or almost 270 million euros, the largest share in this was expenditure on inpatient curative care. General medical and diagnostic services are the next largest expense category, which includes the funding for family physicians and amounted to 20.4%, or 152 million euros. Compensation for prescribed medicines comprised 13.9%, or 103 million euros, of the EHIF expenditure.

The central government expenditures, amounting to 9.6% of Estonian health expenditure, are disclosed in Table 6. In absolute figures, the central government spent 109 million euros on health care in 2013.

Table 6. **Central government health expenditure, 2013**

	2013	
	thousand EUR	%
CURATIVE CARE	11 569	10,6
REHABILITATIVE CARE	1 302	1,2
LONG-TERM CARE	13 769	12,6
..Inpatient long-term care	13 614	12,5
ANCILLARY SERVICES	29 409	27,0
..Patient transportation and emergency rescue	28 905	26,5
OUTPATIENT MEDICAL GOODS	18 987	17,4
....Orthopaedic and other appliances	10 435	9,6
PREVENTIVE CARE	21 904	20,1
..Early disease detection programmes	18 383	16,9
GOVERNANCE AND HEALTH SYSTEM ADMINISTRATION	12 044	11,1
CURRENT HEALTH EXPENDITURE	**108 985**	**100**

Source: NIHD DHS

Patient transport and emergency rescue was the largest central government expense category at 26.5%, with the majority of this funding spent on financing the emergency medical care service. Early disease detection programmes constituted the second major expense category, amounting to 16.9%, or 18.4 million euros, of the central government health expenditure. Most of the expenditure in this category was made in the field of HIV prevention.

Household expenditure comprised 22.6%, or 255 million euros, of the CHE in 2013. A more detailed division of expenditure is provided in Table 7.

Table 7. **Household health expenditure, 2013**

	2013	
	thousand EUR	%
CURATIVE CARE	102 697	40,3
….Dental curative outpatient care	61 472	24,1
REHABILITATIVE CARE	9 127	3,6
LONG-TERM CARE	19 700	7,7
ANCILLARY SERVICES	236	0,1
OUTPATIENT MEDICAL GOODS	123 301	48,3
....Prescribed medicines	61 620	24,2
....Over-the-counter medicines	40 729	16,0
CURRENT HEALTH EXPENDITURE	**255 060**	**100**

Source: NIHD DHS

Nearly two thirds of the household expenditure was spent on medicines and dental care. In the category of medicines, households spent 24.2% of their health budget on prescribed medicines, 16.0% on over-the-counter medicines, with the respective absolute figures being 61.6 and 40.7 million euros. Household expenditure on dental care was 61.5 million euros in 2013. On average, each person spent 193 euros on health care in the course of the year.

2.2 Financing of Estonian health expenditure in a comparison of two methodologies

The comparison of the two methodologies is based on the data from 2011, presented in Table 8. In case of the SHA2011 data in the table, household expenditure has been calculated according to the methodology described in section 1.3.2.

Table 8. **Health expenditure by services according to SHA.1.0 and SHA2011 classifications, 2011**

