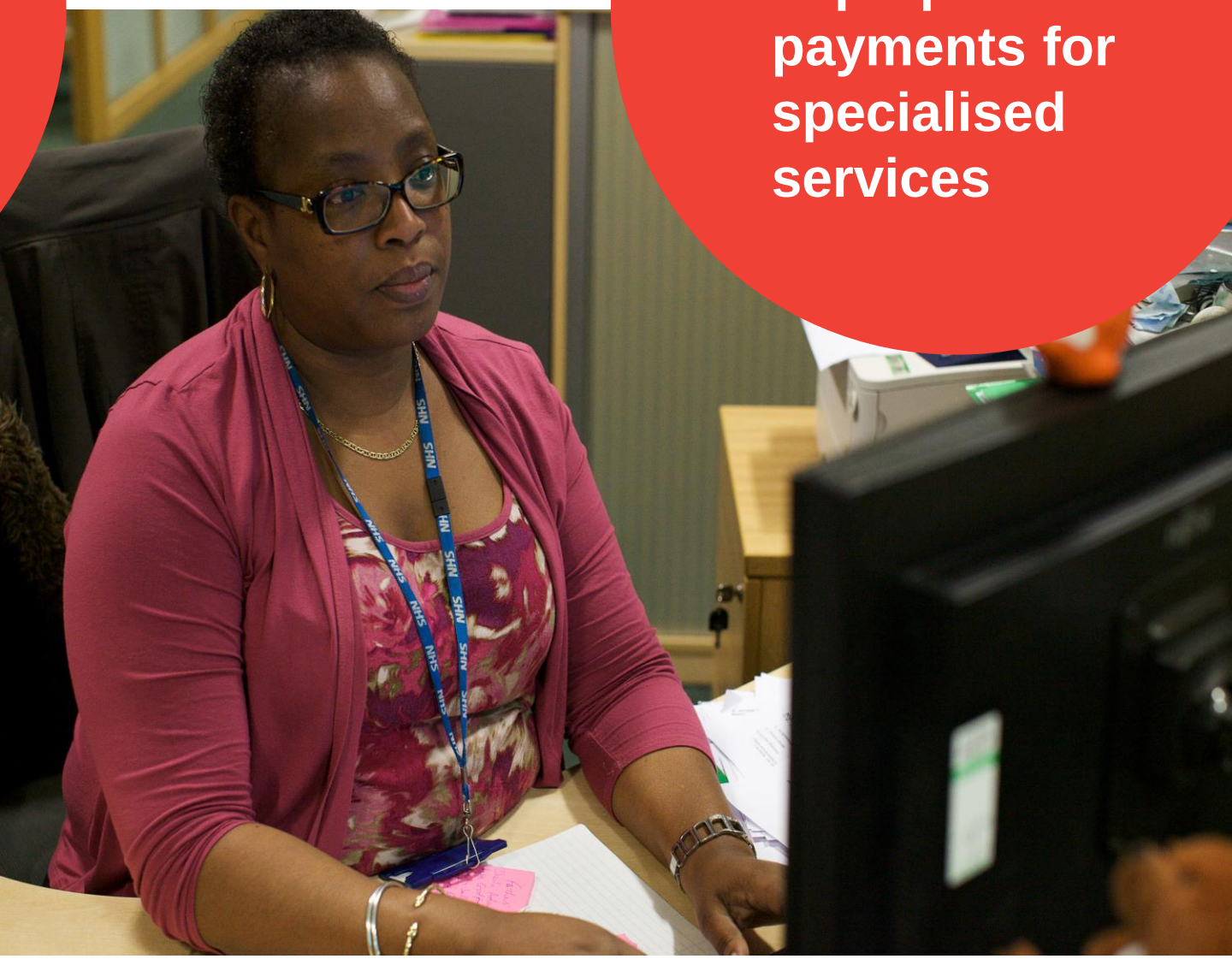
Monitor

Making the health sector work for patients

2016/17 national tariff: Top-up payments for specialised services



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1. Background to proposals for the 2016/17 national tariff

