

# Actuarial evaluation of financial risk in healthcare purchasing

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## **Introduction**

HCAF are the UK's leading source of actuarial analysis of financial risk in healthcare purchasing <sup>(1- 32)</sup>. HCAF have researched this area for over 20 years and make the following observations:

1. There is a general financial risk associated with any contract. This general source of risk diminishes with contract size. HCAF have developed a method for characterising the level of this risk which is expressed as a percentage of the total contract size.
2. There is specific risk associated with emergency admissions to diagnoses covering 70% of emergency activity. This risk is related to metrological, environmental and infectious conditions.
3. There is specific risk associated with step increases in outpatient and emergency demand. Both appear to show a step increase which is triggered by a common source. The recent rise in GP referrals and emergency admissions is a recent example of this behaviour which has also occurred roughly every five to six years over the past 18 years.

HCAF can support CCGs and CSUs with an evaluation of the likely level of these risks contained within the activity and financial plans. The resulting operational flexibility implied by these risks should then be reflected in an operational risk statement for each CCG. This risk statement should identify which budgets can be cut to fund a positive variance should this occur.

To support the aims of the minimum possible elective activity consistent with the 18 week guarantee HCAF suggests that the 'Contract & Capacity Monitoring Tool' developed by HCAF be implemented across all CCG. This tool will allow each CCG to ensure that acute Trusts do not generate additional activity over and above incoming demand. Support will be given to each CCG in using the tool.

Analysis of demand will be conducted using the methods developed by HCAF over the past 15 years. Analysis at specialty level is the suggested preferred option since analysis at HRG level is clouded by Trust counting and coding issues.

HCAF have identified a specific financial risk associated with the V4 HRG, namely, that the financial risk associated with the long stay (i.e. patient stays beyond the upper trim point) part of the tariff has increased by over 30% in the transition from V3.5 to V4. This risk is specific to the counting, coding and specialty mix at specific hospitals <sup>(6)</sup>.

HCAF have also discovered a specific risk associated with the short stay emergency tariff. Once again this risk is specific to particular Trusts and relates to how otherwise A&E attendances are counted as emergency assessment unit (EAU) admissions. HCAF estimate that a profit margin of over £300 per EAU admission is contained in the operation of the short stay tariff <sup>(7)</sup>. The SHA may need to give guidance on how this issue is resolved specifically for those Trusts which count above average volumes of EAU activity.

In terms of the evaluation of capacity risk it is suggested that a review of bed capacity be conducted at any Trust where it is felt that there may be insufficient beds to support the level of elective, emergency & maternity bed demand. The 'Erlang for Beds' methodology developed by HCAF would be used for this purpose.

### **Data required supporting the analysis**

1. Historic first and follow-up attendances for each CCG split by provider at specialty level. A minimum of four to five years data.
2. Historic levels of emergency, elective and day case activity for each CCG split by provider at specialty level. A minimum of four to five years data.
3. Emergency activity should be split by activity covered by the short stay tariff and that which is not.
4. Diagnostic activity as an annual time trend (as above).
5. For the review of bed capacity annual bed days by specialty to be provided by specific Trusts and/or number of births for maternity & birthing bed pools.

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