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2022/23 National Tariff Payment System – a consultation notice

Annex DtD: Method used to calculate prices

24 December 2021

Contents

1. Introduction

1. This document is Annex DtD of the proposed 2022/23 National Tariff Payment System (2022/23 NTPS). It is proposed that this document would, as an annex, form part of the 2022/23 NTPS on publication. It describes the method used for calculating national and unit prices and the model built for delivering the method. The model is built using the software package SAS. The code is available on request – please contact pricing@england.nhs.uk.

2. The aligned payment and incentive approach, introduced in the 2021/22 NTPS, means that all services apart from unbundled diagnostic imaging are no longer in the scope of national prices. However, we propose using the same method as for national prices to calculate the unit prices for all services that had national prices in the 2017/19 NTPS (before the introduction of blended payment in 2019/20).

3. The calculation of national and unit prices for the national tariff is a complex, multi-step process. The proposed calculation method for the 2022/23 NTPS closely follows that previously used by the then Department of Health Payment by Results (PbR) team, up to 2013/14, and previous national tariffs.[1]

4. While the PbR method has not been exactly replicated each year, for the 2014/15, 2015/16 and 2016/17 national tariffs, there were minimal changes other than to reflect updates to currencies, cost uplifts, efficiency and manual adjustments. For the 2017/19 and 2019/20 NTPS, we made some more substantial changes. The 2020/21 and 2021/22 NTPS used largely the same method as 2019/20, although were based on rolling over price relativities from previous years rather than using new cost and activity data. Appendix 1 gives details of the changes made to the PbR method over time.

5. The step-by-step description of the method in Section 2 reflects the proposed method for 2022/23 prices.

[1] For a description of the 2013/14 PbR method, please see Payment by results, step by step guide: calculating the 2013/14 national tariff.

2. Step-by-step calculation process

6. Creating tariff prices involves three main stages:

   - data grouping and combining
   - data cleaning
   - price calculation.

7. Each of these involves multiple steps. This document provides details about what happens at each step.

8. For 2022/23, the two main data inputs to generate individual prices are:

   - costs – 2018/19 National Cost Collection data (both patient-level cost (PLICS) and aggregated National Cost data)
   - activity – 2018/19 hospital episodes statistics (HES) and 2018/19 PLICS.

9. 2022/23 is the first time that PLICS data has been used to calculate tariff prices (previously reference cost data was used). Section 4 gives details of the changes to the method that have been made as a result of the move to PLICS. These include grouping the PLICS data with HES to create spell activity counts and costs, replacing the episode to spell conversion process required when using reference costs.[2]

10. 2022/23 uses a single integrated model. Previously, separate modules were used for different points of delivery (eg admitted patient care, outpatient attendances, etc). The different modules applied the same overarching method but required different data inputs.

11. The following sections give details of the steps the integrated model uses to apply the price calculation method.

[2] Cost data is usually collected at episode level, while tariff prices are set for spells.

2.1 Data grouping and combining

12. The purpose of data grouping is to:

- group the HES admitted patient care (APC), outpatient (OP) and Accident and Emergency (AE) data sets for the National Cost[3] data year (ie 2018/19) with that year's Costing Grouper[4] to group activity into HRGs
- determine trimpoints and excess bed days for HES admitted patient care (APC) spell activity

13. The purpose of combining data sources is to:

- link the HES APC, OP and AE core activity data to the respective PLICS data
- identify outpatient attendance treatment functions, derive department and service codes as appropriate
- get any data not in PLICS plus the unbundled (non-core) APC and OP costs from the aggregated National Costs data
- combine the PLICS and aggregated National Costs data to be ready to be put through the model to calculate prices

2.1.1 Group the activity data (HES)

14. The raw activity input data for payment modelling are HES APC, outpatient (OP) and accident and emergency (AE) activity. The cost input for the model is national costs. For the 2022/23 tariff, the 2018/19 National Cost Collection data and 2018/19 HES data sets are used.

15. The 2018/19 HES data sets are grouped using the 2018/19 HRG4+ Reference Costs Grouper. Length of stay (LoS) trimpoints are calculated for each APC spell HRG using the following formula and rounding the result to the nearest whole number:

- Spell HRG trimpoint = Max{5, Q_3 + 1.5 x (Q_3 – Q_1)}
  Where:

[3] National Cost refers to costs submitted to the National Cost Collection. This includes patient-level (PLICS) data for APC, OP and AE as well as aggregate costs for other services.

