Reference costs guidance for 2011-12

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Foreword by David Flory CBE

Dear Colleague

2011-12 will be the fifteenth year of the reference cost collection. In many ways, it will also be one of the most important so far.

The first reference costs collection in 1997-98 covered under £5 billion of NHS services. The 2011-12 reference costs will cover over £50 billion and are likely to support the calculation of a national tariff in 2014-15.

The Government has set out its commitment to delivering transparent, comprehensive and stable payment systems across the NHS, and the introduction of new currencies for ambulance services, cystic fibrosis and mental health services in these reference costs will support an expansion of the scope of Payment by Results.

Following pilot exercises in the last two years that have proved its feasibility, the collection of spell level costs in these reference costs has the potential to support a move towards a more transparent calculation of the tariff.

Responsibility for tariff design and price setting is passing from the Department to Monitor and the NHS Commissioning Board. By the time that the 2014-15 tariff is in development, and subject to the passing of the Health and Social Care Bill, Monitor is likely to be exercising its duty to set prices that reflect all underlying costs. Monitor is likely to set conditions in the provider licence that will support it in discharging this duty.

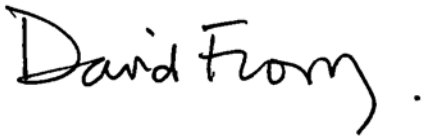
Whatever decisions are made in the future about extending the scope of reference costs to include other organisations that provide services to NHS patients, NHS organisations must themselves lead by example in the quality of reference costs they submit. Last year's audit of the 2009-10 reference costs of all acute NHS and foundation trusts by the Audit Commission highlighted a number of areas of concern that resulted in the removal of data for some organisations from the 2012-13 tariff calculation. There should be more engagement at senior management and Board level in driving up the quality of reference costs.

Effective clinical and finance engagement in costing is a vital part of the quality and efficiency agenda. However, clinicians have too frequently expressed concerns about the quality and credibility of some of the reported costs for their services. From 2011-12, Finance Directors must therefore provide assurance when signing off reference costs that finance teams have actively engaged clinicians in the costing process.

The Department enjoys an excellent relationship with costing professionals in the NHS. This is evidenced in the devolution of responsibility for the Clinical Costing Standards to the Healthcare Financial Management Association (HFMA). These Standards in turn reflect the increasing use of patient level costing and information systems in the NHS that will help organisations make decisions locally and lead to improvements in the quality of reference costs nationally. Many trusts already use these systems to support their

submissions and we see increased use of bottom up costing methods as key to improving the quality and accuracy of reference costs.

We will continue to work in partnership with you, the NHS Commissioning Board and Monitor to drive up the quality of reference costs. To that end, we have worked hard to make this guidance more authoritative, comprehensive and easy to use. We are grateful to those of you who contributed to its development, and hope it will assist you when submitting reference costs later this year.



David Flory
Deputy Chief NHS Executive

Section 1: Introduction

Purpose

1. Reference costs are the average unit cost to the NHS of providing defined services in a given financial year to NHS patients in England and are collected annually. This guidance sets out the mandatory requirements for the collection of 2011-12 reference costs from NHS trusts and NHS foundation trusts. It supersedes guidance issued in previous years and should be used alongside the following:

   (a) Unify2[1] – the Department's corporate data collection system
   (b) Reference costs system and workbook user guide – a manual to help NHS users submit their reference costs in Unify2
   (c) the collection templates, comprising three Microsoft Excel workbooks
      (i) a main reference costs workbook for reporting unit costs and activity (Annex A)
      (ii) a reconciliation workbook to support reconciliation of the total expenditure used in reference costs to final accounts
      (iii) a spells workbook for the separate reporting of spell unit costs and activity
   (d) Healthcare Resource Group 4 (HRG4) 2011-12 Reference Costs Grouper (the Grouper) and documentation[2] - HRG4 is the currency for a significant part of the reference collection. The Casemix Service at the NHS Information Centre publish the Grouper and supporting documentation including user manual, the Code to Group workbook, chapter summaries and listings, and a summary of changes from previous Groupers.

2. The *NHS Costing Manual* specifies the overall principles for NHS costing and remains the mandatory minimum standard at which NHS organisations must cost for reference costs or any other costing model. We have released an updated edition alongside this guidance.

3. To the general costing principles in the *NHS Costing Manual*, we can add a number that are specific to reference costs. These are that reference costs:

   (a) are retrospective, and the quantum of costs used in their production should be reconciled to the audited accounts. The reconciliation statements that form part of the return are an integral element of the audit trail for this reconciliation
   (b) are composed of a mandatory return for unit costs and activity, plus the reconciliation statements
   (c) are average unit costs, irrespective of the underlying data supporting their calculation
   (d) capture the total cost of treating NHS patients for all the services listed in the subsequent sections of this guidance, whether provided by NHS organisations, or sub-contracted to independent sector providers
   (e) include the costs of drugs (paragraph 168) or devices (paragraph 166) against the relevant HRGs, even if the drugs or devices are excluded from the national tariff or separately reported as a memorandum item in the reconciliation statement workbook (paragraph 608)

[1] http://nww.unify2.dh.nhs.uk/unify/interface/homepage.aspx
[2] http://www.ic.nhs.uk/services/the-casemix-service/using-this-service/reference/downloads/costing

(f) emphasise the cost of delivering the service, and not the funding streams that are used to recover these costs. The services covered are those provided for NHS patients under a range of contractual arrangements.

4. Organisations will wish to refer to other resources:

(a) *Service line reporting (SLR)*[3] is the framework developed by Monitor for NHS foundation trusts
(b) for organisations that have implemented patient level information and costing systems (PLICS), the *Clinical costing standards*[4] provide recommended best practice for the production of patient level costs and build on the principles in the *NHS Costing Manual*. Standards are available for acute health and mental health. Following initial publication by the Department, they are now maintained by the Healthcare Financial Management Association (HFMA)
(c) *Patient level information and costing systems and reference costs best practice guide*[5] is our guide to helping organisations using PLICS when producing reference costs
(d) *A simple guide to Payment by Results*[6] is our introduction to Payment by Results (PbR) and the national tariff, the system that reference costs help support.

ROCR approval

5. The Review of Central Returns Committee (ROCR)[7] has approved this reference costs collection under reference number ROCR/OR/2132/FT6/001MAND with an expiry date of January 2013. It is therefore mandatory for all NHS trusts and NHS foundation trusts, who must comply fully with this guidance and its timescales, ensuring they have the necessary resources and systems to meet full compliance.

6. We based our evidence to ROCR on the administrative burden of collating and submitting reference costs on findings from a survey of all trusts and PCTs by the Audit Commission reported in *Reference costs – review of uses by NHS bodies (February 2010)*[8]. 46% of organisations reported spending between 21 and 50 days collating the data required to submit their annual return. 51% of acute and specialist trusts reported spending more than 50 days.

7. ROCR are keen to receive feedback on central data collections from colleagues who submit returns, in particular information about the length of time data collections take to complete and any issues, suggested improvements or duplication. Feedback should be submitted to ROCR using an online form[9].

Main changes for 2011-12

8. We are making a number of changes to the reference costs collection for 2011-12,

[3] http://www.monitor-nhsft.gov.uk/home/developing-nhs-foundation-trusts/service-line-management-0
[4] http://www.hfma.org.uk/costing/
[5] http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_126616
[6] http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_128862
[7] http://www.ic.nhs.uk/rocr
[8] http://www.dh.gov.uk/en/Managingyourorganisation/NHScostingmanual/DH_104762
[9] http://www.ic.nhs.uk/webfiles/Services/ROCR/Data%20Collection%20Feedback%20Template.xls

the purpose of which is to:

(a) redefine the scope of reference costs by focusing on NHS trusts and NHS foundation trust costs, removing primary care trusts (PCTs) and personal medical services plus (PMS+) pilots from the collection, and removing some services where there is no clear national requirement to collect costs
(b) support the future development of Payment by Results (PbR) by aligning the collection to several key areas where we are expanding the scope of PbR currencies and tariffs, and by collecting spell costs to improve the tariff calculation
(c) respond to recommendations from the Audit Commission that the Department should address weak areas of national reference costs guidance identified during their audit programme[10].

9. Most PCTs gave up their provider role on 31 March 2011 under the transforming community services (TCS) programme, although in a very few cases provider arms were still being transferred during 2011-12. Previous collections required that all commissioners of services for NHS patients should submit data as part of their reference costs for services directly commissioned from and delivered by the independent sector. We did not use these costs in the tariff calculation. Instead, they were intended to provide a full statement of the cost of services to NHS patients, whether the NHS provided the service, or sub-contracted it to, or directly commissioned it from, the independent sector. During 2011, it became clear to us that many PCTs had not understood or had not complied with previous guidance. Given the poor quality of the data, its limited usefulness, together with the clustering of PCTs in 2011-12 and concomitant reductions in management capacity, **we are removing the requirement for PCTs to include in the 2011-12 collection the costs to them of directly commissioning services from the independent sector**.

10. In previous collections we also asked PCTs to submit a return on behalf of their PMS+ pilots, for the plus element of these agreements. GP practices also provide defined secondary care services in addition to primary medical services under general medical services (GMS) and alternative provider medical services (APMS). **We have therefore decided to remove PMS+ pilots from the 2011-12 collection.**

11. **The consequence of these changes is that PCTs are no longer required to submit any reference costs for 2011-12.** The single exception will be Isle of Wight PCT which anticipates becoming an NHS Trust on 1 April 2012.

12. Following separate pilot collections of spell based costs in the last two years, **we are mandating and mainstreaming within this collection and within Unify2 the reporting of spell costs for admitted patient care as part of 2011-12 reference costs** (paragraph 55).

13. We have made significant progress since mental health first emerged as the highest priority for the expansion of PbR in 2007, and in 2012-13 we are mandating the use of care clusters for contracting for adult mental health services. **Following the pilot collection of mental health care clusters costs in 2011, we are introducing these into the main reference costs collection for 2011-12** (paragraph 387).

[10] http://www.audit-commission.gov.uk/health/audit/paymentbyresults/assuranceframework/Pages/default.aspx

14. **We have considered the implications of the care clusters for the collection of costs for other mental health services, and taken the opportunity to refine these areas**. In particular, we have:

    (a) **removed the following reporting lines for mental health services from the reference costs workbook:**
        (i) adult admitted patient care (intensive care, acute care and rehabilitation)
        (ii) adult day care facilities
        (iii) adult consultant led outpatient attendances
        (iv) adult consultant led community contacts and community mental health team contacts
        (v) older people admitted patient care
        (vi) older people day care facilities
        (vii) older people consultant led outpatient attendances
        (viii) older people consultant led community contacts and community mental health team contacts
        (ix) adult eating disorder services in admitted patient care, outpatients and the community
    (b) **removed the requirement to split outpatient attendances by first and follow up and by face to face and non face to face attendances**
    (c) **removed the distinction between consultant led community mental health services and community mental health teams**
    (d) **removed the requirement to split community contacts by first and follow up and by face to face and non face to face contacts**
    (e) **removed most of the currencies for mental health specialist teams, which are now included in the care clusters**
    (f) **removed the requirement to split remaining mental health specialist teams by face to face and non face to face contacts, and merged adults and the elderly into one category**
    (g) **removed the requirement to report patients who did not attend (DNA) outpatient attendances as a memorandum item in the workbook**
    (h) **removed the requirement to report DNAs in the community in the reconciliation statement workbook**
    (i) **removed the requirement to report types of mental health specialist teams, other than those listed, in the reconciliation statement workbook**.

15. Having introduced a mandatory currency for cystic fibrosis in 2011-12, we are making rapid progress towards mandating a tariff. **Reference costs will now be on the basis of these new year of care currencies for cystic fibrosis** (paragraph 518). We have retired the previous reporting lines for cystic fibrosis.

16. Having introduced a currency for contracting in 2011-12, **reference costs for ambulance services will now be on the basis of these new currencies** (paragraph 480). We have retired the previous reporting lines for paramedic services.

17. **We are removing the separate collection of coronary care unit data**. The full costs and length of stay of coronary care units must now be included in the relevant cardiology and cardiac surgery HRGs. This will simplify the tariff calculation.

18. Patient transport services (PTS) were included in reference costs between 2006-07 and 2009-10. In all other years they have been excluded. **We are continuing to exclude PTS from reference costs** because their exclusion from PbR and complex

contracting arrangements mean there is currently no national requirement to know these unit costs. NHS ambulance trusts and other NHS and foundation trusts which provide PTS should exclude these costs from their return and note the total in the reconciliation statement workbook.

19. **We are similarly excluding hospital travel costs scheme from 2011-12 reference costs**. NHS and foundation trusts should exclude these costs from their return and note the total in the reconciliation statement workbook.

20. **We have removed most of the previous splits from treatment function codes (TFCs)** so that:

    (a) **gastroenterology should be reported as TFC 301** and not medical gastroenterology (pseudo TFC 301M) and surgical gastroenterology (pseudo TFC 301S)
    (b) **physiotherapy (TFC 650), occupational therapy (TFC 651), speech and language therapy (TFC 652) and dietetics (TFC 654) should be reported without the former adult and child splits. In addition, we have removed the requirement to separately report the number and total cost of these clinics run on a group basis in the reconciliation statement workbook**
    (c) **blood and marrow transplantation should be reported against TFC 308** without the splits for post transplantation (pseudo TFC BMTO) and other (pseudo TFC BMTPT).

21. Trauma and orthopaedics (TFC 110) retains its split between trauma (pseudo TFC 110T) and non-trauma (pseudo TFC 110N) for 2011-12, but we have requested separate TFCs for trauma and for orthopaedics for future collections.

22. **We have removed clinical cytogenetics and molecular genetics (TFC 312)**, retired as a TFC from 1 April 2010, from the reference costs collection.

23. **We are removing a number of zero cost HRGs from the main reference costs workbook** (paragraph 113).

24. **We are removing the "S" flag in the reference costs workbook previously used to denote the use of standard costs where costs could not be accurately profiled to HRGs** (paragraph 140). Previous *NHS Costing Manuals* have included a minimum requirement to select and profile the HRGs that cover at least 80% of cost and activity at each point of delivery, with the discretion that standard costs may be submitted for up to 20% of the remainder of HRGs. Given that one of the principles of HRG4 is that HRGs are iso-resource and expected to have different costs, and that it is inappropriate to report the same cost against multiple HRGs, the latest *NHS Costing Manual* removes this discretion, and **we now expect NHS providers to cost 100% of cost and activity**. Most trusts are already doing this.

25. **We have introduced an additional category for other types of cancer multi-disciplinary team meetings** (paragraph 222).

26. **We have removed the restriction on only reporting HIV and AIDS follow up outpatient attendances** (paragraph 232). Both the first and follow up categories may now be used.

27. **We have removed the pseudo code DOA for patients brought in dead to A&E departments. These costs should now be reported against the relevant HRG** (paragraph 249).

28. **We are introducing a requirement for procedure driven HRGs in outpatients (paragraph 243) and unbundled diagnostic imaging HRGs (paragraph 304) to be reported by TFC,** in line with admitted patient care HRGs and outpatient attendances. This will simplify the tariff calculation.

29. **We have clarified the correct use of the other setting category when reporting costs for some unbundled HRGs** (paragraph 255).

30. **We are considering whether we might change our methodology for incorporating adult critical care outreach costs in the reference costs index (RCI) calculation** (paragraph 296).

31. Clinicians have expressed their concerns to us about the quality and credibility of reference costs reported in previous years for paediatric critical care. To support an improvement in quality**, we have revised the guidance on costing paediatric critical care and provided some benchmark cost ratios** (paragraph 300).

32. In a change from previous years, **the costs of each unbundled high cost drug HRG should now exclude (and not include) relevant pharmacy oncosts as well as all other costs associated with procuring each drug**. These should be included in the core HRG (paragraph 318). This change is intended to align reference costs to currrent PbR guidance, which states that additional payments for drugs excluded from the national tariff should in most cases cover only the cost of the excluded drug and associated consumables and preparation.

33. **The Casemix Service have introduced a core HRG for same day radiotherapy admission or attendance (SC97Z)** which works the same way as the equivalent chemotherapy HRG SB97Z (paragraph 324). Although we expect zero costs to be allocated against these HRGs, we have retained them in the workbook in order to collect activity.

34. **We have removed the separate reporting lines for community specialist palliative care attendances.** Such activity should be reported using the unbundled specialist palliative care HRGs against the other setting (paragraph 355) or specialist nursing services band 2 (paragraph 450).

35. **The average number of sessions per week per patient should also be reported as an additional memorandum item for home haemodialysis** (paragraph 369).

36. To support tariff development, **NHS units providing dialysis away from base should report these costs and activity separately from their base unit costs and activity** (paragraph 370).

37. We have removed the pseudo codes provided in previous years for a range of physiological and clinical measurement tests. **Directly accessed diagnostic services should now be reported using the relevant HRG** (paragraph 381).

38. Previous years' guidance has suggested that we would consider introducing a

combined laboratories category for reporting direct access pathology services (paragraph 405). **We have no plans to introduce this category and organisations should not look to report direct access pathology in reference costs on this basis at any time in the future.**

39. Before beginning the 2010-11 reference costs collection, but after publishing its guidance, we removed pseudo code 501OU from the collection. **All obstetric ultrasound costs and activity in outpatients should be reported against the relevant obstetric scan HRGs** (paragraph 513).

40. **We have added the following services to the exclusions list** (paragraph 559):

(a) acquired brain injury
(b) clinical audit and research unit (ambulance trusts only)
(c) complementary or alternative medicine, where discrete
(d) complex or treatment resistant disorders in tertiary settings
(e) cystic fibrosis drugs (named high cost and inhaled or nebulised drugs only)
(f) emergency bed service (ambulance trusts only)
(g) emergency planning (ambulance trusts only)
(h) gender dysmorphia
(i) hazardous area response teams (ambulance trusts only)
(j) hospital travel costs scheme
(k) intensive care bed information services
(l) logistics or courier transport services (ambulance trusts only)
(m) specialist mental health services for deaf people
(n) neonatal transfers (ambulance trusts only)
(o) neuropsychiatry
(p) orthoses (as a type of discrete external aid or appliance)
(q) patient education
(r) patient transport services
(s) poison or medical toxicology units
(t) single point of telephony services (ambulance trusts only).

41. **We have removed the following services from the exclusions list in the guidance and/or the exclusions list in the reconciliation statement workbook** (paragraph 559):

(a) community cystic fibrosis – costs should be included in year of care cystic fibrosis currencies
(b) extra corporeal membrane oxygenation (ECMO) in paediatric critical care – costs should be included under a specific paediatric critical care HRG
(c) lymphoedema outpatients service – costs should be included in relevant outpatient clinic costs
(d) mental health counselling and therapy – costs for working age adults and older people form part of the mental health care clusters, and costs for children and adolescents form part of existing currencies
(e) MIND – the costs of sub-contracting services, including the charitable sector, are included in reference cost returns
(f) NHS Direct – such services that may have been hosted elsewhere are now hosted by NHS Direct, which has been an NHS trust since April 2007, and does not submit reference costs
(g) plasma exchange scheme – costs should be included in HRG sub-chapter SA

(h) psychology – mental health trusts should include costs against the relevant cluster or non-cluster reference costs; other trusts should consider how the service is provided when reporting costs (a discrete outpatient service should be reported against the relevant TFC, whilst a counselling service provided - for example - to admitted patients after complex surgery should be reported as an oncost)
(i) psychotherapy – see h
(j) voluntary or community first responders (ambulance trusts only)
(k) well babies – costs should be reported as part of the total costs of the maternity delivery episode.

42. **We have clarified the exclusion of home delivery of drugs and supplies where no clinical activity occurs at the time of the delivery to include continence pads, enteral feeding and other supplies** (paragraph 559). As a result, **patients in regular receipt of supplies should no longer be reported as non face to face activity against specialist nursing services bands 4 (continence services) and 5 (stoma care)** (paragraph 450).

43. **We have strengthened the requirement that organisations must not exclude services not on the national list without first seeking our permission. We will challenge exclusions where permission has not been sought. Organisations should not use the facility to add additional lines simply to clarify existing exclusions** (paragraph 560).

44. **For all excluded services, we have removed the requirement to provide an activity measure and count for that service**.

45. **Section 16 includes guidance on how to complete the reconciliation statement workbook**. This responds to the Audit Commission's recommendation in *Improving coding, costing and commissioning.*

46. **We have simplified the reporting requirements in the reconciliation statement workbook** as follows:

(a) from the sources of non-contractual income worksheet we have removed the lines for the national child care strategy and improving working lives initiative
(b) from the memorandum worksheet we have removed the reporting lines about
  (i) total value of injury cost recovery income
  (ii) theatre costs included in critical care costs
  (iii) total cost of multi-disciplinary teams included in admitted patient care and outpatient costs
  (iv) total number of multi-disciplinary teams
  (v) total number of staff members in multi-disciplinary teams
  (vi) total number of DNAs for community mental health attendances
  (vii) total cost of health promotion include in health visiting services
  (viii) total whole-time equivalent of health visitors
  (ix) total cost and number of physiotherapy, occupational therapy and speech and language therapy group sessions
  (x) total cost and number of patients receiving home parenteral nutrition included in community services costs
  (xi) total cost of emergency care practitioners included in ambulance service reference costs

(xii) total category C income netted off from submission
(xiii) total non-recurrent income other than category C not netted off from submission.

47. **We have also removed the requirement to report as memorandum information the mix of rehabilitation outpatient activity reported under TFC 314 as consultation, assessment or delivery.**

48. **We have updated the list of devices in paragraph 166 that should be reported in the reconciliation statement workbook by**

(a) removing artificial urinary sphincter, following introduction of a new HRG, LB50 Implantation of artificial urinary sphincter - male and female
(b) adding biological mesh.

49. **We have added the following to the list of memorandum information that should be provided in the reconciliation statement workbook:**

(a) impairments split by new build and other
(b) the organisations with whom cystic fibrosis specialist centres have shared or network care arrangements
(c) a description of the cancer multi-disciplinary team included in the new other category for MDTs
(d) a question for mental health trusts as to whether they were able to separately cost initial assessments.

50. **We are planning to publish information about high cost drugs and devices and other memorandum information from the reconciliation statement workbooks alongside 2011-12 reference costs**.

51. In previous years, we have run a voluntary survey outside of the reference costs collection about implementation of PLICS. The results of the 2011 survey have been published. **In 2012, this survey will be mandatory, mainstreamed within the reference cost collection (in the reconciliation statement workbook), and will include additional questions about effective clinical and finance engagement in costing.**

52. Following a change in accounting standards, **organisations should exclude from reference costs for 2011-12 all income and expenditure relating to donated assets** (paragraph 584).

53. 40 NHS organisations commented on a draft of this guidance placed on the Unify2 forum on 16 November 2011 (Table 1), as did members of our Reference Costs Advisory Group (RCAG)[11].

[11] http://www.dh.gov.uk/en/Managingyourorganisation/NHSFinancialReforms/DH_123511

Table 1: Responses to draft guidance by organisation

Organisation	Number of responses
Acute trusts	26
Ambulance trusts	1
Care trusts	1
Community trusts	1
Mental health trusts	7
SHAs	4

54. We are grateful for this feedback and it has resulted in numerous changes and clarifications throughout the guidance. In particular, we have decided to:

    (a) make the submission of spell costs alongside finished consultant episode (FCE) costs mandatory not voluntary
    (b) remove the discretion to submit standard costs
    (c) only collect unbundled diagnostic imaging HRG and not any other unbundled HRGs by TFC
    (d) not collect reference costs for wheelchair services in 2011-12
    (e) not require Medical Directors to sign off reference costs alongside Finance Directors.

Spells costs

55. To date, reference costs have been reported by FCE, whilst the national tariff for admitted patient care is spell based. The conversion of FCE costs into spell costs is complicated, and the collection of spell costs has long been considered a key development in the move towards a more transparent calculation of the tariff.

56. To support consideration of such a move, and following separate pilot collections of spell costs from nine providers in 2009-10 and 28 providers in 2010-11 which demonstrated its feasibility, we are mandating and mainstreaming the mandatory collection of spells costs for admitted patient care within Unify2 for 2011-12 reference costs. In practice, this should not require any substantial changes to costing systems and should simply mean that trusts undertake costing as normal at FCE level, and then aggregate their admitted patient data from FCE to spell.

57. The sign off of spell costs and activity by Finance Directors will take place during the week beginning 23 July 2012 (paragraph 84), on SHA designated days that mirror Table 6.

58. A spell should be defined as the period of admission to discharge or death for the same patient at the same provider. Where a patient has multiple distinct admissions on the same day (eg a planned day case in the morning, discharged, re-admitted in the afternoon for a second day case and then discharged) then each of these admissions should be counted separately. To be consistent with the FCE collection, only spells ending in 2011-12 should be included (paragraph 80).

59. Spells data will be submitted as follows:

    (a) in a separate workbook
    (b) for organisation's own costs, ignoring any sub-contracted services (paragraph 76)
    (c) by admission method (day case, ordinary elective and ordinary non-electives).

In a change from the pilot collections, ordinary non-electives should be separately reported for short stay and long stay as for FCEs (paragraph 154)

(d) number of spells by HRG. Spells should be assigned based on the SpellReportFlag field in the Grouper. Unlike FCEs, there will be no requirement to differentiate spells by TFC

(e) average unit cost per spell by HRG, untrimmed for any excess bed days

(f) number of spell inlier bed days by HRG

(g) number of spell excess bed days by HRG.

60. Except where stated above, the submission of spell costs and activity should be on the same basis as the submission of FCE costs and activity. Each spell cost should be the sum of the inlier and excess bed day costs of each of its constituent FCEs. Ideally, spell costs should be built from patient level costings. Where this is not possible, providers should use FCE average unit costs to construct spell costs. Total spell costs should reconcile to total FCE inlier and excess bed day costs by each admission method.

61. Table 2 and Table 3 illustrate. Annex D gives a worked example for a sample dataset, illustrating how FCE costs can be mapped to spell costs.

Table 2: FCE data

A	B	C	D	E	F	G	H	I	J	K=G+H*J
FCE HRG	FCE trim point (days)	Spell HRG	Admission	FCE counts	Spell counts	FCE inlier unit cost	Excess bed day unit cost	Inlier bed days	Excess bed days	Total FCE costs
AA01Z	4	AA01Z	NE	1	1	100	10	4	2	120
AA02Z	3	AA01Z	NE	1	0	75	0	2	0	75
AA03Z	3	AA01Z	NE	1	0	50	0	2	0	50
				3	1			8	2	245

Table 3: Spell data

Spell HRG	Spell trim point (days)	Admission	Spell counts	Untrimmed unit cost	Inlier bed days	Excess bed days
AA01Z	7	NE	1	245	7	3

Future planning

62. There are a number of areas that may affect reference cost collections after 2011-12, or result in additional collections during 2012.

63. We have had significant problems in previous years getting clinical agreement to the tariff prices for HRG chapter H based on reference costs, and there are concerns that providers are not sufficiently reflecting the different costs of the procedures. **We are therefore planning to collect PLICS data for chapter H from a small sample of providers in 2012 to inform the 2013-14 tariff.**

64. In *Liberating the NHS: developing the healthcare workforce*[12], the Department sets

12 http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_132076

out plans for moving to a tariff based system for education and training. As part of the preliminary investigations, **we will be running a pilot exercise in 2012 using a sample of providers to understand the impact of separately collecting the unit costs of education and training and restated reference costs excluding education and training**. Although guidance will be provided with the pilot collection, teaching trusts may wish to prepare by looking at the guidance on costing of non-patient care activities in the *Acute Clinical Costing Standards*.

65. We are considering whether to run **a pilot collection of cystic fibrosis year of care costs using 2010-11 data. This is likely to happen early in 2012**. It will provide us with more accurate and up-to-date data for the 2013-14 tariff and provide trusts with a trial run of the new currency (paragraph 15) before the 2011-12 reference costs submission.

66. **During 2012 we also plan to work with some providers to understand the cost differentials that arise when patients receive dialysis away from base.**

67. **The NHS is implementing the International Statistical Classification of Diseases and Related Health Problems Tenth Revision (ICD-10) 4th Edition on 1 April 2012**, as notified by the Information Standards Board (ISB) in ISB 0021[13]. 2012-13 reference costs will be on the basis of the new codes, and the NHS Information Centre will be amending HRGs to accept them. NHS Connecting for Health (CfH) will provide updated data files for the NHS and system suppliers, and will ensure training materials are available[14].

68. In addition to the current collection, **we plan to collect maternity reference costs on a pathway basis from 2012-13**.

69. To support a tariff which is under development, **2012-13 reference costs are likely to be on the basis of year of care currencies for adult HIV outpatients which distinguish between new, stable and complex patients**[15].

70. Wheelchair services were one of the priority areas for the implementation of Any Qualified Provider (AQP) from April 2012, although reference costs will only be collected from NHS providers in 2011-12 (paragraph 82). **We will begin collecting reference costs for wheelchair services in 2012-13 reference costs using the currencies that are in development.**

71. **Other AQP community currencies are also likely to be introduced in 2012-13 reference costs.**

72. The reference costs guidance on direct access pathology was considered unclear and poorly defined in the Audit Commission Report *Improving coding, costing and commissioning*. We have been unable to address these issues in this guidance, and there remains little likelihood of tariffs being developed in this area. **We are therefore considering removing direct access pathology from 2012-13 reference costs and would welcome comments on this proposal.**

[13] http://www.isb.nhs.uk/library/standard/119
[14] http://www.connectingforhealth.nhs.uk/systemsandservices/data/clinicalcoding
[15] http://www.dh.gov.uk/en/Managingyourorganisation/NHSFinancialReforms/DH_125788

Scope

73. Reference costs are part of the financial regime for NHS trusts and NHS foundation trusts as designated in relevant NHS legislation and guidance.

74. The only NHS trusts not required to submit reference costs are Calderstones Partnership NHS Foundation Trust, NHS Direct and Oxfordshire Learning Disability NHS Trust. The only other organisation required to submit reference costs for 2011-12 is the Isle of Wight PCT (paragraph 11).

75. NHS providers sub-contract work to the independent sector in a number of circumstances such as when they are unable to meet capacity requirements. NHS providers who sub-contract work from outside of the NHS, from either private or charitable sector organisations, are required to include this information in their reference costs return to the same level of detail as for the provision of their own services. This will assist in understanding the cost differentials between the NHS and independent sectors. There is, however, no requirement to separately identify work sub-contracted to other NHS providers.

76. NHS trusts and NHS foundation trusts may therefore need to include two data types in their return, depending on whether they receive health care activity from independent sector providers, covering

    (a) the costs of their own provider function (data type OWN in the workbook)
    (b) the costs to them of sub-contracting services to the independent sector (data type OUT in the workbook), with the exception of mental health care clusters (paragraph 392).

77. This guidance applies to all NHS trusts and NHS foundation trusts in existence between 1 April 2011 and 31 March 2012. According to the Treasury's *Financial reporting manual*, combining two or more public bodies or transferring functions from one part of the public sector, is accounted for using merger accounting. Under merger accounting, financial statements for the new body should show the accounts as if they had always been combined. The transferring body similarly shows its accounts as though it never had the function in its books. Reference costs follow this principle. Thus:

    (a) where trust A is dissolved in-year, eg on 29 February 2012, and is acquired in-year by trust B, eg on 1 March 2012, it is the responsibility of trust B to ensure a single 2011-12 reference cost return combining the costs and activity of both trust A and B is submitted by the mandatory deadline
    (b) where trust C is dissolved on 31 March 2012 and is acquired by trust D on 1 April 2012, a separate reference cost return will be required for each trust, although responsibility for the completion of both returns by the mandatory deadline will fall to trust D
    (c) where there is a transfer of function from trust A to trust B, such as under TCS, the costs of the whole year's services will be accounted for by the body receiving the transfer, trust B. The body divesting of the service, trust A, will have nil costs for the year for these services. This applies whether the divesting body trust A continues to operate or dissolves.

78. It may be necessary to speak to financial accounts colleagues about any such

transfers within the organisation.

79. Successful applicants to NHS foundation trust status during the financial year must submit one full year's reference costs for the sum of the NHS trust and the foundation trust.

80. Where a spell begins in the preceding reporting year (2010-11) and continues into the current reporting year (2011-12), all associated FCEs should be included in reference costs. Where a spell begins in the current reporting year (2011-12) and continues into the next reporting year (2012-13), all associated FCEs should be excluded.

81. Section 15 lists services that are excluded from reference costs.

Independent sector

82. According to proposals in the Health and Social Care Bill, which is currently passing though Parliament, Monitor will be given a duty to set prices that reflect all underlying costs. Licensing for organisations wishing to provide NHS funded services will be the mechanism that gives Monitor the ability to collect information to set prices. However, we are not extending the reference costs collection for 2011-12 to any independent sector organisation, including social enterprises that have taken over PCT provider arms.

Timetable

83. Table 4 gives a high level timetable for 2011-12 reference costs.

Table 4: Timetable for 2011-12 reference costs

Date	Milestone
26 January 2012	Publication of guidance (including step-by-step guide to reconciliation)
February 2012	Release of Unify2 non-compliant draft workbooks
2 April 2012	Release of 2011-12 HRG4 Reference Costs Grouper and documentation
April 2012	Release of Unify2 compliant test workbooks
May 2012	Release of Unify2 compliant final workbooks
May 2012	Release of local validation tool
June 2012	Publication of reference costs system and workbook user guide
2 July 2012	Reference costs submission window opens for FCE costs
23 July 2012	Reference costs submission window opens for spell costs
26 July 2012	Reference costs submission window closes
September 2012	Release of draft RCIs on Unify2
November 2012	Publication of national schedules of reference costs, final RCIs and source data

84. These reference costs will be submitted during a three week submission window starting on 2 July 2012, (Table 5), with a fourth week for trusts to submit spell costs (paragraph 55).

Table 5: Submission window

w/c 2 July					w/c 9 July					w/c 16 July					w/c 23 July				
M	T	W	Th	F	M	T	W	Th	F	M	T	W	Th	F	M	T	W	Th	F
Validation and open submission										SHA cluster managed submission					Spell costs submission				

85. The submission window will run as follows.

Validation and open submission (2 to 12 July)

86. During these two weeks, all organisations will use their own local validations alongside the validation tools produced by the Department and Audit Commission to ensure that the submission is accurate, reducing the need for further uploads following initial submission. Experience from 2010-11 suggests that organisations who waited until the SHA week before making an initial submission faced the biggest challenge in terms of timeliness and accuracy. **Therefore, all organisations are also required to input an initial submission into the system by Thursday 12 July, ahead of the Strategic Health Authority (SHA) cluster managed submission week**. Those organisations that are ready to sign off their final reference costs return during this period may do so. Organisations should avoid uploading on Friday 13 July, to allow time for us to provide feedback on this day.

SHA cluster designated submission days (16 to 19 July)

87. In this week there will be designated days when organisations in each SHA cluster are expected to submit and sign off their final reference costs return (Table 6). We expect that unless there are exceptional circumstances all organisations will have uploaded and signed off on the agreed SHA cluster day.

Table 6: SHA cluster days

16 July	17 July	18 July	19 July	20 July
M	T	W	Th	F
NHS London	NHS South of England	NHS Midlands and East	NHS North of England	

88. Organisations unable to sign off on the agreed date should contact their SHA cluster lead to agree an alternative submission date. Unless there are exceptional circumstances, any request for an alternative submission date will be allocated an earlier date. By the end of the managed submission week all organisations are expected to have submitted and signed off their 2011-12 reference costs. Organisations will not be allowed to request resubmissions.

Spell costs submission (23 to 26 July)

89. In this week spell costs and activity should be uploaded and signed off on SHA cluster designated days that mirror Table 6. Organisations that are ready to upload spell costs before this period may do so.

