Market forces factor review and proposed updates

A joint publication by
NHS England and NHS Improvement

October 2018
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NHS Improvement and NHS England commissioned independent research to inform the review of the market forces factor. The final research reports are published as supporting documents to this paper. They are available from: https://improvement.nhs.uk/resources/201920-payment-reform-proposals
1 Summary

1. The market forces factor (MFF) estimates the unavoidable cost differences between healthcare providers. Each NHS provider is assigned an individual MFF value. MFF values are used to adjust national prices and commissioner allocations.1,2

2. We are proposing a new set of MFF values from 2019/20. These would be based on the most up-to-date data available and some changes to the methodology. In this document we set out the proposed changes and the work behind them. The document is accompanied by an online survey3 to collect feedback. The survey is open until 29 October.

3. The proposed new MFF values mainly use data from 2016/17, rather than 2007-09 used in the current MFF. The data changes over the last 10 years, particularly wage differences between London and the rest of England, drive changes in organisations’ estimated MFF values.

4. Our proposed approach to calculating new MFF values is similar to that currently used. The main changes we are proposing are:

   • using travel to work areas (TTWAs)4 in place of primary care trust (PCT) areas to estimate the non-medical-and-dental staff component
   • including an adjustment for the medical and dental staff component for providers on the fringe of London (as well as those in London, as in the current MFF)
   • introducing business rates as a new component
   • using a more consistent method to combining the components into a single index.

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1 For details of the current MFF, see section 5.1 of the 2017/19 National Tariff Payment System and the supporting document, Guidance on the market forces factor. Both available from: https://improvement.nhs.uk/resources/national-tariff-1719/

2 See www.england.nhs.uk/allocations for more information on how commissioner allocations are set.

3 https://engage.improvement.nhs.uk/pricing-and-costing/mff-proposals

4 TTWAs are estimates of geographical boundaries of local labour markets, produced by the Office for National Statistics. www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/traveltoworkareaanalysisingreatbritain/2016

1 Market forces factor review and proposed updates > Summary
5. We are proposing to phase in the new MFF values over a number of years, in equal steps. This is to ensure the impact the changes have on revenue and allocations do not cause unnecessary volatility. In the event of a multi-year tariff, the phasing in means MFF values would be adjusted each year. The phasing in will be reviewed in later years should further updates to the MFF be warranted, for example to use more recent data. Initially, we have looked at phasing the values in over four years.

6. Before any transition is applied, the proposed payment MFF values have a narrower range (1.000 to 1.211) than the MFF values in the 2017/19 national tariff (1.000 to 1.298) and around two-thirds of NHS trusts and foundation trusts have a proposed change in MFF value within ±2.0%. For a full list of individual values, see the supporting Excel file, Proposed MFF values workbook.\(^5\) It is important to note that this narrowing of the range reflects a reduction in the variation between MFF values, not a reduction in the overall funding in the tariff.

7. Under a four-year transition, MFF values in the first year (2019/20) for more than 80% of NHS trusts and foundation trusts change by less than ±1.0%. The largest drop is -2.0% and the largest increase is 0.5%. Care needs to be taken in interpreting these values. The overall narrowing of the range of MFF values means, all else being equal, that fewer resources would be needed for the MFF components of tariff and so more resources would be available for the underlying national prices. As such, a headline reduction in the MFF for an individual trust will overestimate the net impact of the MFF change on income.

\(^5\) Available to download from: [https://improvement.nhs.uk/resources/201920-payment-reform-proposals](https://improvement.nhs.uk/resources/201920-payment-reform-proposals)
2 Introduction

2.1 The market forces factor review

8. The 2017/19 National Tariff Payment System (NTPS) describes the current market forces factor (MFF) as follows:

National prices are calculated on the basis of average costs and do not take into account some features of cost that are likely to vary across the country. The purpose of the market forces factor (MFF) is to compensate providers for the cost differences of providing healthcare in different parts of the country. Many of these cost differences are driven by geographical variation in land, labour and building costs, which cannot be avoided by NHS providers, and therefore a variation to a single national price is needed.

The MFF takes the form of an index. This allows a provider’s location-specific costs to be compared with every other organisation. The index is constructed to always have a minimum value of 1.00. The MFF payment index operates as a multiplier to each unit of activity.\(^6\)

9. Each NHS provider is assigned an individual MFF value. The MFF for clinical commissioning groups (CCGs) is the weighted average of the MFF values of providers from which they commission services.\(^7\) Independent sector providers take the MFF of the NHS trust or NHS foundation trust nearest to the location where care is delivered.

10. NHS Improvement and NHS England have carried out a programme of work to review the methodology and update the data used for the calculation of the MFF values. The outcome of the review is a proposal to make some changes to how MFF values are calculated and to use the new approach for payment purposes from 2019/20. The proposed new MFF values would be used for allocations to CCGs from 2019/20.

\(^6\) 2017/19 NTPS, paragraphs 266 and 267. [https://improvement.nhs.uk/resources/national-tariff-1719/](https://improvement.nhs.uk/resources/national-tariff-1719/)

\(^7\) The MFF has also been used in the General Medical Services (GMS) contract for GPs and public health allocations.
11. Part of our proposal is to phase in the new MFF values over a number of years, in equal steps. This would strike a balance between mitigating the impact of the changes and ensuring timely delivery of the intended policy.

12. The new values are calculated using the most up-to-date data currently available and include some improvements to the methodology.

2.2 About this document

13. This document contains details of:

- the current MFF (Section 3)
- our approach to the review (Section 4)
- proposed data updates (Section 5)
- proposed method changes (Section 6)
- proposed transition between current and new MFF values (Section 7).