[4] See: https://digital.nhs.uk/services/national-casemix-office/downloads-groupers-and-tools

- The adjusted length of stay (aLoS) for an APC spell is defined as the number of days from admission to discharge (technically: the number of changes of calendar day), after deduction of any days spent in critical care, rehabilitation, specialist palliative care and delayed transfers of care
- Q_1 is the aLoS at which 75% of admissions grouping to the HRG have a higher aLoS (first quartile)
- Q_3 is the aLoS at which 25% of admissions grouping to the HRG have a higher aLoS (third quartile)[5]

16. Once the trimpoints have been calculated for each APC spell HRG, the number of excess bed days are determined as Max{0, aLoS – trimpoint} for each spell.

2.1.2 Link the HES APC, OP and AE core activity data to the PLICS data

17. As the PLICS data is at record level and can be linked to the grouped HES data, the actual APC spell activity counts and costs are created using PLICS data. Note that this removes the complex estimation steps that had been needed in previous years to convert episodes to spells in the method. It also results in aggregated costs and counts which may be different at HRG level to those in the published National Costs.

18. The OP and AE core activity counts and costs are similarly created by linking the PLICS data to the grouped HES data.

2.1.3 Derive department and service codes (APC, OPROC, OPATT and A&E)

19. The published National Costs contain department codes and service codes, as well as currency codes. Department codes generally correspond to points of delivery, for example the APC points of delivery are day case, elective and non-elective. In the National Tariff Payment System prices and scope (and trimpoints beyond which APC excess bed day payments are made) may be differentiated by points of delivery.

[5] Please note: the difference between the first and third quartile, $Q_1 – Q_3$, is called the inter-quartile range and is a standard measure of dispersion.

20. The APC points of delivery (which appear as department codes in the published National Costs and for which unit prices are calculated) are derived from the admission method and the patient classification fields in the APC HES data set.

21. Treatment function codes (TFCs) are recorded in the HES data sets and HRGs are assigned by the Grouper that groups the HES data. However, the department and service codes are derived from other fields in the HES data sets.

2.1.4 Get other data from the aggregated National Costs data

22. The PLICS part of the National Costs data collection is comprised of APC, OP and AE data. The costs are allocated to activities and resources, rather than to core episode/attendance activity, and to unbundled activity. Rather than derive episode/attendance level costs for unbundled APC and OP, aggregated National Costs data is used.

23. Data for other points of delivery/care settings are still collected at an aggregated level from providers.

24. Note that due to data privacy regulations, there is small number suppression in the published National Costs data, whereas all numbers (ie with no suppression) are used for price modelling.

2.1.5 Combine the data

25. The data is then combined to be prepared for the price calculation model.

2.2 Data cleaning

26. The purpose of these stages is to ensure that the data is cleansed of outliers and ready to be put through the model to calculate prices.

27. Data cleaning rules are applied to the cost data, removing the following records:

    - Outliers, detected using a statistical outlier test known as the Grubbs test (also known as the ‘maximum normed residual test’).

- Providers that submitted costs more than 50% below the national average for more than 25% of HRGs/TFCs as well as 50% higher than the national average for more than 25% of HRGs /TFCs submitted.

2.2.1 Initial data and ‘unit cost’

28. The input for the model is combined PLICS (linked to HES) and aggregated National Costs data. For the 2022/23 NTPS, data from the 2018/19 PLICS and National Cost Collections are used.

29. The spell/attendance level data is then subject to the following data cleaning stages.

2.2.2 Remove MFF

30. The market forces factor (MFF) is an estimate of the unavoidable cost differences between healthcare providers.

31. The unit costs providers report include costs that are particular to their geographical location(s). We need to remove these for the analysis as we wish to calculate an average price for the country as a whole. These location-specific costs are removed by dividing providers’ national costs by their particular MFF value.

2.2.3 Apply the Grubbs test

32. Outliers are removed from the raw reference cost dataset based on the Grubbs method, also known as the ‘maximum normed residual test’.