1. Monitor and NHS England set national prices and establish the rules that commissioners and providers must use to agree locally determined prices. Last December, in *Reforming the payment system for NHS services: Supporting the Five Year Forward View*[1] we set out how we intend to encourage:

    a. **Continuous quality improvement**. The payment system needs to promote the long-term, sustainable well-being of the whole person by reimbursing providers for delivering specified quality outcomes for patients rather than particular treatments or inputs.

    b. **Sustainable service delivery**. The payment system needs to incentivise best practice efficient and accessible delivery of care, to make sure that NHS funding goes as far as it can for patients.

    c. **Appropriate allocation and management of risk**. The payment system can help to make sure that financial risks in the NHS, caused by demand pressures or operational performance, sit with those organisations, whether commissioners or providers, that are best able to influence or absorb them in the context in which they arise.

2. Our proposals for 2016/17 support these objectives. In setting the national tariff, we also aim to improve the payment system to make it more transparent, to reflect latest information and to improve the method by which prices are set.

3. We have already engaged with many stakeholders in developing our proposals for 2016/17. We sought advice and input on proposed policies for specialised services by establishing an independent Specialised and Complex Care Advisory Group.[2] This group has advised us on the proposals for specialised top-ups that are contained in this document.

4. We are waiting on the outcome of the Government Spending Review before finalising proposals on the efficiency factor, cost base and service development, which will help us to set final price levels. We therefore do not intend to engage on these elements before the statutory consultation notice.

[1] Available from: www.england.nhs.uk/wp-content/uploads/2014/12/reforming-payment-system.pdf
[2] Further information available from: https://www.gov.uk/government/groups/specialised-and-complex-care-advisory-group

2. About this document

5. This document focuses on top-ups for prescribed specialised services and explains the reasons why we have reviewed the policy on top-ups as part of our preparation for the statutory consultation on the 2016/17 national tariff.

6. The main drivers for our review include the potential move to HRG4+ currency design, the introduction of Prescribed Specialised Services (PSS) following the Health and Social Care Act 2012 and an independent review of specialised services top-ups by the University of York.

7. In this document we give options for how we can implement the proposed specialised top-ups and provide a preliminary impact assessment of our proposals.

8. This is the third document that we have published on policies proposed for the 2016/17 National Tariff Payment System. The other documents, on currency design and relative prices, can be found on Monitor's website.[3]

[3] https://www.gov.uk/government/publications/engagement-on-201617-national-tariff-proposals

3. Context

9. The national tariff covers £72 billion of healthcare spend. It seeks to reimburse providers of healthcare services for efficiently incurred costs and to incentivise desired behaviour, such as adoption of clinical best practice. It also provides crucial information on the efficient costs of providing services that can be used to improve commissioning choices and service delivery.

10. To address the financial challenges facing the NHS, the way that healthcare is provided must change and the payment system must support this. Monitor and NHS England, along with our national partners, outlined new models of care in the Five Year Forward View to discuss how care might be provided in future. We followed this up with a document discussing implications for payments: *Reforming the payment system for NHS services: supporting the Five Year Forward View*.

11. Specialised services are accessed by comparatively small numbers of patients and provided in relatively few hospitals (but with catchment populations of more than one million). These services tend to be located in specialised hospital trusts that can recruit a team of staff with the appropriate expertise and enable them to develop their skills.

12. Specialised services account for approximately 14% of the total NHS budget, with £13.8 billion of the allocation for 2014/15.[4] NHS England is responsible for commissioning specialised services.

13. Four factors are taken into account when determining whether NHS England commissions a service as a prescribed specialised service. These are:

    a. the number of individuals who require the service

    b. the cost of providing the service or facility

    c. the number of people able to provide the service or facility

    d. the financial implications for Clinical Commissioning Groups (CCGs) if they were required to arrange for provision of the service or facility themselves.