Data quality and validation

90. The need for high quality reference costs cannot be overestimated. We expect that these 2011-12 reference costs will be used nationally to inform the 2014-15 tariff and locally to inform prices for services outside the tariff. Reference costs support the Department's commitment to improving data transparency and making a vast wealth of information available to the public as set out in its business plan for 2011 to 2015[16], and inform several input indicators in the business plan quarterly data summary[17]. They are also used to:

16 http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_128494

17 http://www.dh.gov.uk/en/Aboutus/HowDHworks/Transparency/DH_128480

(a) hold the Department and its Ministers to account for the use of NHS resources
(b) help assess whether NHS trusts are ready to become NHS foundation trusts
(c) support elements of national programme budgeting
(d) support Office for National Statistics (ONS) estimates of NHS productivity
(e) inform the design of HRGs
(f) inform academic research.

91. 2010-11 was the fourth year of the Audit Commission's annual PbR assurance programme. All organisations should by now have read *Improving coding, costing and commissioning: annual report on the PbR data assurance programme 2010-11*[18], which included a comprehensive audit of the 2009-10 reference costs submissions at all acute NHS trusts and foundation trusts. The Audit Commission found that

"most trusts' reference costs submissions were accurate in total, although one in eight were not. However, the accuracy of individual unit costs varied and, in some cases, was poor. One in four trusts had one or more individual unit costs that were materially inaccurate."

Their report includes a checklist, reproduced at Annex B, covering 10 key areas that senior hospital managers should use to improve the quality of reference cost submissions.

92. Acute providers should be using the *National Benchmarker*[19], the Audit Commission online tool that compares hospital activity data, clinical coding and PbR related measures with other organisations. The *National Benchmarker* includes three separate reference costs tools containing the analysis used to support the Audit Commission's review of reference costs submissions. They are:

(a) cost variance tool - looks at differences between reported and expected unit costs for each treatment area
(b) activity reconciliation tool - compares activity data submitted in reference costs to activity reported in hospital episode statistics (HES)
(c) activity share tool - looks at whether a trust is undertaking its expected share of activity for its size.

93. The Department has also introduced a number of measures to improve data quality, and Annex C summarises the validations that we will undertake. In addition to the basic validations performed by the Microsoft Excel workbooks and Unify2, we will provide a local validation tool which performs a number of additional validations before workbooks are uploaded to Unify2. This tool will work at three levels:

(a) requires correction - a worksheet that includes some of the most commonly identified errors during our own validations in previous years and which all organisations will be able to anticipate and avoid by reading this guidance. Any errors highlighted in this worksheet must be corrected before uploading to Unify2

[18] http://www.audit-commission.gov.uk/nationalstudies/health/pbr/pbr2011/Pages/pbr2011.aspx
[19] http://www.audit-commission.gov.uk/health/audit/paymentbyresults/benchmarkerandportal/Pages/default.aspx

(b) requires investigation (year on year changes) – using the summary sheet in the reference costs workbook, this provides a comparison of the costs and activity included within the proposed 2011-12 submission against those submitted in 2010-11, and highlights significant changes. All areas will need to be investigated and corrected, as required, before uploading to Unify2

(c) requires investigation (HRG validations) - some HRGs settings are impossible, eg diagnosis driven HRGs reported in outpatients or HRGs with length of stay logic of less than two days reported as ordinary non-elective long stays. Other HRG settings are improbable, eg transplants in outpatients. Again, all areas highlighted will need to be investigated.

94. We are exploring whether some of the local validations can be mainstreamed into the workbooks or Unify2.

95. During the open submission fortnight, we recommend that organisations use the Unify2 verification report, which is updated overnight and shows real time national averages. We will provide regular feedback via Unify2 to organisations who upload during this fortnight.

96. All organisations must have submitted and signed off their reference cost return on the agreed date during SHA submission week (16 to 19 July). We will provide daily feedback during this week. We will undertake some organisation wide final validations once all organisations have submitted, and contact any organisations where there are still data quality issues that need to be addressed.

97. Producing statistical measures of the quality of submitted data is difficult. We are considering the merits of publishing a data variance indicator (DVI) for each organisation alongside the RCI. This DVI would be defined as the average absolute percentage from the mean and would be based on the assumption that there is a relationship between variability and quality.

Clinical and financial engagement

98. Clinical and finance engagement is vital to the NHS in order to respond to the quality and efficiency agenda. It should also be an integral part of the costing process.

99. Dr Mahmood Adil, the Department's national QIPP adviser for clinical and financial engagement[20], describes four scenarios of engagement in a 2011 survey of NHS finance leaders conducted in conjunction with the HFMA[21]. The scenarios describe four different levels of engagement from purely board level (level 1) through to full engagement at different levels and across all clinical specialties (level 4).

(a) Level 1: Engagement is only at board/strategic level. For example, dialogue takes place between medical director and finance director, but there is no real joined-up, collaborative work between the wider clinical and finance teams

(b) Level 2: There is some joined-up, collaborative work between clinical and finance teams but only on an ad hoc basis when required, for example for a specific Commissioning for Quality and Innovation (CQUIN) project

[20] http://www.dh.gov.uk/health/2011/08/clinical-finance-engagement/
[21] http://www.hfma.org.uk/publications-and-guidance/publications.htm?sort=3&keyword=&categories=info_8

(c) Level 3: Joined-up collaborative working between clinical and finance teams is the norm in at least one clinical specialty/directorate. For example, a finance manager works as an integral part of a clinically led quality improvement team. There is also a plan to roll this out across other directorates
(d) Level 4: Joined-up collaborative working between clinical and finance teams is the norm across all clinical specialties/departments. Finance managers routinely work as integral members of clinically led quality improvement teams and both professional groups share cost and quality data to improve outcomes.

100. The characteristics of an organisation which exhibits good (Level 4) clinical and financial engagement in costing might include the following:

(a) introducing SLR and/or PLICS
(b) training for finance staff to raise their knowledge about the delivery of care, eg finance trainees supporting the clinical team or working on quality improvement project as part of an attachment or rotation
(c) training for clinicians to improve their financial understanding, eg clinical trainees taking on a finance role as part of an attachment or rotation
(d) finance staff with a keen interest and direct involvement in the way treatment and care is delivered, for example by spending time in theatre or with consultant
(e) sharing and using relevant cost and quality information, eg the routine availability of clinically tailored costing information to clinicians
(f) involving clinicians in establishing robust costs, eg through refining the allocation and apportionment of indirect costs and overheads to ensure they are transparent
(g) support for clinicians in using this information to run their departments
(h) creating opportunities for clinician and finance managers to develop business cases for quality together.

101. An earlier Audit Commission report, *A prescription for partnership – engaging clinicians in financial management*, includes further discussion of these characteristics and case studies of organisations which have introduced SLR and/or PLICS.

102. Elsewhere in this guidance we note occasions when clinicians have questioned the credibility of reference costs in a particular area (paragraph 298), or we have had to consider seeking additional information outside of reference costs in order to produce tariff prices (paragraph 63).

103. From 2011-12, in addition to assurance from Finance Directors that the quality checklist at Annex B is being used, we will also be seeking assurance and gathering evidence through our survey (paragraph 51) that there has been effective clinical and financial engagement in costing.

Finance Director sign off

104. The onus on the production of sound, accurate and timely data that is right first time rests with each NHS organisation. Finance Directors are therefore required to sign off the data, confirming that:

(a) the costing has been carried out in line with all current costing guidance as outlined in this reference costs guidance and the *NHS Costing Manual*

(b) the return has been reconciled internally and is a true and fair view in cost and activity terms of the services provided
(c) finance teams have actively engaged clinicians in the costing process
(d) the quality checklist has been used to improve the quality of their return.

NHS Data Model and Dictionary

105. Where possible, we have aligned the requirements of the reference cost collection with the definitions in the NHS Data Model and Dictionary (the Data Dictionary). The guidance includes numerous links to the Data Dictionary where definitions exist. Some terms do not have nationally assured definitions, eg direct access, short stay emergency, pre-booked appointment.

Treatment function codes

106. Admitted patient care and outpatient activity should be reported by treatment function[22]. The Information Standards Board (ISB) issued the latest changes to TFCs in Amd 170/2010[23] in February 2011. These changes have been incorporated into the list of TFCs[24] in the Data Dictionary, but organisations should note they are only available to flow in the latest version of the commissioning data sets (CDS 6-1-1). All these TFCs will be available in the reference costs workbook, except those listed in Table 7. Some NHS organisations have opted to report all admitted patient care and outpatient activity using pseudo code 999. However, organisations should where possible report against the relevant TFC.

Table 7: TFCs excluded from reference costs

TFC	Description	Rationale	Para
110	Trauma and orthopaedics	Costs should be split between 110N and 110T	21
290	Community paediatrics	Costs should be reported against community paediatric services	466
318	Intermediate care	Intermediate and continuing care is excluded from reference costs	559
424	Well babies	Costs should be reported under obstetrics (501) or midwife episodes (560)	559
657	Prosthetics	Discrete external aids and appliances services are excluded from reference costs	559
658	Orthotics		
700	Learning disability	Learning disability services are excluded from reference costs	559

107. Table 8 lists pseudo codes for TFCs that we have split, or for activity not covered by or awaiting TFCs.

Table 8: Pseudo TFCs

Pseudo TFC code	Description
110N	Trauma and orthopaedics: non-trauma total contacts
110T	Trauma and orthopaedics: trauma total attendances
999	Global trust codes
CMDT_B	Breast cancer MDT meetings
CMDT_C	Colorectal cancer MDT meetings
CMDT_LG	Local gynaecological cancer MDT meetings

[22] http://www.datadictionary.nhs.uk/data_dictionary/classes/t/treatment_function_de.asp?shownav=1
[23] http://www.isb.nhs.uk/documents/isb-0028/amd-170-2010/index_html
[24] http://www.datadictionary.nhs.uk/web_site_content/supporting_information/main_specialty_and_treatment_function_codes.asp?shownav=1

Pseudo TFC code	Description
CMDT_SpG	Specialist gynaecological cancer MDT meetings
CMDT_SpU	Specialist upper gastrointestinal cancer MDT meetings
CMDT_Oth	Other cancer MDT meetings
DAPF	Direct access plain film
FPC	Family planning clinic attendances
H/A	HIV or AIDS attendances
TCMDT	Total cancer MDT meetings
TCMDT_B	Total cost breast cancer MDT meetings
TCMDT_C	Total cost colorectal cancer MDT meetings
TCMDT_LG	Total cost local gynaecological cancer MDT meetings
TCMDT_SpG	Total cost specialist gynaecological cancer MDT meetings
TCMDT_SpU	Total cost specialist upper gastrointestinal cancer MDT meetings
TCMDT_Oth	Total cost other cancer MDT meetings

Healthcare resource groups

108. HRGs, developed and maintained by the Casemix Service[25] at the NHS Information Centre, underpin PbR from costing through to payment. Reference costs for admitted patient care, outpatients and emergency medicine are collected using the latest version, HRG4.

109. Organisations must use outputs from the HRG4 2011-12 Reference Cost Grouper[26], and the suite of supporting documentation, which will be released in April 2012, when compiling their reference costs.

110. HRG4 currencies are refined every year in line with changing clinical practice and policy requirements. Changes in 2011-12 will reflect international best practice, and include improved recognition of the cost of providing care to children of all ages, and of highly specialist care linked to the use of high cost devices and specialist surgical equipment.

111. The 2011-12 HRG4 Reference Costs Grouper will be supported by the underlying primary classification systems and requires inputs from commissioning data sets (CDS) covering admitted patient care, critical care, outpatients and A&E. The renal dialysis core HRGs are generated by use of fields from the National Renal Dataset rather than from a CDS (paragraph 361).

112. The Grouper reports automatically add one bed day to patients with a length of stay of zero. This is done to reflect the fact that costs are often apportioned on a bed day basis and avoids a zero length of stay incorrectly incurring nil costs. Currently, this only includes episodes with patient classification code 1 (ordinary admission). The Casemix Service is considering amending the reports to include patient classification code 5 (mother and baby using delivery facilities only) in a future Grouper product. However, these extended reports will not be available in the HRG4 2011-12 Reference Costs Grouper.

113. Unbundled HRGs (Section 5) are a key design feature in HRG4. This guidance explains where costs and activity should be reported against unbundled HRGs, and

[25] http://www.ic.nhs.uk/services/the-casemix-service
[26] http://www.ic.nhs.uk/services/the-casemix-service/using-this-service/reference/downloads/costing

where they should be reported against core HRGs.

114. Table 9 lists HRGs where zero costs should be allocated. We will remove these HRGs from the reference costs workbook.

Table 9: Zero cost HRGs

HRG	Description	Rationale
PB03Z	Healthy baby	Costs should be reported as part of the maternity delivery episode
DZ13A	Cystic fibrosis with CC	Costs should be reported against cystic fibrosis year of care currencies
DZ13B	Cystic fibrosis without CC	
PA13C	Cystic fibrosis with length of stay 0 days	
PA13D	Cystic fibrosis with length of stay between 1 and 7 days	
PA13E	Cystic fibrosis with length of stay between 8 and 14 days	
PA13F	Cystic fibrosis with length of stay 15 days or more	
LA08E	Chronic kidney disease with length of stay 1 day or less associated with renal dialysis	Costs should be reported against the LD HRGs

115. The National Service Framework for children defines a child as up to and including 18 years of age and an adult as 19 years and over. These definitions of a child and adult are generally applied within HRG4 and to other services in reference costs, except where specified, eg cystic fibrosis.

Primary classifications

116. HRG4 relies on two underlying primary classification systems: the OPCS Classification of Interventions and Procedures (OPCS-4), and the ICD-10.

117. Organisations should have implemented the latest revision to OPCS-4, OPCS-4.6[27], released on 1 April 2011. This will underpin the 2011-12 HRG4 Reference Costs Grouper.

Queries

118. The SHA clusters will continue to have a key role performance managing the reference costs collection and supporting NHS organisations in complying with current guidance and requirements. Each SHA cluster has at least one reference costs lead (precise arrangements vary from cluster to cluster) and contact details can be found on the Unify2 forum.

119. Local costing groups have been set up across the country. These are a good way of meeting other reference cost leads and sharing issues. SHA cluster leads will be able to provide details of such groups.

120. Another way to find out information is on the Unify2 discussion forum. This is an informal forum, where NHS costing colleagues seek advice from one another, but we may sometimes participate in the discussion. We will also use the Unify2 forum to

27 http://www.connectingforhealth.nhs.uk/systemsandservices/data/clinicalcoding/codingstandards/opcs4/opcs-4.6

post other relevant materials in the lead up to the submission window. The separate reference costs discussion forum website[28] has been retired.

121. The Department's official pages on NHS costing are at www.dh.gov.uk/nhscosting. These were being revised at the time of writing.

122. Queries about HRGs and the HRG4 2011-12 Reference Costs Grouper should be directed to enquiries@ic.nhs.uk, and queries about clinical coding and the Data Dictionary to datastandards@nhs.net

123. We can be contacted at pbrdatacollection@dh.gsi.gov.uk with queries that cannot be resolved using these resources.

[28] http://www.info.doh.gov.uk/fd/refcostsdisc.nsf/main?readform

Section 2: Admitted patient care and day care facilities

Introduction

124. This section covers the following types of admitted patient care:

    (a) day cases
    (b) ordinary electives
    (c) ordinary non-elective short stays and long stays
    (d) regular day or night admissions.

125. It also covers regular attendances at day care facilities for stroke, elderly and other patients.

126. Admitted patient care services should be reported at FCE level, using the latest HRG4 currencies. To support a possible move towards a more transparent tariff calculation in future years, from 2011-12 providers should also report the same data at spell level (paragraph 55). The HRG4 2011-12 Reference Cost Grouper will attach a core HRG to every FCE or spell. Only costs and activity for core HRGs should be reported here. Unbundled HRGs should be reported separately (Section 5) unless specifically mentioned.

127. FCE activity should also be reported at TFC level. It is a local decision as to which TFC should be used for a given service.

128. NHS providers should return data for each type of patient admission that has occurred. Patients who have a planned admission as an ordinary elective but are allowed home on the same day will be recorded on some patient administration systems (PAS) as an ordinary elective admission with a length of stay of zero. For consistency, such admissions will have a standard length of stay definition of date of discharge less date of admission plus one. This adjustment should be made after filtering out services reported using bed days rather than FCEs, eg critical care, rehabilitation and specialist palliative care, and after grouping the data. The Grouper will automatically add a length of stay of one to any episode with a zero length of stay.

Costing admitted patient care

Set up resource profiles (costed HRGs)

129. The following paragraphs describe the process for costing FCEs at an HRG and TFC level.

130. Having identified the HRGs, the key conditions and procedures within each HRG need to be determined, and where costs have not already been calculated at a patient level, a clinical and resource profile is set up for each of these.

131. A clinical profile involves detailed discussion with medical and nursing staff to assess what activities are undertaken and resources consumed each time a procedure or treatment of a condition takes place. In the first year of costing new services, this task may require considerable effort, but in subsequent years it may only need refining. Organisations are encouraged to review clinical audit reviews, teaching tools

for junior doctors etc, which are already in existence, as the basis of a number of profiles may exist in other forms.

132. The resource profile for each key condition or procedure should include the activity units and cost for each associated costing pool, as well as the variable items used in treating the condition.

133. This stage in the process can be time consuming when services are being costed for the first time. Much of the work on this stage can be commenced in advance of final accounts, from analysis of activity levels in previous years, so that only minor adjustments should be needed to clinical and resource when the final costs are being produced.

134. In establishing resource profiles, nurse or ward managers can readily provide relevant information. There are two areas where cost accountants should provide guidance during interviews to ensure that valid results are obtained. These areas are:

    (a) averaging. For each condition, the aim is to derive an average usage for each variable item and there will be variations to this average which arise from, for example, differences between the severity of patients' conditions and differences between consultants' clinical practice. It may be necessary to determine the range of usage before arriving at an average. For example, the minimum data sets will give the lengths of stay for a sample of patients and these can be averaged. This does not imply that there is an average patient
    (b) significance of costs. The nurse or ward managers will be able to estimate the quantities of items consumed. Use the information to identify, for example, whether an item has a significant impact on costs and the quantities are important or whether an item is inexpensive. Some care is needed in dealing with high volume and low cost items and the effort should concentrate their use in relation to different conditions.

135. Condition based costs are evaluated from internally available data. For example, the unit cost of drugs will be available from pharmacy. Other sources of cost data include stores and sterile supplies departments. Care is required with sterile supplies and other departments, so as not to use an internal charge which may include an allocation of fixed costs. Either identify the true variable cost or make an approximation to it.

136. Time based costs are evaluated using duration of attendance (bed days, hours or minutes by unit), derived from the appropriate costing pool.

137. Table 10 illustrates the resource profile.

Table 10: Resource profile

TFC: Point of delivery: HRG: ICD code:	General medicine Non-elective AA22B: Non-transient stroke or cerebrovascular accident, nervous system infections or encephalopathy without complications or comorbidities (CC) I634: Cerebral infarction due to embolism of cerebral arteries				
Costing pool	Pool type	Measure	Units	Unit cost £	Total cost £
Medical staff	Time	Clinical time	9.00	20	180
Ward	Time	Bed days	9.00	20	180
Ward	Event	Admission	1.00	20	20
Nursing	Time	Bed days	9.00	70	630
Diagnostics - plain film radiology - pathology tests	 Event Event	 Banded tests Banded tests	 2.00 10.00	 20 6	 40 60
Therapies - occupational therapy - speech therapy - physiotherapy	 Event Event Event	 Session Session Session	 2.00 2.00 5.00	 25 25 27	 50 50 135
Total cost					1,345

Establishing costed HRGs

138. The resource profiles are now used to determine average HRG costs. The cost for each condition or procedure is multiplied by its number of episodes to give a total cost for that condition or procedure. Table 11 illustrates. This average cost is applied to all of the episodes for the HRG within the point of delivery.

Table 11: Establishing a costed HRG

TFC: Point of delivery: HRG:	General medicine Inpatient non elective AA22B: Non-transient stroke or cerebrovascular accident, nervous system infections or encephalopathy without CC			
ICD code	Description	Unit cost £	Episodes	Total cost £
I634	Cerebral infarction due to embolism of cerebral artery	1,345	40	53,800
I650	Occlusion and stenosis of vertebral artery	1,748	20	34,960
I661	Occlusion and stenosis of anterior cerebral artery	2,147	10	21,470
I672	Cerebral atherosclerosis	2,239	10	22,390
Totals			80	132,620
Weighted average cost [132,620/80] for HRG AA22B				1,658

139. Activity which has not been resource profiled should be attributed, as a minimum, to an average treatment function cost. These FCEs should then be attributed to an HRG and these costs should be reported under the respective HRG.

Costing the residue

140. Within each point of delivery, the residue will consist of two elements:

(a) the above average cost relating to the excess bed days
(b) the uncosted residue relating to low cost and low volume HRGs.

141. Prepared using the resource profiles, the costed HRGs should ideally cover 100% of each service's costs for treated patients, but there may be a residue of costs for each treatment function covering less frequent procedures or diagnoses. All costs should be attributed to a HRG even where a profile has not been produced and from 2011-

12 we are discouraging the use of standard costs for this residue. Organisations are expected to apply alternative costing methodologies and local knowledge to the figures, eg the cost of treating a bunion would generally be expected to be lower than for an appendectomy, when both are in general surgery.

142. For ordinary elective and non-elective patients there will be two groups of cost analysis within each high level control total:

    (a) HRG costs, for truncated episodes
    (b) excess bed days costs.

143. For day cases there will be HRG and residual costs.

144. The cost per day for excess bed days should include only the costs associated with the time based ward costing pool, and any associated variable costs. This is primarily low intensity nursing, drugs, dressings, therapies, and hotel costs. It should include expensive costs only in exceptional circumstances. This cost per day is multiplied by the number of excess bed days to give the total cost associated with the excess bed days.

145. Once this has been established, the total cost of the uncosted activity can be identified. As a minimum requirement this should be divided by the number of uncosted episodes weighted by length of stay to produce an average cost per residual episode. This may be refined if data is available locally. These episodes need to be attributed to the relevant HRG even where these HRGs have not been resource profiled. This will limit distortions to overall efficiency calculations.

146. Once these steps have been completed, the production of resource profiles and the residual unprofiled activity will have been costed. As a final check, a comparison with the previous level control totals should ensure that all relevant costs have been included in the process.

Excess bed days and trim points

147. Excess bed day costs must be reported separately for FCEs but not for spells. Spell unit costs should be untrimmed.

148. For each HRG there are a small number of FCEs which have an abnormally high length of stay. Instead of excluding outliers, which would skew the actual mean length of stay for an HRG, only excess bed days beyond the upper trim point should be excluded. This means that all episodes will be included and costed within the HRG including those which have been truncated. The excess bed days beyond the trim point should be costed separately and a cost per bed day reported. This eliminates outlier FCEs and introduces a standard treatment for truncated episodes and excess bed days.

149. Given that the costs may vary by admission method, costs and activity for excess bed days should be reported separately for ordinary elective and non-elective FCEs. The Grouper splits these between ordinary electives and non-electives as a matter of course. It is expected that the care of patients is less intensive or dependent than at the beginning of the FCE and thus costs will be less per day than for the truncated HRG. Excess bed days need to be calculated, as a minimum, on the basis of their

total cost divided by their number.

150. In calculating HRG length of stay and associated excess bed days, the trim points included in the HRG4 2011-12 Reference Cost Grouper and supporting documentation should be used.

151. Some HRGs have a trim point of 32,000. The reason such trim points have been generated in the past is due to insufficient data available to calculate valid trim points or where maximum length of stay logic is included in the HRG4 design. These trim points are also valid.

152. HRG UZ01Z Data invalid for grouping has a trim point of zero. UZ01Z codes occurring in ordinary elective and non-elective settings should therefore be reported as excess bed days. No unit cost per FCE should be reported for UZ01Z. UZ01Z codes occurring in day case or regular day or night admission settings should continue to be reported as FCE inlier costs, given that by their nature there are no bed days associated with this activity.

153. UZ01Z costs are not included in the calculation of the reference cost index (RCI). The national tariff for UZ01Z is zero to encourage evaluation of this activity and minimise its use.

Ordinary non-elective short stays and long stays

154. Short stay costs and activity inform the calculation of the short stay emergency adjustment in the national tariff. All ordinary non-elective activity must therefore be separately identified as

    (a) short stay – length of stay less than or equal to one day, using patient type code NEI_S
    (b) long stay – length of stay more than one day, using patient type code NEI_L.

155. The short and long stay categories are mutually exclusive. For example, a two day episode would not be reported as one short stay episode plus an excess bed day, but instead the whole two day episode would be reported as a single long stay episode.

156. The Grouper automatically adds one day to activity with a zero length of stay, so short stay should always be activity with a length of stay of one. The Grouper reports are created at individual FCE level, including the episode duration field, which provides the length of stay in days.

Regular day or night admissions

157. Regular day or night admissions[29] are reported as a single, separate category in the collection, matched to the relevant HRG. Attendances for specialist care such as cystic fibrosis, radiotherapy, or renal dialysis should be reported against the relevant sections of the collection, and not here.

29 http://www.datadictionary.nhs.uk/data_dictionary/attributes/p/pati/patient_classification_de.asp?shownav=1

158. As an ongoing regime can extend over several months, the costing of regimes is inappropriate for central reporting, although it may be appropriate for clinical and internal management requirements.

Regular attendances at day care facilities

159. In costing services provided through day care facilities, the Data Dictionary definition[30] should be used. Facilities catering for elderly, stroke, mental health (paragraph 427), and other patients are included. Facilities catering primarily for the long term physically disabled and learning disability patients are excluded, as are all services for these patients.

160. There is a lack of routinely collected patient information to assess the services provided through these facilities. Available data is limited to patient days, and until further developments are achieved in recording activity, patient days will continue to be the activity and unit cost measure used for reference costs.

161. Often patients attend these facilities for a number of days each week and the number of attendances per patient will vary due to the different nature of the patient's condition. Generally, the number of places each day is fixed, eg 20 patients each day over five days gives 100 patient days, or one patient attending one day per week for 20 weeks gives 20 patient days. A conversion should be made from a part day attendance to a patient day for patients attending for only part of a day, eg a morning only attendance equals 0.5 patient days.

162. Any additional costs incurred when an admitted patient attends a day care facility, and their bed is not filled but retained for their later use, should be removed from the total cost of the day care facility and reported as part of the composite cost of that admission. No day care facility activity should be counted for such patients.

Other issues

Assisted reproduction medicine

163. Existing HRGs for assisted reproduction medicine (MC06Z to MC15Z) are not designed to capture the cost of the ten drug regimens for in vitro fertilisation (IVF) or the high cost gonadotropins used in intra-uterine insemination (IUI). These are listed in Table 12. Organisations should exclude the actual costs of these drugs from HRGs MC06Z to MC15Z, and report them in the reconciliation statement workbook as excluded services.

30 http://www.datadictionary.nhs.uk/data_dictionary/nhs_business_definitions/d/day_care_facility_de.asp?shownav=1

Table 12: IVF and IUI drug regimens

Label
IVF Regimen 1 (Ultra Short Protocol) - Low dose
IVF Regimen 1 (Ultra Short Protocol) - High Dose
IVF Regimen 2 (Short Protocol) - Low Dose
IVF Regimen 2 (Short Protocol) - High Dose
IVF Regimen 3 (Long Protocol) - Low Dose
IVF Regimen 3 (Long Protocol) - High Dose
IVF Regimen 4 (Ultra Long Protocol) - Low Dose
IVF Regimen 4 (Ultra Long Protocol) - High Dose
IVF Regimen 5 (Antagonist Protocol) - Low Dose
IVF Regimen 5 (Antagonist Protocol) - High Dose
Gonadotropins

Community hospitals

164. Often patients are admitted to a community hospital following discharge from an acute NHS provider, for rehabilitation or other services. For certain services, where consultants work across two or more NHS organisations, it may be that a patient is discharged from one provider and admitted to another without changing consultant. Although an FCE ends with discharge by a consultant, for the purposes of reference costs an FCE also ends when patients are discharged from an existing provider (ie legal entity) to a new provider, but not when patients are transferred between sites within a single NHS provider. Data standards have always stipulated that if a patient transfers between organisations rather than sites, then the patient's spell and FCE ends.

165. Patients may be admitted outside acute related pathways, in which case they should be reported using the relevant HRG where possible. Section 5 has more details about how community hospitals should report rehabilitation services.

Devices

166. Costs and activity relating to all devices, even if they are currently excluded from PbR, should be included in the admitted patient care and outpatient worksheets, against the HRG to which they relate. To assist tariff development, the number and total cost of the devices listed in Table 13, and the number of patients to which they were fitted, should also be reported in the reconciliation statement workbook.

Table 13: Devices to include in the reconciliation statement workbook

Device	Comment
3 dimensional mapping and linear ablation catheters used for complex cardiac ablation procedures	
Aneurysm coils	
Bespoke orthopaedic prostheses	Bespoke prostheses designed and manufactured for individual patients plus modular limb salvage replacements for femur or shoulder (non CE marked)
Biological mesh	
Bone anchored hearing aids (BAHA)	
Bone growth stimulators	
Circular external fixator frame	
Consumables associated with per oral single operator cholangioscope	Removed "/per anal"
Consumables for robotic surgery	
Devices used in connection with pulmonary artery banding	

Device	Comment
Drug-eluting peripheral angioplasty balloon	
ICD with cardiac resynchronisation therapy (CRT) capability	Bi-ventricular (three leads)
Implantable cardioverter-defibrilator (ICD)	Single or dual chamber (one or two leads)
Insulin pumps and pump consumables	
Intracranial stents	
Intrathecal drug delivery pumps	
Laser sheaths	
Maxillofacial bespoke prostheses	
Neurostimulation devices: deep brain	
Neurostimulation devices: occipital nerve	
Neurostimulation devices: sacral	
Neurostimulation devices: spinal cord	
Neurostimulation devices: vagal	
Occluder vascular and septal devices	
Penile prosthesis	
Percutaneous valve replacement and repair devices	
Radiofrequency, cryotherapy and microwave ablation probes and catheters	When used for treating tumours. Added “and catheters”.
Stents: carotid, iliac and renal stents	Includes embolic protection devices
Stents: endovascular stent graft	Includes aortic stent grafts
Stents: peripheral vascular stents	Includes peripheral vascular drug eluting stents
Ventricular assist devices (VAD) and prosthetic hearts	Added “prosthetic hearts”

167. Costs and activity for fixtures for a BAHA should be reported against CZ27Z. Fitting of a BAHA, including the cost of the device, should be reported against CZ28Z. Maintenance of BAHAs in outpatients remains excluded from reference costs. We will provide information on the Unify2 forum alongside the draft workbooks highlighting other HRGs where all or some activity includes a device or high cost consumables. We also anticipate that the validation tool will highlight a small number of HRGs where the activity should always include a high cost device, and where the proposed reference cost is less than a minimum expected cost.

Drugs

168. The high cost drug OPCS codes, and therefore the unbundled HRGs do not capture all high cost drugs. Others are included in core HRGs. To inform tariff development, the costs of the drugs in Table 14 should be reported in the relevant unbundled or core HRG (except cystic fibrosis drugs which should be excluded from the year of care currencies for cystic fibrosis (paragraph 532)). They should also be reported in the drugs and devices worksheet (referred to as statement Z in previous years) in the reconciliation statement workbook (paragraph 608), except where they are used in chemotherapy to treat neoplasms.

Table 14: High cost drugs

Drug name	Rationale for collecting costs in drugs and devices worksheet
Afamelanotide	PbR exclusion from 2012-13 (and not coded in 2011-12)
Aflibercept	PbR exclusion from 2012-13
Amprenavir	HIV drug being monitored for future use in tariff
Aztreonam Lysine (when delivered via nebulisation/inhalation)*	PbR exclusion from 2012-13
Belatacept	PbR exclusion from 2012-13
Belimumab	PbR exclusion from 2012-13

Drug name	Rationale for collecting costs in drugs and devices worksheet
Cinacalcet	Renal drug being monitored for future use in tariff
Colistimethate sodium (when delivered via nebulisation/inhalation)*	PbR exclusion from 2012-13
Daclizumab	PbR exclusion from 2012-13
Darbopoetin alfa	Renal drug being monitored for future use in tariff
Defibrotide	PbR exclusion from 2012-13
Denosumab	Being monitored
Dexrazoxane	PbR exclusion from 2012-13
Dornase alfa (when delivered via nebulisation/inhalation)*	To collect cystic fibrosis and non-cystic fibrosis costs
Ecallantide	PbR exclusion from 2012-13
Eliglustat	PbR exclusion from 2012-13
Epoetin alfa	Renal drug being monitored for future use in tariff
Epoetin beta	Renal drug being monitored for future use in tariff
Epoetin zeta	Renal drug being monitored for future use in tariff
Fibroblast growth factor 1 gene therapy	PbR exclusion from 2012-13
Filibuvir	PbR exclusion from 2012-13
Fluocinolone acetonide	PbR exclusion from 2012-13
Lanthanum	Renal drug being monitored for future use in tariff
Laquinimod	PbR exclusion from 2012-13
Lixivaptan	PbR exclusion from 2012-13
Macitentan	PbR exclusion from 2012-13
Microplasmin	PbR exclusion from 2012-13
Migalastat	PbR exclusion from 2012-13
Ocriplasmin	PbR exclusion from 2012-13
Pasireotide	PbR exclusion from 2012-13
Pegloticase	PbR exclusion from 2012-13
Ruxolitinib	PbR exclusion from 2012-13
Sevelamer	Renal drug being monitored for future use in tariff
Tafamidis	PbR exclusion from 2012-13
Taliglucerase alfa	PbR exclusion from 2012-13
Tasocitinib	PbR exclusion from 2012-13
Teduglutide	PbR exclusion from 2012-13
Tobramycin (when delivered via nebulisation/inhalation)*	PbR exclusion from 2012-13
Tofacitinib	PbR exclusion from 2012-13
Vedolizumab	PbR exclusion from 2012-13
Verteporfin	PbR exclusion from 2012-13
Zalcitabine	HIV drug being monitored for future use in tariff

* these drugs should be reported separately for cystic fibrosis (by the currency bandings 1 to 5) and for other care

Elderly medicine

169. Elderly medicine is provided in a number of different ways by NHS providers. For many elderly patients, an acute period of care also leads to a period of rehabilitation care, occasionally followed by long term admitted patient care. In some places the acute and rehabilitation components may be delivered within the general medicine TFC, in others they are split between general medicine and geriatrics. This means that it is not possible to distinguish between acute, rehabilitation and long stay care, on the basis of TFC alone.

170. For episodes discharged from the TFC of geriatrics, costing should be undertaken using HRGs for the period of care up to the trim point for that HRG. How subsequent bed days should be costed and reported will vary, depending on the clinical reason

for the stay past the trim point. Excess bed days that have resulted from medical complications, eg a diabetic patient requiring longer than average to heal after a hip replacement, should be costed and reported accordingly at excess bed day level. An example of costing days in excess of an expected length of stay that relate to rehabilitation, eg prolonged physiotherapy after a hip replacement, prior to discharge, can be found in paragraph 338.

Eye services

171. Organisations prescribing a pair of glasses or contact lenses which are dispensed by a high street optician should incur the voucher cost, net off income received from the patient, and include the final cost in their reference costs. Costs should be included within ophthalmology outpatient attendances or procedures, or as part of the admitted patient care HRG for prescriptions that follow from care received as an admitted patient. Organisation seeing a patient in an optometry clinic (including low visual aids clinics) should net off income received from the patient, add the residue to the pool of optometry costs, and include in reference costs as ophthalmology outpatients or as part of an admitted patient care HRG.

Gastrointestinal tract endoscopies

172. When costing gastrointestinal tract endoscopy HRGs FZ51Z to FZ65Z, we would expect that the overwhelming majority of pathology costs would be included within the with biopsy HRGs FZ52Z, FZ55Z and FZ61Z, although therapeutic cases may also involve biopsies.

173. The costs assigned to the therapeutic HRGs should take account of the longer operation time, the cost of disposables (eg snares, clips and stents), additional nursing resource, and the likely higher level of endoscopist required (consultant rather than specialist nurse).

