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System of Health Accounts (SHA) as an Anchor for Accountability of Health Systems in the EU Member States

Potential for Linking Health Spending to the Treatment of Diseases

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Abstract

A System of Health Accounts (SHA), recently adopted by the European Commission as a statistical framework for reporting data and metadata on health care expenditure and financing have paved the path for systematic data collection in the field which is indispensable for ensuring transparency and accountability of health care system on the Member States' level and for adequacy of many health policy recommendations on the EU level. The purpose of this paper is therefore to present selected aspects of the informative and analytical power of the core and extended accounting framework of SHA in the context of health care system accountability with emphasis put on the role of the European Commission in straightening it among Member States. A special attention is paid to one of the SHA newly developed analytical interfaces i.e. the 'consumer health interface' which has potential to be used for conducting multidimensional analyses of health spending by patient characteristics, including diseases and health conditions.

Key words: **System of Health Accounts (SHA), health care systems, accountability, expenditure on treatment of diseases**

Słowa kluczowe: **System Rachunków Zdrowia, systemy ochrony zdrowia, rozliczalność, wydatki związane z leczeniem schorzeń**

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Introduction

The primary intent of each country's health care system is to promote, restore or maintain health of both individuals and population as whole. Thus providing an adequate level of health care depends critically on the incidence and prevalence of diseases, on social and other health determinants, as well as on resources available [1]. Over the last few decades, the way that health care is delivered, organized and financed has changed significantly. As a consequence contemporary health systems, particularly those of the UE Member States (EU MS) have become complex and adaptive systems [2–6].

Such complex and adaptive systems are in general difficult to describe, usually show high operational costs but above all are challenging to manage and to predict [2]. To meet these challenges first of all the health care system need to be accountable. Accountability in health care sector refers to the obligation that delivered health care services are safe, timely, effective, cost-conscious, and patient-centered, and the essence of accountability is answerability of health system to this obligation [7]. Thus in order to achieving health system accountability a key factor is the development of a comprehensive statistical framework for information and data collection, based on which the performance of health system could be measured and assess.

A System of Health Accounts (SHA), recently adopted by the European Commission as a statistical framework for reporting data and metadata on health care

expenditure and financing have paved the path for systematic data collection in the field which is indispensable for ensuring transparency and accountability of health care system on the level of Member States and for adequacy of many health policy recommendations both on the Member States and the EU level. This paper describes selected aspects of the informative and analytical power of the core and extended accounting framework of SHA that – if rigorously incorporated into the national statistical system – could be used as a data basis for measuring and assessing the performance of health care system with potential of further extension of data collections in the areas of concern for many specific health policy.

In accordance with the intended objective of this study, in the first section the notion of health system accountability has been introduced with emphasis put on the role of the European Commission (EC) in straightening it among Member States. In the following sections the SHA have been discussed in terms of the process of it development within the EU statistical system and of the application of it outputs for the purpose of describing and analysing the financial flows, their comparison across countries as well as for drawing recommendations for health and social policies. A special attention is paid to one of the SHA, newly developed, analytical interfaces i.e. the 'consumer health interface' output of which has potential – to be used for conducting multidimensional analyses of health spending by patient characteristics, including diseases and health conditions.

The notion of health system accountability and the role of the European Commission in straightening it among Member States

In the process of both managing health care systems and/or designing health care reforms 'accountability' has become a keyword [8]. The notion of accountability could be semantically interpreted as 'everything being taken into account' [9, p. 6]. Definition of accountability provided, for example by the Business Dictionary refers to 'the obligation of an individual or organization to account for its activities, accept responsibility for them, and to disclose the results in a transparent manner' [10]. Conveying this notion on the ground of complex systems such as health care systems, means not only the description of functioning the system itself, but also identification of responsibilities of the key stockholders, provision of information and data that are related to their activities, and availability of sanctions in case of abuse, failure to or exceeding powers by them [9, p. 7–8].

Since 90-ies the issue of health system accountability has been used either to study different aspects of relations and of specific activity in health care sector, including professional accountability [11–12], the relations between institutions and medical practitioners [11, 13], the role of the state in health care [14], the ethical implications of health market [15], the quality of managed care [16], or to analyse the functioning of the whole health care system [7, 9, 17, 18]. With respect to the latter, for example Ezekiel and Linda Emanuel have defined accountability in terms of entailing responsibility of involved parties through both the formal and informal procedures [17]. The authors specified three major components of so defined accountability i.e. *the loci of accountability* – within which they singled out 11 parties that can be held accountable; *the domains of accountability*, under which they included professional competence, legal and ethical conduct, financial performance, adequacy of access, public health promotion, and community benefits; and *the procedures of accountability*, that includes procedures for evaluating compliance with domains and for disseminating the evaluation and responses by the involved parties.

