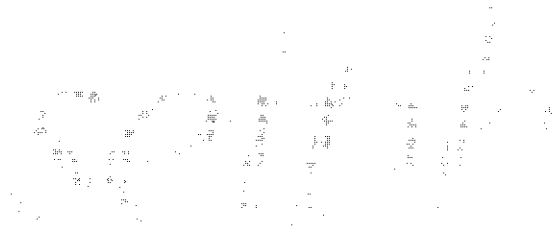

SOUTH EAST INSTITUTE OF PUBLIC HEALTH

ACUTE CHILD HEALTH SERVICES

BRIGHTON, HOVE AND LEWES

A NEEDS ASSESSMENT

D.F. O'Neill
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SEIPH 1998

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OUTLINE OF REPORT FOR ESBHHA ACUTE CHILD HEALTH SERVICES REVIEW BRIGHTON, HOVE AND LEWES

East Sussex Brighton and Hove Health Authority have commissioned SEIPH to conduct a project to inform the relevant stakeholders and the Authority on the secondary health care needs (excluding mental health) of the children in Brighton, Hove and Lewes and those using Brighton Health Care.

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1. Summary and recommendations

Summary

This is a high level report. Its primary focus is the acute health care needs of the population of children served by Brighton Healthcare.

The report is destined to inform the forth coming stakeholder conference on the acute care of children. The Health Authority is committed to address any concerns for change and strategic management opportunities which emerge from the event. The report does not attempt to address the detailed organisational mechanics and local political implications of every aspect of change. Its purpose has been to investigate need, care and change, to raise issues accordingly and to identify certain strengths and weaknesses in the possible options for change.

We have looked at the population and its burden of ill health. We have demonstrated the projected population change, past trends in care and the recent literature on currently changing patterns in the management of acute illness in paediatric practice. Additionally we have looked at the standards of care iterated by the various voluntary, professional, academic and statutory bodies.

Work loads have been identified, along with patient flows (current and prospective) and some of the major factors relating to specific common conditions which need to be addressed.

Brighton faces interesting challenges in terms of provision of paediatric care. The town has been well endowed with a childrens' hospital which has served it well in the past. Small single specialty units are not preferrred models for care in the NHS of the 21st century and those responsible for health care have to address this. Although the catchment population of children is expected to grow by about 4.5% in the next decade there is a bulge pattern passing through it. The growth will be in older numbers of children and adolescents with the population of smaller children shrinking back.

With the exception of burns in particular and other accidents in general, morbidity patterns have not changed drastically in the past twenty or more years. There have been changes, however, in the way that care has been provided and in the way that illnesses are managed. Admissions have risen with the lowering of thresholds for managing acute illness risks. Lengths of stays have shortened although significant variability is seen across services. Outreach services have reduced admission rates for certain conditions (eg diabetes), is seen and opportunities for further targeted community care are possible.

In this era of effective care, clinical audit and attention to outcomes there are possibilities for health authorities to support innovators and to facilitate good practice by evaluation and dissemination of advances in care. In 1997 the Director of Public Health reported relatively high rates for intervention in glue ear and low use of day surgery for managing the condition. This was in the face of increasing evidence regarding the benefits of ` watchful waiting'. Since then we are able to report a fall in the intervention rates and a rise in the day surgery rates at Brighton. This in itself is likely to produce some level of disinvestment.

We would suggest, as a general principle, that the health authority which finds itself in this position should invest in evaluating and auditing the outcomes of care when such changes are occurring. The results should inform local and authority-wide practice of the clinical outcomes of such changes perhaps thereby spread the best practice.

The stake holders will need to address the provision of acute care at two sites and the difficulties of maintaining increasingly stringent standards under these conditions. A total move of service to one site may not be feasible in the immediate future. Consideration of a transitional option which would move more of the care towards the hub site is discussed. Modern methods for management of risk in acute paediatric illnesses are investigated.

Brighton has certain inherent difficulties with its location and with its hospital stock. Weaknesses in the provision of care across multiple sites are nearly always exposed in the area of emergency cover for life supporting situations. Brighton is no exception. Difficulties arise in the provision of paediatric anaesthetic care. These are to do with expertise for life support and emergency interventions at more than one site.

Difficulties also arise with the catchment which currently includes the child populations of Brighton, Hove and Lewes and a further 25% or so (of that number) from other parts of Sussex (East and West). The fact that Brighton is a coastal town limits its catchment drainage on one side and the proximity of London limits it on the other. The current catchment is large enough to need the service of an average of slightly over one paediatric intensive care bed. To maintain a second and reach minimum standards for such care the drainage area would need to enlarge and to provide a rapid evacuation service.

Increasingly there is evidence that relationships exist between volume of activity and quality of care, hence guidelines are set by Royal Colleges to address this issue. The catchment for paediatric surgery provision is an issue addressed in the report.

Finally another change in the modern service for the young is addressed through the need for an adolescent inpatient service.

Recommendations

It is recommended that:

the commissioner evaluates the outcomes of changing practice at the local level, as seen int he management of glue ear. This in turn may advise strategy for other parts of the health authority. The tutelage, of commissioners, trusts and primary care groups, over health improvement, clinical governance and audit should be considered in this regard.

the potential for evaluating the effect of outreach services in relation to referral/emergency attendance patterns and targetting risk groups according to their sociodemographic characteristics of the population targeting be evaluated for further targeting of services.

a detailed assessment of the primary, community and acute child care interfaces be conducted to advise the development of consensus care group guidelines and to develop care group

specific, integrated commissioning strategies which include key indicators.

the Health Authority and Trust investigate in detail the cost effectiveness of establishing a Paediatric Short Stay Facility on the Royal Sussex County Site with appropriate staffing and specialist cover.

the Health Authority, through its health improvement programme seek to ensure quality through volume and with commissioning partners to consider appropriate catchments for the paediatric surgical services.

the Health Authority assess the minimisation of the risk of adverse events associated with current paediatric anaesthesia service arrangements and address the future requirements of these services.

a detailed prospective study on the potential for and implications of widening the catchment area for paediatric intensive care services in Brighton be conducted in 1998. That the findings be used to define the service provision in the new millennium.

an inpatient service for adolescents be established.

2. Background to study

This needs assessment work has been commissioned to inform a wider process being conducted by East Sussex, Brighton and Hove Health Authority which is to review the provision of acute childrens services provided in Brighton Hove and Lewis.

The provision of services for infants, children and adolescents takes place in a dynamic environment in which a range of factors stimulate change. There are common issues effecting such services nationally as well as specific issues unique to Brighton and its locality.

The main issues which are considered include:

- the ***current population*** of children served by these services and its expected growth in coming years
- past current and ***projected activity*** in the secondary care sector
- trends in primary care
- the effect of ***advances in the treatment*** of acutely ill children on the complexity of care, site of care and lengths of stay
- ***manpower planning*** issues in respect of junior doctor hours, post graduate education and training and accreditation of posts, nursing guidelines on quality of care
- ***recommendations*** from standing committees, professional bodies, NHSE, research and other sources
- ***experience*** of successful changing practice in other localities

In the East Sussex, Brighton and Hove Health Authority a stakeholder conference is planned to involve interested parties in the development of a strategy for improving the acute services provided to the children of the locality. This is against a background nationally of increasing concerns regarding the quality of services for children in light of a range of guidance recommendations and criteria.

The services in Brighton are currently subject to various constraints relating to long established arrangements on split sites and to ageing infra-structure at the Royal Alexandra.

Recent annual public health reports include a 1997 survey of general practices giving high ratings for the local paediatrics service on both access and quality, although there were problems with the child and adolescent mental health service. On specific conditions, glue ear was identified as a particular problem, with high rates of admission for E. Sussex residents compared to the rest of England, coupled with a comparatively low percentage of Day cases.

In 1993 the Audit Commission conducted a study of children's hospital services. In the section on strategic commissioning the study identifies four major problems:

- lack of commissioning strategies
- poor specification of services in contracts
- inadequate links between commissioning authorities and providers
- lack of attention to the need for change

The study recommended the following ways of overcoming the problems:

- developing a strategy through documentation of each component of the strategy in terms of how it meets needs
- improving the specification of services by focusing on care groups (eg children with asthma, children with diabetes) and key indicators
- creating better links with providers through effective coordination (eg through key workers)
- addressing the need for change through understanding effectiveness and responsiveness to need.

3. Methods

A number of approaches were taken to make best use of existing literature relevant to this study. ***Documentary evidence was examined from three main sources:***

- a review of research literature,
- guidance and recommendations from the DOH, professional organisations and others,
- strategies from other health authorities for commissioning child health services.

It should be noted that this review has been undertaken at a time when there has been considerable national criticism of the hospital services available for children and adolescents. For example, evidence received by the House of Commons Select Committee on health in 1996/7 indicating that many hospitals have failed to meet the DOH standards laid down in Welfare of Children and Young People, 1991.

Online searches
Online bibliographic searches carried out at SEIPH, found research results on appropriateness of admission and the association between primary and secondary care. These are described in the Discussion. We also looked at the DOH and other web sites these yielded relatively little.

The searches covered: Medline
DHdata
National Children's Bureau
King's Fund.

Current reports and guidance
As there are so many documents readily available that give guidance on child health services, no attempt has been made in this review to list them comprehensively or summarise their recommendations. Most people are aware of the numerous helpful reports produced in the last few years by the Royal College of Paediatrics and Child Health, many of which are aimed at commissioners of health services. Key documents have also been produced by the Department of Health (as above), the Audit Commission (Children First, 1993), the Joint Consultants Committee (Medical staffing and training 1997), the House of Commons Select Committee on Health (1996/7) and the National Association for the Welfare of Children in Hospital: Setting standards for adolescents in hospital.

While knowing these reports exist is relatively simple, purchasers may find acquiring them and reading them takes more time than they can spare. We have scanned much of the relevant material and read some in detail. Many themes and ideas from the documentation have been used in this review. Of particular relevance was 'The Pattern of Medical Services for Children: Medical Staffing and Training' from the Joint Consultants Committee in 1997.

A survey of health authorities in four regions of England was conducted.

A final source of information was policy and strategy documents for commissioning child health services from other health authorities. Our survey of four regions in England examined how far commissioners had developed their strategies for child health. Some important common themes in terms of standards and recommendations emerged from the strategy documents we were sent, and these have been summarised below.

Paediatric Health Strategy Development in English Health Authorities

A telephone and faxed survey in November/December 1997 found a small proportion (20%) had a written strategy document, although others were starting work on them. In one authority a strategy was being written jointly with Social Service and Education departments.

A previous survey, carried out in 1994, found over half the health authorities did not have a named person taking lead responsibility for commissioning children's health services (Webb 1996). There also appeared at that time to be very little documented strategic thinking and planning.

During this review we were able to update this picture. We contacted the public health department in health authorities from a sample of four regions and asked who was responsible for purchasing child health services. We asked whether there was a strategy document, and if so could we be sent a copy. Around two thirds replied and all of these supplied the name of the lead person. We received a small number of documents, although some turned out to be service reviews and service specifications rather than strategies. From the survey and the documents we have seen, it appears that around one in five health authorities have a strategy in place.

Data analysis

Population data has been taken from both national ONS and local ESBHHA reports, to reflect the current population profile and projections for the year 2006.

Routinely collected hospital inpatient and day case records were used to analyse paediatric workloads and compare local activity with national statistics. Comparative data for England were requested from the National Case Mix Office. Analysis included rates of admission, the breakdown of cases by specialty across the two hospital sites, identification of high volume work as described by diagnosis and surgical procedure, and case mix group to examine how case types were managed (using HRGs).

4. Aims

The aims of the project are:

A. To configure the ***specific catchment*** for child health services for the next ten years and produce a profile of the client population. (OPCS mid year estimates).

B. To address the ***acute health care needs*** (excluding mental health) of the children in Brighton, Hove and Lewes.

C. To consider certain ***aspects of primary care*** activity and need in relation to acute care.

D. To investigate issues pertaining to ***appropriate usage and quality*** of care.

E. In light of population needs and service innovation, to consider ***potential service projections*** for the different elements of paediatric care, and related critical workload issues and teaching issues. (addressing care based on ranges of expected activity from national or other comparators and the findings in the literature).

F. To consider a range of ***work-force issues***.

G. To consider ***options for change***.

H. To ***draw conclusions*** and ***make recommendations*** based on them

The review is structured around these eight aims.

5. The Catchment

<u>Aim A.</u> is to configure the specific catchment for acute child health services for the next ten years and produce a profile of the client population.

Estimating the population now

We have used ONS mid year estimates for 1996

The population of children aged 0-16 in Brighton, Hove and Lewis was estimated at

62,037

This accounts for 44% of the total population of all the children aged 0-16 in East Sussex (140,618)

Mid-year estimates for 1996 show that there are 62,037 children aged 0-16 resident in Brighton, Hove & Lewes (Appendix 1 table 1). This is nearly half of the children living in ESBHHA. The number aged under 1 (taken as a proxy for the number of births) are as follows:
Brighton, Hove & Lewes 3620,
Eastbourne & Wealden 2183,
Hastings & Rother 1893.

Historical activity data demonstrate that Acute Paediatrics in Brighton Hospitals provide services to a wider more diffuse catchment (beyond the local population). This role is not expected to diminish in the near future. Acute services in Brighton account for 5.76% of such services provided to the other children aged 0-16 in East Sussex . (Although this may not be exclusive, in that some children may experience services from more than one provider, it is considered a valid factor with which to estimate the wider catchment. Its use is justified on the grounds that the amount of duplication is considered small.)

The population of children aged 0-16 in East Sussex served by Acute Paediatric Services in Brighton was estimated at

66,493

This accounts for 47.3% of the total population of all the children aged 0-16 in East Sussex (140,618)

(Although a small proportion of this usage is represented by sub-regional specialty cases the overall effect of these numbers was considered negligible in estimating the general services catchment).

Historical activity data also demonstrates that Acute Paediatrics in Brighton Hospitals provide services to a further diffuse catchment (beyond East Sussex). Again this role is not expected to diminish in the near future. Acute services in Brighton account for 8.49% of such services provided to the children aged 0-16 in West Sussex.

The population of children aged 0-16 in East and West Sussex served by Acute Paediatric Services in Brighton was estimated at

78,951

There is a small but estimable proportion of children aged 0-16 in Brighton, Hove and Lewes who are served by acute paediatric services elsewhere. As far as can be ascertained from the available data, the majority of these are receiving tertiary specialist services not available locally or care on a temporary resident basis. These are very small numbers. The temporary residents (TRs) are ignored as they also constitute small numbers and are considered a permanent background feature of any service, often offset by incoming TRs.

Projecting forward to the year 2006

We have used the projected population data provided by ESCC

It is estimated that the population of children aged 0-16 in Brighton, Hove and Lewis in 2006 will be

64,980

This will account for 46% of the total population of all the children aged 0-14 in East Sussex (140,656)

The projected numbers of children living in Brighton, Hove & Lewes in 2006

The overall number of children is expected to rise by 4.5% from 62,037 to 64,980

The number of children under 1 year is expected to drop by 2% from 3,620 to 3,552

The number of children 1-4 years is expected to drop by 4.5% from 14,878 to 14,207

The number of children 4-16 years is expected to rise by 8% from 43,539 to 47,221

A similar rationale to that used above has been employed to estimate the overall projected catchment.

The population of children aged 0-16 in East Sussex in 2006 to be served by Acute Paediatric Services in Brighton is estimated at

69,315

The population of children aged 0-16 in East and West Sussex in 2006 to be served by Acute Paediatric Services in Brighton is estimated at

81,408

Profile

Shape of the population

The proportion of children under 16 in the East Sussex population is lower than the country at large by an estimated 3%. (18.6% E S cf. 21.6% England)

Compared with the whole of the Health Authority the population of children in the localities, (expressed as a proportion of the overall population of each), is variable. The locality with the lowest proportion of Children (15%) is Hove, and Hastings (19.2%) is the highest. There is less variation in the Brighton, Hove and Lewes populations, with 16%, 15% and 18% children respectively.

