

Limitations of the HRG Tariff: Excess bed days

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Every year hospitals submit an analysis of their costs for various HRG. These are called the reference costs and the Department of Health uses these reference costs to devise the national HRG tariff. Local reference costs are first adjusted for the local cost of labour and buildings via the market forces factor and the adjusted costs are then averaged to give the national price for each HRG. Central to the whole exercise is the huge assumption that Trusts are correctly determining the cost for each HRG. One aspect of the tariff is the cost per day for what are called 'excess bed days'. Each HRG has a maximum expected length of stay (the upper trim point) and any stay in hospital beyond this upper trim point is paid on a per day basis using a tariff specific to excess bed days which is different for each HRG.

In practice it would appear that most Trusts cost an excess bed day at Specialty level, i.e. the cost per bed day is the same for every HRG within a specialty. Using the most recent 2006/07 reference costs (DH 2008) we see that:

- 37% of Trust-Specialty combinations have an identical price for every HRG in the specialty
- 78% of Trust-Specialty combinations have an almost identical price for every HRG in the specialty, i.e. the standard deviation is less than 1% of the average price.

This is a fairly reasonable costing approach but it does lead to the generation of nonsensical tariff values at HRG level since the national average at HRG level is simply the average of specialty costs for however many hospitals count activity for that HRG in particular specialties. For this reason the HRG prices are both inconsistent and erratic.

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Table 1 gives the national average cost per bed day at a specialty level for elective and emergency admission. As can be seen the Paediatric equivalent always costs more than an adult admission and the relative ranking for the cost of particular specialties appears to be logical. Emergency and elective prices are comparable with emergency being mostly higher than elective except where higher average emergency bed occupancy lowers the average emergency cost per day.

The national average for the ratio of excess bed days to bed days within the trim point are given in Table 2 at specialty level. Across all specialties there are around 15 excess bed days per 100 bed days within trim for elective admissions and 25 excess bed days per 100 for emergency admissions. This table clearly shows that excess bed days are a function of particular specialties not HRG's in general.

The highest values for these ratios are in Spinal Injuries where there are 144 and 269 excess bed days per 100 bed days within trim for elective and emergency admissions respectively. Paediatric Pain Management has 191 excess bed days per 100 days in trim for elective admission. Note the high proportion of Paediatric specialties which explains the need for the Paediatric uplifts on the standard tariff.

In conclusion, a specialty view for the cost of an excess bed day gives a more logical view than one based on individual HRG. This is an unavoidable consequence of a specialty based cost per bed day.

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Table 1: National average cost per (excess) bed day

