

# Incorporating changes into total UK public service productivity

How proposed improvements to the measurement of adult social care services are expected to impact on estimates of total UK public service productivity.

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# 1 . Summary

Published alongside this release, [Measuring adult social care productivity](#) introduces substantial developments to the UK public service productivity measure for adult social care, as well as new metrics – including a new productivity measure for England on a financial-year basis.

Following consultation and any necessary further developments, these changes will be reflected in our forthcoming publication of Public service productivity estimates: total public service, UK: 2016, planned for January 2019. This release will update previously published estimates of output, inputs and productivity for public services in the UK between 1997 and 2015, in addition to new estimates for 2016.

This article provides a brief description of how these proposed data and methods improvements for adult social care (ASC) services are anticipated to impact on estimates of total UK public service productivity, output and inputs, as well as other service areas. The changes to ASC have two high-level impacts on the total public service estimates.

The improvements to data sources and methods imply estimated productivity of public service ASC fell more slowly between 1997 and 2015 than had previously been estimated. This can be expected to revise the total public service series upwards.

Alongside these improvements, the weight applied to ASC in the aggregation of the total series will change. These will be offset by the weights placed on other functions changing accordingly. Depending on the productivity growth of these areas relative to ASC, this will have an effect on total UK public service productivity, but the size and direction of this effect is currently ambiguous.

While changes outlined within [Measuring adult social care productivity](#) are focused on ASC services, such developments also have potentially broader applications – in particular regarding the development of inputs and quality adjustment of other social protection services. Following feedback and further engagement with stakeholders, we will explore the potential to make improvements across the wider public services. Any such changes would impact future estimates of total UK public service productivity, output and inputs.

## 2 . Things you need to know about this release

Annual productivity growth is estimated by comparing growth in total output with growth in the total inputs used. Output, inputs and productivity for total public services are estimated by combining growth rates for individual services. Service areas are defined by [Classification of the Functions of Government \(COFOG\)](#) rather than administrative department or devolved administration and they are:

- healthcare
- education
- social security administration
- adult social care
- children's social care
- public order and safety (excluding police)
- police
- defence
- other (including general government services, economic affairs, environmental protection, housing and recreation)

Aggregate growth for the whole of public services is generated by combining growth for each service area, multiplied by their relative share of total government expenditure (expenditure weight). This means the contribution an individual service area makes to growth in total public services is dependent on not only the growth in that service area, but also its weight relative to total expenditure. Therefore, where service areas experience productivity growth at the same rate, a service area that accounts for a greater share of total expenditure will have a greater effect on the overall growth rate for total public services.

As set out in the [Atkinson Review \(PDF 1MB\)](#), which determined the framework for public service productivity measurement, we monitor changes in government services (and in the machinery of government) alongside changes in data sources and methods used, to keep our measures up to date. In addition, the Atkinson Review argued:

“The output of the government sector should in principle be measured in a way that is adjusted for quality, taking account of the attributable incremental contribution of the service to the outcome.”

To address this, we review current quality adjustment metrics, assessing their robustness, the suitability of their associated methodology and how closely they fit with the objectives of the relevant public service. At the same time, we investigate the feasibility and suitability to develop new quality adjustment for unadjusted services areas output.

These changes should then lead to a formal review, with external expertise, the results of which should be made public, with any recommendations for change and action taken.

More detail on current methods and practice can be found in Annex A and our [Sources and methods for public service productivity estimates: total public services \(PDF 111KB\)](#).

### **3 . Why changes to adult social care methods are necessary**

There are several reasons for the introduction of methods changes to the adult social care (ASC) productivity measure:

- following the [Zero Based Review](#) undertaken by NHS Digital on the main data source used for measuring output, a new cost-weighted activity index is needed from financial year ending 2015 (FYE 2015) onwards
- changes to the data source result in narrower coverage of activities after FYE 2015 and so further methods changes have been made to include services for which there are no activity data, through measuring deflated expenditure and the assumption that “output-equals-inputs”
- changes to the financing of ASC have resulted in the NHS accounting for a greater proportion of funding over time, and so a range of further methods improvements have been undertaken to ensure the measure reflects the full scope of publicly-funded ASC
- a quality adjustment has been introduced to adjust output for services’ effect on user’s social-care-related quality of life

Detail on all these changes can be found in [Measuring adult social care productivity](#).