In this study we were asked to include children aged 0-16 years and the actual figures are shown in Appendix 1 table 1.

Social characteristics of the population

The social characteristics of the localities according to Jarman scores showed considerable deprivation in Hove and Brighton (scores over 20), while Lewis has a score of -2 (similar to the average for England). The overall position of East Sussex with a score of 7.7 ranked 34 out of 112 Health Authorities in the 1991 census, placing it in the worst off third of health authorities in terms of being underprivileged.

The correlation between social characteristics and acute service use is not direct. However, the relationship between activity and the underprivileged appears to reflect an excess burden of use (and possibly morbidity) above certain population threshold levels.

Locality	Jarman Underprivileged Area Score	Finished Consultant Episodes per 1000 population aged under 18
Brighton	20.8	83.1
Eastbourne	21.3	87.3
Hastings	24.4	111.9
Hove	21.3	75.5
Lewes	-1.2	68.4
Rother	3.0	67.6
Wealdon	-13.2	78.5

(Adapted from draft report Information Sub-Group Tables 1.3 and 2.3)

Unemployment levels have been high in East Sussex in recent years (East Sussex County council Briefings 1995), with 1995 levels at 16% in Brighton, 13% in Hove and 7.3% in Lewes. More detailed recent data shows pockets of high unemployment in particular wards. Unemployed people in East Sussex were shown to score consistently lower for most well being and health perception indicators on the SF36 (Short Form 36 - a commonly used health status questionnaire) as used in the Health Quest SE Survey of 1992 (Barker J and Cryer C, 1993). Census data for each of the wards in Brighton, Hove and Lewes for males unemployed, household characteristics, qualifications and social class are shown on tables 5 & 6 in Appendix 1.

6. Acute child health care needs

<u>Aim B.</u> is to address the Acute Child Health Care Needs (excluding mental health) of the children in Brighton, Hove and Lewes.

The House of Commons Select Committee on Health produced its second report on the specific health needs of children and young people in Feb 1997 (House of Commons, 1997). The report's recommendations included support for

- ***health services which are focused on and designed to meet the needs of children***
- ***reducing fragmentation between services within and without the NHS***
- ***supplying good information for effective planning, commissioning, provision and evaluation of services***
- ***implementing advice and guidance from doh and professional and voluntary bodies on good practice***
- ***provision of services by appropriately educated and experienced staff***

The needs of Children

In assessing needs for health care a range of techniques and methods have been applied, these have been categorised by Stevens and Raftery (1994) into three approaches.

The epidemiological approach:

This involves a step wise process using the best measures of the actual and potential burdens of ill health in the community. Based on these epidemiological parameters an accurate picture of need is defined. In principle where the efficiency, effectiveness and outcomes of service interventions are accurately understood a direct line of planning through to compatible service provision is assumed. In practice the level of detail of evidence required is rarely complete enough to permit such a purist approach to be adopted in isolation.

The comparative approach:

Services received by the population in one area are contrasted with those elsewhere.
In this approach a detailed examination of variations in rates of service utilisation permits comparisons to be made across different populations and inferences to be made.
Considerable study and research has been conducted into the components of variations of utilisation in health care services (refs). Were it simply a question of the average being the 'correct' rate there would be little difficulty in using this approach to direct service planning. However, variation in use is not simply a reflection of response to need.

The main factors which give rise to variations have been identified as:

Needs and Demand in terms of the underlying morbidity and the response to it,
Supply in terms of range of services and ease of access
Clinical factors and decision making in the face of uncertainty

The corporate approach

This looks at experience and opinion in the form of patient, professional, public, and political views. Although blurring the differences between need and demand, it provides scope for managing supply and demand while assessing need in relation to local circumstances.

Adequate needs assessment exercises invariably involve combinations of all three approaches. A series of such work conducted on a national level for each issue has been commissioned by the DoH and now runs to 50 or so subjects. Acute Paediatric services however have not been covered at this stage.

Acute Paediatric services encompass a wide range of conditions. Each individual condition can be the subject of an individual needs assessment exercise. This would involve extensive literature researching and the construction of models arising therefrom, in conjunction with profiles of care experienced on the ground. Local surveys are also a valuable primary source of epidemiological data for in depth understanding of local need. Such exercises are beyond the scope of this project but may be appropriate areas of future investigation. We have confined ourselves to accessing local knowledge and existing population information along with estimates of primary and secondary care as indicators of morbidity for this exercise.

Infant and Child Mortality Burden

Whereas the average annual SMR for children aged 0-14 in the health authority (E. Sussex, Brighton & Hove) is low (81 for 1994-6) compared to England & Wales (95), this masks wide variations within the area. The rates in Brighton and Lewes were high (95), while the rate in Hove was very low (61 for 1994-6). Three year averages have been calculated to smooth fluctuations in rates from one year to the next.
Source: Public Health Common Data Set 1997.

Infant Mortality Rates per 1000 live births

Mortality rates in infancy varied across the Brighton, Hove & Lewes area and are a cause for concern. Deaths in infancy in Brighton were high, Brighton rates being about one third higher than the national average and among the worst 20% of Local Authorities in England & Wales. The rates in Lewes were low, falling in the best 10% of Local Authorities. Unlike many socio-economic indicators, where conditions in E Sussex compare well with national averages, E Sussex infant mortality rates were no better than the England & Wales average (6.1 age under 1 year, 4.1 under 28 days, 3.2 under 7 days). Rates are given per 1000 live births for 1996.

Age	*< 1 yr*	*< 28 days*	*< 7 days*
Brighton	*8.0*	*5.2*	*4.6*
Hove	*4.8*	*3.8*	*3.8*
Lewes	*2.3*	*1.1*	*1.1*

Source: Public Health Common Data Set 1997. Note data for one year only.

Childhood Mortality Rates per 100,000 resident children

For children aged 1 year and over, ESBHHA mortality rates were little different from those for the region and the country as a whole.

	1994	1996	1993-1996
1-4 yrs.			
BHL			15.25
ESBHHA	8.9	21.0	
ST Region	23.9	26.0	
England	27.4	27.6	
5-9 yrs.			11.5
BHL			
ESBHHA	14.2	11.3	
ST Region	9.8	10.0	
England	12.7	11.8	
10-14 yrs.			
BHL			14.25
ESBHHA	10.0	14.7	
ST Region	16.4	11.9	
England	15.2	15.0	
1-14 yrs.			
BHL			
ESBHHA	11.2	15.2	
ST Region	16.3	15.4	
England	17.9	17.5	

Source: ESBHHA and Public Health Common Data Set 1995, 1997

Acute Care - *Inpatients*

7,289 children age 0-16 were admitted to Brighton Hospitals in 1996-7

3,813 (52.3%) of cases were emergencies

3,476 (47.7%) were elective admissions of which 1,511 (43.5%) were day cases, (20.7% of total admissions).

The proportionate distribution to hospitals of the total admissions is as follows

87.6% to Royal Alexandra
8.7% to Royal Sussex County
3.7% to other sites

The age-specific distribution to hospitals of the total admissions is as follows

Under 1 year

3% to Royal Alexandra
96.4% to Royal Sussex County
0.6% to other sites

1-5 years

1% to Royal Alexandra
95.7% to Royal Sussex County
3.3% to other sites

5-11 years

5.5% to Royal Alexandra
91% to Royal Sussex County
3.5% to other sites

12-16 years

32.8% to Royal Alexandra
60% to Royal Sussex County
7.2% to other sites

Why are children admitted to Hospital?

Trends in hospital service use by children

Paediatric Care

The MRC sponsored National Survey of Health and Development examined two generations of hospital admissions in children under five. The study used a national sample birth cohort and their firstborn offspring. (Wadsworth ME, 1993) The results showed improvement in the effectiveness of paediatric care and changes in the reasons for hospital admission. There was a small intergenerational increase in the proportion of children treated in hospital. This was accompanied by a large reduction in the time spent in hospital and an increase in admissions of children of low birth weight.

A marked trend towards earlier age of first admission is reported in a study of two birth cohorts five years apart, with low-birth weight infants, infants of young mothers and infants from deprived areas being over represented in the multiple admission group (Spencer et al 1993).

An earlier study of paediatric departments in Oxford Region (Hill AM 1989) had noted an 88% increase in hospital admission rates over the eleven years from 1975 to 1985 without evidence of major changes in morbidity. The rise was mainly due to an increase in emergency admissions for acute common childhood illnesses, particularly respiratory and gastro-intestinal diseases. Median length of stay had fallen from 2.4 to 1.5 days with 40% of discharges occurring within a day after admission. The author concluded that lower thresholds for admission were occurring partly due to increased supply of services and also related to diminishing lengths of stay.

Adolescent Care

Epidemiological information on adolescents' use of hospital has been relatively sparse. A study in the Oxford Region (Henderson et al 1993) identified the following distribution of general hospital admissions:

At the age of ten years
Paediatrics 22%
General surgery 24%
ENT surgery 23%
Trauma & Orthopaedics 20%
By fourteen years
Paediatrics 6%
By sixteen years
Females - Gynaecology 24%
Males - Trauma & Orthopaedics 40%
The study identified termination as the single most common reason for admission in girls aged 15 and 16 and childbirth and terminations as the most common reasons for admission in girls aged 17 to 19. Self poisoning was also common in older teenage girls. Younger girls were admitted most commonly for tonsillectomy.

The commonest reasons for admissions in young males were head injury and appendicectomy, respectively. The authors noted that most admissions in adolescents are for surgical conditions. The commonest individual reasons were attributable to behavioural factors.

Intensive Care

Defined as " a service for patients with potentially recoverable diseases who can benefit from more detailed observation and treatment than is generally available in the standard wards and Departments" (King's Fund Panel 1989). The report from the National Coordinating Group on Paediatric Intensive Care to the NHSE (1997) identified the features of PIC development over the previous 20 years as being ad hoc and unplanned and provided in a variety of settings to poorly understood standards of outcome. The group's report focuses on the long term vision of a high quality integrated service organised and run around the health needs of individual children.

Admissions to Brighton Hospitals of Children under 16 years 1996-97

Approximately three quarters (73.71%) of all admissions are accounted for by seventy ICD 10 codes these are shown in appendix 6 table 1. The top 30 ranking causes for inpatient admission account for half (54%) of all admissions. The average episodes per year are shown here

Table 1

	Diagnosis	Royal Sussex County	Royal Alexandra	Other Sites	Total
J45	Asthma	1.5	357.5	1.5	360.5
J35	Chronic diseases of tonsils and adenoids	42	312.5	0	354.5
H65	Nonsuppurative otitis media	4	335	0	339
J06	Acute upper respiratory infections multiple and unsp sites	0.5	245.5	0	246
N47	Redundant prepuce, phimosis and paraphimosis	0.5	189	2	191.5
R56	Convulsions, not elsewhere classified	0	186.5	0	186.5
S52	Fracture of forearm	124.5	38.5	0	163
K59	Other functional intestinal disorders	2	149.5	1	152.5
J21	Acute bronchiolitis	0.5	132	0	132.5
R10	Abdominal and pelvic pain	17.5	107	0	124.5
K40	Inguinal hernia	0	117.5	1.5	119
K52	Other noninfective gastroenteritis and colitis	0.5	114.5	0	115
S09	Other and unspecified injuries of head	6.5	107.5	0	114
H50	Other strabismus	0	1	107.5	108.5
H66	Suppurative and unspecified otitis media	2	94	0	96
Z47	Other orthopaedic follow-up care	8.5	81.5	1	91
G40	Epilepsy	0.5	90	0	90.5
Missing		81.5	5	0.5	87
Q53	Undescended testicle	0	87	0	87
K02	Dental caries	0	83.5	0	83.5
Z54	Convalescence	1	81	0	82
S01	Open wound of head	8	66.5	5.5	80
K35	Acute appendicitis	6	71.5	0	77.5
J05	Acute obstructive laryngitis [croup] and epiglottitis	0.5	73.5	0	74
Z53	Persons encount health services spec procs not carried out	0	72.5	0	72.5
J03	Acute tonsillitis	5.5	66.5	0	72
R69	Unknown and unspecified causes of morbidity	0.5	71.5	0	72
R06	Abnormalities of breathing	0.5	68.5	0	69
K07	Dentofacial anomalies [including malocclusion]	1	59.5	3	63.5
K21	Gastro-oesophageal reflux disease	0	57.5	0	57.5

Common causes for Hospital Admission

Examination of the commonest causes for hospital admission of children demonstrates certain characteristics of care in Brighton. This is particularly so when compared with patterns of hospital use for children elsewhere.

Asthma, Acute Upper Respiratory Tract Infections, Chronic Tonsillar and Adenoidal disease and Non-suppurative otitis media are the top four causes for hospital admission throughout South Thames and this pattern is reflected in Brighton.

In Brighton procedures for redundant prepuce, phimosis and paraphymosis are the fifth commonest reason for hospital admission (compared with eleventh for the region as a whole) and rank ahead of convulsions, fracture forearm, functional intestinal disorders, bronchiolitis and abdominal and pelvic pain which make up the remainder of the ten highest ranking causes for admission.

Insulin-dependant diabetes mellitus ranked 46th for Brighton Hospitals (cf. 41st for the region as a whole).

The numbers of burns are small and not in the top 70% of causes for admissions.

Table 2

Comparison of Ranking of Hospital Admissions in the Brighton Hospitals Catchment with all Hospital Admissions of Children According to their Place of Residence

	Diagnosis	*Brighton Health care Trust Admissions*	*Brighton Hove and Lewes Residents' Admissions*	*Hospital use by Residents of ESBHHA*	*South Thames Resident's Admissions*
J45	*Asthma*	*1*	*1*	*2*	*3*
J35	*Chronic diseases of tonsils and adenoids*	*2*	*2*	*1*	*1*
H65	*Nonsuppurative otitis media*	*3*	*3*	*3*	*2*
J06	*Acute upper respiratory infections multiple and unsp sites*	*4*	*4*	*4*	*4*
N47	*Redundant prepuce, phimosis and paraphimosis*	*5*	*7*	*8*	
R56	*Convulsions, not elsewhere classified*	*6*	*5*	*7*	*11*
S52	*Fracture of forearm*	*7*	*6*	*6*	*9*
K59	*Other functional intestinal disorders*	*8*			
J21	*Acute bronchiolitis*	*9*	*8*	*10*	
R10	*Abdominal and pelvic pain*	*10*	*9*	*5*	*8*
	Missing Codes		*10*		*7*
K02	*Dental Caries*			*9*	*5*
J03	*Acute Tonsillitis*				*6*

Table 3

Rates per 100,000 of the Population and Length of Stay for Selected Diagnoses

Diagnosis		Brighton Health Care Trust	Brighton, Hove and Lewes	East Sussex, Brighton and Hove H.A.	South Thames (East)
Population figures	**Total**	**78951**	**62037**	**140655**	**801894**
Asthma	cases	360.5	373.5	565	2922.5
	rates per 100K	**457**	**602**	**402**	**364**
	Length of stay	1.71	1.72	1.65	1.81
Chronic diseases of tonsils and adenoids	cases	354.5	349.5	607	3241.5
	rates per 100K	**449**	**563**	**432**	**404**
	Length of stay	1.39	1.43	1.54	1.28
Nonsuppurative otitis media	cases	339	316	564.5	3051
	rates per 100K	**429**	**509**	**401**	**380**
	Length of stay	0.38	0.40	0.40	0.31
Acute upper respiratory infections multiple and unsp sites	cases	246	247	483	2735.5
	rates per 100K	**312**	**398**	**343**	**341**
	Length of stay	1.92	1.93	1.63	1.52
Redundant prepuce, phimosis and paraphimosis	cases	191.5	158.5	271.5	1765.5
	rates per 100K	**243**	**255**	**193**	**220**
	Length of stay	0.14	0.12	0.14	0.15
Convulsions, not elsewhere classified	cases	186.5	181.5	320	1834.5
	rates per 100K	**236**	**293**	**227.5**	**229**
	Length of stay	1.47	1.32	1.48	2.20
Fracture of forearm	cases	163	181	327.5	1837.5
	rates per 100K	**206**	**292**	**233**	**229**
	Length of stay	1.11	1.11	1.12	1.25
Other functional intestinal disorders	cases	152.5	121.5	210.5	1229
	rates per 100K	**193**	**196**	**150**	**153**
	Length of stay	1.53	1.69	1.91	2.82

Table 3 continued

Diagnosis		Brighton Health care Trust	Brighton, Hove and Lewes	East Sussex, Brighton and Hove H.A.	South Thames (East)
Acute bronchiolitis	cases	132.5	131.5	225.5	1439
	rates per 100K	**168**	**212**	**160**	**179**
	Length of stay	3.51	3.32	3.26	3.55
Abdominal and pelvic pain	cases	124.5	129	346	1895.5
	rates per 100K	**158**	**208**	**246**	**236**
	Length of stay	1.57	1.58	2.09	1.78
Dental carries	cases	83.5	84	250.5	2353
	rates per 100K	**106**	**135**	**178**	**293**
	Length of stay	0.47	0.40	0.16	0.10
Acute Tonsillitis	cases	72	76	129	2042.5
	rates per 100K	**91**	**123**	**92**	**255**
	Length of stay	1.63	1.57	1.58	1.33
Diabetes	cases	38	36.5	68	349.5
	rates per 100K	**48**	**59**	**48**	**44**
	Length of stay	4.24	4.18	3.72	4.77
Viral and other specified intestinal infections	cases	56.5	60.5	153	728
	rates per 100K	**72**	**98**	**109**	**91**
	Length of stay	1.50	1.51	1.48	1.72
Burns *	cases	18	39.5	57	318.5
	Length of stay	1.58	3.80	3.24	5.23

* Cases and rates per 100K are not given due to the small numbers.

