Office for National Statistics

Statistical bulletin

# Public service productivity, quarterly, UK: October to December 2024

UK total public service and healthcare productivity, inputs, and output, to provide a short-term, timely indicator of annual productivity estimates. These are official statistics in development.

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Release date:
8 May 2025

Next release:
To be announced

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# 1 . Main points

- We are publishing quarterly estimates of healthcare inputs, output, and productivity for the second time, alongside the estimates of total public service productivity, inputs, and output; healthcare is the largest individual service area by share of expenditure, at approximately 39.2%.

- This is our first quarterly release since incorporating improvements to our accredited annual release following the National Statistician's Independent Review of the Measurement of Public Services Productivity, and includes a more complete healthcare benchmark for the financial year ending 2023 consistent with National Accounts; as such, we have positively revised estimates of public service productivity relative to 2019 since our last quarterly release.

- Total public service productivity in the UK was estimated to have grown by 0.1% in Quarter 4 (Oct to Dec) 2024, compared with Quarter 4 2023, while healthcare productivity was estimated to have grown 0.8% over the same period; the increases were caused by faster growth in output, compared with inputs, for both total productivity and healthcare productivity.

- Annualised quarterly estimates suggest that total public service productivity fell for a second consecutive year in 2024 (0.3%), following a revised fall in 2023 (0.2%; revised up from a fall of 0.6%); this reflects upward revisions to healthcare output consistent with National Accounts.

- Annualised quarterly estimates also suggest that total public service productivity in 2024 is estimated to be 4.6% lower than 2019 levels, while healthcare productivity is estimated to be 9.6% lower than in 2019.

These are official statistics in development. We advise caution when comparing the annualised quarterly estimates in 2023 and 2024 with our annual estimates before the coronavirus (COVID-19) pandemic (which are accredited official statistics). Some sources and methods differ, and the structure of inputs and output changed in response to the pandemic. As we develop our methods, these estimates are subject to revision as more up-to-date data become available. Read more in Section 9: Data sources and quality.

# 2 . About these estimates

This bulletin presents official statistics in development for total public service productivity, inputs, and output. It also includes quarterly statistics on healthcare productivity, inputs, and output for the second time.

Healthcare is the first service area to be separately included in our release. This is because it is the largest public service area by share of general government expenditure (39.2%) and is often the main reason for overall public service productivity movements. We are working to enhance productivity estimates at the service-area level and introduce other improvements, as recommended in the National Statistician's Independent Review of the Measurement of Public Services Productivity.

Our quarterly estimates are official statistics in development (also known as experimental statistics) and provide a short-term, timely indicator of total public service productivity and healthcare productivity. These statistics take no further account of changes to the quality of public services in periods beyond the latest statistics published for 2022 in our annual Public service productivity: total, UK article, which are accredited official statistics. Methodological differences between the annual and quarterly estimates, and a description of the quarterly data, can be found in our recently updated Sources and methods for public service productivity estimates methodology.

We focus our analysis in this bulletin on quarter-on-previous year movements, rather than quarter-on-previous-quarter, because these better reflect underlying productivity trends and minimise the effect of short-term volatility. We also make comparisons with pre-coronavirus (COVID-19) pandemic years, by comparing our annualised quarterly estimates for 2023 and 2024 (which are experimental statistics) with our annual estimates up to 2022 (which are accredited official statistics). Therefore, pre-pandemic comparisons should still be made with caution given methodological differences between the quarterly and annual datasets.

Recent improvements to our annual total public service productivity estimates have also resulted in notable revisions to previous pre-pandemic comparisons, as has the implementation of our latest healthcare benchmark for the financial year ending 2023 (see Section 6: Revisions to public service productivity estimates). This benchmarks our timely quarterly series against a more comprehensive annual dataset. More information can be found in our GDP quarterly national accounts, UK: October to December 2024 bulletin. Ongoing coherence work between our annual and quarterly datasets should help minimise future revisions to our experimental statistics.

Users of these statistics should consider that all our data are seasonally adjusted. The usual seasonal pattern has changed beyond 2023 because of the impact of the coronavirus pandemic. We have adopted a new method for this reason, which is supported by experts on seasonal adjustment. For more information, see Section 9: Data sources and quality.