174. The costs assigned to the HRGs for combined upper and lower gastrointestinal tract endoscopies (FZ63Z to FZ65Z) should take into account the longer operation time, the double instrument use, and the additional nursing resource involved in undertaking multiple procedures at the same time.

Mental health

175. Mental health services provided by mental health service providers are not recorded using HRGs. Mental health service providers should refer to Section 8.

Multiple trauma

176. We would expect activity in the higher scoring sub-chapter VA HRGs to be concentrated in the major trauma centres. But this is not prescriptive and costs for complex patients may be returned from a variety of providers until trauma networks are fully operational.

Spinal cord injuries

177. The specialised services national definition set (SSNDS) for specialised spinal services[31] designates eight specialist spinal cord injury centres (Table 15). Only these centres should use TFC 323 to submit costs and activity for patients with spinal cord injuries.

Table 15: Specialist spinal cord injury centres

Code	Centre
RXQ	Buckinghamshire Hospitals NHS Trust
RXF	Mid Yorkshire Hospitals NHS Trust
RNZ	Salisbury NHS Foundation Trust
RHQ	Sheffield Teaching Hospitals Foundation NHS Trust
RTR	South Tees Acute Hospitals NHS Trust
RVY	Southport and Ormskirk Hospital NHS Trust
RL1	The Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Trust
RAN	The Royal National Orthopaedic Hospital NHS Trust

178. When these patients undergo surgery, the hierarchy has grouped episodes with long lengths of stay to the minor surgical procedures, eg fitting of catheter. This has led to distortion. For spinal injury patients within the above units, patients should be costed on an occupied bed day basis as length of stay is a more powerful cost driver in these circumstances than the majority of surgical procedures.

179. Where surgery is undertaken, the costs of surgery should be costed and recovered through the occupied bed day cost, ie all costs associated with the surgery should be treated as an oncost on the admitted patient stay. It should be noted that this costing treatment is in direct opposition to the treatment of all other forms of admitted patient care. Treating surgery as an oncost and reporting costs on an occupied bed day basis is only applicable to the designated specialist spinal cord injuries units. This approach is consistent with that adopted within the SSNDS.

Transplantation

180. Kidney transplants can be performed when donor organs are received from both live and deceased donors. *Developing robust reference costs for kidney transplants*[32], published by NHS Kidney Care as a March 2010 report and August 2011 update, is required reading for all organisations submitting these costs. It includes a bottom up costing template and a number of basic rules:

    (a) kidney transplants from deceased donors (HRGs LA01* and LA02*) are only ever carried out as non-electives
    (b) kidney transplants from live donors (LA03*) are only ever carried out as electives
    (c) non-elective short stays are very unlikely.

181. As far as possible, costs related to pre- and post-transplant activity should not be included with the composite cost of the transplant episode but identified and reported separately in HRGs LA12* and LA13*. We recognise that clinical coding is not

[31] http://www.specialisedservices.nhs.uk/doc/specialised-spinal-services-all-ages
[32] http://www.kidneycare.nhs.uk/_Resourcestodownload-Reports.aspx#Devolping%20robust%20ref%20costs%20for%20kid%20transplants%20update

nationally mandated when a procedure takes place in an outpatient setting and, unless locally mandated, these HRGs may not be automatically generated. It may therefore be necessary to liaise with the renal unit to adjust activity manually to reflect the fact that these pre- and post-transplant procedures are taking place. We would encourage this issue to be raised with renal clinicians and the clinical coding team to ensure the activity is accurately coded in future. The NHS KidneyCare publication *A guide to recording activity within renal units for national reporting*[33] will help. The separate identification and costing of these pre- and post-transplant HRGs is essential to recognise the fact that non-transplanting units may undertake this activity but not the transplant itself.

182. The cost of kidney transplants should include the costs incurred of matching to suitable donors. Costs relating to a deceased donor should be included in the composite costs of the relevant recipient HRGs (LA01* and LA02*). For live donors there are a number of HRGs against which costs and activity should be reported as follows:

    (a) LA10Z Live kidney donor screening (usually outpatient activity)
    (b) LA11Z Kidney pre-transplantation work-up of live donor
    (c) LA14Z Examination for post-transplantation of kidney of live donor (outpatient activity)
    (d) LB46Z Live donation of kidney (should be carried out as an elective).

183. In line with the guidance above related to the recording of activity and costs of the recipient kidney transplant, the pre- and post-transplant donor activity should not be included with the composite cost of the donor episode (LB46Z) but identified and reported separately under HRGs LA10Z, LA11Z and LA14Z. The separate identification and costing of these pre- and post-transplant HRGs is essential to recognise the fact that non-transplanting units may undertake this activity but not the transplant itself.

184. NHS Blood and Transplant (NHSBT) record all kidney transplants in real time. As a matter of course, this information, available from an organisations's renal transplant unit, should be used as a validation check against reference cost activity.

[33] http://www.kidneycare.nhs.uk/_Resourcestodownload-Reports.aspx#National-Reporting-Guide

Section 3: Outpatient services

Introduction

185. This section covers:

(a) outpatient attendances, including ward attendances
(b) procedure driven HRGs in outpatients.

186. Outpatient attendances and procedures should be reported using the latest HRG4 and TFC currencies. Where a procedure is reported in outpatients, an outpatient attendance cannot also be counted for the same activity. The output of the HRG4 2011-12 Reference Cost Grouper may attach one or more unbundled HRGs to the core HRG produced. Only core HRGs should be reported within this section. Unbundled HRGs should be reported separately (Section 5).

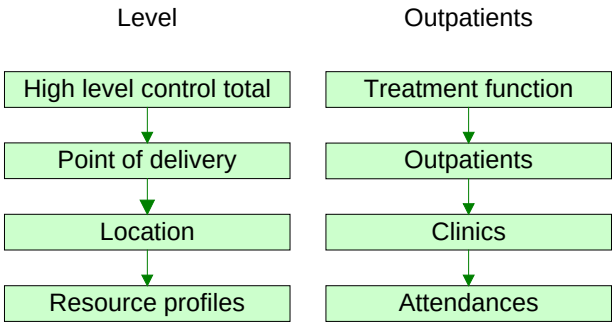
Costing outpatient services

187. For costing outpatient activity at treatment function, sub-treatment function or service level, the costs of investigations, tests, drugs, devices or other care that does not generate a separate HRG should be included at the point of commitment, up to the point where the patient accesses another service that is separately identified in another area of the reference costs collection.

188. For example, in some organisations blood tests might be provided as part of a first outpatient attendance. In other organisations, patients might return for blood tests at their convenience or on an appointment basis, prior to a follow up outpatient appointment. In both circumstances, the costs of these tests should be reported as part of the first outpatient attendance only, as they are generally completed prior to a subsequent follow up outpatient attendance and do not generate a separate HRG. But a patient returning for a colonoscopy in outpatients, for example, would generate a separate HRG and these costs would not be included at the point of commitment.

189. The approach used for the costing of outpatients (Table 16) is consistent with that used for admitted patient care.

Table 16: Costing outpatients



190. Costs will fall into three categories, discussed in detail below:

(a) time based costs, eg staff time
(b) standard costs, eg blood tests
(c) event based costs, eg equipment.

Time based costs

191. For outpatients, this will relate primarily to staff time. The options available for the allocation of staff time are:

    (a) patient related time or
    (b) total time.

192. Total time would allow the identification of all staff time, including time allocated to patients who did not attend their outpatient appointment. Many NHS providers have a policy of overbooking outpatient clinics to allow for DNAs, to ensure productive time in outpatients is maximised. Whilst the level of DNAs is an issue, costs associated with DNAs in outpatients should be treated as an overhead on patient related time for reference costs.

193. Staff costs should therefore be allocated on the basis of patient related time analysis. This will provide a consistent basis for costing this element of outpatient costs. Only if this cannot be done, should total time be used.

194. Detailed time analysis of the proportion of staff time spent on outpatient procedure related activities may not be readily available at this level. Where no duration is available, medical input will be required. Clinical and nursing estimates of the varying levels of input by staff should be used to support the development of relevant resource profiles for outpatient procedures. These estimates should be consistent with the accounting principle of prudence and the standard practice for the allocation and apportionment of overheads in the *NHS Costing Manual*.

Standard costs

195. This section covers other direct costs which can be attributed to resource profiles on the basis of standard costs. This is linked with the allocation of relevant costs at the time they are committed rather than the time they may actually be delivered (paragraph 187).

196. The costs, where not unbundled, which should be allocated to resource profiles in this way include:

    (a) pathology
    (b) equipment, where these can be directly attributed to the individual profile of care
    (c) drugs and devices
    (d) therapy based care required as part of the attendance.

197. Standard costs for specialist equipment and these services are already produced for use as part of internal charging systems within NHS providers and should be applied to attendance based costing for outpatient clinics.

Event based costs

198. It is not appropriate to allocate some costs directly to specific groupings as they relate to the event as a whole, ie costs relate to the clinic rather than individual elements within it. These costs should be identified and allocated or apportioned to the clinics as overheads.

Costs of fixed assets

199. Capital charges can have a significant impact on the cost of outpatients depending on the location in which the clinic is held.

200. The use of equipment in outpatient clinics should be included in the total quantum of costs for reference costs, and the cost attributed to outpatients on the same consistent basis as used for admitted patient activity. Some equipment may be apportioned directly to individual treatments, eg lasers for the treatment of some dermatology cases. General equipment may also be used, and these should be allocated to the clinic and apportioned to the resource profiles as an overhead.

201. In allocating equipment costs two methods are acceptable: cost per minute and cost per use. Given the wide range of equipment in use in NHS providers, either method may be used dependent on the type of equipment.

Outpatient attendances

202. Outpatient attendances[34] in HRG4 (WF01* and WF02*), generated from a number of mandated fields in the outpatient CDS, are organised by:

    (a) first and follow up attendance
    (b) face to face and non face to face attendance
    (c) single and multi-professional attendance.

203. Where a patient sees a healthcare professional in an outpatient clinic setting and receives healthcare treatment, this can be counted as valid outpatient activity. NHS providers offer outpatient clinics in a variety of settings and should be included in reference costs where operated by the provider within a contract. This includes clinics outside main hospital sites in premises not owned by the NHS provider, such as GP practice premises.

204. Outpatient clinics held by a clinician or nurse whilst acting in a private capacity, and which are not part of the NHS provider's income stream, are excluded from reference costs. The same rules apply to outpatient clinics held by a clinician or other primary care practitioner as part of any primary medical services contract.

205. Reference costs do not distinguish between attendances that are pre-booked or not. A different consultant other than the one a patient was admitted under seeing that patient (eg for psychiatric assessment of a medical patient), should be reported here as a consultant led outpatient attendance. A patient attending a ward for examination or care will be counted as an outpatient attendance if seen by a doctor. If seen by a nurse, they are a ward attendance[35]. No designated reporting worksheet exists for ward attendances, costs and activity for which should be reported here as non consultant led outpatient attendances under the appropriate TFC.

[34] http://www.datadictionary.nhs.uk/data_dictionary/nhs_business_definitions/o/out-patient_attendance_consultant_de.asp?shownav=1

[35] http://www.datadictionary.nhs.uk/data_dictionary/nhs_business_definitions/w/ward_attendance_de.asp?shownav=1

First and follow up

206. First attendances[36] are defined in the Data Dictionary. Follow up attendances are those that follow the first attendance irrespective of whether it happened in a previous financial year. Single professionals seeing a patient sequentially as part of the same clinic should be reported as two separate attendances.

Face to face and non face to face

207. Non face to face contacts, as defined in the Data Dictionary[37], should only be included in the collection where there is an opportunity for discussion between patient and healthcare professional. A telephone call to explain the ramifications of test results to a patient would be included, but a telephone call, text or e-mail solely to inform patients of results are excluded.

208. Both face to face and non face to face activity is only valid if it directly entails contact with the patient or with a proxy for the patient, such as the parent of a young child. Contacts with proxies only count if the contact is in lieu of contact with the patient, and the proxy is able to ensure more effectively than the patient that the specified treatment is followed. This is most likely to be the case where the patient is unable to communicate effectively, say for an infant, or for a person who is mentally ill or has learning disabilities.

209. Contacts about the patient, either face to face or non face to face, cannot be counted as valid activity in any service reported in reference costs, with the single exception of cancer multi-disciplinary teams as discussed in paragraph 222. Where organisations are unable to distinguish between face to face and non-face to face activity, all costs for a particular TFC should be reported as face to face activity only.

210. As a general principle, the same patient can access a service as a face to face and non face to face contact in the same financial year. A single patient can therefore appear in both categories accessing the same service in two different ways. There is no requirement that stipulates that only those patients that have had a face to face contact can be counted as having subsequent non face to face contacts.

211. There are no plans to allow the reporting of triage services as activity rather than an overhead in reference costs. Introducing this without the ability to distinguish between patient facing and non patient facing would compromise HES.

Single and multi-professional

212. The generation of one of the multi-professional HRGs depends on the recording of OPCS codes in the patient record that denote a multi-professional or multi-disciplinary attendance.

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36 http://www.datadictionary.nhs.uk/data_dictionary/data_field_notes/f/first_attendance_de.asp?query=First%20Attendance&rank=100&shownav=1

37 http://www.datadictionary.nhs.uk/data_dictionary/attributes/c/cons/consultation_medium_used_de.asp?shownav=1

213. Multi-professional attendances are defined as multiple care professionals (including consultants) seeing a patient together, in the same attendance, at the same time.

214. Multi-disciplinary attendances are defined as multiple care professionals (including consultants) seeing a patient together, in the same attendance, at the same time when two or more of the care professionals are consultants from different national main specialties.

215. These definitions apply when a patient benefits in terms of care and convenience from accessing the expertise of two or more healthcare professionals at the same time. The clinical input of multi-professional or multi-disciplinary attendances must be evidenced in the relevant clinical notes or other relevant documentation.

216. They do not apply if one professional is simply supporting another, clinically or otherwise, eg in the taking of notes, acting as a chaperone, training, professional update purposes, operating equipment and passing instruments. They also do not apply where a patient sees single professionals sequentially as part of the same clinic. Such sequential appointments count as two separate attendances, and should be reported in line with existing Data Dictionary guidance on joint consultant clinics[38].

217. The multi-disciplinary attendance definition does not apply to multi-disciplinary meetings, where care professionals meet in the absence of the patient. Multi-disciplinary meetings should not be recorded as multi-disciplinary attendances.

Consultant led and non consultant led

218. The collection requires consultant led and non consultant led outpatient attendances to be reported separately.

219. Consultant led[39] activity, as defined by the Data Dictionary, occurs when a consultant retains overall clinical responsibility for the service, team or treatment. The consultant will not necessarily be physically present for each patient's appointment, but takes overall clinical responsibility for patient care. The activity will take place in a consultant clinic, defined as per the mandatory outpatient attendance CDS type 020, using the consultant code field[40], main specialty code and TFC.

220. Clinics run by general practitioners with a special interest (GPwSI) or specialist therapists are normally taking patients from what would have been a consultant list, and are classed as consultant led activity.

221. Non consultant led activity takes place in a clinic where the consultant is not in overall charge (ie anything not covered in paragraph 219). Again, these clinics are identified in the CDS by default codes for non consultants in the consultant code field, together with the main specialty code and TFC.

[38] http://www.connectingforhealth.nhs.uk/systemsandservices/data/nhsdmds/faqs/cds/outpatact/sharedcare
[39] http://www.datadictionary.nhs.uk/data_dictionary/nhs_business_definitions/c/consultant_led_activity_de.asp?shownav=1
[40] http://www.datadictionary.nhs.uk/data_dictionary/attributes/c/cons/consultant_code_de.asp?shownav=1

Cancer multi-disciplinary teams

222. There is only one exception to the non face to face rule in paragraph 207 and this is for specific cancer multi-disciplinary team (MDT) meetings to discuss a patient. Cancer MDTs have been defined by the National Institute for Health and Clinical Excellence (NICE) as essential to the delivery of high quality cancer care. Although currently outside the scope of tariff, their costs may in the future be built into a specific cancer outpatient tariff and therefore an improved understanding of MDT costs is necessary.

223. In previous years we have collected data for five areas, in line with recommendations that a sample of the most established MDTs with good levels of membership should initially be costed rather than all MDTs. For 2011-12, we are adding a sixth category, for other MDTs. This is an attempt to capture all cancer MDT costs and therefore remove those costs allocated as overheads across cancer services. The cancer types included in this other category should be noted in the reconciliation statement workbook. Therefore, the six categories are:

    (a) colorectal
    (b) local gynaecological - local teams diagnose most cancers, provide treatment for some types of cancer, and refer people on to the specialist teams if necessary.
    (c) specialist gynaecological - specialist teams provide specialist care and treatment for people whose cancer is less common or who require specialist treatment for other reasons
    (d) breast
    (e) specialist upper gastrointestinal
    (f) other.

224. Cancer MDTs take place in addition to and not instead of outpatient activity. Cancer outpatient clinics are often multi-disciplinary in nature and similarly MDTs can deal specifically with one type of cancer or a group of cancers.

225. The MDT meetings bring together representatives from different healthcare disciplines on a formal timetabled basis to discuss new cancer patients and agree individual treatment plans for initial treatment and on each occasion where the treatment plan needs to be varied or updated eg on relapse. The core role of the MDT is to resolve difficulties in diagnosis and staging and to agree a management plan. Further definitions of MDTs can be found in NICE improving outcomes guidance.

226. The activity measure for the collection is the number of individual patient treatment plans discussed for each MDT. MDTs will always have a defined consultant lead, who is responsible for chairing the meeting, ensuring treatment decisions are recorded etc. Therefore, MDT costs and activity should be reported as consultant led, multi-professional, non face to face, first attendances (HRG WF02D) by MDT type.

227. A suggested methodology for costing this activity is to begin by making contact with the cancer services manager for each MDT to determine:

    (a) their number, frequency and duration
    (b) the staff involved
    (c) the number of individual patient treatment plans developed for meetings.

228. Apportion consultant costs as per their job descriptions, which could be available from either financial management or consultant job plans or sessional information. Similarly, apportion the costs of support staff (eg pathology, medical records department) used in preparation and follow up of meetings. Cancer services managers should be able to help identify where the costs of MDT co-ordinators were coded as they are responsible for such staff. The cost of any data collection should also be included.

229. Organisations should aim to report activity and unit costs for each MDT type. Otherwise, organisations should estimate the annual total cost of each MDT (Table 17). Failing this, one further line is available in the worksheet (TCMDT) where organisations can report an estimate of the annual aggregated total cost of the six individual MDTs with an activity count of one.

Table 17: Cancer MDT codes

MDT	Reporting code for unit costs	Reporting code for total costs
Colorectal	CMDT_C	TCMDT_C
Local gynaecological	CMDT_LG	TCMDT_LG
Specialist gynaecological	CMDT_SpG	TCMDT_SpG
Breast	CMDT_B	TCMDT_B
Specialist upper gastrointestinal	CMDT_SpU	TCMDT_SpU
Other	CMDT_Oth	TCMDT_Oth

230. Although an MDT may draw on membership from several NHS providers, there must be a clear host organisation responsible for its running, which should report the reference costs.

Genetics

231. Include the costs of any tests requested as part of the outpatient attendance. Where genetics services support other activity, such as an admitted patient care episode, the costs of the genetics tests should be included as an overhead to the core HRG and not reported as an outpatient attendance.

HIV and AIDS

232. Costs associated with outpatient services for patients with HIV or AIDS, including testing, contact tracing of former partners etc, should be reported using pseudo code H/A. The costs of antiretroviral therapies should be included in the unbundled high cost drug HRGs (paragraph 318), but the associated costs should be included against pseudo code H/A. We have removed the restriction on only reporting follow up outpatient attendances and both the first and follow up categories may be used.

Orthoptics

233. Orthoptic clinics run as a discrete and separate service from ophthalmology clinics should be reported against orthoptics (TFC 655). Orthoptists, optometrists or other clinical professionals providing services as part of an overall ophthalmology service should form part of its cost base.

Paediatric treatment function codes

234. Providers should allocate costs and activity to paediatric TFCs in line with their Data Dictionary definition as "dedicated services to children with appropriate facilities and support staff". A small number of patients aged over 18 years also receive care in specialist children's service, including patients with learning disabilities, cystic fibrosis and congenital heart disease. Such activity is assumed to have a similar resource usage to children rather than adults and should also be reported under the relevant paediatric TFC.

235. Costs and activity coded to community paediatricians (TFC 290) should be included against community paediatric services (paragraph 466) and not here.

236. Paediatric neuro-disability (TFC 291) should include all neuro-developmental conditions and not just neurological, including behavioural problems, eg autism or attention deficit hyperactivity disorder (ADHD). Neuro-disability work by community paediatricians should be reported in reference costs under TFC 291 and not TFC 290 or the community paediatric services worksheet (paragraph 466). In this instance it is the treatment function that matters, not the type of specialist who delivers it.

237. Neuro-disability has only recently been recognised as a separate specialty so the majority of neuro-disability work will continue to be done by community paediatricians for the near future. Multi-disciplinary assessments including child development centre (CDC) assessments should be reported under TFC 291 as multi-professional face to face contacts.

238. We recognise that it may not always be possible to separate neuro-disability patients from general paediatric patients seen in community paediatric clinics, and where a community paediatrician has a separate general paediatric clinic, this should be reported under paediatrics (TFC 420).

Radiotherapy

239. Patients attending radiotherapy clinics who do not have any form of treatment covered by the unbundled radiotherapy HRGs should be reported as outpatient attendances.

Sexual health services

240. Activity that takes place in a sexual and reproductive health clinic[41] (previously referred to as a family planning clinic), is defined by pseudo code FPC, and should be reported at first and follow up attendance level as non consultant led activity, regardless of the location of the clinic. A TFC has been requested, corresponding to the main specialty code for community sexual and reproductive health.

Therapy services

241. Physiotherapy, occupational therapy, and speech and language therapy (TFCs 650,

41 http://www.datadictionary.nhs.uk/data_dictionary/nhs_business_definitions/s/sexual_and_reproductive_health_clinic_de.asp?shownav=1

651 and 652) should be used where referral for treatment carried out has been made by a clinical or other professional, including when accessed directly by a GP or self-referral, and where the patient attends a discrete therapy clinic solely for the purpose of receiving therapy treatment. As with other types of support services and care, where these services form part of an admitted patient care episode or outpatient attendance in a separate specialty, the costs will form part of the composite costs of that episode or attendance.

Procedures in outpatients

242. Organisations should report procedures carried out in outpatients using the HRG currencies. The Grouper generates a core HRG relevant to procedures carried out in an outpatient setting, instead of a core attendance HRG. Diagnosis codes are not used to determine any HRG when grouping outpatient data.

243. From 2011-12, procedures in outpatients must also be reported by TFC. This will assist the rebundling into outpatient attendances of costs and activity for outpatient procedure HRGs that do not receive a mandatory tariff.

244. There is no requirement to split procedure activity between child and adult, because this will be reflected in the HRG generated where appropriate, nor to distinguish between procedures carried out in first or follow up attendances.

Section 4: Emergency medicine

245. This section covers:

(a) 24 hour A&E services
(b) non 24 hour A&E services
(c) minor injuries units
(d) walk in centres, defined as predominantly nurse-led primary care facilities dealing with illnesses and injuries - including infections and rashes, fractures and lacerations, emergency contraception and advice, stomach upsets, cuts and bruises, or minor burns and strains - without the need to register or make an appointment. They are not designed for treating long-term conditions or immediately life-threatening problems.

246. The collection covers all emergency medicine attendances, defined by the sub-chapter VB HRGs, supported by the A&E minimum dataset, and provided by the A&E department types[42] as defined in the Data Dictionary. A&E mental health liaison services should not be included here, but in the mental health specialist teams worksheet (paragraph 439).

247. The Grouper does not generate separate unbundled HRGs for emergency medicine. The costs of activity typically unbundled should therefore be included within the core emergency medicine HRGs.

248. All emergency medicine services should be split by:

(a) patients who are admitted for further investigation or treatment rather than discharged from A&E
(b) patients who are not admitted but are discharged or die whilst in A&E.

249. We have removed the pseudo code DOA for patients brought in dead (A&E patient group code 70). Patients brought in dead should generally be coded and costed against HRG VB11Z No investigation with no significant treatment.

250. Costs and activity for minor injuries units (MIU) should only be reported separately if:

(a) the MIU ward is discrete, and the attendance is instead of, and has not already been counted as, an emergency medicine attendance
(b) the MIU is not discrete but patients are seen independently of the main A&E department.

251. Where MIUs are part of an A&E department, their costs should be included as an oncost to the A&E department, and their activity excluded from reference costs, to avoid artificially reducing the average unit costs of emergency medicine attendances.

42 http://www.datadictionary.nhs.uk/data_dictionary/attributes/a/acc/accident_and_emergency_department_type_de.asp?shownav=1

Section 5: Unbundled services

Introduction

252. This section covers unbundled HRGs for:

    (a) chemotherapy
    (b) critical care
    (c) diagnostic imaging
    (d) high cost drugs
    (e) radiotherapy
    (f) rehabilitation
    (g) specialist palliative care.

253. Unbundled HRGs were developed to identify specialist services, ensure recognition of priority areas, support service redesign and patient choice, and improve the performance of HRGs so they better represent activity and costs. The costs and activity of these services should be separately identified (ie unbundled) from all admitted patient care and outpatients, and reported by HRG.

254. Although there are unbundled HRGs for diagnostic imaging, the costs should not be unbundled but remain in admitted patient care core HRGs. Unbundled services are not separately identified from A&E activity, and should remain in the emergency medicine core HRGs.

255. For most of these services (critical care and renal dialysis being the exceptions), costs should be separately reported by admitted patient care, outpatient and other settings. The other category recognises that these unbundled HRGs are setting independent, and should be used where the service is delivered outside hospital (eg chemotherapy or rehabilitation in the home or community). It must not be used to misreport admitted patient care or outpatient care due to coding or software issues.

256. The Terminology Reference-data Update Distribution (TRUD) service[43] supply a number of data sets to support consistent coding of activity, including:

    (a) the chemotherapy regimens list, including adult and paediatric regimens, with mapping to OPCS-4 codes
    (b) the National Interim Clinical Imaging Procedure (NICIP) code set of clinical imaging procedures
    (c) the high cost drugs list and map to OPCS-4 codes.

257. We encourage organisations to register for the TRUD service in order to access the most up-to-date versions of these lists. Costing accountants should speak to their coding departments in the first instance because the trust may already be registered with TRUD.

Chemotherapy

258. The unbundled chemotherapy HRGs are organised to reflect the procurement of

[43] http://www.uktcregistration.nss.cfh.nhs.uk/trud3/user/guest/group/0/home

chemotherapy drug regimens and the delivery of chemotherapy. Each patient is allocated one unbundled HRG for the regimen procured and one unbundled HRG for delivery. This section should be read alongside the HRG4 chapter summary for chemotherapy which includes further guidance on coding and mapping to HRGs.

259. The chemotherapy procurement HRGs are for the procurement of drugs for regimens according to band. There are 11 regimen bands, including an HRG for drugs not included on the national regimen list.

260. The activity measure for the chemotherapy procurement HRGs is the number of cycles[44] of treatment and the unit cost is per average cycle. Note that the Grouper outputs the number of procurements rather than number of cycles.

261. Chemotherapy procurement HRGs are designed to cover the cost of the entire procurement service and therefore, in contrast to unbundled high cost drugs (paragraph 318), the cost of each HRG should include pharmacy oncosts (including indirect costs and overheads) as well as all other costs associated with procuring each drug cycle. The cost of supportive drugs – which are any drugs given to prevent, control, or relieve complications and side effects and to improve the patient's comfort and quality of life - should also be included within these HRGs.

262. The definitions in Table 18 may assist with costing of the chemotherapy delivery HRGs. SB17Z takes account of the delivery of regimens not on the national list.

Table 18: Chemotherapy delivery

Definition	Explanation
Deliver simple parenteral chemotherapy	Overall time of 30 minutes nurse time and 30 to 60 minutes chair time for the delivery of a complete cycle.
Deliver more complex parenteral chemotherapy	Overall time of 60 minutes nurse time and up to 120 minutes chair time for the delivery of a complete cycle.
Deliver complex chemotherapy, including prolonged infusional treatment	Overall time of 60 minutes nurse time and over two hours chair time for the delivery of a complete cycle.
Deliver subsequent elements of a chemotherapy cycle	Delivery of any pattern of outpatient chemotherapy regimen, other than the first attendance, ie day 8 of a day 1 and 8 regimen or days 8 and 15 of a day 1, 8 and 15 regimen.

263. In addition to these unbundled chemotherapy HRGs, there is a core HRG (SB97Z) for a same day chemotherapy admission or attendance that is generated by the Grouper if:

(a) chemotherapy has taken place
(b) the activity has length of stay less than one
(c) no major procedures have taken place and the core HRG which would otherwise be generated is diagnosis driven.

264. This core HRG will attract a zero tariff to ensure appropriate overall reimbursement where a patient attends solely for delivery of chemotherapy and no additional admission or attendance has taken place. We still require activity to be reported against SB97Z in the reference costs workbook but the cost of delivery should be

[44] http://www.datadictionary.nhs.uk/data_dictionary/nhs_business_definitions/a/anti-cancer_drug_cycle_de.asp?shownav=1

included against the unbundled chemotherapy delivery HRGs.

265. Supportive care costs for cancer patients receiving chemotherapy should be allocated according to the matching principle. Therefore:

    (a) the costs of services directly related to the treatment of cancer, before and after surgery, should be allocated to the appropriate surgical HRG
    (b) supportive care costs not associated with the surgical procedure should be allocated to the appropriate non-surgical cancer HRG.

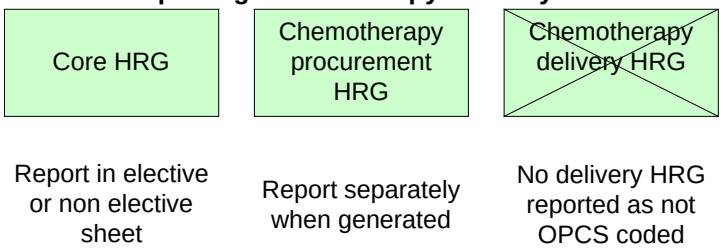
266. Chemotherapy should be reported in the following categories to reflect differences in clinical coding guidance between these settings:

    (a) ordinary elective or non-elective admissions
    (b) day case and regular day or night attendances
    (c) outpatients
    (d) other.

Ordinary admissions

267. The reporting of ordinary elective or non-elective admissions should include the core HRG and the relevant chemotherapy procurement HRGs where generated. Chemotherapy delivery HRGs will not be generated because OPCS chemotherapy delivery codes are not recorded for ordinary admissions (Table 19). The ability to deliver chemotherapy is expected to be part of the routine care delivered on a ward, and therefore costs should be reported as an oncost to the core HRG.

Table 19: Reporting chemotherapy ordinary admissions



268. Table 20 gives an example. From this table:

    (a) the episode derives a core HRG of LB35B that is reported as an ordinary elective
    (b) the episode receives an additional unbundled chemotherapy procurement HRG SB03Z which is reported as part of the average cycle of treatment for reference cost purposes
    (c) there is no unbundled chemotherapy delivery HRG. Current clinical coding guidance states the only time delivery is recorded for chemotherapy is when it is day case, outpatient or a regular day attender, including when the chemotherapy delivery happens at a day case setting and the patient is subsequently admitted (therefore generating an admitted patient care HRG).

Table 20: Coding chemotherapy ordinary admissions

	Diagnosis 1	Procedure 2 (chemotherapy procurement)	Procedure 3 (chemotherapy delivery)
ICD-10 OPCS-4 (input)	C62.9 Malignant neoplasm of testis unspecified	X70.3 Procure chemotherapy drugs for regimens in band 3	Not coded
HRG (output)	LB35B Scrotum, testis or vas deferens disorders without CC	SB03Z Procure chemotherapy drugs for regimens in band 3	Not coded

Day case and regular day or night admissions

269. The reporting of day cases and regular day or night admissions solely for the delivery of chemotherapy should include an unbundled chemotherapy delivery HRG, and may include an unbundled chemotherapy procurement HRG where the procurement of a cycle is recorded. The core HRG SB97Z will be generated for patients admitted for same day chemotherapy treatment if no other significant procedure has taken place (Table 21).

Table 21: Reporting chemotherapy day cases and regular day or night attenders

Core HRG	Chemotherapy procurement HRG	Chemotherapy delivery HRG
SB97Z Zero cost	Report separately if recorded	Report separately

270. Table 22 gives an example of a day case (first attendance of second cycle). From this table:

(a) if there are no other procedures within the episode, the episode derives a core HRG of SB97Z. All of the chemotherapy costs should be reported using the procurement and delivery HRGs
(b) the episode receives an additional unbundled HRG of SB03Z for the chemotherapy procurement, reported as part of the average cycle of treatment for reference costs
(c) the episode receives a further unbundled HRG of SB14Z for chemotherapy delivery, which is reported as a delivery per patient attendance.

Table 22: Coding chemotherapy day cases and regular day or night admissions

	Diagnosis 1	Procedure 1	Procedure 2 (chemotherapy regimen)	Procedure 3 (chemotherapy delivery)
ICD-10 OPCS-4 (input)	C62.9 Malignant neoplasm of testis unspecified	N/A	X70.3 Procure chemotherapy drugs for regimens in band 3	X72.1 Deliver complex chemotherapy for neoplasm including prolonged infusional treatment
HRG (output)	N/A	SB97Z Same day chemotherapy admission/attendance	SB03Z Procure chemotherapy drugs for regimens in band 3	SB14Z Deliver complex chemotherapy, including prolonged infusional treatment at first attendance

Outpatients

271. Outpatients attending solely for the delivery of chemotherapy should be reported as an unbundled chemotherapy delivery HRG, and may be reported as an unbundled chemotherapy procurement HRG where the procurement of a cycle is recorded. The core HRG SB97Z will also be generated for patients attending for same day chemotherapy treatment (Table 23).

Table 23: Reporting chemotherapy outpatients

Core HRG	Chemotherapy procurement HRG	Chemotherapy delivery HRG
SB97Z Zero cost	Report separately if recorded	Report separately

272. Table 24 gives an example of an outpatient (first attendance of second cycle). From this table:

(a) if there are no other procedures within the attendance, it derives a core HRG of SB97Z. All of the chemotherapy costs should be reported using the procurement and delivery HRGs
(b) the attendance receives an additional unbundled HRG of SB03Z for the chemotherapy procurement, which is reported as part of the average cycle of treatment for reference costs
(c) the attendance receives a further unbundled HRG of SB14Z for chemotherapy delivery, which is reported as a delivery per patient attendance for reference costs. Subsequent attendances for the oral delivery of chemotherapy drugs should be reported as SB11Z and not SB15Z.

Table 24: Coding chemotherapy outpatients

	Procedure 1	Procedure 2 (chemotherapy regimen)	Procedure 3 (chemotherapy delivery)
OPCS-4 (input)	N/A	X70.3 Procure chemotherapy drugs for regimens in band 3	X72.1 Deliver complex chemotherapy for neoplasm including prolonged infusional treatment
HRG (output)	SB97Z Same day chemotherapy admission/attendance	SB03Z Procure chemotherapy drugs for regimens in band 3	SB14Z Deliver complex chemotherapy, including prolonged infusional treatment at first attendance

Other

273. This setting should be used to report community chemotherapy, which describes services where patients receive their chemotherapy treatment outside of cancer centres or cancer units in facilities nearer to home such as a GP surgery or in their own homes.

Additional notes

274. Although rare, some patients may have two regimens delivered at one attendance which results in two delivery HRGs. An example is a patient receiving an intrathecal component of a regimen where this component will generate a separate procurement

and delivery alongside any other regimen they may be receiving.

275. Further guidance relating to the treatment of regimens not on the national list can be found in the OPCS-4 clinical coding instruction manual[45].

