

# Price Modelling Narrative

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## Introduction

The Metrics Engine has been developed to provide NHS Improvement, NHS England and stakeholders with a greater level of visibility of how various policies in our method impact proposed national price relativities for admitted patient care. It is intended to enable us to interrogate our pricing method, to ensure the model implements the method and associated policies as intended, and to better understand the impacts of specific policies at a more granular level. We hope the Metrics Engine will also help stakeholders better understand our pricing process and the pricing method. This would enable stakeholders to critically evaluate our proposals and encourage their informed participation in our sector engagement process.

While we intend to continue to further develop the Metrics Engine, we believe it is at a point where it is able to help us achieve some of the goals above. To guide further development, we would like to hear stakeholders' views on its usefulness and on areas where this tool could be improved. However, we also hope the sector will be able to use this tool when considering their responses on our current tariff proposals.

We have tested this new tool with a number of stakeholders before the launch and have received a number of comments on future development. In the process, however, we have also received a number of frequently asked questions and some more specific observations around the effect of our method for determining national prices. This document discusses some of these early observations.

The information in this document is not an exhaustive list but should be seen as the start of a continuing process by which we help stakeholders to better understand how we propose to determine national prices and in turn we hope that stakeholders help us to further improve the method we use. We would therefore welcome any further questions, observations and comments on this tool and our method for determining national prices. Please send your responses to [NHSI.pricing@nhs.net](mailto:NHSI.pricing@nhs.net).

## Stakeholder comments

We have received comments on the following trends in our proposed method for determining national prices for admitted patient care.

1. The removal of MFF from the underlying Reference Costs (Removal of MFF)
2. The FCE to Spell conversion
3. The effect of adjusting the underlying Reference Costs for high cost drugs and devices that are reimbursed separately (Drugs and Device Exclusions)
4. The effect of accounting for the Short Stay Emergency (SSEM) admissions (SSEM adjustment)

In response to these comments we set out below a brief explanation of the method for each of these steps in the price setting process, followed by an explanation of the stakeholder feedback we received. After that we provide an explanation for why the trend is occurring.

## Removal of MFF (Stage name: 'Remove MFF')

Reference Costs (RC) are submitted by all NHS providers. The costs submitted will vary for a number of reasons, but one of the key drivers for variation is due to unavoidable cost differences between trusts (eg because of the geographical location of a trust). The Market Forces Factor (MFF) is an estimate of the unavoidable cost differences between health care providers.

In order to make the costs from each provider comparable, one of the first steps within the model is to remove the MFF. The average impact of this is typically around 8-9% of reported reference costs. Hence, this step in the Metrics Engine will show a drop in prices/overall quantum of around 8-9%.

The national prices we produce are displayed exclusive of MFF. However, the effect of the MFF is that providers should receive a payment that is based on national prices multiplied by their individual MFF (which we publish separately and which is not currently visible in the Metrics Engine). This means that, on average, providers will receive back the quantum removed by this calculation step, but this is not currently visible in the Metrics Engine.

## FCE to Spell conversion (Stage name: 'FCE to Spell conversion (inc. combining DC and EL)')

Reference costs used by NHSI are submitted in Finished Consultant Episodes (FCEs)<sup>1</sup>. The tariffs published by NHSI are for spells<sup>2</sup>, therefore the model has to convert FCE cost data into spell tariff prices.

In order to convert these costs the model uses additional spell activity data from the HES dataset. On an aggregate level these two datasets are largely comparable. However, some discrepancies can arise on an individual HRG level. There are fewer spells than FCE, so we would normally (but not always) expect that for each HRG the activity would reduce in this step of the calculation process.<sup>3</sup>

We have, however, observed a relatively large number of HRGs where the activity after the FCE to spell conversion is larger than expected. This mainly happens when a number of different FCEs are allocated to a Spell HRG that is different to any of the FCE HRG codes. We are planning to review whether this effect warrants a change in future tariffs.

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An FCE is the time spent under the supervision of a single consultant.

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A [Hospital Provider Spell](#) is the total continuous stay of a patient using a [Hospital Bed](#) on premises controlled by a [Health Care Provider](#) during which medical care is the responsibility of one or more [consultants](#), or the patient is receiving care under one or more [Nursing Episodes](#) or [Midwife Episodes](#) in a [ward](#). Source: [http://www.datadictionary.nhs.uk/data\\_dictionary/nhs\\_business\\_definitions/h/hospital\\_provider\\_spell\\_de.asp?shownav=1?query=%22spell%22&rank=100&shownav=1](http://www.datadictionary.nhs.uk/data_dictionary/nhs_business_definitions/h/hospital_provider_spell_de.asp?shownav=1?query=%22spell%22&rank=100&shownav=1)

<sup>3</sup> Please note, this is not always expected to be the case, for example where the spell HRG is different from any of the underlying FCE HRGs

In addition to changes in activity, this step also has an impact on national prices and overall HRG level quantum. This is because this step groups together activity and costs from different HRGs into spells. The impact of this on quantum and national prices is not always directly correlated. For example HRG AA22E shows a reduction in activity, whereas the overall cost quantum for the HRG grows by a small amount in this modelling step. The unit price therefore increases by a large amount. This does not in itself indicate an error, as this would be expected when different FCE HRGs, which can have very different costs, are bundled together into a single Spell HRG.

### **Drugs and Device Exclusions (Stage name: 'Revised costs after D&D removed')**

There are a number of drugs and devices that are not reimbursed through national prices but are addressed through the local pricing rules.. However, some or all of the related costs are usually included in the reference cost collection that we use to calculate national prices.

When calculating national prices we therefore need to adjust the reference costs for those drug and device costs that are reimbursed under the local pricing rules.

We have received comments from stakeholders that some HRGs do not adequately reimburse the cost of devices. However, this modelling step does not address such cases. This modelling step only removes high cost device and/or drug costs where a high cost device and/or drug is addressed through the local pricing rules but does not add any device and/or drug costs into the national price. If there are HRGs that do not adequately address the cost of drugs and/or devices, then we have a separate modelling step, the manual adjustment step, where such issues can be corrected.

### **SSEM adjustments (Stage name: 'Revised total costs after SSEM adjustments')**

Even though Reference Costs (RC) for non-elective admissions are collected separately for long and short stay<sup>4</sup> admissions, our method combines them in the early stage<sup>5</sup> of determining national prices. However, as there are SSEM tariffs for a subset of HRGs, we need to calculate separate NE and SSEM prices for these HRGs.

In this modelling step the national prices for non-elective admissions and SSEM admissions are separated. The effect this step has on national prices is that it reduces the SSEM price and increases the ordinary non-elective price (previously both were the same). This is necessary to ensure that this modelling step does not inadvertently reduce the quantum reimbursed under national prices.

### **Further queries**

As set out above, the information in this document is not an exhaustive list, but should be seen as the start of a continuing process by which we help stakeholders to better understand

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[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/402356/Reference\\_costs.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/402356/Reference_costs.pdf), Page 25, Paragraphs 83 and 84

<sup>5</sup> Filter RC data

how we calculate national prices and in turn we hope that stakeholders help us to further improve our method.

We aim to regularly update this document with further feedback received.

Should you have any further queries or comments about the tariff calculation methodology or the Metrics Engine, please email them to [pricing@improvement.nhs.net](mailto:pricing@improvement.nhs.net)