An edited version of this article has been published as: Jones R (2011) Limitations of the HRG tariff: gross errors. British Journal of Healthcare Management 17(12): 608-609. Please use this to cite.

Limitations of the HRG Tariff: Gross Errors

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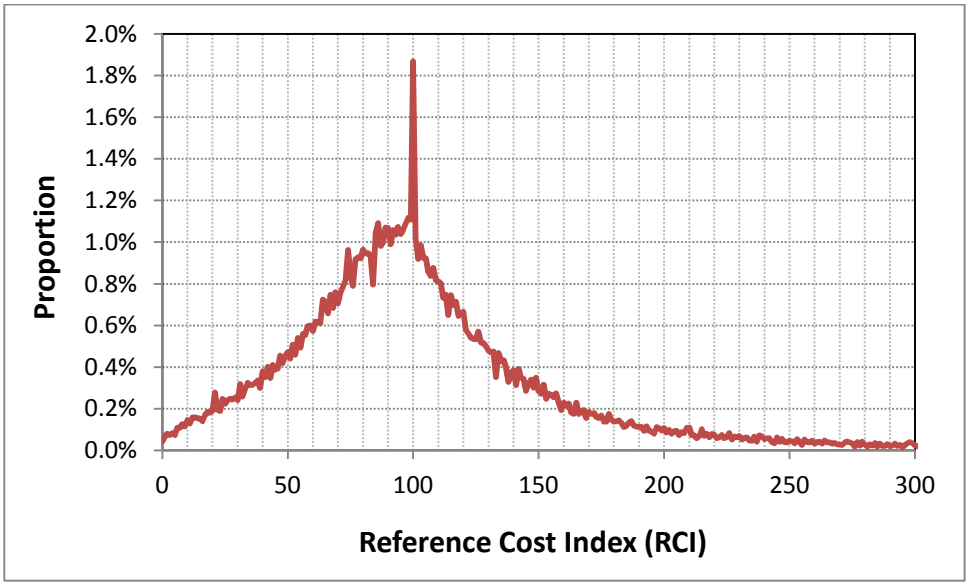
Key Words: HRG tariff, reference costs, quality control, NHS, England, Reference Cost Index, apportionment

Previous articles in this series have investigated the multiple limitations of the HRG tariff which has been undergoing 'development' and 'refinement' for the past twenty years. If you were in charge of a process with a twenty year history what level of accuracy would you expect?

The most recent reference costs for 2010/11 have just been released and the Reference Cost Index (RCI) for each service (230 service code types) and department (30 department codes) combinations (giving 1130 possible combinations such as Elective Overnight-General Surgery, Daycase-Urology, etc). Around 1.2 million separate cost lines from all trusts are condensed into these 1130 service/department combinations. An RCI of 100 represents the national average cost and Figure 1 shows that only 1.9% of Trust service/department combinations are at national average and only 21.5% lie within the RCI range 90 to 110 with 10% having an RCI less than 44 and 10% greater than 187, i.e. the spread is exceedingly large suggesting that the process of attributing costs is 'out of control'. Common sense would suggest that any local costs greater than ± 25 percentage points either side of the national average probably contain gross errors in the attribution of costs.

Figure 1: Spread in RCI for Trust service/department combinations



Footnote: Data is from the "Download Organisation level data" line of the Department of Health (2010/11 Reference Costs Publication) webpage http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_131140