276. Patient receiving both an infusion plus oral treatment as part of a single regimen on the same day will be counted as one delivery and coded to an intravenous delivery code. Patients may also receive other intravenous and oral drugs for their cancers on the same day as their chemotherapy regimen, eg administration of bisphosphonates. The costs of these should be attributed to the relevant core HRG and not included with the chemotherapy delivery HRG.

277. To maintain consistency with national coding guidance, the OPCS procurement and delivery codes for chemotherapy should only be used where the treatment is for systemic anti-cancer therapy, ie malignancy and not for the treatment of non-malignant conditions. Certain drugs appear in both the chemotherapy regimens list and high cost drugs list as they can be used to treat neoplasms as well as a range of other non-neoplastic conditions for example rheumatology. These should be coded using the OPCS high cost drugs codes and not the OPCS procurement and delivery codes.

278. Current clinical coding guidance stipulates when to code delivery of oral chemotherapy (SB11Z). If a regimen includes oral and parenteral administration, the parenteral administration determines the delivery code. SB11Z will be assigned to regimens made up of only drugs administered orally and the costs should reflect current practice in light of recommendations within the National Patient Safety Agency (NPSA) report on oral chemotherapy[46].

279. We are aware that some supportive drugs may have a disproportionately high cost compared to the other expected costs of care within the unbundled chemotherapy procurement HRG, and that some hormonal drugs may similarly have a disproportionately high cost within the core HRG. We are working towards implementing a solution to these issues from 2013-14. Currently the treatment of such drugs should be as per Table 25.

Table 25: Supportive and hormonal drug treatment

Method of delivery	Hormone treatments	Supportive drugs
As an intrinsic part of a regimen	If included within a regimen ignore	If included within a regimen ignore
By itself	Code to the relevant admitted patient or outpatient core HRG generated (not chemotherapy specific)	Apportion over procurement bands, potentially extra delivery time and costs
As part of supportive drug	Include costs within supportive drug costs	N/A

45 http://www.connectingforhealth.nhs.uk/systemsandservices/data/clinicalcoding/codingstandards/publications/ccim

46 http://www.nrls.npsa.nhs.uk/resources/?entryid45=59880

Critical care

280. Critical care reference costs are collected separately for:

    (a) adult critical care
    (b) adult critical care outreach services
    (c) paediatric critical care
    (d) neonatal critical care.

Adult critical care

281. The adult critical care minimum dataset (CCMDS) is a sub-set of the admitted patient care dataset. A patient that is admitted to a critical care unit will have an admitted patient care dataset record for their hospital admission, which will produce a core HRG and other unbundled HRGs, and a CCMDS record producing their unbundled critical care HRG.

282. Costs associated with critical care services are high and only relate to a limited number of patients. Where these costs are included as an overhead on treatments and procedures they significantly distort costs and lead to wide variations.

283. Adult critical care HRGs are based on the total number of organs supported in a critical care period. Research to develop the HRGs by the University of Sheffield established that the total number of, rather than the type of, organ was the best way of grouping patients to produce HRGs that reflect relative resource use.

284. The CCMDS (ISB 0153/Amd 81/2010[47] refers) collects a wider range of organ support information. Reference costs uses these organ support categories to classify cost and activity data. The costs and activity for stays in critical care should therefore be excluded from the composite cost and length of stay for the admitted patient care. A separate cost per bed day should then be produced.

285. The Grouper will only output one HRG per critical care period. This HRG signifies the total number of organs supported, from zero to six, in that critical care period. Only if there is more than one critical care period will there be more than one critical care HRG in the episode (eg if a patient transfers from an intensive care unit to a high dependency unit).

286. The following adult critical care service types should be reported:

    (a) critical care units as defined by critical care unit function type in the CCMDS, excluding the two types below
    (b) burns critical care units
    (c) spinal injuries critical care units.

287. For each of these service types, the unit cost per bed day, total number of critical care bed days, and number of critical care periods should be reported.

288. Data for children treated in adult critical care units should be reported as part of its

[47] http://www.isb.nhs.uk/library/standard/112

costs. It is not necessary to identify separately activity relating to children undertaken in an adult unit.

Critical care periods

289. Record the number of critical care periods[48] that have occurred within each hospital spell. A critical care period is a continuous period of care or assessment (ie a period of time) within a hospital provider spell during which a patient receives critical care in any one single unit function type of the critical care unit. A new critical care period commences with each new CCMDS record.

290. Discrepancies can arise when counting critical care bed days for all types of critical care services activity. For reference costs, counting of critical care should follow the example in Table 26.

Table 26: Critical care bed day count

	Critical care admission date and time	Critical care discharge date and time	Count
Adult with different dates of critical care admission and discharge	5 November 13:00	7 November 10.30	3 critical care bed days
Adult with same date of critical care admission and discharge	5 November 13:00	5 November 22:00	1 critical care bed day

291. Given this counting convention, a critical care bed vacated and subsequently occupied by a second patient over the course of 24 hours should be counted as two critical care bed days.

Costing critical care

292. The reported cost per critical care bed day must fully reflect the costs incurred on average for a bed occupied by a patient on any given day. The following cost pools would be expected to be included in arriving at the cost per critical care HRG:

    (a) hotel services
    (b) nursing and other clinical staff
    (c) therapy services and staff
    (d) medical staff
    (e) ward consumables
    (f) blood and blood products
    (g) drugs
    (h) diagnostics undertaken whilst the patient is in critical care, eg pathology, plain film x-rays, MRIs
    (i) medical and surgical equipment (include the costs of specialist equipment, eg CPAP and NIPPY machines, and ensure that the costs of devices excluded from the national tariff are also reported in the reconciliation statement workbook).

293. The costs of any theatre time must be reported against the core HRG and not the unbundled critical care HRG. If a patient's TFC changes on admission to a critical care unit, a new FCE will begin, and theatre costs will not form part of the total cost for the critical care service. But even if a new FCE does not start on admission to

[48] http://www.datadictionary.nhs.uk/data_dictionary/classes/c/critical_care_period_de.asp?shownav=1

critical care, or an FCE is wholly within critical care under a critical care consultant from admission to discharge, theatre costs should still be excluded from critical care, and reported against the core HRG.

294. Where there is no theatre time, this may result in a relatively small or even zero cost against the core HRG. In these circumstances, organisations have the discretion to exclude these zero cost HRGs on the same principle that other zero cost HRG are excluded (paragraph 114). The key principle here is that critical care represents the highest level of complexity and only the daily costs of providing critical care should be recorded against the unbundled critical care HRG. Meanwhile, costs relating to treating the patient's condition, including any surgery or theatre irrespective of setting, should be reported against the core HRG.

295. High cost drug or blood products which would be included in the high cost drugs HRGs should be reported separately as an unbundled HRG.

Adult critical care outreach services

296. Many organisations have critical care outreach teams that operate outside the parameters of the discrete adult critical care unit. Outreach services support general ward staff in caring for higher acuity patients, facilitate admission to and discharge from critical care, help avoid unnecessary critical care admissions, share clinical skills, and follow up patients to monitor outcomes and services.

297. The full costs of such teams should not be included as an oncost on the appropriate critical care unit, but should be reported separately. As there is no data set for collecting activity for outreach services, no activity information is required. Organisations should therefore enter a total cost and an activity count of 1 for this reporting line. We are considering whether we might change our methodology for incorporating these costs in the RCI calculation.

Paediatric critical care

298. Clinicians have expressed concerns about the quality and credibility of reference costs submitted for paediatric critical care for previous years, which this guidance seeks to address.

299. Costs should be reported against the unbundled HRGs defined in Table 27, which are supported by the paediatric critical care minimum dataset (PCCMDS)[49] and further qualified in terms of scope on page 2 of DSCN 01/2007 version 3[50]. These HRGs can be derived in a variety of settings. Therefore costs for delivery of critical care on children's wards, also known as non-discrete high dependency care, should be included and underpinned by the completion of a PCCMDS record. Care should be taken to ensure these costs are not double counted against the admitted patient care core HRG. Cost and activity for XB01Z to XB07Z should be reported on an occupied bed day basis, with each occupied bed day producing an HRG (ie one HRG per day). XB08Z should be reported using unit cost per journey, with number of

49 http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_sets/paediatric_critical_care_minimum_data_set_fr.asp?shownav=1

50 http://www.isb.nhs.uk/documents/dscn/dscn2007

patient journeys as the activity measure.

Table 27: Paediatric critical care HRGs

HRGs	Comments
XB01Z	Solely for use for extra corporeal membrane oxygenation (ECMO) or extra corporeal life support (ECLS) within a designated provider and commissioned by the National Commissioning Group (NCG) or Specialist Commissioning Groups (SCGs). The providers in Table 28 are expected to report the majority of costs.
XB02Z to XB05Z	Relate to intensive care. Only the providers in Table 29 with paediatric intensive care units are expected to report costs.
XB06Z to XB07Z	Relate to high dependency care. This care can be delivered on children's wards in many hospitals, as well as in designated high dependency and intensive care units. Any provider may submit these costs.
XB08Z	Relates to paediatric critical care transport.

Table 28: Providers of ECMO, ECLS or aortic balloon pump

Code	Name
RBS	Alder Hey Children's NHS Foundation Trust
RQ3	Birmingham Children's Hospital NHS Foundation Trust
RP4	Great Ormond Street Hospital For Children NHS Trust
RJ1	Guy's and St Thomas' NHS Foundation Trust
RR8	Leeds Teaching Hospitals NHS Trust
RT3	Royal Brompton and Harefield NHS Foundation Trust
RHM	Southampton University Hospitals NHS Trust
RTD	The Newcastle Upon Tyne Hospitals NHS Foundation Trust
RA7	University Hospitals Bristol NHS Foundation Trust
RWE	University Hospitals of Leicester NHS Trust

Table 29: Providers with paediatric intensive care units

Code	Name
RBS	Alder Hey Children's NHS Foundation Trust
RNJ	Barts and the London NHS Trust
RQ3	Birmingham Children's Hospital NHS Foundation Trust
RGT	Cambridge University Hospitals NHS Foundation Trust
RW3	Central Manchester University Hospitals NHS Foundation Trust
RP4	Great Ormond Street Hospital for Children NHS Trust
RJ1	Guy's and St Thomas' NHS Foundation Trust
RWA	Hull and East Yorkshire Hospitals NHS Trust
RYJ	Imperial College Healthcare NHS Trust
RJZ	King's College Hospital NHS Foundation Trust
RR8	Leeds Teaching Hospitals NHS Trust
RVJ	North Bristol NHS Trust
RX1	Nottingham University Hospitals NHS Trust
RTH	Oxford Radcliffe Hospitals NHS Trust
RT3	Royal Brompton and Harefield NHS Foundation Trust
RCU	Sheffield Children's NHS Foundation Trust
RTR	South Tees Hospitals NHS Foundation Trust
RHM	Southampton University Hospitals NHS Trust
RJ7	St George's Healthcare NHS Trust
RTD	The Newcastle Upon Tyne Hospitals NHS Foundation Trust
RJE	University Hospital of North Staffordshire NHS Trust
RA7	University Hospitals Bristol NHS Foundation Trust
RWE	University Hospitals of Leicester NHS Trust

300. In 2006, the Casemix Service analysed the results of an observational costing study of staff resource costs in 10 paediatric intensive care units (PICU). The work is discussed in the *National report of the Paediatric Intensive Care Audit Network*

(PICANET), January 2004 – December 2006[51]. The relative staff resource costs across HRGs arising from this work, and a worked example of how organisations might use these to benchmark their own reference costs returns before submission, are shown in Table 30, where we assume a hypothetical paediatric intensive care unit is delivering 5,000 bed days of activity a year at a cost of £10 million. The staff resource costs are expressed as a cost ratio with XB05Z as the reference HRG with a value of 1.00.

Table 30: Using benchmark cost ratios to inform paediatric critical care reference costs

		A	B	C = A * B	D = C / Sum C * £10 million	E = D/B
HRG	Description	**Cost ratio**	Bed days	Weighted bed days	Total cost of weighted bed days £	Average unit cost per bed day £
XB01Z	Paediatric critical care intensive care – ECMO/ECLS	**3.06**	100	306	546,233	5,462
XB02Z	Paediatric critical care intensive care advanced enhanced	**2.12**	150	318	567,654	3,784
XB03Z	Paediatric critical care intensive care advanced	**1.40**	500	700	1,249,554	2,499
XB04Z	Paediatric critical care intensive care basic enhanced	**1.22**	1,000	1,220	2,177,794	2,178
XB05Z	Paediatric critical care intensive care basic	**1.00**	2,000	2,000	3,570,154	1,785
XB06Z	Paediatric critical care high dependency advanced	**0.91**	750	683	1,219,207	1,626
XB07Z	Paediatric critical care high dependency	**0.75**	500	375	669,404	1,339
			5,000	5,602	10,000,000	

301. Organisations may wish to use the cost ratios to assist with the compilation of their reference costs. However, they are indicative only and if organisations can provide robust cost apportionments of their own, they should use these instead. They were obtained from a study undertaken within PICUs, with a higher nursing input to a patient requiring a high dependency level of care than might be delivered to the same patient in a high dependency unit or ward setting. As a consequence, reference costs for delivering high dependency levels of care outside of PICUs would be expected to be lower.

Neonatal intensive care

302. Cost and activity for XA01Z to XA05Z should be reported on an occupied bed day basis, with each occupied bed day producing an HRG (ie one HRG per day). XA06Z relates to neonatal critical care transport and should be reported using unit cost per journey, with number of patient journeys as the activity measure.

Diagnostic imaging

303. The unit of activity for unbundled diagnostic imaging (radiology) HRGs in sub-chapter RA is examinations. For example, a patient who attends an orthopaedic clinic and

51 http://www.picanet.org.uk/Documents/General/Annual_Report_2007/PICANet%20National%20Report%202004%20-%202006.htm

has three MRI scans should be recorded and costed as three MRIs plus the core orthopaedic attendance HRG. But individual HRGs may account for scans of multiple body areas within the same visit to a scanner (eg RA05Z – Computerised tomography scan, three areas without contrast). Therefore, one scan should equal one HRG, but the scan may be of multiple body parts.

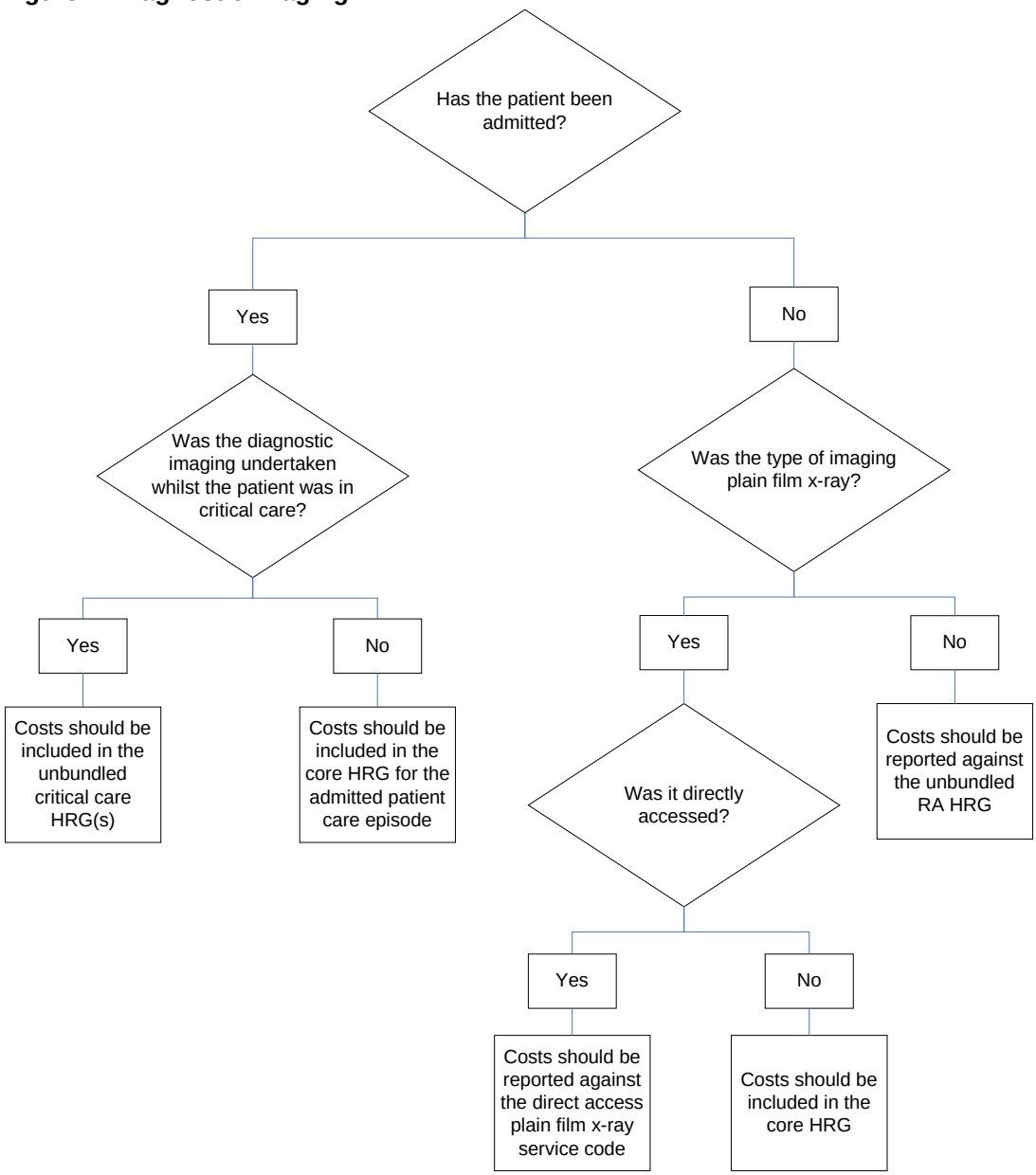
304. In a change for 2011-12, diagnostic imaging should also be reported by the TFC of the outpatient clinic in which the imaging was requested. This will simplify the tariff calculation, by allowing the costs of diagnostic imaging in outpatients to be bundled into the outpatient attendance tariff. Organisations should use pseudo code 999 if they are unable to assign a TFC accurately.

305. Plain film x-rays are not unbundled. The reporting arrangements for these, when directly accessed is covered in paragraph 382. HRGs in sub-chapter RC for interventional radiology, created to support best practice tariff policy, are also not unbundled.

306. Diagnostic imaging should be separately reported under the following settings (Figure 1):

    (a) outpatient
    (b) direct access
    (c) other.

Figure 1: Diagnostic imaging



307. Some diagnostic imaging is not coded in a way that generates an unbundled diagnostic imaging HRG. For example, a correctly coded obstetric ultrasound in outpatients is likely to group to one of the obstetric medicine core HRGs (paragraph 513). Costs and activity for these scans should not be unbundled, but reported within the generated core HRG.

Admitted patient care

308. The costs of diagnostic imaging in admitted patient care should be included within the core HRG. The costs of diagnostic imaging in critical care, rehabilitation or specialist palliative care should be included in the unbundled critical care, rehabilitation or specialist palliative care HRG. Any unbundled diagnostic imaging HRGs produced by the Grouper should be ignored.

Outpatients

309. Diagnostic imaging previously reported under outpatients is now split between

services accessed directly, and those accessed as a part of an outpatient attendance. Where no other procedures are recorded in outpatients, the Grouper will output a core outpatient attendance HRG as well as an unbundled diagnostic imaging HRG. The outpatient attendance should be reported and costed separately. However, where a patient attends for diagnostic imaging only, a core outpatient attendance HRG should not be reported.

Direct access

310. Direct access (defined in paragraph 381) diagnostic imaging should be reported here and should not have a separate core outpatient attendance HRG reported.

Other settings

311. Diagnostic imaging in settings other than admitted patient care (including critical care), outpatient and direct access settings should be reported under other.

High cost drugs

312. Not all drugs that are high cost have an OPCS code, and therefore an unbundled high cost drug HRG. We discuss these in paragraph 168.

313. Drugs that do have an OPCS code will generate a separate unbundled high cost drug HRG in addition to the core HRG for the care episode. For reference costs, high cost drugs should be separately identified for:

    (a) admitted patient care
    (b) outpatients
    (c) other settings.

314. The OPCS-4 clinical coding instruction manual[52] states that high cost drugs are coded per hospital provider spell and not FCE, and usually assigned in the first episode where the drug is administered, eg a patient receiving a particular high cost drug 10 times in a spell would be coded once. This should result in one unbundled high cost drug HRG from the Grouper per drug, per spell.

315. Should a patient receive two different high cost drugs within a single spell, then these would be coded separately and outputted by the Grouper separately, once for the first drug and once for the second drug.

316. It is also possible for the Grouper to output more than one of the same high cost drug HRG in a single spell when different drugs assigned to the same OPCS-4 code are delivered. For example, a patient may receive two drugs in a single spell, both of which belong to the same type of high cost drug. Coding guidance states it would be legitimate to record both drugs even though the same OPCS-4 code is used twice, because these are different drugs. The Grouper would output this as two HRGs.

317. The current HRG4 design does not consider dosage. Taking this, and the coding

52 http://www.connectingforhealth.nhs.uk/systemsandservices/data/clinicalcoding/codingstandards/publications/ccim

guidance above into consideration, and to ensure that costs and activity are recorded consistently, the average cost of a high cost drug should be identified across the admitted patient spell or outpatient attendance.

318. The costs of each unbundled HRG should include only the actual costs of the drug. All other pharmacy oncosts, and the costs of drugs administered with high cost drugs, should remain in the core HRG.

Admitted patient care

319. For admitted patient care, report the unit costs per spell of high cost drug HRGs produced by the Grouper. From Table 31:

(a) the first spell derives a core HRG of EB01Z reported as elective activity
(b) this spell generates an additional unbundled HRG XD38Z for the high cost drug recorded in the episode, which is included in a calculation to work out the unit cost of a high cost drug per average spell for reference cost
(c) the same procedure and high cost drug occurs in a second and third spell
(d) in a fourth spell, both abacavir and amprenavir are administered to the patient, ie two high cost drug HRGs are coded.

Table 31: High cost drugs in admitted patient care

Primary diagnosis	Procedure	HRGs
I27.0 Pulmonary hypertension	X86.6 Antiretroviral drugs band 1 (abacavir administered)	Core HRG EB01Z Non interventional acquired cardiac conditions High cost drug HRG XD38Z Antiviral drugs band 1

320. Table 32 illustrates the calculation of reference costs from this information.

Table 32: Calculation of high cost drugs unit cost

	Instances of X86.6	Cost £
Spell 1	1	400
Spell 2	1	390
Spell 3	1	395
Spell 4	2	765
Total	5	1,950
Average unit cost [£1,950/5] = £390		

Outpatients

321. For outpatients, report the unit cost per attendance of high cost HRGs produced by the Grouper.

Other settings

322. For other activity outside admitted, outpatient or direct access settings, the stand alone pharmacy data system should be used in the absence of clinical coding to derive the appropriate OPCS-4 code and thus generate the HRG, which should be reported on a per average attendance basis.

Radiotherapy

323. The unbundled radiotherapy HRGs are similar to the design of the unbundled chemotherapy HRGs, in that an attendance may result in an additional two HRGs: one HRG for pre-treatment planning and one HRG for radiotherapy treatment. The radiotherapy dataset, introduced in 2009, should be used as a source of data for submitting reference costs. This will result in the vast majority, if not all activity reported as outpatient attendances although the collection offers the following settings for consistency:

    (a) ordinary elective or non-elective admissions
    (b) day case and regular day or night attendances
    (c) outpatients
    (d) other.

324. In addition to these unbundled chemotherapy HRGs, for 2011-12 reference costs the Casemix Service are introducing a core HRG (SC97Z) for a same day external beam radiotherapy admission or attendance that is generated by the Grouper if:

    (a) external beam radiotherapy has taken place
    (b) the activity has length of stay less than one
    (c) no major procedures have taken place and the core HRG which would otherwise be generated is diagnosis driven.

325. This core HRG will attract a zero tariff to ensure appropriate overall reimbursement where a patient attends solely for delivery of radiotherapy and no additional admission or attendance has taken place. We still require activity to be reported against SC97Z in the reference costs workbook but its costs should be allocated against the unbundled radiotherapy HRGs.

326. Activity should be allocated for each fraction of radiotherapy delivered and only one fraction per attendance should be coded. The intention in HRG4 is that each fraction would be separately counted, rather than the number of courses of treatments. However, clinical coding guidance states that only one delivery fraction should be recorded per stay. Therefore, the unit of activity for ordinary admissions is per admission, unless the patient has treatment to more than one body site when it would be permissible to record a delivery fraction for each area treated if a change in resources was identified from delivery on a single site. Table 33 clarifies the Grouper output for different patient settings (providing organisations have followed coding guidance) and the treatment of the data for reference costs.

Table 33: Radiotherapy outputs

Setting	HRG output from the Grouper	Treatment of HRG in reference costs
Ordinary elective or non-elective admission	Core HRG +	Report core HRG costs separately from radiotherapy costs
	Planning HRG (one coded per admission) +	Report planning costs using planning HRGs
	Delivery HRG (one coded per admission)	Report all delivery costs for the admission using delivery HRG
Day case, regular day or night	SC97Z sameday external beam radiotherapy +	Report SC97Z at zero cost (all radiotherapy costs are reported in

Setting	HRG output from the Grouper	Treatment of HRG in reference costs
attendance, and outpatients	Planning HRG (one coded per course of treatment) + Delivery HRG (one coded per fraction delivered every appointment)	planning or delivery activity) Report unit cost of planning HRG per course of treatment Report average cost per fraction and number of attendances
Other (for any activity not included above)		Report planning per course and delivery per fraction

327. A first outpatient attendance may result in the two HRGs described, (one planning HRG and one delivery HRG), with the follow up attendances only resulting in the delivery HRGs and SC97Z being assigned. Consider the example in Table 34. A patient is diagnosed as having Hodgkin's lymphoma. Prior to bone marrow transplant, the patient receives a three fraction course of total body irradiation in outpatients. The total body irradiation is planned and the first treatment is given immediately afterwards (same attendance).

Table 34: Coding radiotherapy in outpatients

	1st attendance	2nd attendance	3rd attendance
OPCS-4 input	X67.2 Preparation for total body irradiation X65.1 Delivery of a fraction of total body irradiation	X65.1 Delivery of a fraction of total body irradiation	X65.1 Delivery of a fraction of total body irradiation
HRG output	Core HRG based on any other significant procedure or SC97Z + SC42Z Preparation for total body irradiation + SC25Z Deliver a fraction of total body irradiation	Core HRG based on any other significant procedure or SC97Z + SC25Z Deliver a fraction of total body irradiation	Core HRG based on any other significant procedure or SC97Z + SC25Z Deliver a fraction of total body irradiation

328. From this table:

(a) the attendance derives a core HRG based on procedures or, where no other procedure has taken place, SC97Z is allocated as the core HRG. The cost of this should be included as an overhead within the fraction cost and the activity ignored

(b) the first attendance generates additional unbundled HRGs for the radiotherapy preparation SC42Z and radiotherapy delivery SC25Z. The planning HRG is intended to cover all attendances required for completion of the planning process. It is not intended that individual attendances for parts of this process will be recorded separately

(c) the planning HRG does not include the consultation at which the patient consents to radiotherapy, nor would it cover any outpatient attendance for medical review required by any change in status of the patient. This should be reported separately as appropriate outpatient activity

(d) the subsequent attendances generate an unbundled radiotherapy delivery HRG SC25Z and core HRGs based on procedures or SC97Z (which should be included as an overhead within the fraction cost and the activity ignored).

329. Consider also the example in Table 35. A patient is diagnosed with breast cancer, which is typically treated by 25 fractions and one planning course. Only one instance of treatment is shown in the example.

Table 35: Coding radiotherapy in ordinary admissions

	Diagnosis	Planning	Treatment (Radiotherapy delivery)
ICD-10 OPCS-4 (input)	C50.9 Malignant neoplasm of breast, unspecified	X67.5 Preparation for simple radiotherapy with imaging and dosimetry	X65.4 Delivery of a fraction of external beam radiotherapy NEC
HRG (output)	SC97Z Same day external beam radiotherapy admission/attendance	SC47Z Preparation for simple radiotherapy with imaging and simple calculation	SC29Z Other radiotherapy treatment

330. An average unit cost per treatment course should not be reported for delivery costs in day case, regular day or night attendance, or outpatient settings. Instead, cost per fraction should be reported by HRG. In addition, the number of relevant attendances or admissions that relate to the number of fractions should be reported. This additional activity data will be used for the development of tariff. Organisations should take care not to double count the activity data within the outpatient section of the return.

331. Supportive care costs for cancer patients receiving radiotherapy in an ordinary elective or non-elective setting should be allocated as set out in paragraph 265.

332. Advice from the National Cancer Action Team (NCAT)[53] highlights the need to allocate costs according to the type of radiotherapy being delivered. There are predominantly two types of radiotherapy:

    (a) external beam radiotherapy and
    (b) brachytherapy and liquid radionuclide administration.

333. Work to develop the brachytherapy classification is ongoing. Until this work is complete, it is important that brachytherapy costs are only reported within the current set of brachytherapy HRGs.

Rehabilitation

334. For the purposes of reference costs, rehabilitation services are those provided to enable a patient to improve their health status, and involve the patient actively receiving medical attention. Rehabilitation for patients with mental health problems should be costed and reported as part of the mental health service section and not under rehabilitation as defined here. Intermediate or continuing care, which is effectively long term care with little or no medical treatment, is excluded from reference costs.

335. The unbundled rehabilitation HRGs in this collection are used to describe patients:

    (a) admitted for discrete rehabilitation or

[53] http://www.cancer.nhs.uk/radiotherapy/

(b) treated on a discrete rehabilitation ward or unit.

336. Costs and activity should be split by the following settings:

(a) admitted patient care
(b) outpatient
(c) other.

337. Each setting is further divided as follows:

(a) complex specialised rehabilitation services level 1
(b) specialist rehabilitation services level 2
(c) non-specialist rehabilitation services.

338. The Grouper will output an unbundled rehabilitation HRG for discrete rehabilitation accompanied by a multiplier showing the days of rehabilitation within the FCE, and adjust the core length of stay for this activity. Table 36 illustrates the Grouper output and the reporting requirements for reference costs.

Table 36: Reporting rehabilitation services

What happens to the patient?

Patient has hip replacement (10 days)	Patent then has discrete rehabilitation as part of admission (20 days)
Total length of stay for spell = 30 days	

What does the grouper output?

One core HRG (reported in ordinary admission worksheet)	20 unbundled HRGs (reported in rehabilitation worksheet)

What costs should be reported and where?

Length of stay = 10 days for core HRG (and excess bed day costs if applicable)	Activity = 20 days for unbundled HRG (reported in rehabilitation worksheet)

Admitted patient care

339. The activity measure for the rehabilitation delivery HRGs is occupied bed day. These HRGs are generated by the recording of OPCS U50 to U54 codes. Where a patient is not admitted specifically to a rehabilitation ward or unit, or where rehabilitation treatment is undertaken without transfer to a specialist consultant, or without transfer to a rehabilitation unit, this should not have been reported under OPCS U50 to U54 codes and thus should not be reported as discrete rehabilitation. Organisations should refer to the OPCS-4 clinical coding instruction manual for further advice.

340. If there are multiple types of rehabilitation delivery coded within a single episode, the Grouper will output an unbundled rehabilitation delivery HRG per day per rehabilitation delivery type (as identified by the appropriate rehabilitation delivery OPCS code).

341. Organisations should therefore take care when reporting the number of rehabilitation delivery days in reference costs, to ensure that these days are not double counted,

and that the number of total rehabilitation delivery days reported across all rehabilitation types for a patient does not exceed the episode duration that contains those rehabilitation delivery OPCS codes.

Outpatients

342. The activity measure for the rehabilitation assessment HRGs is attendance. These HRGs are generated by the recording of OPCS X60.1 to X60.3 codes. Coding guidance also allows these to be used for admitted patient care. Where a rehabilitation assessment procedure is not recorded in outpatients, then the Grouper will output a normal outpatient attendance HRG. Where OPCS codes have not been coded, outpatient attendances for rehabilitation should be reported under the relevant TFC in the outpatient attendance worksheet.

343. OPCS X60.1 to X60.3 codes are assessment only not delivery and coding guidance states that where a patient receives assessment and delivery during the same admission, only one code is required for the delivery from OPCS U50 to U54 as it is assumed that that assessment has already been carried out.

344. We would not expect rehabilitation delivery HRGs VC04* to VC42* to be generated in an outpatient setting because they are not generally coded. These HRGs, when generated in outpatients, should be ignored and the costs and activity reported under the outpatient attendance.

345. When an unbundled rehabilitation HRG is reported in outpatients, an outpatient procedure or attendance HRG must not be reported.

Complex specialised rehabilitation services

346. Certain aspects of rehabilitative care are delivered by specialist NHS providers. Associated with the delivery of complex specialised and specialist rehabilitation are an expectation of increased resource usage and longer durations of admitted patient care. To report the activity and costs of these as part of composite discrete rehabilitation would be to mask the extent of the resources used incurred. Therefore, to support the definitions of specialised services in the SSNDS[54], the collection requires that the NHS separately identify not only those complex specialised rehabilitations services, but also those that might be termed specialist.

347. The SSNDS includes 38 specialised services which are subject to different commissioning arrangements from other NHS services. Complex specialised rehabilitation services (CSRS) level 1 are high cost and low volume services, already commissioned on a wide geographical basis (eg regional or supra-regional) to provide highly specialised services for people with complex needs.

348. CSRS that fall within this definition set and contain components relating to admitted patient rehabilitation are:

    (a) specialised spinal services (all ages)
    (b) specialised rehabilitation services for brain injury and complex disability (adult)

[54] http://www.specialisedservices.nhs.uk/info/specialised-services-national-definitions

(c) specialised burn care services (all ages)
(d) specialised pain management services (adult).

Specialist rehabilitation services

349. A specialist rehabilitation service (SRS) level 2 is one that is not designated a CSRS level 1 service but has the following characteristics:

(a) a co-ordinated multi-disciplinary team of staff with specialist training and experience, including a consultant with specialist accreditation in the specific area of rehabilitation
(b) carries a more complex caseload, as defined by agreed criteria
(c) meets the national standards for specialist rehabilitation laid by the appropriate royal college and specialist societies, eg the British Society of Rehabilitation Medicine (BSRM) for amputee musculoskeletal and neurological rehabilitation (including stroke and brain injury rehabilitation)
(d) serves a recognised role in education, training and published research for development of specialist rehabilitation in the field.

350. The BSRM have developed criteria and checklists for the identification of these level 2 services that conform to the standards required of a specialist rehabilitation service, which may be applied through a scheme of peer review and benchmarking of reported data to confirm service quality.

Non-specialist rehabilitation services

351. Non-specialist rehabilitation services (NSRS) are any not specialist or complex specialised and are therefore identified by exception rather than by definition. Where organisations cannot recognise themselves as either providers of CSRS or SRS, they should report as non-specialist.

Costing rehabilitation services

352. Rehabilitation should only be separately identified where discrete rehabilitation has been carried out. No attempt should be made to separately identify non-discrete rehabilitation costs during an admitted patient care stay.

353. Increasingly, rehabilitation services are provided by community hospitals following transfer from an acute provider. Community hospitals should note the following:

(a) community hospitals providing a rehabilitation service should report this on an occupied bed day basis by HRG
(b) when patients are admitted to a community hospital after discharge from an acute provider (ie a different organisation), the patient may be admitted under the previous acute HRG
(c) community hospitals that provide rehabilitation services should submit this data as rehabilitation (ie because that is the service being provided), rather than using the acute HRG that relates to the condition for which the patient has undergone treatment in the acute provider
(d) where patients are transferred from acute to community hospitals whilst in an acute stage of treatment to facilitate early discharge and still require acute care and stabilisation before rehabilitation treatment, organisations should report the

acute phase of care using an appropriate specialty and HRG, and report the rehabilitation using the appropriate rehabilitation services category

(e) it is inappropriate to report the post-acute element of care as rehabilitation, and it may be similarly inappropriate to report it as the discharge HRG from the acute provider.

