

Healthcare expenditure statistics - methodology

Statistics Explained

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This background article explains [healthcare](#) expenditure statistics, a [data set](#) concerning expenditure and financing of health care goods and services in the [European Union \(EU\)](#) .

The article provides information on the main features of this data collection, its historical development and current legal basis, some main methodological features, information concerning data quality and finally an overview of the uses of the statistics that come from this data collection.

This article is one of a set of online background articles concerning the [methodology](#) for the production of health statistics in the EU and accompanies a number of statistical articles which make up an online publication on [health statistics](#) .

Main features

Statistical objectives

Health accounts are increasingly expected to provide inputs (along with other statistical information) into improved analytical tools to monitor and assess health system performance. One high priority is to develop reliable, timely data that is comparable both across countries and over time. This is indispensable for tracking trends in health spending and the factors driving it, which can in turn be used to compare it across countries and to project how it will grow in the future.

Health accounts are thus used in two main ways: internationally, where the emphasis is on a selection of internationally comparable expenditure data, and nationally, with more detailed analyses of health care spending and a greater emphasis on comparisons over time. Health accounts are crucial for both of these.

The system of health accounts (SHA) 2011 methodology reflects a desire to make health accounts more adaptable to rapidly evolving health systems around the world by further enhancing the cross-country comparability of health expenditure and financing data and thereby increasing the information base for its analytical use. Moreover, it is hoped that the SHA 2011 will be more useful as a tool in the assessment and monitoring of health systems and in the analysis of the importance of health expenditures from a consumption perspective in the economy as a whole.

SHA 2011 is intended to constitute a system of comprehensive, internally consistent and internationally comparable accounts, which should be compatible with other aggregate economic and social statistics as far as possible. Overall, SHA 2011 has sought to adopt, wherever appropriate, definitions and concepts from existing statistical systems that have been approved and defined under the auspices of the United Nations and other international and regional organisations.

Being internally consistent makes it possible to use identities and accounting rules for cross-checking the validity of estimates derived along the different dimensions of the SHA and to identify gaps and deficiencies in current reporting systems and health accounts, thereby indicating priorities for the continued improvement of the data quality.

SHA 2011 provides a standard for classifying health expenditures according to the three axes of consumption, provision and financing. It gives guidance and methodological support in compiling health accounts.

More specifically, the purposes of the SHA 2011 are:

- to provide a framework of the main aggregates relevant to international comparisons of health expenditures and health systems analysis;
- to provide a tool, expandable by individual countries, which can produce useful data in the monitoring and analysis of the health system;
- to define internationally harmonised boundaries of health care for tracking expenditure on consumption.

In order to pursue these purposes, SHA 2011 provides the basis for collecting, cataloguing and estimating all the monetary flows related to health care expenditure.

Scope of the data

Achieving consensus on a common boundary of health care activities is crucial for the complex task of international comparisons. In pursuing this objective, SHA refers to a functional approach based on selected health care activities that can be captured by transactions. Transactions are valued activities that take place between different actors or organisations. The transactions recorded in the SHA framework relate to health care goods and services provided and consumed to improve the health status of individuals and of the population as a whole.

It has to be emphasised that health itself is a condition, and is therefore not exchangeable, in contrast to health care. Health has value in use and not in exchange. Therefore, in health accounts, it is the demand, supply and distribution of health care goods and services, rather than health itself, that define the transactions measured.

Coverage

The functional classification of health care (ICHA-HC) delineates the boundaries of health care activities from an international perspective. Following the concept underlying the design of the ICHA-HC classification, the boundary contains all activities with the primary purpose of improving, maintaining and preventing the deterioration of the health status of persons and mitigating the consequences of ill-health through the application of qualified health knowledge (medical, paramedical and nursing knowledge, including technology, and traditional, complementary and alternative medicine (TCAM)).

Current expenditure on healthcare covers the final consumption expenditure of resident units on healthcare goods and services, including the healthcare goods and services provided directly to individual persons as well as collective healthcare services.