33. The Grubbs test is defined as:

- H_0: the sample doesn’t have outliers
- H_1: the sample has at least one outlier

34. The Grubbs score is calculated using the following formula:

- $G = \max|X_i-\mu|/\sigma$
  Where:
  - G is the Grubbs score

- X_i is the unit cost after the Market Forces Factor (MFF) is removed in a specific sample[6]
- μ is the sample mean
- σ is the standard deviation.

35. The outliers are then identified (and subsequently removed) by comparing the Grubbs score for each observation in the sample with the Grubbs critical value for the sample.

36. The test detects one outlier at a time. This outlier is temporarily deleted from the dataset and the test is repeated until no outliers are detected. This test is undertaken across the natural logarithm of the unit cost after the MFF is removed from each cost value in the dataset.

37. **Please note**: The Grubbs test only removes single results, whereas the 25/50 cleaning rule (applied in the next step) removes all of a provider's data.

2.2.4 Apply the 25/50 rule

38. Cost data from a provider is removed if they submit national costs that are:

- more than 50% lower than the national average for more than 25% of the HRGs submitted, and
- more than 50% higher than the national average for more than 25% of the HRGs submitted for each HRG and department.

39. Once the data inputs have been cleaned and prepared, they are ready to be used to calculate prices.

2.3 Price calculation

40. The price calculation stages use the cleaned cost and activity data and apply calculations and adjustments to produce a tariff price.

41. In the integrated model, some of these steps only apply to data for certain services. Where this is the case, it is indicated in brackets at the end of the

[6] The next section explains why MFF is removed

step name (APC = admitted patient care; OPATT = outpatient attendances). All other steps apply in the same way for all services.

2.3.1 Remove the costs of specialised services (APC)

42. Additional payments for specialised activity are made outside of tariff prices, in the form of top-ups. As the costs of specialised services are contained in the national costs, the average prices would be set too high if we did not remove these costs. We estimate the costs to commissioners for this and adjust the cost quantum accordingly.

43. This is done by top-slicing – adjusting the price of all (or a subset of all) currencies to compensate for costs that cannot be targeted at specific currencies.

2.3.2 Adjust for A&E admission costs (A&E, APC)

44. A&E attendances where patients are admitted generate both an A&E and non-elective payment. The costs solely associated with admitting the patient are removed from the A&E costs and added to the non-elective (NE) tariff. We do this to get a full and accurate NE cost base and to have the A&E cost base reflect only the costs of patient care in the A&E setting.

45. The input figure for the A&E attendance leading to NE admission is obtained from the A&E tariff calculation model.

2.3.3 Adjust excess bed day prices for adults and paediatrics (APC)

46. The clinical requirements of adults and children can vary, including the expected length of stay and cost.

47. Therefore this step calculates the excess bed day prices (also known as long stay payments) as the weighted average of the excess bed day costs at the chapter or sub chapter level. There is a split either between HRGs for under- and over-18s for most chapters, or between HRGs for neonatal and under-18s for the paediatrics chapter.

2.3.4 Remove costs of high cost drugs and devices (APC and OPATT)

48. Specified high cost drugs and devices are excluded from national tariff prices (see Tabs 14a and 14b of Annex DtA). Where a high cost device or high cost drug is on the lists of exclusions from that years' national tariff prices at the time of the cost collection (see Tabs 14a and 14b of the NTPS Annex A workbook for the financial year in which the cost collection took place), the costs of the high cost device or high cost drug is unbundled (ie accounted for separately) from the core HRG/TFC costs.

49. By contrast, the core HRG/TFC costs submitted by providers as part of the national cost collection include the costs of any high cost devices and high cost drugs that were not on the lists of exclusions from that years' national tariff prices – and therefore not unbundled (and so not accounted for separately) – at the time of the cost collection.

50. Where a high cost device or high cost drug is included in core HRG/TFC costs in the cost collection but is proposed to be excluded from (core HRG/TFC) national tariff prices, we need to remove (or unbundle) the costs of the excluded high cost items from the total costs for specific HRGs/TFCs. Conversely, where a high cost device or high cost drug is excluded from core HRG/TFC costs in the cost collection but is proposed to be included in (core HRG/TFC) national tariff prices, we need to add (or rebundle) the costs of the previously excluded high cost items to the total costs for specific HRGs/TFCs

51. The cost adjustments made here are restricted to no more than 50% of the total cost of the HRG/TFC after the removal of the high cost item cost. If the adjustment would exceed 50%, the rest of the high cost item cost is removed through top-slicing.