14. We have also published the following supporting materials:

- The independent research reports that informed our proposals.
- A supporting Excel file, Proposed MFF values workbook, that contains a full list of the proposed MFF values by provider. This illustrates both MFF values resulting from updates to the data only and the proposed values following updates to the data and the method. It includes:
  - current MFF payment and underlying index values
  - proposed underlying index values for each component of the MFF (data update only and data and method update), and overall underlying MFF values (data only update and data and method update)
  - indicative MFF payment index values for each year of a four-year transition. The values in later years may be subject to change as part of development of future tariffs, for example to reflect more recent data.

15. The document is accompanied by an online survey for you to give us your feedback.

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8 The transition in the later years will be reviewed should further updates to the MFF be warranted, for example for more recent data.
9 Available to download from https://improvement.nhs.uk/resources/201920-payment-reform-proposals
10 https://engage.improvement.nhs.uk/pricing-and-costing/mff-proposals

4 Market forces factor review and proposed updates > Introduction
16. The deadline for feedback is 29 October 2018.

17. We have also published an overview of proposed changes for the 2019 national tariff.

18. Please contact pricing@improvement.nhs.uk for more information.
3 The current market forces factor

19. The MFF was last updated in 2010, using data from 2007 to 2009. The last major review of the MFF methodology was in 2006/07.

20. The MFF currently has five components, described in Table 1.\textsuperscript{11}

<table>
<thead>
<tr>
<th>Component (weight)</th>
<th>Method and rationale for inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-medical-and-dental (M&amp;D) staff (54.9%)</td>
<td>The local rate of pay in the broader labour market is used to take account of variations in both direct and indirect employment costs, including those that are not fully addressed by national pay scales and regional pay allowances. Indirect employment costs include, eg, higher turnover and vacancy rates. The going rate of pay in the private sector is estimated for each PCT using statistical modelling to remove the effect of differences in industrial structure, occupations and demographics between PCTs. The values for each PCT are smoothed to reduce large differences in MFF values between neighbouring PCTs. Each trust site value is determined by the PCT where it is located. The sites are then aggregated up to trust level using bed numbers.</td>
</tr>
<tr>
<td>Medical and dental staff (13.9%)</td>
<td>This accounts for the nationally set allowance that M&amp;D staff receive in addition to their Agenda for Change (AfC) pay if they work in London.</td>
</tr>
<tr>
<td>Buildings (2.7%)</td>
<td>Building assets have different values between providers and therefore incur different capital charges and depreciation. The index is based on data on construction costs by PCT provided by the Royal Institution of Chartered Surveyors. The trust site index is determined by the PCT where it is located. The sites are then aggregated up to trust level using bed numbers.</td>
</tr>
</tbody>
</table>

\textsuperscript{11} For more information about the current MFF, see section 5.1 of the 2017/19 NTPS and the supporting document Guidance on the market forces factor. Both are available from: [https://improvement.nhs.uk/resources/national-tariff-1719/](https://improvement.nhs.uk/resources/national-tariff-1719/)
### Market forces factor review and proposed updates

#### The current market forces factor

<table>
<thead>
<tr>
<th>Component (weight)</th>
<th>Method and rationale for inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land (0.4%)</td>
<td>This reflects differences in providers’ financing costs due to differences in trusts’ net book values for land per hectare.</td>
</tr>
<tr>
<td>Other (28.1%)</td>
<td>This allows for costs (e.g., equipment, consumables) that do not vary materially and unavoidably between providers.</td>
</tr>
<tr>
<td>Component weights</td>
<td>The components are combined to give a single MFF value for each provider using the same national weights, based on the national proportions of expenditure on each component reported in NHS accounts.</td>
</tr>
</tbody>
</table>

21. Where providers merged or underwent other organisational restructure, we would calculate a new MFF value based on the weighted average of the MFFs of the original organisations.

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7 Market forces factor review and proposed updates > The current market forces factor
4 Approach to the review

22. Given the length of time since the last methodological review and data update, we developed a work programme that included:

- an independent review of the methodology
- updating the data from 2007/09 to 2015/16 using the current methodologies
- updating the data from 2007/09 to 2016/17 using the proposed methodology
- a review by NHS Improvement and NHS England of the practicality of the changes in method recommended by the independent review.

23. To deliver the project, we commissioned three independent pieces of work:

- The University of Aberdeen updated the non-M&D dental staff component using 2013 to 2015 data and the current methodology.
- The King’s Fund reviewed approaches to adjusting for unavoidable cost differences between providers used by other public services, including in some other countries. The King’s Fund was also asked to gather NHS finance directors’ views on the MFF and unavoidable costs faced by NHS providers. This provided context for the review of the methodology.
- Frontier Economics (FE) reviewed the MFF methodology.

24. In carrying out its review of the methodology, FE:

- developed a framework for assessing which costs should be covered by the MFF
- created a longlist of potentially unavoidable costs, drawing on suggestions from a range of sources (including The King’s Fund report), and tested each against the framework to assess if it would be appropriate to include in the MFF
- developed a framework for assessing potential methodologies to estimate an adjustment for each of unavoidable costs shortlisted for inclusion in the MFF.

25. The frameworks developed by FE are set out in Appendix 1. Appendix 2 shows FE’s assessment of the longlist of potential unavoidable costs against the

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12 Data to update the current methodology for the non-M&D component were available up to 2015/16, but under the new methodology up to 2016/17. Sections 5 and 6 provide more details.