A similar approach was taken by Derick Brinkerhoff who has defined the notion of accountability in terms of answerability and sanctions [7]. The answerability, has been seen by the author as an 'obligation to answer questions regarding decisions and/or actions', hence the emphasis goes to the provision of reliable information and data in order to be able to answer the questions: 'what was done/spent and why?'. Following this approach, the author has proposed three dimensions for examining health care systems accountability: *financial* – that concerns the process of monitoring and reporting on allocation, disbursement, and utilization of financial resources to be evaluated by using the tools of auditing, budgeting, and accounting; *performance* – with focus on health activities in relation to inputs, outputs, and outcomes being subjects of various types of analysis and evaluation; and *political/democratic* – with reference to 'the institutions, procedures, and mechanisms that check on the government against electoral promises, ensures the public trust, responds to societal needs and represents citizens interests'. With respect to the sanctions Brinkerhoff has referred to both the formal 'requirements and penalties covered by law or regulations' such as professional codes of conduct and informal ones such as 'public exposure or negative publicity' [7, pp. 5–7].

In contrast to the above mentioned studies, the majority of which is descriptive and concerning the specific relations in the US health market, a comparative analysis of health care systems' accountability for the European countries has been lately undertaken by the WHO Regional Office For Europe in collaboration with its Member States [18]. As publicly financed services in these countries constitute the major part of delivered services, the notion of accountability has been defined as a 'spectrum of approaches, mechanisms and practices used by the stakeholders concerned with public services to ensure a desired level and type of performance'. The main analytical axis of this study was focusing on three aspects related to strengthening the accountability of health systems i.e. 1) *setting overarching outcomes*, 2) *performance measuring through comprehensive sets of indicators* and 3) *systematic reviewing health systems performance*. All these aspects were under project surveillance during the five years period from 2008 until 2012.

The results show that the majority of countries defines health system outcomes usually within a national health strategy (NHSP) or other types of target programmes; that

out of 53 countries 32 make use of system performance indicators; and that only 18 countries carry out a systematic review of health systems performance. The study also reveals the existence of considerable differences in the ways of monitoring health system performance among countries. These differences were noticeable in 'variation in depth and breadth across the indicators used by countries' as well as in the reasoning that lays behind their use. According to the report the number of overarching indicators was varied from 26 up to 1000 with average of 100 indicators and their choice in some countries was determined by the 'process of health system reform while in others, they were used on regularly basis or in the context of national strategies or designed programmes'. What is worth to mention is that among 53 Members States of the WHO European Region, the EU Member States were the group of countries with more homogeneous results.

This can be explained by the fact that the process of health systems monitoring and assessment in EU MS has been already addressed by the European Commission for more than one decade[1]. Although in institutional and legal aspects, full responsibility for the organization of national health care systems, "the management of health services and medical care and the allocation of the resources assigned to them"[2] lies with the Member States, the European Union within its respective competences may act in the area of health care in accordance with the principle of subsidiarity and proportionality[3]. This happens in a situation where joint actions can prove more effective or where it is necessary to manage issues having a cross-border dimension, for example, those related to patients' rights[4] or health threats caused by pandemics or bioterrorism.

With regard to the functioning of health systems, the European Commission, in close cooperation with Member States, takes initiatives to straighten the transparency and accountability of their health systems and to promote and coordinate health policies between countries. The effects include among others strategies developed by the Commission in the field of health care and EU health programmes. They are aimed at the establishment of guidelines and indicators, the organisation of exchange of best practice, and the preparation of the necessary elements for periodic monitoring and assessments of health systems performance in Member States[5].

In this context, it is worth noticing the proposed objectives in the area of the EU health policy coordination under the currently implemented strategy "Investing in Health"[6] for 2014–2020 targeted at ensuring the effectiveness and financial sustainability of the European health systems These objectives stem directly from problems associated with the economic recession[7], demographic structural changes and shifting epidemiological disease patterns across the population. The strategy focuses, among others, on the need to support the development of information systems and analytical tools designed to evaluate the performance of health systems. In particular, it provides for measures to strengthen the transparency and accountability of health systems in the EU Member States by monitoring the amounts and structure of the health care expenditure in the context of health outcomes, measured by improvement in the population health indicators. Operationalization of the objectives set forth within the strategy is supported among others by the EU health programmes, under which the European Commission identifies specific actions, actors and institutions concerned, and also secures the funds necessary for their implementation.