Factors underlying variations in clinical practice

Factors underlying variations in clinical care can be grouped under three headings as follows (Saunders, Coulter, McPherson 1989):

Need and demand:
The contribution of actual morbidity or need to the variations in admission rates varies with conditions, is not always direct, it has been summarised As follows *"Hospital admission rates bear a close relation to the incidence of morbidity only for the fairly small number of conditions that can be diagnosed with reasonable certainty and for which consensus exists within the medical profession on the need to treat the illness on an inpatient basis"* (Morgan et al 1987).

Supply:
Correlations between need and supply have been demonstrated. Distance and ease of access to paediatric inpatient services have been shown to be determining factors (Goodman et al 1994). The availability or otherwise of alternative forms of care (eg nursing home) and day admission services are further influencing factors. The association between socioeconomic factors and variation in admission rates is also unclear. There are as many good studies demonstrating an association, for example Denman, Scott and Mackie (1975), as those demonstrating little effect, such as that by Brewer and Freedman (1982). The effects on individual conditions appear to be the key to this cofactor. Most studies on the effect of ethnicity have had difficulty in separating out this factor from other socioeconomic factors, such as underlying major lifestyle changes, eg Bennet (1981), Holman and O'Neill (1985). There are some suggestions however from more recent work that ethnicity may exert an effect separate or in addition to socio-economic circumstances (Bergner 1993, Aspinall 1998).

Clinical Factors:
These factors relate to (i) Individual clinical judgement and preferences such as degrees of conservatism or intervention which can be correlated to the individual style/persona of the clinician, and (ii) decision making in the face of uncertainty. In any single clinical management scenario there are often many options for care, the large majority of which are likely to be beneficial. Our understanding of the differential benefits for the various options in any single condition remains limited at this stage. In recent years the enthusiasm and technology needed to address the complex issues concerned has been growing, particularly in relation to the routine development of evidence based care, guidelines, audit and other practices. In addition to demonstrating optimal practice there is a further degree of difficulty involved in identifying and implementing the combination of activities that can influence positive changes for all of the various parties involved.

Other factors which may effect variations and outcomes of clinical care:
In addition to these major headings the relationship between volume of activity and the outcomes of care has been studied. Many conditions , such as for example, Coronary Artery Bypass Grafting, intestinal operations, hysterectomy and others benefit (in terms of lower morbidity and better survival) from being conducted in an environment where the volume of activity is high. Others however, such as fracture neck of femur and stomach operations, would appear to have better outcomes where the volume of activity is low (Sowden et al. 1995).

There is also growing evidence which shows that outcomes can vary significantly with the amount and quality of information that a patient or their carer receives in the decision making process (Effective Healthcare Bulletin, 1995 Vol 2, No.2).

Data Interpretation
As with all data inferences interpretation of variations must bear in mind the quality of the data its use. A study at the start of this decade demonstrated differing ways of interpreting Department of Health guidelines on health services information (Korner recommendations). This gave rise to varying occupancy, throughput and turnover intervals for the same group of paediatric admissions. Data collections have improved considerably in recent years but potential for quality deficits contributing to variations should be born in mind.

Asthma

Asthma is the main cause of admission to hospital for children 0-16, it is also the main cause for visits to the GP in older children. Admission rates for the Brighton Health care Catchment and for East Sussex Residents are similar (if slightly higher) to those of South Thames as a whole. For Brighton Hove and Lewes rates are nearly double those for South Thames.

Increasing asthma admission rates in children have been reported from many countries in recent years (Weitzmann et al 1992, Mitchell et al 1994, Benito et al 1995) there are various arguments as to why this may be so. Some of the factors effecting admission rates have been investigated in detail.

Socio economic factors and family functioning have been identified as effecting hospital use for all conditions in early childhood. Multiple hospital admissions (three or more) in early childhood were found to be associated with residence in an area of social deprivation for two birth cohorts in Sheffield (Spencer et al 1993). The results suggested a dual effect of organic pathology (morbidity) and impaired parental coping. Homelessness also has an effect on hospital use for all conditions in children Lissauer et al). GP referral to hospital was the exception in this study. Recent immigrant families were highly represented. Socioeconomic deprivation, major life events in previous year and maternal depression were all increased versus the controls.

Standardised admission rates for asthma, in all age groups except over 65, were found to be strongly associated with deprivation for the district of residence in a study in the West Midlands (Watson et al 1996). The proportion of asthma admissions coming through direct self referral via A&E departments compared with GP referral was significantly higher for poorer districts. This remained high when repeat admissions were excluded. The authors concluded that differences in the Health care received during acute exacerbations by patients from different backgrounds was likely to be an important factor in this relationship.

Various factors have been cited for improving hospitalisation rates for children with asthma. Concentrating on the functioning of the child within the family has been shown to significantly reduce hospital days per person year and emergency care (Weistein et al.1992). Risk factors for readmission relate to the characteristics of the individual (age and sex), severity of the condition (intravenous treatment), and number of previous admissions which may reflect severity or behavoir of illness. Medical treatment or management are not factors. (Mitchell et al 1994).

There is a very large amount of literature in this subject area and detailed understanding is required to support strategies for change. The admission rates for Brighton, Hove and Lewes are higher than the the region as a whole. This probably reflects both ease of the community's access to high quality services and the socio-economic characteristics of the local population. (See appendix 2 tables 6 & 7). Opportunities for expansion of existing outreach services should be considered in conjunction with targeting of high risk populations.

Table 4

Diagnosis		Brighton Health care Trust	Brighton, Hove and Lewes	East Sussex, Brighton and Hove H.A.	South Thames (East)
Asthma	cases	360.5	373.5	565	2922.5
	rate	**441**	**662**	**445**	**364**

Acute bronchiolitis

Children suffering acute bronchiolitis and living in more deprived electoral wards have also been shown to have a greater risk (x 1.5) of admission (Spencer et al 1996).

Diabetes

Diabetes admissions are few and trends have shown a decline in spite of increasing prevalence of the condition. This has been as a result of increasingly effective management outside of hospital. Declining admission rates for children and shortening lengths of stay have been shown to be associated with successful domiciliary or community based management programmes. (Swift et al 1993, Hirasing et al 1996). Further detailed investigation of admission profiles may reveal opportunities for targeting diabetics young who have not been in contact with such programmes or their GPs. The top twenty ranking procedures for children in Brighton Healthcare are shown with the average annual episodes:

Table 5

Procedure		Royal Sussex County	Royal Alexandra	Other Sites	**Total**	*Day cases*	*Emergencies*
F34	Excision of tonsil	39	309	0	**348**	*1*	*0.5*
E20	Operations on adenoid	0	321.5	0	**321.5**	*124*	*2.5*
D15	Drainage of middle ear	5	225	0	**230**	*154*	*3.5*
N30	Operations on prepuce	0.5	204	2.5	**207**	*159*	*4*
W26	Other closed reduction of fracture of bone	139.5	59	0	**198.5**	*8.5*	*180.5*
F09	Surgical removal of tooth	0	159.5	4	**163.5**	*118*	*3.5*
Y53	Percutaneous approach to organ under i.i.	11.5	107.5	1	**120**	*46.5*	*63*
T20	Primary repaier of inguinal hernia	0	103	1.5	**104.5**	*43*	*9.5*
X33	Other blood transfusion	0.5	104	0	**104.5**	*39.5*	*43*
H01	Emergency excision of appendix	10	76	0	**86**	*0*	*83*
N09	Other placement of testis in scrotum	0	84	0	**84**	*32*	*1*
C31	Combined operations on muscles of eye	0	0.5	81.5	**82**	*54.5*	*0*
H54	Dilation of anal sphincter	0	75.5	0	**75.5**	*42.5*	*5.5*
X48	Immobilisation using plaster cast	7.5	57	0	**64.5**	*2*	*29*
G45	Diag. fibreoptic endoscopic exam of u.g.i.t.	1	51	0	**52**	*6.5*	*2.5*
M73	Repair of urethra	0	44.5	0	**44.5**	*4*	*0.5*
S06	Other excision of lesion of skin	4.5	31	8.5	**44**	*34*	*1*
X29	Continuous infusion of therapeutic substance	3	40	0	**43**	*15.5*	*19.5*
X49	Other immobilisation	0.5	40.5	0	**41**	*0*	*36.5*
X35	Other intravenous injection	0	38	0	**38**	*19*	*3.5*
M45	Diagnostic endoscopic exam. of bladder	0	36	0.5	**36.5**	*14*	*1*

Forty two classifications account for all the procedures conducted at Brighton Health care Trust in the period (See Appendix 7.1). The top ranking twenty procedures account for 62% of the activity and take place with frequencies ranging from three a month to seven of eight a week.

ENT Surgery

Tonsils, adenoids, and drainage of the middle ear are the commonest procedures and are nearly all elective. Tonsillectomy is not done as a single day procedure.In the 30's, Alison Glover observed marked variations in tonsillectomy rates in children across England, with an average of 17 per 1000 . This was in the pre-antibiotic era and when about eighty children died each year post operatively. His comparisons on County Council returns in the South East showed children in Bexhill-on-Sea and Tunbridge Wells had 11 times higher likelihood of having their tonsils removed than children in Ramsgate. Data collected some 60 years later on tonsillectomy rates for children of similar age groups by local authority in South East Thames showed that the rates had fallen to 5 per 1000 though five fold variations could still be demonstrated across the region (O'Neill et al 1992). The rates for the populations demonstrated here are concomitant with a further slight decline and show less than two fold variation. This may be reflecting a degree of common consensus on the management of this condition in the South East with the higher rates being in the population with closest access to facilities.

Table 6

Diagnosis		**Brighton Health care Trust**	**Brighton, Hove and Lawes**	**East Sussex, Brighton and Hove HA**	**South Thames (East)**
Chronic diseases of tonsils and adenoids	cases	354.5	349.5	607	3241.5
	rate	**434**	**619**	**478**	**404**

Glue Ear

The Report of the Director of Public Health, ESB&HHA (1997) contained a article on glue ear in which it was noted that the level of surgical activity was higher than expected in the AHA when compared with national rates (470 per 100,000). It was also noted that day surgery rates were low compared with national averages. In Brighton there were 321.5 cases of adenoidectomy (38 % day cases) and 230 cases of drainage of middle ear (70 % day cases) giving a overall rate of 675 per 100,000 children under 16years or 1.4 times the national rate. This is lower than expected for East Sussex (2.5 times the national rate in 1995-96) with higher than previously reported day case rates for Brighton Health Care (24% and 44% respectively).

These data suggest that significant changes may be taking place in the management of Glue Ear at Brighton. The complexities of the incidence of transient hearing loss and prevalence of permanent hearing loss with its associated learning difficulties are such that the most appropriate way to treat Glue Ear has not been absolutely established. There is increasing interest in the NHS, amongst providers and commissioners of care, to implement the evidence of research and to then research the actual implementation in terms of clinical outcomes. Such trends may occur in response to the dissemination of collective knowledge in a particular area of care.

The example of the Effectiveness Bulletin on Glue Ear could be cited in this instance. They may also be augmented by the efforts and encouragement of commissioners. Such encouragement is seen in the Report of the Director of Public Health (ESB&HHA ibid. 1997). It is, however, incumbent upon commissioners in such circumstances to evaluate this implementation, ever the more so when the change represents potential disinvestment. New investment is frequently subjected to economic appraisal to justify its application. The 'windfall' economic gain to commissioners in such circumstances of potential disinvestment should enable evaluation of healthgain at the local level. This in turn could advise strategy for other parts of the health authority. An example of such practice is demonstrated in the following extract from Bandolier Vol 1 3 Apr 1994:

"Glue Ear - a Sticky Problem.
One of the first grip projects involves the question of whether surgical interventions are effective in combatting disability from glue ear in children. The GRIP project is to be carried out in Berkshire, and is a response to the Effectiveness Bulletin published by the School of Public Health at Leeds and Centre for Health Economics at York.

What is the problem? Glue ear is a common cause of hearing impairment in children. It can result in a hearing loss (measured in decibels of hearing loss, dB HL) of 0 to 50 dB HL, with an average of 20 dB HL. This degree of hearing loss can turn normal speech into a whisper. If glue ear is unilateral, there usually isn't a problem, but bilateral glue ear with significant hearing loss is commonly considered to pose developmental problems to children. However, studies have not produced sufficient evidence to demonstrate a causal link between glue ear and significant hearing disability. Persistent bilateral hearing impairment of 25-30 dB HL is sometimes thought sufficient to justify surgery.

How big is the problem? Forty-two percent of three year olds may begin an episode of glue ear over the next twelve months. Because these episodes are usually short, the prevalence of children with glue ear is less than this, but in the 2-5 year age range 15-20% of children will have glue ear at any time. The prevalence in children older than this falls to less than 5% by age 7 years. It is estimated that about 6% of two year olds have bilateral hearing impairment of at least 25 dB HL which persists for at least three months.

The main risk factors are:- Younger age. More common in boys . Siblings with glue ear. Higher in Winter and Spring. Bottle feeding. Day care attendance. Parental smoking.

What is the natural history of glue ear? Most episodes are short. About half of affected ears resolve spontaneously after 3 months, 75% by six months, and only 5% of children will have glue ear for a year or more. In the vast majority of cases glue ear will not persist beyond early childhood. How many children have surgery? The average rate of surgical treatment for glue ear in England is about 5/1000 children under 15 years, and it is the most common operation in children. There is great variation between regions and between centres within regions, which reflects a number of different issues, including screening policies, culture, referral practice and surgical decision making, and service supply.

What is the appropriate surgical intervention rate? No one knows. That is one reason why the GRIP study is being undertaken.

Does surgery help? Surgery for glue ear usually means surgical removal of the contents of the middle ear (myringotomy), insertion of grommets, adenoidectomy and tonsillectomy, and usually combinations of some of these. There have been 19 published RCTs which examine the effectiveness of surgical intervention for glue ear. Those which examined hearing level as an outcome compared with no-treatment control group indicate that both grommets and adenoidectomy reduce the mean hearing impairment in children with glue ear. However, the gains are neither large nor long-lasting. The mean reduction in hearing loss was 12 DB HL at 6 months and 6 DB HL at 12 months, though there was a very large variation, from no benefit to complete restoration of hearing.

