UK Health Accounts QMI

Quality and methods information for the UK health accounts.

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Next release:
To be announced

Table of contents

1 . Output information

- Accredited official statistic: no
- Data collection: uses secondary administrative and survey data
- Frequency: annual
- How compiled: high-level aggregates primarily use national accounts data with other data sources used to determine healthcare spending by function and provider
- Geographic coverage: UK only
- Related publications: Healthcare expenditure, UK Health Accounts

2 . About this QMI report

This quality and methodology report contains information on the quality characteristics of the data (including the five European Statistical System dimensions of quality) as well as the methods used to create it.

The information in this report will help you to:

- understand the strengths and limitations of the data
- learn about existing uses and user of the data
- reduce the risk of misusing data
- help you decide suitable uses for the data
- understand the methods used to create the data

3 . Important points

- Our health accounts bulletins are an analysis of healthcare expenditure in the UK, produced on a calendar year basis.
- The UK Health Accounts are produced to the internationally standardised definitions of the System of Health Accounts 2011 (SHA 2011), which were developed by the Organisation for Economic Co-operation and Development (OECD), Eurostat (the statistical office of the EU), and the World Health Organization (WHO).
- For international comparability, our statistics include spending on many personal care services, typically delivered as social care services in the UK.
- Our headline statistics measure current healthcare expenditure, analysing the relationship between the type of healthcare (healthcare function), provision (healthcare provider) and financing (healthcare financing scheme) from 2013 onwards.
- We also produce a supplementary analysis of the financing of current healthcare expenditure examining the interaction between financing schemes and the revenues used to finance healthcare, which dates back to 1997.
- Separately, we also measure capital expenditure on healthcare from 1997 onwards.
- Detailed healthcare expenditure statistics are published at a two-year time lag, while highly aggregated provisional estimates of expenditure are produced with a one-year time lag.

4 . Quality summary

Overview

The UK Health Accounts are a set of healthcare expenditure statistics produced to internationally standardised definitions that can be used to compare UK healthcare spending with other countries. The headline statistics concern current healthcare expenditure and analyse the relationship between healthcare consumption, provision, and financing through three core dimensions:

- healthcare financing – the financing arrangements through which healthcare is accessed
- healthcare function – the type of care accessed and mode of provision
- healthcare provider – the setting in which healthcare goods or services are delivered

Additional dimensions measured are:

- revenues of healthcare financing – the derivation of funds used to finance healthcare
- capital spending on healthcare [note 1] – investment in healthcare infrastructure, machinery and equipment, and intellectual property, excluding research and development

Capital expenditure is not included within our headline measure, which is current healthcare expenditure. Instead, current healthcare expenditure measures the consumption of fixed capital, which is the decline in the value, or depreciation, of fixed assets in the economy over time.

The definition of healthcare used in health accounts is somewhat broader than that used in alternative UK healthcare expenditure analyses, as the international definitions include health-related social services, which are typically considered as social care in the UK.

The UK Health Accounts are published by us, at the Office for National Statistics (ONS), within an annual statistical bulletin. Supplementary analyses, such as international comparisons, are published periodically in separate articles.

Uses and users

As internationally comparable statistics, our UK Health Accounts have a range of domestic and international users, such as:

- the Department of Health and Social Care
- health departments in the devolved administrations
- think tanks
- domestic and overseas charities
- health sector businesses and market research organisations
- academics and independent researchers
- overseas statistical agencies
- international organisations including the Organisation for Economic Co-operation and Development (OECD) and the World Health Organization (WHO)

The primary use of the UK Health Accounts is as a tool to measure healthcare expenditure across countries. One of the main metrics used by domestic and international users is healthcare spending as a share of gross domestic product (GDP). However, the breakdowns by healthcare function, provider and financing scheme also offer an insight into the types of healthcare services provided through different financing mechanisms.

We work with stakeholders, including those involved in healthcare analysis and policymaking, working responsively to target development work to fit user needs. We very much welcome feedback from all interested parties, and if you would like to get in contact regarding our health accounts, please contact healthaccounts@ons.gov.uk.