The current health care expenditure account of SHA focuses on final consumption and not on intermediate consumption of services and goods. In other words, SHA does not aim to account for health care goods and services provided as intermediate output to other providers. An aspect to be considered in the consumption of health care is the non-observed economy, in other words unrecorded, illegal or informal activities that are not always captured or reported in regular statistical sources.

SHA refers to valued transactions, in other words transactions under which payments are made to providers in exchange for health care goods and services received by consumers. In other words, the flow of health care goods and services is accompanied by a flow of financial or other means.

In this context, the health care boundary drawn in SHA includes personal home health services provided within households by family members, in cases where they correspond to social transfer payments granted for this purpose. This item therefore comprises private households as providers of home health care. Unpaid care by household members is not included in the core health accounts of SHA.

Moreover, SHA focuses on the consumption of health care goods and services by the resident population irrespective of where this takes place. This implies the inclusion of imports (from non-resident providers) and the exclusion of exports (health care goods and services provided to non-residents).

Finally, SHA covers administration expenditure, as administration is considered to be an embedded activity in the

provision of health care goods and services, such as the administrative activities carried out in a hospital or a physician's practice, and for this reason it is included as an inherent part of the functional dimension.

Development and legal basis

Development and history

The formal process of producing the manual '[A System of Health Accounts — 2011 Edition](#)' (SHA 2011) started in 2007 as a co-operative activity of health accounts experts from the [Organisation for Economic Co-operation and Development \(OECD\)](#), [World Health Organisation \(WHO\)](#) and the European Commission (Eurostat), known collectively as the International Health Accounts Team (IHAT). The resulting manual has been the subject of an extensive and wide-reaching consultation process aimed at gathering inputs from national experts and other international organisations around the world. It strives to reach a consensus, while also reflecting different perspectives and priorities within the expanding domain of health accounts. In developing the material, great importance has been given to policy relevance, feasibility and sustainability. The manual is based on the conceptual framework of the system of health accounts, but must also address practical possibilities and analytical needs.

The manual itself draws inspiration from and builds on a number of international manuals and guidelines on health expenditure accounts, most notably: [A System of Health Accounts \(SHA 1.0\)](#) (OECD, 2000); the [Guide to Producing National Health Accounts \(The Producers Guide\)](#) (WHO, World Bank, USAID, 2003); and the [SHA Guidelines](#) (Eurostat/United Kingdom ONS, 2003). The wealth of experience gained in implementing these various guidelines around the world, the results of specific health accounting research projects and efforts in international data collections have been significant inputs into the manual's development.

The [joint health accounts data collection](#) which started in 2005, is an initiative of Eurostat, the OECD and the WHO to cooperate on gathering statistics on health care expenditure and financing to:

- reduce the burden of data collection on national authorities;
- increase the use of international standards and definitions for health expenditure data;
- encourage further harmonisation of national health accounting practices in order to improve the availability and comparability of data.

The resulting joint questionnaire is based on a detailed set of classifications of the system of health accounts. Three additional questions relate to data on revenues of health care financing schemes, factors of provision (in other words all the inputs used in the process of producing health care goods and services) and capital formation in health systems. Several additional memorandum items, considered important from a health policy perspective, have also been added.

Legal basis

From 2016 onwards, data is submitted to Eurostat according to European 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.

Methodology

Main sources

Data are collected through the joint health accounts questionnaire (JHAQ) that countries submit to Eurostat during the annual data collection exercise. For compiling the JHAQ, countries use data from their national health account registries which comprise but are not limited to data that are based on different statistical sources,:

- specific surveys performed for healthcare activities;
- [household budget surveys](#) ;
- [administrative sources](#) (registers);

- data collected for the purpose of [national accounts](#) ;
- data information systems available in health (and other) ministries / departments as well as other agencies involved in health care.

Economic and demographic data from Eurostat's reference [database](#) are used for calculating:

- expenditure as a percentage of [gross domestic product](#) ;
- expenditure [per capita](#) using the national average [population](#) ;
- expenditure expressed in [purchasing power parities](#) .
- expenditure expressed in Euros.

Statistical units

For healthcare expenditure data each of the three main axes — health care functions, health care providers and health care financing schemes — is the starting point, and the [statistical units](#) vary. For a thorough listing of the main items used and their definitions please see next section.