14. Further information on specialised services can be found on NHS England's website.

[4] Source: https://www.england.nhs.uk/commissioning/spec-services/

4. Revising specialised services top-ups

Summary

Monitor and NHS England have proposed to move to HRG4+ currency design for admitted patient care in the 2016/17 national tariff. HRG4+ has been designed by the Health and Social Care Information Centre to better describe patient complexity and more appropriately pay for complex patients.

In addition, the way that specialised services are defined has changed and the University of York has made recommendations for a new set of top-up payments following an econometric analysis.[5]

In light of these developments, we propose to change the set of specialised services eligible for top-ups in the 2016/17 national tariff. We also propose that the amount paid for top-ups should be based on the independent analysis by the University of York. The Specialised and Complex Care Advisory Group commented on the analysis during its development.

15. Under the National Tariff Payment System, prices for admitted patients paid to providers reflect average costs for clinically meaningful groups of services, also known as Healthcare Resource Groups (HRGs). HRGs are intended to be resource homogenous. This means that all patients allocated to the same HRG have the same expected resource requirement on average, with any variation in actual costs from the expected level being random.

16. This payment arrangement works well if variation in costs within HRGs is random across patients and hospitals. But if there is systematic variation in costs associated with particular groups of patients, problems arise: the payment system may deter hospitals from treating these patients or penalise hospitals that do. The policy of concentrating specialised services in particular providers may give rise to or accentuate such problems.

17. Top-ups for specialised services were introduced in 2005/06 to reflect the additional costs for providers that systematically serve more patients requiring these services.

18. Currently, these providers are paid for a set of services and procedures defined within the Specialised Services National Definitions Set (SSNDS).[6] These services fit into four areas: spinal surgery, neurosciences, orthopaedics and paediatrics. The top-up is triggered by particular diagnoses or procedure codes. For spinal surgery, neurosciences and paediatrics, a top-up is applied to the

[5] Working Paper 118, University of York: http://www.york.ac.uk/che/publications/in-house/
[6] Source: http://webarchive.nationalarchives.gov.uk/+/http://www.isb.nhs.uk/library/standard/238

HRG payment for these services delivered by an eligible provider. For orthopaedics, the top-up is applied to the HRG payment for any provider when a particular set of diagnoses or procedure codes are flagged. The top-up rates that have applied until now are shown in the table below.

Table 1: SSNDS top-up rates

SSNDS code	SSNDS description	Rate
SS08	Neurosciences	28%
SS34	Orthopaedic	24%
SS91	Paediatric Specialised – Low	44%
SS93	Paediatric Specialised – High	64%
SS06	Spinal Surgery	32%

19. Top-ups for specialised services amount to approximately £250-300 million per year. About 70% of top-ups are paid for specialised paediatric services. The approach to calculating and allocating top-ups has not changed for a number of years. The value of the top-up payment is top-sliced from the cost base used to set national prices.

20. The Health and Social Care Act 2012 provided for the transfer of responsibility to NHS England for the commissioning of specialised services. The relevant services are prescribed in regulations made by the Secretary of State.

21. In determining which services are to be prescribed, the Secretary of State must have regard to the four factors referred to in paragraph 13 above, take appropriate advice, and consult NHS England.

22. NHS England established the Clinical Advisory Group for Prescribed Services to provide advice and make recommendations on the specialised services that should be commissioned.

23. The Identification Rules set out the existing service definitions including the set of diagnoses, procedures, specialist and Treatment Function Codes. These changes are reflected in the Prescribed Specialised Services (PSS) 2015/16 Shadow Monitoring Tool.[7]