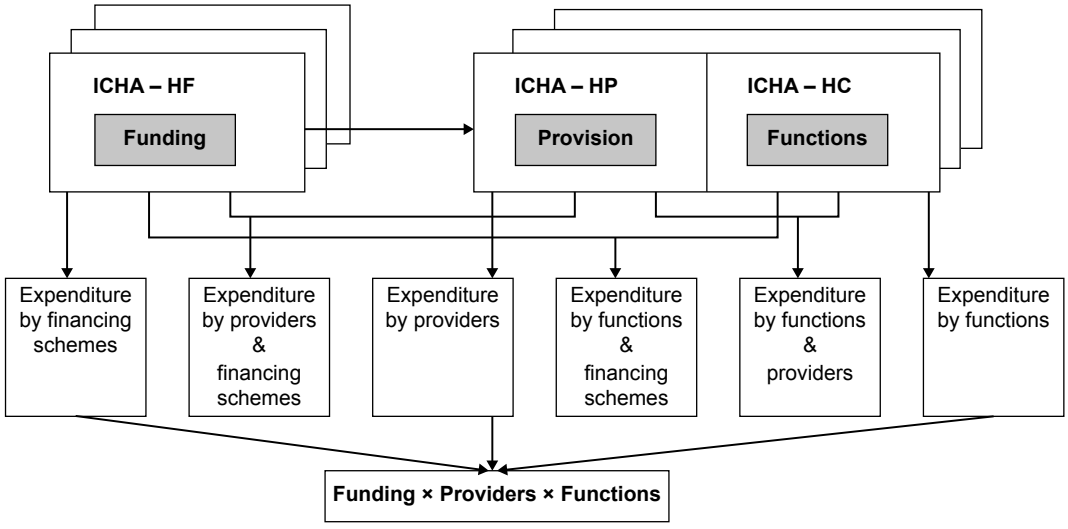
The effects of the Commission's commitment to the development of statistical information systems in health care can be traced by analysing the use of the EU's statistical programme[8] for development and update of the European databases[9] or by tracking the process of drawing up legislation in the field of European statistics[10]. Other activities of the Commission in this area include: organizing platform for coordination of best practice and exchange of experience between the Member States[11], arranging and financing of meetings and expert panels, publication of reports[12] and methodological materials [23] as well as cooperation with other international organizations for development of statistical systems and harmonization of data collections. One of the examples and at the same time a tangible result of these measures taken by the Commission for the development of statistical information systems in the field of health is the System of Health Accounts (SHA).

The development of the SHA accounting framework in the EU statistical system

Works on the concept of an integrated system of accounts in the health sector began in the second half of the 1990s on the initiative of the OECD in collaboration with EUROSTAT[13]. The works resulted in the OECD's publication of the first version of the System of Health Accounts (SHA 1.0)[14] in 2000. In 2002, the European Parliament, within the programme of Community action in the field of public health[15], set – as one of the three objectives of Community action – the need to improve information and knowledge for the development of public health, including the development of databases and information transmission system, which should facilitate the evaluation and presentation of facts on the public health, health policy results, measures taken within the organization and financing of health services as well as the effects of reforms and projects implemented in the field of health care. As a result of these actions, EUROSTAT recommended the implementation of the SHA in the Member States of the European Union, whereas the Community health programme provided for the funds to implement a range of projects supporting further development of the methodologies and implementation of the system within the national statistical frameworks[16]. In connection therewith, by 2005, projects or works on implementing the System of Health Accounts in the national statistical systems were under way in most EU Member States.

The next step was the agreement on the coordination of joint health accounts data collection based on SHA 1.0[17] signed by EUROSTAT, OECD and WHO in 2006. It should be emphasized that the EU Member States worked on the implementation of the SHA in the national

Figure 1. *The flow of information under the SHA core accounting framework*



Source: A SHA (2000), p. 24, adopted by the author to the revised version of SHA (2011) [23].

statistical systems and transmitted the data to Eurostat under the so-called gentlemen's agreement adopted in the framework of the Eurostat's Working Group of Public Health Statistics[18]. In practice this meant that the conceptual work, data and information acquisition as well as cooperation with numerous centres and entities managing this information at the national level depended heavily on the determination of people directly involved in the creation of this system at the national level. The tangible result of this work was the fact that in 2015 a total of 39 OECD and EU member states, including the 26 EU Member States[19, 20], were transmitting the data in accordance with the SHA protocol to these organizations.

In 2007 started the formal process of the SHA revision as a cooperative activity of the three organisations (Eurostat, OECD, WHO) and their Member States resulting in publishing the new version of the SHA manual in November 2011 [23]. The various drafts of the manual has been the subject of intensive and wide-reaching consultation process which involved national experts, institutions and organisations from all around the world. The work on revised version of SHA has become an opportunity to extend the core accounts for additional accounting interfaces under which, among other, the financial flows can be link with non-financial data and indicators. In developing the revised manual great importance has been given to policy relevance, feasibility, and sustainability [23, p. 20].

