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Zero Day Stay 'Emergency' Admissions in Thames Valley

Higher volumes at particular acute sites after adjusting for population characteristics

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Aims

- To demonstrate that zero day stay emergency admissions are largely a by-product of ‘assessment’ activities.
- To provide PCT commissioning and PBC leads with an insight into the PBR implications of zero day stay emergency admissions.
- To calculate the volume of zero day stay emergency admissions in particular locations that should arise due to population charactistics.
- To determine which locations are bearing a higher PbR cost due to these activities.
- To assess if zero day stay emergency admissions represent a valid and unique activity which could justify a separate PbR tariff.

This analysis covers any activity reported as an ‘emergency’ admission with a zero day length of stay. As such it will include admissions to observation wards, medical and surgical assessment units, clinical decision units and A&E assessment units. It is also possible that it includes zero day admissions to avoid breaching the four hour A&E target and may also include activities that may otherwise be regarded as an A&E attendance. There is no easy way of determining the exact nature of each type of zero day activity except by detailed audit of the activities at each acute site.

Executive Summary

This work analyses the results from 2.13 million head of population with144, 000 zero day stay 'emergency' admissions per annum. Analysis is at lower super output area level (LSOA)[1] covering all extremes of age profile, deprivation, ethnic composition (Asian & Black) and distance to the nearest acute site[2] using data for the three years 2003/04, 2004/05 and 2005/06 with volumes normalised to 2005/06 out-turn. Data is analysed at Health Resource Group (HRG) chapter level where each chapter corresponds to a body system, i.e. Nervous System, Vascular System, etc.

A unique relationship between deprivation and increased zero day stay emergency admission is confirmed for each individual HRG Chapter. Ethnicity has a variable effect depending on the specific HRG chapter and ethnic type.

In general, zero day stay emergency admissions increase with decreasing distance to the nearest acute site. They are especially high for the population living within six kilometres (km) of the acute site. However this relationship is unique to each acute site and for some sites such as the Oxford Radcliff and Royal Berkshire Hospital there is no increase in zero day stay emergency admissions for patients living close to the hospital. The highest distance related 'excess' is seen in Milton Keynes.

The key finding of this work is that zero day stay 'emergency' admission are mainly a by-product of Assessment Units. High volumes of zero day stays arise when 'assessment' activities are administratively separated from A&E activities. This division is justified for particular conditions. However, distance specific relationships and site-specific thresholds drive the overall volume of zero day stay emergency admissions more so than the characteristics of the population such that the PbR cost born by some locations is disproportionatly high.

In this study the 12 acute hospital sites (both within and outside of TV) providing care to the residents of TV is used to define 12 hospital emergency catchment areas[3]. Each output area was allocated to an acute site catchment using straight line distance[4]. Each acute site at the centre of a catchment area does not provide a full range of services, i.e. spinal surgery, burns care, etc; however, it is illustrative to see how relative rates of zero day stay emergency admission vary between different catchment areas. The implications to PbR are discussed. HRG chapter benchmarks and estimates of excess activity have been calculated for each Local Authority, PCT and Acute site.

[1] Each LSOA contains around 1,000 to 3,000 head of population. LSOA nest together into electoral wards and can be further nested into PCT or Local Authority boundaries.
[2] Straight line distance is measured in km.
[3] The 12 acute sites are as follows: Basingstoke, Frimley Park, Heatherwood, Hemel Hempstead, Hillingdon, Horton, Milton Keynes, Oxford Radcliff, Royal Berkshire, Stoke Mandeville, Swindon, Wexham Park, Wycombe.
[4] This method assumes that the bulk of the population would normally go to the nearest acute site for emergency care. Around 5% of emergency admissions are to out-of-area hospitals; however for the purpose of establishing good correlations the approximation is fit for purpose.

Key Points

Effect of the Healthcare System

- Around half of acute site catchment areas show elevated levels of zero day stay 'admission' for the population living within 6 km of the acute site
- The other site catchments do not show this behaviour
- The Milton Keynes system is characterised by exceedingly high volumes of zero day stay emergency 'admissions'
- System factors and not the population characteristics are responsible for the bulk of excess 'admissions'

Implications to PbR

- The presence or absence of emergency 'assessment units' at particular acute sites appear to account for the huge variation between locations
- In PbR such 'admissions' attract the inpatient price rather than an A&E attendance price
- At present only 230 out of a maximum possible 345 non-surgical HRG have a reduced stay emergency tariff[5]
- It would appear that a high proportion of zero day emergency stays are falling within those HRG which do not have a reduced stay tariff and hence A&E type activities are attracting the full inpatient tariff (see table)
- The reduced stay tariff covers zero and one day stays and as such appears to over-remunerate Trusts (see table)
- The role of assessment units and their impact on the volume of zero day stays is discussed in detail.
- It would appear that a separate tariff applicable to 'Assessment Unit' zero day stays is required with a possible price of around £200 to £300 for the resulting non-surgical HRGs (see table). This tariff should follow the same principle as a spell and would cover both the A&E and assessment unit activities for each patient, i.e. the PCT cannot be billed twice for the same patient.

Volume of zero day 'emergency' stays in 2004/05 for England (from HES) and 2006/07 PbR Implications

HRG has a short stay tariff	zero day stay 'emergency' admissions	PbR Cost	Approximate Real Cost[6]
No	525,763	£322M	£128M
Yes	336,684	£147M	£102M
Total	**762,447**	**£469M**	**£230 M**

Effect of Population Characteristics

- Rates increase with the Index of Multiple Deprivation (IMD)[7], and some HRG chapters show increased levels of admission due to ethnic populations.
- Attempts to analyse Chapter N (Maternity & Neonatal) were frustrated by what appears to be widespread inconsistency in how events are counted and coded.

[5] Surgical procedures only account for 8% of all zero day stay emergency admissions and these are concentrated in what may be called surgical emergency 'day case' procedures.
[6] Assumes an average 'real' cost of £300 per zero day stay 'emergency admission'

Introduction

In recent years Thames Valley has shown the highest apparent growth in the volume of emergency admissions in England, however, analysis reveals that this is exclusively related to emergency admissions with a zero day stay, i.e. there has been almost no growth in the volume of non-zero LOS emergency admissions over the past three years. These zero day stay emergency admissions appear to arise when an acute trust shifts the interface from A&E to an Assessment Unit, i.e. activities which would previously have been reported as an A&E attendance are now counted as an 'emergency admission' or are counted twice as an A&E attendance and then as a zero day stay emergency 'admission'.

While part of this shift may represent best practice it acts to confound the analysis and creates a specific PbR problem for two reasons. Firstly around one-third of non-surgical[8] HRGs still do not have a short stay tariff, i.e. a zero day stay is paid for at the same price as a full length stay. Secondly the current short stay tariff includes 0 and 1 day stays and appears to over-remunerate the vast majority of zero day stays. For this reason all zero day LOS emergency admissions have been analysed to determine if there is the potential for material differences across Thames Valley.

Method of Analysis

Refer to the companion report covering non-zero day LOS emergency admissions for a full description of the analytical methods.

The only modification was to simplify the effects of distance into just two groups, namely, 0 to 6 km and >6 km. This simplification was required due to the smaller volumes of 0 day stays, i.e. the number of variables in the model was reduced to a level appropriate to the data.

During the process of analysis it was noted that the sum of residuals was higher than expected[9]. This is interpreted as evidence for the fact that the so-called zero day emergency 'admissions' do not have the characteristics of a true 'emergency' admission, i.e. the real age profile is most probably closer to that applicable to A&E attendance than to an 'emergency' admission. In addition there is huge variation between sites in the relative volumes of admissions, i.e. the activities reported as a zero day stay 'emergency' admission are more characteristic of A&E, intermediate or primary care unscheduled care than an 'admission'.

Finally, there is the suggestion that there is more ambiguity in the HRG codes than may otherwise be expected. Considerable overlap is noted between Chapter N (Female Reproductive) and Chapter M (Pregnancy, Childbirth & Neonates), i.e. it is possible to code the same event in different ways such that it is allocated to different HRG chapters. In particular HRGs M09, M14, M15 and M18 are likely to overlap with N12 if record keeping and coding is ambiguous. Such coding ambiguity may be expected when unscheduled care activities are given a diagnosis simply for the purpose that one is recorded.

[8] Non-surgical simply refers to those HRG which use diagnosis rather than procedure code as the basis for grouping. It could be argued that some 'surgical' HRG are in fact composed of a mix of genuine surgical and outpatient procedures and these may qualify for a zero day stay tariff.

[9] The sum of residuals is the difference between that actual activity and that predicted by the model summed over all LSOA.

Population Factors Influencing 'Admission'

Refer to the companion report for specific comments regarding the role of the Index of Multiple Deprivation (IMD) and ethnicity on the relative volume of admissions.

Coefficients in the model covering these fundamental population characteristics are given in Appendix One. The level of 'excess' zero day stays is calculated for each HRG Chapter after adjusting for the fundamental population characteristics of age profile, IMD and ethnicity (Asian or black).

Effect of Distance on Zero Day Emergency Admissions

The effect of distance on the volume of emergency admissions has been recognised for many years. The distance effect is usually modelled with some form of decay function such as a power function.

In this study the distance decay was initially simplified into two parts, namely, 0 to 6 km and >6 km. Model testing showed that the inclusion of the factor covering 0 to 6 km was sufficient to give adequate model specificity. Table One gives the proportion of the TV catchment population living within 6 km of various acute sites. As can be seen this proportion ranges between 35% and 75% and thus there is ample scope for a large excess of unscheduled care events arising from the nearby population.

Table One: Proportion of total catchment population living within 6 km of an acute site[10].

Acute Site	Proportion within 6 km
Oxford Radcliffe	35%
Stoke Mandeville	47%
Wexham Park	55%
Frimley Park	56%
Royal Berkshire	58%
Horton	58%
Wycombe	59%
MKGH	71%
Heatherwood	75%

The additional admissions arising from the population living within 6 km of an acute site are given in Table Two. All other acute sites do not appear to have any additional admissions from this portion of the population, i.e. it is the system behaviour and not the population characteristics which influence the volume of zero day stays.

In Table Two a figure of 66% implies that there are 66% more 'admissions' for people living within 6 km compared to people living > six km after adjusting for the effects of age, deprivation and ethnicity.

Note that in Milton Keynes where 71% of the population lives within six km of the acute site the overall 'excess' of 'admissions' is compounded by very high levels of additional 'admissions' arising from this population, i.e. the acute site appears to be functioning (for whatever reasons) as an alternative to primary care rather than an 'acute' site.

[10] The catchment population is restricted to those living within the borders of Thames Valley

Table Three: Site thresholds for zero day stay 'admissions'. Data at HRG Chapter level is averaged over three years and adjusted to 05/06 out-turn. This acts to adjust for the progressive increase in volumes of zero day stays due to assessment units opening over the passage of time.