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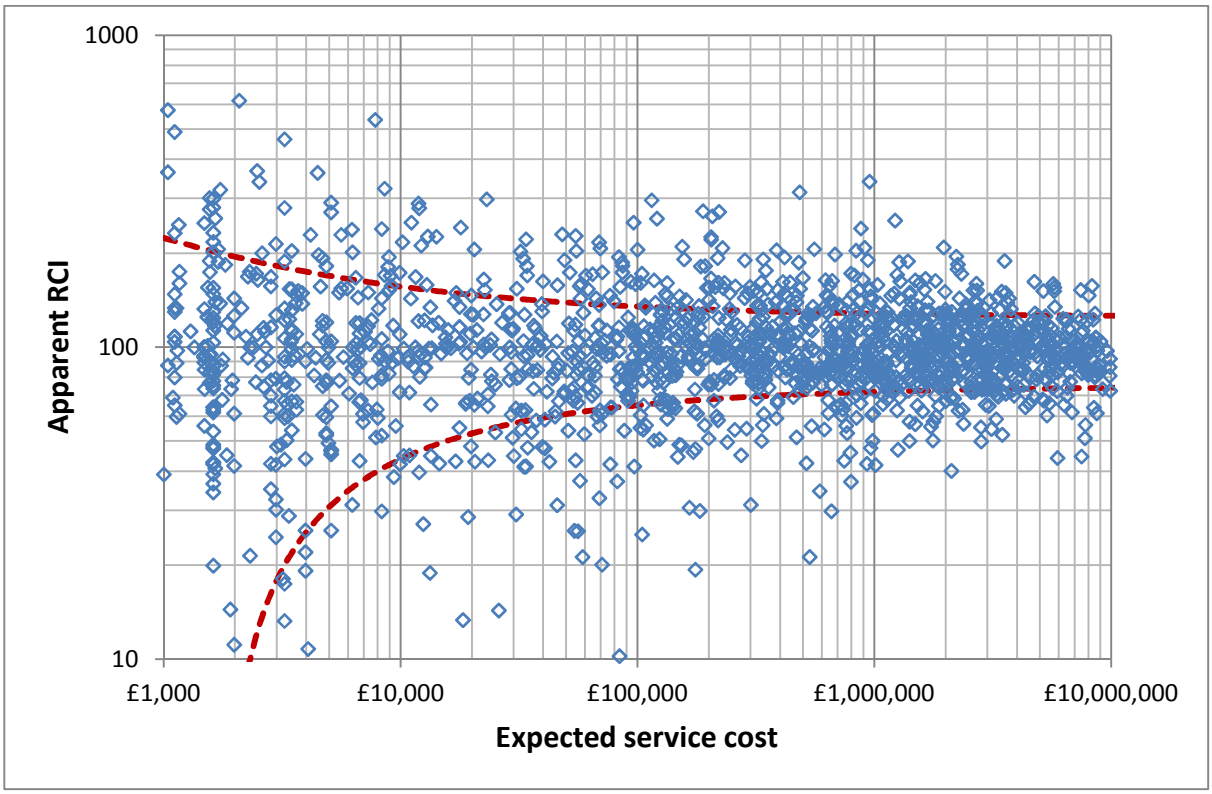
The role of sampling error in determining an average based on the costs of individual patients has been discussed (Jones 2011) and so Figure 2 gives indicative upper and lower margins beyond which sampling error plus a 25% range around the national average would apply for all General Surgery department costs in England. General Surgery has been chosen because in is a bulk standard acute 'surgical' service which avoids all the complications of diagnostic ambiguity in the more medical services. Figure 2 represents the equivalent to a 'quality control' check of the submitted costs. For General Surgery some 28% of costs fall outside of the control limits however across all services some 37% of Trust service/department costs lie outside these upper and lower limits. Hence we can estimate that 37% of all costs contain gross errors in the apportionment of patient specific and Trust overhead costs.

We can rightly conclude that the only thing 'world class' about this process is its propensity to gross error and hence the likelihood that the national 'average' is open to high year to year uncertainty (Jones 2009). The Department of Health (DH) has been attempting to convince everyone that the reference cost collection process is getting better each year and the reader must reach their own conclusions regarding the authenticity of this message.

Figure 2: General Surgery costs relative to sampling error plus a ±25% RCI margin.



Footnote: An equivalent sampling error based on size (service cost) was first calculated and then a further ± 25% margin was added to account for a reasonable range around the national average cost.

However we do need to ask, how has such a woeful situation emerged? The problem appears to lie in the degree to which 'quality control' is absent from this process. Every year the DH compiles comprehensive costing guidelines to which Trusts are supposed to adhere but by and large no one is ever audited against these guidelines. Auditing and quality control for such a key national programme is obviously someone else's problem. If HRGs and the tariff are supposed to be a key

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enabler for the NHS would you leave your key process without a robust quality control process for 20 years?

The next problem is that from version 4 of the HRG tariff onward there has been a veritable explosion in the number of HRG codes covering inpatients, outpatients, A&E, etc. We now have so many cost lines that no one has the manpower capacity to make sure that the myriads of costs are correctly attributed, hence, my estimate of a 37% gross error rate is probably somewhat conservative. This view appears to be supported by a recent Audit Commission report (Audit Commission 2011).

The conclusion appear to be that 'someone' needs to apply the equivalent to Figure 2 as a quality control check against all submitted costs as part of a quality control process and until this is implemented you must use the national tariff at your own risk.

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