Rod **Jones**

Is the HRG tariff fit for purpose?

No product is every better than its design brief and in this respect HRG's rely on the fundamental (and unproven) assumption that health care costs are exclusively driven by case mix. Anyone with an accountancy qualification will tell you that this is a gross simplification. Indeed to suggest such as an answer in an accountancy exam would get you a 'fail'.

In this respect a rather extensive series of articles published in the British Journal of Healthcare Management (http://www.hcaf.biz/HRGPbR.html) has suggested that the difference between how the tariff 'should' and 'does' work may be greater than one may have hoped. This is not a criticism of the HRG groups *per se* but rather of the reality of how the tariff actually gets used in the real world, i.e. the reality rather than the theory of counting and coding (see series called 'Benchmark Admissions' http://www.hcaf.biz/forecastingdemand.html).

Indeed I would go so far as to suggest that the current V4 of the HRG's is indeed a 'world class' example of a clinically relevant classification scheme for diagnoses and procedures. They are not, however; a 'world class' example of a costing methodology.

It would appear that the 'Achilles heel' of the tariff lies in the fact that costs within each HRG are highly specialty dependant. Fig. 1 gives one of hundreds of possible examples. This overwhelming specialty dependence of cost (and average length of stay) acts to penalize any hospital with a case mix that is different to anything other than a bulk standard DGH. From Fig. 1 we see that under the current tariff (an all specialty average) in HRG AA20Z the specialties Paediatric Rheumatology, Orthopaedics, Neurosurgery and Paediatric Neurosurgery will all be deemed to be 'grossly inefficient' due to what is nothing other than a pure artifact of the tariff and its hidden assumptions about how costs behave. Hence recent concerns over the tariff uplift for specialist paediatric services.

The series of articles in BJHCM has identified the following serious deficiencies:

- The tariff is open to the abuse of data standards, i.e. the fundamental difference between ambulatory and inpatient care

- The tariff is open to creaming, i.e. conducting a single procedure (often miscoded) within a multi-procedure HRG

- The different assumptions around how costs behave between the Capitation Formula and the Tariff lead to financial asymmetry, i.e. in older than average populations the provider carries a higher burden of age-related bed day costs while in younger than average populations the purchaser carries higher costs

- There are genuine economy of scale factors leading to lower average costs in medium sized organizations

- The trim point calculation is perversely weighted against specialist providers
- The costs of an excess bed day are almost exclusively specialty rather than HRG dependant

- The within trim point part of the tariff is perversely weighted against specialist providers and the smaller specialist specialties

- The calculated Reference Cost Index for each organization can be re-calculated using specialty-HRG combinations and this calculation removes the apparent high spread in apparent efficiency derived from the standard tariff

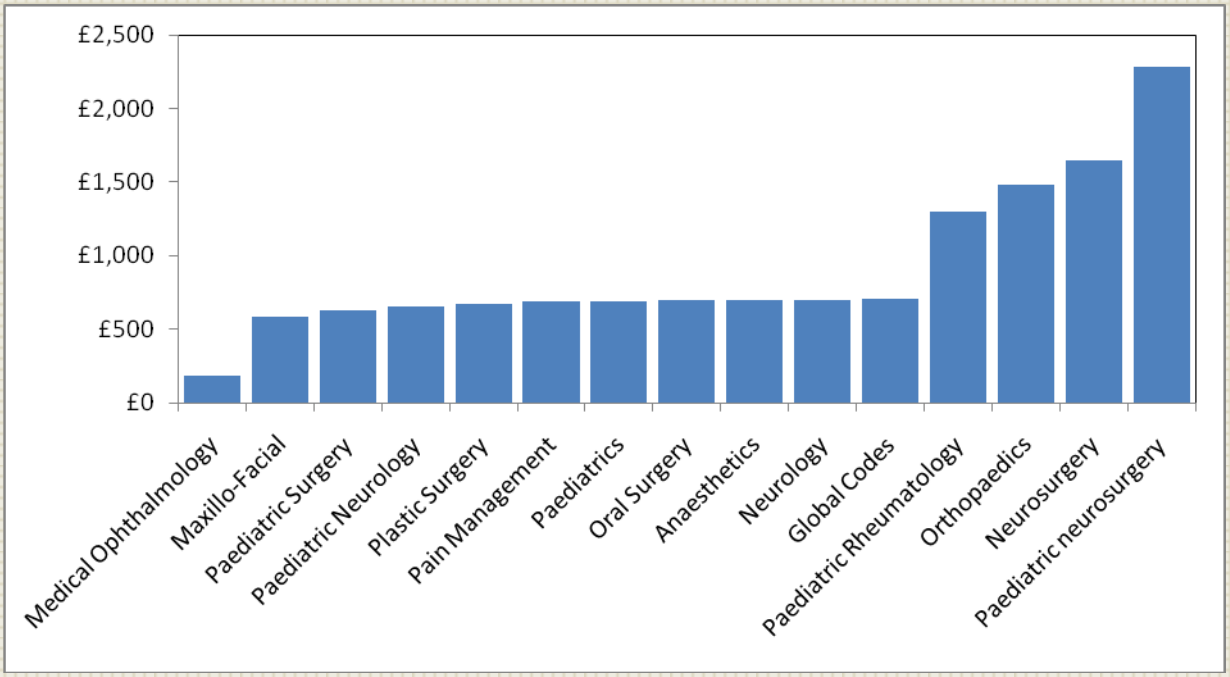
- Certain HRGs are susceptible to the basic cyclic nature of some diagnoses and hence the resulting relationship between marginal costs and volume

- The tariff calculations are open to errors of judgment (see December issue of BJHCM for details of a £400M error of judgment in the structure of the emergency short stay tariff)

Indeed if you are inclined to read Kulinskaya et al (2005) IMA Journal of Management Mathematics you will discover that decease in hospital, transfer from another hospital, discharge to a private institution, etc are all powerful determinants of cost and do not feature in the structure of the tariff.

To conclude, can I respectfully suggest that before you make financial investment and disinvestment decisions based on the tariff you understand the limitations of the tariff as it affects the range of HRG within the scope of your project and do a financial 'due diligence' check before proceeding.

Figure 1: Variation in cost for a day case admission in HRG AA20Z



Footnote: 2008/09 reference costs have been recalculated at specialty level. Cost for a day case has been deliberately chosen because there should be no complications due to argument over length of stay.

Further details regarding the limitations of the tariff can be found at http://www.hcaf.biz/HRGPbR.html

Dr Rod Jones (ACMA) provides actuarial and forecasting services to health care organizations. He can be contacted at: hcaf_rod@yahoo.co.uk

The next briefing paper will look at the role which counting and coding plays in what appears to be 'excess admissions' and issues around coding accuracy and the validity of the tariff.