52. Top-slices for high cost drugs and devices exclusions – and top-ups for high cost drugs and devices which were excluded during the costing year but will be included in HRGs/TFCs unit prices in the tariff year – are comprised of:

    - costs calculated as described above
    - costs for which there is insufficient information to allocate them to specific HRGs/TFCs.

53. Top-slices/top-ups for costs as described in paragraph 51 are applied at this step in the calculation. Top-slices/top-ups for costs for which there is insufficient information to allocate them to specific HRGs/TFCs are applied as cash in/cash out adjustments (see section 2.3.15 and Appendix 2).

2.3.5 Revise total APC costs after short-stay emergency adjustments (APC)

54. Certain HRGs attract a reduced short-stay emergency (SSEM) tariff for adult emergency spells with a length of stay less than two days. The level of the SSEM tariff is based on the average NE length of stay of the HRG because emergencies are, by definition, always non-elective.

55. Before this stage, the model assumes that all NE spells attract the full tariff price. From this point on, however, the model differentiates between SSEM and non-SSEM spells. Due to the reduction in the overall non-elective cost as a result of SSEM reductions, spell costs are increased to ensure that the overall cost remains the same before and after the adjustment.

2.3.6 Remove costs for Injury Cost Recovery Scheme

56. The Injury Cost Recovery Scheme (ICRS) aims to recover the cost of NHS treatment where personal injury compensation is paid, for example, after a road traffic accident. These costs are paid outside of the tariff so are removed only from NE HRGs. Again, this is done as a top-slice.

2.3.7 Combine day case and elective prices (APC)

57. In line with tariff policy, the day case and elective price for each APC HRG is combined. This is done to encourage day case activity where clinically appropriate as it is usually associated with better patient experience. This is done by calculating the weighted average price of the two.

2.3.8 Combine AE costs

58. The unit price for any activity undertaken in a Type 3 A&E department (minor injury unit), irrespective of the HRG to which it groups, is set to the same price as for HRG VB11Z (Emergency Medicine, No Investigation with No Significant Treatment) for Type 1 and Type 2 A&E departments.

2.3.9 Implement the first quantum reconciliation factor – QR1

59. The purpose of the QR1 reconciliation is to reconcile the total model cost quantum to the total national cost quantum used to inform the prices. The formula is:

    - QR1 = ((Total National Cost Quantum) / (Modelled Quantum)) – 1

2.3.10 Implement cost based adjustment factor

60. This step accounts for costs that should not be considered for the tariff.

2.3.11 Apply cost uplifts from data input to current year

61. As the prices are based on 2018/19 cost data, to make the prices comparable to the current year (2021/22), they are uplifted by applying the efficiency, inflation and Clinical Negligence Scheme for Trusts (CNST) adjustment factors for 2018/19, 2019/20 and 2020/21.

2.3.12 Apply the scaling factor

62. At this stage we apply a scaling factor which will ensure that the total modelled price quantum in the model is equal to an externally set target quantum. This factor is calculated through a separate payment engine.

2.3.13 Implement manual adjustments

63. It is important that the prices are a robust reflection of clinical reality. At this stage, the draft prices are therefore shared with the NHS Digital National Casemix Office clinical Expert Working Groups (EWGs). Each HRG chapter has an EWG with specialism in that service area.

64. The EWGs review the prices for their chapter and recommend adjustments that should be made to address illogical relativities (ie where the price assigned to a less complex procedure is higher than the price for a more complex one) and clinical needs. The adjustments do not change the total quantum for the chapter, so any increase in prices is compensated for by reductions in others.

65. The EWG recommendations are considered and applied as manual adjustments unless there are valid reasons not to.

2.3.14 Implement the second reconciliation factor – QR2

66. This reconciliation ensures that the overall HRG chapter quantum is the same before and after manual adjustments and affects all prices. The formula is:

    - QR2 = ((Quantum prior to manual adjustments) / (Quantum post manual adjustments)) – 1

2.3.15 Implement cash in/cash out adjustments

67. To account for significant changes in the tariff at different levels (global, point of delivery, chapter, subchapter or HRG level), cash in/cash out adjustments are used to ensure that:

    - prices do not move by too much year on year
    - providers are not disproportionately affected by the changes
    - prices move to take into account cost or scope changes to services.