Site	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	Tot	Grand Total
Basingstoke	101%	0%	112%	117%	118%	100%	179%	192%	118%	140%	82%	54%	10%	161%	355%	131%	70%	131%	124%	99%
FPH	92%	0%	99%	124%	77%	93%	0%	129%	79%	25%	102%	36%	0%	52%	51%	105%	61%	105%	78%	64%
Heatherwood	98%	0%	69%	91%	45%	112%	217%	125%	76%	88%	110%	131%	0%	77%	114%	185%	68%	185%	96%	78%
Hemel Hempstead	95%	0%	67%	50%	61%	53%	124%	54%	69%	33%	62%	290%	203%	112%	68%	3%	62%	3%	86%	107%
Horton	132%	197%	75%	126%	109%	66%	149%	96%	104%	133%	74%	59%	153%	119%	0%	125%	125%	125%	99%	100%
MKGH	157%	499%	210%	145%	174%	142%	76%	126%	98%	205%	137%	111%	194%	133%	0%	174%	120%	174%	131%	146%
ORH	131%	121%	99%	127%	139%	130%	0%	99%	157%	297%	131%	79%	140%	46%	0%	221%	189%	221%	110%	117%
RBBH	88%	0%	63%	107%	90%	105%	217%	139%	89%	0%	82%	55%	4%	140%	359%	57%	57%	57%	100%	82%
Stoke Mandeville	48%	108%	92%	43%	84%	50%	0%	55%	105%	0%	64%	75%	156%	56%	0%	0%	61%	0%	65%	85%
Swindon	145%	0%	91%	116%	106%	139%	12%	119%	105%	17%	101%	92%	114%	41%	0%	165%	153%	165%	106%	105%
Wexham Park	75%	0%	99%	71%	79%	108%	207%	78%	92%	0%	112%	92%	4%	113%	123%	0%	69%	0%	89%	77%
Wycombe	50%	0%	79%	57%	27%	23%	0%	27%	26%	0%	58%	237%	209%	121%	0%	0%	66%	0%	86%	102%

Important: Explanation of how to interpret a site threshold

The site threshold is that portion of the total excess after stripping out anydistance related effects. Hence for the ORH and RBBH the site threshold explains any total excess of zero day stays, however, for Milton Keynes the site threshold of say 146% (as in Table Three) implies that at MKGH all the excess of persons arriving at the hospital with the potential to become a zero day stay emergency admissions have a 46% higher chance of becoming a zero day admission than elsewhere. So if 66% (as in Table Two) more people arrive at MKGH (living within 6 km) than may otherwise arrive elsewhere then the total percentage converting to a zero day emergency will be 46% of the baseline 100% plus 46% of the additional 66% giving 46% + 30% = 76% more than the TV average.

All PCTs using the Swindon & Marlborough Acute Trust should note that in 2004/05 this trust had the 8th highest % zero day emergency stay in England. PCTs may incur additional costs for ambulance and A&E journeys to this site. The MKGH has the 2nd highest percentage of zero day stays.

Table Two: Additional zero day emergency 'admissions' arising from the population living within 6 km of the acute site.

Site	Acute HRG Chapters (excl N & T)	All HRG[11] Chapters
MKGH	66%	52%
Horton	25%	44%
Wycombe	18%	34%
Heatherwood	10%	7%
Stoke Mandeville	0%	21%
All Other Sites	**0%**	**0%**

The simple fact that there is such a great disparity between sites implies that there are system specific effects. It is suggested that the ambulance service may play an important role in these system specific effects and the Oxfordshire system is worthy of specific comment.

The Oxfordshire ambulance service has been proactive in seeking to triage 999 calls upon receipt of the call and upon arrival at the patient's location. Indications are that this acts to reduce Category C journeys into the hospital by around 45%[12]. It would seem likely that this triage is responsible for the lack of distance related effects surrounding the Oxford Radcliff site.

The Horton site, whilst located just within the borders of Oxfordshire is serviced by four separate ambulance services (Oxfordshire, Two Shires, Warwickshire and Northamptonshire) and it is possible that the absence of triage in the non-Oxfordshire services is responsible for the distance effects seen at this site.

Effect of Acute Thresholds

The fact that there is large variation in acute healthcare structure & practice is widely known and implies that thresholds to zero day stay emergency admission should be different at different sites.

The usual approach to identify a healthcare system is to use a PCT or local authority boundary, however, such boundaries do not reflect the usual flows of patients to the nearest acute hospital site. In this study each LSOA has been assigned to sit in the catchment area of the nearest acute hospital site.

In this study a 100% relative rate of admission represents the TV average while a relative admission rate of 120% implies 20% more emergency admissions than the TV average after adjusting for the effects of age, IMD, ethnicity and distance.

Table Four demonstrates that certain hospital sites have far higher rates of admission, i.e. have a lower threshold to 'admitting' a patient as a zero day stay once the patient has presented at the hospital. This appears to be a feature of the Milton Keynes GH, Oxford Radcliff and Basingstoke sites (10% to 30% increase in overall volume of zero day emergency admissions).

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[11] The bulk of the differences are due to Chapter N (Obstetrics & Neonatal)

[12] For specific details of the admission avoidance work of the Oxfordshire ambulance service contact Steve Young

The reader should recall that the so-called admission threshold is an output of the model, i.e. the model is attempting to tell us something about the real world behaviour of each site and its associated catchment population. Rather than reflecting a propensity to admit the threshold may alternately reflect different administrative structures, i.e. in some sites 'Assessment Units' are processing patients which are treated as an A&E attendance at other sites and hence do not generate a zero day 'admission'.

Note for the HRG chapters describing acute care (All Chapters excluding N and T) high volumes of zero day stays are a consistent characteristic MKGH, Basingstoke and to a lesser extent the ORH and Swindon. Some sites such as Frimley Park, Stoke Mandeville, Wexham Park and Wycombe have much lower levels of zero day stays. It is suggested that the primary reason for these differences is the presence or absence of assessment units which are administratively separate to A&E.

Chapters M (Gynaecology) & N (Maternity & Neonatal) show very patchy behaviour reflecting the differences in counting and coding seen at different sites. These differences have also been highlighted in the companion reports covering non-zero day emergency admissions and outpatient first attendances. There is an urgent need to introduce consistent national standards for these two specialties.

In addition the 'admission threshold' must not be seen as a general threshold but is most probably condition specific. Hence one site will 'admit' a higher proportion of say diabetic cases (Chapter K) via a medical assessment unit while another will deal with these via outreach type services. This understanding then opens up the way for changes in disease management pathways.

Specific Comments at HRG Chapter Level

Apart from the obvious differences seen in Table Three some specific comments are relevant to particular HRG Chapters.

Chapter B (Ophthalmology)

HRG B32 'Non-surgical Ophthalmology' dominates with 65% of the chapter total zero day stays. Note the total dichotomy between sites with most sites having virtually no zero day stays while MKGH, Horton, ORH and Stoke Mandeville have high volumes.

Refer to Appendix Three for a case study which compares the ORH (high zero day stays) to the RBBH (very low zero day stays) to discern the different HRG reflecting patterns of admission associated with the operation of their respective Ophthalmology A&E units.

This case study is designed to highlight the fact that zero day stay emergency activities can occur across a wide range of medical and 'surgical' HRG. The so-called surgical HRG still appear to be susceptible to the inclusion of minor diagnostic procedures mixed in with more 'inpatient' type activities.

Chapter C (ENT, Oral & Maxillofacial Surgery)

HRG C17 'Intermediate head & neck medical diagnoses' accounts for 32% of the chapter zero day volume. Very high volumes at MKGH skew the entire TV average in this HRG chapter.

Refer to Appendix Four for a case study which compares the ORH and the RBBH (36% below the ORH) to discern different HRG reflecting patterns of emergency 'admission' to Oral & Maxillofacial Surgery. This case study also demonstrates the mixture of HRG where zero day stay activities can be reported.

Chapter G (General Surgery – Hepatobiliary and Pancreatic)

This chapter has the lowest proportion of zero day stays of which G19 'Biliary tract disorders' accounts for 40% of all zero day stays in the chapter. Note that some sites have virtually no zero day stays (Frimley Park, ORH, Stoke Mandeville, Wycombe) while all others have higher levels (highest at Heatherwood and RBBH). It is unsure if specific surgical assessment units account for these differences.

Chapter K (Endocrinology & General Medicine)

K16 and other diabetic HRGs dominate this chapter with over 40% of total zero day stays.

Once again a total dichotomy exists between the sites with virtually no zero day stays at the RBBH, Stoke Mandeville, Wexham Park and Wycombe. It is suggested that the organisation of Diabetic services and the existence of diabetic outreach teams accounts for these differences.

Chapters M (Gynaecology) and N (Obstetrics)

Inconsistent clinical coding and counting has been highlighted for these two Specialties and HRG groups in the companion reports covering non-zero day stay emergency admissions and first outpatient attendances.

Note the absence of zero day stays at Frimley Park Hospital which treats activities falling within HRG N12 'Events Not Related to Child Birth' as an 'urgent' outpatient activity. It is noted that HRGs M09, M14, M15 and M18 are likely to overlap with N12 if record keeping and coding is ambiguous. Such coding ambiguity may be expected when unscheduled care activities are given a diagnosis simply for the purpose that one is recorded.

Volume of 'Excess' Zero Day Stays

The volume of excess zero day stay emergency admissions has been determined relative to the Thames Valley average. The actual volume in each LSOA was compared to the expected volume using the age profile, IMD and ethnic mix applicable to the LSOA.

The difference between actual and expected was then summed across all LSOA falling into a Trust or PCT catchment area and this total reflects the contribution of the non-population characteristics upon the count of zero day stays.

Data is given in Tables Four and Five. As can be seen activities at Milton Keynes General Hospital and to a lesser extent the Oxford Radcliff and Horton sites (ORH Trust) greatly influence the entire TV average and as a result several sites experience large negative figures, i.e. if the TV average were to be re-calculated by excluding data from Milton Keynes then the 'excess' in Milton Keynes would be far greater.

Note the distortion in numbers for Chapters M & N where counting and coding issues appear to require resolution. Also note that for particular HRG Chapters there can be a local excess depending on the presence of absence of surgical, medical and paediatric assessment units.

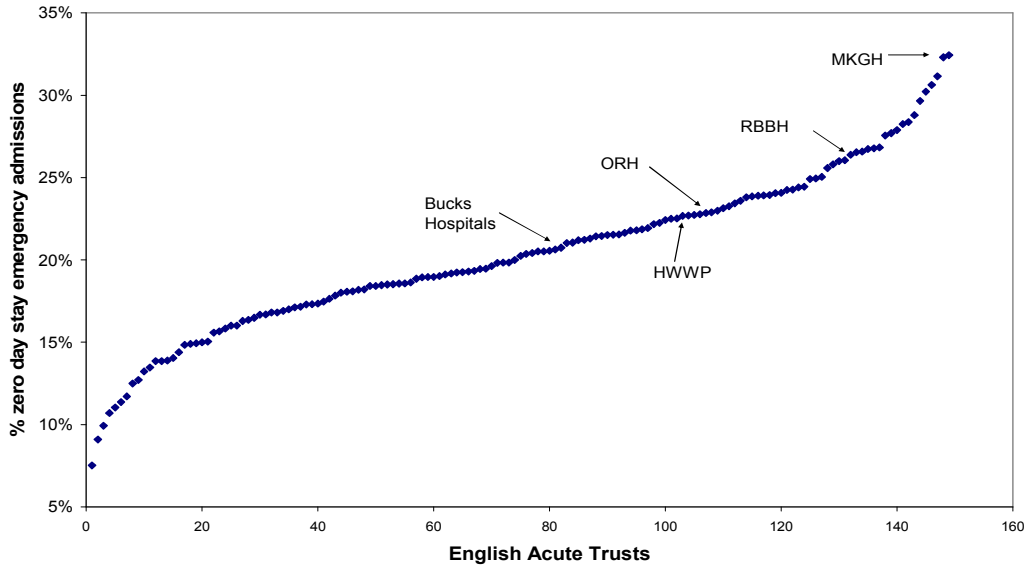
Commissioners will need to consider the implications of this 'excess' activity. Refer to the section dealing with national benchmarks for zero day stay at HRG level as a means for interpreting the implications to 2006/07 PbR prices.

Role of Assessment Units

Assessment Units are one developing trend which although recognised as 'good practice' can lead to an increase in the volume of zero day emergency stays.