These estimates are not a measure of the productivity of an individual worker within the public sector. Instead, they reflect the volume of services delivered to end users, relative to the volume of total inputs required to deliver these services. The measure is dominated by healthcare and education services because of their combined expenditure shares (over half). Almost a third of services are currently indirectly measured using an inputs-equals-output basis in which productivity growth is assumed to be zero.

Unless stated otherwise, all growth rates reported in this article are indexed to the base year of 1997.

Healthcare productivity estimates are presented for the second time in this bulletin. Given their status as official statistics in development and the challenges of post-pandemic measurement, we welcome feedback and comments from users to psp@ons.gov.uk.

# 3 . Quarter-on-previous-year productivity estimates

We advise looking at changes over a longer period, such as quarter-on-quarter a year ago growth rates, because these better reflect underlying productivity trends and minimise the effect of short-term volatility than comparisons over a shorter period, such as comparing with the previous quarter.

## Quarter-on-previous-year total public service productivity estimates

Total public service productivity in the UK was estimated to have grown by 0.1% in Quarter 4 (Oct to Dec) 2024, compared with the same quarter in 2023. Over this period, inputs and output grew by 2.5% and 2.6%, respectively. Strong productivity growth from healthcare was partly offset by falls in social protection, and justice and fire, and further affected by services indirectly measured whereby productivity growth is assumed to be zero (such as military defence and other government services).

**Figure 1: Public service productivity is estimated to have grown by 0.1% in October to December 2024, compared with the same quarter a year ago**

**Quarter-on-quarter a year ago growth rates in total public service productivity, inputs, and output, UK, Quarter 1 (Jan to Mar) 2019 to Quarter 4 (Oct to Dec) 2024**

**Source: Public service productivity from the Office for National Statistics**

**Notes:**

1. Quarterly estimates of productivity are calculated using seasonally adjusted inputs and seasonally adjusted output.

2. This chart inverts the growth rates of inputs, as positive inputs growth contributes negatively to productivity.

3. Q1 refers to Quarter 1 (Jan to Mar), Q2 refers to Quarter 2 (Apr to June), Q3 refers to Quarter 3 (July to Sept), Q4 refers to Quarter 4 (Oct to Dec).

## Quarter-on-previous-year healthcare productivity estimates

Healthcare accounted for approximately 39.2% of the total public expenditure in Quarter 4 2024. It includes several activities, including elective and non-elective services, general practitioners (GPs), prescription drugs, outpatient, mental health, community health, and accident and emergency.

Healthcare productivity is calculated in the same way as total public service productivity: by dividing output by the respective inputs used to produce it. The estimates of each component of inputs (labour, intermediate consumption, capital, and social transfers in kind), as well as output, are based on our National Accounts data. For more information on this, and on the specific components included in healthcare inputs and output, please see Section 9: Data sources and quality.

Figure 2 shows healthcare inputs, output, and productivity as growth rates between consecutive years. Healthcare productivity was estimated to have grown by 0.8% in Quarter 4 2024, compared with the same quarter in 2023. Revised figures suggest this is the first growth in healthcare productivity since Quarter 1 (Jan to Mar) 2024, when it grew by 0.1%. Inputs and output grew by 3.7% and 4.5%, respectively, in Quarter 4 2024, compared with the same quarter in 2023.

**Figure 2: Healthcare productivity was estimated to have grown by 0.8% in October to December 2024, compared with the same quarter a year ago**

**Quarter-on-quarter a year ago growth rates in healthcare productivity, inputs, and output, UK, Quarter 1 (Jan to Mar) 2019 to Quarter 4 (Oct to Dec) 2024**

**Source: Public service productivity from the Office for National Statistics**

**Notes:**

1. Quarterly estimates of productivity are calculated using seasonally adjusted inputs and seasonally adjusted output.

2. This chart inverts the growth rates of inputs, as positive inputs growth contributes negatively to productivity.

3. Q1 refers to Quarter 1 (Jan to Mar), Q2 refers to Quarter 2 (Apr to June), Q3 refers to Quarter 3 (July to Sept), Q4 refers to Quarter 4 (Oct to Dec).

# 4 . Annualised estimates

This section focuses on the annualised estimates of our quarterly total and healthcare public service productivity, inputs, and output, which are official statistics in development. The annualised official statistics in development are based on a quarterly annualised growth rate (QAGR) approach, which produces "nowcasted" estimates for 2023 and 2024.