Specialty Code	Specialty	Elective		Emergency	
		Adult	Child	Adult	Child
100	General Surgery	£268	£425	£243	£348
101	Urology	£236	£391	£215	£355
102	Transplantation Surgery	£335	£610	£533	
103	Breast Surgery	£229		£239	
104	Colorectal Surgery	£155		£145	
105	Hepatobiliary Surgery	£181		£139	
106	Upper GI Surgery	£136		£156	
107	Vascular Surgery	£216		£187	
110	Orthopaedics	£282	£614	£241	£406
120	ENT	£268	£361	£275	£368
130	Ophthalmology	£359	£374	£320	£370
140	Oral Surgery	£226		£310	
141	Restorative Dentistry	£158	£347	£101	£198
144	Maxillo-facial Surgery	£284	£1,932	£329	£273
150	Neurosurgery	£197	£517	£193	£365
160	Plastic Surgery	£216	£527	£257	£338
161	Burns Care			£233	£487
170	Cardiothoracic Surgery	£331		£334	
172	Cardiac Surgery	£278	£553	£309	£615
173	Thoracic Surgery	£235		£240	
174	Cardiothoracic Transplant	£486		£476	
180	A&E	£228		£235	
190	Anaesthetics	£136		£136	
191	Pain Management	£255	£205	£175	
300	General Medicine	£200		£175	
301	Gastroenterology	£215	£514	£189	£382
302	Endocrinology	£202	£674	£221	£564
303	Haematology	£244	£521	£239	£503
306	Hepatology	£402		£311	
307	Diabetic Medicine	£148		£159	
308	Blood & Marrow Transplant	£530		£906	
309	Haemophilia	£1,094		£154	
315	Palliative Medicine	£285		£300	
316	Clinical Immunology	£678	£865		£992
319	Respite Care	£327		£137	
320	Cardiology	£335	£489	£225	£530
323	Spinal Injury	£322		£387	
330	Dermatology	£135	£790	£254	£587
340	Respiratory Medicine	£341	£598	£208	£647
341	Respiratory Physiology	£329		£234	
350	Infectious Diseases	£222	£282	£219	£ 1,773
360	GU Medicine	£282		£269	
361	Nephrology	£153	£417	£171	£419
370	Medical Oncology	£243	£510	£219	£396
400	Neurology	£274	£603	£229	£523
410	Rheumatology	£217	£429	£222	£308
420	Paediatrics		£353		£290
422	Neonatology		£320		
430	Elderly Medicine	£181		£179	
460	Medical Ophthalmology	£101		£133	
501	Obstetrics	£335		£372	
502	Gynaecology	£295		£349	
503	Gynaecological Oncology	£241		£239	
560	Midwife	£171		£340	
822	Chemical Pathology	£311			
999	Joint Consultant	£308		£274	
254	Audiology		£2,326		
290	Community Paediatrics				£457
261	Metabolic Diseases		£3,270		£1,438

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Table 2: National ratio of excess bed days per 100 bed days within trim point

Specialty	Emergency	Specialty	Elective
Spinal Injuries	269	Paediatric Pain Management	191
Medical Ophthalmology	125	Spinal Injuries	144
Paediatric Clinical Immunology	118	Paediatric Infectious Diseases	84
Paediatric Neurology	111	Geriatric Medicine	80
Paediatric Dermatology	108	Midwife Episode	66
Community Paediatrics	100	Dermatology	61
Clinical Immunology & Allergy	88	Paediatric Clinical Immunology	60
Paediatric Gastroenterology	82	Paediatric Metabolic Disease	51
Paediatric Rheumatology	64	Palliative Medicine	49
Paediatric Respiratory Medicine	60	Paediatric Rheumatology	44
Neurology	59	Restorative Dentistry	43
Neonatology	55	Neonatology	43
Paediatric Nephrology	45	Paediatric Respiratory Medicine	41
Dermatology	43	General Medicine	38
Palliative Medicine	43	Paediatric Clinical Haematology	37
Paediatric Metabolic Disease	42	Paediatrics	36
Paediatric Urology	41	Rheumatology	35
Geriatric Medicine	39	Paediatric Nephrology	33
Paediatric Cardiology	39	Paediatric Dermatology	33
Genito-Urinary Medicine	38	Neurology	31
Nephrology	37	Clinical Haematology	30
Rheumatology	37	Nephrology	30
Blood & Marrow Transplant	34	Paediatric Audiological Medicine	29
Paediatric Infectious Diseases	33	Paediatric Neurology	28
Clinical Haematology	32	Paediatric Gastroenterology	28
Paediatric Neurosurgery	32	Genito-Urinary Medicine	27
Paediatric ENT	30	Maxillo-Facial Surgery	23
Paediatric Burns Care	29	Oral Surgery	22
Paediatric Medical Oncology	28	Hepatology	22
Neurosurgery	27	Accident & Emergency	21
Paediatric Surgery	27	Upper GI Surgery	21
Respite Care	27	Paediatric Medical Oncology	21
Cardiothoracic Transplantation	27	Infectious Diseases	20
Upper GI Surgery	27	Ophthalmology	20
General Medicine	26	Blood & Marrow Transplant	19
Ophthalmology	26	Gastroenterology	18
Paediatric Clinical Haematology	26	Diabetic Medicine	18
All Specialty Average	25	All Specialty Average	15