Does surgery have problems? Grommet insertion is not without complications, including risks associated with anaesthesia. There may be a greater risk of chronic perforation, and infection is common, with between 20 and 35% of children likely to experience discharge, and this is persistent in 5%.

When is treatment appropriate? The big question. If children with glue ear and a hearing loss of 25 DB HL or more are not treated immediately, but monitored over a period of time (watchful waiting) to establish that the condition is persistent, fewer will be treated because of the natural spontaneous resolution. There is already some delay because of waiting lists, and to ensure that an inappropriate amount of time does not occur before surgery in those where the condition is persistent, a provisional waiting list system should be used. Children should be put on the provisional waiting list after initial audiological assessment indicates potential need for surgery and should remain on this list during the period of watchful waiting. Retesting before surgery will also ensure that dry taps (i.e. no glue in ear at surgery) occur much less frequently, and that children are not subject to the hazards of anaesthesia and surgery for no reason.

The GRIP initiative The programme agreed with Berkshire AHA is the following:- Audit current practice to establish baseline. Establish provisional waiting list and watchful waiting. Establish audiology assessments at presentation, during watchful waiting, before and after surgery. Monitor audiological benefits and dry tap rate. Audit new practice to establish change and benefit. Indicate ways system can be improved.

GRIP for Glue Ear - The Future If the study in Berkshire demonstrates that this system of dealing with glue ear provides a sensible way of delivering Health care to the patients who need it, it will form the basis of purchaser-provider contracts for the following year for Oxfordshire, Buckinghamshire and Northamptonshire. Other regions may then also use the Berkshire GRIP initiative as the basis for their purchase of services."

General Surgery

The general surgical procedure casemix is best looked at in the full chart at appendicies 7 and 10. It consists of operations on the prepuce, inguinal hernia repair, emergency appendectomies, operations on testis, anal dilatation, operations on lips and tongue, nail excisions, skin excisions, and certain procedures not classified. The commonest operation is circumcision and although rates for Brighton Hove and Lewes are slightly higher than elsewhere this probably represents local demand, access and supply factors more than anything else.

Trauma and Orthopaedics

Closed reduction of fractures account for the majority of orthopaedic procedures in children invariably the result of accidents. The pattern of admissions for older children has been mentioned above.

Accident patterns in younger children have been described (Carter et al 1993). Maximum numbers of accidents occurred in the second year of life. In the majority of cases parents take their children directly to the emergency department. Most accidents occur at home between 09.00 and 21.00hrs.

Less than 1% in the study in question required admission. Children who had accidents were more likely to have a sibling who had an accident in the previous year. Socioeconomic differences between cases and controls were not significant. Another study on under fives (Kendrick 1993) found that children admitted after injury were twice as likely to have had one or more earlier attendance, thereby making A&E attendance a predictor for hospital admission. The authors suggested that attendances be notifiable to health visitors.

A study in Oxford on under fives (Sellar et al 1991) found that 1 child in 88 was admitted each year.After five year follow up it was found that 8.5% of admissions had at least one further admission for an accident.

Burns

The numbers of admissions for burns is small and in line with the reported declining incidence (Sarhadi et al 1995) the numbers of deaths have also declined due to improved management of burns and a decrease in the numbers with large body surface area burns.

Current Service Provision

ACUTE SERVICES FOR CHILDREN IN BRIGHTON HEALTH CARE

Acute services are provided across two sites, the Royal Sussex County Hospital (RSC) and the Royal Alexandra Hospital for Sick Children. The sites are about two miles apart. Services are mainly used by Brighton, Hove & Lewes (BH&L) residents, although about 20% of admissions to Royal Alexandra Hospital are children from a wider area covering E Sussex and W Sussex. There are some specialised services provided in Brighton that attract children from the wider area.

Paediatric beds and wards are located at the Royal Alexandra Hospital. Outpatient sessions are also held there. Children go to the RSC for ophthalmology, and older children are seen for ENT problems. The major trauma department is at RSC where children also get admitted, for example with fractures and injuries under trauma and orthopaedic consultant surgeons.

Workload Analysis

Findings are summarised here, with the detail and supporting tables in appendices.

The main focus for this study has been the workload for each hospital, therefore most of the analysis was carried out on inpatient episodes for 0-16 year olds attending Brighton Health Care providers. The latest data available were used, and to reduce the influence of small numbers and give stability to the results we used two years data covering 1995/6 and 1996/7 to show average annual figures. The analysis included an examination of a number of key variables, these included age, route of admission and discharge, episode number, specialty, consultant and case mix (using diagnoses, surgical procedures and Health care Resource Groups).

Expressed in finished consultant episodes, Royal Alexandra treats ten times as many children as the Royal Sussex County. The specialties of general paediatrics, paediatric neurology, paediatric surgery and oral surgery are based at the Royal Alexandra. A limited range of specialties are provided on both sites, eg ENT, T&O and a few paediatric cases appear at the County. A range of low volume work is done in other specialties at the RSC. This includes endoscopies (general surgery), elective ENT, older children in general medicine and neonates under paediatrics. Children are also seen at the RSC in the specialties of A&E and obstetrics. (Appendix 3 Table 1)

Provider based summary data (1996-97) rate per annum by age band

Table 7.1

ALL ADMISSIONS

Age Band	Royal Sussex County	Royal Alexandra	Other Sites	Total
Under 1	33	1065	7	1105
1 to under 5	23.5	2287.5	78.5	2389.5
5-11	134	2229	85.5	2448.5
12-16	441.5	806.5	98	1346
Total	632	6388	269	7289

Table 7.2

DAY CASES

Age Band	Royal Sussex County	Royal Alexandra	Other Sites	Total
Under 1	0	54.5	7	61.5
1 to under 5	0.5	459.5	62	522
5-11	9	564.5	52	625.5
12-16	60.5	162.5	79	302
Total	70	1241	200	1511

Table 7.3

EMERGENCIES

Age Band	Royal Sussex County	Royal Alexandra	Other Sites	Total
Under 1	21.5	839.5	0	861
1 to under 5	22	1238.5	2	1262.5
5-11	115.5	928	6.5	1050
12-16	230.5	402.5	7	640
Total	389.5	3408.5	15.5	3813.5

Royal Sussex County takes more emergency admissions (62% compared to 53%), and Royal Alexandra does a higher percentage of Day cases (19% compared to 11%). Royal Alexandra is close to national figures for children up to 15 years data which show 54% are emergency admissions and 21% are Day cases. (Tables 7.1, 7.2 and 7.3)

70% of admissions to the County are older children aged 12-16, and a further 25% are emergency admissions of younger children. (Tables 7.1 - 7.3)

The majority of work is in diseases of the respiratory system at the Royal Alexandra. The highest workload area for Royal Sussex County is injuries and poisoning (this reflects the high number of A&E and T&O admissions to this hospital). Other key areas are diseases of the digestive system, diseases of the ear, and other symptoms & signs. At the Sussex Eye Hospital the most important area unsurprisingly is diseases of the eye and adnexa (Appendix 5 Table 1).

Average lengths of stay at the Royal Sussex County seem to be higher than at Royal Alexandra, except for removal of the appendix. When the Day cases are removed from this comparison, the difference still persists. (Appendix 8 Tables 1-3)

Service Provision At Royal Alexandra

Medical specialties:
Paediatric medicine - 3 full-time consultants (general paediatricians but with special interests include gastroenterology, diabetes, epilepsy, respiratory and neonatal).

Neonatology - 1 full-time consultant, with an additional post funded in 1998.

Paediatric oncology is provided under a shared care arrangement with Southampton and London trusts. Care managed from London, an Associate Specialist takes the lead in Brighton.
Advice provided from visiting consultants within BHC on dermatology, cardiology and endocrinology.

Three wards for medical specialties containing 40 cots or *beds* (21 may be used to isolate <10 month olds).

'Casualty' : a walk-in emergency outpatient department operates at R Alexandra. (The major trauma A&E department is at RSC.)

Surgical specialties:
General paediatric and neonatal surgery - 3 full-time specialist surgeons based at R Alexandra Hospital, with special interests in urology, gastroenterology, oncology, endoscopic surgery and urodynamics.

ENT, maxillo-facial, trauma and orthopaedic services provided at R Alexandra. Adolescents tend to be seen at RSC, where these specialty staff are based.

There are 23 beds at the Royal Alexandra on a surgical ward, 4 cots on baby ward and 10 beds in a dedicated day case unit.

Orthodontics - there is a dedicated and well-equipped unit led by a consultant.

Paediatric intensive care - there is a dedicated PIC at R Alexandra, funded to operate 1 bed. The trust has made a bid to fund one further high dependency bed.

Support and other services:
There is a Home Care team of 3 whole time equivalent nurses, including specialist diabetic nurse.
Clinical support - some is supplied as dedicated at R Alexandra, eg radiography, physiotherapy, etc, while others are either at RSC (CT, MRI, pathology) or in South Downs Trust.

Non-clinical services - many dedicated at R Alexandra, eg general administration and management, parents' accommodation, specialist portering, etc.

Respiratory Research Centre funded by appeal/donation. Led by a research registrar and supported by specialist respiratory nurses.

Adolescent care:
There are no special arrangements for adolescents and this is regarded as unsatisfactory.
The number of children aged 10 - 16 admitted to Brighton Health Care in 1996-97 for all causes was 1884.5 (25.8% of admissions). The trust plans to create an Adolescent Unit when the service moves to the RSC.

Staffing:
Medical staffing - at the R Alexandra there are eight dedicated consultants supported by specialist registrars (6), and junior doctors (15 SHOs). Plus additional cover from other specialties as described above. (There are five community consultant paediatricians in South Downs trust.)

Accreditation - all medical staff in specialties at the R Alexandra are accredited for paediatric and GP training. The paediatric surgical specialties are not accredited because of the split site cover provided.

Nursing staff - 130 wte at R Alex plus budget for flexible labour to cover winter peak demand. Majority (around 80%) of trained staff are Registered Sick Children's Nurses (RSCNs). Staff also hold various END awards, eg care of neonates, anaesthetic nursing.

Professions Allied to Medicine - 10 wte at R Alex in orthodontics and x-ray departments.

Management - part of directorate of women's and children's health, has clinical director, 1 senior manager and 24 wte admin and clerical staff.

Development plans:
Capital Development Strategy - the trust would like to relocate at RSC with purpose-built facilities, fuller access to trust support services and the reduced risks associated with running a split site service.

Recommendations

It is recommended that the commissioner evaluates the outcomes of changing practice at the local level, as seen in the management of glue ear. This in turn may advise strategy for other parts of the health authority. The tutelage of commissioners, trusts and primary care groups over health improvement, clinical governance and audit should be considered in this regard.

It is recommended that the potential for evaluating the effect of outreach services in relation to referral/emergency attendance patterns and sociodemographic characteristics of the population targeting be evaluated for further targeting of services.

7. Primary Care

Aim C. is to consider certain aspects of primary care activity and need in relation to acute care.

Local primary care activity data is not available, we have therefore looked at national data taken from the 4th National Survey of General Practice and considered certain aspects of the local services and population in relation to them.

Table 8.1

Top ten consultations with doctor with hospital admission rates for 0-4 year olds (National Figures)

Condition	GP Consultations per 10,000	Hospital admissions per 10,000	Hosp. admissions as percentage of GP consultations
Acut U. respiratory infections of multiple or unspecified site	5451	200	3.7
Non suppurative otitis media & Eustachion tube disorders	3155	125	4.0
Acute nasopharyngitis	2960	1	0.0
Acute bronchitis & bronchiolitis	2563	122	4.8
Ill-defined intestinal organisms	2541	4	0.2
Atopic dermatitis & related conditions	2458	0	0.0
Disorders of conjunctiva	2314	4	0.2
Asthma	2045	200	9.8
Suppurative & unspecified otitis media	1680	44	2.6
Acute tonsillitis	1428	22	1.6

Table 8.2

Top ten consultations with doctor with hospital admission rates for 5-15 year olds (National Figures)

Condition	GP Consultations per 10,000	Hospital admissions per 10,000	Hosp. admissions as percentage of GP consultations
Asthma	1486	56	3.8
Acut U. respiratory infections of multiple or unspecified site	1329	11	0.8
Acute tonsillitis	1312	19	1.4
Non suppurative otitis media & Eustachion tube disorders	1076	83	7.7
Other diseases due to viruses & Chlamydiae	852	1	0.1
Acute pharyngitis	759	6	0.8
Allergic rhinitis	622	2	0.3
Acute bronchitis & bronchiolitis	562	0	0.0
Suppurative & unspecified otitis media	523	19	3.7
Acute nasopharyngitis	477	0	0.1

In general the burden of ill health in children seen in primary care correlates well with hospital admissions for asthma and ENT disorders Apart from intestinal upsets, atopic dermatitis (which relates to asthma) and conjunctival disorders in the under fives all of these common causes for GP consultation are for disorders of the respiratory tract of one form of another. This would tend to confirm earlier indications that these are the conditions where options for care modification at the interface between primary and secondary care stand out.

The types of practices serving the catchment area

Mention has been made of the potential effects of referral practices, socio-economic disadvantage and access factors on variations in the use of secondary care. There has been much written in the literature on 'primary care preventable admissions' (Pappas et al.1997, Billings et al 1996, Bindman et al 1995, Casanova et al 1995, Durojaiye et al 1989). Partly this arose from attempts to use secondary care utilisation data for primary care outcomes data and partly to reflect change in environments where primary care is in much earlier stages of development than in UK. However, it is difficult to extract generalisable principles from them, firstly because there appears to be somewhat of a gradient of usefulness for such data depending on how developed the local primary care services are and secondly because of the multiplicity of factors involved. Where single factors are investigated the evidence is more practicable.

Thakker et al (1994) investigated the characteristics of paediatric hospital admissions (under 15) in relation to the general practices they were served by. There were 894 emergency non-traumatic admissions in 12 months from a population of 26,433 covered by 20 general practices. They found that the proportions of admissions coming directly through the accident and emergency department verses via urgent GP referral varied significantly across practices - a greater than four fold difference being demonstrated (range 19-85% of admissions being direct self referrals). Practice specific admission rates also varied significantly with a seven fold difference demonstrated (10-70/100). The risk of direct self referral admission was to increase significantly with age and decrease with the number of GPs in the practice and the number of children registered with a practice. There was also a significant association with higher unemployment in the practice population. Other access issues - distance and local social characteristics - were not shown to be associated with the route of admission. Associations were also demonstrated with variations in admission rates but were not statistically significant. Higher rates were associated with unemployment in the practice population and in the ward in which the practice was to cater and with lower numbers of children on the practice register.

The local area does not have a high proportion of large group practices and is unlikely to change radically in the future. This ought to be taken account of in the provision of services.

Size of General Practices in Brighton, Hove and Lewes

Partners	*Number of Practices*
1	*3*
2	*1*
3	*4*
4	*3*
5	*5*
6	*3*
7	*0*
8	*1*

McFaul et al (1994) in a study of appropriateness of 267 consecutive admissions at a DGH found that overall 80.5% were judged appropriate. The numbers of patients attending A&E and those referred directly by their GPs were approximately equal. The appropriateness level was found to be similar in these two groups. The direct attendances had proportionally more representation of disadvantaged families. Approximately a quarter of all admissions were less than 24 hours. Of these however, half were admitted unnecessarily compared with a fifth of overall admissions.

Another study assessed the level of agreement between doctors in different specialty groups regarding the need for admission for surgical referrals (McCulloch et al 1997). The levels of agreement were shown to be initially poor, particularly between GPs and consultant surgeons. Following concensus discussion the groups achieved high levels of agreement.

The catchment is served mainly by small to medium sized practices. The distribution of areas of deprivation are shown in Appendix 1, table 5. An integrated Primary,Commnity and Acute Care Strategy for child health should take as its starting point the level of risk of particular care groups in the community and monitor their profile of service use and activity across the spectrum of care and the input from other agencies. The data available for this paper does not allow such detailed examination but the literature has indicated the potential for following this up strategically. This is particularity of interest in light of the principles behind Health Action Zones and the requirements of the recent white paper (1997).