13 The final reports from each of these pieces of work are published as supporting documents. See https://improvement.nhs.uk/resources/201920-payment-reform-proposals
framework for inclusion in the MFF. Appendix 3 gives more details of why private finance initiatives (PFI) and rurality, which were commonly raised as potentially unavoidable costs, were not included in the proposed MFF.

26. FE provided a set of recommendations on the MFF methodology.\textsuperscript{14} We used the following criteria to assess if any further changes to these recommendations were practical and warranted:

- data availability
- balance between accuracy and transparency
- incentive implications.

27. We made only a few changes to FE’s recommendations. These are described in the following sections.

\textsuperscript{14} See the FE report for full details of its recommendations. Available from: https://improvement.nhs.uk/resources/201920-payment-reform-proposals
5 Updates to the data

28. The first step in the overall review was to update the data from 2007/09 to 2015/16 with no methodological changes.\(^\text{15}\)

29. The non-M&D staff index in the current MFF is based on modelling by UoA. The latest available UoA models are for 2013 to 2015.\(^\text{16,17}\) For consistency, our initial data update also used 2015/16 data for the other components of the MFF.\(^\text{18}\)

30. The data update required a small number of changes to the current method; for example, changes to the underlying datasets (eg PCTs no longer exist) or data unavailability (eg site-level bed data). Appendix 4 summarises these changes.

31. The impact of the data update alone is described below.

5.1 Impact of data updates

32. Figure 1 shows the change between trusts' current payment MFF values and the values calculated from updates to the data alone, with no changes to the methodology.\(^\text{19}\) Figure 2 illustrates the impact of this on operating revenues. Figure 3 shows the impact on CCGs’ MFF values. All these impacts are before any transition is applied.

33. The supporting Excel file, Proposed MFF values workbook, lists providers’ MFF values arising from updating the data with no changes in methodology.\(^\text{20}\)

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\(^{15}\) The MFF values and analysis presented here reflects almost all mergers that were completed before 1 April 2018. However, the merger between Mersey Care NHS Foundation Trust and Liverpool Community Health NHS Trust has not been included and they have been treated as separate organisations.

\(^{16}\) Three years of earnings data are pooled to ensure a sufficiently large sample size

\(^{17}\) See the UoA report in the supporting documents for more details. Available from https://improvement.nhs.uk/resources/201920-payment-reform-proposals

\(^{18}\) As described in Section 6, we were able to use 2016/17 data, where available, when applying the revised methodology.

\(^{19}\) All the analysis of the impact is for NHS trusts. Independent providers currently take the MFF value of their nearest NHS trust.

\(^{20}\) Available from https://improvement.nhs.uk/resources/201920-payment-reform-proposals
Figure 1: Change in MFF payment index values compared to values in 2017/19 tariff, due to data updates

Note: on the horizontal axis 1% to 1.5% covers the range of equal to or greater than 1.00% but less than 1.5%

Figure 2: Estimated impact on tariff revenue as a percentage of operating revenue due to data updates

Note: on the horizontal axes 1% to 1.5% covers the range of equal to or greater than 1.00% but less than 1.5%
Figure 3: Estimated impact on CCGs’ MFF values due to data updates

Note: on the horizontal axes 1% to 1.5% covers the range of equal to or greater than 1.00% but less than 1.5%.

34. From the data update alone, just over two-thirds of trusts have a change in their payment value of between -2.0% and 1.5%, with a just under one-third having a fall of -2.0% of lower.

35. Figure 2 shows the estimated impact of the changes in MFF values on tariff income as a percentage of operating income. The impact is smaller than the percentage change in the MFF payment value. The impact as a percentage of operating income will be larger if other income is also adjusted by the proposed MFF values.

36. As noted above, care needs to be taken in interpreting these changes. The overall narrowing of the range of MFF values means, all else being equal, that fewer resources would be needed for the MFF components of tariff and so more resources would be available for the underlying national prices. So, the headline change in the MFF for an individual trust may overestimate the net impact of the MFF change on income.
37. The data update also showed that pay differentials between London and the rest of England have reduced since the current MFF values were calculated.\textsuperscript{21} The affects the non-M&D staff element and leads to a relative reduction in MFF values for trusts in and around London (although they remain higher than values for trusts outside the London area).

\textsuperscript{21} Other recent research has shown a similar trend. For example, an August 2018 House of Commons Library report found that, in real terms, average weekly earnings in London were 7.9\% lower in April 2017 than in April 2008. This compared to an average of 5.8\% lower for the UK as a whole. See the paragraphs and graph regarding 'Longer term trend' on page 16 (section 4.1) of the House of Commons Library Briefing Paper Number 7950, 1 August 2018: Labour market statistics: UK regions and countries. http://researchbriefings.files.parliament.uk/documents/CBP-7950/CBP-7950.pdf
6 Methodology changes

38. Following FE’s recommendations, and the review of these by NHS Improvement and NHS England, Table 2 summarises the final proposed changes to the method for calculating the MFF. More details of the main changes are set out in the rest of this section. The impact of the method and data updates is then described.

