Office for National Statistics

UK Health Accounts: T-1 estimates of healthcare expenditure – methodological guidance

The methodology used to calculate healthcare expenditure by financing scheme for the year t-1 on a basis consistent with the back series of the UK health accounts.

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1 . Introduction

In June 2021, we published our first set of provisional healthcare expenditure estimates with a one-year time lag. These are known as our t-1 estimates, where year "t" indicates the year of publication. This means that for our 2021 release our t-1 estimates were healthcare expenditure in 2020. Our t-1 estimates disaggregate healthcare expenditure by financing schemes and are produced to be consistent with the internationally standardised definitions of the System of Health Accounts (SHA 2011) and our back series, which runs from 1997 to 2019 in our 2021 release.

The estimates should be considered provisional, based on appropriate and timely proxy indicators that give us the best indication of healthcare expenditure before the data sources used to produce our full set of health accounts for the year become available. Our full health accounts provide greater detail on how healthcare spending is distributed by healthcare function and provider. More information on how we produce our regular health accounts series is available in our main methodology article. As a result of the provisional nature of these estimates and the data used to produce them, users should be aware that the t-1 figures may be subject to substantial revisions one year after release, when the full set of health accounts data are incorporated.

Our t-1 estimates are published in separate statistical bulletins to our full health accounts. This separates the full detailed analysis on data with a two-year time lag (t-2) from our early t-1 expenditure estimates, which are produced using a different methodology. We provide the back series of healthcare expenditure by financing schemes in the t-1 statistical bulletins for data time series comparisons. The new measures will also be submitted to international organisations for inclusion on international datasets, such as OECD.stat, where they will be marked with a "p" on the dataset for "provisional".

2 . Why we produce t-1 estimates

Timeliness

The development of t-1 estimates allows for more timely analysis of healthcare expenditure in the UK, consistent with the framework of the System of Health Accounts 2011. This is particularly valuable for 2020 given the changes to healthcare financing that have arisen because of the coronavirus (COVID-19) pandemic.

Comparability

Producing provisional estimates for all financing schemes will provide greater comparability to t-1 estimates produced by other countries for international databases.

Relevance

T-1 estimates will help us to respond to user requests for more timely indicators of healthcare expenditure, comparable to our health accounts back series.

3 . Main principals

As many of our regular data sources for measuring healthcare expenditure are not available for the year t-1, we use alternative, more timely data sources to estimate healthcare expenditure growth. These proxy growth rates are then applied to our t-2 health accounts estimates to project growth between the years t-2 and t-1 on a highly aggregated level.

The UK health accounts measure the consumption of healthcare goods and services in a calendar year. This largely follows the principals of the measurement of final consumption expenditure as established under the framework of the System of National Accounts (SNA), and as measured within the UK National Accounts. Therefore, the proxy measures we use to estimate growth in healthcare expenditure are based on the most timely national accounts data available at the time of publication, which are the most recent quarterly national accounts.

The quarterly national accounts use additional data to provide a more precise indication of economic growth than the first estimate of gross domestic product (GDP), but are less comprehensive than the estimates published in The Blue Book, based on annual data sources, later in the year. More information on the compilation of the UK National Accounts is available in the GDP QMI. As our t-2 estimates rely heavily on Blue Book data, future revisions to estimates in the quarterly national accounts will be represented in our revisions to the health accounts in year t-2.

4 . Method for each financing scheme

Our t-1 estimates are based on growth rates in quarterly national accounts data for each financing scheme. The differences in the main sources used to produce the full health accounts compared with the t-1 estimates are as follows.

