Dr Foster's case notes

"HRG drift" and payment by results

In April 2004 the NHS introduced its new "payment by results" system, starting with foundation hospitals. Under this system, providers will no longer be paid by block contracts, but by case mix adjusted activity.[w1] *This new system uses healthcare resource groups (HRGs) as a measure of care based on diagnosis and complexity of treatment. HRGs are analogous to diagnosis related groups (DRGs) used in other countries. This new system has already run into problems: evidence shows disproportionate rises in the numbers of short stay inpatients admitted through accident and emergency departments. As a consequence, the planned implementation of payment by results across all NHS trusts for April 2005 has been restricted to elective admissions only.*[w2] *In addition, there is concern that "gaming" may result, whereby providers reclassify patients into more complex and therefore more expensive HRGs to gain extra revenue.*[w1 w3]

The bottom line

- Foundation trusts show a greater increase in short stay inpatient admissions through accident and emergency departments than non-foundation trusts
- The mean episode cost for foundation trusts did not change significantly
- Foundation trusts have not consistently changed the proportion of HRG codes indicating complicating conditions

We examined hospital episode statistics to determine whether foundation hospitals—the NHS providers using the payment by results system since April 2004—showed a change in numbers of emergency admissions and coding patterns compared with those providers still under the old block contracts. We examined the numbers of short stay inpatients (one day or less) admitted via accident and emergency departments and the average cost of all episodes for two periods, April 2003 to September 2003 and April 2004 to September 2004. We looked at four groups of providers: all trusts combined; all non-foundation trusts; a group of 20 non-foundation trusts nearest in volume to foundation trusts in both periods; and all foundation hospitals. We also examined the proportion of HRG codes for complicating conditions within two example groups of diagnoses: lobar, atypical, or viral pneumonia and fractured neck of femur.[w4]

Table 1 Emergency admissions through accident and emergency services with a length of stay of one day or less

Group	No of emergency admissions		% change
	April-Sept 2003	April-Sept 2004	
All trusts	384 325	450 688	17.3
All non-foundation trusts	362 239	423 249	16.8
All trusts similar in volume to foundation trusts	53 038	61 642	16.2
All foundation trusts	22 086	27 439	24.2

Table 2 Mean cost (£) per episode, April to September

Group	2003		2004	
	No of episodes	Mean cost	No of episodes	Mean cost
All trusts	5 369 820	1248	5 414 072	1243
All non-foundation trusts	5 027 754	1254	5 056 031	1248
All non-foundation trusts nearest in volume to foundation trusts	646 697	1292	684 532	1272
All foundation trusts	342 066	1172	358 041	1170

The numbers of short stay inpatients admitted through accident and emergency departments increased by 16-17% in the groups of hospitals examined, but in foundation hospitals the numbers increased by 24% (table 1). Mean episode costs for all foundation trusts were lower than for all non-foundation trusts and all non-foundation trusts nearest in volume to foundation trusts in both periods (table 2).

Several countries have introduced case mix prospective payment systems, with varying results. The potential benefits are enhanced data collection, as well as a fairer distribution of resources to providers as an incentive to increase capacity and thus reduce waiting lists.[w5] However, the payment by results system is no panacea. Our analysis of short stay admissions from accident and emergency departments suggests a disproportionate increase within foundation trusts. The additional problem of "HRG drift" requires careful monitoring through regular audits and updating HRG codes.[w2] Thus far the English data show no consistent evidence of HRG drift, but further analysis is needed as more data become available.

The basic figures

- Foundation trusts have a seen a greater increase in short stay inpatient admissions through accident and emergency (24%) than non-foundation trusts (17%) (table 1)
- The mean episode costs for all trusts decreased slightly between the two periods (£1248 *v* £1243; $P<0.001$) (table 2)
- The proportion of patients aged under 70 with complicating conditions associated with pneumonia increased slightly for all trusts over the period examined (28.3% *v* 29.7%; $P=0.009$) (see table 3 on bmj.com)
- The proportion of patients under 70 with complicating conditions associated with fractured neck of femur did not change significantly for all trusts over the period examined (33.3% *v* 34.3%; $P=0.333$)

This month's Dr Foster's case notes were compiled by Raquel Rogers, Susan Williams, Brian Jarman, and Paul Aylin at the Dr Foster Unit at Imperial College. Dr Foster is an independent research and publishing organisation created to examine measures of clinical performance.

Unabridged version with additional tables, data, and references is on bmj.com