SHA.1.0			Difference (thousand EUR)	SHA2011		
Service	thousand EUR	%		%	thousand EUR	Service
HC.1 Services of curative care	497 443	53,3	37 869	54,8	535 311	HC.1 Curative care
HC.1.1 In-patient curative care	252 180	27,0	9 369	26,8	261 548	HC.1.1 In-patient curative care
HC.1.2 Day cases of curative care	18 261	2,0	1 769	2,1	20 029	HC.1.2 Day curative care
HC.1.3 Outpatient curative care	225 431	24,2	26 716	25,8	252 147	HC.1.3 Outpatient curative care
HC.1.3.1 Basic medical and diagnostic services	139 451	15,0	-232	14,3	139 219	HC.1.3.1 General outpatient medical and diagnostic services
HC.1.3.2 Outpatient dental care	60 897	6,5	11 385	7,4	72 281	HC.1.3.2 Dental outpatient curative care
HC.1.3.3 All other specialised health care	23 163	2,5	17 483	4,2	40 646	HC.1.3.3 Other specialised outpatient curative care
HC.2 Rehabilitative care	19 514	2,1	-2 766	1,7	16 748	HC.2 Rehabilitative care
HC.3 Long term care	40 814	4,4	5 276	4,7	46 089	HC.3 Long-term care
HC.4 Ancillary services to health care	103 112	11,1	-3 248	10,2	99 863	HC.4 Ancillary services
HC.5 Medical goods dispensed to outpatients	224 624	24,1	6 722	23,7	231 346	HC.5 Medical goods dispensed to outpatients
HC.5.1.1 Prescribed medicines	159 873	17,1	-8 917	15,5	150 955	HC.5.1.1 Prescribed medicines
HC.5.1.2 Over-the-counter medicines	37 050	4,0	12 364	5,1	49 414	HC.5.1.2 Over-the-counter medicines
HC.6 Prevention and public health services	26 051	2,8	0	2,7	26 051	HC.6 Preventive care

HC.7 Health administration and health insurance	21 220	2,3	0	2,2	21 220	HC.7 Governance and health system administration
CURRENT HEALTH EXPENDITURE	932 778	100	43 852	100	976 629	CURRENT HEALTH EXPENDITURE

Source: NIHD DHS

The Table indicates that implementation of SHA2011, including the new methodology for calculating household expenditure, has increased health expenditure by 43.9 million euros. The largest increase, 37.9 million euros, occurred in the category of curative care (HC.1). This was mainly due to contributions of specialised care services (HC.1.3.3) and dental care (HC.1.3.2).

Some adjustments also occurred in the structure of expenditure on medicines. The expenditure on prescribed medicines (HC.5.1.1) decreased while the expenditure on over-the-counter medicines (HC.5.1.2) increased. This was caused by the aforementioned new methodology of calculating household health expenditure.

A review of the percentages of different service types in CHE indicates that no major changes have taken place. As the largest increases in absolute figures occurred in the categories of curative care (HC.1), long-term care (HC.3) medical goods (HC.5), the same categories also had the largest increase in health expenditure in percentage terms. The expenditure on rehabilitative care (HC.2) decreased, reducing the percentage of this expenditure category in total health expenditure.

3. DIVISION OF HEALTH EXPENDITURE BETWEEN FUNCTIONS AND SERVICE PROVIDERS

Expenditure on curative care, amounting to 619 million euros, constituted more than half of all CHE. At the same time, the expenditure on prevention remains low (about 3%). The distribution of health expenditure between functions is shown in Table 9.

Table 9. **Expenditure on health care functions, 2013**

	2013	
	thousand EUR	%
CURATIVE CARE	618 574	54,7
..Inpatient curative care	291 575	25,8
..Day care	23 872	2,1
..Outpatient curative care	301 707	26,7
….General medical and diagnostic outpatient services	159 574	14,1
….Dental curative outpatient care	89 987	8,0
….Other specialised health care services	52 146	4,6
REHABILITATIVE CARE	22 011	1,9
..Inpatient rehabilitative care	7 540	0,7
..Rehabilitative outpatient care	13 845	1,2
LONG-TERM CARE	60 303	5,3
..Inpatient long-term care	55 881	4,9
ANCILLARY SERVICES	117 938	10,4
..Laboratory services	52 454	4,6
..Imaging services	35 789	3,2
..Patient transportation and emergency rescue	29 695	2,6
OUTPATIENT MEDICAL GOODS	255 406	22,6
....Prescribed medicines	165 401	14,6
....Over-the-counter medicines	42 670	3,8
PREVENTIVE CARE	32 325	2,9
..Early disease detection programmes	21 082	1,9
GOVERNANCE AND HEALTH SYSTEM ADMINISTRATION	23 536	2,1
CURRENT HEALTH EXPENDITURE	**1 130 091**	**100**

Source: NIHD DHS

The next-largest expense category was the expenditure on outpatient medical goods at 255.4 million euros. The majority of expenditure in this category was spent on prescribed medicines.