HF11 Government schemes

Main data sources for full health accounts:

- Online System for Central Accounting and reporting (HM Treasury)
- General government final consumption expenditure (Blue Book, Office for National Statistics (ONS))

Main data source for t-1 provisional growth rates:

- general government final consumption expenditure (quarterly national accounts, ONS)

HF21 Voluntary health insurance schemes

Main data sources for full health accounts:

- LaingBuisson data
- Association of British Insurers data

Main data source for t-1 provisional growth rates:

- household final consumption expenditure (quarterly national accounts, ONS)

HF22 NPISH schemes (charities)

Main data sources for full health accounts:

- NPISH non-market output (Blue Book, ONS)

Main data source for t-1 provisional growth rates:

- NPISH non-market output (quarterly national accounts, ONS)

HF23 Enterprise financing schemes

Main data sources for full health accounts:

- intermediate consumption of healthcare (supply and use tables, Blue Book, ONS)

Main data source for t-1 provisional growth rates:

- gross value added (quarterly national accounts, ONS)

HF3 Out-of-pocket spending

Main data sources for full health accounts:

- household final consumption expenditure (Blue Book, ONS)
- LaingBuisson data

Main data source for t-1 provisional growth rates:

- household final consumption expenditure (quarterly national accounts, ONS)
- ONS estimates of long-term care expenditure growth

Government schemes (HF.1.1)

To measure government expenditure in the year t-1, we estimate growth using a proxy from the timeliest general government final consumption expenditure (GGFCE) data, which is the quarterly national accounts. This presents UK expenditure in current prices over quarters, which can be combined to create calendar years.

GGFCE can be distinguished by function based on the Classification of the Functions of Government (COFOG). We use healthcare expenditure (COFOG 7) as our proxy to estimate government healthcare expenditure in t-1.

This will exclude government expenditure on adult social care services, of which a large number of services are considered healthcare within our health accounts definitions. Based on analysis of previous years, the impact of excluding adult social care from the t-1 proxy growth rates is expected to be relatively small. However, we will continue to monitor differences between projections and final estimates the following year.

Government schemes – budget comparisons

We also produce estimates of government expenditure based on budgeted spending as a comparison to the initial GGFCE data. This allows for an early comparison of expected spend to actual spend. For these estimates we compare final budget positions for the latest financial year with equivalent outturn data for the previous year. This combines health budgets for the four health administrations within the UK, as well as local authority adult social care budgets in England. As we are only able to provide health accounts on a UK basis, these are combined to produce a UK growth proxy. Central government estimates are based on Departmental Expenditure Limits for resource (RDEL) data, which best captures day-to-day current healthcare expenditure.

As budget data are presented over financial years, we combine two financial years to estimate expenditure over a calendar year, assuming equal spend over each month of the year. This means 25% of expenditure in the first financial year (representing January to March) is added to 75% of expenditure from the second financial year (representing April to December).

The sources used to estimate growth based on budgets for each UK nation are as follows. Given the scope of services covered by health departments can differ across nations, we do not make comparisons across UK nations. The links included provide examples of sources for the financial year ending (FYE) 2021.

England – central government

Outturn data (for earlier years): Public Spending Statistical Analyses, Table 1.3a (HM Treasury)

Budget data (for latest year): same source or supplementary supply estimates

England – local government

Outturn data (for earlier years): local authority revenue expenditure and financing: individual local authority data – outturn, Table RO3 (MHCLG)

Budget data (for latest year): local authority revenue expenditure and financing: budget, Table 2a (MHCLG)

Scotland

Outturn data (for earlier years): Scottish Budget, Table 5.02 (Scottish Government)

Budget data (for latest year): same source

Wales

Outturn data (for earlier years): report on outturn, Resource DEL Outturn by Budget Expenditure Lines (Welsh Government)

Budget data (for latest year): final budget position – Main expenditure group, Health and social services tables (Welsh Government)

Northern Ireland

Outturn data (for earlier years): final resource outturn data (Department of Health)

Budget data (for latest year): final budget position, Department of health (Northern Ireland Executive)

For 2020, additional adjustments were made to budgets to account for coronavirus (COVID-19)-related expenditure throughout the year. Our 2020 estimates incorporate these additional adjustments.

We made a specific adjustment to our methodology to account for NHS Test and Trace. We substituted the NHS Test and Trace budget, sourced from the Department for Health and Social Care (DHSC) supply estimate, with National Audit Office (NAO) analysis of the budget up to November 2020. This is because, as a new service, the bulk of the NHS Test and Trace budget is for costs incurred in the later months of the financial year. This avoids a sizeable overestimate of growth in 2020, which would result from allocating 75% of the budget on these service to 2020. The monthly profile of spending on other services may also differ from usual trends but we are unable to account for this.