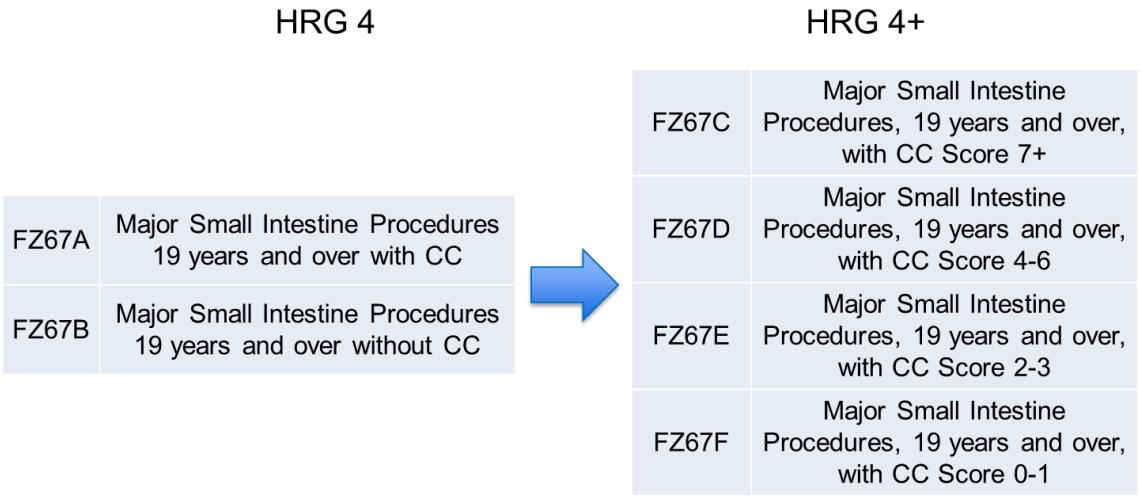
24. A considerable number of services previously identified as specialised in the SSNDS are not identified as specialised under the PSS 2015/16 Shadow Monitoring Tool. This means that if applied, a number of services will no longer receive top-ups. However, the proposed move to HRG4+ is expected to provide a better reflection of complexity within national prices. This allows payment to

[7] Source: http://www.hscic.gov.uk/casemix/prescribedspecialisedservices

better reflect the costs incurred in treating patients of different levels of complexity, as shown in the figure below.

25. Given the change in legislative framework for specialised services and the age of SSNDS, we have decided to review top-ups for specialised services. The University of York's analysis also identified additional services eligible for top-ups which has led to an increase in the value of top-up payments.

Figure 1: Moving from HRG4 currency design to HRG4+



26. In 2014, Monitor and NHS England established a stakeholder group, the Specialised and Complex Care Advisory Group (SCCAG) to review our proposals to revise top-ups. This group included a range of stakeholders from providers and commissioners. The group oversaw a review of specialised top-ups conducted by the University of York.

27. The review used econometric analysis against the PSS definition and the new HRG4+ classification to identify areas where the costs of providing services defined as specialised are different to non-specialised services and where this difference is statistically significant. A summary of this work is in Annex 2.

28. This group reviewed the original top-up values using Hospital Episode Statistics (HES) data and reference cost data (up to the 2013/14 financial year), using the new specialised service definitions and two different statistical approaches: ordinary least squares (OLS) and random effects (RE). The OLS approach had previously been used as the basis for the current model of top-ups. The RE model adjusts for hospital-specific effects. Further information on the different statistical approaches can be found in working paper 118 published by the University of York.[8]

[8] Available at: http://www.york.ac.uk/che/publications/in-house/

29. The RE model was rejected because such hospital specific effects could include efficiency differences but potentially also any unavoidable additional costs associated with being a specialist provider. As such the OLS model was felt to be a fairer predictor the costs of specialist care.

30. We also considered the material impact to particular providers and service lines when considering the new top-ups. As a result, we refined the list of PSS rates supplied by the University of York by including an additional set of exclusion and inclusion rules. These made sure that flags would only be included if they had a minimum number of cases/material impact but would not be excluded if they had a large impact on a particular provider or service line. The full list of rules (including those suggested by York) are:

    a. exclude flags that only apply to HRGs not covered by fixed prices

    b. exclude flags that generate negative top-ups

    c. exclude areas where the analysis suggests the top-up rate is not statistically significant

    d. exclude flags that apply to less than 600 patients

    e. exclude top-ups with rates of less than 10%, unless:

        i. the top-up rate is >5% and the total top-up amount is > £1million

        ii. the cost difference >5% and the top-up allocation/budget for a single provider >£100K.