Strengths and limitations of the UK Health Accounts

Strengths

- Given these statistics are produced to international definitions, estimates can be compared with those produced by most other developed economies around the world.
- The core dimensions of the UK Health Accounts are interactive, meaning that users can obtain detailed information on healthcare expenditure; for example, spending on curative outpatient care provided in hospitals financed through government schemes.
- The production of the UK Health Accounts involves stakeholders from all four UK health administrations, as well as private sector experts, ensuring a rigorous quality assurance process.
- The UK Health Accounts undergo continuous improvement with an open revisions policy to ensure they meet user needs and are not constrained by more restrictive revisions practices.

Limitations

- Because of the limitations of some of the data sources used to produce the Health Accounts we are only able to produce a UK aggregate; no analysis of healthcare expenditure by England, Scotland, Wales and Northern Ireland is possible.

- While estimates of healthcare expenditure by financing scheme are robust, data gaps mean that imputation is needed to report some elements of spending by healthcare function and provider, such as carrying forward information on the split of services by function, or in using alternative data sources as proxy estimates of growth, where our preferred data sources are unavailable.

- Within our estimate of government-financed healthcare expenditure, in the absence of more up-to-date information, the allocation of spending on services commissioned to independent sector providers is based largely on historic proportions.

Latest expansion of the UK Health Accounts

The System of Health Accounts 2011 offers a broad framework for detailed breakdowns of healthcare expenditure. The latest elements of the framework incorporated into the UK Health Accounts were implemented in the 2024 release: Healthcare expenditure, UK Health Accounts: 2022 and 2023. We expanded out the provider category “Providers of health care system administration and financing” into its subprovider categories:

- government health administration agencies

- private health insurance administration agencies

- other administration agencies

Government spending by healthcare function and provider in 2022

Some elements of government healthcare expenditure by healthcare function and provider for 2022 are estimated based on provisional NHS National Cost Collection (NCC) for the financial year ending (FYE) 2023. This applies to the England component of our UK government healthcare expenditure estimates, with alternative data sources used to capture expenditure in Scotland, Wales, and Northern Ireland. The method is also only applied to expenditure on NHS trust services for each variable, with data sources used to capture expenditure on other types of healthcare provider, unchanged from previous years.

This affects:

- all healthcare function breakdowns of hospital providers (HP1)

- all healthcare function breakdowns of other ambulatory providers (HP3x)

- all healthcare function breakdowns of ancillary care providers (HP4)

- inpatient long-term care (health) provided by residential long-term care facilities (HC31xHP2)

- therapeutic appliances and other medical goods provided by retailers and other providers of medical goods (HC52xHP5)

- pharmaceuticals and other medical non-durable goods provided by retailers and other providers of medical goods (HC51xHP5)

- information, education and counselling programmes provided by preventive care providers (HC61xHP6)

- ancillary services provided by all other industries as secondary providers of health care (HC4xHP82)

There is no impact on our total government healthcare expenditure estimates, which are aligned to national accounts data.

Government spending by healthcare function and provider in 2023

Because of structural changes to source data, we have made alterations to the function and provider analysis for government expenditure for 2023.

The data do not allow for the separate identification of specialist palliative care expenditure resulting in expenditure now being reported under curative and rehabilitative care (HC1HC2). The following are therefore not reported for 2023:

- day long-term care expenditure provided in hospitals financed by government schemes (HC32xHP1xHF11)
- outpatient long-term care expenditure provided in hospitals financed by government schemes (HC33xHP1xHF11)

These categories continue to be reported between 2013 and 2022, however.

Additionally, we have been unable to distinguish spending on outpatient curative and rehabilitative care provided by community health services into the outpatient subcomponents. This means that for 2023 we are no longer reporting outpatient curative and rehabilitative care breakdowns for "other ambulatory care providers" (HP3x) or total providers (HPTOT), for both government schemes (HF11) or all financing schemes (HFTOT).

In all instances this will not affect the total government healthcare expenditure estimates, which are aligned to national accounts data.

Out-of-pocket expenditure

In our latest release we have updated estimates of out-of-pocket expenditure on general practice and dentistry based on the most recent evaluation of the market size conducted by our data suppliers. As a result, we have re-estimated the back series based on the new estimates.

