NHS Improvement

Reference costs 2017/18: highlights, analysis and introduction to the data

November 2018

We support providers to give patients safe, high quality, compassionate care within local health systems that are financially sustainable.

Contents

Foreword

This document supports our publication of the 2017/18 reference costs by giving:

- the headlines and analysis from the 2017/18 reference cost collection
- introduction to the data published alongside this document.

Reference costs give the most comprehensive picture available of how the 232 NHS providers in England (80 NHS trusts and 152 NHS foundation trusts) spent £68 billion delivering healthcare to patients in 2017/18. They are the average unit cost to the NHS of providing defined services to NHS patients in England in a given financial year and have been collected annually since 1997.

These 2017/18 reference costs are produced under the arrangements put in place following the Health and Social Care Act 2012, which transferred responsibility for the National Tariff Payment System in England from the then Department of Health to NHS Improvement[1] and NHS England.

The reference costs collection is the nationally mandated collection of cost data from NHS trusts and NHS foundation trusts for delivering services in the NHS. It is a rich data source and has many uses, from informing local price setting to public accountability to Parliament. The quality of the data that informs the collection is, therefore, extremely important.

It is NHS providers' responsibility to improve their internal costing processes and systems to help them better understand the cost of delivering services, leading in turn to submission of improved cost data. National bodies have a responsibility to ensure the costs collected are fit for purpose, and to support this by producing comprehensive and clear guidance.

Our aim is to move to a single national cost collection based on patient-level costing (known as PLICS). Details of progress and our medium- to long-term ambitions can be found on our website. Clear guidance on exactly which services should be submitted by which trust and in which collection will be issued well in advance of next year's collections. The collection of 2017/18 cost data was an important step in the transition to PLICS, with parallel PLICS and reference costs collections for

[1] NHS Improvement is the operational name for the organisation that since 1 April 2016 has brought together Monitor and the NHS Trust Development Authority.

admitted patient care (APC), outpatient (OP) and accident and emergency (A&E) services. We found the outputs of the two collections reconciled very closely to each other (within 1%). In the one case where they did not, we traced the reason to an inconsistency in the collections guidance for 2017/18. We will revise our guidance for 2018/19 to ensure consistency of collection.

For the collection of costs for 2018/19 in summer 2019, PLICS submission for APC, OP and A&E will be mandatory for all acute trusts. However, they will no longer be required to submit reference costs for those services as we can now derive the cost data required by users of reference costs from PLICS. This is a key step towards a single cost collection at a patient level. Reference cost collections will be phased out over the next two-to-three years for other acute services and non-acute services, replaced with a completely PLICS-based collection.

For 2018/19 acute trusts will still need to make a reference costs submission for any non APC, OP and/or A&E services. In time, we intend to include the remaining acute services in the acute PLICS collection.

Any non-acute trusts that deliver APC, OP and/or A&E services will still be required to make a full reference costs submission.

In 2019 we will run reference costs collections and voluntary PLICS collections for mental health and ambulance services with a view to discontinuing the former in 2020, subject to a decision to make these PLICS collections mandatory. We expect community health to do the same a year later.

We are developing new standards for costing education and training (E&T) and reviewing how it works alongside PLICS. This is with a view to implementing a mandatory E&T PLICS collection in 2020. We will run a small pilot E&T PLICS collection in late 2018 and a larger voluntary one in 2019 to test the new standards.

If the information you are looking for is not available in this publication or on our website, please contact costing@improvement.nhs.uk.

Our shared ambition is for costing data that supports the delivery of high quality care for patients and better value for the NHS.

Department of Health and Social Care
NHS England
NHS Improvement

Headlines and analysis

Headlines

The reference costs collected for 2017/18:[2]

- cover £68 billion of NHS expenditure, an increase of £1.9 billion (2.9%) from the £66.1 billion collected in 2016/17
- represent 62% of £110 billion total NHS revenue expenditure[3]
- include core admitted patient care (APC) costs of £27.7 billion in 2017/18, mental health costs of £7.2 billion, community care costs of £5.5 billion and ambulance costs of £1.9 billion.

Table 1 breaks down the total reference costs by department for the last five years. Changes in total costs over the period could be due to changes in the scope of the collection, changes in activity or changes to the cost of delivering services.