Table 2: Proposed key changes to the MFF calculation method

<table>
<thead>
<tr>
<th>Proposed MFF component</th>
<th>Proposed changes to the calculation method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-M&amp;D staff</td>
<td>• Use travel to work areas (TTWAs)(^{22}) in place of PCT areas to classify the local labour market.</td>
</tr>
<tr>
<td></td>
<td>• Apply updated smoothing to the TTWA-based values.</td>
</tr>
<tr>
<td></td>
<td>• Remove the job responsibility adjustment.(^ {23})</td>
</tr>
<tr>
<td>M&amp;D staff</td>
<td>• In addition to the London allowance, include an allowance for providers on the fringe of London.</td>
</tr>
<tr>
<td>Business rates</td>
<td>• Include business rates as a new component in the MFF.</td>
</tr>
<tr>
<td>Weightings</td>
<td>• Normalise each of the MFF index values by MFF-adjusted operating revenue before combining the components into a single index.</td>
</tr>
</tbody>
</table>

39. Most of the proposed changes to the method follow FE’s recommendations,\(^ {24}\) but we have made a few adjustments to FE’s proposals. These changes are:

- when combining the indices for each component, the same weights are used for all trust types (e.g., acute, ambulance, etc); FE proposed using different weights for different types of trust
- normalising the index for each component by operating revenue rather than gross floor area

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\( ^{22}\) TTWAs are estimates of geographical boundaries of local labour markets, produced by the Office for National Statistics.

\( ^{23}\) This is an adjustment for skill levels between different areas, as people with the same job title may have different levels of responsibility and function in different parts of the country.

\( ^{24}\) See the FE report for full details of its recommendations. Available from: [https://improvement.nhs.uk/resources/201920-payment-reform-proposals](https://improvement.nhs.uk/resources/201920-payment-reform-proposals)
• using data for all sites in the non-M&D staff index component instead of the site with the most activity
• applying a smoothing adjustment for cliff edges.

40. As part of applying the revised methodology, we also updated the estimates to use 2016/17 data in place of the 2015/16 data used for the work commissioned from UoA.25 The extra data impact is likely to be relatively small overall and has the advantage that this analysis is based on more up-to-date data.

41. The following sections briefly describe the rationale for the proposed method changes. See the FE report for more detail.

6.1 Key proposed changes to the method

6.1.1 Non-M&D staff component

42. The current non-M&D staff MFF component attempts to adjust for variations in indirect employment costs as well as direct pay costs that are not fully addressed by national pay scales and regional pay allowances. Indirect employment costs include higher turnover and vacancy rates and grade drift.

43. In common with adjustments in other parts of the public sector, the non-M&D staff component uses the general labour market (GLM)26 method, which assumes that private-sector labour markets result in a set of wage rates for locally recruited staff. These wage rates are an area’s ‘going rate’ for each group of workers with a certain set of skills. These wage rates may vary from one local labour market to the next, reflecting differences in their characteristics such as the cost of living and barriers to exit and entry.

44. The GLM method estimates differences in hourly wage rates across the country using statistical modelling to adjust for differences in workforce demographics and skills between local areas (the latter proxied by occupation and industry). This therefore gives the effect of the local geographical area alone.

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25 Business rates are based on 2015/16 data. However, this is the latest available and it is planned to update these should 2016/17 or later data become available in time for the 2019 tariff. The earnings data are for pooled years 2014 to 2016.

26 The GLM method relies on access to the Annual Survey of Hours and Earnings dataset. As this dataset contains sensitive information on individuals it is not published at the granular level required and can only be accessed with approval from the Office for National Statistics.
45. FE also analysed actual pay costs in the NHS using data from the electronic staff record (ESR)\(^{27}\) and compared these with the GLM estimates.

46. For non-clinical staff, FE found a strong relationship between NHS and private-sector pay rates.\(^{28}\) FE therefore recommended using the GLM method for non-clinical staff.

47. For non-M&D clinical staff (e.g., nursing and allied health professionals), FE found a stronger correlation between actual pay and national pay rates, plus the high cost area supplement (HCAS), than with private-sector pay.

48. While it is not possible to obtain robust data on indirect employment costs,\(^{29}\) based on their analysis of staff turnover and agency spend data, FE concluded that indirect costs were higher in areas with higher private-sector pay for non-M&D clinical staff. Omitting any adjustment for unavoidable indirect costs would therefore not meet the aims of the MFF. As such, FE recommended retaining the GLM approach for non-M&D clinical staff to also take account of indirect costs, albeit using a proxy.

49. FE recommended discontinuing the job responsibility adjustment. This is a further adjustment for skill levels between different areas, as people with the same job title may have different levels of responsibility and functions in different parts of the country (for example, managers in the financial sector). The adjustment, which is an estimate, had limited effect and removing it also simplified the calculation.\(^{30}\)

6.1.2 Using travel to work areas for local pay rates

50. To estimate local pay rates, the GLM method requires the geographical area that the local labour market covers to be defined. The current non-M&D staff component was estimated in 2010, when PCT areas were used as the geographical area. However, PCTs no longer exist.

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\(^{27}\) [www.electronicstaffrecord.nhs.uk/home/](http://www.electronicstaffrecord.nhs.uk/home/)

\(^{28}\) Correlation coefficient of 0.73.

\(^{29}\) Indirect employment costs could include higher turnover, lower productivity and higher vacancy rates as well as recruitment costs, agency costs or cost of providing other non-pay benefits to attract and retain staff.

\(^{30}\) The adjustment required access to and the use of another data set, the Labour Force Survey, and further econometric analysis. The adjustment could also only be applied at regional level rather than TTWA or PCT level.
51. Given that PCT areas were not intended to represent a single labour market, it is not surprising that there were sometimes significant variations, or 'cliff edges', in the estimated staff costs in neighbouring PCTs, and therefore neighbouring trusts. To address these cliff edges, the current MFF method includes smoothing between neighbouring PCTs.

52. FE recommended using TTWAs for the geographical area, rather than administrative areas (e.g. local authorities). TTWAs are produced by the Office for National Statistics and are designed to estimate geographical boundaries of local labour markets. FE suggested that, as TTWAs align to labour market areas, smoothing or interpolation should not be applied. This is also a simplification of the methodology. However, FE recognised cliff edges may still be an issue for some areas and we have therefore undertaken further work on this issue.