A review of the CHE by service providers indicates that the largest part of expenditure was incurred in hospitals, amounting to 45.8% of the current expenditure, or 517 million euros in absolute figures. Table 10 provides and overview of the CHE by service providers.

Table 10. **Health care expenditure by service providers, 2013**

	2013	
	thousand EUR	%
HOSPITALS	517 345	45,8
RESIDENTIAL LONG-TERM CARE FACILITIES	42 238	3,7
PROVIDERS OF AMBULATORY HEALTH CARE	227 832	20,2
PROVIDERS OF ANCILLARY SERVICES	29 291	2,6
RETAILERS AND OTHER PROVIDERS OF MEDICAL GOODS	255 462	22,6
PROVIDERS OF PREVENTIVE CARE	29 452	2,6
PROVIDERS OF HEALTH CARE SYSTEM ADMINISTRATION AND FINANCING	23 536	2,1
REST OF ECONOMY	2 530	0,2
NON-RESIDENT HEALTH CARE PROVIDERS	2 405	0,2
CURRENT HEALTH EXPENDITURE	**1 130 091**	**100**

Source: NIHD DHS

Retailers of medical goods constituted the second-largest expense group with 22.6%. The majority of expenditure through these institutions was made in purchasing prescribed and over-the-counter medicines. 20.2% of health care expenses in 2013 were paid to providers of ambulatory health care. The majority of expenditure in these institution was used for general medical and diagnostic services and dental care.

DATA SOURCES

The data sources used for health expenditure calculations are listed below. Depending on source, data was presented on standard forms or in a custom format.

1. Estonian Health Insurance Fund – expenditure on compulsory health insurance benefits.
2. Ministry of Finance – 2013 report on local government budget implementation.
3. Health expenditure of ministries: Ministry of Education and Research, Ministry of Justice, Ministry of Defence, Ministry of the Environment, Ministry of Culture, Ministry of Economic Affairs and Communications, Ministry of Agriculture, Ministry of Finance, Ministry of the Interior, and Ministry of Foreign Affairs.
4. Data on health expenditure from private insurance companies.
5. State Agency of Medicines – turnover of medicines on hospital and retail pharmacies.
6. Occupational health institutions – data on mandatory medical examinations of employees.
7. Database of the State Treasury – 2013 State Budget Execution Report is the source of data on the health expenditure incurred by the Ministry of Social Affairs.
8. Departments of the Ministry of Social Affairs:
    a. Finance and Property Management Department – specified data on medical treatment expenses of uninsured persons, foreign aid projects, foreign loans; projects financed through the ministry of Finance from gambling tax;
    b. Social Policy Information and Analysis Department – institutional reporting on social welfare.
9. National Institute for Health Development – health promotion projects and programmes, and statistical reports:
    a. Economic activities related to health care;
    b. Physicians' consultations and home visits;
    c. Day care;
    d. Treatment beds and hospitalisations.
10. Estonian Red Cross – expenditure on prevention and public health services.
11. Estonian eHealth Foundation – expenditure on promoting and developing e-solutions for the national health care system.

REFERENCES

1. Haiglavõrgu arengukava, Riigi Teataja. https://www.riigiteataja.ee/akt/830528?leiaKehtiv (05.11.2014)

2. Leibkondade tervishoiukulutused Eestis aastatel 2005–2008 kahe metoodika võrdluses, Aljona Karlõševa. http://www.tai.ee/images/PDF/Metoodika/Karloseva_Leibkondade_tervishoiukulutused_Eestis_2005_2008.pdf (03.11.2014)