In march 2015, after three years process of preparatory work, the Commission Regulation as regards statistics on healthcare expenditure and financing[21] has entered into force. It paved the path for a number of Member States to formalize this collaboration, which for some of them meant that works on the annually developed national health accounts have been entered into plans and task budgets of the institutions coordinating the statistics in this field. According to the adopted regulation, starting from 2016, the EU Member States are required to transmit the data following the new SHA methodology (2011 Edition) [23] at the level of aggregation specified in the Annex to the Regulation[22]. A reference year shall be 2014, which means that the data transmitted under this Regulation should be available by the end of 2016.

SHA core accounting framework – tracking trends in health spending [25]

System of Health Accounts (SHA), as an international statistical reporting system, offers methodologies for creating a 'family' of interconnected standard tables designed to ensure an organized description of financial flows associated with the consumption of goods and services in the field of health (core account) and additional tables combing financial flows with non-financial data and indicators of the resources used as well as the measures of health care outputs (extended account). The added value of SHA stems, among others, from the fact that it is based on functionally defined boundary of the health sector, and refers to the common criteria, definitions, classifications and reporting rules. These features result in more consistent over time and more comparable across countries data collections thus enable for tracking trends in health care spending.

The core account is organised based on a three-dimensional system allowing to classify the expenditures on health care by[23]: function (ICHA-HC), providers (ICHA-HP) and financing schemes (ICHA-HF) of health services (**Figure 1**).

The compilation of data according to the foregoing three core classifications of SHA allows to answer three basic, however of great importance questions for the transparency of financials flows in health care sector and for responsiveness to it of health policy:

- what kinds of health care goods and services are consumed? (functional perspective);
- which health care providers deliver these goods and services? (providers) and
- which financing scheme pays for these goods and services? (funding).

As a result, any final, health care goods or services provided to consumers can be described in one, two, or simultaneously three dimensions, according to the approach that the value of consumed health care goods and services corresponds to the value of these provided, and thus the amount of the expenditures incurred in this respect.

The versatility of the functional approach stems from the fact that expenditures on health care goods and services are classified by defined functions i.e. forms of activity relating to the implementation of specific tasks of the health care system[24], thus regardless of the country organization and financing of health services. This approach is of particular importance for analysis of health expenditure and their cross-country comparisons, since it involves delineation of the boundaries of the health care sector common to all the countries, and thus an objectively unified scope of statistical reporting.

The spending on health care goods and services classified according to this approach[25] can be analysed from the perspective of the goods and services consumed individually (e.g. diseases treatment, rehabilitation services, long-term nursing care, ancillary services associated with e.g. diagnostics, pharmaceuticals and other medical goods provided on an outpatient basis) and those consumed collectively (public health programmes and the administrative and governance tasks performed in the health care system as a whole). The goods and services consumed individually may involve a further breakdown of expenditure, taking into account the mode of their production and use (inpatient care, day care, outpatient care and care provided at patient's home). Such a breakdown reflects the fundamental differences between the countries health systems, resulting from the technical and organizational aspects of healthcare provision, solutions used in the health care management and assessment of their effectiveness.

The functional classification recognizes additional a number of the so-called 'health care-related functions' and 'memorandum items'[26]. Information on long-term social care expenditures (including cash and in-kind benefits) and the long-term health care expenditures allow to monitor the financial burdens on the health care system in connection with the aging populations. It is of fundamental significance for actions aimed at ensuring the cohesion and stability of health and social security systems in the long term. Information on expenditure on food control, hygiene and drinking water as well as on environmental health allow to expand the research area with additional (other than health care related) determinants of public health. On the other hand, information on expenditures related to the education and training of medical personnel or health care research and development can provide a starting point for the analysis aimed to evaluate the investment in human capital or development of innovation in the health care sector.

The exhaustiveness of expenditure classification by providers[27] of health care goods and services is manifested by the fact that it includes both the national entities, institutions and individuals, for which the provision of health goods and services is primary activity (e.g. hospitals, individual medical practices, diagnostic laboratories, pharmacies etc.) as well as those for which the provision of such goods and services are secondary or one of many others activities pursued (e.g. correctional facilities, companies providing occupational medicine services to their employees, or households, which provide care to their family members). The category of 'foreign providers' includes the expenditure on goods and services acquired by residents of a given country abroad. In general expenditures classified by providers of health care goods and services reflect the organizational structure for provision of health care services, typical for a given country. Thus, the analyses carried out using this approach are useful primarily for the assessment of the economic performance of the activities pursued, by selected groups of providers within a country or, for example, in one of it regions.