354. Unbundled rehabilitation HRGs should not be used to describe the cost of activity beyond an HRG trim point for any acute or non-specified HRG. This should still be reported as excess bed days.

Specialist palliative care

355. The unbundled specialist palliative care HRGs should be reported under the following settings:

(a) ordinary elective or non-elective admissions, including support hospital teams
(b) day cases and regular day or night admissions
(c) outpatients
(d) other.

356. The unbundled HRGs include care that is provided under the principal clinical management of a specialist palliative care medicine consultant, either in a palliative care unit or in a designated palliative care programme. This care should usually be reported using main specialty codes for palliative medicine (315), nursing episode (950) or allied health professional episode (960).

Ordinary admissions

357. Specialist palliative care for ordinary elective or non-elective admissions should be reported using HRG SD01* reported on a bed day basis. The Grouper will output an unbundled specialist palliative care HRG accompanied by a multiplier showing the days of specialist palliative care within the FCE, and adjust the core length of stay for this activity.

358. If a patient is not admitted under the care of a specialist palliative medicine consultant but is receiving support from a member of a specialist palliative care team, this is classed as specialist palliative care support and should be reported using HRG SD03*.

Day case and regular day or night attenders

359. Same day specialist palliative care should be reported under HRG SD02*. The Grouper will automatically add one bed day.

Outpatients

360. For non-admitted care, HRG SD04* should be reported for medical and HRG SD05* for non-medical specialist palliative care attendances. A core outpatient attendance HRG should not also be reported when a patient attends for specialist palliative care only.

Section 6: Renal dialysis

Introduction

361. Renal dialysis services should be separately identified from other services and reported using HRG4 against a single setting (rather than the separate categories of ordinary admission etc).

362. The sub-chapter LD dialysis HRGs are generated from data items contained in the NRD[55], which is only for chronic kidney disease (also known as chronic renal failure) and not acute kidney injury (previously called acute renal failure).

363. When a patient has dialysis for chronic kidney disease, some organisations record a dialysis session (patient solely admitted for dialysis) as an outpatient or regular day admission within the CDS. This should generate both the LD HRG for the dialysis and LA08E for the CDS activity. As all the costs relate to dialysis, and are reported under the LD HRG, there should be zero costs allocated to LA08E which we have removed from the reference costs workbook.

364. When a patient has dialysis for acute kidney injury, this does not generate an LD HRG, and the costs should be reported against the appropriate HRG for the CDS activity (likely to be LA07*). All other LA08* HRGs should have costs assigned, because these will be for patients with chronic kidney disease who are receiving care over and above dialysis.

Haemodialysis

365. The following HRGs are to be used for reporting reference costs for haemodialysis

    (a) LD01* to LD04* (hospital haemodialysis)
    (b) LD05* to LD08* (satellite haemodialysis)
    (c) LD09* and LD10* (home haemodialysis).

366. Activity should be reported by individual session, ie each session of haemodialysis treatment received on a given day for each patient.

367. Because the HRGs are automatically generated from the NRD it should be easier than in previous years for providers to identify all activity, which may not previously have been recorded on the hospital PAS system, admitted patient care CDS or outpatient CDS, but held locally.

368. Where separate costs for patients with blood borne viruses receiving haemodialysis are identified these should include the cost differential arising from the need to provide isolation dialysis if its delivery reduces staffing flexibility and increases the capital costs through patient specific dialysis machine usage.

369. There is an additional requirement for 2011-12 to report the average number of sessions per week per patient of home haemodialysis for patients aged 19 years and over. Organisations will need to liaise with their renal unit to obtain this information.

[55] http://www.ic.nhs.uk/services/datasets/dataset-list/renal

Dialysis away from base

370. There is also an additional requirement for 2011-12 to identify separately the costs and activity associated with providing dialysis to patients aged 19 years and over whilst they are away from their normal base. Organisations will need to liaise with their renal unit to obtain this information. Costs should be provided on exactly the same basis as for regular dialysis at the base unit.

Peritoneal dialysis

371. Activity and costs for peritoneal dialysis HRGs should be reported on a per day basis as described in the NRD and not based on the number of bags or exchanges. New HRGs will be introduced in the Grouper specific to assisted automated peritoneal dialysis (APD) (LD13*). These are designed to capture patients receiving APD at home with the assistance of a healthcare professional.

372. In costing continuous ambulatory peritoneal dialysis (CAPD) and APD, the cost of the bags used for each session is a major cost driver. These bags can differ in size, so using number of bags is not a good proxy for number of sessions. Instead, patient days should be used as a proxy for sessions. The cost of the fluids for exchange, plus the operating costs of the machine facilitating the exchange in APD should be included.

Costing renal dialysis

373. Renal medicine admitted patient care costs should be mapped accordingly to admitted patient care cost pools and not to renal dialysis except where these costs are directly related to dialysis in admitted patient care. The full range of staffing inputs should be allocated to all dialysis modalities including, but not limited to, medical and nursing staff (including erythropoiesis stimulating agents (ESA) management), nutrition and dietetic staff, social work, pharmacy and medical engineering or technical staff. Costing models must allocate these appropriately to peritoneal dialysis therapies. Costs should also include the revenue costs of buying and maintaining buildings and equipment, allocated appropriately between the different types of dialysis.

374. Outpatient activities associated with each dialysis modality should be separately recorded and linked to the outpatient point of delivery e.g. pathology testing or drug prescriptions issued in clinics. The outpatient attendance HRGs should not be reported for patients attending for renal dialysis only

375. For dialysis undertaken using the hub and spoke configuration, the activity and costs should be recorded within the submission of the NHS provider with contractual responsibility for the delivery of the care.

376. The costs of all ESAs and drugs for bone mineral disorders should be included in the LD HRG costs. Some of these drugs should also be reported separately in the reconciliation statement workbook:

    (a) the ESAs Epoetin alpha, beta and zeta, and Darbetin alpha
    (b) the drugs for bone mineral disorders Cincalcet, Sevelamer and Lanthanum.

377. In a number of cases, drugs related to associated conditions are required. All of these drug costs should be treated as any other cost of treatment and attributed at the point of delivery or as in outpatients, the point of commitment, unless separately identified.

378. PTS, which are a significant cost component of haemodialysis services, are excluded from reference costs and therefore must be excluded from costs reported for renal dialysis services.

Section 7: Services accessed directly

Introduction

379. This section covers diagnostic and pathology services.

380. Diagnostic or pathology services that are undertaken in admitted patient care, critical care, outpatients or emergency medicine are included as part of the composite costs of these types of care. However, instead of occurring during the course of an admission or outpatient attendance, these services are also often carried out independently from an admission or attendance. This activity is classified as services accessed directly, and relates to all sources of referral for diagnostic tests and services outside these settings, eg when a patient is referred by a GP for a test or self-refers. NHS organisations should be careful to avoid double counting such activity.

Diagnostic services

381. Patients can directly access a range of diagnostic services, including physiological and clinical measurement tests. In previous years, these have been reported using separate currencies (DA01 to DA18). From 2011-12, they should be reported separately using the relevant HRGs, which include but are not limited to, the HRGs in Table 37. We are working with the NHS Information Centre to enable diagnostic services accessed directly to be identifiable in the next CDS release.

Table 37: Diagnostic services and examples of relevant HRGs

AA33C	Conventional EEG/EMG/Nerve conduction studies with length of stay 2 days or less 19 years and over
AA33D	Conventional EEG/EMG/Nerve conduction studies with length of stay 2 days or less 18 years and under
DZ31Z	Complex Lung Function Exercise Testing
DZ32Z	Simple Lung Function Exercise Testing
DZ33Z	Hyperbaric Oxygen Treatment
DZ34Z	Complex Bronchodilator Studies
DZ35Z	Simple Bronchodilator Studies
DZ36Z	Bronchial Reactivity Studies
DZ39Z	Complex Gas Exchange Studies
DZ40Z	Simple Gas Exchange Studies
DZ43Z	Complex Airflow Studies
DZ44Z	Simple Airflow Studies
DZ45Z	Lung Volume Studies
DZ46Z	Respiratory Muscle Strength Studies
DZ48Z	Respiratory Drive Studies
DZ50Z	Respiratory Sleep Study
EA47Z	Electrocardiogram Monitoring and stress testing
FZ54Z	Diagnostic Flexible Sigmoidoscopy 19 years and over
FZ55Z	Diagnostic Flexible Sigmoidoscopy with biopsy 19 years and over
LB42Z	Dynamic Studies of Urinary Tract
WA20W	Examination, Follow-up or Special Screening, with CC
WA20Y	Examination, Follow up or Special Screening, without CC

382. Plain film x-rays are not unbundled in any setting and the composite costs should be included within the core HRG or unbundled critical care HRG irrespective of patient setting. However, direct access plain film x-ray should be reported separately alongside other direct access diagnostic services under pseudo code DAPF.

Pathology services

383. Costs and activity for the following pathology services should be submitted on a test basis, with the number of requests required as a memorandum activity item:

(a) biochemistry
(b) cytology (excluding cervical screening programmes)
(c) haematology (excluding anti-coagulant services)
(d) histology or histopathology
(e) immunology
(f) microbiology or virology
(g) neuropathology
(h) phlebotomy
(i) other.

384. A request for pathology investigation is defined in the Data Dictionary[56], but a definition of a pathology test is not provided. The definitions in Table 38, developed by the National Pathology Alliance Benchmarking Review, should be used wherever possible.

Table 38: Pathology test definitions

Clinical biochemistry	
Requests	Work received from a single patient at one time usually, but not always, on a single specimen. A GP multi-request form for three departments eg microbiology, haematology and biochemistry, with a blood sample for investigations in all three departments, would be one request in each of the three departments.
Tests	A result produced by an analytical process on a single specimen. Calculated results and comments describing a test or result should not be counted as tests.
Haematology	
Requests	A request should be patient focused and related to specimens taken from one patient at one time whether they are dispatched to the department in one or a multiplicity of containers. A GP multi-request form for three departments eg microbiology, haematology and biochemistry, with a blood sample for investigations in all three departments, would be one request in each of the three departments. Samples taken from one patient at the same time may arrive in the laboratory at different times – they are still one request.
Tests	A test is the output of either one analysis or a number of related analyses on a single analyser.
Microbiology	
Requests	A request is one sample, which would normally receive one laboratory number.
Tests	Work carried out as a single protocol of related work on one sample where reporting of only part of the work would be regarded as an incomplete result. However, to account for the additional work associated with clinically significant culture positive specimens (identification and/or antibiotic sensitivity procedures). These further procedures should score as one additional test per organism.
Cellular pathology	
Requests	A request should be patient focused and relate to specimens taken from one patient at one time whether dispatched to the department in one or a multiplicity of containers and related to a single request form.
Immunology	
Requests	Receipt of a single laboratory request form and accompanying appropriate specimens drawn from an individual patient at one time, the whole of which having been submitted at the same time by a referring clinician.
Test	A single analytical procedure.

56 http://www.datadictionary.nhs.uk/data_dictionary/nhs_business_definitions/r/request_for_pathology_investigation_de.asp?shownav=1

385. Care should be taken to include the entire costs of these services, including costs incurred in the transportation of samples.

Section 8: Mental health services

Introduction

386. This section covers:

(a) adult (working age and older peoples) mental health services
(b) children and adolescent mental health services (CAMHS)
(c) drug and alcohol services
(d) specialist mental health services
(e) secure mental health services.

387. *Equity and Excellence: Liberating the NHS (*2010)[57], committed the Department to implement a set of currencies for adult mental health services for use from 2012-13. These currencies are not HRGs, but care clusters based on need developed by the Care Pathways and Packages Project (CPPP)[58], a consortium of NHS commissioners and providers from NHS Yorkshire and the Humber and NHS North East. We first collected reference costs for care clusters from 85 mental health trusts in a pilot exercise in addition to and alongside the main reference costs collection in September 2011[59].

388. This guidance builds on the lessons learned from the pilot exercise, and should be read alongside *Payments by Results guidance for 2012-13*[60] which looks at operational issues in using the currencies. The reference costs that will be returned for 2011-12 may be used in an assessment of whether to move to a national tariff for each care cluster in 2013-14.

389. The care clusters cover working age adults and older people only, and replace previous reference cost currencies for adult and elderly mental health services. They also include some services previously reported as specialist mental health services or mental health specialist teams. Existing reference cost currencies for children and adolescent, drug and alcohol, and some specialist mental health services remain, but we have refined these in light of the introduction of the care clusters (paragraph 14). Some services previously excluded from reference costs should now be included in care clusters and existing reference cost currencies. Table 39 summarises the allocation of mental health services across the reference cost currencies.

[57] http://www.dh.gov.uk/en/Healthcare/LiberatingtheNHS/index.htm
[58] http://www.cppconsortium.nhs.uk/
[59] http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_122803
[60] http://www.dh.gov.uk/health/category/policy-areas/nhs/resources-for-managers/payment-by-results/

Table 39: Allocation of mental health services within reference costs

Service	Included in cluster reference costs	Included in non-cluster reference costs	Excluded from reference costs
Approved social worker services*	Yes		
Assertive outreach teams	Yes		
Crisis accommodation services	Yes		
Crisis resolution and home treatment teams	Yes		
Early intervention in psychosis services from age 14	Yes		
Eating disorder services (adult, excluding tertiary eating disorders)	Yes		
Emergency clinics or walk in clinics	Yes		
Emergency duty teams (which are not emergency assessments eg for sectioning under the Mental Health Act)*	Yes		
Homeless mental health services	Yes		
Local psychiatric intensive care units	Yes		
Mental health counselling and therapy	Yes	Yes	
Psychology	Yes	Yes	
Psychotherapy	Yes	Yes	
A&E mental health liaison services (psychiatric liaison)		Yes	
Autism and asperger syndrome		Yes	
CAMHS		Yes	
Drug and alcohol services		Yes	
Eating disorder services (children and adolescents)		Yes	
Forensic and secure mental health services		Yes	
Learning disability services in high dependency or high secure units		Yes	
Mental health services provided under a GP contract		Yes	
Perinatal mental health services (mother and baby units)[61]		Yes	
Primary diagnosis of drug or alcohol misuse		Yes	
Specialised addiction services		Yes	
Specialist psychological therapies (admitted patients and specialised outpatients)		Yes	
Specialised eating disorder services[62]		Yes	
Improving access to psychological therapies (IAPT)		Yes**	
Acquired brain injury			Yes
Complex or treatment resistant disorders in tertiary settings			Yes
Gender dysmorphia			Yes
Learning disability services not provided in high dependency or high secure units			Yes
Specialist mental health services for deaf people			Yes
Neuropsychiatry			Yes

* these services are only included in clusters where NHS funded, otherwise they are excluded.
** other specialist teams.

390. The collection and guidance is therefore organised from the perspective of service users and the settings in which mental health services are delivered. For non-cluster activity, the following settings apply:

(a) ordinary elective and non-elective admissions on an occupied bed day basis
(b) day care facilities on a patient day basis
(c) outpatient attendances
(d) community contacts

[61] http://www.specialisedservices.nhs.uk/doc/specialised-mental-health-services-all-ages
[62] http://www.specialisedservices.nhs.uk/doc/specialised-mental-health-services-all-ages

(e) mental health specialist teams.

391. For cluster activity, the following settings apply:

(a) admitted patient care on an occupied bed day basis
(b) non-admitted patient care on a per day basis
(c) initial assessments.

392. Mental health trusts should separately identify the costs of sub-contracting services from non-NHS providers, including the voluntary sector, in their return (paragraph 76) for non-cluster currencies. But sub-contracted costs should be included within the clusters. A memorandum column has been added to the cluster worksheet to capture the cost of sub-contracted services that are included in the cluster cost.

393. Only mental health trusts should use these currencies. Other trusts should use HRGs.

Adult mental health services

Mental health care clusters

394. The mental health care clusters[63] for working age adults and older people, focus on the characteristics and needs of a service user, rather than the individual interventions they receive or their diagnosis. By starting from the perspective of individual service users, rather than organisations, the clusters fit with and can be used to support the personalisation agenda set out in *Putting People First*[64]. The care clusters are numbered from 00-21, although 09 is not currently used and 99 is used for patients not assessed or clustered. As with HRGs, these clusters will be reviewed and refined over time.

395. Mental health PbR does not use ICD-10 or OPCS-4 codes. Instead mental health professionals will rate service users using a mental health clustering tool (MHCT) that will help them determine which cluster best describes the characteristics of a particular service user. The tool has 18 scales (eg depressed mood, problems with activities of daily living). The first 12 scales are the Health of the Nation Outcome Scales (HoNOS), which are already part of the Mental Health Minimum Data Set. Each scale is rated from 0 (no problem) to 4 (severe to very severe problem). Clinicians are then able to identify a cluster, the profile of which matches that of the service user. Work is ongoing to develop algorithm software to support the clustering decision.

396. The clusters cover extended time periods which may contain multiple different care interventions. For instance, whilst in cluster 3 (non-psychotic (moderate severity)) a service user might have several sessions of psychological therapies, contacts with a care coordinator and a prescription for exercise. Each cluster has an associated review period, which should be taken as a **maximum rather than a minimum** period

63 http://www.datadictionary.nhs.uk/data_dictionary/nhs_business_definitions/m/mental_health_care_cluster_de.asp?shownav=1

64 http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_081118

duration. Organisations must ensure that once the review has taken place service users are reallocated to a new cluster if necessary. The cluster is finished for a service user only when they have been either moved to a different cluster, to a service outside clusters, or formally discharged.

397. Table 40 shows the clusters and their maximum review period.

Table 40: Mental health care clusters

Code	Cluster label	Review interval (maximum)
00	Unable to assign mental health care cluster code	12 months
01	Common mental health problems (low severity)	12 weeks
02	Common mental health problems (low severity with greater need)	15 weeks
03	Non-psychotic (moderate severity)	6 months
04	Non-psychotic (severe)	6 months
05	Non-psychotic (very severe)	6 months
06	Non-psychotic disorders of over-valued ideas	6 months
07	Enduring non-psychotic disorders (high disability)	Annual
08	Non-psychotic chaotic and challenging disorders	Annual
09	This cluster is under review and should not be used	Not applicable
10	First episode psychosis	Annual
11	Ongoing recurrent psychosis (low symptoms)	Annual
12	Ongoing or recurrent psychosis (high disability)	Annual
13	Ongoing or recurrent psychosis (high symptom and disability)	Annual
14	Psychotic crisis	4 weeks
15	Severe psychotic depression	4 weeks
16	Dual diagnosis	6 months
17	Psychosis and affective disorder (difficult to engage)	6 months
18	Cognitive impairment (low need)	6 months
19	Cognitive impairment or dementia (moderate need)	6 months
20	Cognitive impairment or dementia (high need)	6 months
21	Cognitive impairment or dementia (high physical or engagement)	6 months
99	Patients not assessed or clustered	N/A

398. A suite of documents to help organisations clinically cluster their service users is available[65]. These include the Mental Health Clustering Booklet for 2011-12, which outlines the care clusters and the supporting MHCT, and contains Care Transition Protocols for each cluster. Their use is encouraged as they are intended to improve the accuracy of cluster allocation, which will improve the overall functioning of the clinical and currency model.

Costing adult mental health services

399. Mental health providers should cost their services to the same minimum standards in the *NHS Costing Manual* that apply to all NHS providers. The *Clinical Costing Standards for Mental Health* offer a guide for organisations using or implementing PLICS. Each organisation will have their own data systems and costing systems, therefore it is impossible to provide a 100% consistent methodology for costing at a cluster level. **However, we recommended costing using a bottom up, patient level approach to ensure the most accurate results are obtained.**

400. The key to costing accurately at cluster level is having the activity and interventions recorded by service user and the cluster assigned appropriately so costs can be built up by service user. The only activity cluster costs collected are the costs of activity

[65] http://www.dh.gov.uk/en/Managingyourorganisation/NHSFinancialReforms/DH_4137762

split by admitted and non-admitted care and the separate cost of the initial assessment activity by cluster.

401. Due to the nature and length of mental health care clusters, with some beginning in one financial year and running to the next, and others having a length of 12 months or more, costs will not be collected on a completed cluster basis. The collection will therefore capture data at a cost per cluster per day level, produced using the length of clusters falling in the reference costs year (expressed in days, similar to an acute spell or episode), and the costs of interventions within them.

402. The non-cluster admitted patient care collection excludes activity which continues into the next reporting year (paragraph 80). To take account of the potential length of some of the mental health care clusters **all activity and costs which occur in the financial year must be reported**, regardless of whether the clusters have completed.

403. Costs per cluster per day can be calculated using a number of different methodologies, depending on the costing system in place. Organisations with more detailed activity data using PLICS will be able to adopt a bottom up approach which is likely to involve applying a weighted cost per day per cluster based on the length of cluster. This is the methodology used by the CPPP to cost their clusters (Annex E). CPPP calculate a cost per day by cluster, based on a series of relative value units or cluster weightings, to reflect the differing treatment intensity. This cost can then be multiplied up to get a cost by patient in a specific cluster.

404. Another approach, where less detailed activity data are available, is used by West Midlands and builds on a predominantly top down methodology used in traditional reference costs, to produce a cost per day per cluster (Annex F). Here, each community visit, outpatient attendance, admitted bed day etc can be costed and then totalled up by patient to give a cluster cost for each service user, from which an average cost can be produced.

405. The clusters are designed to be setting independent. However, the 2011 pilot exercise also collected cluster costs by setting (admitted patient care, outpatients, community). In a change for the 2011-12 collection, we will not be collecting all the setting information. Instead we will be collecting costs and activity for admitted patient care and non-admitted patient care (covering outpatients, day care and community), as well as for initial assessments (Table 41). Organisations should take care to ensure that the quantum of admitted and non-admitted unit costs multiplied by respective activity is equal to the care cluster quantum.

Table 41: Care cluster worksheet

Field	Comments
Setting independent cluster costs	
Total cost	This cell is calculated and is the total cluster cost excluding the initial assessment
Number of cluster days within the costing period	Total number of patient days within each cluster within the costing period
Total number of unique service users in cluster	Total number of unique service users in each cluster. This should be the actual number of service users treated. For example, one service user may have two episodes or instances in a cluster, either in the same spell or at readmission, and in the next field (total number of service user episodes) would count as two. However in this unique service users field they would count as one. Table 43 clarifies

Field	Comments
Total number of service user episodes	Total number of service users counted in each cluster. If a service user has been allocated to a cluster more than once during the overall period, each separate time should be counted. A reassessment resulting in the service user remaining in the same cluster does not result in a new episode. A new episode only occurs if the service user moves from one cluster to another or at readmission.
Unit cost per service user episodes	This is a calculated cell. Cost per service user per each instance of cluster including the costs of interventions within them. This should be the average cost of each instance of the cluster, eg a service user may have two or more instances of a cluster. The cost reported here should be the average cost of one instance
Average cluster length (days)	This is a calculated cell. Average length of cluster per service user. This is the overall average length of cluster for each service user episode expressed in days
Unit cost per day per cluster	This is a calculated cell. Average/weighted cost per day per service user per cluster
Admitted patient care	
Number of admissions	Where a service user has been receiving treatment since the previous year they must be included in the number of admissions
Unit cost per occupied bed day	This covers admitted patient care on an occupied bed day basis covering ordinary elective and non-elective activity.
Number of occupied bed days	
Non admitted patient care	
Unit cost per non-admitted cluster day	This is a single cost per day per service user per cluster, covering all non admitted patient care settings and is produced using an analysis of direct costs of interventions across a cluster period. Annex E describes one methodology for calculating this directly. Alternatively costs can be calculated by building up the setting activity, for example, community contacts, outpatient attendances etc.
Number of non-admitted cluster days	
Initial assessments	
Unit cost per assessment	This covers the costs and activity associated with initial assessments of service users which helps clinicians to allocate them to clusters. Initial assessment and clustering of service users can require significant professional resource, and are therefore identified separately rather than included as an overhead for service users who are clustered.
Number of initial assessments	
Sub-contracted service cost (included in cluster cost)	This column is memorandum only. Sub-contracted service costs are included in cluster costs (paragraph 392), but should be separately recorded here.

406. The clusters should only include costs and activity incurred for a service user who has been assigned a cluster. The worksheet includes separate lines for:

    (a) unable to assign mental health care cluster code (cluster 00) – record costs for a service user who has been assessed but has not been allocated a cluster, including the cost of their initial assessment
    (b) patients not clustered or assessed (cluster 99) - record costs incurred for treatment before a service user has been assessed and allocated to a cluster. This will include service user costs close to the year end where the initial assessment costs fall into both years and the cluster is allocated after the year end. We do not want to include part year costs in initial assessments, so initial assessment costs before and after the year end will remain in cluster 99. For 2011-12, any service user not clustered before the December 2011 deadline can remain in cluster 99.

407. For 2011-12, for service users who have been treated before being clustered,

possibly as a result of the deadline for clustering service users of December 2011, the costs of the treatment prior to being clustered should remain in cluster 99, whilst the costs of the initial assessment and on-going treatment should be assigned to the appropriate cluster.

408. For 2012-13 reference costs, once a service user has been assessed and placed into a cluster, the costs of the initial assessment and any pre-treatment should be assigned to the appropriate cluster. The approach for both years is shown in Table 42.

Table 42: Assessing and clustering service users

Reference costs year	Service user	Date of referral and start of treatment	Date clustered	Treatment of costs and activity
2011-12	Patient A	July 2011	December 2011	July to December - costs to cluster 99 December - (including assessment) to the appropriate cluster
2012-13	Patient B	July 2012	August 2012	All costs to the appropriate cluster

409. As a principle, the costs and activity for initial assessments should be recorded separately for each cluster, in order to enable separate costs for these assessments to be identified. These costs do not appear in total cluster costs within the collection template.

410. We note that for 2011-12 some organisations may not be able to separately record and cost initial assessments and therefore may need to include the costs within the total cluster costs. This will need to be flagged in the reconciliation statement workbook. Organisations should be aware that for the 2012-13 collection they will not be permitted to do this and will need to separately identify and cost the initial assessments, and systems should be set up to deliver this.

411. The cost of re-assessment should be included in the cluster the user is assigned to at the time of the re-assessment, rather than the new cluster if the cluster changes. Re-assessment does not result in a new episode unless the cluster changes. Therefore if a user remains in a cluster after any number of re-assessments it will still count as one episode.

412. DNAs will not be collected separately and the costs should be included as an overhead within the relevant cluster pathway.

413. In the 2011 pilot collection there were some differences in the way the number of service users were recorded. We give two examples below to clarify our requirements (ignoring the initial assessment). Organisations should also be aware that, in a change from the pilot collection in 2011, an additional field to record the number of unique service users is included as well as the number of service users. Organisations should aim to complete both fields but if unable to do this should complete whichever field is appropriate for their information system. For 2012-13, organisations will be expected to complete both fields.

414. In our first example, we consider a service user who changes cluster (Table 43). Here, the service user is assessed and spends 30 days in cluster 13 at a cost of £1,000. They are reviewed and re-clustered to cluster 14, spending 20 days there at a cost of £2,000. They are re-reviewed and returned to cluster 13, where they spend

the remaining 70 days until the end of the year at a cost of £4,000.

Table 43: Service user change of cluster

Cluster	Total cost	Total patient days within cluster	Total no of unique service users	Total no of service user episodes	Average cost per service user	Length of cluster per service user	Average cost per day per cluster
13	£5,000	30 + 70 = 100	1	2	£2,500	50	£50
14	£2,000	20	1	1	£2,000	20	£100

415. To clarify the recording of patient assessment, in our second example we consider service users who are assessed multiple times in-year within a cluster. Here, the service user is assessed and spends 20 days in cluster 15 at a cost of £9,000. They are reviewed after four weeks and are confirmed to remain in cluster 15, where they spend 20 more days at a cost of £2,000. They are re-reviewed and stay in cluster 15, where they spend the remaining eight days until the end of the year at a cost of £1,000 of cost. Although there have been several reassessments, as the service user has not moved cluster this is one episode.

Table 44: Multiple assessment of service user

Cluster	Total cost	Total patient days within cluster	Total no unique service users	Total no of service user episodes	Cost per service user	Length of cluster per service user	Average cost per day per cluster
15	£12,000	20+20+8=48	1	1	£12,000	48	£250

Child and adolescent mental health services

416. CAMHS should be reported in the following settings:

(a) ordinary elective and non-elective admissions on an occupied bed day basis
(b) day care facilities on a patient day basis
(c) outpatient attendances
(d) community contacts.

417. Child and adolescent drug and alcohol, eating disorder and secure services are reported separately.

Drug and alcohol services

418. This relates to service users who do not have a significant mental health need but who are treated by substance misuse services, which have different commissioning routes and information systems from mainstream mental health services. Drug and alcohol services therefore continue to be reported separately, split by adult and child and adolescent services, in the following settings:

(a) ordinary elective and non-elective admissions on an occupied bed day basis
(b) outpatient attendances
(c) community contacts.

Specialist mental health services

419. The following specialist mental health services should be reported separately:

(a) autistic spectrum disorder
(b) children and adolescents eating disorder services
(c) adult eating disorder services
(d) perinatal mental health services (mother and baby units)
(e) other.

420. These services should be reported in the following settings:

(a) ordinary elective and non-elective admissions on an occupied bed day basis
(b) outpatient attendances
(c) community contacts.

Secure mental health services

421. Providers of secure mental health services should submit unit costs and activity based on occupied bed days for the following services:

(a) low secure services
(b) medium secure services
(c) high dependency secure provision
    (i) women's services
    (ii) mental health or psychosis
    (iii) learning disabilities
    (iv) personality disorder
(d) high secure units
    (i) women's services
    (ii) mental health or psychosis
    (iii) learning disabilities
    (iv) personality disorder
    (v) dangerous and severe personality disorder
(e) child and adolescent low secure services
(f) child and adolescent medium secure services
(g) child and adolescent high secure services.

422. Only the designated trusts in Table 45 should submit data for high secure units.

Table 45: High secure units

Code	Name
RW4	Ashworth, Mersey Care NHS Trust
RKL	Broadmoor, West London Mental Health NHS Trust
RHA	Rampton, Nottinghamshire Healthcare NHS Trust

423. Only the designated trusts in Table 46 should submit data for child and adolescent secure services.

Table 46: Child and adolescent secure services

Code	Name
RXT	Birmingham and Solihull Mental Health NHS Foundation Trust
RXV	Greater Manchester West Mental Health NHS Foundation Trust
RV5	South London and Maudsley NHS Foundation Trust
RW1	Southern Health NHS Foundation Trust
RX4	Northumberland, Tyne and Wear NHS Foundation Trust

Settings for non-cluster activity

Ordinary elective and non-elective admissions

424. Costs and activity should be submitted on an occupied bed day basis. Some admitted patient care within mental health services includes trial periods of time where patients are on home leave. They are not discharged but sent on leave to return as an admitted patient at a future date. This sometimes creates an anomaly where their beds may be used for other admitted patients, resulting in bed occupancy levels of over 100%.

425. Organisations should ensure that the reported total number of occupied bed days for a ward does not include any leave day activity unless the bed is held open for that patient to return to, ie that no other patient uses the bed in their absence. This rule also applies to patients transferred temporarily to an acute provider for treatment.

426. Where the PAS does not record home leave, the activity levels will need to be adjusted manually. The key rule is to ensure that multiple occupancy above 100% is not reported, as this would have the artificial effect of diluting the unit costs.

Day care facilities

427. Costs and activity for mental health services in day care facilities[66] should be submitted on the same basis as for other patients using these facilities. Therefore, the guidance in paragraphs 159 to 162 applies here.

428. Centres catering primarily for patients with long term physical disability or learning disability are excluded (as are all services for these patients).

429. There has sometimes been uncertainty as to whether a regular contact with a client constitutes day care facility attendance or a community mental health team (paragraph 435) group contact. It is usually considered that day care facilities have consultant input and undertake patient assessments, whereas a community mental health team group contact would not necessarily involve a consultant and may not involve patient assessments.

Outpatient attendances

430. Costs and activity should be reported for attendances and non face to face contacts. Where consultants have a clinical caseload within a specialist team, eg criminal justice liaison team, the costs and activity should be reported against the specialist team currencies (paragraph 439). Where consultants do not have a clinical caseload within a specialist team, costs and activity should be reported in an outpatient or community (paragraph 435) setting.

431. The key to determining whether activity should be reported in an outpatient or community setting is as follows:

66 http://www.datadictionary.nhs.uk/data_dictionary/nhs_business_definitions/d/day_care_facility_de.asp?shownav=1

(a) if the appointment is booked into a clinic list for a specific clinic session, including clinics in a residential home, where a consultant sees more than one patient in that clinic and location, then report in an outpatient setting
(b) otherwise it should be reported in a community setting, eg a home or domiciliary visit or a visit to a single client in a residential home.

432. Primary consultations, eg telephone or informal contact, before the patient attends for a traditional first appointment (including mental health services such as CAMHS and community mental health teams) should not be recorded as an attendance. Rather, the cost of such contacts should form part of the unit costs of contacts with clients once accepted for treatment by the relevant service.

433. Domiciliary visit payments are now only paid in limited circumstances, or to those consultants who have chosen to retain the old consultant contract (section 12(2) 2003). The distinction to be made for reference costs is between:

(a) costs of seeing a client in a consultant clinic, which should be categorised as an outpatient attendance
(b) costs of a consultant seeing a client at home, which should be categorised as a community contact.

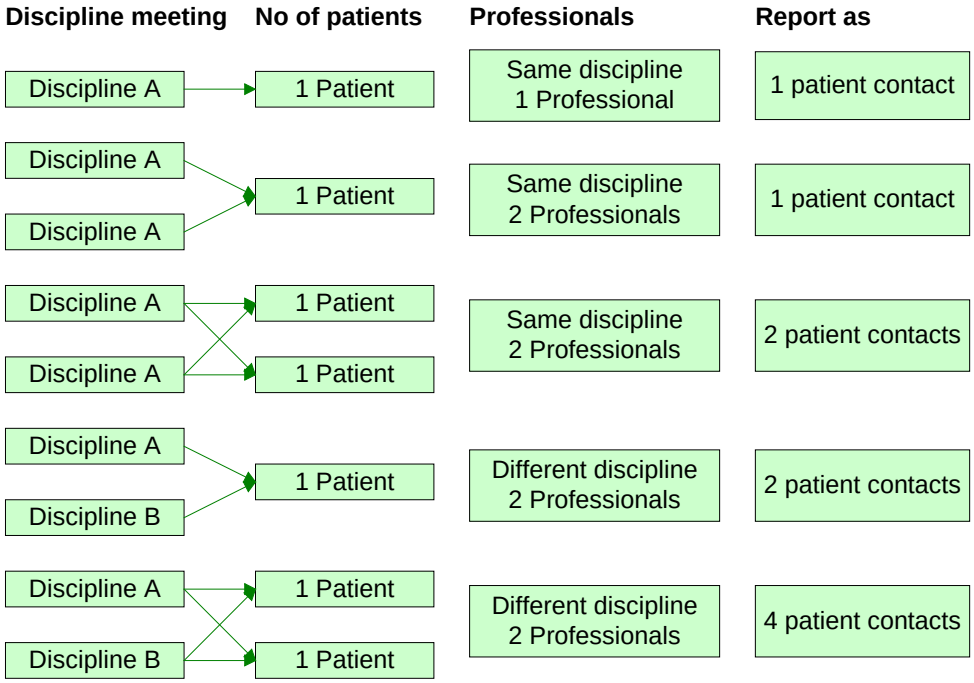
434. Costs, but not activity, for DNAs should be counted and included as an overhead.

Community contacts

435. Costs and activity should be reported for face to face and non face to face patient contacts with consultant led community services or community mental health teams (CMHT). CMHTs are teams of variable sizes, comprising a combination of staff from qualified and unqualified disciplines including social workers, community mental health nurses, occupational therapists, psychiatrists, psychologists, counsellors and community support workers (eg home helps).