For general practice expenditure the market size relates to 2024 only and so earlier estimates are based on growth in medical services expenditure as observed in household final consumption expenditure data. We will continue to work with data providers to improve out-of-pocket expenditure estimates through the time series.

Note 1 - Capital expenditure is not included within our headline measure, which is current healthcare expenditure. Instead, current healthcare expenditure measures the consumption of fixed capital, which is the decline in the value, or depreciation, of fixed assets in the economy over time.

5 . Quality characteristics of the data

This section provides a range of information that describes the quality and characteristics of the UK Health Accounts and identifies issues that should be noted when using the statistics.

The quality of a statistical product can be defined as the "fitness for purpose" of that product. More specifically, it is the fitness for purpose regarding the European Statistical System (ESS) dimensions of quality. This section addresses these quality dimensions and other important quality characteristics, including:

- relevance
- accuracy and reliability
- timeliness and punctuality
- coherence and comparability
- accessibility and clarity

More information on the use of these dimensions to measure statistical output quality can be found in the guidelines for measuring statistical output quality.

Relevance

(The degree to which the statistical outputs meet users' needs.)

The UK Health Accounts are produced to the internationally standardised definitions of the System of Health Accounts 2011 (SHA 2011) to allow accurate comparisons of healthcare expenditure between countries. These definitions have been widely adopted by Organisation for Economic Co-operation and Development (OECD) member states and replaced and refined the initial System of Health Accounts (SHA 1.0) framework. Prior to the regulated international definitions, differences between how nations defined healthcare expenditure had prevented consistent international comparisons of health spending.

As a result of consistent definitions, a range of metrics are now available to international and domestic policymakers to compare UK healthcare spending to other countries. The most well-known of these metrics is the percentage of gross domestic product (GDP) attributed to healthcare expenditure, which, when used in combination with performance metrics, can be used as one indicator of the relative efficiency of a country's health system.

As well as informing policy, these statistics are used by charities, think tanks and academic journals to influence policy. Other domestic uses include informing the general public through media coverage of our statistics.

Internationally, the OECD publish analysis of healthcare expenditure in two biennial anthologies of internationally comparable metrics that help to determine the performance of health systems in countries: Health at a Glance and Health at a Glance: Europe. Eurostat and the World Health Organization (WHO) also use the data in various analyses and forecasting. The WHO produce worldwide health expenditure heat maps and analysis on the means by which health systems are financed. This is important in analysing the scope of universal health coverage in different countries and the degree to which healthcare is covered through public funds.

Accuracy and reliability

(Accuracy is the degree of closeness between an estimate and the true value. Reliability is the closeness of the initial element value to the subsequent estimated measure.)

Because of the large number of data sources used in the production of health accounts, it is not possible to produce statistical measures of accuracy, such as variances and confidence intervals for our statistics.

To maximise their accuracy, considerable quality assurance was undertaken during the development of the UK Health Accounts. The development of health accounts involved quality assurance of the methodology by main data providers and a number of external experts, including from the Health Foundation, Centre of Health Economics at the University of York and the Personal Social Services Research Unit at London School of Economics. The OECD health accounts team also undertook quality assurance of the UK methods prior to the first publication, and produced a report approving the UK Health Accounts as compliant with the System of Health Accounts 2011 (SHA 2011) definitions.

The UK Health Accounts are compiled by calculating each financing scheme individually. Where possible, we look to triangulate aggregates for healthcare financing schemes with other known sources of expenditure data. The health accounts figure for total government healthcare expenditure (HF.1.1) is reconciled back to the two other measures of healthcare spending produced using the OSCAR dataset – HM Treasury's Public Expenditure Statistical Analysis (PESA) data series, and general government final consumption expenditure, as measured within the UK National Accounts.

Estimates for healthcare financed by non-profit institutions serving households (NPISH) and enterprise-financing are derived from recognised national accounts estimates of individual consumption expenditure and intermediate consumption respectively. Expenditure financed through out-of-pocket schemes and voluntary health insurance schemes are triangulated against household final consumption expenditure estimates used in the UK National Accounts and Association of British Insurers (ABI) data on health insurance premiums.