Main concepts and definitions

Reference period: calendar year.

The guiding principles in defining the dimensions and classifications of SHA 2011 have been the relevance and usefulness for health analytical purposes, continuity with existing standards and improved links to the system of national accounts (SNA). The starting point for SHA 2011 is the consumption of services and goods by the resident population of a country or region. This influences the structure of the classifications in that, in describing the system, it is the final consumption by residents which is given priority, over production.

The SHA 2011 manual has been developed by applying a functional approach to what is provided and consumed in health care. This means that health expenditures are included regardless of how or by whom the service or good is funded, or how and by whom it has been provided. For example, health services provided and consumed outside the SNA-defined health branch (such as occupational health services or medical services in residential long-term care) are part of the final consumption of health services of the resident population, and thus included in SHA. The way health care is financed, for example, whether or not the final consumed health service is paid for or reimbursed by a public entity, is not decisive for inclusion or exclusion in the health accounts.

All four functions of the health system (in other words governance, resource generation, financing and service delivery), as described by the WHO, can be linked to the three axes of health accounts: consumption, provision and financing. Each axis is associated with specific classifications, but there is no unique classification matching each axis. For example, the financing axis can be measured equally by financing schemes and financing agents. Consumption is the starting point, and the goods and services consumed with a health purpose (functions) set the boundary of the health accounts. What has been consumed has been produced and provided, thus another axis is provision. Finally, what has been consumed and provided has been financed. This means that the third axis, financing, as well as the second axis on provision are measured according to the consumption.

The main statistical units used along the three axis and their corresponding definitions are presented below.

Health care functions

Healthcare functions relate to the type of need that current expenditure on healthcare aims to satisfy or the kind of objective pursued. The following main items are defined:

- curative care, which means the healthcare services during which the principal intent is to relieve symptoms or to reduce the severity of an illness or injury, or to protect against its exacerbation or complication that could threaten life or normal function;
- rehabilitative care, which means the services to stabilise, improve or restore impaired body functions and structures, compensate for the absence or loss of body functions and structures, improve activities and participation and prevent impairments, medical complications and risks;
- inpatient care, which means the treatment and/or care provided in a healthcare facility to patients formally admitted and requiring an overnight stay;

- outpatient care, which means the medical and ancillary services delivered in a healthcare facility to a patient who is not formally admitted and does not stay overnight;
- day care, which means the planned medical and paramedical services delivered in a healthcare facility to patients who have been formally admitted for diagnosis, treatment or other types of healthcare and are discharged on the same day;
- long-term care (health), which means a range of medical and personal care services that are consumed with the primary goal of alleviating pain and suffering and reducing or managing the deterioration in health status in patients with a degree of long-term dependency;
- home-based care, which means the medical, ancillary and nursing services that are consumed by patients at their home and involve the providers' physical presence;
- ancillary services (non-specified by function), which means the healthcare or long-term care related services non-specified by function and non-specified by mode of provision, which the patient consumes directly, in particular during an independent contact with the health system and that are not integral part of a care service package, such as laboratory or imaging services or patient transportation and emergency rescue;
- pharmaceuticals and other medical non-durable goods (non-specified by function), which means pharmaceutical products and non-durable medical goods intended for use in the diagnosis, cure, mitigation or treatment of disease, including prescribed medicines and over-the-counter drugs, where the function and mode of provision are not specified;
- therapeutic appliances and other medical goods (non-specified by function), which means medical durable goods including orthotic devices that support or correct deformities and/or abnormalities of the human body, orthopaedic appliances, prostheses or artificial extensions that replace a missing body part, and other prosthetic devices including implants which replace or supplement the functionality of a missing biological structure and medico-technical devices, where the function and the mode of provision are not specified;
- preventive care, which means any measure that aims to avoid or reduce the number or the severity of injuries and diseases, their sequelae and complications;
- governance, and health system and financing administration, which means services that focus on the health system rather than direct healthcare, direct and support health system functioning, and are considered to be collective, as they are not allocated to specific individuals but benefit all health system users.