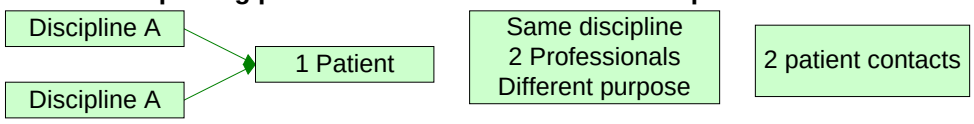
436. Although it is rare for patients to meet more than one discipline (ie qualified professional staff group within each CMHT) at a single time, when this does occur the reason is for very different purposes and therefore should be recorded for reference costs. Table 47 describes this process.

Table 47: Reporting patient contacts with multi-disciplinary community mental health teams



437. The exception to this general principle is when two or more professionals from the same discipline meet a single patient, at the same time, but for a different purpose (Table 48).

Table 48: Reporting patient contacts with two or more professionals from the same discipline



438. Costs, but not activity, for DNAs should be included as an overhead. Where CMHTs include social workers funded by social services, in addition to NHS funded staff, only the cost and activity of the NHS funded staff should be included in the reference cost return.

Mental health specialist teams

439. Most cost and activity data for services undertaken by mental health specialist teams (MHST), using currencies based on the annual national survey of investment in adult mental health services[67], should now be included in the care clusters. Remaining costs and activity should be reported on a patient contacts basis for:

(a) A&E mental health liaison services
(b) CAMHS
(c) criminal justice liaison
(d) prison health
(e) other.

440. Where consultants have a clinical caseload within a MHST, their costs and activity

67 http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_117488

should be reported with the team. Costs, but not activity, for DNAs should be included as an overhead.

Section 9: Community services

Introduction

441. This section covers:

(a) specialist nursing
(b) district nursing
(c) nursing services for children
(d) school based children's health services
(e) health visiting
(f) community dentistry
(g) community dietetics
(h) community paediatric services
(i) community podiatry
(j) community rehabilitation teams
(k) community therapy (physiotherapy, occupational therapy, and speech and language therapy)
(l) hospital at home and early discharge schemes.

442. One of the challenges for reference costs for community services has been the lack of a standard minimum data set and detailed service descriptions for the majority of services commonly classified as community services. The introduction of the Community Information Data Set (CIDS)[68] for local use from April 2012 therefore marks a significant step forward. Given this, and the changes elsewhere in the collection, we are leaving reference costs for community services largely unchanged for 2011-12 but will begin to make changes from 2012-13.

443. Due to the anticipated volume of data involved, and the paucity of automated recording systems for the majority of community services, organisations may use appropriate and reflective sample data to ascertain annual activity when reporting information in this section. There is no minimum sample time stipulated within reference costs but the sample should be reflective of annual activity in a service area. Where this is not feasible, organisations may use informed clinical estimates, retaining evidence of the data source.

444. This guidance also applies to outreach services. These services reflect changes in the way health services are being delivered with less clearly defined boundaries around service delivery. For a number of services, this can result in the same staff delivering services in ward settings in acute hospitals and outside such settings to provide continuity of care to patients.

445. As these services are delivered in a range of settings, input from other health professionals, including practice nurses will occur. All relevant costs have to be included to ensure comparability and the key issue is the cost of services and not the funding stream. Services that are categorised as primary medical services are excluded however.

[68] http://www.ic.nhs.uk/services/in-development/community-information-programme/community-information-data-set-cids

446. Some of the services described in this section – dentistry, dietetics, podiatry and therapy - can be provided in a number of settings. Where they are provided as part of an admitted patient care or outpatient attendance, the costs should be reported within the composite cost of the admitted patient care or outpatient attendance HRG. Otherwise, activity and costs for these services when provided in a community setting, including when directly accessed, should be reported in this section.

447. Definitions for face to face and non face to face community contacts are aligned with those for outpatient attendances in paragraphs 207 to 211.

448. Where group sessions are reported in this section, the activity count is the number of sessions irrespective of the size of the group involved or the number of health professionals running the session, eg two therapists running a session for 20 people has an activity count of one.

449. Evening or twilight services offered as an extension to a community nursing service should be reported under the appropriate category (eg district or specialist nursing) thus forming part of the composite costs and activity of that service.

Specialist nursing services

450. Specialist nursing services are reported using community contacts as the activity currency, disaggregated by the bands in Table 49, split further by adult or child and face to face or non face to face.

Table 49: Specialist nursing service bands

Band	Description	Comment
1	Cancer related	
2	Palliative or respite care	
3a	Arthritis nursing liaison	
3b	Diabetic nursing liaison	
3c	Cardiac nursing liaison	
3d	Asthma or respiratory nursing liaison	
3e	Breast care nursing liaison	
3f	Parkinson or alzheimer nursing liaison	
4	Continence services	Exclude costs relating to patients in regular receipt of supplies (eg continence pads, stoma bags) which should be reported against home delivery of drugs and supplies (paragraph 559) in the reconciliation statement workbook
5	Stoma care	
6	Intensive care nursing	
7	Infectious diseases	
7b	Tuberculosis specialist nursing	
8	HIV/AIDS nursing services	Includes follow up of HIV care, psychosocial support, treatment support for individuals starting or switching therapy etc
10	Haemophilia	
11	Transplantation patients	Includes patients on pre and post transplantation programmes
12	Enteral feeding	
13	Tissue viability nursing liaison	
14	Treatment room nursing services	To be used for nursing staff based in GP surgeries
15	Active case management	Includes community matrons
16	Not used	Formerly used for community cystic fibrosis. Retired following the introduction of year of care currencies for cystic fibrosis
17	Other specialist nursing	eg sickle cell

District nursing services

451. Organisations should make every effort to map district nursing services to the specialist nursing bands. Only if this is not possible should organisations report against district nursing, split by face to face and non face to face.

Nursing services for children

452. In addition to specialist nursing services, the NHS provides a range of other nursing services for children including:

    (a) vulnerable children support, including child protection and family therapy
    (b) development services for children, including psychology
    (c) paediatric liaison
    (d) other child nursing services not included in specialist nursing and school based child health services, including looked after children nurses.

453. These services should be reported as one composite group using total community contacts in the financial year as the activity measure.

454. The following should be noted for child protection services, where separate to services performed by community paediatricians (paragraph 207):

    (a) in general, the cost of child protection is an oncost of nursing services for children. Activity included should relate to the number of total face to face contacts in a given financial year, not the number of children on the register
    (b) funding received from non-NHS sources should be netted off expenditure incurred in line with the matching principle
    (c) where the service is advisory to other elements of health care, and there is no contact with children, costs should be apportioned between the service areas that receive advice
    (d) where the service offers advice to non-NHS bodies, eg social services, the police etc, these costs should be excluded
    (e) for consistency with other reference cost definitions, the activity relating to meetings about the patient are not counted for reference costs. The costs of these meetings should be included as an overhead and apportioned as appropriate
    (f) the above advice is applicable to all child protection teams, including those that consist of a team of consultants and nurses.

School based children's health services

455. A number of health services and checks are performed through educational facilities. School based children's health services include all services provided in the school setting, and not just nurses that are school based and providing health services. While having a significant levels of nursing input, they also have input from community paediatricians. For reference costs, they have been divided into:

    (a) core services, including school entry review and year 6 obesity monitoring, further sub-divided into
        (i) one to one
        (ii) group single professional

(iii) group multi professional (using the same definition of multi professional in paragraph 213)

(b) other services, including routine medical checks, sexual and reproductive health advice, family planning, smoking cessation, substance misuse advice and support, obesity and behaviour management (sleep, diet, healthy lifestyles, relationships etc), further sub-divided into
   (i) one to one
   (ii) group single professional
   (iii) group multi professional

(c) vaccination programmes.

456. The activities suggested for each category above are not exhaustive, may not all be undertaken by providers and may be known by a slightly different name. Core and other services should be reported using total community contacts in the financial year. In costing all school based services, the full cost of delivering these services, not just associated nursing costs, should be included.

457. In addition, there is a requirement to report activity for school based vaccination programmes (including MMR, tuberculosis and meningitis) using the number of vaccinations given as the currency, and unit cost per child. The activity measure will be based on the number of individual vaccinations given in a year. For example, if two vaccinations from a course of three are given in the year, this will count as two. This will allow for uncompleted courses as it is the individual number of vaccinations and immunisations that are the activity unit. For reference costs, vaccinations may be equated with number of injections given. The unit cost should include all costs (including administration, nursing and medical costs) where these are part of the service costs, as well as the cost of vaccines. Any income in the form of fees from patients should be matched to expenditure.

458. Vaccination programmes jointly funded by GPs or non-NHS providers are excluded from reference costs. Similarly, where a GP provides the vaccination, but it is administered by a school based nurse, activity and associated costs incurred by the NHS provider for this element of service should be excluded.

Health visiting services

459. Health visiting services have been divided, with the same caveats as in paragraph 456, into:

(a) core visiting services, including between six to eight weeks contact, one year contact, and two to three years contact, further sub-divided into
   (i) face to face group
   (ii) face to face one to one
   (iii) non face to face

(b) other health visiting services, excluding parentcraft and post-natal visits, but including, antenatal contact, child in need, clinics, looked after children, parental health, parenting of child, prison service, safeguarding and telephone triage, further sub-divided into
   (i) face to face group
   (ii) face to face one to one
   (iii) non face to face

(c) parentcraft, which should be reported as group sessions as per paragraph 448

(d) post-natal visits.

460. Post-natal visits are separately identified for community midwives (paragraph 516), and post-natal visits carried out by health visitors are reported for consistency. As with vaccinations, the full cost of this element of service should be identified.

461. When counting activity for post natal visits, the following should be noted:

(a) post-natal visits are visits undertaken up to 28 days after the birth
(b) the activity measure is the visit itself, irrespective of whether the health visitor sees the mother, baby or both
(c) visits should only be counted where the mother, baby or both were seen. Costs, but not activity, for DNAs should be included as an overhead
(d) post natal visits that occur more than 28 days after the birth should be included in other health visiting services.

462. Vaccinations and immunisations should be separately reported at full cost (including travel costs), on the same basis as school based children's services (paragraph 458).

Community dietetics

463. Community dietetic services should be reported here, using number of attendances as the activity measure.

Community dentistry

464. Community dentistry should be reported using number of attendances as the activity measure. It should include the costs and activity of face to face dental officer activity in clinics, and screening contacts that these officers carry out in schools (where each child screened constitutes a contact, since each requires one-to-one activity).

465. Primary dental services are excluded from reference costs. Some patients choose to access primary dental services provided by undergraduate dental students in secondary care settings. As these services are substitutes for primary care provision, they should also be excluded from reference costs. Consultant led oral surgery and orthodontic treatment (including post-graduate student activity) which takes place in secondary care should, however, be included.

Community paediatric services

466. As noted in paragraph 236, neuro-disability work conducted by community paediatricians should be reported under paediatric neuro-disability (TFC 291) and not in this section. All other costs and activity for community paediatric services should be reported in the community attendances worksheet under the CP60 codes with number of attendances as the activity measure and using the currencies in Table 50 split by face to face and non face to face.

Table 50: Community paediatric service currencies

	Face to face	Non face to face
Safeguarding	Include all child protection medical examinations for suspected physical, sexual or emotional abuse or neglect, and attendance at child protection conferences where the child or parent is present	Include all telephone contacts with child or parent on safeguarding. Contacts about patients, with the exception of cancer MDT meetings about a patient, should not be counted as valid activity (this exclusion also applies to the other currencies below)
Other statutory work for social services	Include all adoption medicals, initial and review looked after children (LAC) medicals, medicals specifically conducted for children in need	Include all telephone contacts with child or parent. The role of adoption adviser, panel preparation and attendance and designated LAC doctor should be included as oncosts for the service
Statutory work for education	Include all medical assessments as part of statutory assessment, where the child or young person has been seen specifically to provide the report. Do not include reports written from the notes for the child or young person already known to the service, ie where the child is not seen to prepare the report. Also include here annual reviews or MDT meetings on children with identified special educational needs (SEN) where child or parent is present	Include all telephone contacts with child or parent. The role of Designated Medical Officer for SEN, panel preparation and attendance should be included as oncosts for the service
Child public health	Include medical assessments done as part of the child health promotion programmes and vaccinations given by community paediatricians, where these are not provided by GPs. Also include any face to face consultations with parents for immunisation advice, where these can be identified, eg immunisation advice clinics	Include all telephone contacts with child or parents regarding immunisations. The role of Immunisation Coordinator and Child Health Promotion Coordinator, including telephone advice line for professionals, should be included as oncosts for the service
Other (default if it is not possible to split costs and activity into the categories above)	Include any other face to face clinical activity not included above or under TFC 291	Include all telephone contacts with child or parent

467. TFC 290 (community paediatrics) may be used in trusts to identify work described here under CP60. For reference costs, all costs and activity clinically recorded under TFC 290 should be reported under the CP60 codes. This ensures that all data are reported consistently in one place.

468. Although most of this activity may be driven by social services and education, it is generally funded by the NHS. If it is funded by a local authority, or as part of a pooled budget arrangement, then it should generally be excluded (paragraph 559).

Community podiatry

469. Podiatry services can be delivered in a number of settings, eg the patient's home or GP surgery. Services provided in a community setting should be reported here, using number of attendances as the activity measure.

Community rehabilitation teams

470. Community rehabilitation teams are usually comprised of a number of health care professionals providing ongoing care to patients in a community setting. The range of services provided will vary on a patient by patient basis, although the care usually includes nursing and a range of therapy services. These services may be provided by teams operating from both hospital and community bases. For reference costs, the location of the team has no relevance, although care should be taken not to double count any activity reported using the unbundled rehabilitation HRGs.

471. The activity measure is the number of team contacts in a financial year, eg one patient seen by a nurse for three days, twice by a physiotherapist, and twice by a speech and language therapist represents seven team contacts. This example assumes that team members do not see patients on anything other than a team basis, ie that total clinical caseload for that professional relates solely to team activity. Where members of a clinical team also see patients in another capacity, eg as a speech and language therapist, costs and activity should not be reported as part of the community rehabilitation team activity but elsewhere in the collection using the relevant currency, eg community speech and language therapy.

472. Some teams provide rehabilitation services for patients with specific diagnoses or conditions, eg neurological community rehabilitation teams. There is no requirement to separately identify the types of rehabilitation services provided.

Community therapy services

473. Therapy services may be provided as part of an admitted patient care stay or outpatient attendance, in which case the costs should be included in the composite costs of the relevant HRG. Therapy services may also be provided in the community and may be accessed directly (see paragraph 380) by a patient. They may be delivered by community based therapy staff or on an outreach basis. The services may be follow-on treatments from earlier events, or relate to continuing care in community settings, and should be reported using the number of community contacts in a financial year as the activity measure.

474. This section covers the following services undertaken in the community:

    (a) physiotherapy
    (b) occupational therapy
    (c) speech and language therapy.

475. These services are further sub-divided into:

    (a) adult one-to-one services
    (b) adult group services
    (c) children one-to-one services
    (d) children group services.

Hospital at home and early discharge schemes

476. These schemes allow the early discharge of patients from hospital in order for them to receive ongoing healthcare from healthcare professionals at home. The range of

services provided by these teams varies patient by patient, although the care usually includes nursing and a range of therapy services. The teams may operate from hospital or community bases. For reference costs, the location of the team has no relevance. There are currently no information standards to cover these schemes, but an indicator may be added to the admitted CDS types in future.

477. Data should be reported using three currencies:

(a) hospital at home – COPD
(b) hospital at home – fractured neck of femur
(c) hospital at home – other.

478. The activity measure is the number of team contacts in a financial year, and the guidance in paragraph 471 applies here. There is also a requirement to report the number of complete packages of care, ie one complete package might contain five contacts.

479. These schemes are different from intermediate care and step down beds. They have a projected end date for the care plan following a patient's early release from an acute admission, whereas intermediate care and step down beds usually have a longer care path, can be delivered in hospital and community beds, and are excluded from reference costs.

Section 10: Ambulance services

Introduction

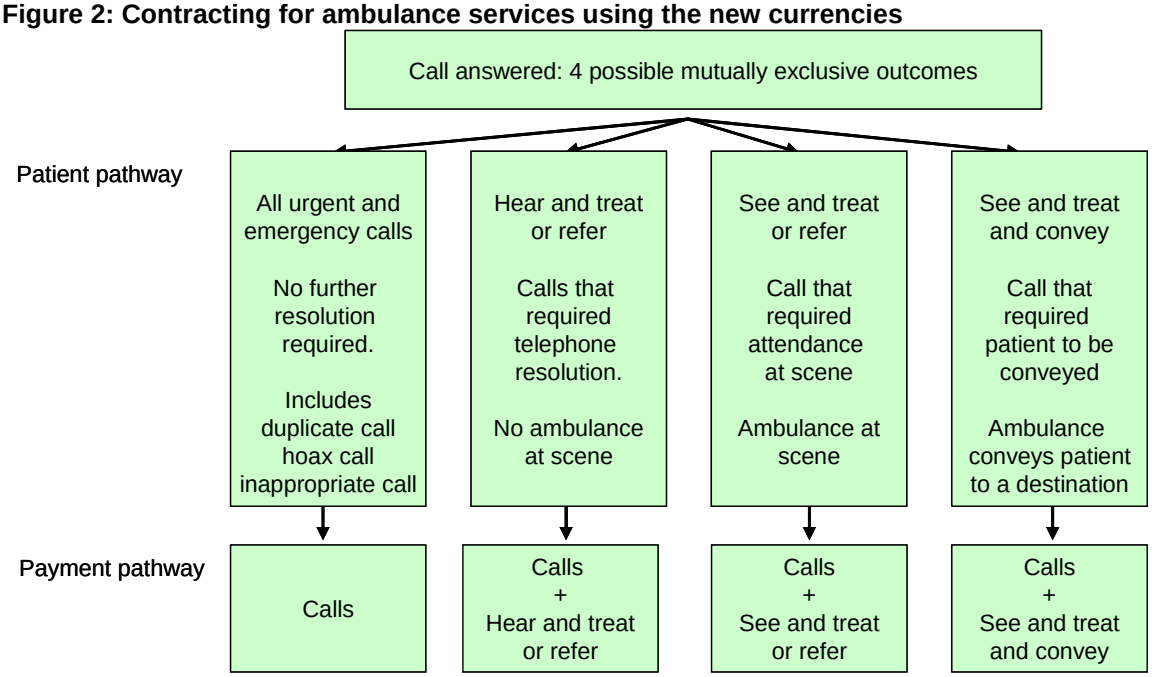
480. For ambulance emergency and urgent services, we are replacing the previous paramedic reference cost collection with four currencies that will directly correlate to the scope of the new PbR approach to funding. These should be used by the 11 ambulance service trusts, and the proposed Isle of Wight NHS trust, to report 2011-12 reference costs.

Currencies

481. These currencies have been developed and agreed with ambulance trusts and commissioners to support the contracting and payment of emergency and urgent ambulance services from April 2012 as illustrated in Figure 2. We plan to align their definitions with definitions in the Ambulance Quality Indicators[69]. The four currencies are:

(a) calls
(b) hear and treat or refer
(c) see and treat or refer
(d) see and treat and convey.

Figure 2: Contracting for ambulance services using the new currencies



Where a third party organisation undertakes the initial call and directly accesses the ambulance despatch system, only the resolution currency will be payable

Calls

482. The activity measure is the number of emergency and urgent calls presented to switchboard and answered.

69 http://www.dh.gov.uk/en/Publicationsandstatistics/Statistics/Performancedataandstatistics/AmbulanceQualityIndicators/index.htm

483. Include 999 calls, calls from other healthcare professionals requesting urgent transport for patients, calls transferred or referred from other services (such as other emergency services, 111, NHS Direct, other third parties).

484. Include hoax calls, duplicate or multiple calls about the same incident, hang-ups before coding complete, caller not with patient and unable to give details, caller refusing to give details, response cancelled before coding complete.

485. Exclude calls abandoned before answered, PTS requests, calls under any private or non-NHS contract.

486. The unit cost is the cost per call.

Hear and treat or refer

487. The activity measure is the number of patients, following emergency or urgent calls, whose issue was resolved by providing clinical advice by telephone or referral to a third party.

488. Include patients whose call is resolved without despatching a vehicle, or where a vehicle is despatched but is called off from attending the scene before arrival – either by providing advice through a clinical decision support system or by a healthcare professional providing clinical advice or by transferring the call to a third party healthcare provider.

489. An ambulance trust healthcare professional does not arrive on scene.

490. The unit cost is the cost per patient.

See and treat or refer

491. The activity measure is the number of incidents, following emergency or urgent calls, resolved with the patient being treated and discharged from ambulance responsibility on scene. There is no conveyance of any patient.

492. Include incidents where ambulance trust healthcare professionals on scene refer (but do not convey) the patient to any alternative care pathway or provider.

493. Include incidents where, upon arrival at scene, ambulance trust professionals are unable to locate a patient or incident.

494. Include incidents despatched by third parties (such as 111, NHS Direct or other emergency services) directly accessing the ambulance control despatch system.

495. The unit cost is the cost per incident.

See and treat and convey

496. The activity measure is the number of incidents, following emergency or urgent calls, where at least one patient is conveyed by ambulance to an alternative healthcare provider.

497. Alternative healthcare provider includes any other provider who can accept ambulance patients, such as A&E, MIU, walk-in centre, major trauma centre, independent provider etc.

498. Include incidents despatched by third parties (such as 111, NHS Direct or other emergency services) directly accessing the ambulance control despatch system.

499. Exclude PTS and other private or non-NHS contracts.

500. The unit cost is the cost per incident.

Costing ambulance services

501. In addition to costs and activity described in the preceding paragraphs, the currencies should include costs and activity relating to primary care practitioners, medical incident officers, emergency care practitioner costs, hospital ambulance liaison officers (HALO), and falls cars. Services that should be excluded by ambulance trusts are listed in Table 55.

502. Income from sources other than NHS commissioners, including commercial income, should be netted off the reference costs quantum. For example, where an emergency service is provided on standby at football matches, the commercial income received should be netted off emergency service provision. Other examples include police custody or airport response units. In activity terms, any resulting emergency activity generated from these contracts should be deducted from total emergency responses.

503. When attributing or allocating staff and vehicle costs, the cost of PTS vehicles and crews used to support emergency services in given situations should be included in the costs for these services, and not under patient transport.

504. The *NHS Costing Manual* provides the minimum classification of costs for use by ambulance trusts, which differs in some areas from the standard classification for NHS providers. It includes a non-mandatory framework, developed by the ambulance costing working group that we encourage trusts to use as a baseline for allocating costs to the relevant currencies. In addition, it suggests allocation methods for a range of indirect and overhead costs that reflect consistent practice across the NHS.

Section 11: Obstetric and maternity services

Introduction

505. This section covers:

(a) obstetrics and maternity admitted patient episodes
(b) maternity outpatients
(c) scans, screens and tests
(d) community midwifery.

Obstetrics and maternity admitted patient episodes

506. All obstetrics and maternity admitted patient episodes should be reported as non-elective under obstetrics (TFC 501) or midwife episodes (TFC 560). This activity should not be reported as elective.

507. All activity relating to HRG PB03Z (healthy baby) or TFC 424 (well babies) should be excluded. Associated costs should be reported as part of the total costs of the maternity delivery episode against the relevant HRG. Note that the Data Dictionary defines TFC 424 as “care given by the mother or substitute with medical and neonatal nursing advice if needed”. TFCs describe the carer, in this case the mother or substitute. We would expect trusts to use the TFC of the appropriate care professional (obstetrician, paediatrician or consultant midwife) rather than TFC 424 for babies with a minor or major diagnosis (HRGs PB01Z or PB02Z) or receiving a procedure driven HRG.

508. Babies who are unwell (ie any babies that are not defined as well babies, eg neonatal level of care 1, 2 or 3) will generate their own admission record. Costs should be reported against the relevant HRG and, where applicable, the unbundled neonatal critical care HRGs.

509. The HRG 2011-12 Reference Costs Grouper will introduce new HRGs to cover ante-natal and post-natal care, scans and other procedures that occur outside the delivery episode. HRG NZ10Z, Diagnostic and therapeutic procedures on fetus, has been retained to capture specialist fetal medicine activity. Providers should take care to differentiate accurately and consistently between the costs of this activity.

510. HRGs NZ11* to NZ15* cover delivery episodes, and are designed to reflect the costs associated with different types of delivery.

Maternity outpatients

511. These specifically include midwifery antenatal care undertaken by the NHS provider in GP and community based surgeries, which should be included as part of antenatal outpatients where the provider is able to code and electronically flow data. The setting of the outpatient clinic is irrelevant, as long as it fits with Data Dictionary definitions.

Scans, screens and tests

512. A number of routine scans, screens and tests are offered to mothers as an integral

part of the maternity pathway. Such tests (sexual health, glucose tolerance, ultrasound etc) are often carried out in obstetrics outpatients or antenatal clinics, but also in admitted patient episodes (particularly amniocentesis, chorionic villus sampling etc).

513. Where a woman attends the hospital for an ultrasound, scan or screen as part of a non-admitted attendance, this activity should be reported as an outpatient attendance with the appropriate OPCS-4 code for any procedures or interventions carried out, which may result in a procedure driven HRG.

514. Where a woman is admitted to hospital and part of her care includes an ultrasound, scan or screen, this activity should be recorded as part of that admitted patient episode.

515. The costs of carrying out the tests should be treated as an indirect cost to the relevant maternity HRG or attendance. Pathology costs from analysing routine tests should also be treated as an indirect cost to the relevant maternity HRG or attendance. The costs of analysing samples that are undertaken under a separate commissioner contract (such as genetics, DNA, RNA, biochemistry analysis for downs syndrome, specialist diagnostic laboratories etc) should not be included in the obstetrics or maternity reference costs.

Community midwifery

516. Home deliveries form part of the collection, and are shown separately from hospital based deliveries. Steps should be taken to ensure that this information is routinely collected and accessible within comprehensive midwifery records and systems.

517. Antenatal and postnatal visits in the home also form part of the collection and should be costed separately as community services.

Section 12: Cystic fibrosis

Introduction

518. The Department is developing a national tariff for cystic fibrosis, based on a mandatory year of care currency introduced in April 2011, and the reference costs collection for 2011-12 will change to support this.

519. We are retiring from the collection the following currencies previously used to describe cystic fibrosis care:

(a) admitted patient care episode bands 1 to 5
(b) outpatient attendance bands 1, 2 and other
(c) specialist nursing services band 16 (community cystic fibrosis).

520. In place of these retired reporting lines, we are introducing currencies based on a year of care (the cystic fibrosis patient journey over a 12 month period) that should be used by adult and paediatric cystic fibrosis centres[70] and other providers where shared care arrangements are in place to report 2011-12 reference costs. The Grouper generates HRGs for cystic fibrosis (DZ13*, PA13*) that we will remove from the reference costs workbook – their costs should be included in the year of care currencies.

Year of care currencies

521. Under the new currency model, each patient is allocated to one of seven bands derived from clinical information including cystic fibrosis complications and drug requirements, each of which describes an increasingly complex year of care. The bands as described in the SSNDS Definition No. 10 Cystic Fibrosis Services (all ages) (3rd Edition)[71] are:

(a) Band 1: Patients who only receive outpatient care from doctors, nurses, physiotherapist, dieticians, social workers, etc. No intravenous antibiotics required. No admitted patient episodes apart from an annual assessment and review as a day case
(b) Band 1a: As above but require up to 14 days of intravenous antibiotics (at home or in hospital) and spend a maximum of seven days in hospital over the course of a 12 month period or receive short-term (up to three months) nebulised antibiotics for eradication treatment
(c) Band 2: Patients who require maintenance nebulised antibiotics for pseudomonas infection or maintenance nebulised Dornase alfa. Patients receive up to 28 days of intravenous antibiotics in a year or spend a maximum of 14 days in hospital
(d) Band 2a: Patients who receive both nebulised antibiotics and Dornase alfa and require up to 56 days of antibiotics intravenously at home or in hospital or a maximum of 14 days in hospital
(e) Band 3: Patients who have more frequent admitted patient episodes, have up to a maximum of 84 days on intravenous antibiotics (at home or in hospital) or

[70] http://www.cftrust.org.uk/aboutcf/cfcare/ukcfcentres/
[71] http://www.specialisedservices.nhs.uk/doc/cystic-fibrosis-services-all-ages

spend up to 57 days in hospital or patients with gastrostomy feeding or any listed cystic fibrosis complication namely cystic fibrosis related diabetes, ABPA, massive haemoptysis, pneumothorax

(f) Band 4: Patients who have severe disease and usually spend up to 112 days in hospital per year, although it is recognised that some patients, at this stage of their illness, prefer to be treated or supported at home with the support of the cystic fibrosis multi-disciplinary team. Patients require a minimum of 85 days per year on intravenous antibiotics (at home or in hospital). Patients have cystic fibrosis related complications of diabetes, pneumothorax or haemoptysis

(g) Band 5: Patients are severely ill and stay in hospital for greater than 113 days per year, awaiting transplantation or receiving palliative care. As above, it is recognised that some patients, at this stage of their illness, prefer to be treated or supported at home with the support of the cystic fibrosis multi-disciplinary team. Patients may be receiving nocturnal ventilation and feeding gastrostomies. Life expectancy is usually no more than a year to 18 months.

522. Table 51 summarises these bands in the form of a banding classification matrix.

Table 51: Cystic fibrosis banding matrix

Banding definitions		Band						
		1	1A	2	2A	3	4	5
Therapies	Maximum number of days of IV antibiotics	0	14	28	56	84	112	≥113
	Nebulised antibiotics (Pseudomonas infection)		Yes					
	Long-term (>3 months) nebulised antibiotics or Dornase alfa			Yes				
	Long-term (>3 months) nebulised antibiotics and Dornase alfa				Yes			
Hospitalisations	Maximum numbers of days in hospital	0	7	14	14	57	112	≥113
Supplemental feeding	Nasogastric feeds				Yes			
	Gastrostomy					Yes		
Complications	Cystic fibrosis related diabetes or ABPA without other complications				Yes			
	Cystic fibrosis related diabetes and ABPA					Yes and (FEV1 ≥60%)	Yes and (FEV1 <60%)	
	Massive Haemoptysis or Pneumothorax					Yes and (FEV1 ≥60%)	Yes and (FEV1 <60%)	
	Cystic fibrosis related diabetes and gastrostomy					Yes and (FEV1 ≥60%)	Yes and (FEV1 <60%)	
	Non tuberculous mycobacterium treated or difficult to treat infections (eg MRSA or Cepacia) requiring other nebulised antibiotics					Yes		

523. The Cystic Fibrosis Trust produces the bandings based on data returned by both specialist centres and shared care providers to its national database, the UK Cystic

Fibrosis Registry [72]. Allocations to bands are based on data from the calendar year before the next financial year and are issued each February. We recommend 2011-12 reference costs are based on 2011 calendar year bandings that will be issued in February 2012. Because cystic fibrosis is a long term condition there is relatively little movement between bands from one year to another, rather there is a steady progression of disease severity over several years. There will be no movement of patients between bands during any one financial year. For ease of understanding, Table 52 provides an example for manually banding a patient.

Table 52: Worked example for cystic fibrosis banding

Step one: define the value for each criteria
The values for patient A are:

FEV1% predicted lung function	75%
Maximum number of total days of IV antibiotics	12
Nebulised antibiotics (Pseudomonas infection)	Yes
Long-term (>3 months) nebulised antibiotics or Dornase alfa	No
Long-term (>3 months) nebulised antibiotics and Dornase alfa	No
Maximum numbers of days in hospital	7
Nasogastric feeds	Yes
Gastrostomy	No
CF Related Diabetes or ABPA w/o other complications	Yes
CF Related Diabetes and ABPA	No
Massive Haemoptysis or Pneumothorax	No
CF Related Diabetes and Gastrostomy	No
Non Tuberculous mycobacterium treated or difficult to treat infections (MRSA)	No

Step two: determine the band for each criteria
This is indicated by the shaded cells in Table 51. It is to be expected that the criteria will fit multiple bands. In our example, patient A is eligible for bands 1A or 2A.

Step three: allocate the patient to their highest band
In our example, patient A is allocated to band 2A and their entire year of care costs are reported against band 2A. This process is repeated for each patient.

524. The currencies themselves make no distinction between adults and children. However, in order to understand the cost differentials between adults and children we are retaining for the cost collection a split between adults (defined here as patients aged 17 and over) and children (defined as patients aged 16 and under).

Part year of care

525. There are likely to be increases and decreases in the numbers of patients in each band in any one centre during the financial year. This will be due to births, transition from children's to adult services, natural patient movement from one location to another, transplantation and deaths. Because costing will be done on the basis of bands issued in February, we expect that this will have minimal impact. However, to ensure the bands only show full year of care costs, and to maintain the principle of full absorption costing, we are introducing further reporting lines for part year of care patients.

526. New births will be banded as 2A, which recognises the additional costs associated with diagnosis and treatment of a new patient. These patients will revert to the band

[72] http://www.cftrust.org.uk/aboutcf/publications/cfregistryreports/

issued through the process described above when the bandings are revised for the following year.

527. Clinical transition from a children's to an adult service or transfer to another centre may take place over a period of time. For the purposes of payment the two centres must agree a date at which responsibility for care will transfer, and this will inform the reporting of part year costs.

528. In some cases (eg university students, patients needing care whilst on holiday) there may not be a formal transfer of care as an individual may not wish or need to have their care transferred to a new centre. Should treatment be required away from the centre responsible for their care, this will be covered by a provider to provider agreement. The treatment of costs and income for these agreements is discussed in the *NHS Costing Manual*.

Shared or network care

529. For adult patients, all care will be the responsibility of the specialist centre with no shared care arrangements in place. Shared or network care is a recognised model for paediatric care, where children may not receive all their care at a specialist centre and may receive some care at other local hospitals or clinics under shared care arrangements. Therefore, it is important that specialist cystic fibrosis centres and shared care providers use these currencies to report costs. To facilitate this, we are further splitting the currencies for children between specialist centres and shared care providers. Specialist centres should list providers with whom they have shared care arrangements in the reconciliation statement workbook.

530. The formal process of designating treatment centres will take some time. For 2011-12 reference costs, designated centres will be those where the centre:

    (a) has agreed with the commissioner of the service that it will be a specialist centre for cystic fibrosis
    (b) has accepted the national service specification for the provision of cystic fibrosis treatment for children and/or adults as appropriate and will have incorporated the specification into the 2012-13 contract.
    (c) has already met the requirements contained within the service specification or will have a plan agreed with the commissioner of the service to meet those requirements by April 2014
    (d) will meet the requirements for data entry into the UK Cystic Fibrosis Registry as detailed in its operating procedure from 1 April 2012.

Costing cystic fibrosis

531. The bandings cover all cystic fibrosis related care for a patient during the financial year. This includes:

    (a) admitted patient care and outpatient attendances, whether delivered in a specialist centre or at a network clinic under shared care arrangements. Examples include patients admitted for treatment of exacerbation of chest infection, admitted for medical treatment of cystic fibrosis distal intestinal obstruction syndrome, or admitted with a new diagnosis of cystic fibrosis related diabetes to establish a new insulin regimen. To help identify activity we

introduced new TFCs for adult cystic fibrosis (TFC 343) and paediatric cystic fibrosis (TFC 264) in April 2011, the use of which is described in the Data Dictionary[73]. A primary diagnosis of cystic fibrosis may also be a useful way to identify cystic fibrosis specific care

(b) home care support, including home intravenous antibiotics supervised by the cystic fibrosis service, home visits by the multidisciplinary team to monitor a patient's condition (eg management of totally implantable venous access devices (TIVADs)), collection of mid-course aminoglycoside blood levels, and general support for patient and carers
(c) intravenous antibiotics provided during admitted patient care
(d) annual review investigations.