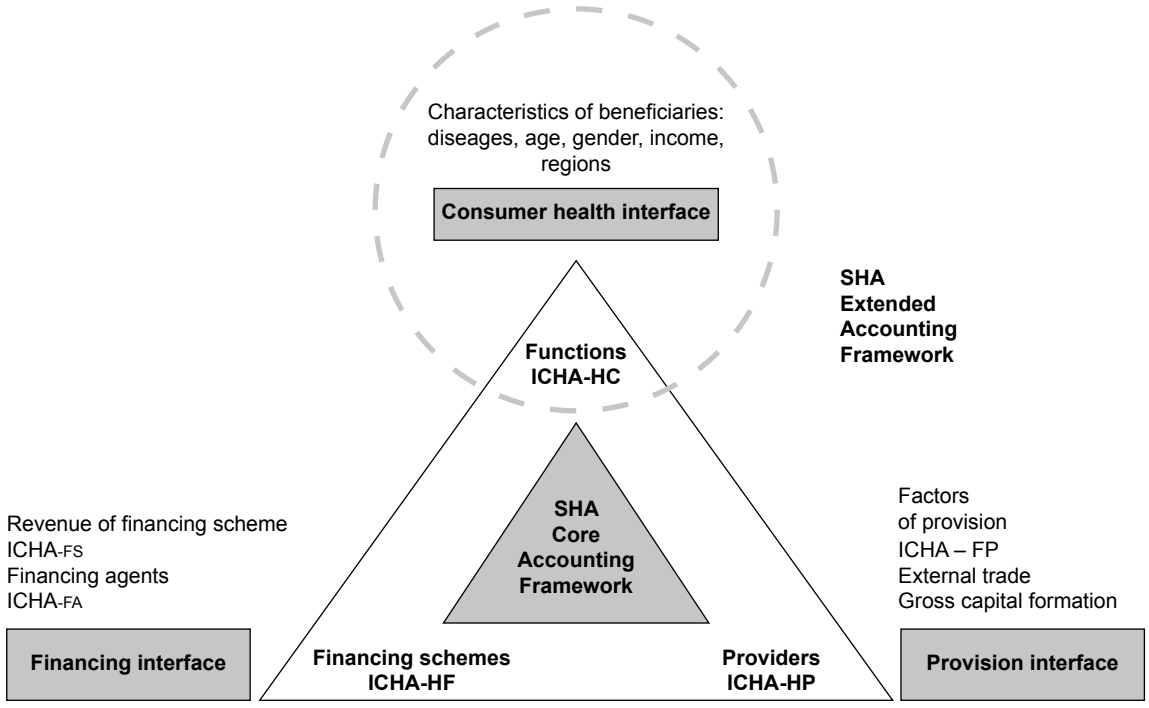
On the other hand, pragmatism in classification of health care financing[28], results for the possibility to recognize expenditures by categories relating to the institutional sectors of the economy, defined under the System of National Accounts (SNA) and by categories of financing schemes, relating to the concept of social security funds, as defined in the framework of the European System of Integrated Social Protection Statistics (ESSPROS). This solution enables compatibility between SHA classifications with other statistical system classifications. The additional classification of revenues[29] of health care financing schemes (e.g. social security contributions, transfers from abroad, or government transfers, co-payments by households, employers etc.) allows to obtain the information on the volume and structure of revenues, the manner of their collection and their flows between institutional sectors of the economy. In this way, SHA allows for the analysis of financial flows in each country, regardless of the health care financing solutions adopted within the framework of a given system.

SHA extended accounting framework – linking expenditure to treatment of disease

The three basic approaches for classification of health care expenditures presented above may serve as a starting point for the in-depth multidimensional analysis, using additional non-financial data and information (**Figure 2**), respectively, from the perspective of *providers* (providers of health goods and services), *payers* (institutions, organizations and individuals financing health services), and *consumers* (i.e. beneficiaries of health services),

The production interface delves into the cost structures of health care provision and provide a separate treatment of capital account and of external trade account, while the financing interface allows for systematic assessment of how finances are mobilize, manage and used, including the financing arrangements, the institu-

Figure 2. *SHA core and extended accounting framework*



Source: OECD, EUROSTAT, WHO, A System of Health Accounts. 2011 Edition, OECD Publishing, 2011: 55 [23] (modified by the author).

tional units and the revenue raising mechanism. On the other side the consumer health interface enables to explore the breakdown of health expenditure by beneficiary characteristics [23, p. 21]. An example of such a multidimensional analysis performed from the perspective of a consumer of health care goods and services, may be the linking of the three basic classifications of health care expenditures with the data on the use of health services by the entire population or specific groups of beneficiaries[30] broken down by e.g. age, gender, place of residence, household income or a group of diseases. Such analyses allow for obtaining the information on: who (according to selected characteristics) is the "beneficiary" of health care services and goods, who pays for them, what are those goods and services and who provides them.