Finally, current expenditure on healthcare means the final consumption expenditure of resident units on healthcare goods and services, including the healthcare goods and services provided directly to individual persons as well as collective healthcare services.

Health care financing schemes

'Healthcare financing schemes' means types of financing arrangements through which people obtain health services, including both direct payments by households for services and goods and third-party financing arrangements. The following main items are defined:

- government schemes, which means healthcare financing schemes whose characteristics are determined by law or by the government and where a separate budget is set for the programme and a government unit that has an overall responsibility for it;
- compulsory contributory health insurance scheme, which means a financing arrangement to ensure access to healthcare for specific population groups through mandatory participation determined by law or by the government and eligibility based on the payment of health insurance contributions by or on behalf of the individuals concerned;
- compulsory medical savings accounts (MSA), which means savings accounts that are legally compulsory, whereby the basic method for fund-raising and some issues concerning the use of the account to pay for health services are regulated by government, and where there is no pooling across individuals, except for family members;
- voluntary health insurance schemes, which means schemes based upon the purchase of a health insurance policy, which is not made compulsory by government and where insurance premiums may be directly or indirectly subsidised by the government;

- non-profit institutions financing schemes, which means non-compulsory financing arrangements and programmes with non-contributory benefit entitlement that are based on donations from the general public, the government or corporations;
- enterprise financing schemes, which means primarily arrangements where enterprises directly provide or finance health services for their employees without the involvement of an insurance-type scheme;
- household out-of-pocket payment, which means a direct payment for healthcare goods and services from the household primary income or savings, where the payment is made by the user at the time of the purchase of goods or the use of the services;
- rest of the world financing schemes, which means financial arrangements involving or managed by institutional units that are resident abroad, but who collect, pool resources and purchase healthcare goods and services on behalf of residents, without transiting their funds through a resident scheme.

Health care providers

Healthcare providers means the organisations and actors that deliver healthcare goods and services as their primary activity, as well as those for which healthcare provision is only one among a number of activities. The following main items are defined:

- hospitals, which means the licensed establishments that are primarily engaged in providing medical, diagnostic and treatment services that include physician, nursing and other health services to inpatients and the specialised accommodation services required by inpatients and which may also provide day care, outpatient and home healthcare services;
- residential long-term care facilities, which means establishments that are primarily engaged in providing residential long-term care that combines nursing, supervisory or other types of care as required by the residents, where a significant part of the production process and the care provided is a mix of health and social services with the health services being largely at the level of nursing care in combination with personal care services;
- providers of ambulatory healthcare, which means establishments that are primarily engaged in providing healthcare services directly to outpatients who do not require inpatient services, including both offices of general medical practitioners and medical specialists and establishments specialising in the treatment of day-cases and in the delivery of home care services;
- providers of ancillary services, which means establishments that provide specific ancillary type of services directly to outpatients under the supervision of health professionals and not covered within the episode of treatment by hospitals, nursing care facilities, ambulatory care providers or other providers;
- retailers and other providers of medical goods, which means establishments whose primary activity is the retail sale of medical goods to the general public for individual or household consumption or utilisation, including fitting and repair done in combination with sale;
- providers of preventive care, which means organisations that primarily provide collective preventive programmes and campaigns/public health programmes for specific groups of individuals or the population-at-large, such as health promotion and protection agencies or public health institutes as well as specialised establishments providing primary preventive care as their principal activity;
- providers of healthcare system administration and financing means establishments that are primarily engaged in the regulation of the activities of agencies that provide healthcare and in the overall administration of the healthcare sector, including the administration of health financing;
- rest of the economy means other resident healthcare providers not elsewhere classified, including households as providers of personal home health services to family members, in cases where they correspond to social transfer payments granted for this purpose as well as all other industries that offer healthcare as a secondary activity;
- rest of the world providers means all non-resident units providing healthcare goods and services as well as those involved in health-related activities.

Main classifications

The associated key health accounting dimensions of the SHA 2011 framework include:

- classification of health care functions (HC);
- classification of health care providers (HP);
- classification of financing schemes (HF).