For most financing schemes, total expenditure is calculated as a "control total", based on sources of aggregated data. The breakdown of spending by healthcare function and provider is then calculated using a selection of more detailed data sources. This is known as a "top-down" approach, where analysis by healthcare function and provider is made to match the control total. The exception to this is out-of-pocket expenditure, which we derive total expenditure by summing multiple data sources used to obtain to obtain a total – known as a "bottom-up" approach. With this approach it is more difficult to ascertain whether all expenditure has been captured. This approach requires greater levels of expert quality assurance. However, it is a common approach used by countries for measuring out-of-pocket expenditure.

Given the differences in the data sources used for the control totals and the healthcare function and provider analyses, the two separate totals are unlikely to match. In the event of the control total exceeding the sum of expenditure in the healthcare function and provider analysis, the residual is allocated to the category "not elsewhere classified" (HC.0xHP.0). If the healthcare function and provider analysis exceed the control total, then the former is scaled down to match the latter.

Within the measurement of government expenditure, there is no comprehensive source of data to fully allocate the NHS's purchases of healthcare from non-NHS providers by function and provider in England. We have used historic information collected from NHS commissioning bodies to ascertain a broad distribution of these services by function and provider, supplemented with additional information from the Department of Health and Social Care and LaingBuisson.

Most public sector financial data are reported on a basis aligned to the UK's fiscal year (broadly April to March). To produce calendar year estimates, two sets of financial year figures are apportioned to equate to the calendar year. This approach assumes a consistent level of spending across all months of the year. We review instances where this assumption is likely to be untrue, for example the distribution of coronavirus (COVID-19)-related testing, tracing and vaccination services across calendar years. In this instance we apportioned expenditure on these services differently, using national accounts volumes data as a means of identifying a more appropriate calendar year distribution.

The UK Health Accounts undergo continuous improvement operating an open revisions policy to ensure they meet user needs. This allows revisions to raw data sources, such as national accounts data, to be incorporated over the whole time series. This also means that we can make alterations based on improvements to international definitions. Revisions to the previous year's vintage of data are summarised in the latest statistical bulletin and presented in our datasets.

Timeliness and punctuality

(Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the gap between planned and actual publication dates.)

Full health accounts data are published annually on a calendar year basis for the reference time period t-2 and highly aggregated early estimates of expenditure are published for the time period t-1. Statistics are generally published around the end of April or start of May. Further information on how we calculate our t-1 estimates is available in UK Health Accounts: T-1 estimates of healthcare expenditure – methodological guidance.

While the health accounts international guidelines mandate that data must be produced on a calendar year basis, many of the sources that are used in health accounts are published on a financial year basis. The time delay before financial year data are available prevents an earlier publication date. All financial year data sources are converted to a calendar year basis as part of the production process.

For more details on related releases, the GOV.UK release calendar is available online and provides 12 months' advance notice of release dates. In the unlikely event of a change to the pre-announced release schedule, public attention will be drawn to the change and the reasons for the change will be explained fully at the same time, as set out in the Code of Practice for Statistics.

Coherence and comparability

(The degree to which data derived from different sources or methods, but that refers to the same topic, is similar, and the degree to which data can be compared over time and domain, for example, geographic level.)

International comparisons

The primary purpose of the UK Health Accounts is to compare UK healthcare spending with that of other nations. The UK Health Accounts are produced according to the System of Health Accounts 2011 (SHA 2011) guidelines, which helps to ensure consistency between how nations report healthcare expenditure estimates. The guidelines were established by the Organisation for Economic Co-operation and Development (OECD), Eurostat (the EU's statistical agency), and the World Health Organization (WHO). These organisations assist countries in enacting the guidelines, regulate improvements or alterations to the guidelines, and actively quality assure data provided by countries to their international datasets.

The SHA 2011 guidelines improved the clarity of the health accounts definitions and set out the three main purposes of health accounts. These were to:

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

All EU countries and most other OECD member states have adopted SHA 2011 definitions meaning that UK data are internationally comparable with a considerable number of countries.

While the SHA 2011 guidelines generally ensure a good level of consistency between reporting of healthcare expenditure between nations, there are some areas of spending that still should be treated with caution. Long-term care expenditure is particularly difficult to isolate for some countries and additional OECD guidelines (PDF, 556.7KB) have been published to help improve the level of consistency in these estimates. The OECD's dataset highlights major deviations from SHA 2011 guidelines with a "d" notification next to estimates.