Annexes

Annex 1. **Reference table on health care functions**

SHA2011		**SHA1.0**	
Code	**Description**	**Code**	**Description**
HC.1	CURATIVE CARE	HC.1	SERVICES OF CURATIVE CARE
HC.1.1	..Inpatient curative care	HC.1.1	Inpatient curative care
HC.1.2	..Day curative care	HC.1.2	Day cases of curative care
HC.1.3	..Outpatient curative care	HC.1.3	Outpatient curative care
HC.1.3.1	….General medical and diagnostic outpatient services	HC.1.3.1	Basic medical and diagnostic services
HC.1.3.2	….Dental curative outpatient care	HC.1.3.2	Outpatient dental care
HC.1.3.3	….Other specialised outpatient curative care	HC.1.3.3	All other specialised health care
		HC.1.3.9	All other outpatient curative care
HC.1.4	..Home-based curative care	HC.1.4	Curative home care
HC.2	REHABILITATIVE CARE	HC.2	REHABILITATIVE CARE
HC.2.1	..Inpatient rehabilitative care	HC.2.1	Inpatient rehabilitative care
HC.2.2	..Day rehabilitative care	HC.2.2	Day cases of rehabilitative care
HC.2.3	..Rehabilitative outpatient care	HC.2.3	Rehabilitative outpatient care
HC.2.4	..Home-based rehabilitative care	HC.2.4	Rehabilitative home care
HC.3	LONG-TERM CARE	HC.3	LONG TERM CARE
HC.3.1	..Inpatient long-term care	HC.3.1	Inpatient long-term care
HC.3.2	..Day long-term care	HC.3.2	Day cases of long-term care
HC.3.3	..Outpatient long-term care		
HC.3.4	..Home-based long-term care	HC.3.3	Long term care: home care
HC.4	ANCILLARY SERVICES	HC.4	ANCILLARY SERVICES TO HEALTH CARE
HC.4.1	..Laboratory services	HC.4.1	Clinical laboratory
HC.4.2	..Imaging services	HC.4.2	Diagnostic imaging
HC.4.3	..Patient transportation and emergency rescue	HC.4.3	Patient transport and emergency rescue
		HC.4.9	All other miscellaneous ancillary services
HC.5	OUTPATIENT MEDICAL GOODS	HC.5	MEDICAL GOODS DISPENSED TO OUTPATIENTS
HC.5.1	..Pharmaceuticals and other non-durable medical goods	HC.5.1	Pharmaceuticals and other medical non-durables
HC 5.1.1	....Prescribed medicines	HC.5.1.1	Prescribed medicines
HC 5.1.2	....Over-the-counter medicines	HC.5.1.2	Over-the-counter medicines
HC 5.1.3	....Other medical non-durable goods	HC.5.1.3	Other medical non-durables
HC.5.2	..Therapeutic appliances and other durable medical goods	HC.5.2	Therapeutic appliances and other medical durables
HC.5.2.1	....Glasses and other vision products	HC.5.2.1	Glasses and other vision products
HC.5.2.2	....Hearing aids	HC.5.2.3	Hearing aids
HC.5.2.3	....Orthopaedic and other appliances	HC.5.2.2	Orthopaedic and other appliances

HC.5.2.9	....All other medical durables	HC.5.2.4	Medico-technical devices, including wheelchairs
		HC.5.2.9	All other miscellaneous medical durables
HC.6	PREVENTIVE CARE	HC.6	PREVENTION AND PUBLIC HEALTH SERVICES
HC.6.1	..Information, education and counselling programmes	HC.6.9*	All other miscellaneous public health services
HC.6.2	..Immunisation programmes	HC.6.3*	Prevention of communicable diseases
HC.6.3	..Early disease detection programmes	HC.6.3*	Prevention of communicable diseases
		HC.6.4	Prevention of non-communicable diseases
HC.6.4	..Health condition monitoring programmes	HC.6.1	Maternal and child health; family planning and counselling
		HC.6.2	School health services
		HC.6.5	Occupational health care
HC.6.5	..Epidemiological surveillance and risk and disease control programmes	HC.6**	
HC.6.6	..Preparing for disaster and emergency response programmes	HC.6**	
HC.7	GOVERNANCE AND HEALTH SYSTEM ADMINISTRATION	HC.7	HEALTH ADMINISTRATION AND HEALTH INSURANCE
HC.7.1	..Health system administration	HC.7.1.1	General government administration of health (except social security)
HC.7.2	..Administration of health financing	HC.7.1.2	Administration of social security funds
		HC.7.2	Private insurance