- The principle of an assessment unit can be incorporated into an A&E department and hence activity is paid at the A&E tariff
- Elsewhere the 'assessment' activities can be administratively segregated from A&E and due to this structure the activities are paid at the relevant inpatient HRG tariff
- Different administrative criteria for directing patients via an assessment unit can lead to a situation where particular trusts send far higher volumes (of otherwise A&E attendances) via the assessment unit.
- The same activity therefore attracts different prices due to administrative systems and differences in these between trusts
- The national average is a mixture of hospitals operating in a continuum between two possible extremes

Figure One: Range in the proportion of total emergency volume which is reported as a zero day stay for English acute hospitals.



The extent of these differences is illustrated in Figure One where the range is given for English acute hospital trusts in 2004/05[13]. As can be seen the average for all emergency admissions across all specialties ranges from 10% up to 32%. It is of

[13] Excludes Trusts with less than 10,000 emergency admission per annum.

Table Four: Calculated excess zero day stay emergency admissions for Thames Valley Residents lying in the catchment area of various acute sites.

Acute Site	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	All excl M, T	All
Basingstoke	11	12	4	11	33	6	3	144	12	15	-2	-39	-291	157	9	-1	-21	6	252	-8
FPH	-3	3	5	6	-15	-3	-4	18	-6	5	3	-29	-161	-48	0	1	-6	7	-118	-261
Heatherwood	4	5	-5	6	54	47	4	68	-19	14	5	93	-484	-63	6	-5	-30	21	42	-378
Hemel Hempstead	0	3	0	-12	-21	-20	4	-31	-10	1	-5	90	175	9	0	-3	-7	-2	-63	112
Horton	36	14	-5	15	188	-43	1	-6	-4	9	-16	-49	382	222	4	7	32	14	240	653
MKGH	270	88	135	265	826	571	9	639	95	49	156	130	1434	1146	7	157	398	98	4582	6223
ORH	166	55	34	119	477	262	-12	59	290	42	139	-104	786	-631	18	48	721	116	941	2060
RBBH	-15	23	-54	41	-15	45	30	448	-9	36	-33	-230	-1580	602	37	-6	-224	2	-16	-1552
Stoke Mandeville	-58	17	3	-48	-42	-117	0	-170	20	8	-19	-32	815	-249	-5	-10	-16	1	-996	-157
Swindon	15	5	7	7	15	26	-4	67	8	5	4	2	13	-48	1	2	66	10	93	117
Wexham Park	-48	6	12	-51	-154	183	17	-118	6	52	26	9	-440	420	14	2	-166	-9	-497	-913
Wycombe	-27	16	-6	-52	-120	-126	5	-144	-55	15	-40	679	1496	232	-2	-16	-80	-9	-175	1230

Table Five: Calculated excess zero day stay emergency admissions for Thames Valley residents lying within the catchment area of different local authorities and hence PCTs. This is the cumulative outcome of the different acute sites servicing these LAs and PCTs.

Local Authority	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	All excl M, T	All
South Buckinghamshire	-5	5	17	-8	-45	48	0	-27	10	4	17	44	755	73	-2	3	-16	1	-28	684
West Oxfordshire	36	12	2	29	79	47	-5	24	69	9	36	-3	185	-119	5	6	95	13	154	327
Aylesbury Vale	-31	21	13	-35	-5	-81	2	-134	27	6	-5	-40	821	-173	-5	-3	-38	-2	-741	98
Oxford	73	19	1	45	200	93	3	17	81	20	35	-94	130	-231	8	16	301	65	292	680
Milton Keynes	263	79	125	262	793	570	11	642	90	48	148	134	1325	1138	7	154	391	98	4551	6092
Slough	-25	-2	-5	-35	-75	106	14	-66	13	39	8	-43	-796	263	11	4	-106	-13	-268	-1020
Cherwell	39	17	5	36	246	5	1	24	55	14	9	-49	609	180	6	17	129	22	529	1221
Windsor and Maidenhead	-25	5	2	-2	-6	51	7	-1	-18	13	8	25	-556	75	7	-9	-56	7	-191	-736
Vale of White Horse	35	13	23	12	78	60	-9	7	43	7	30	-16	218	-194	3	6	154	26	59	285
Bracknell Forest	0	4	-1	9	28	35	0	58	-20	15	4	61	-528	-90	4	-4	-28	21	-49	-481
South Oxfordshire	25	20	5	27	75	13	-9	23	49	9	12	-23	314	-150	3	3	147	18	-13	310
Wycombe	-21	12	-3	-42	-91	-107	6	-118	-38	16	-34	589	1427	216	-2	-10	-63	-9	-34	1337
Chiltern	-6	9	2	-32	-61	-50	1	-77	-27	3	-14	190	437	32	-1	-7	-23	-2	-242	143
West Berkshire	14	17	-3	21	40	9	10	275	5	17	-11	-57	-580	306	14	-1	-20	8	420	-133
Reading	-25	7	-36	8	-26	3	20	178	-6	22	-5	-126	-968	302	16	-3	-146	-7	-138	-1045
Wokingham	5	8	-12	11	1	43	3	150	-2	13	-15	-64	-581	138	16	3	-56	8	31	-528

interest to note that the second highest Trust is Milton Keynes where a (Medical) Clinical Decision Unit and an A&E Assessment Unit were both opened during 2003/04 and a Surgical Assessment Unit during 2004/05. See case study in Appendix Four.

In explanation of this developing trend it is noted that some A&E activities do not easily conform to the four hour rule. Activities involving extended periods of observation for concussion, drug overdose, cardiac conditions, etc may or may not result in eventual admission and may require a time scale for assessment and observation beyond four hours. This group of patients should qualify as a valid short stay emergency admission.

Finally, in times of low resource relative to demand within an A&E department there can be additional pressure to admit to avoid breaching the four hour target – this is most likely to occur at specific times of the year or days of the week, i.e. at weekends.

Table six lists the top 25 high-volume zero day 'emergency' stays for England in 2004/05 (from HES). As can be seen all are non-surgical except for M05 which contains a mixture of minor procedures some of which are non-surgical. These HRG mainly fall into the category of activities which may not necessarily conform to the four hour rule. Note that HRG H41 is for over 69 years or with complications and so is a valid activity in this category.

Table Six: Top 25 zero day stay 'emergency admissions' by volume in 2004/05.

HRG	Description	0 day stays	% 0 day
E36	Chest Pain <70 w/o cc	42,273	37%
P03	Upper Respiratory Tract Disorders	34,865	53%
M09	Threatened or Spontaneous Abortion	31,616	65%
S16	Poisoning, Toxic, Environmental and Unspecified Effects	28,026	39%
F47	General Abdominal Disorders <70 w/o cc	25,396	28%
P13	Other Gastrointestinal or Metabolic Disorders	24,396	39%
P06	Minor Infections (including Immune Disorders)	18,846	39%
N12	Antenatal Admissions not Related to Delivery Event	18,145	43%
P26	Infectious and Non-Infectious Gastroenteritis	18,099	44%
H24	Soft Tissue Disorders <70 w/o cc	15,503	63%
H42	Sprains, Strains, or Minor Open Wounds <70 w/o cc	12,935	47%
P01	Asthma or Wheezing	12,348	32%
H64	Head Injury <70 w/o cc	12,051	47%
E35	Chest Pain >69 or w cc	11,631	21%
M05	Upper Genital Tract Minor Procedures	10,409	42%
H23	Soft Tissue Disorders >69 or w cc	9,884	49%
P15	Accidental Injury without Brain Injury	9,416	25%
S33	Examination, Follow up and Special Screening	8,659	68%
P14	Ingestion Poisoning or Allergies	8,488	43%
A28	Headache or Migraine <70 w/o cc	8,443	33%
E30	Arrhythmia or Conduction Disorders <70 w/o cc	8,389	27%
E32	Syncope or Collapse <70 w/o cc	7,676	36%
B32	Non Surgical Ophthalmology with los <2 days	7,617	64%
F46	General Abdominal Disorders >69 or w cc	7,483	13%
H41	Sprains, Strains, or Minor Open Wounds >69 or w cc	6,908	27%

Table Seven extends this further to explore the highest volume HRG in each Chapter. Once again they are all non-surgical and account for between 20% and 60% of the entire chapter zero day stays. All of these HRG have a proportion of zero day stays which is double the Chapter average, i.e. it is the high volume zero day HRGs which are influencing the chapter average.

Table Seven: Highest zero days stay HRG in each Chapter.

Highest Volume zero day HRG in each Chapter		HRG % zero day	Chapter Average % zero day	Proportion of HRG Chapter zero day volume
G19	Biliary Tract Disorders <70 w/o cc	8%	4%	40%
D34	Other Respiratory Diagnoses <70 w/o cc	33%	9%	15%
K16	Diabetes or Other Hyperglycaemic Disorder <70	21%	11%	17%
Q18	Non-Surgical Peripheral Vascular Disease w/o cc	26%	12%	55%
L69	Urinary Tract Stone Disease	19%	13%	14%
F47	General Abdominal Disorders <70 w/o cc	28%	14%	38%
A28	Headache or Migraine <70 w/o cc	33%	15%	25%
E36	Chest Pain <70 w/o cc	37%	19%	40%
R16	Thoracic or Lumbar Spinal Disorders <70 w/o cc	28%	19%	50%
C17	Intermediate Medical Head, Neck Diagnoses w/o cc	21%	20%	32%
J35	Minor Skin Procedures - Category 2 w/o cc	27%	21%	21%
H24	Soft Tissue Disorders <70 w/o cc	63%	24%	16%
U01	Invalid Primary Diagnosis or blank diagnosis	23%	24%	91%
S16	Poisoning, Toxic and Unspecified Effects	39%	25%	39%
T10	Alcohol or drugs non-dependant use	53%	30%	30%
B32	Non Surgical Ophthalmology with los <2 day	64%	37%	62%
P03	Upper Respiratory Tract Disorders	53%	38%	21%
N12	Antenatal Admissions not Related to Delivery Event	43%	39%	75%
M09	Threatened or Spontaneous Abortion	65%	44%	55%

Table Eight shows those HRG which have more than 50% of all admissions as a zero day stay. For such HRGs there is a very clear case that the bulk of this is 'assessment' activities rather than what would qualify as an 'admission' activity.

Table Eight: Non-surgical HRG with a proportion of zero day stays above 50% of the total volume. Data is for England in 2004/05 and is from HES.

HRG	HRG Description	Zero day Stays	Total Cases	Percentage Zero days
S33	Examination, Follow up and Special Screening	8,659	12,701	68%
S34	Other Procedures and Health Care Problems	451	672	67%
M09	Threatened or Spontaneous Abortion	31,616	48,887	65%
B32	Non Surgical Ophthalmology with los <2 days	7,617	11,933	64%
H24	Soft Tissue Disorders <70 w/o cc	15,503	24,632	63%
T11	Alcohol & Drugs non-dependant use	2,257	3,673	61%
S11	Disorders of Immunity without HIV/AIDS	183	340	54%
P03	Upper Respiratory Tract Disorders	34,865	65,235	53%
T10	Alcohol & Drugs Non-dependant use	3,505	6,588	53%
P16	Child Welfare and Protection	100	188	53%
M12	Non-Surgical Treatment of Lower Genital Tract Disorders	1,886	3,585	53%
P21	Renal Disease	3,153	6,011	52%
E21	Deep Vein Thrombosis <70 w/o cc	4,621	9,035	51%

In conclusion, assessment units are a valid source of zero day emergency stays and are recommended as 'best practice'. This activity is likely to be described as an 'observation ward'. Their volume is likely to grow over time as more and more hospitals implement these units. It is also clear that other activities are being reported as a zero day stay. The combined set of activities being counted as a zero day stay do however create problems for the national tariff and these implications will now be discussed. See Appendix Four for a case study demonstrating how assessment units can markedly change the volume of 'emergency' admissions and the apparent growth.