4.1. What we propose

31. We propose to:

    a. Base top-ups for specialised services on the cost differences identified by the University of York's OLS model (we explain the rationale for this in the section below).

    b. Consider the material impact of changes to providers and service lines and put appropriate transitional arrangements in place. We are particularly mindful of the potential impact on providers of paediatric services.

32. The top-ups using the OLS model and PSS descriptions are set out in Table 2.

Table 2: Proposed top-ups using the OLS model

PSS code	PSS description	Rate
NCBPS01O	Bone sarcoma	35.0%
NCBPS09Z	Burns Care	48.0%
NCBPS13E	Cardiac - Cardiac surgery	25.0%
NCBPS13C	Cardiac - Inherited heart disorders	16.0%
NCBPS13F	Cardiac - PPCI and Structural Heart Disease (Complex Invasive Cardiology)	13.0%
NCBPS23A	Childrens services - Cancer	14.0%
NCBPS23B	Childrens services - Cardiac	61.0%
NCBPS23F	Childrens services - Gastroenterology	8.0%
NCBPS23H	Childrens services - Haematology	12.0%
NCBPS23M	Childrens services - Neurosciences	34.0%
NCBPS23N	Childrens services - Ophthalmology	35.0%
NCBPS23T	Childrens services - Respiratory	42.0%
NCBPS23X	Childrens services - Surgery	23.0%
NCBPS33C	Colorectal - Transanal Endoscopic Microsurgery	60.0%
NCBPS38S	Haemoglobinopathy - Sickle Cell	13.0%
NCBPS03Z	Haemophilia	43.0%
NCBPS01M	Head and Neck cancer	10.0%
NCBPS19V	Hepatobiliary - pancreatic cancer	7.0%
NCBPS19Z	Hepatology and Pancreatic	13.0%
NCBPS08O	Neurosciences - Neurology	9.0%
NCBPS08S	Neurosciences - Neurosurgery	46.0%
NCBPS34A	Orthopaedic Surgery	22.0%
NCBPS23Q	Paediatric Surgery - Trauma and Orthopaedics	23.0%
NCBPS01Y	Rare Cancers	6.0%
NCBPS11C	Renal Services - Access for dialysis	24.0%
NCBPS11T	Renal Services - Renal Transplantation	16.0%
NCBPS29B	Respiratory - Complex thoracic surgery	38.0%
NCBPS29E	Respiratory - Management of central airway obstruction	40.0%
NCBPS29R	Respiratory - Other	13.0%
NCBPS01L	Soft cell sarcoma	58.0%
NCBPS01X	Specialised Urology - Penile cancer	38.0%
NCBPS01Z	Specialised Urology - Testicular cancer	34.0%
NCBPS06A	Spinal cord injury	90.0%
NCBPS01T	Teenage and Young Adults Cancer	9.0%
NCBPS01U	Upper GI Surgery - oesophageal and gastric cancer	13.0%
NCBPS30Z	Vascular Services	8.0%

33. The top-ups in Table 3 are under consideration at this stage.

Table 3: Additional top-ups under consideration

PSS code	PSS description	OLS rate
NCBPS09Z	Burns Care	48.0%
NCBPS01L	Soft cell sarcoma	58.0%
NCBPS06A	Spinal cord injury	90.0%
NCBPS11T	Renal Services - Renal Transplantation	16.0%
NCBPS29R	Respiratory - Other	13.0%
NCBPS38S	Haemoglobinopathy - Sickle Cell	13.0%
NCBPS11C	Renal Services - Access for dialysis	24.0%

34. Alongside the work done by the University of York, we conducted an impact assessment to assess the material impact of the changes to providers and service lines. As there are significant changes in the proposed top-ups for certain services we considered a number of scenarios for implementation.