Recommendation:

That a detailed assessment of the primary, community and acute child care interfaces be conducted to advise the development of consensus care group guidelines and to develop care group specific, integrated commissioning strategies which include key indicators.

Appropriateness and Quality

Aim D is to investigate issues pertaining to appropriate usage and quality of care.

Appropriateness

Under the section on acute care we have discussed trends in paediatric care as they have been demonstrated in recent decades. As numbers of admissions increased and lengths of stays shortened, queues and discharge delays have become common features of many hospital inpatient services. This has led to interest in understanding how services are utilised.

Clinical audit has increased the focus on effectiveness and quality aspects of clinical care, similarly interest has also developed into understanding how efficiently the services are delivered. The development of Utilisation Review in North America, (an external mechanism for reviewing the care purchased), gave rise to various techniques for reviewing the intensity and level of care provided and the appropriateness of its use. The rationale for admitting individual patients to hospital care and the appropriateness of continuing days of stay have been subjected to a battery of evaluations. Techniques include the use of interviews with medical, nursing staff, patients, their carers and their GPs to elicit their implicit judgements or by the use of a structured form of interview checking against specific criteria. Similarly explicit criteria audits of appropriateness were designed for evaluating care by screening medical records.

Paediatric studies in Canada have demonstrated inappropriate admissions and days of stay in the region of 20 - 30 % (Smith et al 1993, Gloor et al 1993) with adequate evidence of instrument validation. In this country the adult versions of these instruments have been modified for local practice and validated (Coast 1995, Bristow 1997). Use in paediatric care in this country has been more difficult. Direct testing of the Paediatric Appropriateness Evaluation Protocol (PAEP) for validity in the NHS environment only gave moderate levels of agreement when compared with British paediatric practice (Wernicke et al 1997) and the authors cautioned against direct use of instruments designed for another environment. Poor agreement rates are also a problem with unstructured implicit judgement by clinicians and others (Sanazarro 1980, Rajaratnum 1991).

One study (Rajaratuam ibid) has suggested that there is a need for local speciality specific admission policies to ensure cost effective use of facilities. However, even when appropriateness instruments have been modified to UK practice it may be difficult to manage paediatric risk with a purely dogmatic policy response to 'inappropriate admissions' as defined by criteria audit because of the way that services are staffed and the different perceptions of risk and appropriatenes held by different types and seniority of staff. Addressing the inefficiency of inappropriate admissions purely by keeping them out may be an inadequate response to the risk perceived by the clinical staff providing the service at the time of demand.

A retrospective study of the appropriateness of 267 consecutive admissions at a DGH (McFaul et al 1994) found that 1 in 5 were inappropriate. Approximately a quarter of all admissions were for less than 24 hours. Of these short stay admissions 1 in 2 were inappropriate according to the criteria audit. Conversely less than 1 in 11 of those admitted for longer than 24 hours were considered inappropriate on the criteria audit.

In adult care much effort is being expended on the prevention of appropriate hospital admissions by preventing breakdown of care in the community before it reaches the stage of requiring hospital admission. This has been seen in the many and diverse initiatives that have been developed to deal with winter pressures. In paediatric practice in the UK and elsewhere children's health has been improved through increasingly effective management of risk which has seen the lowering of admission thresholds (Hill ibid) at a time of decreasing mortality and morbidity. Lengths of stay have come down at the same time as admission rates have gone up. There is evidence, however, that, given appropriate facilities, the lengths of stay could come down even further as the needs for risk management of acute conditions is in most cases very short .

Numa et al (1991) studied a cohort of children admitted to hospital for medical conditions for less than 24 hours over 12 months. Four diagnostic groups accounted for nearly 80% of admissions. They found that 87.7% had justifiable conditions at the point of admission. These were asthma, ingestions, infections and convulsions. Rapid recovery/resolution is a common feature of such admissions and only 35% were not fit for discharge within 12 hours. The hospital in question did not have a short stay facility and their mean duration of admission was 17 hours. A majority of these patients (65%) satisfied the criteria for admission to a short stay observation area. The authors concluded that brief hospitalisation for relatively minor illness was a significant requirement in modern paediatric care. Inpatient administration and medical review often lengthens inpatient stay unnecessarily. Significant cost savings are possible with short stay facilities.

A study of such a ward showed the following results in its first year of operation. (Brown and Penna 1996).

Admissions to a short stay emergency ward for rapid stabilisation were reviewed.
No of admissions - 1300
Period of study - 12 months
Admitted to inpatient beds for further care - 4%
Stayed over 24 hours 3%
Average LOS - 17.5 hours.
Main users - Children under 3 years (58%).
Critical incidents recorded during the whole period - 0
Levels of appropriateness were not determined. The length of stay was considerably longer than that expected in the study by Numa et al. However the base line from which they were starting was not the same and one year's activity may still be considered transitional. Average estimates of the value of bed days saved through the introduction of the service as compared to previous running costs was put at £250,000. (Such estimates need to be treated with caution if they depend on theoretical allocations of average bed day cost. They do not necessarily address all the implications of fixed costs being freed up for reinvestment).

Another study (Beverly et al 1997) at about the same time demonstrated the following:

Admissions to a paediatric day assessment ward were reviewed for the first year of operation.
No of admissions - 1731
Period of study - 12 months
Admissions to inpatient beds overnight 3% reduction in paediatrics
7% reduction in surgery
Midnight occupancy 17.7% reduction in paediatrics
25.4% reduction in surgery
Inpatient admission not required in 38% of all attendances
Adverse events recorded during the whole period - 0
Levels of appropriateness were not determined. Average estimates of the value of bed days saved through the introduction of the service £32,000

An earlier study of a similar type showed the following results in its first year of operation. (Dawson et al 1991).

Admissions to a short stay emergency ward for rapid stabilisation were reviewed.
No of admissions - 1308
Period of study - 12 months
Admitted to inpatient beds within week for further assessment - 4%
Stayed over 24 hours 59.4%
Average LOS - 4.5 hours.
Main users -
Critical incidents recorded during the whole period -
Levels of appropriateness were not determined

McFaul et al (1994) in a study of appropriateness of 267 consecutive admissions at a DGH found that overall 80.5% were judged appropriate. The rate of direct attendance to GP referral was approximately equal. The appropriateness level was found to be similar in these two groups although the direct attendances had proportionally more representation of disadvantaged families. Approximately a quarter of all admissions were less than 24 hours. Of these however, half were admitted unnecessarily compared with a fifth of overall admissions.

Another study which looked at the appropriateness of care in a paediatric short stay ward (Beattie and Moir 1993) over a 1 year period reported a level of 7% inappropriate admissions.

Recommendation:

That the Health Authority and Trust investigate in detail the cost effectiveness of establishing a Paediatric Short Stay Facility on the Royal Sussex County Site with appropriate staffing and specialist cover.

Quality Standards

The following principles and standards have been extracted from the strategies or policy frameworks received, which reflect some important common themes which we believe will be of general relevance. For each we have addressed the situation in Brighton and the NHS with recommendations or proposals where appropriate.

Guiding principles:

- reduce hospital admissions and move towards ambulatory care and home nursing,

  Consider the establishment of a paediatric short stay facility at RSC

- developing the skills of primary health care teams,

  Identify GP practice profiles in electoral wards with high deprivation and address the strengthening of primary care through primary care management of particular target groups of children groups of children at risk of hospital admission by consensus development of integrated strategies and guidelines.

- keep lengths of stay in hospital as short as possible,

  Consider the establishment of a paediatric short stay facility at RSC

- move toward integrated child health services,

  Through integrated strategies and guidelines as part of strategic commissioning.

- need for paediatric oversight of all children in hospital,

  The establishment of a paediatric short stay facility at RSC should incorporate the appropriate specialist cover and this should be extended to provide paediatric oversite of children on the RSC and Eye Hospital sites.

- need to demonstrate capacity to provide high quality services,

  Addressing standards of practice and accreditation.

- retain services where they can be justified on outcome or cost (especially applies to tertiary and out of area services),

  Through detailed Investment / Disinvestment Plans. Eg The cost benefit of establishing a paediatric short stay facility has the potential to free up resources elsewhere for reapplication.

- use outcomes data before commissioning new services and to check existing services,

  The opportunity to audit the outcomes of the changing management of glue ear at Brighton has been identified as a potential example for encouraging change else where in the Health Authority. The use of the methodology described by Numa et al for identifying the potential impact of a paediatric short stay facility is recommended. Should such a facility be established it is considered important that studies such as those described by Brown et al and Beverly et al be incorporated in the evaluation from the outset.

- choice for older children and adolescents,

  The establishment of a formal service for adolescents is recommended

- Court Report (1976), Children Act (1989), UN Convention on the rights of the Child (1991), Children's Charter (1996), etc.

  Commissioners should specify the salient features of these documents in commissioning strategies and commissioners and providers should monitor key indicators for their implementation.

- knowledge of child protection issues,

  Commissioners should have in place a child protection strategy and service specification which the strategy meets needs, and seeks to continuously enhance coordination between key workers

- BPA, RCN and other professional guidance.

  Such guidance should be reviewed and addressed within commissioning strategies and targets set for meeting outstanding recommendations

- Strategic commissioning.

  There is a need to develop care group specific, integrated commissioning strategies which address primary, community and secondary care and to include key indicators. The timing and development need to be accommodated within other strategic developments as set down in various strategic advice. These include the development of Health Action Zones, Health Improvement Plans, Primary Care Groups, Clinical Governance as addressed in the white paper (ibid 97) and the green paper (1998) and specialist service guidelines such as the Paediatric Intensive Care Framework recommended by the National Coordinating Group. Strategic commissioning should address each component of the strategy in terms of how it meets needs and should contain devices for creating better links between providers (eg key workers). Such developments should links between commissioning authorities and providers. This in turn will lead to more detailed specification of services and associated activities (such as evaluation) in contracts, thereby addressing the recommendations in the Audit Commission Report.

Specific standards:

- facilities separate from adults, (inpatient, outpatient and day care),
- adolescents' accommodation separate from children, eg adjacent, private rooms,
- staffed with paediatric trained nurses,
- paediatric oversight regardless of specialty of admission,
- 24 hour cover by a senior paediatrician and a dedicated RSCN nurse in a&E,
- an RSCN present in out-patient clinics at all times,
- children's wards should have at least 2 staff members per shift who are RSCNs (RCN 1990),
- experienced resident paediatric medical staff available to provide adequate 24 hour cover,
- children should only be taken by ambulance to a&E departments where there is a same site paediatric department,
- care of critically ill requires 1 cot/48,000 (BPA) or 1 cot/40,000 (PICS) children,
- PIC providing level 2 care should have a minimum of 2 beds
- facilities for at least one parent to sleep at the hospital per intensive bed or cot,
- neonatal/special care staffing and equipment laid down by BPA/BAPM,
- surgeons should have at least 6 months training in paediatric surgery and maintain continuing medical education,
- surgeons and anaesthetists should be suitably trained and treat children on a regular basis,
- 24 hour cover by experienced anaesthetists should be provided for emergency surgery,
- suitable transport services available for transfer and referral (including supervisory staff).

A number of health authorities mentioned their current problems included recruitment of medical (eg consultant paediatricians), nursing and paramedical staff, and retention of nursing staff.

Definitions of children varied or, more usually, were not defined. The Children Act applies to all ages up to 21. The adolescent period was variously described, for example as age-bands 11-18 or 12-19 years.

Aim E is to consider potential service projections for the different elements of paediatric care, and related critical workload issues and teaching issues.

Future Services

Using the projected population estimates for 2006 it is possible to produce a direct projection of current hospital activity to mirror the population. See tables below.

Table 9.1
ADMISSIONS 1996/7

Area	0	01-04	05-16	Total
Brighton Hove & Lewes	1011	2031	3565	6607

Table 9.2
RATE per 1000 (admissions/population)

Area	0	01-04	05-16	Total
Brighton Hove & Lewes	279	137	82	107

Table 9.3
PROJECTION - for Brighton, Hove & Lewes only for 2006

Area	0	01-04	05-16	Total
Population	3552	14207	47221	64980
Admissions expected	992	1939	3866	6920
Percentage change	-0.19%	- 4.5%	+7.8%	+ 4.5%

Source: East Sussex county council

Following on from the past trends and addressing current and expected changes in patterns of use the following was noted:

A marked trend towards earlier age of first admission.

An increase in hospital admission rates without evidence of major changes in morbidity. The rise was mainly due to an increase in emergency admissions for acute common childhood illnesses, particularly respiratory and gastro-intestinal diseases.

Median lengths of stay had fallen
Increasing numbers of discharges were occurring within a day after admission

These trends were seen particularly in the younger age groups.

The use of paediatric services diminishes in the older age groups eg 26% of admissions aged 10 dropping to 6% of admissions by age 14 in the Oxford study.

There are 3813.5 emergency admissions of children per year to Brighton Health Care. Of these 2261 are Paediatric admissions. Typical lengths of stay are as follows: Asthma 1.71 days, Acute URI 1.92 days, Convulsions 1.47 days, Functional intestinal disorders 1.53 days, Acute Bronchiolitis 3.51 days, and Acute tonsillitis 1.63 days.

If the findings of the study by Numa were applied to this cohort ie 65% were to satisfy the criteria for a short stay observation area and could appropriately be managed with similar short stays a significant reduction in bed days would result. Assuming an average los of 1.7 days for the cohort the current annual bed day use for the 2261 admissions would be 3844. If 65% of these were suitable for such care (with ave.los 12 hrs) that would mean that 1470 admissions which currently account for 2498 bed days would be appropriately cared for in 735 bed days. This would reduce annual paediatric occupancy by 46% from 3844 to 2081 bed days per annum.

The above scenario assumes a dedicated round the clock facility at the site of emergency attendances. The Beverly study addressed the use day time assessment. The findings of that study applied to the BHC Paediatric cohort estimates a reduction in occupancy of 17% form 3844 to 3191 bed days per annum.

In the Dawson study a facility similar to that proposed in the conclusions of the Numa study showed that 40% of patients were managed with an average los of 4.5 hrs (0.19 of a bed day). If this estimate is applied to the BHC cohort the annual bed day use for 904 admissions (40% of cohort) would reduce from 1536 bed days per annum to 172.This would give a reduction in annual occupancy from 3844 bed days of 35% to 2480 bed days per annum.

Whichever scenario is considered there would appear to be significant health gain and economic benefit to be had from refocusing the way in which short tem high risk acute illnesses in children are managed in Brighton. The potential for freeing up resources at one site and establishing a new style of service on the other sight could provide substantial benefits. It does not provide a total solution to the split site difficulties and may raise other issues as yet untouched upon.

Assuming that potential for such change in services exist then the catchment population projections would be addressed by such change. Although the population of children is growing (c.4.5% in 10 years), the population of younger children is expected to drop (see table 9.1). As the younger children are those more likely to be served by a short term assessment facility this would fit well with the population change. Even if the admission load of young children were to continue to increase at the rate it did in the eighties it would probably be offset by the reductions implicit in such a strategy. Even this is not however that likely as the rising admission rates in the eighties were thought to be in response to management of risk and increases in supply.

Most of the rise will take place in the five to 16 year olds. The under tens are likely to be absorbed in the availability of space in an assessment facility and freed up ward space. The over tens need to be accommodated by services for adolescents and to be increasingly targeted for risk modification with primary and secondary prevention.

Aim F is to consider a range of work-force issues.

Location of Care

The Royal College of Paediatrics (formerly the British Paediatric Association) in its 1994 Document on Purchasing Health Services for Children and Young People recommended the following with regards to service configurations.

Services which need paediatrics on the same hospital site:

- Maternity
- A&E
- Surgical Specialities

The lack of complete paediatric cover at the RSCH should be addressed and could be part of a broader plan to develop an assessment facility.