53. TTWAs are based on two criteria: at least 75% of those who are resident in them work in them, and at least 75% of those who work in them are resident in them. But this definition does not lead to a unique set of TTWAs for each provider. It also allows for a significant number of people (up to 25%) to live in one TTWA and work in another.

54. TTWAs provide a good estimate of the size of the local labour market, and are a considerable improvement on PCT geographies. They also meet the aim of simplifying the MFF calculation method by giving all providers in the same TTWA the same staff MFF. Importantly, they also significantly reduce cliff edges before any smoothing is applied.

55. However, some cliff edges in MFF values remain. TTWAs only allow any one location to be in one labour market; in reality, the country is covered by many overlapping labour markets. The consequences of this are particularly severe near the boundaries of TTWAs, which is probably a reason for some of the remaining MFF cliff edges, particularly around London.

56. We do not think that cliff edges in themselves are undesirable as they might reflect genuine cost differences. For example, HCAS allowances may create significant differences in staff cost for trusts in inner London compared to those on the fringe of London. It is therefore important to balance the aim of reflecting

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31 www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/traveltoworkareaanalysisingreatbritain/2016

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genuine non-controllable cost differences with the need for plausible results. Trust sites that are near each other with limited travel time between them are unlikely to operate in completely separate labour markets even if they have been allocated to two different TTWAs.

57. To reflect these considerations, we have applied smoothing to reduce the cliff edges where trust sites are close to each other. This is based on the smoothing method that was part of the current MFF methodology but has been refined to focus more closely on near neighbours, and so minimise the impact on the interiors of TTWAs.\(^{32}\)

### 6.1.3 Use data for all sites

58. FE recommended calculating the non-M&D staff component based on the provider site where most of the activity occurs.

59. We propose not to follow this recommendation and instead calculate the value at each site level before aggregation to provider level. This aggregation includes a weighting by gross internal floor area (as a proxy for size). Floor areas are taken from the published 2016/17 ERIC returns.\(^{33}\)

60. While this change increases the complexity of the calculation, it increases the accuracy of the non-M&D staff calculation by better reflecting the differences in staff costs incurred by trusts with multiple sites that cross TTWA boundaries. This also helps with the calculation of new MFF values for trusts that merge and other changes in configuration.

### 6.1.4 Include an allowance for London fringe in the M&D staff component

61. FE recommended a continued uplift to reflect the HCAS London weighting as these are actual costs incurred although FE did not find that wage rates for M&D staff varied between areas.\(^{34}\) The evidence for indirect costs varying by areas was mixed but FE felt it was not strong enough to merit an adjustment.

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\(^{32}\) Smoothing was undertaken at site level using the weighted average of the MFF values of sites up to 50km away. The weights decline exponentially as the distance apart increases (known as a distance decay function). This mean that the adjustment is largest where sites are closest to each other and have significant differences in the 'raw' staff index values.


\(^{34}\) Although the analysis was not conclusive and was consistent with the continuing compensation of HCAS in London.
62. The current MFF takes into account the HCAS for London. Following FE’s recommendation, we propose including an extra band for London fringe providers as that area is associated with a lower HCAS payment than central London.

6.1.5 Include a business rates component

63. Business rates are a new component that accounts for the higher business rates that providers in areas with higher rental values currently pay to local authorities. These are unavoidable and vary materially.

6.1.6 Weights by trust type

64. Spending profiles vary between different types of trust. For example, ambulance trusts have asked why the M&D staff MFF is used for them, when they often employ almost no medical staff. To reflect this, FE proposed the use of different sets of weights for acute, community, mental health and ambulance trusts. The weights would be based on each type of trust’s spend on M&D staff, non-M&D staff, etc.

65. However, we believe it would be difficult to assign providers to a single category consistently as many provide more than one type of service, and the proportion of a provider’s activity in each category may change over time. A single set of weights has therefore been retained for all trust types.

6.1.7 Normalisation – combining the components

66. The indices for each component are combined to give a single MFF value. The individual indices need to be calibrated on a consistent basis. For example, one index with a scale of 1.00 to 1.30 cannot be combined with one on a scale of 0.80 to 1.05, as it will distort the relative weights for the indices. Each component index therefore needs to be placed on a consistent basis, or ‘normalised’.

67. FE proposed normalising by gross internal floor area as a proxy for trust size. However, we are proposing to use operating revenues instead. This is because it better takes into account cost-weighted activity and reflects the underlying purpose of the adjustment, to equalise financial pressures.
6.2 Impact of methodology and data update

68. The proposed MFF values are based on updates to both the methodology and data. The supporting Excel file, *Proposed MFF values workbook*, lists trusts’ proposed MFF values. Figure 4 shows the TTWAs and proposed payment MFF values by trust headquarters location.

**Figure 4: Proposed payment MFF by trust headquarter location.**

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35 For the 2019/20 MFF values, we propose to use the latest data available at the time of calculation, which may be more recent for some components than used in this analysis.

36 Available from [https://improvement.nhs.uk/resources/201920-payment-reform-proposals](https://improvement.nhs.uk/resources/201920-payment-reform-proposals)
69. As with the current MFF, following the data update and method changes, the highest MFF values are in London and areas close to London. They are typically lower in areas furthest from large cities, which is also the case with the current MFF.

70. Figure 5 shows the change between trusts’ current MFF payment values and the values calculated from the proposed method and data updates. The change in MFF value for around two-thirds of trusts is within ±2.0%. About one-third of trusts have a fall of -2.0% or lower. This is about the same as the impact of the data updates alone, although there are significant differences for individual trusts.