Implications to the National Tariff

At a local level it is clear that the configuration of services and the consequence of these to how patients attendances are allocated to either an A&E attendance or an emergency 'admission' lead to deviations from 'national average'.

The relevant national benchmark is the % of emergency admissions which are short stay, hence, how far does local practice differ from the national average.

Particular trusts have very high excess to national average of zero day stay emergency admissions and this leads to differential costs under the current national tariff.

- The whole concept of the PbR tariff rests upon conformity to the national 'average'
- The calculated price within the tariff lags 2 to 3 years behind all that constitutes national 'average', i.e. 04/05 data is used to calculate the 06/07 price.
- Changes in technology and 'best practice' create situations which deviate from the national average
- Change at the local level tends to occur as a step (i.e. immediate deviation from national average) while it is the cumulative addition of step changes in individual trusts which results in a national average which appears to be a smooth trend (i.e. the individual step changes are lost in the national total)

Benchmarks for Zero Day Stay Emergency Admissions

The valid benchmark for all discussions around 06/07 activity is the 04/05 national average. This is because 2004/05 activity forms the basis for 2006/07 prices.

Appendix Five gives the 2004/05 national average for percentage zero day stays at HRG level.

Trusts and PCTs are advised to refer to this table when seeking to negotiate required actions when local average deviates markedly from the national average.

Appendix One: Population characteristics influencing the volume of zero day stay emergency 'admissions'

The coefficients in this table were used to calculate the TV average volume expected due to population characteristics. The volume of 'excess' admissions relative to the TV average was then calculated for each LSOA and these were then aggregated to Ward, Local Authority and PCT.

Expected volume = NA x (I + A x IMD + B x % Asian + C x % Black)

This table should NOT be used for local PBC calculations. The appropriate benchmark is the national average percentage zero day stays (see Appendix Five).

HRG Chapter	Intercept (I)	IMD (A)	Asian (B)	Black (C)
A Nervous System	0.1470	0.0040	0.0004	0.0107
B Eyes & Periorbita	0.0933	0.0030	0.0011	0.0073
C Mouth, Nose & Ears	0.2144	0.0076	0.0049	-0.0009
D Respiratory	0.0810	0.0036	0.0009	0.0025
E Cardiac	0.1575	0.0034	0.0028	0.0083
F Digestive	0.1608	0.0055	-0.0009	0.0041
G Hepato-biliary & Pancreatic	0.0800	0.0030	-0.0006	-0.0163
H Musculoskeletal	0.3041	0.0097	-0.0006	-0.0016
J Skin, Breast & Burns	0.2971	0.0105	0.0004	0.0019
K Endocrine & Metabolic	0.0800	0.0030	-0.0102	-0.0069
L Urinary Tract & Male Reproductive	0.1790	0.0027	0.0001	0.0074
M Female Reproductive	0.5576	0.0094	-0.0014	-0.0012
N Pregnancy, Child Birth & Neonatal	3.8059	0.1233	-0.0035	-0.0155
P Childhood	0.4062	0.0068	0.0048	-0.0005
Q Vascular	0.1000	0.0030	-0.0013	-0.0154
R Spinal	0.2500	0.0045	0.0000	0.0000
S Haematology, Poisoning & Non-specific groups	0.1995	0.0140	0.0021	0.0159
T Mental Health	0.0045	0.0053	0.0001	0.0030
Total excluding N & T	0.2481	0.0069	0.0021	0.0061
Total for all Chapters	0.2928	0.0081	0.0016	0.0117

Appendix Two: High volume of 'emergency' admission to Ophthalmology at the ORH

Analysis of 2004/05 catchment population data at Specialty level indicates that the ORH appears to have 10-times the volume of total emergency admission (including zero day stays) in Ophthalmology compared to any other Trust catchment population in Thames Valley.

This case study investigates which HRGs may be used to report this 'excess' activity. The RBBH is used as a reference site. Note that in Ophthalmology the RBBH services both East & West Berkshire and hence has a 1.35-times larger catchment population that the ORH. The NHS IA's Performance Investigator tool was used to extract 2004/05 trust data at HRG level. As can be seen HRG which could encompass zero day stay activities appear to account for the bulk of the difference.

There is no suggestion that the ORH is doing anything wrong or that the RBBH is 'better'. This case study simply demonstrates that different models of care have unintended PbR consequences and that some models of care cost more than others.

HRG B30 Surgical Retina Intermediate Complexity - £1825

The procedures included in this HRG include 'suture of eye NEC' and 'removal of foreign body NEC'. The ORH has 94 more admissions than the RBBH (3-times higher than RBBH, hence, 4-times higher than TV average)[14].

HRG B32 Non Surgical Ophthalmology with 0 or 1 day LOS - £518

The diagnoses included in this HRG include 'conjunctivitis', etc. The ORH has 35 more admissions than the RBBH (5-times higher)

HRG B33 Non Surgical Ophthalmology with >1 day LOS - £1,718

The diagnoses included in this HRG include 'conjunctivitis', etc. The ORH has 38 more admissions than the RBBH (2-times higher)

HRG B29 Surgical Retina Low Complexity - £745

The procedures included in this HRG include examination of eye under anaesthetic. The ORH has 19 more admissions than the RBBH (3-times higher)

HRG Q06 Miscellaneous Vascular Procedures - £2,711

The procedures included in this HRG include 'repair of other artery NEC'. The ORH has 10 more admissions than the RBBH (3-times higher)

HRG B15 Other Lens Surgery Low Complexity - £989

The procedures included in this HRG include extraction of foreign body from lens. The ORH has 4 more admissions than the RBBH (5-times higher)

[14] This surgical HRG appears to be open to distortion due to ambiguous coding.

HRG only reported by the ORH

The following HRG are all reported as emergency Ophthalmology at the ORH – the only Trust in Thames Valley to do so.

A18, A24, A27, C17, H44, J30, J40, S33, S34, J43

Additional 10 or more emergency admissions are accounted for in this group.

Conclusions

The ORH is confirmed to be counting higher volumes of 'emergency' admission which may be an artefact of the counting and coding of Ophthalmology A&E procedures.

Commissioners could be paying for an additional 210 'emergency' admissions above the 'norm' expected in other Ophthalmology departments.

Some of these additional admissions will be zero day stays. Some zero days stays may be minor procedures reported in surgical HRG due to ambiguous coding of activities or due to loop-holes in the procedure codes used to define a 'surgical' HRG.

Appendix Three: High volume of 'emergency' admission to Oral & Maxillo-facial Surgery at the ORH

Analysis of 2004/05 catchment population data at specialty levelindicates that the ORH appears to have 7-times the volume of total emergency admission (including zero day stays) to Oral & Maxillofacial Surgery compared to any other Trust catchment population in Thames Valley.

This case study investigates which HRG may be used to report this 'excess' activity. The RBBH is used as a reference site. Note that in Oral Surgery the RBBH services both East & West Berkshire and hence has a slightly larger effective catchment population to that of the ORH. The NHS IA's Performance Investigator tool was used to extract 2004/05 trust data at HRG level.

As can be seen zero day stay activities can account for the bulk of these differences.

There is no suggestion that the ORH is doing anything wrong or that the RBBH is 'better'. This case study simply demonstrates that different models of care have unintended PbR consequences and that some models of care cost more than others. The whole issue of zero day stays is part of this discussion.

HRG C17 v3.5 Intermediate Medical Head, Neck or Ear Diagnoses w/o cc

The diagnoses included in this HRG include mainly treatment of cancers which appear to be reported mostly as an outpatient attendance at the RBBH. The ORH has 36 more admissions than the RBBH.

HRG H44 v3.5 Major Cranial, Visceral or Blood Vessel Injury <70 w/o cc

The diagnoses included in this HRG include fractures and injury not receiving a surgical procedure. The ORH has 17 more admissions than the RBBH.

HRG C25 v3.5 Intermediate Maxillo-facial/ENT procedures

This HRG relates to fracture procedures. The ORH has 18 more admissions than the RBBH.

HRG J35 v3.5 Minor Skin Procedures - Category 2 w/o cc

The procedures included in this HRG include a wide variety of minor procedures including sutures, etc. The ORH has 16 more admissions than the RBBH.

HRG S19 v3.5 Complications of Procedures

This HRG could include emergency admission following an elective procedure. The ORH has 16 more admissions than the RBBH.

HRG B21 v3.5 Orbit / Lacrimal High Complexity

The procedures included in this HRG include 'removal of foreign body'. The ORH has 16 more admissions than the RBBH.

HRG H41 v3.5 Sprains, Strains, or Minor Open Wounds >69 or w cc

The diagnoses included in this HRG include non-surgical admissions for fractures of tooth and other superficial injury. The ORH has 13 more admissions than the RBBH.

HRG C57 v3.5 Major Mouth or Throat Procedures

The procedures included in this HRG include a very wide range of procedures with room to report a more minor case mix. The ORH has 13 more admissions than the RBBH.

HRG C07 v3.5 Minor Medical Head, Neck or Ear Diagnoses <70 w/o cc

Mainly used for non-surgical treatment of neoplasm's which appear to be reported as outpatient at the RBBH. The ORH has 11 more admissions than the RBBH.

HRG H64 v3.5 Head Injury <70 w/o cc

The diagnoses included in this HRG include non-surgical admission for 'unspecified injury of head'. The ORH has 8 more admissions than the RBBH.

HRG P15 v3.5 Accidental Injury without Brain Injury

The diagnoses included in this HRG include non-surgical admission for superficial injuries and fractures. The ORH has 6 more admissions than the RBBH.

HRG B16 v3.5 Oculoplastic Low Complexity

Normally an Ophthalmology HRG but includes sutures to the eyelid, etc (maxillofacial surgery?). The ORH has 6 more admissions than the RBBH.

HRG only reported by the ORH

The following HRG are all reported as emergency Oral/Maxillofacial Surgery at the ORH – the only Trust in Thames Valley to do so.

F49, H99, J44, J43, J42, K09, K08, P13, Q18, Q06, S35, S33, S13

Additional 15 or more emergency admissions are accounted for in this group.

Conclusions

The ORH is confirmed to be counting higher volumes of 'emergency' admission which may be an artefact of the counting and coding of A&E type procedures.

Some of this may include treatment of cancers which are reported elsewhere as outpatient appointments.

Commissioners could be paying for an additional 180 'emergency' admissions above the norm expected in other Oral & Maxillofacial departments.

Appendix Four: Effect of assessment units and other changes at MKGH upon the trends in total emergency admissions

This case study looks at the trends in total emergency admissions at the Milton Keynes General Hospital over the past four years to demonstrate that the opening of various assessment units or other changes in counting and/or coding can have a material effect of the volume of emergency admissions and on the apparent growth in emergency admissions.

In 2002 the MKGH was struggling to meet the four hour target in A&E. It was felt that a radical solution was required which resulted in the opening of various assessment units incorporating aspects of Modernisation Agency thinking available at the time into the design of the units. These units have opened progressively over the period Feb-03 to Apr-05 as follows:

1. Feb-03 Clinical Decision Unit for Medical GP emergency referrals
2. Jul/Aug-03 A&E Assessment Unit admits direct from A&E
3. Nov-04 Surgical Assessment Unit for Surgical GP emergency referrals
4. Apr-05 Paediatric Assessment Unit for GP and A&E referrals

Recall that back in 2002 PbR was still in its infancy and hence the future implications to a PbR environment could not be fully foreseen. Indeed the Trust and PCT understood that the unit would lead to counting changes and had agreed a way to pay for the incremental activity at a local price.

Data is at quarterly level (divided by the number of days per quarter) from the NHS IA's Performance Investigator data reporting tool (HRG v3.5).