Domestic comparisons

It is important to note that the UK Health Accounts are produced to definitions that extend beyond what is typically thought of as healthcare expenditure in the UK. Estimates also include elements of services typically thought of as social care within the UK, such as care homes, home care services and payments of Carer's Allowance. This needs to be taken into consideration when comparing UK health accounts estimates to other sources of healthcare expenditure data, such as HM Treasury's Public Expenditure Statistical Analyses, or final consumption expenditure within the UK National Accounts, which classify healthcare as services that would be broadly covered by health departments only.

Unfortunately, it is not currently possible to compare spending across the four nations of the UK. This is in part because of differences in the data collections of government expenditure across the four UK nations, which hamper direct comparisons of spending by healthcare function and provider. For non-government financing schemes, most data sources are derived from UK-wide data collections, and no information is available to ascertain spending by nation.

Data sources over time

While the data sources used to produce health accounts are generally comparable over the data time series, it should be noted that there is a difference in the data for adult social care services in England between 2013 and 2015. This is a result of the change in the NHS Digital data collection for expenditure on these services, from the Personal Social Services Expenditure (PSS-EX1) collection to the Adult Social Care Financial Return (ASC-FR) collection. While a similar method for allocating expenditure from the ASC-FR return has been developed to that used for the PSS-EX1 data, the division of this spending by the categories of inpatient and home-based care is not fully comparable between the three years.

Accessibility and clarity

(The ease with which users can access data, and the quality and sufficiency of metadata, illustrations and accompanying advice.)

Office for National Statistics website

Data are published annually in our Healthcare expenditure, UK Health Accounts series of statistical bulletins. These are usually released in spring in order to fulfil our international data provision obligations. A series of datasets containing the data accompany our release, as well as CSV files containing data in a flat file format. Bespoke datasets are also available through our Customise my data tool.

We also periodically publish informative supplementary articles on an ad hoc basis, generally to analyse international comparisons. Any additional articles will usually be produced after June, to make use of data provided to international organisations by other countries.

Our recommended format for accessible content is a combination of HTML webpages for narrative, charts and graphs, with data being provided in usable formats such as CSV and Excel. We also offer users the option to download the narrative in PDF format. In some instances, other software may be used, or may be available on request. For further information please refer to the contact details at the beginning of this report.

For information regarding conditions of access to data, please refer to the following:

- terms and conditions (for data on the website)
- freedom of information
- accessibility

More details on related releases can be found on the GOV.UK release calendar. If there are any changes to the pre-announced release schedule, public attention will be drawn to the change and the reasons for the change will be explained fully.

International organisations

UK health accounts data are also published by the OECD, Eurostat and the WHO. The OECD publishes data on the OECD database around the end of June, as part of the release of OECD health statistics and update their dataset around November, incorporating any changes resulting from their quality assurance consultations. Eurostat publishes data on the Eurostat database after a country's data submission has been validated. The WHO publishes data on their Global Health Expenditure Database, generally around December.

Why you can trust our data

We are the UK's largest independent producer of statistics and its national statistics institute. Our data and security policies detail how data are collected, secured and used in the publication of statistics. We treat the data that we hold with respect, keeping it secure and confidential. We use statistical methods that are professional, ethical, and transparent.

The Office for National Statistics' (ONS) statistics are crucial for effective debate and decision-making in government, industry, academia or by private individuals. In line with the Statistics and Registration Service Act 2007 and the supporting Code of Practice for Statistics, the statistics we produce are designed to meet the wider public good as well as the needs of government.

The Code of Practice for Statistics requires us to continuously improve our engagement with customers on statistical quality by ensuring customers understand the quality of our statistics and by establishing how far the quality meets their needs. Additional government security needs and the continued concern about data assurance requires us to ensure our confidentiality commitments are met and that the security of our statistics is maintained. Establishing a climate of continuous quality improvement will also reduce cost and enhance value.

6 . Methods used to produce the data

A full summary of sources of data and statistical methods used to compile the output are documented in our methodological guidance.