* Part of the SHA.1.0 expenditure is included in the SHA2011 expenditure category.
** No subdivision in the SHA.1.0 classification

Source: NIHD DHS

Annex 2. **Reference table on health care providers**

SHA2011		**SHA1.0**	
Code	**Description**	**Code**	**Description**
HP.1	HOSPITALS	HP.1	HOSPITALS
HP.1.1.1	....Regional hospitals		
HP.1.1.2	....Central hospitals		
HP.1.1.3	....General hospitals		
HP.1.1.4	....Local hospitals		
HP.1.2	..Mental health hospitals	HP.1.2	Mental health and substance abuse hospitals
HP.1.3	..Other hospitals	HP.1.3	Specialty hospitals
HP.2	RESIDENTIAL LONG-TERM CARE FACILITIES	HP.2	NURSING AND OTHER RESIDENTIAL CARE FACILITIES
HP.2.1	..Long-term nursing care facilities	HP.2.1	Nursing care facilities
HP.2.2	..Mental health and substance abuse facilities	HP.2.2	Residential mental retardation, mental health and substance abuse facilities
HP.2.9	..Other nursing and residential care facilities	HP.2.3	Community care facilities
		HP.2.9	All other residential care facilities
HP.3	PROVIDERS OF AMBULATORY HEALTH CARE	HP.3	PROVIDERS OF AMBULATORY HEALTH CARE
HP.3.1	..Medical practices	HP.3.1	Offices of physicians
HP.3.2	..Dental practices	HP.3.2	Offices of dentists
HP.3.3	..Other health care practitioners	HP.3.3	Offices of other health practitioners
HP.3.4	..Ambulatory health care centres	HP.3.4	Outpatient care centres
HP.3.5	..Providers of home health care services	HP.3.6	Providers of home health care services
HP.4	PROVIDERS OF ANCILLARY SERVICES		
HP.4.1	..Providers of patient transportation and emergency rescue	HP.3.9.1	Ambulance services
HP.4.2	..Medical and diagnostic laboratories	HP.3.5	Medical and diagnostic laboratories
		HP.3.9.2	Blood and organ banks
HP.4.9	..Other providers of ancillary services	HP.3.9.9	Providers of all other ambulatory health care services
HP.5	RETAILERS AND OTHER PROVIDERS OF MEDICAL GOODS	HP.4	RETAIL SALE AND OTHER PROVIDERS OF MEDICAL GOODS
HP.5.1	..Pharmacies	HP.4.1	Dispensing chemists
HP.5.2	..Retail sellers and other suppliers of durable medical goods and medical appliances	HP.4.2	Retail sale and other suppliers of optical glasses and other vision products
		HP.4.3	Retail sale and other suppliers of hearing aids
		HP.4.4	Retail sale and other suppliers of medical appliances
HP.5.9	..All other miscellaneous sellers and other suppliers of medical goods	HP.4.9	All other miscellaneous sale and other suppliers of pharmaceuticals and medical goods