71. Figure 6 shows an indicative impact of these changes on trusts’ tariff income as a percentage of operating revenues. The impact is smaller than the percentage change in the MFF payment value, all but nine trusts having a change within ±2.0% (before the application of any transition path). The impact as a percentage of operating income will be larger if other income is also adjusted by the proposed MFF values.

72. Figures 7 and 8 show the impact on CCGs’ MFF values.

73. All of these impacts are before any transition path is applied. See Section 7 for details of the proposed transition.
Figure 5: Change in MFF payment index against 2017/19 tariff values due to data and method updates

Note: on the horizontal axis 1% to 1.5% covers the range of equal to or greater than 1.00% but less than 1.5%

Figure 6: Estimated impact of data and method updates on operating revenue

Note: on the horizontal axis 1% to 1.5% covers the range of equal to or greater than 1.00% but less than 1.5%
Figure 7: Estimated percentage change in CCG MFF values due to data and method updates

Market forces factor review and proposed updates > Methodology changes
Figure 8: Estimated impact on CCG MFF values due to data and method updates

Note: on the horizontal axes 1% to 1.5% covers the range of equal to or greater than 1.00% but less than 1.5%

74. The range of MFF values has narrowed, from between 1.000 and 1.298 in the current MFF to between 1.000 and 1.211 in the proposed MFF. This has the effect of reducing the total amount of money allocated through the MFF.\(^{37}\) To maintain the overall amount of money available through the national tariff, national prices would be slightly increased to offset this (before taking into account other, non-MFF related, changes to national prices).

75. Many of the trusts whose MFF values fall are in and around London. Earnings data show that relative pay in London compared the rest of the country has fallen since 2006-09.

76. The analysis in this paper is based on the payment MFF values, as they are the values providers will use. The payment index has a minimum MFF value of 1.00. The Proposed MFF values workbook also includes the underlying MFF index, which has a national average value of 1.00, with some providers having MFF values above 1.00 and some below 1.00. The payment index is a rescaling of the underlying index – that is, the underlying MFF value of each provider multiplied by the same percentage.

\(^{37}\) Total amount allocated is calculated as: (activity x national prices x MFF values) minus (activity x national prices).

24 Market forces factor review and proposed updates > Methodology changes
7 Transition

77. Previously, changes in MFF values were restricted to no greater than ±2.0% of a trust’s payment index in any one year. However, the length of time since the MFF was last updated means that for many trusts the changes are larger than this and, if implemented immediately, the changes might cause financial instability. We are therefore proposing a transition between the current and proposed MFF values.

78. We propose to phase in the new MFF payment index values over a four-year period in equal steps (ie the MFF will move by a quarter of the distance between the existing and new MFF values in each year). However, we will not make a final decision on the length of the transition period until we have feedback on the proposals set out in this document.

79. We will review the phasing-in as part of future tariff development, for example to use more recent data.

80. Under a four-year transition, MFF values in the first year (2019/20) for more than almost 80% of NHS trusts and foundation trusts change by less than ±1.0%. The largest drop is -2.0% and the largest increase is 0.5%.

81. The expected impact on operating revenues in the first year would be between -0.7% and 0.6%, assuming the changes in MFF have no impact on locally priced services.

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38 For example, when new MFF values were introduced in 2011/12.
39 If we assume the MFF change impacts all provider revenue, the range would be between -1.5% and 1.0%.
Appendix 1: FE’s frameworks for including costs in the MFF and assessing component calculation methods

FE’s framework for assessing which costs should be included as components of the MFF included the following set of criteria:

- Is the cost element unavoidably higher for some providers?
  - Is the variation in the expenditure item (wholly or partially) outside the control of providers now and in the foreseeable future?
- Is the MFF the most appropriate mechanism for adjusting for this unavoidable cost element?
  - Is the variation in expenditure caused by this unavoidable cost element currently accounted for in an adequate manner by other parts of the payment system or other policies?
  - Should the variation in expenditure caused by this unavoidable element be accounted for by other parts of the payments systems or policies?
- Is the unavoidable element of the cost significant?
  - Does the unavoidable element of expenditure cause a significant variation in expenditure from one provider to another?
  - Elements that are judged individually immaterial may need to be considered together.
- Is inclusion in MFF consistent with positive incentives?
  - What changes in incentives would providers likely experience following the inclusion of this unavoidable element?
  - Is there a strong possibility that adjusting for this unavoidable element within the MFF would result in significant unintended consequences in terms of providers’ behaviour?
- Is it broadly practical to include the unavoidable cost element?
  - Is data currently available to account for this element?
  - If not, how difficult and onerous is new data collection likely to be?

FE’s framework for assessing methods to calculate the components of the MFF included the following criteria:

- Accuracy
  - Does the method accurately capture the unavoidable variation?
– Are the results stable over time?
– Is the method future proof?
• Simplicity
  – Will the method be transparent to stakeholders?
  – Is the method easy to apply and replicate?
• Incentive implications
  – Is the calculation method compatible with setting desirable incentives? For example, can providers and commissioners reasonably influence their MFF values?
  – What are the likely changes in behaviour?
  – How strong are the incentives?
## Appendix 2: Summary of FE’s assessment of cost elements against the framework for inclusion in the MFF