35. If we moved instantly to the new PSS flags and rates, the total value of top-ups for specialised services would change from approximately £290 million to approximately £400 million.

36. We propose a transitional arrangement to smooth the impact of the changes. This would allow top-up rates to transition smoothly for all service lines by 25% per year.

4.2. Rationale

37. We have proposed this change because it meets the current definition for specialised services and fits in with our proposals to move to HRG4+ currency design.

38. This change uses the latest set of reference costs and HES data and provides an updated set of specialised top-ups based on an evidence-based approach outlined in the University of York report. This ties the specialised top-ups more closely to the current definition of specialised care.

39. The greater cost discrimination theoretically available within patient level cost data than in current reference costs would lead to better identification of the excess costs of specialised services and therefore higher specialised top-ups. This hypothesis was explored by the working group, which found that the patient level cost data currently available did not routinely lead to higher top-ups. Patient level costing data was also not available across all providers, making designing a national payment system off this data problematic. The SCCAG advised that at this stage specialised top-ups should continue to be based upon the current approach, using reference costs.

40. We have decided to adopt the OLS model over the RE model. The RE model adjusts for hospital-specific effects. These effects include not only efficiency differences between hospitals but also the systematic complexity effects associated with specialised services. Consequently, the SCCAG considered that using the RE model might underestimate the need for top-ups. Further information on the results of these statistical approaches is set out in the University of York working paper.[9]

41. We have considered the impact to key providers and service lines in our ongoing impact assessment. We designed an enhanced impact assessment program where we worked closely with stakeholders using their own local data to assess the magnitude of the impact of both currency and top-up changes. We have designed our transitional arrangements in light of the material differences that will be experienced by some providers.

42. The SCCAG has also recommended that we undertake further work to reflect the infrastructure and training costs of providing certain types of specialised services, eg paediatrics.

4.3. Transitional arrangements

43. We understand that there are considerable proposed changes in both the currency and the definitions of specialised care. We believe that these changes are based on firm, clinically informed foundations and, together with the analysis done by the University of York, provide a more rigorous and evidence-based approach to top-ups for specialised services.

44. However, as several changes are proposed at once, we are mindful of material impacts on providers. We are therefore proposing two alternatives for transitional arrangements. These options will help mitigate the most significant impacts on providers affected by the proposed changes. Both of the options are based on a transition from the original SSNDS rates to new PSS flags.

45. We also propose to quickly implement increased top-ups for services where the analysis suggests the payment system has not recognised higher costs.

Option 1

46. In option 1 top-ups would be based on the PSS rates presented above. Specialty areas that would lose top-ups when moving to the new rates (spinal, orthopaedics and paediatrics) would transition to the new PSS rates over four years. This would reduce the initial impact on these areas compared to moving to immediate implementation of the new PSS flags.

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[9] Working Paper 118, University of York: http://www.york.ac.uk/che/publications/in-house/

47. Only losses would be transitioned over four years, and we would not scale back to the full PSS value for top-ups (approximately £400 million). This means that the total value of top-ups under this option would be greater, at around £500 million.

48. This option would have a greater impact on certain specialised services, compared to imposing a larger top-slice on the rest of the sector.

Option 2

49. In option 2, top-ups would also be based on the PSS rates presented above. Specialty areas that would lose top-ups when moving to the new rates (spinal, orthopaedics and paediatrics) would transition to PSS rates at a faster rate compared to option 1. This would reduce the initial impact on these areas compared to moving to immediate implementation of the new PSS flags.

50. This option is designed to minimise the impact of the change in areas that would lose top-ups. This would balance our concerns about the impact on key clinical services against the impact of imposing a larger top-slice on the rest of the sector.

51. The figures in this document are provisional and subject to revision. We are still working on manual adjustments, options around HRG4+ smoothing and several other policy areas that will feed into our final impact assessment.