How we collect and process the data

The UK Health Accounts are constructed using a variety of secondary data sources. These data sources include administrative and survey data. We collect most data sources either directly from providers, or through online sources. Partners in the Department of Health and Social Care (DHSC), Scottish Government, NHS Wales and Welsh Government, and the Department of Health in Northern Ireland construct the analyses of government healthcare spending by provider and function.

Government schemes

Main data sources for total expenditure:

- Online System for Central accounting and reporting (HM Treasury)
- general government final consumption expenditure (Office for National Statistics (ONS))

Main data sources for expenditure by function and provider:

- NHS National Cost Collection (NHS England)
- ASC-FR (NHS Digital); Annual accounts data (various)
- benefit expenditure (DWP); RO3 (MHCLG)

Voluntary health insurance schemes

Main sources for total expenditure:

- LaingBuisson data
- Association of British Insurers data
- general insurance data (ONS)

Main data source for expenditure by function and provider:

- LaingBuisson

Non-profit institutions serving households (NPISH)

Main data source for total expenditure:

- NPISH final consumption expenditure (ONS)

Main data sources for expenditure by function and provider:

- National Council of Voluntary Organisations dataset
- original ONS research

Enterprise financing schemes

Main data source for total expenditure:

- Supply-use tables (ONS)

Main data source for expenditure by function and provider:

- LaingBuisson

Out-of-pocket spending

Main data sources for expenditure by function and provider:

- LaingBuisson
- Consumer Trends (ONS)
- Living Costs and Food Survey (ONS)

This is not a comprehensive list of all data sources used, but a summary of the main sources. The sources for expenditure by function and provider for government schemes represent the key sources used for expenditure in England. Equivalent sources are used for expenditure in the devolved administrations. These analyses are produced by health administrations rather than the ONS. Out-of-pocket spending is aggregated by summing components, rather than reconciling analysis to a control total for total expenditure.

How we quality assure and validate the data

Data are quality assured at a detailed level to ensure there are no changes to the data collection methodology. This is done through regular conversations with data suppliers in the DHSC and the devolved health administrations for data received from their jurisdictions, and with private sector data providers such as LaingBuisson. Our own processing is quality assured through double-running processing tasks, and automated checking procedures throughout our processing system. Published data sources are used to triangulate growth rates in expenditure, which enables us to understand changes we observe in the data.

Estimates of healthcare expenditure are ratified by our health accounts steering group, which consists of senior analysts in the health departments of the four UK nations, representatives from the Organisation for Economic Co-operation and Development (OECD), and independent healthcare experts.

In addition to our own quality assurance practices, a panel of experts from the OECD, the World Health Organization (WHO) and Eurostat perform further quality assurance checks once we have submitted data to our international partners. This includes consistency checks across data dimensions, revisions and growth rate analysis, as well as sense checks against spending in other countries.

How we disseminate the data

The UK Health Accounts are first published in an annual statistical bulletin. Data are then provided to international partners, who disseminate data through their own international databases. See Section 5: Quality characteristics of the data for further information on how our health accounts are disseminated.

7 . Related links

System of Health Accounts 2011 (Organisation for Economic Co-operation and Development (OECD), Eurostat, World Health Organization (WHO)) is a statistical reference manual giving a comprehensive description of the financial flows in healthcare related to the consumption of healthcare goods and services.

Healthcare expenditure, UK Health Accounts is our series of statistics bulletins providing healthcare expenditure statistics, produced to the international definitions of the System of Health Accounts 2011.

UK Health Accounts: methodological guidance explains the methodology used to calculate healthcare expenditure for the different financing schemes that comprise the UK Health Accounts.

Estimating the 1997 to 2012 UK Health Accounts time series – methodology guidance details the methodology used to calculate healthcare expenditure by financing scheme for the period 1997 to 2012 on a basis consistent with the international definitions of the System of Health Accounts 2011.

UK Health Accounts: T-1 estimates of healthcare expenditure – methodological guidance explains the methodology behind our provisional more timely high-level estimates for health spending.

An Introduction to health accounts details how the UK Health Accounts differ from the previous, and now discontinued, ONS analysis "Expenditure on Healthcare in the UK".

8 . Cite this methodology

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