Figure A4.1: Apparent growth in total emergency admissions (including zero day stay)

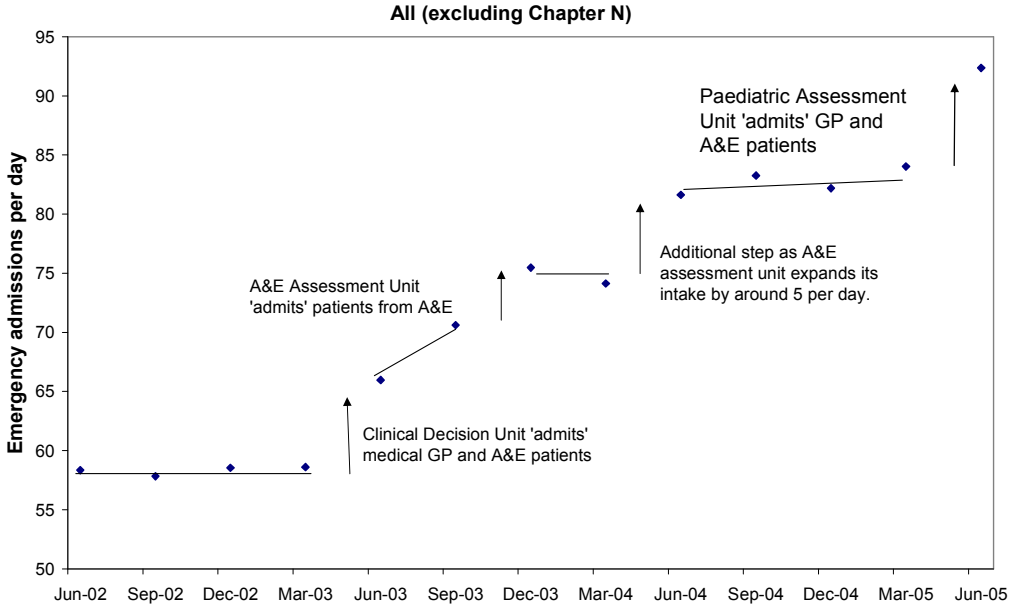


Figure A4.1 shows how the assessment units have affected the trend in total emergency admissions. This is due to the fact that all patients attending an assessment unit are treated as an 'admission'. As can be seen the opening of the various Assessment Units have incremental step change effects on total emergency

admissions. The step increases are almost exclusively made up of zero day emergency admissions.

Figure A4.2 shows the trend in emergency admissions for Chapter N (Obstetrics & Neonatal). These patients do not go via the Assessment Unit but are directed to the Maternity Unit. As can be seen there is a step change in activity at the start of the 2004/05 financial year which was due to a change in the way neonates and early pregnancy events were counted and coded. Once again the change is principally due to zero day stay 'emergency' admissions. Note that the step change in counting does not influence the slope of the overall trend line which is roughly close to that expected by demographic change.

Figure A4.2: Changes in volume of Chapter N emergency admissions

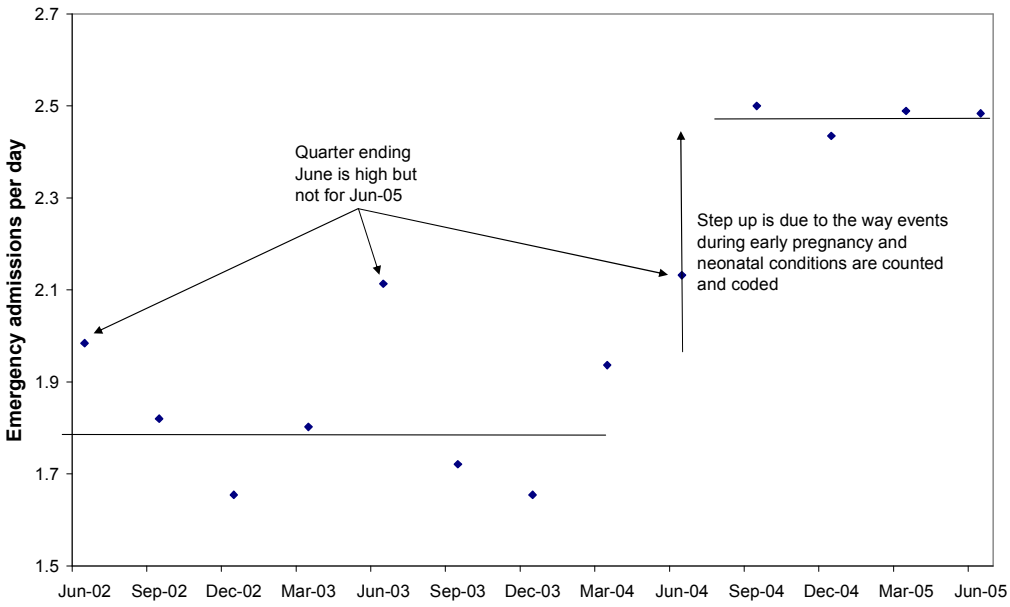


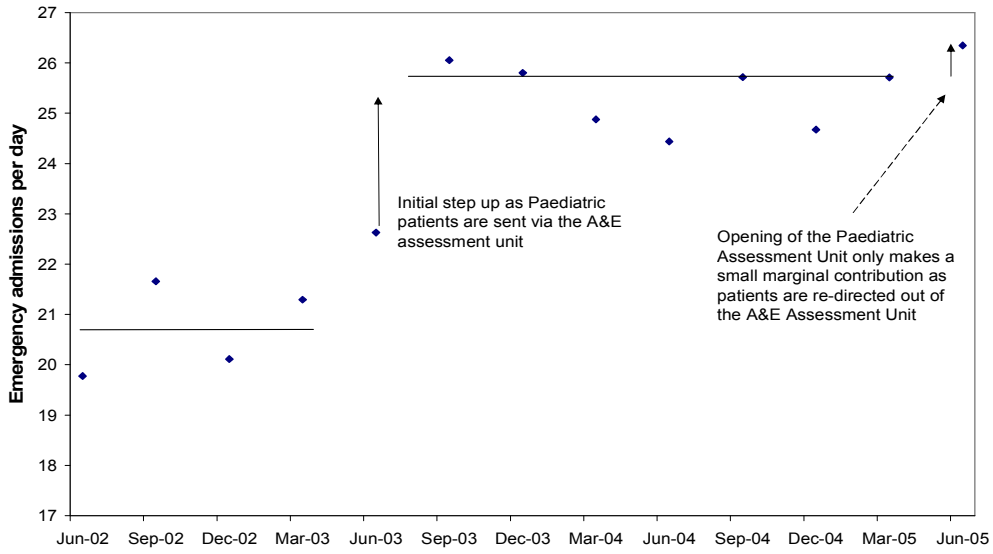
Figure A4.3 looks at the growth experienced for Chapter P (Diseases of Childhood) where a step change occurs but once again without any effect on the overall slope of the trends line. Paediatric patients are initially sent via the A&E assessment unit and this explains why the opening of the Paediatric Assessment Unit in Apr-05 has only a small incremental effect, i.e. paediatric patients are re-directed from the A&E assessment unit to the Paediatric Assessment Unit.

Fundamental questions need to be asked:

Are the activities of the assessment units costing closer to an A&E attendance or closer to the short stay HRG tariff?

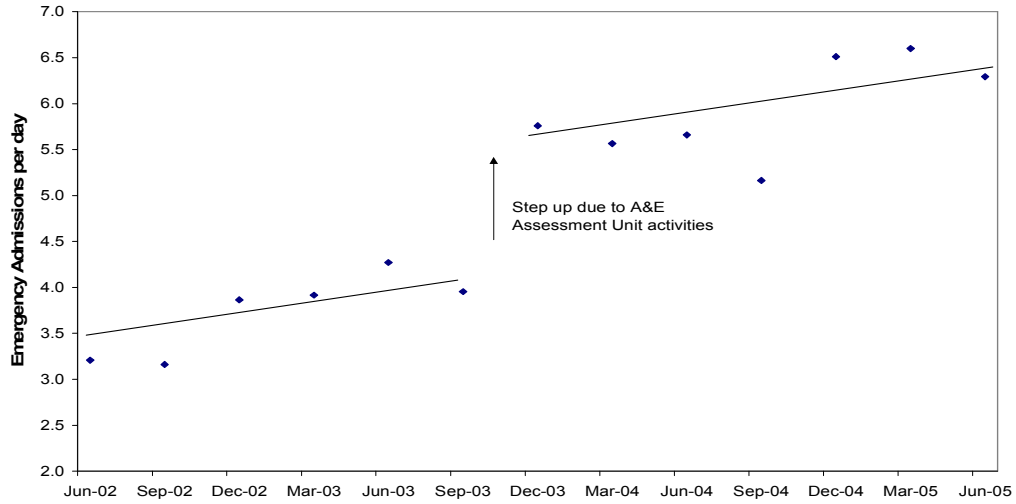
Is it valid for the Trust to charge the PCT for an A&E attendance and then for an additional assessment unit short stay given that the bulk of patients do not enter the acute bed pool?

Figure A4.3: Changes in the volume of Chapter P (Childhood) emergency admissions



The high growth arising from that proportion of the flow which goes via the assessment unit is concentrated in particular HRG chapters and reflects those conditions where extended diagnosis may be needed.

Figure A4.4: Growth in Chapter E (Cardiac) emergency admissions



In conclusion, the emergency assessment unit and other changes in counting/coding has led to a change in the way emergency admissions are counted and has led to the appearance of 'high' growth in some HRG chapters but not in others. Both the step changes and the high growth are made up of zero day stay emergency admissions.

These changes are consistent with the provision of 'best practice' diagnostic facilities but have untended consequences in a PbR environment which does not currently provide a tariff appropriate to assessment unit activities.

Appendix Five: National average percentage zero day emergency stays at HRG level.

Data is for 2004/05 and is from HES and covers all emergency admissions to acute hospitals and mental health Trusts. Since 2004/05 data is the basis of the 2006/07 tariff it serves as the benchmark for assessing the PbR implied 'acceptable' average for zero day stay emergency admissions. Decease on the day of admission or miscoding may account for the small percentage values in those HRG which describe complex surgery (A03, etc) or very ill medical patients (A25, A99, etc). PCTs should scrutinise any 'surgical' HRG where the percentage of zero day stays is high to determine if this is due to the inclusion of minor and diagnostic procedures into otherwise genuine surgical activities.