Table 1: Reference costs by department, 2013/14 to 2017/18 (£ billion)

Total cost by department	2013/14 (£bn)	2014/15 (£bn)	2015/16 (£bn)	2016/17 (£bn)	2017/18 (£bn)
Day case	3.8	4	4.3	4.5	4.4
Elective inpatient	5.3	5.4	5.5	5.4	5.4
Non-elective inpatient	15	15.6	16.7	17	18
Sub-total core APC	**24.1**	**25**	**26.5**	**26.9**	**27.7**
Other acute services	10.8	9.9	10.6	11	11.4
Outpatient attendance	8.1	8.5	8.8	8.9	9.3
Outpatient procedure	1.3	1.5	1.6	1.8	1.8
Accident and emergency (A&E)	2.3	2.5	2.7	3	3.2
Sub-total all acute services	**46.6**	**47.4**	**50.2**	**51.6**	**53.4**

[2] Figures exclude HRG UZ01Z – data invalid for grouping.
[3] https://www.gov.uk/government/news/department-of-healths-settlement-at-the-spending-review-2015

Total cost by department	2013/14 (£bn)	2014/15 (£bn)	2015/16 (£bn)	2016/17 (£bn)	2017/18 (£bn)
Mental health	6.6	6.7	6.9	7.1	7.2
Community health services	5.1	5.3	5.4	5.6	5.5
Ambulances	1.6	1.7	1.7	1.9	1.9
Total	**58.3**	**61.2**	**64.2**	**66.1**	**68**

Acute services

Acute services are made up of APC services and services provided in outpatient and A&E departments.

Table 2 gives the average unit costs for 2015/16 to 2017/18 by point of delivery..

Table 2: Unit costs[4] by point of delivery, 2015/16 to 2017/18 (£)

Point of delivery	2015/16 (£)	2016/17 (£)	2017/18 (£)
Day case	733	738	742
Elective inpatient (excluding excess bed days)	3,749	3,684	3,894
Non-elective inpatient (excluding excess bed days)	1,609	1,590	1,603
Excess bed day[5]	306	313	346
Outpatient attendance	117	120	125
A&E attendance	138	148	160

[4] The unit cost of day case, elective inpatient and non-elective inpatient is per finished consultant episode (FCE). An FCE is the time a patient spends in the care of one consultant. Where two or more consultants in the episode provide care, one consultant takes overriding responsibility and only one FCE is recorded. The unit cost of an excess bed day is per day. The unit cost for outpatient and A&E attendance is per attendance.

[5] Each HRG has a maximum expected length of stay (the upper trim point) and any stay in hospital beyond this is referred to as an excess bed day.

Mental health services

The total value of mental health services in 2017/18 was £7.2 billion. Of this, £4.5 billion (62.6%) was costed against mental healthcare clusters. The remaining £2.7 billion (37.4%) related to other mental health services, the costs of which are collected based on different units of activity,[6] most often a care contact or single attendance.

Table 3 gives the unit costs and total costs for mental healthcare clusters between 2015/16 and 2017/18. The cost of initial assessment is per patient assessed and may cover multiple attendances, though the assessment is usually expected to be completed in two contacts. The cost for cluster days is not per contact; instead, it is the total cost of a cluster period divided by the number of days spent in the cluster.[7]

Table 3: Summary costs for mental healthcare clusters, 2015/16 to 2017/18

	2015/16		2016/17		2017/18	
Service area	**Unit cost (£)**	**Total cost (£m)**	**Unit cost (£)**	**Total cost (£m)**	**Unit cost (£)**	**Total cost (£m)**
Initial assessment (cost per assessment)	312	193,144	301	247,229	307	268,091
Cluster days (cost per cluster day)	17	4,156,962	18	4,215,921	18	4,226,567
Total		**4,350,106**		**4,463,150**		**4,494,658**

[6] The organisation-level source data 4 zip file gives a detailed breakdown of the units of currency.
[7] Example of the cluster day calculation:

Total cost of the cluster	Days in the cluster	Cost per cluster day
£1,000,000	59,000	16.95

Other mental health services

The rest of mental health services are collected using different activity measures, and cover drug and alcohol services and secure mental health services, for example.

Table 4 summarises the unit cost and total costs of each of these service areas.

Table 4: Unit cost and total costs by contact for non-cluster mental health services, 2015/16 to 2017/18

	2015/16		2016/17		2017/18	
Service area	**Unit cost (£)**	**Total cost (£m)**	**Unit cost (£)**	**Total cost (£m)**	**Unit cost (£)**	**Total cost (£m)**
Child and adolescent mental health services	290	636,146	267	698,425	275	747,921
Drug and alcohol services	115	180,457	114	160,049	123	147,060
Mental health specialist teams (excluding adult IAPT)	165	347,836	168	380,080	192	368,809
Secure mental health services	524	823,011	n/a[8]	834,075	n/a	792,121
Specialist mental health services	328	180,314	328	245,859	315	235,767
Total		**2,167,764**		**2,318,488**		**2,291,678**

[8] In 2016/17 the methodology for collecting some secure services data was changed to a combination of pathway and cluster; it is no longer viable to compare unit costs across years.