5. Next steps

52. Monitor and NHS England will make a final proposal on top-ups for specialised services in the statutory consultation notice on the 2016/17 national tariff.

53. We expect to publish the statutory consultation notice in early 2016.

54. If you have comments on the proposals in this document please email them to pricing@monitor.gov.uk.

Annex 1: Preliminary impact assessment

55. This is subject to change. This is not the final impact assessment but an early indicative result.

56. The estimated impact of the new specialised top-up arrangements is shown in the table below.

Table 4: Estimated impact of the new top-ups for specialised services

Specialty area	Current top-ups (£M)	Top-ups under full move to PSS (£M)	Transition option 1 (£M)	Transition option 2 (£M)
Cancer (potential new area for top-ups)	-	20	20	20
Cardiac (potential new area for top-ups)	-	92	92	92
Paediatrics	215	97	189	150
Neurosciences (Neurosurgery)	51	112	112	112
Orthopaedics	7	2	5	4
Other (potential new area for top-ups)	-	20	20	20
Respiratory (potential new area for top-ups)	-	45	45	45
Spinal	18	8	16	13
Total	**~291**	**~397**	**~498**	**~456**

57. These figures are likely to change based upon outstanding decisions on manual adjustments, decisions on the final set of flags to include and smoothing changes from HRG4+. Numbers have been rounded to the nearest million.

58. The figures have been calculated using the correct split of providers on the Enhanced Tariff Offer and Default Tariff Rollover in 2015.

Annex 2: Summary of the University of York results

Overview

Current policy in the NHS in England promotes concentration of the treatment of relatively rare and complex conditions in a limited number of specialist centres. However, if a more complex patient casemix leads to specialised treatments being systematically more costly than non-specialised treatment, then the national tariff payment system based on HRGs may penalise providers that perform this activity.

Data and methods

We apply the PSS definitions of specialised care, both for the original 2013/14 tool and the 2014/15 shadow monitoring tool (PSS-SMT), to patient level data from HES mapped to reference cost data for three financial years, from 2011/12 to 2013/14. We use OLS and RE models to ascertain the cost differential associated with specialised care for patients allocated to the same HRG.

We analyse costs for each patient to determine whether specialised care is associated with higher costs relative to patients allocated to the same HRG who did not receive specialised care.

We specify six analytical models:

- Model 1: cost analysis of the full sample, with the dependent variable defined as the full set of costs, including excess bed day and unbundled costs.
- Model 2: cost analysis of a reduced sample, where patients allocated to fully specialised and fully non-specialised HRGs are dropped, as their costs are reflected in the base tariffs.
- Model 3: core HRG cost analysis of the reduced sample, with the dependent variable capturing only the core HRG cost, not excess bed day and unbundled costs, as these are reimbursed separately
- Model 4: as model 3, but with PSS eligibility criteria also used to identify whether a patient has received specialised care.
- Model 5: Excess bed day cost model. Analysis of variation in excess bed costs, only for those patients that stay beyond their HRG trimpoint.
- Model 6: analysis of length of stay of the full sample, as a sensitivity analysis given concerns about reference costs not being truly patient level costs.

We calculate the total additional costs associated with each specialised service at national level and examine the extent to which specialised services are concentrated within or spread across hospitals and HRGs.

Results

Out of 16,964,893 patients treated in English hospitals in 2013/14, 10.5% were identified as having received specialised care under PSS rules and 11.8% under PSS-SMT rules. Estimated cost differentials are generally stable over years and across different models. 2013/14 data shows that:

- For 29 of the 69 PSS markers, we find cost differentials in excess of 10% when analysing the cost of the core HRG to which patients are allocated (Model 3 RE).
- Only 24 of these 29 PSS markers have cost differentials in excess of 10% when the updated PSS-SMT rules are applied.
- We find that 6 of the 35 new PSS-SMT markers have cost differentials in excess of 10%.
- We observe fewer cost differentials when considering excess bed day costs (Model 5 RE), the differential being in excess of 10% for only 9 PSS markers.

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