Annualised inputs and output estimates are derived by averaging the non-seasonally adjusted index values across four quarters of a calendar year. Productivity estimates are calculated by dividing the annualised output estimates by the annualised inputs estimates. The annual growth rates in these annualised estimates are applied to the 2022 accredited official statistics, to provide more timely annual estimates for 2023 and 2024. The same method has been used in our Developing nowcast methodologies for public service productivity, UK article.

These estimates are official statistics in development and users should note the confidence interval around them. They should be treated with caution until our 2023 and 2024 annual accredited estimates become available. Annualised estimates differ from our annual total public service productivity accredited official statistics. This is because they are based on different data sources and do not account for changes to the quality of public services. More information can be found in Section 9: Data sources and quality. The QAGR approach implies that the growth in our accredited official statistics series will follow the same trend as our official statistics in development.

## Annualised total public service productivity estimates

Figure 3 shows productivity, inputs, and output in an annual context over a longer period. It combines our accredited annual estimates from 1997 to 2022 with official statistics in development for 2023 and 2024, derived using the QAGR approach. Confidence intervals (CI) are included in Table 1 to provide context about the uncertainty attached to these growth estimates.

Central estimates suggest that annual total public service productivity fell by 0.2% in 2023 (95% CI, negative 2.1%, positive 1.8%), before falling again by 0.3% in 2024 (95% CI, negative 2.8%, positive 2.3%). Given that the 95% CI for total public service productivity in 2023 and 2024 include zero, we are unable to predict with confidence whether there was growth or contraction in 2023 and 2024. Both inputs and output grew in 2023 and 2024, with inputs estimated to have grown at a faster rate than output in both years.

**Figure 3: Public service productivity is estimated to have fallen by 0.2% in 2023 and 0.3% in 2024**

**Total public service productivity, inputs, and output, UK, 1997 to 2024**

**Source: Public service productivity from the Office for National Statistics**

**Notes:**

1. Estimates for 2023 and 2024 are official statistics in development and are annualised quarterly estimates.
2. Estimates from 1997 to 2022 are annual accredited official statistics.

The width of our confidence intervals partly reflects the impact of ongoing improvements being made to these experimental statistics. For example, following the improvements introduced in our accredited annual estimates, total public service productivity is estimated to have grown by 4.0% in 2022 compared with growth of 1.1% according to previously published annualised estimates. The wide confidence intervals reflect the need to continue our efforts to improve coherence between the annual and quarterly estimates and, over time, these should narrow.

Table 1: Nowcast estimates for 2023 and 2024 total public service productivity, inputs, and output growth rates, UK

| | | | 95% Confidence Interval | |
|---|---|---|---|---|
| | **Nowcast estimate for** | **Central estimate** | **Lower** | **Upper** |
| **Productivity** | **2023** | -0.2 | -2.1 | 1.8 |
| | **2024** | -0.3 | -2.8 | 2.3 |
| **Inputs** | **2023** | 1.8 | -0.8 | 4.3 |
| | **2024** | 3.3 | 0.2 | 6.4 |
| **Output** | **2023** | 1.6 | 0.0 | 3.1 |
| | **2024** | 3.0 | 1.1 | 4.9 |

Source: Public service productivity from the Office for National Statistics

Notes

1. We use a quarterly annualised growth rate nowcast. For more details please see Developing nowcast methodologies for public service productivity, UK.

## Annual healthcare productivity estimates

Figure 4 shows healthcare productivity, inputs, and output in an annual context. It combines our accredited annual healthcare estimates from 1997 to 2022 with “nowcasted” official statistics in development for 2023 and 2024, derived using the QAGR approach. Please note the confidence intervals associated with the nowcast estimates provided in Table 2.

Central estimates suggest that healthcare productivity is estimated to have grown by 0.6% in 2023 (95% CI, negative 3.6%, positive 4.7%). This was upwardly revised from a 0.6% fall, and reflects revisions to healthcare output consistent with National Accounts revisions (see Section 5: Comparisons with pre-coronavirus (COVID-19) pandemic levels). Healthcare productivity is estimated to have fallen by 0.3% in 2024 (95% CI, negative 5.3%, positive 4.6%). Both inputs and output grew in 2023 and 2024, with output estimated to have risen at a faster rate than inputs in 2023, but not in 2024. Confidence intervals for healthcare inputs and output are shown alongside those for productivity in Table 2.