These three core classifications address the three basic questions:

- what kinds of health care goods and services are consumed?
- which health care providers deliver these goods and services?
- which financing scheme pays for these goods and services;

The ultimate goal of data compilation of the core accounts is to answer these three questions with respect to each transaction that incurs health care expenditures — in other words, to use the three axes of the international classifications for health accounts (ICHA), namely, function, provider and financing, to describe each financial flow in the health care sector.

Classification of health care functions (ICHA-HC)

Within the health accounting framework, the underlying principle may be formulated as 'what is consumed has been provided and financed'. Clearly, there is no one-to-one relationship between health care functions and the provision and financing categories. The same type of health care goods and services can be consumed from different types of providers and at the same time purchased using various types of financing schemes. But to achieve the tri-axial perspective (consumption–provision–financing), the starting point is to measure consumption, which in a health functional approach describes the direct consumption by the population according to the type of health purpose. The boundaries of health care are set based on this consumption purpose. It is therefore important to have a clear understanding of what consumption with a health purpose is, and which are the relevant categories to be identified.

The functional classification of health care (ICHA-HC) delineates the boundaries of health care activities from an international perspective. Health care in a country comprises the sum of activities performed for the purposes of:

- promoting health and preventing disease;
- diagnosis, treatment, cure and rehabilitation of illness and reducing premature [mortality](#) ;
- caring for persons affected by [chronic illness](#) ;
- caring for persons with health-related impairment, [disability](#) , and;
- assisting patients to die with dignity;
- governance and administration of the health system.;
- providing and administering health programmes.

The core functions of health care refer to the purposes listed above. Health care-related classes also identify policy relevant areas that are related to health but go beyond the health care boundary. This is the case, for example, for programmes that come under the social part of long-term care (LTC) or areas involving cross-sectoral health promotion.

Classification of health care providers (ICHA-HP)

Healthcare services are provided in a wide range of institutional settings that vary across countries.

Health care providers encompass organisations and actors that deliver health care goods and services as their primary activity, as well as those for which health care provision is only one among a number of activities. They vary in their legal, accounting, organisational and operating structures. However, despite the huge differences that exist in the way health care provision is organised, there is a set of common approaches and technologies that all health care systems share and that helps to structure them.

The classification of health care providers (ICHA-HP) therefore serves the purpose of classifying all organisations that contribute to the provision of health care goods and services, by arranging country-specific provider units into common, internationally applicable categories.

The main objective of the classification of health care providers is to be comprehensive and complete, which means capturing all the organisations and actors involved in the provision of health care goods and services. Second, all providers should be structured by their main characteristics into categories that enable linkages with the related structures of health care functions (HC) and health care financing (HF). Third, the classification should be described in a way that will help both data compilers and data users to match national organisations and actors with health care provider categories.

The principal activity exercised is the basic criterion for classifying health care providers. This does not mean, however, that providers classified under the same category perform exactly the same set of activities.

A classification of healthcare providers serves the purpose of addressing the question 'What is the organisational structure that is characteristic of the provision of health care within a country?'. Together with the classification of health care functions (ICHA-HC) and the classification of financing schemes (ICHA-HF), the health care provider classification shapes the accounting space of the core health care expenditure accounts.

Classification of health care financing schemes (ICHA-HF)

The framework for health care financing under SHA 2011 does not intend to show all the complexity and all the details of a health financing system. Instead, it focuses on the most important issues from the perspective of accounting for health expenditure.

Health financing systems mobilise and allocate money, within the health system, to meet the current health needs of the population (individual and collective), with a view to expected future needs. Individuals may have access to care by means of direct payment for services and goods or through third-party financing arrangements, such as with a National Health Service, social insurance or voluntary insurance.

Therefore, health care financing schemes are the main 'building blocks' of the functional structure of a country's health financing system: the main types of financing arrangements through which health services are paid for and obtained by people. Examples include direct payments by households and third-party financing arrangements, such as social health insurance or voluntary insurance. Although the financing schemes in this framework are key for purchasing health care, they also include the rules for other functions, such as the collection and pooling of the resources of the given financing scheme.