Services needed by Paediatrics on the same site are:

- General Surgery
- Anaesthetics
- Imaging
- Pathology
- Pharmacy
- Allied health professionals and teachers

There is a deficiency of constant appropriate anaesthetic cover at the Princess Alexandra. This needs to be addressed in terms setting targets for change. (RCAnaesth. 1994)

Accreditation (training, services)

The appropriate model of paediatric care is outlined in the report the Joint Working Party on Services for Children and subsequently supported by the House of Commons Committee is a combined child health service. The general hospital element should provide:

Neonatal services
A&E services
IP, DP, OP and peripheral clinic services
Level 2 intensive stabilisation care prior to transfer
Advice to other specialties
Collaboration with primary and community care
Child protection service
Child and adolescent psychiatry and clinical psychology services
Hospital outreach services
Services for adolescents

The Joint Consultative Committee the Pattern of Medical Series for Children: Medical Staffing and Training (1997) describes small, medium and large units. Brighton meets most of the criteria for a large unit except for (a) Intensive care level 2-3 which would require a separate intermediate grade rota. (b) It is unclear if there is alwaysfull time, on-site, experienced intermediate paediatric cover for the obstetric service. (ie minimum of a year of fulltime paediatrics). A unit should be associated with other tertiary care facilities. The isolation of the separate site mitigates against thisand vice versa. The establishment of a short stay assessment unit at ROC for paediatry with appropriate specialist staff would address the problem for RSC.

Registrar and SHO posts in General Paediatrics and neonatology meet accreditation requirements.

In Paediatric Surgery there are three middle-grade doctors. This specialty does not have accreditation for training. The posts do not meet accreditation guidelines on service load/ experience grounds and because of the difficulties in relation to acute services being provided at more than one site. The 1:3 roster presents difficulties with regard to commitment to a 56 hour week. The recommended catchment for Paediatric Surgery (BAPS, 1995) is one surgeon per 500,000 population and four paediatric surgeons plus a paediatric urologist per unit. There is increasing evidence (Selby et al 1995) that procedures which are performed infrequently are less likely to be of a high quality compared to those performed on a more frequent basis. This would require a catchment for the Brighton service of say East and West Sussex and parts of Kent and Surrey. The Royal College of Anaesthetists rcommends that the anaesthetics service for children be led at all times by consultants who anaesthetise children regularily (at least the equivalent of one full operating list per week). Children under five should normally be anaesthetised by consultants or under the direct supervision of consultants. The cover arrangements provided to the split sites in Brighton would appear to have the potential to preclude this requirement at times.

Recommendation

That the commissioner seek, through its health improvement programme, to ensure quality through volume and with commissioning partners to consider appropriate catchments for the paediatric surgical services.

That the commissioner assess the minimsation of the risk of adverse events associated with current paediatric anaesthesia service arrangements and address the future requirements of these services.

Services for Adolescents

Adolescents require appropriate care for their age and the National Association for the Welfare of Children in Hospital has identified the following issues in relation to the care of adolescents in hospital:

- The needs of adolescents regarding flexibility and growing independence are often at variance with the needs of younger children and are not met by the facilities provided in a normal childrens ward.
- The provision of designated adolescent care is cost-effective.
- The BPA estimates 15 adolescent beds for a DGH serving a population of c. 200,000. Which translates to a six bed unit for Brighton Health Care. (Excluding Obstetric and Psychiatric care). The approximate expected usage 3 beds orhopaedic, 2 beds medical 1 bed ENT and other surgical specialties.
- Care requires individual specialist care and consultant paediatrician (with an interest in adolescents) oversight and available psychological, social work and mental health support.
- Separate self contained accommodation with privacy and disabilities addressed. It should be linked to the paediatric department. Eduction facilities are required. Day rooms are needed. Flexible catering should be addressed. Cultural needs should be catered for in visiting arrangements, dress, communication etc.
- Staff should have specialist training, be preferably both sexes and be led by an RSCN.
- Adolescent specific information for audit should be collected.
- Consumer information should be collected.

ICU

A difficulty pertains at Brighton Health care for the provision of Paediatric Intensive Care (PIC).

One PIC bed is funded and at times a second is used. Single bed PICUs are not recommended. The common difficulties faced by all PICUs are likely to be problematic for Brighton in the future, as are the supply of medical clinicians and nurses and the problems of supporting a retrieval service for small volume. Furthermore the population projection is not likely to increase existing demand as the numbers of young children in the population will drop. About half of PIC admissions nationally are under age 2.

Without going into further detail in terms of standards and recommendations the primary issue is how to maintain and develop the existing skill and expertise with the constraints of the current catchment.

Using the expected lengths of stay in level 2 PIC (ave. 3.7 days) and the population of the catchment area (1.2 admissions per 1000) there is need for one PIC bed . To justify the funding of a second bed a larger catchment with an adequate retrieval system would need to be defined. If the wider East Sussex population of children were to be served by such then the need would translate to two beds with 93 % occupancy. This is the primary logistic and strategic question to be addressed by the commissioner, secondarily there remain certain issues relating to the on-site availability of specialist services in particular anaesthetics.

The development and standards would subsequently need to be addressed in the service specification. (Blue light travelling time from Hastings to Brighton is probably shorter than to elsewhere).

The recommendations of the the National Coordinating Group (NCG) on Paediatric Intensive Care are summarised as follows:

Trusts and Health Authorities to conduct detailed audit of -

- The numbers of children needing intensive care
- The profile of demand
- The current configuration of services
- Average lengths of stay
- Predictbility of services in advance
- The extent of need for high dependancy beds

Identify the organisation of the appropriate level of service
In the case of Brighton this falls between DGH and Lead Centre and is population dependant.

Measure compliance with standards

- Medical and Nursing training
- Specific treatment competencies and equipment
- On site access to specialties
- Families facilities
- On site support services
- Training and quality control requirements

Action is required in the following areas

- To address the single bed service issue - this is contrary to recommendations.
- To conduct a detailed <u>prospective</u> study of potential need in the greater catchment and the possibility of developing a service for the population of East Sussex
- To clarify within a year of the NCG report the method for provision of appropriate intensive care in Brighton with particular referenc to location of service with adequate facilities.
- Designation of the type of service to be provided at Brighton
- Clarification of the provision of retreval services
- Development of protocols outlining service provision
- Develop plan to assure provision of services meeting the standards set out in the report within 3 years of the report's release.

Recommendations

That a detailed prospective study on the potential for and implications of widening the catchment area for paediatric intensive care services in Brighton be conducted in 1998. That the findings be used to define the sevice provision in the new milleneum.

That an inpatient service for adolescents be established.

8. Conclusion and Options for Change

Aims G & H are to consider options for change, draw conclusions and make recommendations.

The document has highlighted the needs of the population patterns of care and prospects for change. Changing practice patterns are a feature of modern health care and clinical management.

In concluding the report addresses options for change recognising population and catchment projections for Brighton Health care and within the framework of the recent government white and green papers and the various professional and other guidance referred to above.

In 1997 the Annual Report of the Director of Public Health drew notice to the relatively high rates for surgical intervention and low rates for day surgery in the management of `Glue Ear' in East Sussex compared with the national picture. This report has identified changing practice at Brighton Health Care. This change may reflect a `watching, waiting' practice which is increasingly promoted in Otological research and results in less frequent intervention. Such changing practice represents the `leading edge' for the Health Authority as the change is not yet reflected in other parts of East Sussex . At the same time changes in practice of this nature represent a certain disinvestment through natural attrition which may have some perceptible economic benefit and present opportunity for reinvestment in care of a different kind. Where such patterns occur and where the health authority has a declared interest in fostering such change it is the authority's responsibility to evaluate such change.

In the same manner that new investments are always subject to appraisal, practice patterns of any changing investment should be evaluated for effectiveness clinical outcome, patient choice and satisfaction, and efficiency.

With the widening responsibilities for quality of care of health authorities, trust management and primary care groups (as they change) such evaluations should become a part of the programmes for Health Improvement. They should be built into Clinical Governance and through focussing audit and performance management should provide examples of practice which if beneficial can be disseminated more widely across the health authority.

With the development of community care in the primary care group context, health improvement planning and health action zones opportunities for exploring innovation at the interfaces of traditional care will continue to increase. The literature on patterns of emergency care for asthma diabetes and other conditions demonstrates the potential for investing in secondary and tertiary prevention.

Consensus development has the potential to reduce acute exacerbations and improve health if done with local groups of stakeholders managing the various aspects of particular conditions. The socio demographic characteristics of particular population groups and the characteristics of the services they receive can provide information for prioritising action in this direction. The development of condition specific community and service profiles and care group guidelines with

appropriate key indicators of success should form the basis of commissioning strategies. These in turn can be incorporated into health improvement programmes.

There is increasing evidence which supports the provision of Paediatric Short Stay Facilities. The size and hours of availability are dependent on the expected care loads. The evidence suggests that a substantial proportion of acute inpatient admissions require only a few hours of sophisticated observation after which they can be fit for home care. Where such facilities are not available the administration and management of inpatient care tend to operate in time cycles which prolong care well beyond this need. A number of possible projections have been demonstrated in this text, they are meant as examples. Further detailed investigation into the practicalities of such a proposal for Brighton is suggested. The relocation of all paediatric services on the main acute site is the longer term goal expressed in the capital investment plan. Short term management of short term acute illness in children on the same site as the trauma services may provide a suitable interim arrangement and may consolidate specialist cover for acute care.

More and more, those who provide sophisticated levels of care are expected to be able to demonstrate how that care caters for need in the population. Where services have developed from geographical or historical context they may not be contoured to the needs of the population. The case mix and volume of paediatric surgical care in Brighton Health Care and across Sussex indicate possible difficulties for the maintenance of a high volume, high quality service. Ten year projections show that the catchment for younger children will actually contract slightly. The population and expected volume of activity do not concur with guidance on preferred size of services as recommended by the Royal College of Surgeons. This has implications for accreditation of training, continuing professional development and standards. The potential for a conjoint service with a larger unit may need to be considered. A detailed investigation is recommended to assess the impact of these implications and their relevance to health improvement programmes and the health performance framework proposed within the white paper.

With advances in skill, technology and health care expectations, the standards of professional care also advance. The fixed infra structure of hospital stock represents long term capital investment and as a result care infra-structures are often victims of their own service's successes. The requirements for expertise in paediatric anaesthesia are such that consultant care can be required out of hours at more than one site at once. The options for addressing this problem come into three categories

(1) Increasing the availability of specialists through extra or back up on call. This may ultimately require further review of numbers of specialists. However a limiting factor may be the availability of elective paediatric lists to maintain specialists' skills

(2) Provision of emergency care at a single site. The implications of such a proposal are beyond the scope of this study but could be given some consideration in light of the proposal to manage acute paediatric emergencies at one site.

(3) Increased mobility of services with emergency transport infra structure. Such schemes have been applied elsewhere, often for obstetrics on peripheral sites. They tend to be

cumbersome and are usually only interim arrangements.

Paediatric Intensive Care(P.I.C.) Services are also the subject of a volume/standards conundrum. In the case of Brighton Health Care slightly more than one bed is justified on current activity. The phasing out of single P.I.C beds has been recommended nationally. The provision of a second bed is costly and any service P.I.C. development could be significantly affected by the ramifications of the volume/standards issues discussed above. On the present utilisation of such services by the whole population of East Sussex and the West Sussex users of Brighton Health care, a second level two P.I.C. bed could be justified, if the catchment were increased to serve this population. This would obviously require an integrated commissioning strategy. This would need to address the provision of retrieval services and the acceptability of such a proposal to all stakeholders. Such a strategy would need to incorporate key indicators in order to evaluate the continued provision of the service.

As can be seen in this discussion each of these issues ramifies on the others. Taking each separately and in isolation does not necessarily accommodate the requirements of the next. The fact that they interdigitate so extensively means that a strategy which addresses all of them needs to be developed.

Prioritising the way in which they are addressed presents its own set of difficulties. However a starting point is required from which to examine the cascading effects. It is suggested that the order in which the issues have been presented here provides a practical starting point as the earlier issues evaluating changing care patterns and addressing acute admissions have relatively shorter planning cycles and provide a logical focus from which the remaining issues can be advanced.

The purpose of this document has been to highlight needs, patterns of care and prospects for change and to place them into current context. They next need to be addressed by stakeholders before being progressed further.

SEIPH March 1998

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APPENDIX 1

ESBH RESIDENT BASED ADMISSIONS, PROJECTED ADMISSIONS, AND SOCIAL CHARACTERISTICS

APPENDIX 1: ESB&H based admissions, projected admissions and social characteristics

1. POPULATION - mid-1996 ONS estimates

Area	0	01-04	05-16	Total
Brighton Hove & Lewes	3620	14878	43539	62037
Hastings and Rother	1893	8019	24178	34090
Eastbourne & Wealden	2183	10481	31827	44491
Total	7696	33378	99544	140618

Source: ONS mid-1996 estimate

2. ADMISSIONS 1995/6 and 1996/7

Area	0	01-04	05-16	Total
Brighton Hove & Lewes	2022	4062	7130	13214
Hastings and Rother	1345	2483	4233	8061
Eastbourne & Wealden	1289	2634	4792	8715
Total	4656	9179	16155	29990

Source: 1995/6 and 1996/7 Flatfiles and PID hospital data

3. RATE per 1000 [(admissions/2)/population]/1000

Area	0	01-04	05-16	Total
Brighton Hove & Lewes	279	137	82	107
Hastings and Rother	355	155	88	118
Eastbourne & Wealden	295	126	75	98
Total	302	138	81	107

4. PROJECTION - for Brighton, Hove & Lewes only for 2006

Area	0	01-04	05-16	Total
Population	3552	14207	47221	64980
Admissions expected	992	1939	3586	6555

Source: East Sussex county council

5. Unemployed males and household characteristics (based on 100% sample) *Source: 1991 OPCS Census*

District	Ward name	% Unemployed males	% Households with no car	% Households with no bath or shower	% Owner occupied households	% Lone parent head of household
Brighton	Hanover	9.5	54.6	1.1	58.0	4.6
	Hollingbury	7.8	45.9	0.4	58.9	7.0
	King's Cliff	9.7	54.2	0.7	48.5	4.4
	Marine	13.3	49.4	0.2	40.3	7.5
	Moulsecoomb	12.8	42.9	0.0	49.0	6.8
	Patcham	3.6	26.1	0.0	87.4	2.1
	Preston	5.1	30.7	0.2	80.7	3.4
	Queen's Park	13.2	63.0	0.3	43.7	2.8
	Regency	12.6	60.5	0.5	52.3	3.3
	Rottingdean	4.9	24.3	0.0	90.8	1.4
	St.Peter's	7.8	47.2	0.9	63.4	3.7
	Seven Dials	9.5	55.4	0.4	60.9	3.3
	Stanmer	5.6	33.9	0.0	72.3	4.9
	Tenantry	7.1	41.9	1.3	70.8	3.6
	Westdene	4.7	25.0	0.1	83.8	2.7
	Woodingdean	5.1	22.2	0.0	81.1	3.9
	Total	8.3	43.1	0.4	64.6	4.1
Hove	Brunswick and Adelaide	10.2	55.2	0.4	51.7	2.9
	Goldsmid	7.4	47.6	0.2	66.4	2.4
	Hangleton	5.7	33.6	0.1	67.8	4.6
	Nevill	7.0	34.1	0.3	71.4	4.2
	Portslade North	5.0	26.1	0.1	81.1	4.4
	Portslade South	5.8	37.5	0.2	75.3	3.2
	Stanford	3.8	18.2	0.1	87.1	2.4
	Vallance	8.9	56.2	0.3	56.0	3.1
	Westbourne	6.7	43.3	0.2	71.5	2.6
	Wish	5.7	39.3	0.3	74.6	2.6
	Total	6.7	40.7	0.2	68.9	3.2
Lewes	Barcombe	2.8	12.6	0.1	64.0	1.9
	Chailey	3.4	12.8	0.0	72.3	2.8
	Ditchling	2.5	16.3	0.1	79.4	1.6
	East Saltdean	4.7	29.1	0.0	91.7	1.9
	Hamsey	0.0	0.0	0.0	0.0	0.0
	Kingston	2.9	10.9	0.0	73.2	0.8
	Lewes Bridge	4.2	33.2	0.6	69.8	3.0
	Lewes Castle	6.4	38.4	0.3	57.6	5.9
	Lewes Priory	4.2	31.0	0.2	78.6	3.1
	Newhaven Denton	4.0	16.5	0.2	94.0	2.0
	Newhaven Meeching	6.1	36.0	0.4	67.8	4.8
	Newhaven Valley	4.9	34.1	0.2	74.3	2.7
	Newick	3.4	15.5	0.4	79.4	1.9
	Ouse Valley	4.4	28.3	0.3	38.1	1.9
	Peacehaven East	7.2	26.1	0.0	79.2	3.6
	Peacehaven North	5.0	20.5	0.1	83.7	4.9
	Peacehaven West	5.9	33.4	0.1	86.6	1.6
	Plumpton	3.3	10.9	0.0	79.5	2.0
	Ringmer	3.4	16.3	0.3	78.1	2.1
	Seaford Central	5.5	36.2	0.1	81.0	1.4
	Seaford East	4.3	20.5	0.0	87.9	1.9
	Seaford North	4.6	24.9	0.0	79.6	3.6
	Seaford West	3.1	21.1	0.2	93.0	1.1
	Telscombe Cliffs	4.4	20.2	0.1	88.3	2.0
	Wivelsfield	3.3	8.6	0.0	84.2	3.6
	Total	4.5	25.0	0.2	78.8	2.8
Brighton, Hove & Lewes		6.9	37.8	0.3	69.5	3.5

