

An edited version was published as: Jones R (2008) Limitations of the HRG tariff: excess bed days. *British Journal of Healthcare Management* 14(8): 354-355. Please use this to cite.

# Limitations of the HRG Tariff: Excess bed days

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Key words: Specialty costs, cost per day in hospital, excess bed day, HRG Tariff, England, NHS

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 labor 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, 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 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 different specialties. For this reason, the HRG prices are both inconsistent and erratic.

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 specialties appears to be logical. Emergency and elective prices are comparable with emergency being mostly

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higher than elective except where higher average emergency bed occupancy lowers the average emergency cost per day.

**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      |        |
| 110            | Orthopaedics              | £282     | £614   | £241      | £406   |
| 120            | ENT                       | £268     | £361   | £275      | £368   |
| 130            | Ophthalmology             | £359     | £374   | £320      | £370   |
| 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   |
| 172            | Cardiac Surgery           | £278     | £553   | £309      | £615   |
| 173            | Thoracic Surgery          | £235     |        | £240      |        |
| 174            | Cardiothoracic Transplant | £486     |        | £476      |        |
| 191            | Pain Management           | £255     | £205   | £175      |        |
| 301            | Gastroenterology          | £215     | £514   | £189      | £382   |
| 302            | Endocrinology             | £202     | £674   | £221      | £564   |
| 303            | Haematology               | £244     | £521   | £239      | £503   |
| 306            | Hepatology                | £402     |        | £311      |        |
| 308            | Blood & Marrow Transplant | £530     |        | £906      |        |
| 316            | Clinical Immunology       | £678     | £865   |           | £992   |
| 320            | Cardiology                | £335     | £489   | £225      | £530   |
| 323            | Spinal Injury             | £322     |        | £387      |        |
| 330            | Dermatology               | £135     | £790   | £254      | £587   |
| 340            | Respiratory Medicine      | £341     | £598   | £208      | £647   |
| 350            | Infectious Diseases       | £222     | £282   | £219      | £1,773 |
| 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   |

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 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.

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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.

**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        |
| <b>All Specialty Average</b>    | <b>25</b> | <b>All Specialty Average</b>    | <b>15</b> |

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