These analyses are vital not only from the point of view of health policy, but also policies aimed at implementing the criterion of social justice adopted in each Member States (analyses of affordability)[31] and ensuring territorial cohesion and sustainable development (analysis of spatial accessibility and affordability of services)[32] at the Community level. Similarly, the use of the information on the place of residence with a breakdown into residents and non-residents makes it possible to monitor the volume and direction of patient mobility and the scale of transactions with foreign countries (exports and imports of goods and services)[33], which is of particular importance in the context of the EU Directive on patients' rights in cross-border healthcare[34].

The demographic situation of the population and the associated health condition of the population, determine significantly the shape of the demand for health care services. This requires adjustment on the supply side, through necessary adaptations in the way the health care goods and services are organized or delivered in different types of health care facilities including stationary (hospitals, long-term care) and ambulatory care facilities, or nursing homes [28]. The fact that the demand for health services varies depending on the age and gender has also its consequences for the allocation of financing means within the health care sector. Results of analyses conducted in this direction are often used as corrective factors for allocation formulae designed for the needs of various types of compensation mechanisms between regions of a country in connection with the demographic diversity of these regions. The process of population aging and the related increase in the burden on the public sector is another example of the problems, which in recent years have become an area of concern of socio-economic policy, both at the level of individual Member States and the entire European Union. In this context, information on health care expenditures broken down by age and gender can be used in projection developed, among others, for the purpose of estimating short-term and long-term trends in these expenditures as well as the total public spending.

Classification of expenditure on health care goods and services broken down by specific groups of diseases (according to ICD)[35] as the reason for use of health care services provides information that can be used to develop strategies in the field of health priorities, planned interventions or programmes for prevention of epidemics,

that focused to eliminate such problems. This analysis can be further extended into direction of the so called Cost-of-Illness studies (COI) by estimating the total costs (direct, indirect and intangible costs) of diseases or specific health conditions, output of which provide information on the actual burden caused thereby not only for the sick person, the family, or health care budgets, but also for the whole economy. At the macroeconomic level, the important information is which of groups of diseases exert the major impact – in terms of lost opportunities and resources – on the GDP, or social welfare level.

The analysis of the fund allocations by payers (sources of funding) and by disease groups, allows to address the question: *Who finances the benefits aimed to reduce the occurrence of specific health problems?* At the health sector level, this information includes, for example, the knowledge on the diseases which consume the most resources (financial, human and capital), or which impose burden on the state budget. It could be also used, by the insurance funds to estimate the insurance risks, by the Ministry of Health to determine the pool of medical services financed by public funds, or for example to introduce or vary/differentiate charges for patients using specific health care services. In turn, an analysis of the allocation of expenditure by providers of health care goods and services with a breakdown into disease groups provides the information about *who provides these services* and thus gives an answer which of provider universe bears the highest costs of treating these diseases. As a results this information can be used for decision-making regarding the conditions for reimbursement of benefits depending on the volume of medical costs incurred by certain groups of providers (e.g. hospitals vs. outpatient practices).

The evaluation of economically reasonable and efficient allocation of resources[36] to the selected types of health interventions or programmes (by functions or by group of diseases) can be achieved by comparing the financial input (by factors of provision)[37] and the output (e.g. number of hospital discharges, outpatient consultations and diagnostic tests) with a breakdown by individual providers of health care goods and services. Additionally, the linking of financial data with information on the number of specific type of services provided can be used to estimate the average unit costs for groups of services necessary for treatment of diseases, which in turn can be used to determine the price indices[38] in the health care sector. Furthermore measuring and monitoring of changes in the health care expenditures classified by selected characteristics of the beneficiaries (age, gender, disease) and their subsequent correlation with changes in the health status of the population, using indicators such as life expectancy, healthy life years (HLY) and quality-adjusted life years (QALY), provides the information on the expenditures incurred and the health outcome achieved. This knowledge is essential and should be the starting point for properly implemented health policy, introduced reforms and opinions formulated about the effectiveness of the health care system functioning[39].