HP.6	PROVIDERS OF PREVENTIVE CARE	HP.5	PROVISION AND ADMINISTRATION OF PUBLIC HEALTH PROGRAMMES
HP.7	PROVIDERS OF HEALTH CARE SYSTEM ADMINISTRATION AND FINANCING	HP.6	GENERAL HEALTH ADMINISTRATION
HP.7.1	..Government health administration agencies	HP.6.1	Government administration of health
HP.7.2	..Estonian Health Insurance Fund	HP.6.2	Social security funds
HP.7.3	..Private insurance agencies	HP.6.4	Private insurance administration (except social security)
HP.7.9	..Other administration agencies		
HP.8	REST OF ECONOMY	HP.7	OTHER INDUSTRIES
HP.8.1	..Households as providers of home health care	HP.7.2	Private households as providers of home care
HP.8.2	..Other industries as secondary providers of health care	HP.7.1	Establishments as providers of occupational health care services
HP.8.9	..Other industries	HP.7.9	All other industries as secondary producers of health care (schools, Defence Forces, prisons)
HP.9	NON-RESIDENT HEALTH CARE PROVIDERS	HP.9	REST OF THE WORLD
		HP.10	INDIVIDUALS

Source: NIHD DHS

Annex 3. **Reference table of health financing schemes**

SHA2011		**SHA1.0**	
Code	**Description**	**Code**	**Description**
HF.1	PUBLIC SECTOR FINANCING SCHEMES	HF.1	Public sector
HF.1.1	..Public sector, excl. Estonian Health Insurance Fund	HF.1.1	Public sector, excl. Estonian Health Insurance Fund
HF.1.1.1	....Central government schemes	HF.1.1.1	Central government
HF.1.1.2	....Local government schemes	HF.1.1.3	Local government
HF.1.2.1	....Estonian Health Insurance Fund	HF.1.2	Estonian Health Insurance Fund
HF.2	VOLUNTARY HEALTH CARE PAYMENT SCHEMES		
HF.2.1.2	….Supplementary insurance schemes	HF.2.2	Private insurance enterprises (other than health insurance)
HF.2.2	..Financing schemes of non-profit institutions	HF.2.4	Non-profit institutions
HF.2.3	..Enterprise financing schemes (except supplementary insurance)	HF.2.5	Corporations (other than health insurance)
HF.3	HOUSEHOLD OUT-OF-POCKET PAYMENT	HF.2.3	Private households
HF.4	REST OF THE WORLD FINANCING SCHEMES	HF.3	REST OF THE WORLD

Source: NIHD DHS

Annex 4. **Comparison of two methodologies (SHA2011 and SHA.1.0)**

		HP.1	HP.1.1.1	HP.1.1.2	HP.1.1.3	HP.1.1.4	HP.1.2	HP.1.3	**HP.2**	HP.2.1	HP.2.2	HP.2.9	**HP.3**	HP.3.1	HP.3.2	HP.3.3	HP.3.4	HP.3.5	**HP.4**	HP.4.1	HP.4.2	HP.4.9
		HOSPITALS	….Regional hospitals	….Central hospitals	….General hospitals	….Local hospitals	..Mental health hospitals	..Other hospitals	**RESIDENTIAL LONG-TERM CARE FACILITIES**	..Long-term nursing care facilities	..Mental health and substance abuse facilities	..Other residential long-term care facilities	**PROVIDERS OF AMBULATORY HEALTH CARE**	..Medical practices	..Dental practices	..Other health care practitioners	..Ambulatory health care centres	..Providers of home health care services	**PROVIDERS OF ANCILLARY SERVICES**	rescue	..Medical and diagnostic laboratories	..Other providers of ancillary services
CURATIVE CARE	**HC.1**																					
..Inpatient curative care	HC.1.1																					
..Day curative care	HC.1.2																					
..Outpatient curative care	HC.1.3																					
….General medical and diagnostic outpatient services	HC.1.3.1																					
….Dental curative outpatient care	HC.1.3.2																					
….Other specialised outpatient curative care	HC.1.3.3																					
..Curative home care	HC.1.4																					
REHABILITATIVE CARE	**HC.2**																					
..Inpatient rehabilitative care	HC.2.1																					
..Day rehabilitative care	HC.2.2																					
..Rehabilitative outpatient care	HC.2.3																					
..Rehabilitative home care	HC.2.4																					