532. The following costs should not be included in the bands:

(a) the high cost, cystic fibrosis specific, inhaled or nebulised drugs Aztreonam lysine, Colistimethate sodium, Tobramycin and Dornase alfa. The total cost of these drugs for all full year of care and part year of care patients should be reported in the excluded services worksheet in the reconciliation statement workbook (paragraph 559). The cost of each of these drugs in each band for full year of care patients, but excluding part year of care patients, should also be separately noted in the outpatient (regardless of setting) columns of the drugs and devices worksheet (paragraph 608). Note that this exclusion differs from the usual treatment of high cost drugs without unbundled HRGs described in paragraph 168)
(b) unrelated care which will be assigned to the relevant HRG or TFC, eg obstetric care for a pregnant woman with cystic fibrosis, ENT outpatient review for nasal ploys. Cystic fibrosis ICD-10 codes are included in HRG complication and comorbidity lists and recognised in HRG output
(c) insertion of gastrostomy devices and insertion of TIVADs are not included in the annual banded tariff. The associated surgical costs should be covered by the relevant separate codes
(d) costs associated with long-term nutritional supplementation via gastrostomy or nasogastric tube feeding, which remain within primary medical services
(e) costs associated with all other chronic non cystic fibrosis specific medication prescribed by GPs and funded from primary medical services, eg, long-term oral antibiotics, pancreatic enzyme replacement therapy, salt tablets, and vitamin supplements
(f) costs associated with high cost antifungal drugs that generate an unbundled high cost drug HRG
(g) neonates admitted with meconium ileus who are subsequently identified to have cystic fibrosis until they have been discharged after their initial surgical procedure. Subsequent annual banding should not include the period they spent as an admitted patient receiving their initial surgical management
(h) patient transport services.

533. Funding of the named high cost drugs above will be governed by national commissioning policies. Prescription of these drugs will be initiated by the specialist centre. However, should long term usage be required (as in bands 2A to 5), it may be

73 http://www.datadictionary.nhs.uk/web_site_content/supporting_information/main_specialty_and_treatment_function_codes.asp?shownav=1

to the greater benefit of the patient if the responsible GP is prepared to continue prescribing. Under these circumstances, and where the prescribing GP has recharged the specialist centre for the actual cost of drugs received, the specialist centre should exclude these in the excluded services worksheet and report them separately in the drugs and devices worksheet as described above.

534. We are aware that there are very small numbers of severely ill band 5 patients with highly variable costs. Some may require continuous intravenous antibiotics but can manage their care at home with the support of the specialist team. Others may require prolonged and continuous intravenous antibiotics and hospitalisation over a period of six months or more. Such costs should nevertheless be included.

Section 13: Audiology services

535. The collection of services delivered within discrete audiology departments is aligned to the non-mandatory pathway prices for direct access adult hearing services (paragraph 186 of the Payment by Results guidance for 2009-10). It covers the following aspects:

    (a) assessment
    (b) fitting
    (c) cost of the actual hearing aid
    (d) first follow up
    (e) repairs
    (f) neonatal screening.

536. This includes ongoing outpatient attendances and hearing tests conducted by audiologists and audiological technicians following referral from an ear, nose and throat (ENT) outpatient clinic, and services accessed directly.

537. As well as hearing tests, a range of other services are provided through audiology departments, eg communication groups, environmental aids sessions, lip reading, obscure auditory dysfunction (OADS) follow up, relaxation classes and vestibular rehabilitation. These services should be excluded from reference costs if they do not meet the requirements in this section.

538. Some audiology clinics are held in the community rather than in hospitals. They should be included in reference costs regardless of location when an NHS provider has contractual responsibility for the provision of the service.

539. Cost and activity should not be reported in this section when:

    (a) the activity is carried out as part of an ENT outpatient clinic. Instead, report against the ENT outpatient attendance
    (b) the activity is via a referral from a GP but does not take place in a discrete audiology department. Instead, report as an outpatient attendance under paediatric audiological medicine (TFC 254), audiological medicine (TFC 310) or audiology (TFC 840)
    (c) it relates to the fitting of bone anchored hearing aids. Instead, report against HRGs CZ27Z or CZ28Z (paragraph 114).

540. The activity measure for the initial hearing test or assessment, the fitting of a hearing aid, and the first follow up attendance is the number of attendances. The unit cost is the cost per attendance.

541. The non-mandatory pathway prices only include the first follow up attendance, and organisations should only report the costs and activity of these. Patterns of subsequent follow ups, which should be treated as an excluded service, vary considerably and can distort the cost.

542. The activity measure for the counselling and issue of aids for tinnitus is the number of attendances. The unit cost is the cost per attendance.

543. The activity measure for the actual hearing aid is the number of aids issued. The unit

cost is the cost per aid. The collection distinguishes between the following types of aid:

(a) analogue standard aid
(b) analogue superior aids (including directional control)
(c) digital aids.

544. Costs of other repairs, moulds, tubes etc. should be included as an integral cost driver of the fitting or repair services rather than against the actual hearing aid.

545. We recognise that new hearing aids are not issued solely to new patients and that stronger aids may be required as a patient's hearing deteriorates, or a fault occurs which requires a new aid.

546. The full cost of the digital hearing aid, regardless of whether it is capitalised, should be included, including any capital charges. The purchase of digital hearing aids recorded as capital for funding will in effect mean that capital charges are payable and depreciation is built into the accounts. When performing local reconciliations, an adjustment may be needed to take account of this, taking out the depreciation charge and putting in the full costs. A note should be retained to cover that this adjustment has been made.

547. The activity measure for repair services is the number of repairs, including postal, patient attendance and drop off. The unit cost is the cost per repair.

548. The activity measure for neonatal screening is the number of screening attendances. The unit cost is the cost per attendance. Follow up treatments or interventions should be treated as admitted patient or outpatient services, and standard costing guidelines apply.

Section 14: Non-contractual income

549. One of the most significant items to impact on the reference costs quantum is the level of income from sources other than contracts with NHS commissioners that an NHS provider receives. Allowable non-contractual income is income not directly related to patient care that must be netted off costs when calculating reference costs.

550. In comparing and benchmarking costs, this income can have a distorting effect and therefore must be matched to the cost of service to which it relates. For example, spending on training and education in Trust A is £1 million and in Trust B is £1.5 million. However, Trust B receives allowable non-contractual income for education and training of £0.5 million, resulting in the same net cost in both Trusts. If Trust B did not net off the income they would be over allocating £0.5 million of costs, thus inflating their reference costs.

551. For reference costs, allowable non-contractual income is only that not relating to patient care activity. Income should not be netted off simply because it is targeted or specific funding.

552. Where allowable non-contractual income relates to services excluded from reference costs, care must be taken to ensure it is not netted off. There are no costs in the submission to which this income can be matched.

553. The reconciliation statement workbook requires the actual sums received in the financial year from the following sources:

(a) medical and dental education levy (MADEL)
(b) service increment for teaching (SIFT)
(c) non-medical education and training (NMET)
(d) research and development (R&D)
(e) continuing professional development (CPD)
(f) NHS learning accounts and national vocational qualifications (NVQs)
(g) other charitable contributions
(h) other income received.

554. R&D comprises several funding streams. For reference costs, only R&D income relating to costs that end when the research ends should be netted off costs. The following funding streams are allowable non-contractual income:

(a) research- research grant funding, to pay for the costs of the R&D itself (eg writing the research paper), received from DH (including the National Institute for Health Research (NIHR)), other government departments, charities, and the Medical Research Council (MRC) which includes funding for Biomedical Research Centres, Biomedical Research Units and Collaborations for Leadership in Applied Health Research and Care (CLARHC)
(b) NHS support - funding from DH (NIHR) to cover additional patient care costs associated with the research (eg extra blood tests, extra nursing time) that end when the research ends
(c) flexibility and sustainability funding - funding from DH mainly to support NIHR faculty and associated workforce.

555. Other R&D funding streams relate to patient care costs that continue after the

research ends. These are not allowable non-contractual income and can not be deducted from quantum:

(a) treatment costs including excess treatment costs – funding from normal commissioning arrangements to cover patient care costs associated with the research that continue to be incurred after the research ends if the service in question were to continue
(b) subventions - exceptional funding from DH to contribute to the cost of very expensive excess treatment costs.

556. The Department and other stakeholders are in the early stages of reviewing how excess treatment costs might be funded differently in the future. This could have implications for the future reporting of research costs in reference costs similar to education and training (paragraph 64).

557. Table 53 lists other income received that should be classed as allowable non-contractual income and netted off costs (paragraph 576).

Table 53: Allowable non-contractual income

Item	Notes
Adoption medical fees	
Administration charges	
Advertising	
Beverages and meals	
Cancer network	
Car parking	
Catering	
Charitable contributions to non-pay expenditure	
Charitable income	
Clinical excellence awards	
Clinical trials	But see exclusions list. Associated activity must be excluded from reference costs, similar to private patients
Conferences	
Copy x-ray income for legal cases	
Copying	
Court order administration fees	
Drugs income for drugs supplied to other NHS trusts and pharmacists	
Educational courses	
External research income	
GP co-operatives	
Hospital shop leases	
Hospitality	
Income generation schemes	
Interest received on cash deposits	
Investments	
Lease cars	
Lecture fees	
Lifting	
Lodging charges	
Miscellaneous income	
Mortuary fees	
Moving and handling	
Occupational therapy sales	
Operating theatre and pre-operative assessment programme	
Paycare Commission	

Item	Notes
Photography	
Provider to provider (PTP) handling charges	
Prescription income	
PTP income	
PTP VAT to pay	
Receipts in advance	
Reclaims and rebates	
Rent and rate deductions	
Rent of land and premises	
Research and development	
Restroom hospitality and takings	
Safer cities	
Salary recharges	To charities, universities (eg for staffing university sessions on an MRI scanner) and other non-NHS bodies (eg clinical pathology accreditation)
Sale of baby scan photos	
Sale of inventory items	
Sale of scrap	
Silver recovery	
Staff meal deductions	
Telephones	
Training income	
Unclaimed patients property	
Vending machines sales	
World Health Organisation (WHO) income	

558. Table 54 lists examples of other income that should be classed as not allowable non-contractual income and therefore added back to costs (paragraph 577).

Table 54: Not allowable non-contractual income

Item	Notes
A&E patient experience fund	
Access, booking and choice funding	
Cancer service collaborative	
Capital to revenue transfers	
Coronary heart disease (CHD) collaborative	
Clinical audit funding	
Department of Health funding for specific projects eg disability equipment assessment	Not acceptable unless targeted income specified in the allowable list above
Emergency services collaborative	
Income and expenditure surplus from a previous year	
Improvement partnership for hospitals	
Information for health	
Information for health modernisation fund	
Maternity liaison committee	
Recharges to PCTs as contributions to expenditure for NHS direct	
Reimbursements from manufacturers for device recalls	This only applies where the income is treated as non-NHS income. If it is treated as NHS income, no adjustment is required
Social service income staff	If pooled budget arrangement, services should be excluded
Transitional relief	Transition relief is sometimes provided to offset exceptional costs, eg PFI schemes.

Section 15: Services excluded from reference costs

559. Some services are excluded from reference costs. This might be because of:

(a) no national requirement to know costs
(b) lack of clarity as to the unit that could be costed
(c) no clear national definitions of a service
(d) overlaps with social care funding.

560. Table 55 lists these services. We have added comments where an exclusion needs qualifying, and the exclusion should be understood alongside these comments. **Organisations must not exclude other services, because of historical reporting convention, without first seeking our permission**. **We will challenge exclusions that are not clearly defined.** As a rule, services should form part of the reference costs collection unless listed.

561. The total costs of services excluded should be calculated using total absorption costing, should reflect their entire cost rather than just direct cost, and should be noted in the reconciliation statement workbook (paragraph 604). There is the facility to add additional lines to capture other services where we have granted permission as described above. **Organisations should not use this facility to clarify existing exclusions**.

Table 55: Services excluded from reference costs

Exclusion	Comments
Acquired brain injury	Delivered by mental health trusts
Admission prevention schemes	Where not covered by the specialist nursing services band 15 (active case management) at paragraph 450
Air ambulance service	NHS ambulance trusts only
Artificial eye fitting	The specialist artificial eye fitting service provided by an ocularist, including making, fitting and aftercare checks are excluded. But any preparatory surgery etc are included within admitted patient care costs and activity.
Audiology services	See paragraphs 537 and 541.
Bone anchored hearing aids (BAHAs) – maintenance and programming	Only the costs and activity associated with maintenance and reprogramming after implementation are excluded. The costs and activity associated with fixtures for and fitting of BAHAs form part of the admitted patient care and outpatient returns.
Chemical biological radiological and nuclear (CBRN) costs	NHS ambulance trusts only
Clinical audit and research unit (CARU)	NHS ambulance trusts only
Clinical trials	If the impact of income for clinical trials is such that to net it off would produce unrealistically low, zero or negative costs (ie surplus income), the costs and activity relating to such trials must be excluded. Clinical trial costs and activity should only be included in reference costs where the costs incurred are an accurate indication of what the actual costs of that treatment would be, outside the clinical trial setting.
Cochlear implants – maintenance and programming	Only the costs and activity associated with maintenance and reprogramming after implementation are excluded. The costs and activity associated with implanting forms part of the admitted patient care return.

Exclusion	Comments
Complementary or alternative medicine	Discrete services provided by these practitioners, eg acupuncture or aromatherapy massage are excluded. Where these services form part of a further activity spell they should be included. Therefore, where therapists and practitioners such as acupuncturists or chiropractors form part of a team providing services such as pain management or orthopaedics, their costs, including related on-costs, and associated activity, should be included in the respective cost pool. This approach is consistent with the principles of full absorption costing and matching costs to the services that generate them.
Complex or treatment resistant disorders in tertiary settings	Delivered by mental health trusts
Cystic fibrosis drugs	The high cost, cystic fibrosis specific, inhaled or nebulised drugs Aztreonam lysine, Colistimethate sodium, Tobramycin and Dornase alfa are excluded. The cost of these drugs should also be separately reported by cystic fibrosis banding in the drugs and devices worksheet (paragraph 532).
Decontamination units	NHS ambulance trusts only
Discrete external aids and appliances services	For example, artificial limb or eye services, orthoses, shoes and wigs. Covers both the costs of the services and of the appliances.
Domiciliary visits	Only those that attract a fee for the additional service (apart from mental health domiciliary visits that are included in community activity) are excluded. Normal domiciliary visits undertaken by community or other nurses or therapists for which they are not paid an additional fee are included.
Drugs used in assisted reproduction medicine	Exclude the cost of drugs used in IVF and IUI from HRGs MC06Z to MC15Z (paragraph 163)
Emergency bed service (EBS)	NHS ambulance trusts only
Emergency dental services	Mainly out of hours dental services
Emergency planning	NHS ambulance trusts only
Gender dysmorphia	Delivered by mental health trusts
GP open access	Where patients access open access services provided by GPs. But not open access services whereby GPs refer patients to Trusts.
GP out of hours services	Including where an NHS ambulance provider has taken over the responsibility of providing this service from GPs
Hazardous area response teams (HART)	NHS ambulance trusts only
Health promotion programmes	Defined in the Data Dictionary[74] with examples (stop smoking services, alcohol or drug addiction clinics etc)[75]. Excludes parentcraft, which should be reported under health visiting services (paragraph 459).
Healthy start[76]	Previously known as welfare foods
Helicopter emergency medical services (HEMS)	
Home delivery of drugs and supplies	Some organisations incur costs in delivering drugs, oxygen, blood products or supplies directly to

[74] http://www.datadictionary.nhs.uk/data_dictionary/nhs_business_definitions/h/health_promotion_programme_de.asp?shownav=1

[75] http://www.datadictionary.nhs.uk/data_dictionary/attributes/h/health_promotion_programme_aim_de.asp?query=Health%20Promotion&rank=75&shownav=

[76] http://www.dh.gov.uk/en/Publichealth/HealthyStart/index.htm

Exclusion	Comments
	patient's homes, without any associated clinical activity at the time the drugs or supplies are delivered. Where this occurs, the following costs should be excluded: • drugs, including oxygen or blood products • supplies, eg continence pads or enteral feeding • delivery of drugs or supplies • nurse support of a non-clinical nature • administrative cost of enrolling patients and the managing of the home care service • administrative cost of contracting, ordering, invoice matching and payment • any other associated costs
Hospital travel costs scheme	Scheme offering financial help with the cost of travel to and from hospitals and other NHS centres[77]
Independent or charitable hospices	
Intensive care bed information services	Services hosted in one organisation and provided for the benefit of multiple organisations in a region.
Intermediate and continuing care	Intermediate care is a term used to describe a range of time-limited, residential and/or community based services designed to help people with old age related needs make a faster and more complete recovery from illness. These costs are included in mental health care clusters but excluded from non-cluster mental health and all other service areas.
Learning disability services	Including all charities, eg SCOPE. But excluding secure mental health services (paragraph 421)
Local improvement finance trust (LIFT) set up costs	See paragraph 564
Logistics or courier transport service eg collecting clinical waste	NHS ambulance trusts only
Methadone swallow and depot injection clinics	
Multi-professional triage teams	
Needle exchange schemes	
Neonatal transfers	NHS ambulance trusts only. NHS ambulance trusts should note these costs on the excluded services worksheet in the reconciliation statement workbook. Other trusts should continue to report the costs of neonatal critical care transportation under HRG XA06Z.
Neuropsychiatry	Delivered by mental health trusts
Nursing and residential care homes	
One stop shops and rapid diagnostic packages	Excluded because of disproportionate cost compared to normal single attendances.
Other specialised services	Services provided at a small number of organisations which we have agreed with the organisations concerned may be excluded: • photopheresis provided at the Rotherham NHS Foundation Trust and Guy's and St Thomas' NHS Foundation Trust • malignant hyperthermia unit at Leeds Teaching Hospitals NHS Trust • poisons information service and clinical toxicology service at Guy's and St Thomas' NHS Foundation Trust
Patient education	NHS ambulance trusts only. For all other trusts it should be treated as an overhead.
Patient transport services (PTS)	NHS ambulance trusts and other providers of PTS

[77] http://www.dh.gov.uk/en/Managingyourorganisation/Financeandplanning/DH_075759

Exclusion	Comments
Private finance initiative (PFI) set up costs	See paragraph 564
Physically disabled services	Including charities
Pooled or unified budgets	As a general principle, costs and activity are excluded for any and all services jointly provided under pooled or unified budget arrangements, including Section 28a or Section 31 agreements, with agencies outside the NHS such as social services, housing, employment, education, eg Sure Start, community equipment stores. Where organisations are confident that they can • separately identify a discrete element of the service that is funded by the NHS and • identify the total costs incurred by that service • have accurate and reflective activity data then they can choose to include that service. Such decisions should be defendable to auditors.
Pregnancy advisory service	Discrete counselling
Primary dental services	All services provided under an NHS dental contract
Primary medical services	All services provided under a GP contract (APMS, GMS, PCTMS, PMS)
Prison health services	Except prison mental health specialist teams (paragraph 439)
Resettlement programmes	Adult and elderly
School exclusion services	
Screening programmes	Treatment varies – some national screening programmes are excluded and some are included. See paragraph 562.
Single point of access telephony services (eg 111, NHS direct)	NHS ambulance trusts only
Specialist mental health services for deaf people	Includes services commissioned nationally by NHS Specialised Services from a very few mental health trusts
Spinal care packages in the community	
Step down beds in residential facilities	
Vaccination programmes part-funded by GPs or non-NHS providers	
Wheelchair services	

562. There are several types of patient not in Table 55 for whom income received should be deducted when calculating the quantum on the reconciliation worksheet (paragraph 575). To also exclude costs would understate the quantum by effectively double netting off. However, the activity associated with the costs must be removed. These patients are:

(a) military patients - funded by the Ministry of Defence
(b) non-NHS funded patients - including overseas visitors to the UK who are not exempt from charge under the NHS (Charges to Overseas Visitors) Regulations 2011. This includes most irregular migrants, visitors from a country that the UK does not have a reciprocal agreement with, and some UK citizens residing overseas.
(c) patients from the devolved administrations (Scotland, Wales and Northern Ireland) - parliament votes the budget for the NHS in based on the requirements of NHS patients in England ie those residing in England and legally entitled to NHS care
(d) private patients.

563. The inclusion or exclusion in reference costs of national screening programmes[78] varies. Table 56 clarifies the treatment of each programme.

Table 56: UK national screening committee programmes

Programme	Included or excluded
Antenatal and newborn	
NHS Fetal Anomaly Screening Programme	Included in relevant maternity outpatient and admitted patient costs
NHS Infectious Diseases in Pregnancy Screening Programme	Included in relevant maternity outpatient and admitted patient costs
NHS Linked Antenatal and Newborn Sickle Cell and Thalassaemia Screening Programme	Included in relevant maternity outpatient and admitted patient costs. Exception is for the small number of genetic tests that occur, which are excluded and should be funded directly by PCTs[79]
NHS Newborn and Infant Physical Examination Screening Programme	Included in the cost of maternity delivery HRGs or postnatal visits
NHS Newborn Blood Spot Screening Programme	The taking of the sample is included in the cost of maternity delivery HRGs or postnatal visits. Its analysis by regional newborn screening services is excluded from reference costs
NHS Newborn Hearing Screening Programme	Included in audiological services neonatal screening (paragraph 548)
Young person and adult	
NHS Abdominal Aortic Aneurysm Screening Programme	Excluded
National Screening Programme for Diabetic Retinopathy	Included in diabetic retinal screening
NHS Breast Screening Programme	Excluded
NHS Cervical Screening Programme	Excluded
NHS Bowel Cancer Screening Programme	Excluded
Related programmes[80]	
Health check (vascular risk)	Excluded
Chlamydia screening	Excluded
Prostrate cancer	Excluded

564. Table 57 clarifies the treatment of PFI or LIFT expenditure. As a general principle, PFI or LIFT set up costs include one off revenue costs incurred in setting up a PFI or LIFT scheme from the initial business case stage to financial close. This includes fees (consultancy, legal, financial etc) and other costs such as planning applications. These set up costs should be excluded from reference costs.

Table 57: PFI and LIFT expenditure

Heading	Comment	Treatment of costs in reference costs
Cost of services		Include
Depreciation charges		Include
Dual running costs	For services transferring	Include. Double running costs for all other service reconfigurations etc. are included.
Interest expense		Include. This includes the indexed elements of PFI payments that do not relate to services.
Interim services (including pass through costs)	Facilities management costs transferred early	Include
Subleasing income		Include. Income generated from any subleased areas should be deducted from overall PFI costs.

[78] http://www.screening.nhs.uk/index.php
[79] http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Dearcolleagueletters/DH_104835
[80] Not approved by the UK national screening committee

Accelerated depreciation		Exclude. Accelerated depreciation should be excluded.
Advisor fees	External advice provided to the Trust	Exclude. Set up costs (principally fees) incurred by the trust in the development of a PFI scheme can be excluded.
Annual capital expenditure	Such as lifecycle costs	Exclude. The costs of capital items are picked up through depreciation in the same way as all other capital assets.
Demolition costs	These are works undertaken and paid for by the trust outside of the PFI contract	Exclude. If the scheme were to be funded through public capital this is likely to be capital expenditure.
Impairment charge		Exclude. This is consistent with the principle that reference costs reflect ordinary ongoing revenue costs and exclude extraordinary one off costs unless otherwise stated.
Project team	Trust project team	Exclude. Set up costs (principally fees) incurred by the trust in the development of a PFI scheme can be excluded. Please ensure that you can satisfy the auditors that the costs of the project team relate solely to the time spent working on the PFI scheme.
Profit on sale of surplus land		Exclude.
Repayment of finance lease		Exclude.
Other costs	Other payments not made to PFI provider	Other costs incurred by the trust that are a result of the PFI development but are not payments made to the PFI provider should be treated in the same way as other similar trust costs as directed in this guidance.

Section 16: Reconciliation

Introduction

565. In *Improving coding, costing and commissioning*, the Audit Commission recommended that the Department should provide guidance on how to complete the reconciliation statement workbook. The following guidance responds to that recommendation.

566. The completion of the reconciliation statement workbook is a fundamental part of the reference cost process. The workbook provides assurance that all costs have been correctly included, services excluded identified and allowable income netted off the reference cost quantum. It also provides memorandum information used by the Department and the NHS Information Centre and, from 2011-12, the PLICS survey that we previously ran outside the collection.

567. The reconciliation statement workbook includes the following worksheets:

(a) **reconciliation** – this reconciles the data recorded in the audited financial statements to the total reference cost quantum
(b) **services excluded** – records all services excluded from reference costs
(c) **non-contractual income** – records sources of non-contractual income
(d) **drugs and devices** - a memorandum of high cost drugs and devices, the costs of which must be included against the appropriate HRGs in the reference costs workbook, and separately identified here for further analysis and investigation by the Department
(e) **memorandum** – other memorandum information to inform the development of reference costs and the national tariff
(f) **survey** – a mandatory survey about uptake of PLICS and other questions about the costing process including clinical engagement.

568. It is essential to complete the workbook at the start of the reference costing process. Identifying excluded services, excluded costs and allowable non-contractual income and agreeing totals to final accounts will provide confidence that the correct reference cost quantum has been established before costing services.

569. Although each trust will have their own system, the following steps are likely to apply to all:

(a) ensure the financial accounts are closed and the final version of the general ledger is available

(b) obtain the final trial balance or drawdown the general ledger, or both, and ensure they agree, at detailed account code level

(c) allocate the lines on the trial balance/download to the lines on the reconciliation worksheet. At this stage, it may be possible to extract data for the drugs and devices and non-contractual income worksheets

(d) check the figures obtained in the step above agree to the final audited accounts spreadsheets (TRUs for NHS trusts, FTCs for NHS foundation trusts). It may be necessary to ask colleagues in financial accounts for this information

(e) complete the reconciliation worksheet to the Total costs line 28 and ensure this agrees to the trial balance/download

(f) check the data against last years to identify any material or unexpected variations, and investigate if needed

(g) import this quantum into the costing system

(h) identify the excluded services from the outputs of the costing system and complete the excluded services worksheet, which will link to line 29 in the reconciliation worksheet

(i) ensure the total reference cost quantum in the completed reference costs workbook agrees to the Total reference cost submission quantum line 30 on the reconciliation worksheet

(j) complete the non-contractual income and drugs and devices worksheets

(k) final check of the reconciliation statement workbook against last years to identify any material or unexpected variations, and investigate if needed.

Reconciliation worksheet

570. Separate sheets have been provided for NHS trusts or NHS foundation trusts. Note that they must now be completed in £ not in £000.

571. This worksheet reconciles the data recorded in the audited financial statements to the total reference cost quantum. On the worksheet the references to the lines in the TRUs/FTCs are included where applicable.

572. Trusts obtaining foundation trust status part way through a financial year should complete the reconciliation worksheet for foundation trusts. They must include the total of their TRUs and FTCs on this worksheet in order to balance back to their total reference cost quantum. Line 23 Other gains and losses has been added to the FTC statement so part year foundation trusts do not need to recalculate the TRU figures to fit the FTC layout. Where there are other presentational differences, eg finance costs unwinding of discount, there is no need to restate the TRUs to fit the FTC description, but all costs must be included.

573. The worksheet starts with the total operating expenses reported in the financial statements. There are then a number of adjustments to remove expenditure that is not included in the calculation of reference costs, or to deduct income that should be netted off. Trusts must ensure there is no double counting or double netting off.

574. **Line 1 Operating expenses** is the starting point to ensure all costs are included in quantum.

575. **Lines 2 to 4 Non-NHS income** are deducted as reference costs are calculated for the treatment of English NHS patients only. Removing the income received from non-NHS patients, including the devolved administrations, will result in a nil net cost.

576. **Line 5 Other operating income** is deducted here as the majority of the income will

be allowable non contract income (Table 53). In order to provide accurate data to inform the transition to an education and training tariff we have separated MADEL, NMET and SIFT income from other operating income at lines 5a to 5d. All trusts must complete this breakdown of other income. The total of these four lines must equal total other operating income.

577. **Line 6 Not allowable non-contractual income** is added back. This is income included in line 5 that cannot be netted off when calculating reference costs (Table 54).

578. **Line 7 Cost of centrally funded awards under the clinical excellence awards scheme** is deducted. Only centrally funded awards, via the NHS bundle, under the clinical excellence awards scheme (levels 9 to 12, or distinction award levels B, A and A+ under the old scheme) should be netted off. Internally funded awards (levels 1 to 9, or discretionary points levels 1 to 8 under the old scheme) should not be netted off. Where centrally funded and locally funded awards are included in **Line 5 Other operating income** the amount must be added back there in order to be deducted here, to avoid double netting off.

579. **Line 8 Funds received for foundation trust application** are deducted. Where these are included in **Line 5 Other operating income** the amount must be added back there in order to be deducted here.

580. **Line 9 PFI or LIFT exclusions** that relate to set up costs of PFI or LIFT schemes are excluded (Table 57).

581. Any profit/loss from the sale of non-current assets in a PFI or LIFT deal should also be included here to net off the gain or loss. This would be recorded in income/ expenditure for foundation trusts or other gains and losses in NHS trusts.

582. **Line 10 Impairments and reversals** charged through the Statement of Comprehensive Income are not included in reference costs and must be removed. Where there is a charge to expenditure the amount will be deducted to remove the expenditure, conversely the reversal of an impairment will be added back. There is a new requirement to split these impairments between new build and other on the memorandum worksheet (paragraph 613).

583. **Lines 11 and 12 Capital cost of donated/government granted assets and donations/government grants received to fund non current assets**. Costs and income associated with donated/government granted non-current assets must be removed. Income received in year is added back (as this will have been deducted on line 5), and any charges to expenditure such as depreciation are deducted (these will be included in line 1). Take care not to remove impairments, which will have already been deducted in **Line 10 Impairments and reversals**. The income may be actual cash donated to purchase an asset or the asset value where an asset has been donated; the treatment here will be the same.

584. Following a change to the interpretation of accounting standards, the treatment of the credit entry relating to donated assets will no longer be held in reserves and used to offset charges to expenditure. The funding element is now recognised as income in year as required by IAS 20 as interpreted by the HM Treasury Financial Reporting Manual.

585. In the year when the asset is received, the trust will have income equal to the value of the asset and a much smaller depreciation charge to expenditure. To prevent any instability in reference costs quantum caused by this large net income in the year of receipt, followed by years of increased costs (ie the depreciation charge etc), all income and expenditure relating to donated assets must be excluded from reference costs.

586. This will bring the treatment in line with previous years were the income released from reserves would be equal to the depreciation etc charged and so have a nil effect on reference costs. Impairments will not be an issue as these are not included in reference costs. This change relates equally to government granted assets.

587. **Line 13 Less bad debts** relating to non-NHS patients and allowable other operating income must be removed from the reference cost quantum.

588. **Lines 14 to 19** are blank rows that have been left for trusts to add adjustments that have not been included in the reconciliation. Full details of the adjustment must be provided.

589. **Line 20 Total net operating expenditure** is the sum of lines 1 to 19.

590. **Line 21 Adjustment for provider-to-provider agreements.** Guidance on the principle of provider-to-provider arrangements can be found in the *NHS Costing Manual*. The basic principle is that the providing trust will have expenditure with income to match and therefore nil effect on reference costs. The receiving trust will cost any services as though they were provided internally, ie they are included in reference costs.

Providing trust

591. Provision of services – it is unlikely that a provider-to-provider adjustment will be needed where a trust only provided services. The income from providing the service would be posted to other operating income and so will already have been netted off expenditure in line 5.

592. Provision of treatment – where treatment has been provided to a non-NHS patient no adjustment will be needed as the income will have already been deducted on lines 2 to 4. Where the treatment is provided to another NHS body then the income will need to be deducted on line 21, to net off the cost.

Receiving trust

593. There should be no need for any provider to provider adjustment for the trust receiving the service or treatment. The cost paid to the providing organisation will be included in reference costs as though it were provided by the trust itself.

594. **Line 22 Subtotal** is the sum of line 20 and line 21.

595. The net operating cost is then adjusted for the non-operating costs/income lines as reported in the financial accounts.

596. **Line 23 Add other gains and losses**, for NHS trusts only or foundation trusts

obtaining foundation trust status in year, for the part of the year they were an NHS trust. This will be mainly profit/loss on disposal of non current assets, which is included in expenditure or other income in foundation trust accounts and therefore does not need to be adjusted. Profit/loss on disposal of non current assets must be included in the reference cost quantum.

597. **Line 24 Investment revenue or finance income** is interest received.

598. **Line 25 Finance costs or finance expenses** is interest payable and other costs associated with financing. In NHS trusts, it will also include unwinding of discount on provisions.

599. **Line 26 PDC dividends payable** is the PDC payables figure from the Statement of Comprehensive Income, not the cash flow figure.

600. **Line 27 Finance expenses - unwinding of discount** applies to foundation trusts only and is the cost of the unwinding of discounts on provisions in NHS trusts it is included in line 25.

601. **Line 28 Total cost** is the sum of lines 22 to 27.

602. **Line 29 Total cost of services excluded from reference costs collection** must equal the figure recorded on the **Services excluded** worksheet.

603. **Line 30 Total reference cost submission quantum** is the sum of lines 28 and 29 and must agree to the main reference cost submission. This will be validated in Unify2.

Services excluded

604. This statement records all services excluded from reference costs (listed in Section 15) and will agree to the figure reported in the Reconciliation worksheet.

Non-contractual income

605. This statement of non-contractual income (discussed in Section 14) is memorandum only and does not link to the other worksheets.

606. The categories of income separately identified on this sheet are used by the Department when considering cross subsidisation of costs and other areas of tariff development.

607. Non-contractual income will be predominantly **Other operating income**. In most cases the total on this worksheet will be the sum of lines 5, 7 and 8 less line 6 from the reconciliation worksheet. Some trusts may make other adjustments for non-contractual income on the user defined lines 14 to 19, and these will need to be taken into consideration if reconciling the total to other operating income.

Drugs and devices

608. This worksheet provides a memorandum of high cost drugs and devices, the costs of which should have been included against the appropriate currencies in reference

costs workbook (with the exception of cystic fibrosis specific drugs, which should have been excluded, and total costs noted on the services excluded worksheet), and separately identified here for further analysis and investigation.

609. The Department uses the data to adjust tariffs to reflect the exclusion of some high cost drugs and devices. It is necessary to make these adjustments outside reference costs as the drugs and devices that are unbundled and/or included in tariff may change between reference cost collection and tariff calculation three years later.

610. There is the facility to add additional lines, eg for other high cost renal drugs in addition to those named.

611. The NHS Information Centre also uses the data when assessing HRG design.

Memorandum

612. This worksheet provides other memorandum information to inform the development of reference costs and the national tariff. Some of the lines must be completed by all providers (eg supply of drugs to patients on discharge), other lines need only to be completed by certain specified providers.

613. A breakdown of impairments charged to the Statement of Comprehensive Income between new build and other has been added. This will provide information for the Department to consider the impact of impairing new builds.

Survey

614. This worksheet replaces the separate voluntary PLICS survey that we have separately conducted alongside the reference costs collection in previous years, and is mandatory.

Checklist

615. This following checklist will help to ensure the completeness and accuracy of the reconciliation statement workbook:

Reconciliation statement workbook checklist		
1	Reconciliation	Do the final reconciliation worksheet figures agree to working papers and the final audited TRU/FTC consolidation schedules? Has this been completed in £ (note the change from previous years)? Are there any late audit adjustments? Have they been included in the quantum? Where lines 14-19 have been used have the reasons for this been provided?
2	Services excluded	If additional lines have been completed, has permission been granted by the Department? Do these additional lines only relate to exclusions for which permission has been given, and not to clarifications of existing exclusions on the national list?
3	Non-contractual	Has the non-contractual income sheet been completed?

Reconciliation statement workbook checklist		
	income	
4	Drugs and devices	Have all drugs costs (except cystic fibrosis) been included against relevant HRGs in the reference costs workbook? Have all device costs been included against relevant HRGs in the reference costs workbook?