Conclusion

The complexity of health care system results among others from a large number of entities involved in health care activities, a high degree of interrelatedness between various system components and the uniqueness of those relations many of which generate a high level of uncertainty regarding health care outcomes. As demonstrated, the SHA accounting framework due to the tri-axial approach to health care expenditure has capacity which allow countries, regardless of their organisation and financing of health care service, to trace the financial flows between these interrelated parties and interconnected components of health system.

The adaptive nature of health system stems from the necessity of adjusting the various system components to the changing environment, both inside and outside the health care sector, and associated challenges such as: aging population, changes in epidemiological risk profiles, development of advanced medical technology, growing expectations of health care beneficiaries, or economic downturn, to name a few. Therefore by expanding the SHA core accounting framework into three analytical interfaces countries would be able, depending on setting health outcomes, to focus their attention on specific areas of health and social policy interest.

To put in nutshell: A System of Health Accounts (SHA), holds the features which – if rigorously introduced under the national statistical system – could provide access to reliable, timely, and consistent (internally and over the time) health data, at the same time compatible with other aggregated economic and social statistical systems. Last but not least data collected under SHA framework can be comparable across countries. Therefore the SHA output has potential to become an important data and information dimension to be used by EU Member States for monitoring their health care sector's sustainability and by EU Commission Services for designing, inter alia, the comprehensive set of health care indicators and drawing recommendation for health policy.

Notes

[1] The concept of health systems monitoring and assessment was introduced in 2006 as part of the open method of coordination (OMC). The OMC is a method of soft governance towards EU goals through exchange of best practice among Member States, including specific benchmarks and indicators, in those policy areas which fall under the partial or full competence of Member States. (see: [EC communication on: *Working together, working better: A new framework for the open coordination of social protection and inclusion policies in the European Union*, COM (2005) 706 final] [19].

[2] See Article 168 of the consolidated version of the Treaty on the Functioning of the European Union, OJ C 326, 12/10/12 p. 47 (hereinafter: the TFEU) [20].

[3] See Article 5 of the consolidated version of the Treaty on the European Union, OJ C 326, 26/10/2012 p. 13 [20].

[4] See Directive 2011/24/EU of the European Parliament and of the Council of 9 march 2011 on the application of patients' rights in cross-border healthcare, OJ L 88, 4.4.2011 [21].

[5] See Article 168 of the TFEU [20].

[6] Investing in Health in Social Investment Package, the Commission Staff Working Document, SWD (2013) 43 final, 02.20.2013 [22].

[7] With respect to the financial crisis, the European Union has taken a number of additional measures relating to a widely understood economic governance, which have either directly or indirectly affected the functioning of health systems in the Member States. They include short-term measures aimed at stabilizing the economic situation and helping those Member States that are most deeply mired in crisis as well as long-term measures designed to reinforce the monitoring and coordination of economic policies of the Member States. Examples of the former are the economic adjustment programmes for Greece, Ireland, Portugal and Cyprus, which provide for savings and corrective actions in various areas of economic and social activities, including the health sector. An example of the latter is the procedure of the European Semester, which serves to reinforce the area of public finances in Member States and to support national projects covered by the objectives of the "Europe 2020" strategy.

[8] Five-year and two-year programmes are developed using the European Statistical System (ESS) i.e. a partnership between the Community statistical authority (EUROSTAT), the national statistical institutes (NSIs) and other national authorities responsible in each Member State for the development, production and dissemination of European statistics. This Partnership also includes the EEA and EFTA countries. The role of EUROSTAT in the ESS is to initiate and coordinate the work aimed at the harmonization of European statistics.

[9] See EUROSTAT database http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database; See European health indicators: HEIDI Data Tools http://ec.europa.eu/health/indicators/indicators/index_en.htm; accessed: 17.03.2016.

[10] Regulation (EC) No 1338/2008 of the European Parliament and of the Council of 16 December 2008 on Community statistics on public health and health and safety at work, OJ L 354, 31.12.2008.

[11] See the Commission Communication "A renewed commitment to social Europe: Reinforcing the Open Method of Coordination for Social Protection and Social Inclusion", COM (2008) 418 final, Brussels, 2.7.2008.

[12] European Commission, Joint Report on Health Systems, Occasional paper 74 / December 2010 (source: http://europa.eu/epc/pdf/joint_healthcare_report_en.pdf; accessed: 25.09.2016).

[13] For the purpose of this cooperation, Eurostat set up Task Force on Health Care Statistics, the aim of which was to discuss and comment various draft versions of SHA which were produced between 1998–2000.

[14] OECD (2000) A system of Heath Accounts (version 1.0) OECD Publishing (hereinafter: SHA 1.0) [24].

[15] Decision No 1786/2002/EC of the European Parliament and of the Council of 23 September 2002 adopting a programme of Community action in the field of public health (2003–2008), OJ L 271, 09.10.2002.