Community health services

The total value of community health services in 2017/18 was £5.5 billion. These services are primarily collected using care contact[9] as the unit of activity. However, there are exceptions to this, such as some audiology services, elements of intermediate care and wheelchair services.

Table 5 gives the unit costs and total costs for community health services.

Table 5: Unit costs total costs for community health services, 2015/16 to 2017/18

	2015/16		2016/17		2017/18	
Service area	**Unit cost (£)**	**Total cost (£m)**	**Unit cost (£)**	**Total cost (£m)**	**Unit cost (£)**	**Total cost (£m)**
Allied health professionals	63	880,408	66	901,201	68	863,549
Audiology	57	200,959	57	196,219	58	192,355
Community rehabilitation teams	85	91,428	84	116,312	89	111,915
Day care facilities regular attendances	131	31,586	124	24,188	102	28,306
Health visiting and midwifery	61	1,053,419	65	1,057,022	65	979,489
Intermediate care	127	723,880	132	825,279	125	887,241
Medical and dental	137	205,398	140	206,366	149	202,559
Nursing	45	2,081,528	44	2,147,981	45	2,104,532
Wheelchair services	177	134,967	181	128,790	187	109,601
Total		**5,403,574**		**5,603,358**		**5,479,548**

[9] The organisation-level source data 4 zip file gives a detailed breakdown of the units of currency.

Ambulance services

The total cost of ambulance services in 2017/18 was £1.9 billion, of which £1.3 billion (70%) was reported against the 'see and treat and convey' currency.

Ambulance services are split into four currencies, with units of activity as follows:

Currency	Unit of activity
Calls	Per call
Hear and treat or refer	Per patient
See and treat or refer	Per incident
See and treat and convey	Per incident

Table 6 shows the unit costs and total costs for ambulance services between 2015/16 and 2017/18.

Table 6: Costs by currency for ambulance services, 2015/16 to 2017/18

	2015/16		2016/17		2017/18	
	Unit cost (£)	Total cost (£m)	Unit cost (£)	Total cost (£m)	Unit cost (£)	Total cost (£m)
Calls	7	67,672	7	73,786	7	74,113
Hear and treat or refer	34	26,958	37	29,686	37	32,922
See and treat or refer	181	424,980	181	442,551	192	472,443
See and treat and convey	236	1,221,894	248	1,306,086	252	1,341,643
Total		**1,741,504**		**1,852,109**		**1,921,121**

Introduction to the data

The 2017/18 reference costs data is presented in four ways:

- the national schedule of reference costs (NSRC)
- the reference cost index (RCI)
- the reconciliation statement
- a database of source data.

All the data is available to download from the NHS Improvement website. Here we describe what each of the data collections contains.

National schedules of reference costs

The NSRC shows the national average unit cost for each service submitted by the 232 NHS providers in 2017/18.

The schedule shows:

- activity – measured by the number of attendances, bed days, episodes, tests or other unit of activity appropriate to the service
- total cost – measured by the number of attendances, bed days, episodes, tests or other unit of activity appropriate to the service
- the national average (mean) unit cost – that is, total cost divided by total activity
- the number of data submissions – that is, the number of providers reporting costs against each service.

The costs included in the schedule are the average of the actual reported costs. We have not removed the market forces factor (MFF) index, which reflects unavoidable cost differences due to geographical location.

To ensure a like-for-like comparison of activity and costs, the main schedule separates the costs of bed days – for elective and non-elective inpatients – that fall

inside and outside nationally set lengths of stay, known as the trim points.[10] Costs that fall inside the trim point are known as inlier costs and those that fall outside as excess bed day costs.

Within the schedule, we have used unit costs and activity reported by NHS trusts and foundation trusts to estimate:

- the total cost of each activity (by healthcare resource group – HRG, etc) across all settings
- the total cost of all activity in each setting (inpatients, day cases, outpatients, etc).

As in previous years, we exclude HRG UZ01Z (data invalid for grouping) from the schedules.