<table>
<thead>
<tr>
<th>Cost element</th>
<th>Unavoidable</th>
<th>MFF most appropriate mechanism</th>
<th>Significant</th>
<th>Include</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buildings depreciation</strong></td>
<td>Yes, trusts will be unable to control the cost of building inputs in their area. This will lead to some unavoidable variation in building values and depreciation charges.</td>
<td>Yes, all trusts are required to depreciate their buildings and the cost of building will vary unavoidably between providers.</td>
<td>Yes, in our view the maximum unavoidable impact is significant</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Business rates</strong></td>
<td>Yes, the unit market rental values of commercial land and buildings will exhibit unavoidable variation. Certain trusts will have to make business rates payments which are to some degree unavoidably higher than others.</td>
<td>Yes, providers who own their buildings will have to make business rates payments. Providers who lease their buildings will pay business rates indirectly via a rental or management charge. These costs will vary unavoidably between providers due to variation in market rental values.</td>
<td>Yes, in our view the maximum unavoidable impact is significant</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Labour market pressures</strong></td>
<td>Yes, trusts are unable to influence prevailing local wage rates. Trusts in certain locations are obliged to pay equivalent staff more. This element covers all staff employed by providers. Certain groups of staff (eg M&amp;D) may be affected differently by labour market pressures than other groups (eg administrative and clerical staff).</td>
<td>Yes, all trusts are affected by variation in staff costs and there is a consistent pattern to the effect. Staff costs are closely linked to activity such that an activity uplift is appropriate.</td>
<td>Yes, in our view the maximum unavoidable impact is significant</td>
<td>Yes</td>
</tr>
<tr>
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<td>--------------------------------------------------</td>
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</tr>
<tr>
<td>Variation in cost of building leading to higher capital charges</td>
<td>Yes, trusts will be unable to control the cost of building inputs in their area. This will lead to some unavoidable variation in building values and financing costs such as public dividend capital (PDC) charges.</td>
<td>Yes, all trusts have to finance their buildings and there is a consistent pattern to the effect on input costs.</td>
<td>Yes, in our view the maximum unavoidable impact is significant.</td>
<td>Yes</td>
</tr>
<tr>
<td>Variation in cost of land leading to higher capital charges</td>
<td>Yes, unit land values will vary around the country and trusts will be price takers in this regard. This will lead to some unavoidable variation in financing costs such as PDC charges.</td>
<td>Yes, all trusts will have to pay capital charges on their land and the cost of land will vary unavoidably between providers.</td>
<td>Yes, in our view the maximum unavoidable impact is significant.</td>
<td>Yes</td>
</tr>
<tr>
<td>Cost of utilities</td>
<td>Yes, electricity, gas and water input prices are unavoidably higher in certain areas.</td>
<td>Yes, utilities costs will affect all providers, constitute a regular annual charge and reflect a consistent pattern in input prices.</td>
<td>No, in our view the maximum unavoidable impact is not significant.</td>
<td>No</td>
</tr>
<tr>
<td>Capital financing structure</td>
<td>Yes, in some cases, there is an unavoidable element to some capital expenditure repayment costs as contracts may be long term in nature and the terms will exhibit variation. However, this may be as a result of previous management decisions by the provider.</td>
<td>No, we do not recommend that capital expenditure structure (eg PFI vs. Department of Health and Social Care (DHSC) loans) are compensated via the MFF. This is because each arrangement is unique and requires individual attention. Also lump sum payments may be more appropriate than activity-based compensation.</td>
<td>Not assessed as didn’t pass MFF most appropriate criterion.</td>
<td>No</td>
</tr>
</tbody>
</table>
### Appendix 2: Summary of FE’s assessment of cost elements against the framework for inclusion in the MFF

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</tr>
</thead>
<tbody>
<tr>
<td>Clinical Negligence Scheme for Trusts (CNST) payments</td>
<td>Yes, some providers will have unavoidably higher payments than others due to the type of services they provide.</td>
<td>No, tariffs for healthcare resource group (HRG) sub-chapters and the tariff cost uplifts have already been uplifted to reflect CNST contributions.</td>
<td>Not assessed as didn’t pass MFF most appropriate criterion.</td>
<td>No</td>
</tr>
<tr>
<td>Complexity of casemix</td>
<td>Yes, providers that see more complex cases on average will have unavoidably higher costs per patient than providers that offer more routine services.</td>
<td>No, the current system already reflects difference in casemix via HRG currencies and specialist top-ups.</td>
<td>Not assessed as didn’t pass MFF most appropriate criterion.</td>
<td>No</td>
</tr>
<tr>
<td>Fragile local health economy</td>
<td>Yes, characteristics of a given local health economy, including social care, are likely to unavoidably impact on secondary providers’ efficiency. Secondary providers may be unable to control these factors.</td>
<td>No, other measures are in place to deal with this issue such as delayed transfer of care payments and the Better Care Fund. The best solution is to address struggling aspects of a health and social care system directly.</td>
<td>Not assessed as didn’t pass MFF most appropriate criterion.</td>
<td>No</td>
</tr>
<tr>
<td>Inefficient estate set-up</td>
<td>Yes, the layout and characteristics of a provider’s estate will affect their efficiency and this cost will be partially unavoidable at least in the short and medium term. However, this may be as a result of previous management decisions by the provider.</td>
<td>No, in our view adjusting for estate efficiencies does not fit within the MFF. Specific trusts that cannot access finance to improve their estate may require compensation which is not based on activity.</td>
<td>Not assessed as didn’t pass MFF most appropriate criterion.</td>
<td>No</td>
</tr>
<tr>
<td>Rurality/remoteness</td>
<td>Yes, previous work has found that a small number of remote sites suffer additional unavoidable costs due to their size.</td>
<td>No, in our view these costs should be compensated via local arrangements to reflect the existing national rurality adjustment to CCG allocations.</td>
<td>Not assessed as didn’t pass MFF most appropriate criterion.</td>
<td>No</td>
</tr>
<tr>
<td>Cost element</td>
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</tr>
<tr>
<td>Training costs</td>
<td>Yes, some providers will undertake more training than others.</td>
<td>No, training tariffs are already in place.</td>
<td>Not assessed as didn’t pass MFF most appropriate criterion.</td>
<td>No</td>
</tr>
<tr>
<td>Travel time</td>
<td>Yes, certain areas will have unavoidably higher travel times than others. Providers in these areas that deliver services off-site will experience higher costs.</td>
<td>No, only a small number of providers will be affected (community and mental health trusts in rural areas). These trusts could be compensated separately if necessary. One option would be to extend the existing travel time allocation adjustment which currently only covers ambulance trusts.</td>
<td>Not assessed as didn’t pass MFF most appropriate criterion.</td>
<td>No</td>
</tr>
<tr>
<td>Asset renewal costs (not including land and buildings)</td>
<td>No, asset renewal costs will generally not vary unavoidably; therefore there is no need to include a compensating adjustment.</td>
<td>Not assessed as didn’t pass avoidable criterion.</td>
<td>Not assessed as didn’t pass avoidable criterion.</td>
<td>No</td>
</tr>
<tr>
<td>Cost of purchasing supplies</td>
<td>No, in our view the cost differences arising from purchasing supplies are likely to reflect fixable inefficiencies rather than intrinsic differences between providers.</td>
<td>Not assessed as didn’t pass avoidable criterion.</td>
<td>Not assessed as didn’t pass avoidable criterion.</td>
<td>No</td>
</tr>
<tr>
<td>Multi-site costs</td>
<td>No, generally trusts will be able to determine the number of sites from which they operate. There is no compelling reason why multi-site trusts will have higher costs.</td>
<td>Not assessed as didn’t pass avoidable criterion.</td>
<td>Not assessed as didn’t pass avoidable criterion.</td>
<td>No</td>
</tr>
</tbody>
</table>
Appendix 3: Rationale for factors commonly raised and not taken into account