6. Qualifications and social class based on 10% sample) *Source: 1991 OPCS Census*

District	Ward name	%Qualified Males	%Qualified Females	%Social Class I	%Social Class II	% Social Class III(n)	% Social Class III(m)	% Social Class IV	% Social Class V
Brighton	Hanover	8.6	11.9	4.7	26.8	10.9	26.8	18.5	6.9
	Hollingbury	4.6	5.2	5.8	21.6	15.4	31.1	12.9	8.3
	King's Cliff	10.9	11.5	8.6	38.9	12.1	17.2	10.1	5.1
	Marine	6.9	5.1	5.2	21.0	9.7	27.8	16.1	11.3
	Moulsecoomb	2.4	1.4	3.1	11.6	7.3	32.8	21.6	15.1
	Patcham	8.2	6.0	4.8	36.3	16.3	26.3	8.8	6.0
	Preston	13.6	12.6	13.7	39.0	11.2	20.5	8.8	3.2
	Queen's Park	8.1	7.6	9.1	27.8	12.5	22.7	17.6	4.0
	Regency	14.5	14.4	10.8	40.1	9.4	16.0	13.2	4.7
	Rottingdean	12.1	7.6	10.9	42.1	15.4	21.3	6.3	0.5
	St.Peter's	12.2	12.7	11.2	35.0	10.4	26.2	10.4	3.1
	Seven Dials	13.3	13.7	10.8	36.7	12.4	19.3	10.4	2.7
	Stanmer	3.4	3.2	2.6	24.5	13.8	34.7	14.3	6.6
	Tenantry	7.9	6.1	4.4	24.4	11.6	32.0	16.4	9.1
	Westdene	14.3	9.0	13.3	46.0	9.7	18.5	8.1	1.6
	Woodingdean	4.9	4.3	6.6	14.8	10.2	48.0	11.3	3.1
	Total	9.2	8.3	7.8	30.1	11.7	26.6	12.8	5.8
Hove	Brunswick and Adelaide	12.2	9.0	5.9	40.6	16.0	17.4	11.0	2.7
	Goldsmid	11.9	10.2	13.5	30.3	15.7	18.4	8.6	4.3
	Hangleton	4.9	3.5	2.5	23.5	19.0	37.5	11.5	3.5
	Nevill	5.2	3.6	8.6	24.4	15.8	28.5	11.8	6.3
	Portslade North	4.0	3.4	3.7	22.5	14.2	39.7	11.6	4.9
	Portslade South	3.2	3.9	2.6	20.1	17.5	33.6	14.4	6.6
	Stanford	15.8	8.5	18.3	48.2	12.7	10.7	4.1	2.5
	Vallance	8.8	7.8	7.5	31.0	16.0	26.5	11.0	3.5
	Westbourne	7.9	7.2	8.6	33.8	12.6	24.2	9.6	5.1
	Wish	8.0	6.1	8.2	36.7	15.5	18.8	10.1	6.3
	Total	8.3	6.4	7.7	30.7	15.5	26.1	10.5	4.6
Lewes	Barcombe	14.3	11.9	13.8	41.4	1.7	24.1	19.0	0.0
	Chailey	12.0	10.3	8.9	42.9	8.9	23.2	12.5	3.6
	Ditchling	11.7	12.3	14.3	54.3	2.9	14.3	11.4	2.9
	East Saltdean	9.4	6.3	11.5	41.0	14.8	21.3	0.0	9.8
	Hamsey	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Kingston	19.5	18.2	27.5	41.2	7.8	9.8	5.9	2.0
	Lewes Bridge	11.5	10.1	9.0	32.8	17.2	23.1	12.7	2.2
	Lewes Castle	12.0	12.3	13.5	24.8	9.0	32.3	12.8	5.3
	Lewes Priory	17.2	13.3	15.9	40.1	5.7	21.7	8.3	5.1
	Newhaven Denton	5.1	4.7	4.1	37.1	9.3	30.9	8.2	8.2
	Newhaven Meeching	3.1	3.1	3.8	23.1	8.7	31.7	11.5	14.4
	Newhaven Valley	4.9	5.3	2.0	24.0	9.0	32.0	18.0	11.0
	Newick	15.6	11.8	14.9	47.8	7.5	19.4	4.5	6.0
	Ouse Valley	5.1	7.2	2.2	37.0	0.0	30.4	28.3	2.2
	Peacehaven East	4.8	3.5	5.4	31.1	9.5	29.7	17.6	5.4
	Peacehaven North	5.4	3.6	5.8	30.2	15.9	31.7	7.4	5.3
	Peacehaven West	2.4	4.7	5.3	22.7	12.0	40.0	18.7	1.3
	Plumpton	16.4	12.1	8.0	46.0	8.0	22.0	14.0	2.0
	Ringmer	10.3	8.9	6.4	34.5	17.3	23.6	10.9	5.5
	Seaford Central	8.2	11.8	5.3	36.3	15.9	27.4	8.0	1.8
	Seaford East	9.6	5.4	10.7	34.0	12.6	16.5	17.5	6.8
	Seaford North	7.2	4.5	6.2	26.7	13.0	28.1	15.1	7.5
	Seaford West	7.1	5.5	9.1	38.4	20.2	15.2	13.1	1.0
	Telscombe Cliffs	6.5	4.2	3.0	33.7	13.9	31.7	12.9	3.0
	Wivelsfield	14.8	12.7	5.0	53.3	5.0	25.0	6.7	3.3
	Total	9.2	7.9	8.4	34.4	11.4	26.1	11.9	5.2
Brighton, Hove & Lewes		8.9	7.7	7.9	31.4	12.6	26.3	12.0	5.3

APPENDIX 2

MORBIDITY STATISTICS FROM GENERAL PRACTICE
1991-1992

APPENDIX 2: Morbidty statistics from general practice 1991-1992

1. New and first ever episodes rates per 10,000 years at risk
(>50 per 10,00 episodes per year)

Disease (ICD9)	0-4	5-15
Ill-defined intestinal organisms (009)	2011	387
Chickenpox (052)	459	148
Herpes simplex (054)	80	77
Rubella (056)	56	15
Other viral exanthemata (057)	209	43
Specific diseaeses due to Coxsackie virus (074)	84	9
Other diseases due to viruses & Chlamydiae (078)	201	599
Viral infection in condtions classified elsewhere & of unspecified site (079)	337	118
Dermatphytosis (110)	107	179
Candidiasis (112)	565	79
Other intestinal helminthiases (127)	169	139
Pediculosis & phthirus infestation (132)	85	118
Acariasis (133)	51	60
Other & unspecified infectious & parasitic diseases (136)	98	28
Benign neoplasm of skin (216)	18	50
Special symptoms or syndromes NEC	92	49
Disturbance of conduct NEC (312)	11	35
Hyperkinetic syndrome of childhood (314)	10	2
Epilepsy (345)	12	12
Migraine (346)	3	87
Disorders of conjuctiva (372)	2094	407
Inflammation of eyelids (373)	79	89
Strabismus & other disorders of binocular eye movement (378)	57	10
Disorders of external ear (380)	222	238
Non supperative otitis media & Eustachion tube disorders (381)	2426	853
Supperative & unspecified otitis media (382)	1269	395
Other disorders of ear (388)	280	198
Acute nasopharyngitis (460)	2520	447
Acute sinusitits (461)	19	126
Acute pharyngitis (462)	506	690
Acute tonsillitis (463)	1238	1157
Acute laryngitis & tracheitis (464)	449	121
Acut U. respiratory infections of multiple or unspecified site (465)	4403	1165
Acute bronchitis & bronchiolitis (466)	834	1973
Chronic pharyngitis & nasopharyngitis (472)	137	75
Allergic rhinitis (477)	147	459
Influenza (487)	192	169
Bronchitis not specified as acute or chronic (490)	95	17
Asthma (493)	883	545
Disorders of tooth development (520)	64	0
Diseases of hard tissues of teeth (521)	122	3
Diseases of oral soft tissues (528)	122	72
Functional digestive disorders NEC (564)	236	71
Other disorders of urethra & urinary tract (599)	217	147
Redundant prepuce & phimosis (605)	68	28
Disorders of penis (607)	171	62
Pain & other symptoms associated with female genital organs (625)		53
Disorders of menstruation & other abnormal bleeding from female genital tract (626)	1	52
Cellulitis & abscess of finger & toe (681)	114	94
Other cellulititis & abscess (682)	54	55
Impetigo (684)	292	171
Other local infections of skin & subcutaneous tissue (686)	67	46

New and first ever episodes (Cont.)

Disease (ICD9)	0-4	5-15
Erythematosquamous dematosis (690)	147	56
Atopic dermatitis & related conditions (691)	1624	240
Contact dermatitis & other eczema (692)	333	155
Diseases of nail (703)	33	102
Diseases of sebaceous glands (706)	33	184
Urticaria (708)	130	93
Other & uspecified disorder of joint (719)	40	111
Other & unspecified disorders of back (724)	6	53
Other disorders of soft tissues (729)	34	67
Infection specific to perinatal period (771)	123	0
Sprain & strains of wrist & hand (842)	12	73
Sprain & strains of knee & leg (844)	12	76
Sprain & strains of ankle & foot (845)	28	121
Sprain & strains of other & unspecified parts of back (847)	5	53
Open wound of head (873)	160	66
Superficial injury of face neck & scalp (910)	73	36
Contusion of face, scalp & neck (920)	69	33
Injury other & unspecified (959)	29	52
Certain adverse effects NEC (995)	445	284
Need for prophylactic vaccination & inoculation against bacterial disease (V03)	186	220
Need for prophylactic vaccination & inoculation against certain viral diseases (V04)	271	346
Need for prophylactic vaccination & inoculation against combinations of diseases (V06)	4753	214
Health supervision of infant or child (V20)	1883	9
General medical examination (V70)	54	155
Special screening for cardiovascular, respiratory & genitourinary diseases (V81)	35	54

2.Consultations with doctor rates per 10,000 years at risk

(>50 per 10,00 episodes per year)

Disease (ICD9)	0-4	5-15
Ill-defined intestinal organisms (009)	2541	428
Chickenpox (052)	504	159
Herpes simplex (054)	92	86
Rubella (056)	56	13
Other viral exanthemata (057)	229	47
Specific diseaeses due to Coxsackie virus (074)	89	10
Other diseases due to viruses & Chlamydiae (078)	254	852
Viral infection in condtions classified elsewhere & of unspecified site (079)	380	133
Dermatphytosis (110)	136	225
Candidiasis (112)	699	93
Other intestinal helminthiases (127)	175	145
Pediculosis & phthirus infestation (132)	81	161
Acariasis (133)	63	72
Other & unspecified infectious & parasitic diseases (136)	113	32
Benign neoplasm of skin (216)	23	66
Neurotic disorders (300)	18	64
Special symptoms or syndromes NEC (307)	124	84
Disturbance of conduct NEC (312)	47	51
Hyperkinetic syndrome of childhood (314)	15	4
Specific delays in development (315)	60	11
Epilepsy (345)	31	48
Migraine (346)	3	132
Disorders of conjuctiva (372)	2314	444
Inflammation of eyelids (373)	94	104
Strabismus & other disorders of binocular eye movement (378)	81	16
Disorders of external ear (380)	287	287
Non supperative otitis media & Eustachion tube disorders (381)	3155	1076
Supperative & unspecified otitis media (382)	1680	523
Other disorders of ear (388)	321	223
Deafness (389)	52	45
Acute nasopharyngitis (460)	2960	477
Acute sinusitits (461)	20	141
Acute pharyngitis (462)	549	759
Acute tonsillitis (463)	1428	1312
Acute laryngitis & tracheitis (464)	514	131
Acut U. respiratory infections of multiple or unspecified site (465)	5451	1329
Acute bronchitis & bronchiolitis (466)	2563	562
Chronic pharyngitis & nasopharyngitis (472)	176	109
Allergic rhinitis (477)	182	622
Influenza (487)	236	192
Bronchitis not specified as acute or chronic (490)	125	20
Asthma (493)	2045	1486
Disorders of tooth development (520)	73	0
Diseases of hard tissues of teeth (521)	130	4
Diseases of oral soft tissues (528)	144	84
Functional digestive disorders NEC (564)	360	113
Other disorders of urethra & urinary tract (599)	314	206
Redundant prepuce & phimosis (605)	92	38
Disorders of penis (607)	199	74
Pain & other symptoms associated with female genital organs (625)		85
Disorders of menstruation & other abnormal bleeding from female genital tract (626)	0	82
Cellulitis & abscess of finger & toe (681)	128	105
Other cellulititis & abscess (682)	69	70
Impetigo (684)	346	192
Other local infections of skin & subcutaneous tissue (686)	78	58

Consultations with doctor (cont.)