Out-of-pocket payments (HF.3)

T-1 estimates are calculated by splitting out-of-pocket spending into four main constituent components and measuring the growth in each independently. The t-1 figures for these components are then combined into one estimate for total out-of-pocket spending on healthcare.

The four main components of out-of-pocket spending are:

- medical goods
- hospital services
- ambulatory and other healthcare services
- long-term care services

The first three components broadly correspond to the three subdivisions of household final consumption expenditure (HHFCE) under the Classification of individual consumption by purpose (COICOP) framework that relate to health (COICOP 6). These are medical goods (COICOP 6.1), outpatient services (COICOP 6.2) and hospital services (COICOP 6.3). The estimates of HHFCE presented in the quarterly national accounts are used to project expenditure growth for the first three components of out-of-pocket expenditure.

There may be some deviation from true out-of-pocket expenditure within these estimates, as HHFCE combines self-funded healthcare with care financed through health insurance, therefore these estimates will include growth in insurance claims, measured in the health accounts as voluntary health insurance schemes.

For long-term care services, there is not enough distinction within the COICOP framework to be able to separately identify long-term care services from other social protection, such as nursery services within HHFCE. Therefore, we estimate growth in long-term care services to be line with observed growth in the back series.

Given the impact of the coronavirus on the adult social care sector, we have made further adjustments to our estimate of growth in long-term care spending in 2020 based on information from alternative sources. This attempts to capture the impact of the coronavirus on reducing the volume of self-funding long-term care clients over the year, the additional burden of coronavirus-related costs in the adult social care sector placed on self-funders over the year, and the reduction in client fees local authorities expect to receive in 2020. These estimates are based on very limited data availability and so are subject to greater uncertainty than other estimates in our t-1 projections.

Voluntary health insurance schemes (HF.2.1)

Voluntary health insurance schemes are largely a measure of household final consumption expenditure (HHFCE) on goods and services. Within HHFCE, the administration of voluntary health insurances is measured as "health insurance" (COICOP 12.5.3). The claims component is represented as household spending on healthcare within COICOP 6 and is combined with out-of-pocket expenditure.

For our t-1 estimates, we calculate growth in the administrative component of voluntary health insurance schemes based on growth in COICOP 12.5.3 (health insurance). For the claims component of health insurance, the composite growth rate of hospital services (COICOP 6.3) and medical services (COICOP 6.2) is used, with expenditure from our t-2 estimates used to weight each component.

Non-profit institutions serving households schemes (HF.2.2)

NPISH financing represents charities spending on healthcare, specifically covering charity expenditure funded through voluntary donations, grants and investment income, excluding charity expenditure funded through client contributions and purchases of care.

To estimate the growth in non-profit institutions serving households (NPISH) schemes, we draw upon quarterly national accounts estimates of NPISH non-market output in Industry Q (human health and social work activities). A proportion of Industry Q is excluded based on historical analysis of the share of each division of industry Q (Industries 86, 87 and 88) that is not healthcare under the definitions of the System of Health Accounts 2011.

The methodology is consistent with our means of calculating NPISH expenditure in the full health accounts. However, the full health accounts make use of the annual Blue Book data published later in the year.

Enterprise financing schemes (HF.2.3)

The measurement of expenditure by enterprise-financing schemes (HF.2.3) deviates from the concept of final consumption expenditure. This scheme measures healthcare expenditure provided by employers (excluding private health insurance) for employees, such as occupational healthcare services, and therefore represents intermediate consumption. Given there is a three-year lag in the supply and use data we use to estimate intermediate consumption of healthcare goods and services, we used gross value added for all industries, published in the quarterly national accounts, as our proxy to estimate growth, which is a measure of output. This approach uses the assumption that growth in the provision of occupational healthcare largely mirrors economic production. Typically representing less than 1% of overall healthcare expenditure, growth in this financing scheme does not have a significant impact on total healthcare expenditure.