68. Appendix 2 gives details of the cash in/cash out adjustments for the 2022/23 prices. Examples of adjustments to take into account cost or scope changes to services include:

    - General top slices across APC and OPATT core HRG/TFC cost quantums for removal of cancer genetic testing from the scope of national tariff
    - General top-ups to the APC and OPATT core HRG/TFC cost quantums for a number of drugs proposed to be removed from the high cost drugs exclusion list – and therefore to be included in the scope of unit prices. Since, the adjustments are applied as

69. In both of these examples, the adjustment has been applied generally across APC and OPATT as there is insufficient information to allocate the adjustments to specific HRGs/TFCs.

2.3.16 Implement cash in/cash out reconciliation factor (QR3)

70. This quantum reconciliation factor is used to ensure that the total quantum after applying the cash in/cash out adjustments remains unchanged:

    - QR3 = ((Quantum prior to cash in/cash out)) / ((Quantum post cash in/cash out)) – 1

2.3.17 Apply the prospective adjustments

71. Adjust prices to proposed 2022/23 levels by applying the cost uplift (2.8%) and efficiency factors (1.1%).

2.3.18 Final prices prepared for publication

72. The final prices are moved into Annex DtA of the national tariff.

Appendix 1: Changes to the 2013/14 PbR method

73. The proposed calculation method for the 2022/23 NTPS closely follows that previously used by the then Department of Health Payment by Results (PbR) team, up to 2013/14.[7]

74. In previous national tariffs we have aimed to replicate the method as closely as possible, making changes to reflect updates to currencies, cost uplifts, efficiency and manual adjustments.

75. For the 2014/15, 2015/16 and 2016/17 tariffs, there were minimal changes beyond these annual updates. However, in some more recent tariffs we have made more substantial changes to the 2013/14 PbR method and these are set out here.

Changes for 2017/19

76. For the 2017/19 NTPS, we made the following changes to the 2013/13 PbR method:

- update models for the HRG4+ currency design
- apply a small set of data-cleaning rules to the 2013/14 reference cost data to improve the quality of the cost data in the model
- include a reconciliation to ensure that we base our price relativities between tariff models on the equivalent cost relativities in the reference costs dataset
- make the manual adjustment process more transparent and included a reconciliation at chapter or subchapter level to ensure that the manual adjustments made to modelled prices do not change the total amount paid for each chapter
- make minor adjustments to streamline the calculation process and improve its transparency: for example, removing some calculation steps in the

[7] For a description of the 2013/14 PbR method, please see Payment by results, step by step guide: calculating the 2013/14 national tariff.

2013/14 PbR model which did not have any clearly identifiable policy intention (such as what appeared to be historic manual adjustments)

- recreate any models that were not transferred from the Department of Health as closely as possible
- update the calculation method for BPTs
- introduce volatility and a cost base adjustment (scaling)
- remove the affordability adjustment.

Changes for 2019/20

77. The 2019/20 NTPS saw the introduction of blended payment for emergency care services. Prices for the maternity payment pathway were also made non-mandatory as the pathway included Section 7A services that may not have national prices. This meant that both emergency care and maternity prices ceased to be national prices but were still included in the method used to calculate national prices.

78. In addition, we made the following changes to the method used for the 2017/19 NTPS:

- Strengthened qualitative review of price relativities by NHS Digital's National Casemix Office's clinical Expert Working Groups (EWGs).
- Updated the manual adjustment process to introduce a standardised approach to treating prices based upon very small numbers of cases.
- Introduced the cash in/cash out process to increase specificity in how total amounts of money are adjusted for changes in the scope of the tariff.
- Used the revised methodology for calculating MFF values.
- Incorporated revisions to the Prescribed Specialised Services (PSS) eligibility lists, rules and hierarchy.
- Included a transfer of £1 billion from the Provider Sustainability Fund (PSF) into non-elective and A&E prices.