**Figure 4: Healthcare productivity is estimated to have grown by 0.6% in 2023 and fallen by 0.3% in 2024**

**Healthcare productivity, inputs, and output, UK, 1997 to 2024**

**Source: Public service productivity from the Office for National Statistics**

**Notes:**

1. Estimates for 2023 and 2024 are official statistics in development and are annualised quarterly estimates.
2. Estimates from 1997 to 2022 are annual accredited official statistics.

Table 2: Nowcast estimates for 2023 and 2024 healthcare productivity, inputs, and output growth rates, UK

| | | | 95% Confidence Interval | |
|---|---|---|---|---|
| | **Nowcast estimate for** | **Central estimate** | **Lower** | **Upper** |
| **Productivity** | **2023** | -0.6 | -3.6 | 4.7 |
| | **2024** | -0.3 | -5.3 | 4.6 |
| **Inputs** | **2023** | 0.1 | -4.3 | 4.4 |
| | **2024** | 5.2 | 0.4 | 9.9 |
| **Output** | **2023** | 0.7 | -1.0 | 2.3 |
| | **2024** | 4.8 | 2.7 | 6.9 |

Source: Public service productivity from the Office for National Statistics

Notes

1. We use a quarterly annualised growth rate nowcast. For more details please see Developing nowcast methodologies for public service productivity, UK.

# 5 . Comparisons with pre-coronavirus (COVID-19) pandemic levels

The coronavirus (COVID-19) pandemic had a substantial impact on public services. Inputs rose in 2020, reflecting the extra resources provided to public services to deal with the pandemic. Conversely, output fell in 2020 as many services were delivered in a different way than in 2019, with additional costs and mandatory restrictions present for certain services.

Our pre-pandemic analysis published in previous releases compared the latest available quarter with the last full quarter before the pandemic, Quarter 4 (Oct to Dec) 2019. However, that approach amplifies known methodological differences between the quarterly and annual estimates (see Section 9: Data sources and quality). Therefore, to avoid confusion and align our analysis to our annual accredited official statistics of total public service productivity, we present our pre-pandemic comparisons in Table 3 comparing our latest annualised quarterly estimates (which remain experimental) with our accredited annual estimate for 2019.

The annualised quarterly estimates show that productivity in 2024 remains below pre-pandemic levels (4.6% lower than 2019). Previous estimates suggested productivity levels in 2023 were 8.7% below pre-pandemic levels, however, our latest estimates indicate productivity was 4.3% lower than 2019. This reflects estimates in our Public service productivity: total, UK, 2022 article showing stronger productivity growth in 2022, compared with previously annualised quarterly estimates, and upward revisions to healthcare productivity throughout 2023.

The annualised quarterly estimates also show that healthcare productivity in 2024 remains below pre-pandemic levels (9.6% lower than 2019). Our latest estimates indicate productivity was 9.4% below pre-pandemic levels in 2023. Previously published estimates showed less of a recovery compared with pre-pandemic levels than we show here. Section 6: Revisions to public service productivity estimates, explains the reasons behind these revisions.

Table 3: Comparing recent public service productivity levels with 2019 levels

| Year | Total PSP | Healthcare | Note |
|---|---|---|---|
| **2022** | 4.1% lower | 9.9% lower | Comparing Annual 2022 with Annual 2019 |
| **2023** | 4.3% lower | 9.4% lower | Comparing Annualised quarterly estimates with Annual 2019 |
| **2024** | 4.6% lower | 9.6% lower | Comparing Annualised quarterly estimates with Annual 2019 |

Source: Public service productivity from the Office for National Statistics

Notes

1. Estimates for 2022 are based on annual accredited official statistics.
2. Estimates for 2023 and 2024 compare official statistics in development (that is, quarterly annualised estimates) and annual accredited official statistics.

# 6 . Revisions to public service productivity estimates

The public service productivity estimates follow our National Accounts Revisions Policy.

Figure 5 compares our latest public service productivity index estimates with those previously published in our Public service productivity, quarterly, UK: July to September 2024 bulletin. Figure 6 compares our latest growth estimates with those previously published.

At the aggregate level, upward revisions reflect stronger estimates of productivity growth in 2022 because of measurement improvements introduced in our Public service productivity: total, UK, 2022 article, compared with previously published annualised quarterly estimates. It also reflects upward revisions to general government volume output estimates for health consumption from Quarter 1 (Jan to Mar) 2023 onwards. This is partly because of source data revisions and the implementing of our latest healthcare benchmark for the financial year ending 2023. This benchmarks our timely quarterly series against a more comprehensive annual dataset. More information can be found in our GDP quarterly national accounts, UK: October to December 2024 bulletin.

**Figure 5: Revisions to total public service productivity, inputs and output**

**Annual and annualised indices for total public service productivity, inputs, and output, UK, 1997 to 2023**

**Source: Public service productivity from the Office for National Statistics**

**Notes:**

1. Each index represents a consolidated time series consisting of Annual estimates up to 2022 (or 2021, for previously published estimates) and annualised quarterly estimates up to 2023 Q4.

**Figure 6: Revisions to public service productivity quarter-on-quarter a year ago growth**

**Total public service productivity growth, UK, Quarter 1 (Jan to Mar) 2019 to Quarter 3 (July to Sept) 2024**

**Source: Public service productivity from the Office for National Statistics**

**Notes:**

1. Q1 refers to Quarter 1 (Jan to Mar), Q2 refers to Quarter 2 (Apr to June), Q3 refers to Quarter 3 (July to Sept), Q4 refers to Quarter 4 (Oct to Dec).

For more detailed information on revisions to productivity, inputs, and output, please see Table 5 in our accompanying dataset.

# 7 . Data on public service productivity

Public service productivity, quarterly, UK
Dataset | Released 8 May 2025
UK total public service productivity and healthcare productivity. Includes estimates of inputs, output, productivity, and revisions. These are official statistics in development.

# 8 . Glossary

### Deflator

A price index used to remove inflation effects from current price estimates of expenditure to provide a volume estimate.

### Direct output measurement

Using a cost-weighted activity index to estimate the non-quality adjusted output of a service provided, such as the number of students in state schools, adjusted for attendance to produce an estimate of total hours of schooling delivered each year. Differs from indirect output measurement, where output is assumed equal to inputs.

### Intermediate inputs

Also referred to as “goods and services”, or “intermediate consumption” (the national accounts term). Intermediate inputs include goods and services used up in the provision of a public service, such as utilities, energy, professional services, and medical supplies, among others.

### Public services

These are services delivered by or paid for by government (central or local). If paid for by the government, they may be delivered by a private body – for example, the provision of nursery places by the private sector, where these places were funded by the government.

### Quality adjustment

A statistical estimate of the change in the quality of a public service, using an appropriate metric, such as safety in prisons as part of the public order and safety adjustment.

### Service area

The way we refer to the breakdown of public services into seven areas, closely following Standard Industrial Classification (SIC) codes.

### Standard Industrial Classification

The industrial classification applied to the collection and publication of a wide range of economic statistics.

## 9 . Data sources and quality

### Data sources

We use different sources and methods to produce our official statistics in development quarterly statistics and our annual accredited official statistics.

This bulletin uses expenditure data from the quarterly UK National Accounts, split into seven categories:

- healthcare
- education
- social protection
- justice and fire
- military defence
- central government services
- local government services

Data sources and methods differ from the annual publication, depending on data availability and appropriateness on a quarterly or annual basis. For example, some inputs measures that are available on an annual basis as direct measures are not available on a quarterly basis. These missing quarterly direct input measures may only be obtainable using indirect measures (deflated expenditure).

Our total public service productivity estimates (accredited official statistics) also use different deflators to estimate volumes of inputs other than those used in this release. As such, estimates are not directly comparable between the quarterly and annual publications.

This release does not reflect changes to the quality in public service output whereas our accredited total public service productivity estimates do, for some public output. Estimates of productivity, inputs and output up to 2022 are reported on an annual basis and use data from our Public service productivity, total, UK, 2022 article. Further information about our annual accredited official statistics can be found in our Public service productivity: total, UK, quality and methodology information (QMI).

More information on the differences between the official statistics in development estimates and the annual estimates are described in Section 12 of our Sources and methods for public service productivity estimates methodology. Importantly, quality adjustments are not applied to our quarterly official statistics in development estimates.

## Revisions

The estimates in this bulletin reflect the revisions included in our GDP quarterly national accounts, UK: October to December 2024 bulletin; including revisions to healthcare output because of the annual national accounts benchmarking process. This release also contains data that are consistent with Blue Book 2024 and are in line with our National Accounts Revisions Policy. More information on the changes introduced in Blue Book 2024 can be found in Section 6 of our Public service productivity, quarterly, UK: April to June 2024 bulletin.

The estimates published in this bulletin are also affected by the quarterly revisions of our seasonal adjustment methods. Within our accredited annual total public service productivity statistics, the seasonal adjustment methods will continue to be reviewed when new quarters are added to our estimates. Future quarters may deliver data that could affect our view of the seasonal adjustment time path, if we discover this is a turning point in seasonal behaviour.

## Measuring public service productivity

Productivity is calculated by dividing output by the respective inputs used to produce it. Therefore, productivity will increase when more output is being produced for each unit of inputs used. Estimates of inputs, output, and productivity are given both as growth rates between consecutive periods and as indices, showing the cumulative trend over time.

Our quarterly estimates of public service productivity are seasonally adjusted. In official statistics, it is common for the time series to have regular, repeating, predictable variation (for example, the increase in retail sales in December). To help users interpret the series, national statistical institutes use a statistical method called seasonal adjustment to remove these effects. We use the X11 algorithm in the X-13 ARIMA-SEATS software to perform seasonal adjustment.

Since 2023, the non-seasonally adjusted data on public service productivity, particularly inputs, show a different seasonal pattern than earlier data. This is because of policies and measures adopted by government departments following the coronavirus (COVID-19) pandemic. This new seasonality was not properly captured by the seasonal adjustment model for inputs, which produced estimates that do not appear fully to reflect the current economic scenario. To revise the seasonal adjustment fully requires more quarters of data post-coronavirus to enable re-estimation of the trend of the new seasonality. For this reason, supported by experts on seasonal adjustment, we have treated data on healthcare inputs from Quarter 2 (Apr to June) 2020 until the most recent quarter as outliers, reflecting the impact of coronavirus and subsequent effects.

From Quarter 1 (Jan to Mar) 2022 until the most recent quarter, our new seasonally adjusted method follows three steps.

1. Create new healthcare inputs seasonally adjusted estimates, which include outliers from Quarter 2 2020 until Quarter 4 (Oct to Dec) 2024.

2. Calculate the difference between the healthcare outlier model and the healthcare inputs standard seasonally adjusted model.

3. Apply the difference between these models to the seasonally adjusted total inputs, adjusted by the expenditure share of healthcare, from Quarter 1 2022 until the most recent quarter.

This adjustment reflects better the trend in non-seasonally adjusted inputs data, compared with the previous seasonally adjusted model. The seasonal adjustment models applied to healthcare and total output have remained unchanged. These estimates will be subject to revision as new data become available.

For total UK public services, estimates of inputs are made up of aggregated series for individual public services, weighted together by their relative share of total expenditure on public services in current price (expenditure weight).

Inputs include labour, goods and services, social transfers in kind, and consumption of fixed capital. Expenditure data, used to estimate most inputs growth, are taken from our Gross domestic product (GDP) quarterly national accounts, UK: October to December 2024 bulletin.

Output in our productivity estimates reflects total general government final consumption expenditure (GGFCE). The quarterly national accounts produce estimates of government output, based on direct measures where they are available, and indirect measures where they are not.

Inputs for healthcare are calculated from the volume growth of healthcare labour inputs multiplied by the current price expenditure share of healthcare labour, relative to other health inputs components. We adopted the same approach to calculate the intermediate consumption, capital, and social transfer in kind (STIK). The sum of these components leads to the healthcare inputs volume growth in each period.

Our estimates of intermediate consumption, capital, and STIK are based on national accounts sources. Labour growth is based on our public sector employment data (direct implied expenditure), and deflated bank staff implied expenditure.

Our quarterly data do not currently account for staff absenteeism in our labour estimates. However, our annual accredited official statistics estimates do account for this. More information on the differences in methods and sources used in our quarterly and annual estimates of public service productivity can be found in our Public service productivity QMI.

Our public service quarterly output volume measure for healthcare is estimated based on the growth in the following types of activities in England, which have timely data collections:

- elective and non-elective treatments
- hospital outpatient first and follow-up appointments
- emergency care
- critical care services
- ambulance attendances
- community health services
- mental health treatments
- community prescribed drugs
- general practitioner (GP) consultations
- dental services
- ophthalmic services
- NHS phone and website services

More information can be found in our Improvements to healthcare volume output in the quarterly national accounts methodology.

Timely quarterly activity data are not available for all healthcare services. The quarterly healthcare output growth is estimated based on indicators for the subset of services above, where data are available. Because of limitations in data availability, these indicators cover data for England only. In the short term, we assume that the changes in these timely indicators are representative of the changes in the level of healthcare output more broadly. In the longer term, these timely estimates are benchmarked against a more comprehensive measure of healthcare output once more detailed annual data become available.

Public service productivity uses the expenditure of public services, which defines GGFCE. It includes services where employees are central or local government, as well as publicly-funded independent sector providers. This differs from the public sector, which includes public corporations but excludes publicly-funded independent sector providers, to avoid double-counting.

Public service productivity is measured differently to labour productivity and multi-factor productivity, and is not directly comparable. It reflects the volume of services delivered to end users, relative to the volume of total inputs (which include labour, intermediate consumption, and capital). The measure is dominated by healthcare and education services because of their relative size.

These estimates should be considered a first estimate of public service productivity. The Office for National Statistics (ONS), together with other government departments and experts, will continue to develop and improve its methods, which may lead to revisions of these preliminary estimates.

## Recommendations from the National Statistician's Independent Review of the Measurement of Public Services Productivity

We will continue to make incremental improvements to this release and accompanying datasets, in line with recommendations set out in the National Statistician's Independent Review of the Measurement of Public Services Productivity. These include:

- accounting for available quality adjustment data and, where this is not possible, keeping nowcasting models under annual review to provide the most accurate and timely data possible (see Recommendation 16)

- replacing the current “contribution to growth” compilation method with “chain volume measures”, and then implementing reconciliation of the quarterly estimates with the annual estimates each year, in order to align with the UK National Accounts protocols, and improve coherence and understanding for users (see Recommendation 18)

- applying the Quarterly cumulative Average Growth Rates (QAGR) method to provide more timely nowcast estimates for annual estimates as further research is undertaken to evaluate the efficacy of alternative methods in the light of the coronavirus pandemic (see Recommendation 19)

- proceeding with best practice improvements to align quarterly and annual production statistics (see Recommendation 20)

# 10 . Related links

Public service productivity: total, UK, 2022
Article | Released 27 March 2025
Updated measures of output, inputs and productivity for UK public services between 1997 and 2022, including service area breakdown, quality adjustment, and latest revisions.

Public Services Productivity Review, impact of improved methods on total public service productivity: 1997 to 2021
Article | Last revised 27 March 2025
This article presents the improvements to public service productivity measures introduced in the Public Services Productivity Review implemented in March 2025.

National Statistician’s Independent Review of the Measurement of Public Services Productivity
Report | 13 March 2025
Summarising the significant work the Office for National Statistics (ONS) has undertaken over the last 18 months to review and improve the measurement of public service productivity in the UK.

GDP quarterly national accounts, UK: October to December 2024
Bulletin | Released 28 March 2025
Revised quarterly estimate of gross domestic product (GDP) for the UK. Uses additional data to provide a more precise indication of economic growth than the first estimate.

Productivity flash estimate and overview, UK: October to December 2024 and July to September 2024
Article | Released 18 February 2025
Productivity flash estimates for Quarter 4 (Oct to Dec) 2024, based on the GDP first quarterly estimate and labour market statistics, and productivity overview for Quarter 3 (July to Sept) 2024.

Developing nowcast methodologies for public service productivity, UK
Article | Released 11 December 2024
An overview of the latest experimental methods to produce timelier estimates of annual UK public service productivity. These are official statistics in development.

# 11 . Cite this statistical bulletin

Office for National Statistics (ONS), released 8 May 2025, ONS website, statistical bulletin, Public service productivity, quarterly, UK: October to December 2024