HRG	HRG Description	Percentage Zero day stay
A01	Intracranial Procedures Except Trauma - Category 1	4%
A02	Intracranial Procedures Except Trauma - Category 2	2%
A03	Intracranial Procedures Except Trauma - Category 3	1%
A04	Intracranial Procedures Except Trauma - Category 4	0%
A05	Intracranial Procedures for Trauma w cc	1%
A06	Intracranial Procedures for Trauma w/o cc	1%
A07	Intermediate Pain Procedures	60%
A08	Percutaneous Image Controlled Pain Procedures	17%
A09	Peripheral Nerve Disorder w cc	12%
A10	Peripheral Nerve Disorder w/o cc	30%
A11	Muscular Disorders	9%
A12	Disorder of Balance aetiology unknown w cc	11%
A13	Disorder of Balance aetiology unknown w/o cc	27%
A14	Brain Tumours or Cerebral Cysts >69 or w cc	3%
A15	Brain Tumours or Cerebral Cysts <70 w/o cc	9%
A16	Cerebral Degenerations >69 or w cc	7%
A17	Cerebral Degenerations <70 w/o cc	28%
A18	Multiple Sclerosis or other CNS Demyelinating Conditions	12%
A19	Haemorrhagic Cerebrovascular Disorders	13%
A20	Transient Ischaemic Attack >69 or w cc	14%
A21	Transient Ischaemic Attack <70 w/o cc	24%
A22	Non-Transient Stroke or Cerebrovascular Accident >69 or w cc	3%
A23	Non-Transient Stroke or Cerebrovascular Accident <70 w/o cc	5%
A24	Cranial Nerve Disorders	27%
A25	Nervous System Infections	5%
A26	Encephalopathy	22%
A27	Headache or Migraine >69 or w cc	19%
A28	Headache or Migraine <70 w/o cc	33%
A29	Epilepsy >69 or w cc	11%
A30	Epilepsy <70 w/o cc	24%
A31	Head Injury with Brain Injury	20%
A32	Head Injury without Significant Brain Injury w cc	7%
A33	Head Injury without Significant Brain Injury w/o cc	17%
A34	Miscellaneous Disorders of Nervous System	14%
A37	Motor Neuron Disease	7%
A38	Alzheimers Disease	6%
A98	Neoplasms, etc	22%
A99	Complex Elderly with a Nervous System Primary Diagnosis	3%
B13	Phakoemulsification Cataract Extraction and Insertion of Lens	51%
B14	Non Phakoemulsification Cataract Surgery	18%
B15	Other Lens Surgery Low Complexity	73%
B16	Oculoplastic Low Complexity	53%
B17	Oculoplastic Intermediate Complexity	42%
B18	Oculoplastic High Complexity	38%
B19	Orbit / Lacrimal Low Complexity	80%
B20	Orbit / Lacrimal Intermediate Complexity	11%
B21	Orbit / Lacrimal High Complexity	4%
B22	Cornea / Sclera Low Complexity	55%
B23	Cornea / Sclera Intermediate / High Complexity	17%
B24	Ocular Motility Intermediate Complexity	74%
B25	Ocular Motility Redo / Adjustable / High Complexity	40%
B26	Glaucoma / Uvea Low Complexity	27%
B27	Glaucoma / Uvea Intermediate Complexity	22%
B28	Glaucoma / Uvea High Complexity	18%
B29	Surgical Retina Low Complexity	79%

B30	Surgical Retina Intermediate Complexity	11%
B31	Surgical Retina High Complexity	4%
B32	Non Surgical Ophthalmology with los <2 days	64%
B33	Non Surgical Ophthalmology with los >1 day	0%
C04	Minor Mouth or Throat Procedures	47%
C06	Minor Medical Head, Neck or Ear Diagnoses >69 or w cc	18%
C07	Minor Medical Head, Neck or Ear Diagnoses <70 w/o cc	34%
C15	Minor Maxillo-facial/ENT procedures	35%
C16	Intermediate Medical Head, Neck or Ear Diagnoses w cc	15%
C17	Intermediate Medical Head, Neck or Ear Diagnoses w/o cc	21%
C21	Intermediate Ear Procedures	39%
C22	Intermediate Nose Procedures	6%
C25	Intermediate Maxillo-facial/ENT procedures	3%
C26	Major Medical, Head, Neck or Ear Diagnoses w cc	12%
C27	Major Medical, Head, Neck or Ear Diagnoses w/o cc	27%
C31	Major Ear Procedures	9%
C32	Major Nose Procedures	3%
C35	Major Maxillo-facial/ENT Procedures	3%
C36	Complex Major Head, Neck or Ear Diagnoses >69 or w cc	7%
C37	Complex Major Head, Neck or Ear Diagnoses <70 w/o cc	16%
C41	Complex Major Ear Procedures	25%
C42	Complex Major Nose Procedures	2%
C45	ENT Complex Major Maxillo-facial Procedures	0%
C54	Complex Major Mouth or Throat Procedures	1%
C55	Minor Ear Procedures	45%
C56	Minor Nose Procedures	37%
C57	Major Mouth or Throat Procedures	5%
C58	Intermediate Mouth or Throat Procedures	18%
C59	Exteriorisation of Trachea	1%
C60	Cochlea Implants	20%
C98	Neoplasms, etc	4%
C99	Complex Elderly with a Mouth, Head, Neck or Ear Primary Diagnosis	8%
D01	Transplant	0%
D02	Complex Thoracic Procedures	2%
D03	Major Thoracic Procedures	4%
D04	Intermediate Thoracic Procedures w cc	1%
D05	Intermediate Thoracic Procedures w/o cc	6%
D06	Minor Thoracic Procedures	21%
D07	Fibreoptic Bronchoscopy	54%
D08	Rigid Bronchoscopy	22%
D10	Pulmonary Embolis w cc	3%
D11	Pulmonary Embolis w/o cc	7%
D12	Lung Abscess-Empyema	3%
D13	Lobar, Atypical or Viral Pneumonia w cc	3%
D14	Lobar, Atypical or Viral Pneumonia w/o cc	6%
D16	Bronchiectasis	8%
D17	Cystic Fibrosis	21%
D18	Pulmonary, Pleural or Other Tuberculosis	4%
D21	Asthma w cc	6%
D22	Asthma w/o cc	16%
D23	Pleural Effusion w cc	2%
D24	Pleural Effusion w/o cc	6%
D25	Respiratory Neoplasms	6%
D31	Sleep Disordered Breathing	16%
D33	Other Respiratory Diagnoses >69 or w cc	14%
D34	Other Respiratory Diagnoses <70 w/o cc	33%
D37	Pulmonary Oedema	5%
D39	Chronic Obstructive Pulmonary Disease or Bronchitis w cc	4%
D40	Chronic Obstructive Pulmonary Disease or Bronchitis w/o cc	8%
D41	Unspecified Acute Lower Respiratory Infection	11%
D42	Bronchopneumonia w cc	6%
D43	Bronchopneumonia w/o cc	7%
D44	Inhalation Lung Injury or Foreign Body w cc	4%
D45	Inhalation Lung Injury or Foreign Body w/o cc	8%
D46	Fibrosis or Pneumoconiosis w cc	7%
D47	Fibrosis or Pneumoconiosis w/o cc	8%
D48	Pneumothorax w cc	3%
D49	Pneumothorax w/o cc	11%
D50	Respiratory Failure w cc	8%
D51	Respiratory Failure w/o cc	14%
D52	Plurisy	39%
D53	Granulomatous, Allergic Alveolitis or Autoamune Lung Disease	12%
D98	Neoplasms, etc	8%
D99	Complex Elderly with a Respiratory System Primary Diagnosis	4%
E01	Transplant	0%

E02	Transplant	0%
E03	Cardiac Valve Procedures	0%
E04	Coronary Bypass	0%
E07	Pacemaker Implant for AMI, Heart Failure or Shock	6%
E08	Pacemaker Implant except for AMI, Heart Failure or Shock	2%
E09	Cardiac Pacemaker Replacement/Revision	5%
E11	Acute Myocardial Infarction w cc	3%
E12	Acute Myocardial Infarction w/o cc	4%
E13	Cardiac Catheterisation and Angiography with complications	4%
E14	Cardiac Catheterisation and Angiography without complications	6%
E15	Percutaneous Coronary Intervention	4%
E17	Endocarditis	2%
E18	Heart Failure or Shock >69 or w cc	5%
E19	Heart Failure or Shock <70 w/o cc	7%
E20	Deep Vein Thrombosis >69 or w cc	38%
E21	Deep Vein Thrombosis <70 w/o cc	51%
E22	Ischaemic Heart Disease without intervention >69 or w cc	9%
E23	Ischaemic Heart Disease without intervention <70 w/o cc	14%
E24	Hypertension >69 or w cc	16%
E25	Hypertension <70 w/o cc	27%
E28	Cardiac Arrest	29%
E29	Arrhythmia or Conduction Disorders >69 or w cc	11%
E30	Arrhythmia or Conduction Disorders <70 w/o cc	27%
E31	Syncope or Collapse >69 or w cc	13%
E32	Syncope or Collapse <70 w/o cc	36%
E35	Chest Pain >69 or w cc	21%
E36	Chest Pain <70 w/o cc	37%
E37	Other Cardiac Diagnoses	15%
E38	Electrophysiological and other Percutaneous Cardiac Procedures >18	3%
E39	Electrophysiological and other Percutaneous Cardiac Procedures <19	11%
E40	Other Cardiothoracic or Circulatory Procedures >18	10%
E41	Other Cardiothoracic or Circulatory Procedures <19	4%
E42	Valve Disorders	7%
E43	Congenital Disorders	21%
E99	Complex Elderly with a Cardiac Primary Diagnosis	5%
F01	Oesophagus - Complex Procedures	0%
F02	Oesophagus - Very Major Procedures	0%
F03	Oesophagus - Major Procedures or Prostheses	1%
F04	Therapeutic endoscopic procedures	11%
F06	Diagnostic Procedures, Oesophagus and Stomach	23%
F07	Disorders of the Oesophagus >69 or w cc	8%
F08	Disorders of the Oesophagus <70 w/o cc	25%
F12	Stomach or Duodenum Very Major Procedures	0%
F13	Stomach or Duodenum - Major Procedures >69 or w cc	4%
F14	Stomach or Duodenum - Major Procedures <70 or w/o cc	2%
F15	Stomach or Duodenum - Therapeutic Endoscopic or Intermediate Procedures	41%
F17	Stomach or Duodenum Disorders >69 or w cc	10%
F18	Stomach or Duodenum Disorders <70 w/o cc	26%
F21	Small Intestine - Very Major Procedures	0%
F22	Small Intestine - Major Procedures >69 or w cc	3%
F23	Small Intestine - Major Procedures <70 w/o cc	4%
F24	Small Intestinal Disorders (excluding IBD)	13%
F31	Large Intestine - Complex Procedures	1%
F32	Large Intestine - Very Major Procedures	0%
F33	Large Intestine - Major Procedures w cc	1%
F34	Large Intestine - Major Procedures w/o cc	4%
F35	Large Intestine - Endoscopic or Intermediate Procedures	28%
F36	Large Intestinal Disorders >69 or w cc	7%
F37	Large Intestinal Disorders <70 w/o cc	17%
F41	General Abdominal - Very Major or Major Procedures >69 or w cc	1%
F42	General Abdominal - Very Major or Major Procedures <70 w/o cc	2%
F43	General Abdominal - Endoscopic or Intermediate Procedures >69 or w cc	3%
F44	General Abdominal - Endoscopic or Intermediate Procedures <70 w/o cc	4%
F45	General Abdominal - Diagnostic Procedures	3%
F46	General Abdominal Disorders >69 or w cc	13%
F47	General Abdominal Disorders <70 w/o cc	28%
F48	Intestinal Infectious Disorders >69 or w cc	4%
F49	Intestinal Infectious Disorders <70 w/o cc	15%
F51	Inflammatory Bowel Disease - Complex Procedures	1%
F52	Inflammatory Bowel Disease - Major Procedures	0%
F53	Inflammatory Bowel Disease - Endoscopic or Intermediate Procedures >69 or w cc	1%
F54	Inflammatory Bowel Disease - Endoscopic or Intermediate Procedures <70 w/o cc	6%
F55	Inflammatory Bowel Disease >69 or w cc	9%
F56	Inflammatory Bowel Disease <70 w/o cc	18%
F61	Gastrointestinal Bleed - Very Major Procedures	1%