Changes for 2020/21 and 2021/22

79. For 2020/21 and 2021/22, the prices were based on the previous year's tariff, rather than calculating price relativities using new cost and activity data. This meant that the initial steps to calculate price relativities were not applied.

80. There were changes in the scope of national prices in that:

- For 2020/21, blended payment was introduced for outpatient attendances. Prices for these services were no longer in scope of national prices but were included in price calculations and related adjustments.
- For 2021/22, the aligned payment and incentive blended payment was introduced. This removed all services apart from unbundled diagnostic imaging from the scope of national prices. However, price calculations and related adjustments included all services that had national prices in the 2017/19 NTPS (before the introduction of blended payment in 2019/20).

Changes for 2022/23

81. The 2022/23 NTPS is the first time that PLICS data has been used to set prices, rather than reference costs. The move to using PLICS data has enabled or motivated the following changes to the method used for 2019/20 (the last time prices were calculated using new cost and activity data):

- Linking PLICS and HES data at record level. This allows the PLICS data to be regrouped independently and consistently with HES and to create APC spell activity counts and costs directly as input for price calculation.
- Simplifying and consolidating the four cleaning rule steps into two (the Grubbs test and the 25-50 rule – see Section 2.2), enabling consistent cleaning process for all points of delivery across all settings.
- Modifying the order of the steps and removing some of the complexity previously required in the APC section of the model, since episode to spell conversion is now performed at the beginning of the process directly using PLICS data rather than using national average reported costs for episodes.
- Modifying the order of steps so that the removal of the market forces factor takes place prior to data cleaning and the application of CNST adjustments takes place as cash in/cash out adjustments.
- Embedding feedback from clinical EWGs on prices from previous tariffs in the modelling process.

Appendix 2: 2022/23 cash in/cash out adjustments

Policy Adjustment Area	More details	Amount being moved	Cash out from	Cash in to
High cost drugs and devices - Cancer Genetic Testing (APC)	APC (44%) & OPATT (56%) of £77,800,00 total amount. General top slices for removal of cancer genetic testing from the scope of national tariff	£34,232,000	APC - DC/EL/NE/SSEM	Specialised Commissioning
High cost drugs and devices - Cancer Genetic Testing (OPATT)	APC (44%) & OPATT (56%) of £77,800,00 total amount. General top slices for removal of cancer genetic testing from the scope of national tariff	£43,568,000	OPATT	Specialised Commissioning
High cost drugs (Boceprevir, Daclatasvir, Simeprevir, Telaprevir & Winfuran)	Amount calculated for drugs being removed from the high costs list	£6,608,564	Spec Comm (pass-through cost)	CCG Tariff (APC &OPATT)
Chemotherapy	Unbundled Subchapter SB (SB11Z to SB15Z). Individual prices uplifted by £15 for addition to the scope of national tariff.	£29,138,552	Specialised Commissioning	SB Subchapter
Top Up Payment	General cash in for addition to CCG from the scope of PSS from Specialised Commissioning	£11,269,698	Specialised Commissioning	CCG Tariff (APC including OPROC)
Complex Knee Revisions	General top slice of Chapter H to fund hub and spoke model of complex knee revisions	£12,866,400	All of chapter H and VA	Specialised Commissioning
Cataract + glaucoma	Ophthalmology	£378,936	BZ chapter	BZ30
Maternity	Cash out of all prices except renal dialysis and moved to postnatal tariff prices to reverse a decision made in 2019/20.	£15,700,000	APC, OPATT, A&E, maternity, unbundled prices	Maternity pathway postnatal phase prices

Policy Adjustment Area	More details	Amount being moved	Cash out from	Cash in to
High cost drugs and devices - Drugs	Part of general top slices and some targeted HRGs areas for removal of high cost drugs from the scope of national tariff prices	£20,552,034	Specialsed Commissioning and CCGs	APC – DC/EL/ NE/SSEM
High cost drugs and devices - Devices (Thrombectomy)	Amount calculated for devices being removed from the HRG to move to a high costs list	£3,318,000	HRG YA13Z	Specialised Commissioning
Smoothing adjustment for volatility of targeted HRGs and providers	Uplift for 52 targeted HRGs point of delivery	£48,799,198	Targeted two APC subchapters	Identified list of HRGs
Smoothing adjustment for Nuclear Medicine volatility management	Cash adjustment uplift for Nuclear Medicine HRGs	£4,478,913	Targeted two APC subchapters	RN subchapter