Appendix 2 lists all the cost elements FE considered for inclusion in its proposed MFF. For some cost elements, FE concluded that they were unavoidable, but inclusion in the MFF would not be appropriate. This was either because the MFF was not judged to be the most appropriate mechanism for adjusting their cost, or their impact was not felt to be significant.

Some stakeholders (including the finance directors interviewed by The King’s Fund) raised PFI payments and rurality and remoteness as elements that could potentially be included in the MFF. However, FE did not recommend including them for the following reasons.

Private finance initiative payments
FE did not consider PFI payments to be unavoidable. The land and buildings costs indices are applicable in the same way as for other trusts. In addition, FE’s view was that a trust’s local decision to use a PFI avoided other costs such as maintenance of older estate. While the decision may have been made some time ago and feel like an external constraint to the current trust management, FE’s view was that perverse incentives would be generated if PFI payments were compensated for more directly by the MFF. Where PFI schemes do demand some extra support, lump sum payments may be more appropriate than activity-based compensation.

Rurality and remoteness
FE did consider some higher costs due to sparsity and remoteness to be unavoidable – for example, the greater difficulties in achieving economies of scale and longer staff travel times for home visits and between providers’ sites. FE also considered the finding by the Advisory Committee on Resource Allocation (ACRA) that costs for just a small number of sites are higher due to remoteness. However, FE’s view was that, as these costs are so locally specific and relevant to relatively few sites, it was not appropriate for adjustments to be made on an activity basis through the MFF. FE felt that site-specific funding through other mechanisms would be more appropriate. An adjustment for these costs for the small number of sites identified by ACRA is currently made to target allocations for the relevant CCGs.

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40 Frontier Economics did not assess the extent to which other mechanisms in the payment system work effectively.

41 For example, in 2014 Northumbria Healthcare terminated the PFI contract which originally enabled the construction of Hexham General Hospital. This buy-out was facilitated by a loan from Northumberland County Council and will reportedly save approximately £3 million per year. [www.northumbria.nhs.uk/news/northumberland-hospital-changes-hands-pfi-pay-out-deal-finalised](http://www.northumbria.nhs.uk/news/northumberland-hospital-changes-hands-pfi-pay-out-deal-finalised)

Appendix 4: Data sources and changes to current method used for the simple data update

<table>
<thead>
<tr>
<th>Component</th>
<th>Data source (2015/16 datasets unless otherwise stated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical and dental (M&amp;D)</td>
<td>Update used high cost area supplement (HCAS) zones to determine the geographical location of a trust. Current MFF used used strategic health authority (SHA) codes to determine geographical location, however SHAs have since been abolished.</td>
</tr>
<tr>
<td>Non-M&amp;D staff</td>
<td>Update used electronic staff record (ESR) data to calculate adjustment for HCAS. Current MFF used wage bill data. To normalise index, current method used bed data from Estates Return Information Collection (ERIC) data 2014/15 dataset used (also applicable to non-M&amp;D staff and buildings components) as bed data is not available in the 2015/16 ERIC dataset.</td>
</tr>
<tr>
<td>Land</td>
<td>Clinical commissioning group (CCG) administrative geography used to define labour market boundaries . Current MFF used PCTs as the geographical area. To normalise index, ERIC data – bed data used in current MFF and for update. For update 2014/15 dataset used and bed data not available for 2015/16.</td>
</tr>
<tr>
<td>Weightings</td>
<td>Provider financial accounts (both data update and current MFF). Royal Institute of Chartered Surveyors Building Cost Information Service for both data update and current MFF. Provider financial accounts and ESR data for update. Provider financial accounts for current MFF.</td>
</tr>
</tbody>
</table>