Other classifications

SHA 2011 defines additional dimensions compared to SHA 1.0 that allow the compilation of complementary indicators of the health system:

- classification of types of revenues of health financing schemes;
- classification of factors for healthcare provision;
- classification of beneficiaries — age, gender, disease, socioeconomic characteristic or region;
- classification of human resources in health care (using the 2008 version of the [international standard classification of occupations](#));
- classification of healthcare goods and services.

Further methodological information

The SHA 2011 is the framework currently used for the systematic description of the financial flows related to health care and is accompanied by a set of [guidelines for implementation](#). The annexes to the system of health accounts manual provide further information on related issues such as the relationship of the ICHA to other classifications.

Methodological notes for individual countries are available in the annexes to the metadata file for [Healthcare expenditure](#).

Data quality

Health systems have complex, nationally determined frameworks that are strongly influenced by culture, politics and economics, with links across economic sectors, public administration and various activities related to social

participation. Due to the multi-factorial nature of health and the multi-sectoral contribution to health status, a health systems framework is much wider than the SHA approach, notably with respect to the boundaries of health expenditure.

While health systems can vary significantly among countries, the SHA aims to enhance international health care expenditure data by delineating the boundary of health care according to a functional classification. SHA 2011 is intended to constitute a system of comprehensive, internally consistent and internationally comparable accounts, which should be compatible with other aggregate economic and social statistics as far as possible.

Notwithstanding the international comparability aimed at by SHA 2011, any deviations from the SHA methodology stemming from national practicalities and specificities are clearly documented in the metadata.

Data dissemination

Published data

Statistical data are available in various formats. [Statistics Explained articles](#) and [publications](#) provide data and analysis, while Eurobase provides a set of multi-dimensional [databases](#) and information in a simpler format as [main tables](#).

Health care expenditure and financing data are analysed according to three 2-dimensional tables, each combining two of the three dimensions: health care functions, health care providers and health care financing schemes.

Time coverage

All data are annual.

The time series start in 2003. Statistics for the time period 2003–12 are collected according to the SHA 1.0 methodology.

Statistics for the reference year 2013 and onwards are collected according to the SHA 2011 methodology. In certain cases, countries are able to provide historical data covering one or more years.

Geographical coverage

Eurostat publishes data for EU Member States, Iceland, Norway, Switzerland and Liechtenstein.

Among the EU Member States, at the time of writing, only data for Malta are not available.

All data are national: no regional data are available.

Units

Expenditure for the reported categories is presented according to following units:

- expenditure in millions of euro;
- expenditure in millions of national currency;
- expenditure in millions of purchasing power parities;
- expenditure in euro per capita;
- expenditure in national currency per capita;
- expenditure in purchasing power parities per capita;
- percentage of gross domestic product;
- percentage of current health expenditure.

Timing of data release

Eurostat (and the OECD and the WHO) asks for the submission of final data for the reference year N at N + 2 years, for example data for the year 2015 are requested to be provided by the end of April 2017.

Data are published on Eurostat's online database as soon as they are validated by the three international organisations.

See also

Online publications

- [Health in the European Union – facts and figures](#)
- [Disability statistics](#)

Healthcare expenditure statistical articles

- [Government expenditure on health](#)

General health statistics articles

- [Health statistics introduced](#)
- [Health statistics at regional level](#)

Main tables

- [Health \(t_hlth\)](#) , see:

Health care (t_hlth_care)

Database

- [Health \(hlth\)](#) , see:

Health care (hlth_care)

Health care expenditure (SHA 2011) (hlth_sha11)

Dedicated section

- [Health](#)

Methodology

- [OECD, Eurostat, WHO \(2011\), A System of Health Accounts, OECD Publishing \(SHA 2011\)](#)
- [OECD \(2000\), A System of Health Accounts, OECD Publishing \(SHA 1.0\)](#)
- [Healthcare expenditure](#) (ESMS metadata file — hlth_sha)

External links

- [European Commission — Directorate-General for Health and Food Safety — Public health](#)
- [European Commission — Directorate-General for Health and Food Safety — Health Systems Performance Assessment](#)
- [Organisation for economic co-operation and development \(OECD\) — Health policies and data](#)
- [World health organisation \(WHO\) — Health systems](#)

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