Glossary

Admitted patient care	An overarching term covering the following classifications of patients who have been admitted to a hospital: ordinary elective admissions, ordinary non-elective admissions, day cases, regular day admissions and regular night admissions.
Allocation	Allocating costs involves spreading costs from one to many based on a predetermined methodology, eg the number and cost of each test.
Apportionment	Apportioning costs involves spreading cost from one to many based on a predetermined percentage. For example, board costs might be apportioned across service departments on the basis of the proportion of total pay expenditure.
Complications and comorbidities	Many HRGs differentiate between care provided to patients with and without complications and comorbidities. Comorbidities are conditions that exist in conjunction with another disease, eg diabetes or asthma. Complications may arise during a period of healthcare delivery.
Core HRG	Represents a care event (eg finished consultant episode, outpatient attendance or A&E attendance).
Cost driver	Activity that influences the cost of a service, eg length of stay or time in theatre.
Cost pool	Costs from different cost centres are grouped into different cost pools (eg wards, theatres or diagnostics) to enable analysis
Cost weight	This is a weighting to reflect resource usage. For example, each individual pathology test needs to be assigned a cost weight because different tests will use different levels of resources in terms of staff time and consumables.
Currency	A unit of healthcare activity such as spell, episode or attendance.
Data quality	The degree of completeness, consistency, timeliness and accuracy that makes the data appropriate for a specific use.
Direct costs	Costs that directly relate to the delivery of patient care. Examples include medical and nursing staff costs.
Discrete service	The definition of discrete in this context in the guidance is where a patient has attended solely for this service and it is not part of an ongoing package of care.
Excess bed days	Days that are beyond the trim point for a given HRG.
Finished consultant episode (FCE)	An episode of treatment under one consultant that has finished.
Fixed costs	Fixed costs are not affected by in-year changes in activity, for example rent and rates.
Healthcare resource group (HRG)	Standard groupings of clinically similar diagnosis and procedure codes that use similar levels of resources.
Spell	The period from date of admission to date of discharge

	for one patient in one hospital. A spell may consist of more than one FCE.
Impairments	Impairments arise when there is a loss in value of an asset compared with its balance sheet value. They typically arise when an asset becomes obsolete or is to be sold, but can also be identified in a regular revaluation of assets. Any loss in value is recorded in the organisation's income and expenditure account
Indirect costs	Costs that are indirectly related to the delivery of patient care. They are not directly determined by the number of patients or patient mix but costs can be allocated on an activity basis to service costs.
Multi-professional education and training (MPET)	Funding from the Department to NHS trusts and NHS foundation trusts to compensate for the costs of undergraduate and postgraduate medical training, and training for non-medical and other clinical staff.
Overhead costs	Costs that are not driven by the level of patient activity and which have to be apportioned to service costs as there is no clear activity-based allocation method. An example would be the chief executive's salary.
Patient level costing	Allocating costs, wherever possible, to a patient. Historically, costs have been allocated to a specialty or healthcare resource group (HRG) and then allocated across all patients, producing average costs. Assigning costs down to patient level provides opportunities for much greater understanding of how costs are built up.
Patient level costing and information systems (PLICS)	The systems that support patient level costing.
Payment by results	The payment system in England under which commissioners pay healthcare providers for each patient seen or treated, taking into account the complexity of the patient's healthcare needs. The Department's *A simple guide to Payment by Results*[81] provides a useful introduction.
Quantum	The total monetary amount available at a trust to be allocated within reference costs.
Semi fixed costs	Semi-fixed costs are fixed for a given level of activity but change in steps, when activity levels exceed or fall below these given levels. Nursing costs are an example.
Service line reporting (SLR) or management (SLM)	Service line reporting or management was introduced by Monitor for NHS foundation trusts and involves identifying specialist areas and managing them as distinct operational units. This allow trusts to analyse the relationship between activity and expenditure; much like a local store would do when wanting to understand which sections within the store are most profitable.
Service weight	Service weights are used to allocate costs across a wide group of patients or products. For example, pharmacy

81 http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_128862

	costs may be allocated across all healthcare resource groups with each HRG receiving a service weight.
Service/Programme/Treatment function	These terms tend to be used interchangeably. In costing, they are a separately identifiable group of patient related activities that can be quantified. These may be a treatment function, sub treatment function, department or function depending on local management arrangements and styles of service delivery.
Tariff	The fixed prices for units of healthcare activity published by the Department.
Trim point	A defined length of stay for each HRG. Technically defined as the upper quartile length of stay for the HRG plus 1.5 times the inter-quartile range of length of stay.
Unbundled HRG	An unbundled HRG represents an additional element of care. An unbundled HRG will always be associated with a core HRG that represents the care event, and will always be produced in addition to a core HRG.
Variable costs	Costs that vary with changes in activity, for example drugs.

Annex A: Guide to the reference costs workbook

Table 58: Reference costs workbook

Worksheet name	Services covered	Currency	Other splits	Activity measure	Para ref
EL	Ordinary electives	HRG and TFC		FCE Inlier bed day Excess bed day	124
NEL	Ordinary non-elective long stays	HRG and TFC		FCE Inlier bed day Excess bed day	124
NES	Ordinary non-elective short stays	HRG and TFC		FCE	124
DC	Day cases	HRG and TFC		FCE	124
RDNA	Regular day or night admissions	HRG and TFC		Admission	124
DCARE	Daycare facilities	Stroke Elderly Other		Patient day	159
OPATT	Outpatient attendances Ward attendances	TFC	Consultant led Non consultant led	Attendance	202
OPPROC	Outpatient procedures	HRG and TFC		Procedure	242
CMDT	Cancer multi-disciplinary team meetings	TFC		Patient treatment plan	222
AE	Emergency medicine	HRG sub-chapter VB	24 hour A&E Non 24 hour A&E MIUs Walk in centres	Attendance	245
CHEMP	Chemotherapy procurement	HRG sub-chapter SB	Ordinary admission Day case and regular day or night admission Outpatient Other	Cycle of treatment	258
CHEMD	Chemotherapy delivery	HRG sub-chapter SB	Day case and regular day or night admission Outpatient Other	Delivery	258
CHEMDAY	Same day chemotherapy admission/attendance	HRG SB97Z	Day case and regular day or night admission Outpatient	Attendance	263
ACC	Adult critical care	HRG sub-chapter XC	Critical care units	Bed day	281

Worksheet name	Services covered	Currency	Other splits	Activity measure	Para ref
			Burns critical care units Spinal injuries critical care units	Critical care period	
ACCOUT	Adult critical care outreach	Total cost of outreach service		Activity count = 1	296
PNCC	Paediatric critical care Neonatal critical care	HRG sub-chapter XA and XB		Bed day	298
CCT	Paediatric critical care transportation Neonatal critical care transportation	HRG sub-chapter XA and XB		Patient journey	298
DIAGIM	Diagnostic imaging	HRG sub-chapter RA and TFC	Outpatient Direct access Other	Examination	303
HCDAPC	High cost drugs in admitted patient care setting	HRG sub-chapter XD		Spell	312
HCDOP	High cost drugs in outpatient and other settings	HRG sub-chapter XD		Attendance	312
RADO	Radiotherapy planning in ordinary admission Radiotherapy treatment in ordinary admission	HRG sub-chapter SC		Admission	323
RADP	Radiotherapy planning	HRG sub-chapter SC	Day case and regular day or night admission Outpatient Other	Treatment	323
RADT	Radiotherapy treatment	HRG sub-chapter SC	Day case and regular day or night admission Outpatient Other	Attendance (one fraction of radiotherapy per attendance)	323
RADDAY	Same day radiotherapy admission/attendance	HRG SC97Z	Day case and regular day or night admission Outpatient	Attendance	
REHABA	Rehabilitation assessment	HRG sub-chapter VC	Admitted patient care Other Complex specialised Specialist Non-specialist	Attendance	334
REHABD	Rehabilitation delivery	HRG sub-chapter VC	Admitted patient care Other Complex specialised Specialist	Occupied bed day	334

Worksheet name	Services covered	Currency	Other splits	Activity measure	Para ref
			Non-specialist		
SPCAPC	Specialist palliative care	HRG sub-chapter VC	Ordinary admission Day case and regular day or night admission	Bed day	355
SPCOP	Specialist palliative care	HRG sub-chapter VC	Outpatient Other	Attendance	355
RENAL	Renal dialysis	HRG sub-chapter LD			361
DAD	Direct access diagnostic services	HRG DAPF for direct access plain film x-rays		Test	381
DAP	Direct access pathology services	Biochemistry Cytology Haematology Histology or histopathology Immunology Microbiology or virology Neuropathology Phlebotomy Other		Test	383
MHCC	Mental health care clusters for working age adults and older people	Care clusters		Various	394
MHOBD	CAMHS ordinary admissions Specialist mental health services Secure mental health services	Children and adolescents Drug and alcohol services: children and adolescents Drug and alcohol services: adult Autistic spectrum disorder Eating disorder services: children and adolescents Eating disorder services: adults Mother and baby units Low level secure services Medium level secure services High dependency secure provision: women's services High dependency secure provision: mental health or psychosis High dependency secure provision: learning disabilities High dependency secure provision : personality disorder		Occupied bed day	416, 419, 421

Worksheet name	Services covered	Currency	Other splits	Activity measure	Para ref
		High secure unit: women's services High secure unit: mental health or psychosis High secure unit : learning disabilities High secure unit : personality disorder High secure unit dangerous and severe personality disorder Child and adolescent low secure services Child and adolescent medium secure services Child and adolescent high secure services			
MHDAY	Mental health day care facilities	Children and adolescent		Patient day	427
MHOPATT	Mental health consultant-led outpatient attendances	Adult drug and alcohol services Child and adolescent drug and alcohol services Child and adolescent other services Autistic spectrum disorder Eating disorder services: children and adolescents Mother and baby units		Attendance	416, 418, 419
MHCOMM	Mental health consultant-led community services and community mental health teams	Adult drug and alcohol services Child and adolescent drug and alcohol services Child and adolescent other services Autistic spectrum disorder Eating disorder services: children and adolescents		Contact	416, 418, 419
MHST	Mental health specialist teams	A&E mental health liaison services Criminal justice liaison services Prison services Other mental health specialist teams	Adult and elderly Child	Contact	
COMMSPEC	Community specialist nursing services	1: Cancer related 2: Palliative or respite care 3a: Arthritis nursing liaison 3b: Diabetic nursing liaison 3c: Cardiac nursing liaison 3d: Asthma or respiratory nursing liaison 3e: Breast care nursing liaison 3f: Parkinson or alzheimer nursing liaison 4: Continence services	Adult or child Face to face or non face to face	Contact	450

Worksheet name	Services covered	Currency	Other splits	Activity measure	Para ref
		5: Stoma care 6: Intensive care nursing 7: Infectious diseases 7b: Tuberculosis specialist nursing 8: HIV/AIDS nursing services 10: Haemophilia 11: Transplantation patients 12: Enteral feeding. 13: Tissue viability nursing liaison 14: Treatment room nursing services 15: Active case management 17: Other specialist nursing			
COMMNURS	Community nursing services	Nursing services for children School based children's health core services School based children's health other services District nursing services Health visiting core services Health visiting other services Parentcraft	Face to face or non face to face Group or one-to-one	Contact	451, 455, 459
COMMTHPY	Community therapy services	Physiotherapy Occupational therapy Speech and language therapy	Adult or child Group or one-to-one	Contact	
COMMREHB	Community rehabilitation teams	Community rehabilitation teams		Contact	
COMMVAC	Vaccinations and immunisations	School based children's health services Health visiting services Other community medical services		Vaccination	455, 459
COMMBABY	Community ante and post natal visits	Community midwifery ante natal visits Community midwifery post natal visits Health visiting post natal visits		Visit	516, 459
COMMATT	Community services attendances	Community paediatric services Community podiatry Community dentistry Community dietetics		Attendance	466
COMMMID	Community midwifery home births	HRG sub-chapter NZ		HRG	516
HAH	Hospital at home and early discharge schemes	COPD Fractured neck of femur Other		Team contact Complete package of care	476
AMBCALL	Ambulance services	Calls		Call	482

Worksheet name	Services covered	Currency	Other splits	Activity measure	Para ref
AMBHEAR	Ambulance services	Hear and treat or refer		Patient	487
AMBSEE	Ambulance services	See and treat or refer See and treat and convey		Incident	491
CYSTIC	Cystic fibrosis	Band 1 Band 1A Band 2 Band 2A Band 3 Band 4 Band 5	Adult (17 and over) Child (16 and under) Specialist centre Shared care provider Part year of care	Patient	518
AUDIOAIDS	Audiology services: hearing aids	Analogue standard Analogue superior Digital		Aid	535
AUDIOFITT	Audiology services: fitting	Assessment Fitting Follow up Counselling and issue of aids for tinnitus		Attendance	535
AUDIOREP	Audiology services: repairs	Hearing aid repairs		Repair	
AUDIOSCRN	Audiology services: neonatal screening	Neonatal screening services		Screening	535

Table 59: Spells costs workbook

Worksheet name	Services covered	Currency	Other splits	Activity measure	Para ref
EL&NEL	Ordinary electives Ordinary long stay electives Ordinary short stay electives Excess bed days	HRG		Spell Spell inlier bed day Spell excess bed day	59
DC	Day cases	HRG		Spell	59

Annex B: Quality checklist

10 key areas that will improve the quality of costing information		
1	Total costs	Is the total cost quantum correct? Has the guidance on standard adjustments been correctly applied?
2	Sense check	Has a simple sense check been completed? Are unit costs under £5 and over £50,000 justifiable? Do other unit costs seem correct? Are the reasons for outliers documented and signed off?
3	Checking against other sources	Has the activity information used in reference costs submission been reconciled to other sources, such as HES or contract monitoring information? Has the reference costs submission been compared with last year's, particularly the reported unit costs? Are the reasons for outliers documented and signed off?
4	Benchmarking	Has the previous submission been benchmarked against national data, both for individual unit costs and for activity volumes (this information is available in the Audit Commission's national benchmarker)? Are the reasons for outliers documented and signed off?
5	Non-PAS systems	Where non-PAS systems are used is there a consistent and robust approach to accessing and producing information in the currency required for costing?
6	Known data quality issues	Where data quality is known to be poor, is there a suitable approach to producing activity and cost information? Is there a plan in place to address the poor data quality?
7	Documentation	Are there documented processes in place for completing reference costs submissions? Have the areas of difficulty been adequately explained? Has this been tested and signed off?
8	Reporting and clinician engagement	Is costing information routinely reported to clinicians and other service leaders? Are they supported in using this information to run their departments? Are the implications of poor data quality on funding understood?
9	Board engagement	Is the RCI reported to the board, with suitable information on the implications of changes and national performance? Are the board updated on known data quality issues and the work to resolve them?
10	PCT engagement on non-tariff	Is the PCT properly engaged in the non-admitted patient care, non-tariff parts of reference costs when they underpin local contracts? Are they involved in resolving known issues?

Audit Commission, 2011

Annex C: Reference cost validations

Table 60: Mandatory validations in the reference costs workbook

Validation	Description	Worksheet	Source	Para
Activity > 0	Activity must be positive	All	Unify2	
Activity = integer	Activity must be an integer	All	Unify2	
Activity and unit cost	If activity is reported, then a unit cost must be reported, and vice versa	All	Unify2	
Adult critical care outreach services	Activity count must equal one, and a total cost reported	ACCOUT	REFC	297
Bed days > = FCEs	Number of inlier bed days must be greater than or equal to FCEs	EL, NEL	Unify2	
Data type invalid	Data type must be OWN or OUT	All	REFC	
Direct access pathology	Number of requests must be reported as well as number of tests	DAP	REFC	
Duplicate entry	Each combination of data type, department code, service code and currency code must be unique	All	REFC	
Excess bed day costs without excess bed day activity	If excess bed day costs are reported, then excess bed day activity must be reported, or vice versa	EL, NEL	Unify2	
Excess bed days without inlier activity	If excess bed day costs are reported, inlier activity must be reported	EL, NEL	Unify2	
Hospital at home	Number of completed packages of care must be reported as well as number of team contacts	HAH	REFC	
HRG code invalid	HRG codes must match those provided in the HRG4 2011-12 Reference Costs Grouper	All sheets that use HRGs	REFC	
Inlier bed days < HRG trim point * no. of FCEs	Inlier bed days should not be greater than the HRG trim point multiplied by number of FCEs	EL, NEL	Unify2	
Missing entry	Missing values (excluding cost or activity) within a row of data	All	REFC	
NEI_L average length of stay >= 2	Average length of stay, ie number of inlier bed days divided by number of FCEs, must be greater than or equal to two for non-elective long stays.	NEL	Unify2	
No data	Codes have been supplied, but no unit costs or activity	Flexible sheets	Unify2	
Patient type invalid	Patient type must be a valid code, eg DC, EI etc	Flexible sheets	REFC	
SB97Z and SC97Z = 0	Costs should not be allocated to SB97Z or SC97Z	CHEMDAY, RADDAY	REFC	264, 325
TCMDT	Only an activity of 1 and total cost can be reported against total cancer multi-disclipinary team (TCMDT) service codes. If the activity is known, it must be reported against the appropriate CMDT service code	CMDT	REFC	229
TFC code invalid	TFC codes must match those in the Data Dictionary or Table 8	EL, NEL, NES, DC, RDNA, OPATT, OPPROC, DIAGIM	REFC	
Unit cost > 0	Unit cost must be positive and greater than £0.01	All	Unify2	
Unit cost = #.##	Unit cost must be to two decimal places	All	Unify2	

Table 61: Mandatory validations in the spells workbook

Validation	Description	Worksheet	Source	Para
Activity > 0	Activity must be positive	All	Spells	
Activity = integer	Activity must be an integer	All	Spells	
Activity and unit cost	If activity is reported, then a unit cost must be reported, and vice versa	All	Spells	

Validation	Description	Worksheet	Source	Para
Bed days > = spells	Number of inlier bed days must be greater than or equal to spells	All	Spells	
Excess bed days without inlier activity	If excess bed days are reported, inlier spell bed days must be reported	All	Spells	
Inlier bed days < HRG trim point * no. of spells	Inlier bed days should not be greater than the HRG maximum trim point multiplied by number of spells	All	Spells	
Unit cost > 0	Unit cost must be positive and greater than £0.01	All	Spells	
Unit cost = #.##	Unit cost must be to two decimal places	All	Spells	

Table 62: Mandatory validations between workbooks

Validation	Description	Source
RECON and REFC	The reconciliation workbook cannot be signed off until the reference costs workbooks has been uploaded and vice versa	Unify2
REFC quantum	The sum of all unit costs and activity in the reference costs workbook must be within +/-5% of line 30 in the reconciliation worksheet	Unify2
Spells quantums	Total spell costs should equal total FCE inlier and excess bed day costs by each admission type (day case, ordinary elective and ordinary non-elective)	Unify2

Table 63: Non-mandatory validations that require investigation in the reference costs workbook

Validation	Description	Worksheet	Source
Day case *2 > ordinary elective	We will query where day case unit costs are more than double ordinary elective admission unit costs. This analysis will be at (i) supplier type, (ii) service and (iii) currency level	DC, EL	Post submission
HRGs with high cost device	We will query lower than minimum expected costs for a small number of HRGs where the activity should always include a high cost device (eg cochlear implant and bone anchored hearing aid (BAHA) HRGs).	EL, NEL, NES, DC, OPPROC	REFC
Market share (acute and non-acute)	We will query data where the market share is greater than 5% and cost greater than £100,000 at (i) department and (ii) currency level	All	Post submission
No change from last year	We will query where there are no change in both unit costs and activity from last year. The acute analysis will be at (i) supplier type, (ii) department, and (iii) sub-chapter level. The non-acute analysis will be at (i) supplier type, (ii) department, (iii) service and (iv) currency level	All	Post submission
Outliers (acute and non-acute)	We will query any significant outliers in the unit cost data at (i) department and (ii) currency level.	All	Post submission
Outpatient procedures < 1,000	We will query all acute organisations reporting less than 1,000 outpatient procedures	OPPROC	REFC
Paediatric TFCs	We will query all acute organisations not using paediatric TFCs (paragraph 234)	OPATT	REFC
Same cost HRGs	We will query any HRGs in a sub-chapter which have the same cost (see *NHS Costing Manual*)	All sheets that use HRGs	Post submission
TFC 323	We will query any of the organisations in Table 15 not reporting activity against this TFC, and query any other organisations reporting against this TFC	OPATT	REFC
Unit cost < £5	We will query all data with a unit cost of less than £5	All	REFC
Unit cost > £50,000	We will query all data with a unit cost greater than £50,000	All	REFC
Unlikely HRG settings	We will query costs reported in HRGs settings which are either impossible (eg diagnosis driven HRGs in outpatients or HRGs with length of stay logic of < 2 days in non-elective inpatient long stay) or unlikely (eg transplants in outpatients)	EL, NEL, DC, OPPROC	REFC
WF01 * 2 > WF02	Outpatient attendances have single-professional	OPATT	Post submission

Validation	Description	Worksheet	Source
	(WF01*) and multi-professional (WF02*) HRGs. We will compare these at (i) supplier type, (ii) department and (iii) service level, and query any where the WF01* unit cost is more than double the WF02* unit cost		
Year on year (acute and non-acute)	We will query changes in activity and quantum data which are greater than 25% compared to the previous year at (i) supplier type, (ii) department, and (iii) sub-chapter level (for acute only). It is likely that there are valid reasons for these changes, and if so then no action is required. However, if significant changes in activity or quantum in a particular area were not expected please review the data and consider if a resubmission is necessary. Clearly, if the reason for the change is an issue with the previous year's data then a re-submission is not necessary	Summary	Post submission
XB01Z	We will query any of the organisations in Table 28 not reporting activity against this HRG, and query any other organisations reporting against this HRG	PNCC	REFC
XB02Z to XB05Z	We will query any of the organisations in Table 29 not reporting activity against this HRG, and query any other organisations reporting against this HRG	PNCC	REFC

Annex D: Spell costs

Spell costs will be reported in the reference costs workbook alongside FCE costs. The following tables illustrate how spell costs might be worked up before they are transferred to the workbook.

Table 64: Sample data

EPIKEY	PROCODE	ADMISSION	FCE HRG	EPI LOS	EPI TRIM	EPI EBD	INLIER UNIT COST	EBD UNIT COST	Spell ID	SPELL HRG	SPELL_LOS	SPELL TRIM	SPELL EBD	SPELL FLAG
(unique episode identifier)	(provider code)	(admission descriptor)	(HRG of episode)	(episode length of stay)	(episode trimpoint)	(episode excess bed days)	(episode inlier unit cost)	(episode excess bed day unit cost)	(unique spell identifier)	(HRG of spell)	(spell length of stay)	(spell trimpoint)	(spell excess bed day)	(flags final episode in each spell)
000019	RZZ	NE	AA22Z	15	34	0	2,796	0	0000016	AA22Z	19	58	0	1
000021	RZZ	NE	AA22Z	19	34	0	2,996	0	0000017	AA22Z	27	58	0	1
000020	RZZ	NE	AA25Z	8	19	0	2,165	0	0000017					0
000004	RZZ	DC	AB04Z	1	32000	0	649	0	0000004	AB04Z	1	8	0	1
000001	RZZ	DC	BZ02Z	1	32000	0	802	0	0000001	BZ02Z	1	3	0	1
000002	RZZ	DC	BZ02Z	1	32000	0	711	0	0000002	BZ02Z	1	3	0	1
000023	RZZ	NE	DZ19B	6	5	1	963	206	0000018					0
000022	RZZ	NE	EB03H	2	31	0	750	0	0000018					0
000024	RZZ	NE	EB03H	10	31	0	2,741	0	0000018	EB03I	18	22	0	1
000025	RZZ	NE	EB03I	13	16	0	1,798	0	0000019	EB03I	13	22	0	1
000017	RZZ	NE	EB08I	1	5	0	900	0	0000015	EB08I	1	5	0	1
000013	RZZ	EL	FZ12C	8	14	0	3,008	0	0000013	FZ12C	8	14	0	1
000018	RZZ	NE	FZ25A	4	32000	0	2,613	0	0000016					0
000029	RZZ	NE	FZ48C	1	32000	0	314	0	0000023	FZ48C	1	32000	0	1
000030	RZZ	NE	FZ48C	1	32000	0	317	0	0000024	FZ48C	1	32000	0	1
000005	RZZ	EL	GA10B	6	4	2	2,066	231	0000005	GA10B	6	4	2	1
000006	RZZ	EL	GA10B	2	4	0	2,234	0	0000006	GA10B	2	4	0	1
000014	RZZ	EL	HB12B	6	14	0	4,017	0	0000014					0
000016	RZZ	EL	HB12B	16	14	2	60,198	221	0000014	UZ01Z	25	0	25	1
000007	RZZ	EL	JA07C	3	6	0	2,687	0	0000007	JA07C	3	6	0	1
000008	RZZ	EL	JA07C	5	6	0	2,198	0	0000008	JA07C	5	6	0	1
000026	RZZ	NE	NZ01F	2	4	0	1,460	0	0000020	NZ01F	2	4	0	1
000027	RZZ	NE	NZ01F	2	4	0	1,251	0	0000021	NZ01F	2	4	0	1
000028	RZZ	NE	NZ01F	6	4	2	1,888	387	0000022	NZ01F	6	4	2	1
000015	RZZ	EL	UZ01Z	3	0	3	0	158	0000014					0
000003	RZZ	DC	WA14Z	1	32000	0	402	0	0000003	WA14Z	1	3	0	1
Totals				143		10	101,925	2,356			143		29	20

In Table 65, each row relates to each FCE HRG, spell HRG, and admission combination.

Table 65: FCE and spell costs

FCE HRG	Spell HRG	Admission	FCE Counts	Spell Counts	FCE (Inlier) Unit Cost	FCE Excess Bed Day Unit Cost	FCE Inlier Bed Days	FCE Excess Bed Days	Total FCE Bed Days	Spell Inlier Bed Days	Spell Excess Bed Days	Total Spell Bed Days
AA22Z	AA22Z	NE	2	2	2,896	0	34	0	34	46	0	46
AA25Z	AA22Z	NE	1	0	2,165	0	8	0	8	0	0	0
FZ25A	AA22Z	NE	1	0	2,613	0	4	0	4	0	0	0
AB04Z	AB04Z	DC	1	1	649	0	1	0	1	1	0	1
BZ02Z	BZ02Z	DC	2	2	756	0	2	0	2	2	0	2
DZ19B	EB03I	NE	1	0	963	206	5	1	6	0	0	0
EB03H	EB03I	NE	2	1	1,745	0	12	0	12	18	0	18
EB03I	EB03I	NE	1	1	1,798	0	13	0	13	13	0	13
EB08I	EB08I	NE	1	1	900	0	1	0	1	1	0	1
FZ12C	FZ12C	EL	1	1	3,008	0	8	0	8	8	0	8
FZ48C	FZ48C	NE	2	2	315	0	2	0	2	2	0	2
GA10B	GA10B	EL	2	2	2,150	231	6	2	8	6	2	8
JA07C	JA07C	EL	2	2	2,442	0	8	0	8	8	0	8
NZ01F	NZ01F	NE	3	3	1,533	387	8	2	10	8	2	10
HB12B	UZ01Z	EL	2	1	32,107	221	20	2	22	0	25	25
UZ01Z	UZ01Z	EL	1	0	0	158	0	3	3	0	0	0
WA14Z	WA14Z	DC	1	1	402	0	1	0	1	1	0	1
					* total cost	* *total cost*						
TOTALS			**26**	**20**	**101,925**	**2,356**	**133**	**10**	**143**	**114**	**29**	**143**

The relationship between table Table 65 and the sample data in Table 64 is as follows.

Column	Description
FCE HRG	The HRG for each episode
Spell HRG	The HRG for each spell
Admission	Spell admission method. Note: all FCEs in the spell must have the same admission method or the spell will be invalid for grouping.
FCE Counts	Total count of FCEs for the FCE HRG/spell HRG/admission combination.
Spell Counts	The total count of spells per FCE HRG/spell HRG/admission method combination. Providers should use the SpellReportFlag from the groupers spell-level output to help populate this. The total should be consistent with the sum of the SD Spell Flag column
FCE (Inlier) Unit Cost	The average FCE unit cost per FCE HRG/spell HRG/admission method combination. Calculated as the total inlier costs for each FCE divided by the total cost.
FCE Excess Bed Day Cost	EBD unit cost for each FCE HRG/spell HRG/admission combination. Calculated as the sum of the episode EBD in each

Column	Description
	FCE divided by the total FCE EBD
FCE Inlier Bed Days	The sum of SD EPI LOS minus the sum of SD EPI EBD
FCE Excess Bed Days	The sum of SD EPI EBD in the sample data
Total FCE Bed Days	The sum of SD EPI LOS
Spell Inlier Bed Days	The sum of SD Spell_LOS minus the sum of SD Spell EBD
Spell Excess Bed Days	The sum of SD Spell EBD in the sample data
Total Spell Bed Days	The sum of SD Spell_LOS

Table 66 shows the information from Table 65 aggregated to spell level and should be transferred to the reference costs workbook.

Table 66: Spell costs

Spell HRG	Admission	Spell Counts	Untrimmed Unit Cost	Spell Inlier Bed Days	Spell Excess Bed Days	Total Spell Bed Days
AA22Z	NE	2	5,285	46	0	46
AB04Z	DC	1	649	1	0	1
BZ02Z	DC	2	756	2	0	2
EB03I	NE	2	3,229	31	0	31
EB08I	NE	1	900	1	0	1
FZ12C	EL	1	3,008	8	0	8
FZ48C	NE	2	315	2	0	2
GA10B	EL	2	2,382	6	2	8
JA07C	EL	2	2,442	8	0	8
NZ01F	NE	3	1,791	8	2	10
UZ01Z	EL	1	65,130	0	25	25
WA14Z	DC	1	402	1	0	1
			** total cost*			
TOTALS		**20**	**104,281**	**114**	**29**	**143**

The relationship between Table 66 and the data in Table 65 is as follows:

Column	Description
Spell HRG	As per Table 65
Admission	As per Table 65
Spell Count	Total count for each spell HRG/admission combination i.e. the sum of spell counts from Table 65
Untrimmed Unit Cost	The sum product of Table 65 FCE Counts multiplied by Table 65 FCE (inlier unit cost) plus the sum product of Table 65 FCE Excess Bed Day cost multiplied by Table 65 FCE Excess Bed Days, this is then divided by Spell Count.
Spell Inlier Bed Days	As per Table 65
Spell Excess Bed Days	The sum of Table 65 Spell Excess Bed Days

Annex E: Costing mental health care clusters and CPPP

The CPPP approach is based on a calculation of direct costs of interventions, which are used to determine the relative resource intensity of care provided across the clusters. It seeks to utilise patient user level costing methodologies.

A cost per day is first calculated, and this is applied to the duration of care between reviews to give a cost per cluster period.

For admitted patient care, it is assumed that there is no difference in relative resource intensity across admitted patient activity. Therefore existing reference costs are used to calculate a cost per day.

The process for costing clusters for community or non-admitted patient activity can be summarised in four stages:

Stage 1: Collate the cost of clinical time at a cluster level.

From the data collected through the community mental health teams (CMHT) run a report at a patient level for the given reporting period providing:

- the length of time of the appointment
- cluster allocated
- band of staff (individual staff details if available)

Calculate a cost of the staffing resource utilised across these patients (Table 67).

Table 67: Cost of clinical time per cluster

A	B	C	D	E	F = C*E
Patient	Cluster	Appointment time	Band	Staff rate per hour	Cost per appointment
X	01	30 mins	Band 6	£18.55	£9.28
Y	02	60 mins	Band 8a	£27.72	£27.72
Z	03	60 mins	Consultant	£65.40	£65.40

Consolidate this patient level costing for the patients identified at a cluster level to obtain a total cost per cluster for this period (Table 68).

Table 68: Total cost per cluster

G	H	I	J = H/I	K=J/MIN(J)
Cluster	Total of cluster (sum of appointments in column F above)	Patient days	Cost per patient day	Weightings
01	115,895	25,134	4.61	1.00
02	177,565	32,368	5.49	1.19
03	94,228	18,017	5.23	1.13
04	226,998	34,864	6.51	1.41
05	158,458	21,085	7.52	1.63
06-21	1,322,744	150,062	8.81	1.91
Total	2,095,888	281,531		

The cost of clinical staff time is the cost driver used to identify the relative resource intensity between the clusters. Column K above shows a relative value unit for each cluster. The relative value provides an indication of the relative resource utilisation of the

clusters. From column K in the table, we can see cluster 05 is shown to require 1.63 more resources than cluster 1. This stage is completed utilising 12 months of data from the MHCT.

The calculation can be applied at an organisation, directorate and or team level to develop benchmarking. As data volumes increase and data quality improves, this will lead to team level costing to allow a more detailed understanding of costs.

Stage 2: Calculate a fully absorbed cost per day.

Each organisation has a fully absorbed cost at a patient service level from their existing costing model that has been previously calculated to support the reference costs return. Using stage 1 for each patient service area the fully absorbed cost can be apportioned out across the clusters using the weighted patient days.

The data collected through the CMHT provides the number of patient days patients have spent within each cluster. Run a report to provide the total number of patient days by cluster for the period. The fully absorbed cost by cluster can be divided by the patient days for that cluster to obtain a cost per day per cluster

L	M=H	N=I	O=K	P=N*O	Q=P/SUM(P)*SUM(Q)[1]	R	S=Q/R
Cluster	Costed patient level data £	Patient days	Weighting	Weighted patient days	Apportioned full cost £	Total days in the cluster	Cost per day per cluster £
01	115,895	25,134	1.00	25,134	215,878	34,223	6.30
02	177,565	32,368	1.19	38,518	330,834	40,598	8.15
03	94,228	18,017	1.13	20,359	174,865	22,424	7.79
04	226,998	34,864	1.41	49,158	422,222	45,007	9.38
05	158,458	21,085	1.63	34,369	295,198	25,638	11.51
06-21	1,322,744	150,062	1.91	286,618	2,461,786	184,024	13.38
Total	2,095,888	281,530		454,156	3,900,783	351,914	

[1]Where the sum of Q is the full cost of the service from costing model.

Through costing based on primary data collected at a patient level, organisations are better placed to develop full patient level costing across all services.

Columns R and S should be inserted into the reference cost workbook under the section on community/non-in-patient.

While this reference costs collection is only concerned with collecting a cost per day per cluster, the CPPP methodology has two further stages as described briefly below.

Stage 3: Period of care durations

Use cost per day per cluster to determine the total cost of the cluster period duration of care. CPPP are currently collecting durations within clusters as part of the data set to review against the care transition protocols.

Stage 4: Create a tariff

Development of a tariff will be informed by stages 1 to 3. The focus on continually improving data quality and iterative benchmarking will inform the production of local tariffs.

Annex F: Costing mental health care clusters and West Midlands

The West Midlands project utilised existing reference cost activity categories and costs, in combination with care cluster activity, to calculate a cost by cluster. This approach is likely to be achievable for most organisations.

Initially care cluster activity is grouped using an aggregated template.

Table 69: West Midlands approach (1)

Cluster 01, Service user A				
Activity type	Currency description	Activity volume	Average unit cost	Total cost
Contact	Community mental health team: adult services	1	£51	£51
Outpatient	Adult: other services	2	£253	£506
Occupied bed day	Adult: acute care	21	£288	£6,058
				£6,615

A template similar to the following one is also used to record service user's interventions and associated costs. For submission of reference costs, local costs should be used for this calculation.

Table 70: West Midlands approach (2)

Cluster	01		02		03	
Service type	Activity	Activity/ client	Activity	Activity/ client	Activity	Activity/client
Outpatients:						
Adult outpatient new						
Adult outpatient other						
SMS alcohol outpatient new						

By utilising a combination of service user information, patient level costing and top down allocation methodologies, costs by service user by cluster can be calculated. A template similar to the reference costs cluster based collection can be used to record and summarise service user costs. Outpatient activity is shown here as an example, but this template would be expanded and the columns repeated for admitted patient bed days, day care attendances, community contacts etc.

Table 71: West Midlands approach (3)

Outpatient						
	Service user ref no	Attendance no of	Unit cost £	Value £	SLR ref	Total cost
Cluster 1 Cluster costs	1 2 3					
Cluster 21	29 30 31					
Total						