paediatric rethink

Next year sees the use of revised healthcare resource group currency HRG4+ in the national tariff. In the first of a short series, starting with paediatric medicine, Steve Brown examines what this will mean for payment of different services

In terms of how care is paid for, paediatric medicine faces significant changes under national tariff plans for 2016/17. The changes are the result of the adoption of a new healthcare resource group design (HRG4+) covering inpatient activity and outpatient procedures. HRG4+ builds on its HRG4 predecessor, providing a more granular currency for the tariff that enables better recognition of the additional costs of complex interventions.

Trusts have in fact been costing activity using the revised HRG4+ currency for a while. Changes were phased in over three years, starting with the reference costs in 2012/13. The changes to the paediatric chapter were made as part of the second phase, used for reference costs in 2013/14. But 2016/17 will mark the first use of HRG4+ for payment purposes (using this second phase version). While HRG4+ builds on its HRG4 predecessor, it takes a different approach in a number of areas, including the introduction of complication and comorbidity (CC) scores rather than simple with/without splits (see quick guide on page 17). But the Health and Social Care Information Centre's National Casemix Office has taken the opportunity to do some further restructuring within the paediatrics chapter.

Chapter P covers paediatric medicine (for children aged up to and including 18 years old) and neonatal medicine. Surgical procedures remain in the various other relevant HRG specialty chapters, with an age split used to differentiate HRGs for adults and children (FZ69B, for example, *Complex small intestine procedures, 18 years and under*).

Table 1: Example of how activity mapping changes under new HRG4+ design

Non-elective inpatients: long-stay FCEs

Data source			FCEs	Unit cost (£)	Total cost (£)	Inlier bed days	Avg LoS
RC 2011/12	PA23A	Cardiac conditions with CC	2,680	4,523	12,122,615	13,644	5.09
RC 2011/12	PA23B	Cardiac conditions without CC	864	2,112	1,824,458	2,673	3.09
		Total cost (£)			**13,947,073**		
		Total FCEs; total bed days	**3,544**			**16,317**	
		Avg cost per FCE; avg overall length of stay			**3,935**		**4.60**
RC 2013/14	PE23A*	Paediatric cardiac conditions with CC score 13+	224	11,048	2,474,698	2,534	11.31
RC 2013/14	PE23B	Paediatric cardiac conditions with CC score 10-12	280	6,828	1,911,902	2,580	9.21
RC 2013/14	PE23C	Paediatric cardiac conditions with CC score 6-9	729	5,391	3,930,060	5,180	7.11
RC 2013/14	PE23D	Paediatric cardiac conditions with CC score 3-5	931	3,656	3,403,282	4,818	5.18
RC 2013/14	PE23E	Paediatric cardiac conditions with CC score 1-2	691	2,740	1,893,521	2,748	3.98
RC 2013/14	PE23F	Paediatric cardiac conditions with CC score 0	455	1,741	792,169	1,387	3.05
		Total cost (£)			**14,405,632**		
		Total FCEs; total bed days	**3,310**			**19,247**	
		Avg cost per FCE; avg overall length of stay			**4,352**		**5.81**

** The PE23 HRGs make up six of 12 HRGs in the new paediatric cardiology disorder sub-chapter*

HRG4+ means an expansion in the number of HRGs used to describe paediatric medicine. The 114 HRGs in HRG4 become 194 separate groups. In addition, the previous single sub-chapter PA (paediatric medicine) has been deleted and replaced with 17 new sub-chapters relating to the relevant body systems. These sub-chapters better align with the broader HRG4+ structure, adopting the letter used to define the adult medicine/all age surgery HRG4 chapters where this is possible.

So sub-chapter PC covers paediatric ear nose and throat disorders, mirroring HRG4+ chapter C, which covers ear nose and throat disorders for adults and surgery for all patients. And sub-chapter PF covers paediatric gastroenterology disorders because chapter F covers the digestive system more generally.

The new structure has also retained the numbering convention used within the former HRG4 PA sub-chapter. The lower respiratory tract disorders without bronchiolitis covered by the former PA14 HRGs, for example, translate into PD14 (with further splits to recognise complexity).

Provider impact

To get an understanding of the impact this might have on what providers get paid, we can look at paediatric cardiac conditions in 2011/12 reference costs (the basis for enhanced tariff option prices in 2015/16 using HRG4) and the 2013/14 reference costs (the proposed basis for the 2016/17 tariff using HRG4+). While reference costs do not turn automatically into tariff prices – and simple tariff prices paid to paediatric providers will often be subject to additional tariff top-ups – they are the starting point for setting prices.

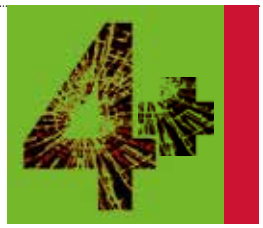
The total number of non-elective long-stay finished consultant episodes was similar across the two years – a reduction from 3,544 to 3,310, although inlier bed days went up (see table 1, page 15).

The 864 'without CC' FCEs in 2011/12 have turned into 455 FCEs with a CC score of 0 in 2013/14. You might expect the two 'no complications' categories to show similar levels of activity. However, the CC lists that accompany each sub-chapter identifying comorbidities and complications by ICD10 diagnosis codes have changed between the two

Table 2: Paediatric tariff rates 2015/16 and 2016/17 (draft)

Non-elective			
ETO 2015/16	PA23A	Cardiac conditions with CC	£3,177
ETO 2015/16	PA23B	Cardiac conditions without CC	£1,187
2016/17	PE23A	Paediatric cardiac conditions with CC score 13+	£8,912
2016/17	PE23B	Paediatric cardiac conditions with CC score 10-12	£5,454
2016/17	PE23C	Paediatric cardiac conditions with CC score 6-9	£3,938
2016/17	PE23D	Paediatric cardiac conditions with CC score 3-5	£2,280
2016/17	PE23E	Paediatric cardiac conditions with CC score 1-2	£1,329
2016/17	PE23F	Paediatric cardiac conditions with CC score 0	£831

The 2016/17 prices are draft price relativities before any adjustments for efficiency and cost inflation



years. Instead of a single CC list for the PA HRG4 sub-chapter, there are now specific CC lists for each paediatric sub-chapter.