Appendix 3: Glossary

Term	Description
Casemix	The term casemix has a number of meanings, from the literal mix of cases (patients) seen by a consultant, hospital or region, to the way patient care and treatments are classified into groups. In the method description, casemix refers to the classification into groups.
Currency	A unit of healthcare for which a price is set. The currencies for national tariff prices are either healthcare resource groups (HRGs) or treatment function codes (TFCs). TFCs are used for outpatient attendances.
Episode	An episode is an agreed time period during which healthcare is provided to a patient. An episodic payment approach is the payment of an agreed price for all the healthcare provided to a patient during an episode.
Excess bed day (EBD)	When the duration of an Admitted Patient Care episode/spell exceeds the trimpoint number of days (as calculated/set for the HRG in the relevant HRG grouping), each day in the period after the trimpoint number of days until discharge is an excess bed day.
Excess bed day payment	For patients who remain in hospital beyond an expected length of stay for clinical reasons, there is a reimbursement in addition to the tariff price called an ‘excess bed day payment’ (sometimes referred to as a ‘long-stay payment’). The long-stay payment applies at a daily rate where the length of stay of the spell exceeds a ‘trimpoint’ specific to the HRG.
Expert working groups (EWGs)	EWGs are groups of clinical experts, managed by the NHS Digital National Casemix Office and include representatives of medical colleges, associations and societies.
Groupers	Groupers are published by the NHS Digital National Casemix Office and combine clinical diagnosis and treatment codes to group activity into HRGs.

Term	Description
Healthcare resource groups (HRGs)	Groupings of clinically similar treatments that use similar levels of healthcare resource. HRGs are split into ‘chapters’ and ‘subchapters’ denoting clinical areas (eg Chapter P is paediatrics). HRG4+ is the current version of the system in use for payment. HRGs are used as the basis for many of the currencies.
Hospital Episode Statistics (HES)	A data warehouse containing details of all admissions, outpatient appointments and A&E attendances at NHS hospitals in England. This data is collected during a patient’s treatment at a hospital to enable hospitals to be paid for the care they deliver. HES data are designed to enable secondary use for non-clinical purposes. https://digital.nhs.uk/data-and-information/data-tools-and-services/data-services/hospital-episode-statistics
National Cost Collection	The National Cost Collection comprises aggregated costs (the average unit cost of providing defined services to NHS patients in England) and patient-level costs/PLICS.
Patient-level cost data (PLICS)	Patient-level cost data (known as PLICS) are costs based on the specific interactions a patient has, and the events related to their healthcare activity.
Quantum	Quantum refers to the total amount of money.
Scaling factor	The factor used to ensure that the total quantum in the model is equal to an externally set target (cost base).
Spell	The period from the date that a patient is admitted into hospital until the date they are discharged, which may contain one or more episodes of treatment.
Short stay emergency tariff (SSEM)	Mechanism for ensuring appropriate reimbursement for lengths of stay of less than two days, where the average HRG length of stay is longer. This forms part of the blended payment arrangements for emergency care payments.
Top-slicing	Top-slicing is the process of reducing all prices by a small percentage to provide funding to be reallocated to target specific areas.

Term	Description
Treatment function codes (TFCs)	Outpatient attendance prices are based on TFCs. Main specialty codes represent the specialty within which a consultant is recognised or contracted to the organisation. Outpatient attendance activity is generally organised around clinics based on TFC specialties and they are used to report outpatient activity and also to set prices for outpatient procedure activity where there is no unit price for the HRG in the outpatient setting.
Trimpoint	For each HRG, the trimpoint is calculated as the upper quartile length of stay for that HRG plus 1.5 times the inter-quartile range of length of stay, rounded to the nearest whole day. After the spell of treatment exceeds this number of days, a provider will receive payment for each additional day the patient remains in hospital. This is referred to as an excess bed day payment or a long stay payment.
Unbundled	To enable HRGs to represent activity and costs more accurately, some significant elements can be “unbundled” from the core HRGs that reflect the primary reason for a patient admission or treatment. These unbundled HRGs better describe the elements of care that comprise the patient pathway and can be commissioned, priced and paid for separately.

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