F62	Gastrointestinal Bleed - Major or Therapeutic Endoscopic Procedures	2%
F63	Gastrointestinal Bleed - Diagnostic Endoscopic or Intermediate Procedures	18%
F64	Gastrointestinal Bleed >69 or w cc	5%
F65	Gastrointestinal Bleed <70 w/o cc	19%
F71	Abdominal Hernia Procedures >69 or w cc	1%
F72	Abdominal Hernia Procedures <70 w/o cc	2%
F73	Inguinal Umbilical or Femoral Hernia Repairs >69 or w cc	1%
F74	Inguinal Umbilical or Femoral Hernia Repairs <70 w/o cc	3%
F75	Herniotomy Procedures	10%
F76	Hernia Disorders >69 or w cc	15%
F77	Hernia Disorders <70 w/o cc	34%
F81	Appendicectomy Procedures >69 or w cc	0%
F82	Appendicectomy Procedures <70 w/o cc	0%
F83	Appendix Disorders	6%
F91	Anus - Major Procedures	2%
F92	Anus - Intermediate Procedures >69 or w cc	4%
F93	Anus - Intermediate Procedures <70 w/o cc	9%
F94	Anus - Minor Procedures >69 or w cc	7%
F95	Anus - Minor Procedures <70 w/o cc	19%
F96	Anal Disorders	20%
F98	Neoplasms, etc	14%
F99	Complex Elderly with Digestive System Primary Diagnosis	4%
G01	Transplant	0%
G02	Liver - Complex Procedures	3%
G03	Liver - Very Major Procedures	5%
G04	Liver - Major Procedures >69 or w cc	4%
G05	Liver - Major Procedures <70 w/o cc	15%
G06	Acute Liver Disorders	9%
G07	Chronic Liver Disorders >69 or w cc	4%
G08	Chronic Liver Disorders <70 w/o cc	7%
G11	Biliary Tract - Complex Procedures	0%
G12	Biliary Tract - Very Major Procedures	0%
G13	Cholecystectomy >69 or w cc	0%
G14	Cholecystectomy <70 w/o cc	0%
G15	Therapeutic Pancreatic or Biliary Procedures	1%
G16	Diagnostic Pancreatic or Biliary Procedures w cc	2%
G17	Diagnostic Pancreatic or Biliary Procedures w/o cc	3%
G18	Biliary Tract Disorders >69 or w cc	2%
G19	Biliary Tract Disorders <70 w/o cc	8%
G20	Biliary Tract Neoplasms	4%
G21	Pancreas - Complex Procedures	0%
G22	Pancreas - Very Major Procedures	1%
G23	Pancreatic Disorders	2%
G24	Chronic Pancreatic Disease >69	4%
G25	Chronic Pancreatic Disease <70	6%
G26	Therapeutic Pancreatic or Billary Procedures with Neoplasms	0%
G27	Procedures on the Spleen	4%
G98	Neoplasms, etc	10%
G99	Complex Elderly with a Hepato-Biliary or Pancreatic System Primary Diagnosis	2%
H01	Bilateral Primary Hip Replacement	0%
H03	Bilateral Primary Knee Replacement	0%
H04	Primary Knee Replacement	2%
H07	Primary or Revisional Shoulder, Elbow, or Ankle Replacements	1%
H08	Joint Replacements or Revisions, Site Unspecified	3%
H09	Anterior Cruciate Ligament Reconstruction	0%
H10	Arthroscopies	14%
H11	Foot Procedures - Category 1	10%
H12	Foot Procedures - Category 2	7%
H13	Hand Procedures - Category 1	30%
H14	Hand Procedures - Category 2	30%
H15	Hand Procedures - Category 3	21%
H16	Soft Tissue or Other Bone Procedures - Category 1 >69 or w cc	3%
H17	Soft Tissue or Other Bone Procedures - Category 1 <70 w/o cc	10%
H18	Soft Tissue or Other Bone Procedures - Category 2 >69 or w cc	7%
H19	Soft Tissue or Other Bone Procedures - Category 2 <70 w/o cc	25%
H20	Muscle, Tendon or Ligament Procedures - Category 1	18%
H21	Muscle, Tendon or Ligament Procedures - Category 2	12%
H22	Minor Procedures to the Musculoskeletal System	38%
H23	Soft Tissue Disorders >69 or w cc	49%
H24	Soft Tissue Disorders <70 w/o cc	63%
H25	Inflammatory Spine, Joint or Connective Tissue Disorders >69 or w cc	17%
H26	Inflammatory Spine, Joint or Connective Tissue Disorders <70 w/o cc	29%
H27	Non-Inflammatory Bone or Joint Disorders >69 or w cc	12%
H28	Non-Inflammatory Bone or Joint Disorders <70 w/o cc	34%
H29	Congenital Hip Dislocation with Open Procedures	0%

H30	Infections of Bones or Joints	7%
H31	Musculoskeletal Signs and Symptoms >69 or w cc	28%
H32	Musculoskeletal Signs and Symptoms <70 w/o cc	48%
H35	Open Lower Limb Fractures or Dislocations	1%
H36	Closed Pelvis or Lower Limb Fractures >69 or w cc	4%
H37	Closed Pelvis or Lower Limb Fractures <70 w/o cc	5%
H38	Open Upper Limb Fractures or Dislocations	4%
H39	Closed Upper Limb Fractures or Dislocations >69 or w cc	12%
H40	Closed Upper Limb Fractures or Dislocations <70 w/o cc	16%
H41	Sprains, Strains, or Minor Open Wounds >69 or w cc	27%
H42	Sprains, Strains, or Minor Open Wounds <70 w/o cc	47%
H43	Major Cranial, Visceral or Blood Vessel Injury >69 or w cc	12%
H44	Major Cranial, Visceral or Blood Vessel Injury <70 w/o cc	26%
H45	Minor Fractures or Dislocations	29%
H47	Traumatic Amputations	21%
H48	Other Wounds or Injuries	24%
H49	Multiple Injury >69	3%
H50	Multiple Injury <70	8%
H51	Removal of Fixation Device >69 or w cc	9%
H52	Removal of Fixation Device <70 w/o cc	41%
H53	Pathological Fractures or Malignancy of Bone and Connective Tissue >69 or w cc	4%
H54	Pathological Fractures or Malignancy of Bone and Connective Tissue <70 w/o cc	12%
H63	Head Injury >69 or w cc	31%
H64	Head Injury <70 w/o cc	47%
H70	Resurfacing of Hip	0%
H71	Revisional Procedures to Hips	2%
H72	Revisional Procedures to Knees	2%
H80	Primary Hip Replacement Cemented	0%
H81	Primary Hip Replacement Uncemented	0%
H82	Extracapsular Neck of Femur Fracture with Fixation w cc	0%
H83	Extracapsular Neck of Femur Fracture with Fixation w/o cc	0%
H84	Intracapsular Neck of Femur Fracture with Fixation w cc	0%
H85	Intracapsular Neck of Femur Fracture with Fixation w/o cc	0%
H86	Neck of Femur Fracture with Hip Replacement w cc	0%
H87	Neck of Femur Fracture with Hip Replacement w/o cc	0%
H88	Other Neck of Femur Fracture w cc	2%
H89	Other Neck of Femur Fracture w/o cc	4%
H98	Neoplasms, etc	10%
H99	Complex Elderly with a Musculoskeletal System Primary Diagnosis	2%
J01	Complex Breast Reconstruction using Flaps	0%
J04	Intermediate Breast Surgery w cc	9%
J05	Intermediate Breast Surgery w/o cc	11%
J06	Minor Breast Surgery w cc	11%
J07	Minor Breast Surgery w/o cc	24%
J08	Non-Malignant Breast Disorders	41%
J09	Malignant Breast Disorders >69 or w cc	7%
J10	Malignant Breast Disorders <70 w/o cc	19%
J11	Lymph Dissection Procedures	5%
J12	Drainage of Ascites	2%
J13	Burns	31%
J14	Burns	33%
J15	Burns	9%
J16	Burns	0%
J17	Burns	0%
J18	Burns	0%
J19	Burns	36%
J20	Other Burn with 1 Significant Graft Procedure >49	3%
J21	Other Burn with 1 Significant Graft Procedure >18 <50	8%
J22	Other Burn with 1 Significant Graft Procedure <19	10%
J23	Burns	0%
J24	Burns	0%
J25	Burns	0%
J26	Other Burn without Significant Graft Procedure >49	22%
J27	Other Burn without Significant Graft Procedure >18 <50	34%
J28	Other Burn without Significant Graft Procedure <19	40%
J29	Major Reconstructive Surgery	6%
J30	Major Skin Procedures >49 or w cc	7%
J31	Major Skin Procedures <50 w/o cc	17%
J32	Intermediate Skin Procedures	34%
J33	Minor Skin Procedures - Category 3	26%
J34	Minor Skin Procedures - Category 2 w cc	14%
J35	Minor Skin Procedures - Category 2 w/o cc	27%
J36	Minor Skin Procedures - Category 1 w cc	15%
J37	Minor Skin Procedures - Category 1 w/o cc	35%
J38	Skin Ulcers	8%

J39	Major Dermatological Conditions >69 or w cc	15%
J40	Major Dermatological Conditions <70 w/o cc	29%
J41	Major Skin Infections >69 or w cc	11%
J42	Major Skin Infections <70 w/o cc	16%
J43	Major Skin Tumours	6%
J44	Minor Dermatological Conditions or Benign Tumours	37%
J45	Minor Skin Infections	31%
J46	Total Mastectomy w cc	0%
J47	Total Mastectomy w/o cc	0%
J48	Partial/Subtotal Mastectomy w cc	7%
J49	Partial/Subtotal Mastectomy w/o cc	13%
J50	Other Major Breast Surgery	0%
J98	Neoplasms, etc	10%
J99	Complex Elderly with a Skin, Breast or Burn Primary Diagnosis	3%
K01	Thyroid Procedures	15%
K02	Parathyroid Procedures	2%
K03	Adrenal Procedures	11%
K04	Anterior Pituitary Disorders	18%
K07	Fluid or Electrolyte Disorders >69 or w cc	6%
K08	Fluid or Electrolyte Disorders <70 w/o cc	17%
K09	Disorders of Nutrition	8%
K10	Inborn Errors of Metabolism	29%
K11	Diabetes with Hypoglycaemic Emergency >69 or w cc	14%
K12	Diabetes with Hypoglycaemic Emergency <70 w/o cc	34%
K13	Diabetes with Hyperglycaemic Emergency >69 or w cc	4%
K14	Diabetes with Hyperglycaemic Emergency <70 w/o cc	5%
K15	Diabetes and Other Hyperglycaemic Disorder >69 or w cc	10%
K16	Diabetes and Other Hyperglycaemic Disorder <70 w/o cc	21%
K17	Diabetes with Lower Limb Complications	5%
K18	Non Pituaritary Endocrine Neoplasms >69 or w cc	4%
K19	Non Pituaritary Endocrine Neoplasms <70 w/o cc	10%
K20	Non Surgical Thyroid Disorders >69 or w cc	6%
K21	Non Surgical Thyroid Disorders <70 w/o cc	21%
K22	Other Endocrine Disorders >69 or w cc	7%
K23	Other Endocrine Disorders < 70 w/o cc	21%
K98	Neoplasms, etc	11%
K99	Complex Elderly with an Endocrine or Metabolic System Primary Diagnosis	3%
L01	Transplant	0%
L02	Kidney Major Open Procedure >49 or w cc	1%
L03	Kidney Major Open Procedure <50 w/o cc	4%
L04	Kidney Major Endoscopic Procedure	1%
L05	Kidney Intermediate Endoscopic Procedure >69 or w cc	5%
L06	Kidney Intermediate Endoscopic Procedure <70 w/o cc	10%
L07	Non OR Admission for Kidney or Urinary Tract Neoplasms >69 or w cc	4%
L08	Non OR Admission for Kidney or Urinary Tract Neoplasms <70 w/o cc	7%
L09	Kidney or Urinary Tract Infections >69 or w cc	7%
L10	Kidney or Urinary Tract Infections <70 w/o cc	21%
L11	Ureter Open Procedure	1%
L12	Ureter Major Endoscopic Procedure	1%
L13	Ureter Intermediate Endoscopic Procedure	2%
L14	Bladder Major Open Procedures or Reconstruction	2%
L15	Urinary Diversion without Cystectomy	5%
L16	Bladder Intermediate Open Procedure	14%
L17	Bladder Major Endoscopic Procedure	0%
L18	Bladder Intermediate Endoscopic Procedure w cc	4%
L19	Bladder Intermediate Endoscopic Procedure w/o cc	8%
L20	Bladder Minor Endoscopic Procedure w cc	10%
L21	Bladder Minor Endoscopic Procedure w/o cc	28%
L22	Bladder or Urinary Mechanical Problems >69 or w cc	12%
L23	Bladder or Urinary Mechanical Problems <70 w/o cc	21%
L24	Ureteric or Bladder Disorders	32%
L25	Bladder Neck Open Procedures Male	3%
L26	Bladder Neck Open Procedures Female	13%
L27	Prostate Transurethral Resection Procedure >69 or w cc	0%
L28	Prostate Transurethral Resection Procedure <70 w/o cc	1%
L29	Prostate or Bladder Neck Intermediate Endoscopic Procedure (Male and Female)	4%
L30	Prostate or Bladder Neck Minor Endoscopic Procedure (Male and Female)	55%
L31	Malignant Prostate Disorders	5%
L32	Non-Malignant Prostate Disorders	11%
L33	Urethra Major Open Procedures	18%
L34	Urethra Intermediate or Minor Procedures >69 or w cc	6%
L35	Urethra Intermediate or Minor Procedures <70 w/o cc	16%
L36	Urethra Disorders	22%
L37	Penis Major or Intermediate Open Procedures	7%
L38	Penis Minor Open Procedure > 69 or w cc	24%