## 4 . Impact and conclusion

The impact of these changes on adult social care (ASC) will not occur in isolation, as once incorporated into our headline measure of total UK public service productivity, there will be multiple effects on the measurement of total UK public services, as well as other service areas.

While the impact of the final version will be reflected in the January 2019 release Public service productivity estimates: total public service, UK: 2016, the following reflects, in broad categories, where and how such improvements would be expected to effect estimates.

### Change in trend

As a result of the proposed data source and methods improvements, the productivity of public service ASC is estimated to have fallen more slowly between 1997 and 2015 than had previously been published. This was driven by stronger performance in the service area’s output, although partly offset by changes to growth in its inputs series. The quality adjustment further increases productivity for the years following its introduction in 2010. This can be expected to revise the total public service series upwards.

### Change in expenditure weights

Through the suite of proposed changes to expenditure data sources relating to ASC, as set out in [Measuring adult social care productivity](#), the anticipated level of expenditure, across the entire time series, would differ from that previously published, to varying degrees.

This expenditure (relative to that of other service areas) is used to aggregate growth rates of output and inputs for individual service areas to produce estimates of total public service output, inputs and productivity. The contribution an individual service area, therefore, makes to growth in total public services is dependent on not only the growth in that service area, but also its relative weight. Therefore, where service areas experience productivity growing at the same rate, a service area that accounts for a greater share of total expenditure will have a greater effect on the overall growth rate for total public services. These changes will, therefore, impact on the contributions of all service areas to varying degrees.

For example, local government expenditure relating to housing services and social protection not elsewhere classified from financial year ending 2012 (FYE 2012) has been removed from ASC. These functions and relevant expenditure will be reallocated and captured elsewhere, as part of the overall total public service expenditure and inputs within social protection. This will change the weights used per function in the aggregation to deliver total public service productivity.

The impact of these changes will be dependent on the growth rates exhibited by these sectors relative to ASC, and is therefore ambiguous at this point.

## 5 . Annex A: Current practice for total public services

In [Public service productivity estimates: total public service, UK: 2015](#), adult social care (ASC) output is based on the quantity of social services activities measured either in terms of time (for example, number of weeks of residential care) or number of items (for example, number of meals provided). These activities, weighted together by their share of net expenditure, cover a variety of services: assessments of need, day care, home care and provision of care home places. Where the data are available, services are measured separately for different client groups. These are:

- older people aged 65 years and over (including those with mental health needs)
- younger adults aged 18 to 64 years with physical disability, learning disability or mental health needs

It is worth noting that cost-weighted activity could no longer be measured on a comparable basis from financial year ending 2014 (FYE 2014) onwards (one of the main motivations for this development work). As a result, ASC output was forecasted for 2014 and 2015, following the implementation of the [Zero Based Review](#).

Adult social care inputs, again as used in [Public service productivity estimates: total public service, UK: 2015](#), are based on or taken from a mixture of expenditure, deflator and administrative data sources. They are split into four main components: compensation of employees, local authority own-provision intermediate consumption, care provided by others and consumption of fixed capital by central and local government. Each component's expenditure is deflated using a specific deflator, to remove price effects and reflect growth in volume.

To calculate the final overall inputs index, growth rates for each of the four components of inputs are aggregated together, using expenditure weights drawn from the national accounts.

Growth rates for output and inputs are converted to indices with a base year of 1997, and the productivity index is calculated by dividing the output index by the inputs index. The percentage change in the productivity index between consecutive years provides the annual growth rates for productivity.