[16] See, for example SHA Practical guidance for implementing A System of Health Accounts in the EU, Eurostat/UK ONS, 2003; SHA – Results of Health Account Data in Europe, Eurostat/BASYS- Germany 2004; Multi-Beneficiary Programme for Statistical Co-Operation with the Phare Countries Eurostat/ICON-Germany, 2004–2006.

[17] This agreement provided, among others, for preparing a joint EU-OECD list of SHA national respondents. Starting from December 2005, EUROSTAT and OECD send a joint SHA questionnaire, verify the data received and share the databases developed on the basis thereof in accordance with individual schedules of each of these institutions.

[18] The Eurostat Working Group on "Public Health Statistics".

[19] In Poland, the works on the pilot system of health accounts lead were conducted in 2001–2002 at the request of the Office of Foreign Aid Programmes in Health Care (see Schneider M., Kawiorska D. et al., *System of Health Accounts in Poland*, Office of Foreign Aid Programmes in Health Care, Warsaw, March 2002: 1–194) and since 2004, the work on health accounts have been managed by the Central Statistical Office within the framework of the Programme of Public Statistical Surveys (see CSO, National Health Accounts for 2010).

[20] The countries, where the preparatory works are still pending include Ireland and Italy.

[21] Commission Regulation (EU) 2015/359 of 4 March 2015 implementing Regulation (EC) No 1338/2008 of the European Parliament and of the Council as regards statistics on healthcare expenditure and financing (see OJ L 62/6).

[22] This Annex provides the basis for the detailed questionnaire and the accompanying guidelines used in the joint annual collection and transmission of data from Member States by Eurostat.

[23] As defined in the International Classification of Heath Accounts (ICHA), developed for the purpose of the revised System of Health Accounts (SHA 2011) [23].

[24] The tasks performed through the application of medical, paramedical and nursing knowledge and technologies include: health promotion and prevention; diagnosis, treatment, cure and rehabilitation of illness; caring for persons affected by chronic illness; caring for persons with health-related impairment and disability; palliative care; providing community health programmes; governance and administration of the health system (for more see: SHA (2011): 52–69 and 72–117) [23].

[25] For more see: SHA (1.0): 111–128, and SHA (2011): 71–120 [23].

[26] It refers to the activities beyond the functionally defined boundaries of the health care sector.

[27] For more see: SHA (1.0): 135–148 and SHA (2011): 121–153 [23].

[28] For more see: SHA (1.0): 151–156 and SHA (2011): 153–194 [23].

[29] See SHA (2011): 196–210 [23].

[30] For more see SHA (2011): 196–246 [23].

[31] The affordability, analysed on the macro-economic level, remains in close connection with the procedures for awarding the rights to use the health services, while on the micro-economic level it is described as the patient's ability to bear the costs associated with the use of health care. See Włodarczyk C.W., *Polityka zdrowotna w społeczeństwie demokratycznym,* Uniwersyteckie Wydawnictwo Medyczne „Vesalius", Kraków 1996: 302 [26].

[32] The spatial accessibility is identified as the relationship between the distribution of health care infrastructure and human resources and the distribution of the population reporting the health needs. In turn, the availability of services is defined as the relationship between the scope and types of existing benefits and the scope and types of consumer needs, or possibly

as the adequacy of supply to the needs on the market for medical services (Kisiała W., *Organizacja przestrzenna a zmiany dostępności oddziałów ratunkowych w Polsce*, University of Economics, Scientific Papers, Poznań 2012 [27].

[33] For more see SHA (2011): 223–270 [23].

[34] See Directive 2011/24/EU of the European Parliament and of the Council of 9 march 2011 on the application of patients' rights in cross-border healthcare, OJ L 88, 4.4.2011.

[35] *International Statistical Classification of Diseases and Related Health Problems. – 10th Revision*, edition 2010, WHO, 2011 [29].

[36] In formulating health care priorities at the microeconomic level, one can use e.g. cost-benefit analysis, under which the costs of alternative programmes are compared with the benefits deriving from their implementation.

[37] For more see: SHA (2011): 211–224 [23].

[38] For more see: SHA (2011): 301–318 [23].

[39] Given the special nature of the health care goods and services, the output, meaning the effect (where measuring the effectiveness), shall be deemed to be the result of treatment understood as a change in health status measured e.g. as the life expectancy, or using synthetic indicators e.g. healthy life years (HLY), or quality-adjusted life years (QALY), while the output in terms of service/product (where measuring the efficacy) shall be deemed to be the service provided e.g. number of hospital discharges or dental visits.

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