L39	Penis Minor Open Procedure <70 w/o cc	34%
L40	Penis Disorders	45%
L41	Vasectomy Procedures	50%
L42	Scrotum Testis or Vas Deferens Open Procedures >69 or w cc	7%
L43	Scrotum Testis or Vas Deferens Open Procedures <70 w/o cc	17%
L44	Scrotum Testis or Vas Deferens Disorders	38%
L45	Extracorporeal Lithotripsy	42%
L46	Renal Replacement Associated Procedures	3%
L47	Renal Replacement Therapy w cc	3%
L48	Renal Replacement Therapy w/o cc	16%
L49	Acute Renal Failure >69 or w cc	3%
L50	Acute Renal Failure <70 w/o cc	8%
L51	Chronic Renal Failure	18%
L52	Renal General Disorders >69 or w cc	6%
L53	Renal General Disorders <70 w/o cc	10%
L54	Urinary Tract Findings >69 or w cc	13%
L55	Urinary Tract Findings <70 w/o cc	28%
L66	Urethra Major Open Procedure - paediatric	36%
L68	Cystectomy with Urinary Diversion and Reconstruction	0%
L69	Urinary Tract Stone Disease	19%
L98	Neoplasms, etc	7%
L99	Complex Elderly with a Urinary Tract or Male Reproductive System Primary Dx	3%
M01	Lower Genital Tract Minor Procedures	20%
M02	Lower Genital Tract Intermediate Procedures	16%
M03	Lower Genital Tract Major Procedures	6%
M04	Lower Genital Tract Complex Major Procedures	0%
M05	Upper Genital Tract Minor Procedures	42%
M06	Upper Genital Tract Intermediate Procedures	2%
M07	Upper Genital Tract Major Procedures	1%
M08	Upper Genital Tract Complex Major Procedures	0%
M09	Threatened or Spontaneous Abortion	65%
M10	Surgical Termination of Pregnancy	62%
M11	Medical Termination of Pregnancy	42%
M12	Non-Surgical Treatment of Lower Genital Tract Disorders	53%
M13	Non-Surgical Treatment of Genital Prolapse or Incontinence	39%
M14	Non-Surgical Treatment of Fibroids, Menstrual Disorders, or Endometriosis	43%
M15	Non-Surgical Treatment of Ovary, Tube, or Pelvis Disorders	20%
M16	Non-Surgical Treatment of Gynaecological Malignancy w cc	6%
M17	Non-Surgical Treatment of Gynaecological Malignancy w/o cc	13%
M18	Non-Surgical Treatment of Other Gynaecological Conditions	36%
M19	Gynaecological Radiotherapy	8%
M98	Neoplasms, etc	17%
M99	Complex Elderly with a Female Reproductive System Primary Diagnosis	6%
N01	Neonates - Died <2 days old	61%
N02	Neonates with Multiple Minor Diagnoses	18%
N03	Neonates with one Minor Diagnosis	38%
N04	Neonates with Multiple Major Diagnoses	4%
N05	Neonates with one Major Diagnosis	27%
N06	Normal Delivery w cc	6%
N07	Normal Delivery w/o cc	14%
N08	Assisted Delivery w cc	3%
N09	Assisted Delivery w/o cc	6%
N10	Caesarean Section w cc	0%
N11	Caesarean Section w/o cc	2%
N12	Antenatal Admissions not Related to Delivery Event	43%
P01	Asthma or Wheezing	32%
P02	Cystic Fibrosis	21%
P03	Upper Respiratory Tract Disorders	53%
P04	Lower Respiratory Tract Disorders without Acute Bronchiolitis	22%
P05	Major Infections (including Immune Disorders)	8%
P06	Minor Infections (including Immune Disorders)	39%
P07	Neoplasms	35%
P08	Febrile Convulsions	36%
P09	Nervous System Disorders	40%
P11	Endocrine Disorders (excluding Diabetes Mellitus)	35%
P12	Major Gastrointestinal or Metabolic Disorders	25%
P13	Other Gastrointestinal or Metabolic Disorders	39%
P14	Ingestion Poisoning or Allergies	43%
P15	Accidental Injury without Brain Injury	25%
P16	Child Welfare and Protection	53%
P17	Behavioural Disorders	34%
P18	Developmental Disorders	43%
P19	Major Congenital Conditions	26%
P20	Other Congenital Conditions	41%
P21	Renal Disease	52%

P22	Renal Disease with Renal Failure	22%
P23	Blood Cell Disorders	26%
P24	Skin, Musculoskeletal, or Connective Tissue Disorders	48%
P25	Cardiac Conditions	33%
P26	Infectious and Non-Infectious Gastroenteritis	44%
P27	Acute Bronchiolitis	28%
P28	Epilepsy Syndrome	32%
P29	Diabetes Mellitus	16%
P30	Head Injury with Brain Injury	30%
P31	Head Injury without Brain Injury	13%
P98	Neoplasms, etc	15%
Q01	Emergency Aortic Surgery	11%
Q02	Elective Abdominal Vascular Surgery	6%
Q03	Lower Limb Arterial Surgery	1%
Q04	Bypasses to Tibial Arteries	0%
Q05	Extracranial or Upper Limb Arterial Surgery	2%
Q06	Miscellaneous Vascular Procedures	16%
Q09	Procedures on the Lymphatic System w cc	2%
Q10	Procedures on the Lymphatic System w/o cc	11%
Q11	Varicose Vein Procedures	15%
Q12	Therapeutic Endovascular Procedures	2%
Q13	Diagnostic Radiology - Arteries or Lymphatics w cc	2%
Q14	Diagnostic Radiology - Arteries or Lymphatics w/o cc	6%
Q15	Amputations	1%
Q16	Foot Procedures for Diabetes or Arterial Disease, and Pdx to Amputation Stumps	5%
Q17	Non-Surgical Peripheral Vascular Disease w cc	11%
Q18	Non-Surgical Peripheral Vascular Disease w/o cc	26%
Q19	Vascular Access for Renal Replacement Therapy	5%
Q98	Neoplasms, etc	2%
Q99	Complex Elderly with a Vascular System Primary Diagnosis	7%
R01	Minor Spinal Procedures	20%
R02	Surgery for Prolapsed Intervertebral Disc	0%
R03	Decompression and Effusion for Degenerative Spinal Disorders	1%
R04	Vertebral Column Injury with Fusion or Decompression	1%
R05	Vertebral Column Injury without Procedure >69 or w cc	5%
R06	Vertebral Column Injury without Procedure <70 w/o cc	7%
R07	Spinal Cord Injury with Fusion	0%
R08	Spinal Cord Injury without Procedure	13%
R09	Revisional Spinal Procedures	0%
R10	Surgery for scoliosis or spinal deformity	0%
R11	Spinal Cord Surgery	4%
R12	Cervical Spinal Disorders >69 or w cc	18%
R13	Cervical Spinal Disorders <70 w/o cc	33%
R14	Spinal Tumours	9%
R15	Thoracic or Lumbar Spinal Disorders >69 or w cc	17%
R16	Thoracic or Lumbar Spinal Disorders <70 w/o cc	28%
R17	Non-Traumatic Spinal Cord Disorders	7%
R18	Scoliosis or Other Spinal Deformity	27%
R19	Intermediate Spinal Procedures	4%
R98	Neoplasms, etc	7%
R99	Complex Elderly with a Spinal Primary Diagnosis	3%
S04	Coagulation Disorders	31%
S05	Red Blood Cell Disorders >69 or w cc	7%
S06	Red Blood Cell Disorders <70 w/o cc	30%
S07	Other Haematological or Splenic Disorders w cc	4%
S08	Other Haematological or Splenic Disorders w/o cc	12%
S09	Bone marrow graft	2%
S10	Manifestations of HIV/AIDS	6%
S11	Disorders of Immunity without HIV/AIDS	54%
S12	Septicaemia	4%
S13	Pyrexia of Unknown Origin	28%
S14	Other Viral Illness	27%
S15	Other Non-Viral Infections	12%
S16	Poisoning, Toxic, Environmental and Unspecified Effects	39%
S19	Complications of Procedures	18%
S21	Convalescent or Other Relief Care	16%
S22	Planned Procedures Not Carried Out	40%
S24	Respite Care	6%
S26	Shock and Anaphylaxis	44%
S27	Malignant Disorder of the Lymphatic/ Haematological Systems with los <2 days	38%
S28	Malignant Disorder of the Lymphatic/ Haematological Systems with los >1 day	0%
S29	Other Admissions Related to Neoplasms	5%
S30	Other Congenital Conditions Persisting in Adulthood	24%
S31	Admission for Unexplained Symptons	20%
S32	Abnormal Findings without Diagnosis	25%

S33	Examination, Follow up and Special Screening	68%
S34	Other Procedures and Health Care Problems	67%
S35	Other Specified Admissions and Counselling	15%
S36	Diagnostic Extraction of Bone Marrow	16%
S98	Neoplasms, etc	10%
S99	Complex Elderly with a Haematology, Infectious Disease or Non-specific Primary Dx	5%
T01	Senile dementia	5%
T02	Schizophreniform psychosis	18%
T03	Schizophreniform psychosis	31%
T04	Mania with section	0%
T05	Mania	36%
T06	Depression with section	0%
T07	Depression	40%
T08	Presenile dementia	21%
T09	Anxiety	39%
T10	Alcohol & Drugs non-dependant use	53%
T11	Alcohol & Drugs	61%
T12	Alcohol or drugs dependency	14%
T13	Eating disorders	17%
T14	Personality disorders	41%
T15	Childhood disorders	33%
T16	Mental retardation	17%
T17	Learning disability	7%
U01	Invalid Primary Diagnosis or missing	23%
U02	Invalid domionant procedure	16%
U04	Age outside range	27%
U05	Age conflicts with diagnosis	42%
U07	Poorly coded primary diagnosis	31%

Whilst Chapter T is mainly the output of Mental Health Trusts there is considerable overlap with A&E activities which may be channelled via Assessment Units and thus contribute to some surprising high percentages of zero day stays.

One also needs to question if HRG S22 ‘Planned Procedure Not Carried Out’ qualifies for a £405 tarrif payment especially if it is a so-called zero day stay emergency admission.