Reference costs index

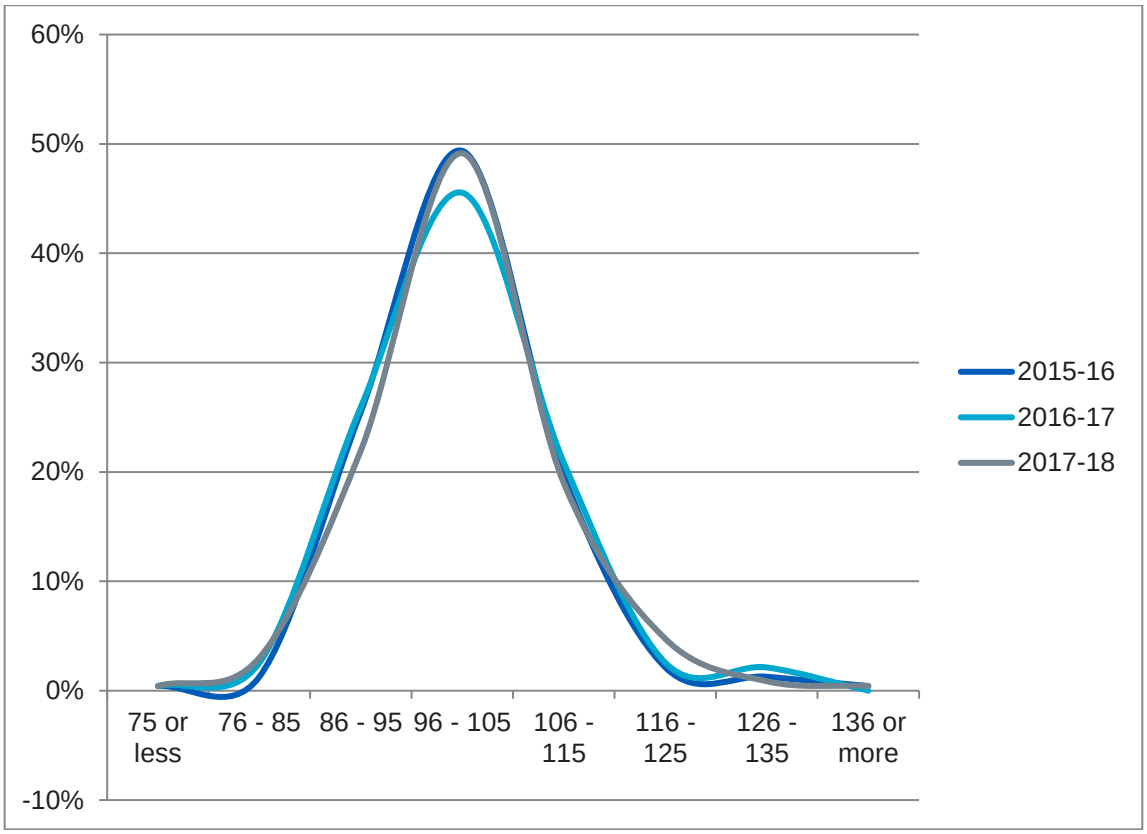
The RCI is a measure of the relative cost difference between NHS providers. It shows the actual cost of a provider's casemix compared with the same casemix delivered at national average cost. A provider with costs equal to the national average will score 100, one higher costs will score over 100 and one with lower costs will score below 100. For example, a score of 110 suggests that costs are 10% above the average, while 90 suggests costs are 10% below the average.

Whereas the schedule provides detailed information on the national average cost for each treatment or procedure, the RCI compares costs at the aggregate level for each provider.

Figure 1 presents the 2017/18 RCI distribution compared with that for the previous two years.

[10] The trim point is defined as the upper quartile length of stay for the HRG plus 1.5 times the interquartile range of length of stay. NHS Digital publishes the HRG4+ 2017/18 Reference Costs Grouper trim points.

Figure 1: RCI distribution, 2015/16 to 2017/18



Reconciliation statement

The data from the reconciliation statement is also published. The reconciliation statement is an integral part of the reference costs return and shows the adjustments made to get from providers' audited financial accounts to their total reference costs. Adjustments are made to derive the total reference costs, such as accounting for services outside the scope of reference costs collection, income received for private patients, research and development (R&D) and education and training (E&T).[11]

The reconciliation statement allows comparison of providers to understand how they have derived their total reference costs, and shows how the adjustments are made.

[11] The rationale for netting income on the reconciliation statement is due to the assumption that income received for private patients, R&D and E&T is equivalent to the costs incurred for those services.

The published data includes:

- data from the reconciliation statement, showing the adjustments made to get from providers' audited operating expenses to their total reference costs
- details of the value and volume of high cost drugs and devices
- details of the answers provided on the self-assessment checklist.

Database of source data

Alongside this document we have published a technical document, *Reference costs 2017/18: a guide to using the data*, three zip files containing the raw data submitted by trusts and the supporting information required to use the data. Information about what is in the zip files is given found in Chapter 3 of the technical document. All files can be downloaded from the NHS Improvement website.

Glossary

Costing terms used are defined in the NHS Improvement costing glossary.

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