LONG-TERM CARE	**HC.3**																						
..Inpatient long-term care	HC.3.1																						
..Day long-term care	HC.3.2																						
..Outpatient long-term care	HC.3.3																						
..Home-based long-term care	HC.3.4																						
ANCILLARY SERVICES TO HEALTH CARE	**HC.4**																						
..Laboratory services	HC.4.1																						
..Diagnostic imaging	HC.4.2																						
..Patient transport and emergency rescue	HC.4.3																						

Source: NIHD DHS

Available in the new methodology	
Available in both methodologies	
Available in the old methodology	

Annex 5. **Differences between household expenditures according the new and the old methodology, mean difference for the period 2005-2011, thousand EUR, %**

SHA2011		**Absolute difference**	**Relative difference**
HC.1	CURATIVE CARE	**28 841**	**78,6%**
HC.1.1	..Inpatient curative care	**8 169**	**566,4%**
HC.1.2	..Day curative care	**1 316**	**...**
HC.1.3	..Outpatient curative care	**19 337**	**56,4%**
HC.1.3.1	….General medical and diagnostic outpatient services	**-1 754**	**-48,6%**
HC.1.3.2	….Dental curative outpatient care	**7 689**	**27,5%**
HC.1.3.3	….Other specialised outpatient curative care	**13 401**	**2853,3%**
HC.1.4	..Curative home care	**19**	**...**
HC.2	REHABILITATIVE CARE	**-6 294**	**-48,3%**
HC.2.1	..Inpatient rehabilitative care	**-11 926**	**-97,6%**
HC.2.2	..Day rehabilitative care	**0**	**...**
HC.2.3	..Rehabilitative outpatient care	**5 632**	**...**
HC.2.4	..Rehabilitative home care	**0**	**...**
HC.3	LONG-TERM CARE	**3 702**	**63,6%**
HC.3.1	..Inpatient long-term care	**3 702**	**63,6%**
HC.3.2	..Day long-term care	**0**	**...**
HC.3.3	..Outpatient long-term care	**0**	**0,0%**
HC.3.4	..Home-based long-term care	**0**	**...**
HC.4	ANCILLARY SERVICES TO HEALTH CARE	**-4 339**	**-97,5%**
HC.4.1	..Laboratory services	**-4 116**	**-97,4%**
HC.4.2	..Diagnostic imaging	**-222**	**-100,0%**
HC.4.3	..Patient transport and emergency rescue	**0**	**...**
HC.5	MEDICAL GOODS DISPENSED TO OUTPATIENTS	**1 762**	**33,0%**
HC.5.1	..Pharmaceuticals and other medical non-durables	**-4 017**	**31,8%**
HC 5.1.1	....Prescribed medicines	**-13 169**	**-20,0%**
HC 5.1.2	....Over-the-counter medicines	**8 378**	**28,1%**
HC 5.1.3	....Other medical non-durables	**774**	**78,4%**
HC.5.2	..Therapeutic appliances and other durable medical goods	**5 779**	**49,5%**
HC.5.2.1	....Glasses and other vision products	**3 666**	**64,0%**
HC.5.2.2	....Hearing aids	**-247**	**9,9%**
HC.5.2.3	....Orthopaedic and other appliances	**428**	**-50,4%**
HC.5.2.9	....All other miscellaneous medical durables	**1 932**	**116,8%**
	CURRENT HEALTH EXPENDITURE	**23 672**	**14,6%**

Source: NIHD DHS

Health and health care statistics:
Health statistics and health research database
http://www.tai.ee/tstua

Website of Health Statistics Department of National Institute for Health Development
http://www.tai.ee/tegevused/tervisestatistika

Dataquery to National Institute for Health Development
tai@tai.ee

Database of Statistics Estonia
http://www.stat.ee/

Statistics of European Union
http://ec.europa.eu/eurostat

European health for all database (HFA-DB)
http://data.euro.who.int/hfadb/

OECD's statistical databases (OECD.Stat)
http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT