Llywodraeth Cymru
Welsh Government

BACKGROUND, DOCUMENT

NHS expenditure programme budgets: quality report

This report covers the general principles and processes leading up to the production of our statistics.

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Statistical presentation

Data description

These statistics present annual information on NHS expenditure by programme of care based on the medical condition the expenditure relates to by commissioner and NHS organisation. Further breakdowns are provided for expenditure per head and expenditure by percentage of total expenditure.

Classification system

Expenditure is mapped to programmes of care based on medical conditions as an alternative to analysis by the type of care or type of institution where care is provided. Programmes of care, i.e. programme budget categories, are defined by reference to the **International Classification of Diseases Version 10 codes (ICD 10) (World Health Organization)**. Analysing expenditure in this context focusses on the patient and the care they receive, rather than the provider of care.

It is recognised that a medical model of care may not always be appropriate in the areas of community services and social care. Accordingly there are two specific groups for ‘Healthy Individuals’ and ‘Social Care Needs’ which capture the costs of prevention programmes and services that support individuals with social rather than health care needs.

Not all healthcare activity or services can be assigned by medical condition, preventative activity or social care need. Where organisations are unable to allocate costs to programme categories with current data sources and methodologies, expenditure is allocated to the ‘Other’ category.

Sector coverage

NHS expenditure can be analysed by programme budget category, commissioner and local health board.

Statistical concepts and definitions

Commissioner

Local health boards fund services provided by primary care practitioners such as GPs and dentists, and secondary care services such as hospital treatment. LHB expenditure includes a small amount of other expenditure which cannot be classified to primary or secondary care.

Expenditure

Expenditure allocated to each programme budget category presented at current prices.

Expenditure per head

This uses the closest Office for National Statistics (ONS) Mid-Year Population Estimates available at the time of publication. The mid-year estimates for 2022 were used as a denominator for 2022-23 expenditure.

Organisation

Local health board or Wales.

Programme Budget Category

Activity is assigned to 23 programme budget categories based on the primary diagnosis for any encounter.

Year

Financial year which expenditure relates to.

Statistical unit

The unit in the statistics is expenditure, in pounds Sterling. Expenditure relates to spend during the financial year based on medical condition and is presented at current prices.

Statistical population

Financial figures are collected from all Welsh local health boards and NHS Trusts. All expenditure on Welsh residents is included in the data, including expenditure on services funded by Welsh local health boards and provided by NHS and private providers of health care, both within and outside Wales.

Reference area

Wales and local health boards within Wales.

Time coverage

Data is available from 2005-06 with data from 2009-10 onwards presented for seven local health boards following reorganisation on 1 October 2009 and further changes on 1 April 2019.

Statistical processing

Source data

The data in statistical releases and accompanying **StatsWales** tables comes from Local Health Board (LHB) programme budgeting returns. Data is submitted to and consolidated by the NHS Wales Executive.

Frequency of data collection

Statistics are collected and presented on an annual basis for each financial year.

Data collection

The allocation of expenditure to programme budget categories is carried out by local health boards using the best available information, e.g. for acute inpatients and day cases, episodes are allocated to program budget category by ICD10

code and the unit cost of each episode is determined by its HRG (Healthcare Resource Group). For other types of expenditure there may be specific data from the Welsh Costing Return 1 (WCR 1, formerly the TFR2 return) to support an allocation, e.g. WCR 1 expenditure on mental illness services for children and adolescents can be assigned directly to the corresponding programme budget category.

Data is provided in an Excel form according to a structured template with initial submission of data in September following the end of the financial year. The programme budgeting data is the final product of a complex costing process.

Extensive guidance is provided on the main costing process and separate guidance for completion of the programme budgets stage for organisations to follow.

Data validation

Data validation occurs at multiple stages before publication.

Data is collected by the NHS Executive who undertakes validation of the initial data submission. Further quality assurance of the data is undertaken alongside Welsh Government and NHS organisations have opportunity to respond prior to data being finalised. Any queries are raised with relevant LHBs before publication of the data.

Data is provided to Welsh Government for publication. Welsh Government compiles analyses and conducts some final validations in the form of checks against previous periods and additional checks on the data for the reference period such as ensuring subcategories tally, health board totals add up to Wales totals and costs per head and percentage costs are calculated correctly.

The control total for the Programme Budgets exercise comprises the total

expenditure of local health boards in Wales and the Public Health Wales NHS Trust. The total figure reported in the local health board return must agree with the total expenditure figure shown in the local health board accounts (operating cost statement).

Data compilation

Expenditure data are presented at current prices, i.e. prices relating to the period being measured, and therefore include the effects of inflation in the prices of goods and services. This should be considered when making comparisons between years. An increase in expenditure does not necessarily mean an increase in the quantity of goods and services purchased.

To calculate the expenditure per head of population, the closest Office for National Statistics (ONS) Mid-Year Population Estimates at the time of publication are used. The mid-year estimates for 2022 were used as a denominator for 2022-23 expenditure.

Adjustment

No adjustments are carried out on the data.

Quality management

Quality assurance

Our statistics are produced to high professional standards set out in the **Code of Practice for Statistics**. They are produced free from any political interference.

All outputs are checked prior to publication and quality assurance is undertaken in line with the following **quality management strategy** and the Code of Practice for Statistics.

Quality assessment

The statistics in this release are assessed each year and meet the requirements of the Code of Practice for Statistics. The statistics are of sufficient quality to be published as official statistics.

Relevance

User needs

The main users are:

- ministers, members of the Welsh Parliament, and the Members Research Service in the Welsh Parliament
- NHS organisations
- the Health and Social Services Group in the Welsh Government
- other areas of the Welsh Government
- local authorities
- the research community
- students, academics and universities
- individual citizens and private companies

These statistics will be used in a variety of ways. Some examples of these are:

- advice to Ministers
- to inform debate in the Welsh Parliament and beyond

- to monitor and evaluate expenditure in the NHS in Wales as well as informing funding arrangements

The statistics may also be useful for other UK governments and departments.

User satisfaction

We encourage users of the statistics to contact us to let us know how they use the data.

If you are a user and do not feel the above list adequately covers you, or if you would like to be added to our circulation list, please let us know by e-mailing **stats.healthinfo@gov.wales**.

Completeness

The statistics presented are fully comprehensive of all expenditure in the NHS, therefore all expenditure is covered in one of the 23 categories.

Where expenditure cannot be confidently allocated to a clinical category it is allocated to the ‘Other’ category. A large portion of general medical services expenditure is allocated to the ‘Other’ category as there is insufficient data to allocate it to relevant clinical categories.

Accuracy and reliability

Overall accuracy

The allocation of expenditure to programme budgeting categories is not a

straightforward task and methods of allocation are improving each year. As a consequence, comparisons of the broad patterns over time are likely to be of more value than analysing more granular year-on-year changes. Allocation to sub-categories involves a degree of estimation and comparisons are limited by the scale of uncoded activity, therefore subcategory level data should be used with caution. Any small short term change may be due to changes in allocation methodology and not actual changes in spending priorities.

Where significant changes to the methodology are known to cause a large change in the data from year-to-year, they will be highlighted in the statistical release and this quality report. The category of circulatory disease is not broken down in releases because the subcategory of 'Other circulatory disease' is likely to include a significant amount of expenditure for coronary heart disease and cerebrovascular disease which cannot be analysed directly to those two subcategories.

Significant changes to the data calculation methodology were introduced in 2012-13. Therefore any comparison with data before and after this period is limited because any changes in trend may be only due to methodology rather than actual changes in expenditure.

From 2017-18, analysis is based on data collected from NHS organisations in partnership with a new all Wales costing system software supplier. This new software offers the opportunity for Wales to further develop its service costing processes to introduce greater scope, depth and granularity of costed activity to support future objectives of greater consistency within Wales and with England, data analysis and management information. Organisations are confident that new costing models are robust and testing regimes have not identified any significant areas of disparity.

A significant decrease in clinical coding performance in acute hospital services was reported for 2017-18 resulting in an increase in "invalid / uncoded data" of 52.5% compared with 2016- 17. The increase was concentrated in two

organisations, Aneurin Bevan and Hywel Dda. The impact on other programmes of care is unknown and could potentially be impacting any programme significantly driven by acute hospital based care. Although clinical coding performance in 2018-19 improved from the previous year's position, uncoded activity remained high and was concentrated in the same two organisations. Both organisations employed additional processes to ensure the impact of uncoded activity was minimised.

A substantial change to the coding of sepsis related diagnoses was introduced in ICD-10 Coding Standards relevant to 2017-18 causing a presumed jump in the number of sepsis cases. This caused a significant shift of expenditure from a number of programme categories into the 'infectious diseases' category resulting in an increase of £45 million (52.2%) from 2016-17. The standard was refined further in April 2018. The movement has been partially reversed by the refinement in coding during 2018-19 and as a consequence the 'Infectious diseases' category reduced by £15 million overall. The impact to other programmes is difficult to assess and identify from natural year-on-year movement.

In 2019-20 the scope of the costing process in Wales was expanded to include the costing of activities that were incomplete at the end of the costing period, fully aligning the boundaries of activity and costs for the first time and allowing the reporting of the full scope of activities that impact a costing period. Prior year costing included only those activities that had completed within the costing period. This had minimal impact as costs would, in the vast majority of instances, have been included in the same programmes pre and post change.

The coronavirus (COVID-19) pandemic greatly impacted on the programme budgets data particularly in 2020-21 and 2021-22, and to a lesser extent in 2022-23. A number of programmes experienced considerable fluctuation in year and across years as a result of the direct and indirect impact of the pandemic. The impact of the pandemic in the detail of the Programme Budgeting analysis is extensive and complex. Four key aspects to consider are:

- The impact of the direct cost of COVID-19 services and care of COVID-19 patients on the programme profile.
- The impact of changes in services, activity levels and profiles as emphasis shifts to recovery from the peak of pandemic response.
- The impact of a change of costing process in 2020-21 necessitated by the impact of the pandemic on hospital services (and a return to pre-pandemic process in 2021-22).
- The impact of cost increases across all services from additional pandemic related activities (protective clothing, cleaning etc.).

The peak of the response to the pandemic in 202-21 required a change to costing process to overcome the challenges of extraordinary flexibility and versatility of services and working practices. Service recovery and the return of more structured working practice allowed a return to established pre-pandemic costing practice in 2021-22.

The methodology change had a significant impact on the Programme Budget spend profile over the 2020-21 and 2021-22 period, a result of differing emphasis on activity proportions and absolute levels, with elements of year on year movements over the period being an impact of that change as much as result of service change, use or investment.

In 2022-23, a review determined that, whilst historically mapping of diagnosis codes relating to Burns was divided between Skin Problems and Trauma and Injuries programmes, there was no significant reason for this division thus all Burns codes were moved to Skin Problems in 2022-23. The vast majority of Burns spend in 2022-23 would have been recorded in Trauma and Injuries in previous years. The movement has caused an increase in Skin Problems spend in 2022-23 however overall spend on burns is likely to have decreased slightly, as indicated by a reduction in Admitted Patient Care activity.

Sampling error

No sampling is used in this data collection.

Non-sampling error

Not all expenditure can be allocated to specific programme budget categories. The ‘Other’ programme category contains significant service areas where organisations are unable to allocate costs to programmes with current data sources and methodologies.

The largest subgroup within the Other programme category (42.1%) is expenditure on General Medical Services, which cannot be reasonably estimated at disease specific level. In 2022-23, 93.8% of Primary Care General Medical Services costs were not allocated to clinical programme categories, and instead were captured in the ‘Other’ category. A large proportion (26.1%) of Continuing Healthcare spend was also unallocated to programme categories (and accounted for 11.7% of the Other category expenditure). In all, with the addition of Open Access, unallocated PHW function and non-coded (mostly) secondary care elements, £1.2 billion (13.5%) of spend sat in the ‘Other’ category and was outside the clinical programmes in 2022-23. This should always be considered in the presentation of specific programme costs.

The expenditure allocation process incorporates an opportunity for all organisations to implement provisions allowing clinically uncoded activity to be assigned to programmes where there was a high degree of confidence from data indicators to do so. A number of organisations had decreased levels of activity meeting clinical coding targets in 2022-23 and a significant review of the process was undertaken to ensure maximum benefit for analysis whilst minimising outcome risk.

The process was revised and expanded in 2022-23, based on three years of coded activity, placing reliance on consistent patterns of allocation to programme within specialties across those three years. Despite this basis, the process expansion and high levels of uncoded activity in year have impacted year on year comparability in programmes, particularly where breakdown to sub-categories is provided in the data. All local health boards except from Powys adopted this approach in 2022-23.

Data revision

In the unlikely event of incorrect data being published, revisions would be made and users informed in conjunction with our **revisions, errors and postponements** arrangements.

There have been no revisions since the 2016-17 update published in April 2018.

Seasonal adjustment

No seasonal adjustment is used in these statistics.

Timeliness and punctuality

Timeliness

Initial submission of data to the Finance Delivery Unit is typically in September and data is finalised by the end of October. Welsh Government aims to publish the annual release in April of the year following the reference period the expenditure relates to (13 months from the last day of the reference period).

Punctuality

Statistics are published as soon as possible after the relevant time period.

All outputs adhere to the Code of Practice by pre-announcing the date of publication through the **upcoming calendar**. Furthermore, should the need arise to postpone an output this would follow our **revisions, errors and postponements** arrangements.

Coherence and comparability

Geographical comparability

Reforms to the NHS in Wales took effect from 1 October 2009 and replaced the previous 22 commissioning local health board and provider NHS Trust organisations by a smaller number in a new structure of 7 geographical local health boards. Local health boards were further amended on 1 April 2019.

Comparability over time

Data for 2005-06 to 2008-09 is reported for local health boards prior to reorganisation on 1 April 2019.

Coherence (cross domain)

The Treasury publishes an analysis of identifiable public spending for countries and regions in the Public Expenditure Statistical Analyses (PESA). PESA is probably the most appropriate source for comparing health spending by country

as it is compiled using a common classification system across the UK. The NHS programme budget figures in this release include the total expenditure of local health boards in Wales and the Public Health Wales NHS Trust. However, these figures do not include capital expenditure and items of expenditure funded centrally by the Welsh Government, such as training and research, which will be included in the PESA figures. The programme budget figures are therefore not directly comparable with the PESA figures.

Programme budgets were published by NHS England for expenditure in 2013-14 commissioned by Clinical Commissioning Groups (CCGs), but excluded expenditure commissioned by NHS England (such as specialised care services and primary care services), expenditure of Public Health England and expenditure on public health functions financed by local authorities from grants made by Public Health England. Most screening services, such a screening for cancer, were not commissioned by CCGs and therefore were not included in published 2013-14 data for England, whereas in Wales screening expenditure was included in services to healthy individuals.

Comparisons between programme budgets for Wales and England should therefore not be made unless these factors can be taken into account.

Coherence (internal)

Data is collected from each health board on a consistent basis and therefore comparisons between health board areas are valid.

Accessibility and clarity

Publication

The statistics are published in an accessible, orderly, pre-announced manner on the Statistics and Research section of the Welsh Government website. An **annual update** is published with high level analysis on our website. Statistical releases are accompanied by more detailed tables on StatsWales.

We aim to use plain English in our outputs and all outputs adhere to the Welsh Government accessibility policy. Our statistical releases are published in Welsh and English. Statistical releases are created in-line with the Statistical Services style guide for statistical reports. Alternative text is used to describe non-text content such as charts.

Online databases

The full historical series of statistics are published as interactive data tables on **StatsWales**.

Other

Data can be manipulated on-screen on **StatsWales** and downloaded in a variety of formats including Open Data.

Documentation on methodology

The following sources of information are relevant to the data collection and the published statistics on programme budget expenditure:

International Classification of Diseases Version 10 codes (ICD 10) (World Health Organization)

Quality documentation

All quality information is published in this quality report.

Cost and burden

Information about the costs associated with the collection and aggregation of the data specifically for the purpose of producing the official statistics is not available.

Confidentiality

The Welsh Government statistics and research **statement on confidentiality and data access** describes our approach to data confidentiality and conforming with the **Code of Practice for Statistics**.

Feedback

We welcome feedback on any aspect of these statistics which can be provided by email to **stats.healthinfo@gov.wales**.

Produced by the Knowledge and Analytical Services, Welsh Government

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