Also, remembering that there are two years between the two sets of reference costs, it is also possible that coding has become more thorough, capturing some of the additional secondary diagnosis codes that indicate the presence of complications and comorbidities.

However the real benefits will be for the more complex activity. In 2011/12 all non-routine patients were grouped into the single HRG PA23A and had an average unit cost of £4,523. But in 2013/14, this same non-routine activity is broken into five HRGs (PE23A-PE23E) depending on the CC score (see quick guide).

This clearly highlights the different costs incurred in treating patients that were previously all collected in a single HRG. The most complex cases (CC score 13+) actually cost £11,048 and the simplest non-routine cases cost £2,740. This is a difference in costs between a patient with a score CC of 1-2 and the most complex cases (CC score = 13+) of £8,308, in large part reflecting significantly different average lengths of stay.

With the HRG4+-based 2016/17 tariff due to be finalised soon, teams will need to increase their familiarity with the changes and understand the financial impacts

Complex model

An analysis of hospital episode statistics run through the 2013/14 reference cost grouper by the National Casemix Office suggests a typical patient in this most complex group might be a two-year old with a primary diagnosis of primary pulmonary hypertension. But they might have serious secondary diagnoses that could include congestive heart failure, atrial and atrioventricular septal defects, acute bronchiolitis, wheezing and a rash. During their stay – typically more than 10 days – they might undergo one or more relatively minor surgical procedures such as a fibre optic endoscopic percutaneous insertion of a gastrostomy tube to enable stomach feeding or the insertion of central or tunnelled venous catheters.

Translating these relative costs into more granular tariff prices should mean more accurate tariffs. It is possible the old two-group approach under HRG4 would have worked for a provider with the right mix of with and without CC activity. But for a provider with a casemix heavily weighted towards the more complex activity, it is clear the simple 'with CC' tariff would have left them running at a loss.

Monitor's draft prices (published during the summer without adjustments for efficiency and cost inflation) show how tariffs might look for the new HRG4+ structure – see table 2. There is no direct read across from reference costs to tariff prices – finance practitioners have long called for greater transparency – but there are two major high level reasons for the differences.

First of all average unit costs in reference costs are simply the average of all reported costs and are not adjusted for unavoidable cost differences (represented by providers' individual market forces factor). The tariff prices represent the minimum that any provider would be paid, with providers with an MFF of more than 1 receiving more (MFF x tariff).

You also need to allow for specialist top-ups so providers eligible for either of the paediatric specialist top-ups could receive an inflated tariff price. To date this has involved a top-up of either 64% (high) or 44% (low) for eligible providers in eligible cases, but a revised approach to top-ups is proposed for 2016/17.

HRG4+ is relatively new to many finance practitioners. However, with the HRG4+-based 2016/17 tariff due to be finalised soon, teams will need to increase their familiarity with the changes and understand the financial impacts.

A quick guide to HRG4+

HRG4+ was developed by the National Casemix Office, part of the Health and Social Care Information Centre, and builds on the pre-existing currency HRG4. Next year – 2016/17 – will see the new currency used for the first time for payment as part of the national tariff. But costing practitioners should be familiar with it, as it made its first appearance in the reference costs submission for the 2012/13 financial year.

That was the first of three phases over which the new currency has been introduced. Approximately 25% of HRG subchapters were redesigned for reference costs 2012/13, a further 25% for reference costs 2013/14 and 25% again for 2014/15.

The remaining 25% of sub-chapters did not require a redesign. Next year's tariff will in fact use the phase 2 design of HRG4+ (2013/14 reference costs) with an expectation that the final changes will be brought in as part of phase 3 in the 2017/18 tariff (using the 2014/15 reference cost design).

HRG4+ is more granular than its predecessor. Monitor and NHS England say there are around 2,000 currencies in HRG4+ compared with the 1,300 in HRG4. In fact these numbers just refer to the HRGs with national prices. The HSCIC points out that its engagement grouper for the 2016/17 tariff includes 2,361 HRGs.

The key change responsible for the increase in HRG volume is a more sensitive approach to the impact of complications and comorbidities on the costs of care. The current HRG4 currency, versions of which are used in both the default tariff rollover and enhanced tariff option tariffs, basically splits many HRGs by with or without CC (complications and comorbidities). But under HRG4+, CC scores are introduced. What might have been a two-way with or without split in HRG4 might become a four-way split (see example below for root HRG FZ67).

The CC score is built up using a scoring system related to secondary diagnoses – each recorded CC is assigned a score and these are summed to derive a total CC score. HRG4+ can also take account of multiple procedures, formalising the use of procedure grouping logic in some areas and using single or multiple intervention splits as a proxy for disease severity in others. Again, the overall aim is to ensure that higher cost spells are separated from more standard cost spells.

FZ67 – major small intestine procedures 19 years and over

HRG4			HRG4+	
			FZ67C	CC score 7+
FZ67A	with CC	→	FZ67D	CC score 4-6
FZ67B	without CC		FZ67E	CC score 2-3
			FZ67F	CC score 0-1