Disease (ICD9)	0-4	5-15
Erythematosquamous dematosis (690)	213	75
Atopic dermatitis & related conditions (691)	2458	384
Contact dermatitis & other eczema (692)	542	221
Diseases of nail (703)	37	169
Diseases of sebaceous glands (706)	41	346
Urticaria (708)	158	110
Other & uspecified disorder of joint (719)	51	156
Other & unspecified disorders of back (724)	10	67
Other disorders of soft tissues (729)	39	81
Infection specific to perinatal period (771)	156	0
Sprain & strains of wrist & hand (842)	11	74
Sprain & strains of knee & leg (844)	14	92
Sprain & strains of ankle & foot (845)	30	129
Sprain & strains of other & unspecified parts of back (847)	5	58
Open wound of head (873)	124	51
Superficial injury of face neck & scalp (910)	73	34
Contusion of face, scalp & neck (920)	66	33
Injury other & unspecified (959)	25	52
Certain adverse effects NEC (995)	454	290
Need for prophylactic vaccination & inoculation against bacterial disease (V03)	225	142
Need for prophylactic vaccination & inoculation against certain viral diseases (V04)	138	156
Need for prophylactic vaccination & inoculation against combinations of diseases (V06)	3595	130
Health supervision of infant or child (V20)	2080	10
General medical examination (V70)	46	123
Special screening for cardiovascular, respiratory & genitourinary diseases (V81)	25	31

Source: OPCS Morbidity Statistics from General Practice 4th National Study 1991-92

APPENDIX 3

PROVIDER BASED SUMMARY DATA (1996-97)
RATE PER ANNUM
BY
SPECIALTY

APPENDIX 3: Provider based summary data (1996-97) rate per annum by specialty

1. ALL ADMISSIONS

Specialty	Royal Sussex County	Royal Alexandra	Other Sites	Total
General Surgery	35	0	10.5	45.5
Urology	2.5	0	6.5	9
T and O	234.5	495.5	3.5	733.5
ENT	115.5	1117.5	0	1233
Ophthalmology	0	0	201	201
Oral Surgery	5	222	5	232
Paediatric Dentistry	0	0.5	0	0.5
Orthodontics	0	34	0	34
Plastic Surgery	0	13	10	23
Cardiothoracic Surgery	0	0	1	1
Paediatric Surgery	0	1791	0	1791
A and E	110	0	0	110
Anaesthetics	2.5	0	5	7.5
General Medicine	21.5	0	0.5	22
Gastroenterology	4	0	0	4
Endocrinology	2.5	0	0	2.5
Cardiology	1	0	0	1
Dermatology	0	11.5	0	11.5
Thoracic Medicine	1	0	3	4
Nephrology	1	0	0	1
Rheumatology	1	0	0	1
Paediatrics	27	2607.5	0	2634.5
Paedatric Neurology	0	95.5	0	95.5
Obstetrics	54	0	0	54
Gynaecology	13.5	0	23	36.5
Radiotherapy	0.5	0	0	0.5
Total	632	6388	269	7289

2. DAYCASES

Specialty	Royal Sussex County	Royal Alexandra	Other Sites	Total
General Surgery	0	0	9	9
Urology	0	0	5.5	5.5
T and O	11.5	3.5	3.5	18.5
ENT	14.5	365.5	0	380
Ophthalmology	0	0	141	141
Oral Surgery	0	149.5	5	154.5
Paediatric Dentistry	0	0.5	0	0.5
Orthodontics	0	0	0	0
Plastic Surgery	0	10	10	20
Cardiothoracic Surgery	0	0	0.5	0.5
Paediatric Surgery	0	504	0	504
A and E	39.5	0	0	39.5
Anaesthetics	0	0	4.5	4.5
General Medicine	0.5	0	0	0.5
Gastroenterology	3	0	0	3
Endocrinology	1	0	0	1
Cardiology	0	0	0	0
Dermatology	0	0.5	0	0.5
Thoracic Medicine	0	0	0	0
Nephrology	0	0	0	0
Rheumatology	0	0	0	0
Paediatrics	0	181	0	181
Paedatric Neurology	0	26.5	0	26.5
Obstetrics	0	0	0	0
Gynaecology	0	0	21	21
Radiotherapy	0	0	0	0
Total	70	1241	200	1511

3. EMERGENCIES

Specialty	Royal Sussex County	Royal Alexandra	Other Sites	Total
General Surgery	34	0	0	34
Urology	2	0	0	2
T and O	198.5	278	0	476.5
ENT	26.5	57.5	0	84
Ophthalmology	0	0	12	12
Oral Surgery	4	47	0	51
Paediatric Dentistry	0	0	0	0
Orthodontics	0	1	0	1
Plastic Surgery	0	0	0	0
Cardiothoracic Surgery	0	0	0	0
Paediatric Surgery	0	708.5	0	708.5
A and E	66.5	0	0	66.5
Anaesthetics	2.5	0	0	2.5
General Medicine	21	0	0.5	21.5
Gastroenterology	1	0	0	1
Endocrinology	1.5	0	0	1.5
Cardiology	1	0	0	1
Dermatology	0	9	0	9
Thoracic Medicine	1	0	3	4
Nephrology	0.5	0	0	0.5
Rheumatology	0	0	0	0
Paediatrics	17.5	2243.5	0	2261
Paedatric Neurology	0	64	0	64
Obstetrics	0	0	0	0
Gynaecology	12	0	0	12
Radiotherapy	0	0	0	0
Total	389.5	3408.5	15.5	3813.5

APPENDIX 4

PROVIDER BASED SUMMARY DATA (1996-97)
RATE PER ANNUM

APPENDIX 4: Provider based summary data (1996-97) rate per annum by age band

1. ALL ADMISSIONS

Age Band	Royal Sussex County	Royal Alexandra	Other Sites	Total
Under 1	33	1065	7	1105
1 to under 5	23.5	2287.5	78.5	2389.5
5-11	134	2229	85.5	2448.5
12-16	441.5	806.5	98	1346
Total	632	6388	269	7289

2. DAYCASES

Age Band	Royal Sussex County	Royal Alexandra	Other Sites	Total
Under 1	0	54.5	7	61.5
1 to under 5	0.5	459.5	62	522
5-11	9	564.5	52	625.5
12-16	60.5	162.5	79	302
Total	70	1241	200	1511

3.EMERGENCIES

Age Band	Royal Sussex County	Royal Alexandra	Other Sites	Total
Under 1	21.5	839.5	0	861
1 to under 5	22	1238.5	2	1262.5
5-11	115.5	928	6.5	1050
12-16	230.5	402.5	7	640
Total	389.5	3408.5	15.5	3813.5

APPENDIX 5

PROVIDER BASED SUMMARY DATA (1996-97)
RATE PER ANNUM
BY
ICD 10 CHAPTER HEADING

APPENDIX 5: Provider based summary data (1996-97) rate per annum by ICD10 chapter heading

1. ALL ADMISSIONS

ICD10 Chapter	Royal Sussex County	Royal Alexandra	Other Sites	Total
1.Certain infectious diseases	6.5	148	2	156.5
2.Neoplasms	8	138.5	9.5	156
3.Diseases of blood and blood-forming organs	0.5	106	0	106.5
4.Endocrine, nutritional and metabolic diseases	5.5	76.5	0	82
5.Mental and behavioural disorders	2	6.5	0	8.5
6.Diseases of nervous system	2.5	131	1.5	135
7.Diseases of eye and adnexa	0	21.5	156.5	178
8.Diseases of ear and mastoid process	16	528	0	544
9.Diseases of circulatory system	1	33.5	1.5	36
10.Diseases of respiratory sytem	73	1423.5	4	1500.5
11.Diseases of digestive system	19.5	888.5	10	918
12.Diseases of skin and subcutaneous tissue	44.5	102	6.5	153
13.Diseases of musculoskeletal system	21.5	137	7	165.5
14. iseases of genito-urinary system	8.5	380.5	9	398
15.Pregnancy childbirth and puerpeium	7	0	16	23
16.Conditions in perinatal period	3.5	114	0	117.5
17.Congenital malformities etc	4	478.5	27.5	510
18.Symptoms signs etc not elsewhere classified	24	652.5	3	679.5
19.Injury poisoning and other consequences	291.5	647.5	10.5	949.5
20.External causes of morbidity and mortality	0.5	0.5	0	1
21.Factors influencing health status	11	369	4	384
Missing	81.5	5	0.5	87
Total	632	6388	269	7289

2.DAYCASES

ICD10 Chapter	Royal Sussex County	Royal Alexandra	Other Sites	Total
1.Certain infectious diseases	0.5	3	2	5.5
2.Neoplasms	4	71	9	84
3.Diseases of blood and blood-forming organs	0	34	0	34
4.Endocrine, nutritional and metabolic diseases	0.5	11.5	0	12
5.Mental and behavioural disorders	0	1	0	1
6.Diseases of nervous system	0	18.5	1.5	20
7.Diseases of eye and adnexa	0	2.5	110.5	113
8.Diseases of ear and mastoid process	3.5	281	0	284.5
9.Diseases of circulatory system	0	3.5	1.5	5
10.Diseases of respiratory sytem	1	38	0.5	39.5
11.Diseases of digestive system	1	265	8.5	274.5
12.Diseases of skin and subcutaneous tissue	36	11.5	6	53.5
13.Diseases of musculoskeletal system	4.5	3	6.5	14
14. iseases of genito-urinary system	0	191.5	7	198.5
15.Pregnancy childbirth and puerpeium	0	0	14.5	14.5
16.Conditions in perinatal period	0	11	0	11
17.Congenital malformities etc	0	130	24.5	154.5
18.Symptoms signs etc not elsewhere classified	1.5	57.5	3	62
19.Injury poisoning and other consequences	11.5	36	0.5	48
20.External causes of morbidity and mortality	0	0	0	0
21.Factors influencing health status	5.5	71.5	4	81
Missing	0.5	0	0.5	1
Total	70	1241	200	1511

3.EMERGENCIES

ICD10 Chapter	Royal Sussex County	Royal Alexandra	Other Sites	Total
1.Certain infectious diseases	5.5	138.5	0	144
2.Neoplasms	2.5	23	0	25.5
3.Diseases of blood and blood-forming organs	0.5	53.5	0	54
4.Endocrine, nutritional and metabolic diseases	5	46	0	51
5.Mental and behavioural disorders	2	4	0	6
6.Diseases of nervous system	2	94.5	0	96.5
7.Diseases of eye and adnexa	0	17.5	4	21.5
8.Diseases of ear and mastoid process	2	24.5	0	26.5
9.Diseases of circulatory system	1	28.5	0	29.5
10.Diseases of respiratory sytem	20	987	3	1010
11.Diseases of digestive system	15	367	0	382
12.Diseases of skin and subcutaneous tissue	4.5	69.5	0	74
13.Diseases of musculoskeletal system	5.5	108	0	113.5
14. iseases of genito-urinary system	7.5	90	0.5	98
15.Pregnancy childbirth and puerpeium	6.5	0	0	6.5
16.Conditions in perinatal period	2	91.5	0	93.5
17.Congenital malformities etc	0.5	53.5	0	54
18.Symptoms signs etc not elsewhere classified	21	527.5	0	548.5
19.Injury poisoning and other consequences	267.5	574.5	8	850
20.External causes of morbidity and mortality	0.5	0.5	0	1
21.Factors influencing health status	0.5	105	0	105.5
Missing	18	4.5	0	22.5
Total	389.5	3408.5	15.5	3813.5

APPENDIX 6

PROVIDER BASED SUMMARY DATA (1996-97)
RATE PER ANNUM
BY
ICD 10 DIAGNOSIS CODE

APPENDIX 6: Provider based summary data (1996-97) rate per annum by ICD10 diagnosis code

Common admissions covered by 70 ICD10 diagnoses & accounting for 73.71% of all admissions

1.ALL ADMISSIONS

Diagnosis		Royal Sussex County	Royal Alexandra	Other Sites	Total
J45	Asthma	1.5	357.5	1.5	360.5
J35	Chronic diseases of tonsils and adenoids	42	312.5	0	354.5
H65	Nonsuppurative otitis media	4	335	0	339
J06	Acute upper respiratory infections multiple and unsp sites	0.5	245.5	0	246
N47	Redundant prepuce, phimosis and paraphimosis	0.5	189	2	191.5
R56	Convulsions, not elsewhere classified	0	186.5	0	186.5
S52	Fracture of forearm	124.5	38.5	0	163
K59	Other functional intestinal disorders	2	149.5	1	152.5
J21	Acute bronchiolitis	0.5	132	0	132.5
R10	Abdominal and pelvic pain	17.5	107	0	124.5
K40	Inguinal hernia	0	117.5	1.5	119
K52	Other noninfective gastroenteritis and colitis	0.5	114.5	0	115
S09	Other and unspecified injuries of head	6.5	107.5	0	114
H50	Other strabismus	0	1	107.5	108.5
H66	Suppurative and unspecified otitis media	2	94	0	96
Z47	Other orthopaedic follow-up care	8.5	81.5	1	91
G40	Epilepsy	0.5	90	0	90.5
Missing		81.5	5	0.5	87
Q53	Undescended testicle	0	87	0	87
K02	Dental caries	0	83.5	0	83.5
Z54	Convalescence	1	81	0	82
S01	Open wound of head	8	66.5	5.5	80
K35	Acute appendicitis	6	71.5	0	77.5
J05	Acute obstructive laryngitis [croup] and epiglottitis	0.5	73.5	0	74
Z53	Persons encount health services spec procs not carried out	0	72.5	0	72.5
J03	Acute tonsillitis	5.5	66.5	0	72
R69	Unknown and unspecified causes of morbidity	0.5	71.5	0	72
R06	Abnormalities of breathing	0.5	68.5	0	69
K07	Dentofacial anomalies [including malocclusion]	1	59.5	3	63.5
K21	Gastro-oesophageal reflux disease	0	57.5	0	57.5
Q54	Hypospadias	0	57.5	0	57.5
A08	Viral and other specified intestinal infections	0	56.5	0	56.5
J18	Pneumonia, organism unspecified	0.5	56	0	56.5
T39	Poison by nonopioid analgesic antipyretic and antirheumatics	16.5	39	0	55.5
C49	Malignant neoplasm of other connective and soft tissue	0	53.5	0	53.5
M24	Other specific joint derangements	1	48	0	49
J34	Other disorders of nose and nasal sinuses	8.5	40	0	48.5
L60	Nail disorders	35.5	9	2	46.5
S00	Superficial injury of head	0	46.5	0	46.5
J22	Unspecified acute lower respiratory infection	1	45	0	46
P92	Feeding problems of newborn	0	44.5	0	44.5
Q66	Congenital deformities of feet	0.5	44	0	44.5
N39	Other disorders of urinary system	0	38.5	1	39.5
E10	Insulin-dependent diabetes mellitus	4	34	0	38
R11	Nausea and vomiting	0	38	0	38
Z13	Special screening exam for other diseases and disorders	0.5	37	0	37.5
R62	Lack of expected normal physiological development	0	37	0	37
S82	Fracture of lower leg, including ankle	23.5	13	0	36.5
T85	Comps oth internal prosthetic devices implants & grafts	0	35.5	0	35.5
S02	Fracture of skull and facial bones	14	20.5	0	34.5

1 ALL ADMISSIONS (cont.)

	Diagnosis	Royal Sussex County	Royal Alexandra	Other Sites	Total
K62	Other diseases of anus and rectum	0	29.5	2	31.5
Q38	Other congenital malformations of tongue, mouth and pharynx	0	30.5	0	30.5
D69	Purpura and other haemorrhagic conditions	0.5	29.5	0	30
N13	Obstructive and reflux uropathy	0	28	0	28
Q65	Congenital deformities of hip	0	28	0	28
T81	Complications of procedures, not elsewhere classified	3.5	24	0.5	28
Q43	Other congenital malformations of intestine	0	27.5	0	27.5
B34	Viral infection of unspecified site	0.5	25.5	0	26
K42	Umbilical hernia	0	25.5	0	25.5
L03	Cellulitis	1.5	24	0	25.5
S42	Fracture of shoulder and upper arm	14	11.5	0	25.5
L02	Cutaneous abscess, furuncle and carbuncle	0.5	24.5	0	25
Q17	Other congenital malformations of ear	0.5	23	0.5	24
T17	Foreign body in respiratory tract	0.5	23	0	23.5
Z48	Other surgical follow-up care	0	21	2	23
J02	Acute pharyngitis	0	22.5	0	22.5
H72	Perforation of tympanic membrane	2.5	19.5	0	22
Q10	Congen malformations of eyelid lacrimal apparatus & orbit	0	0.5	20.5	21
Q40	Other congenital malformations of upper alimentary tract	0	21	0	21
Z43	Attention to artificial openings	0	21	0	21
All Others		187	1612.5	117	1916.5
Total		632	6388	269	7289

2.DAYCASES

	Diagnosis	Royal Sussex County	Royal Alexandra	Other Sites	Total
J45	Asthma	0	0	0	0
J35	Chronic diseases of tonsils and adenoids	0	8	0	8
H65	Nonsuppurative otitis media	1	186.5	0	187.5
J06	Acute upper respiratory infections multiple and unsp sites	0	6	0	6
N47	Redundant prepuce, phimosis and paraphimosis	0	144	1.5	145.5
R56	Convulsions, not elsewhere classified	0	6	0	6
S52	Fracture of forearm	1	0	0	1
K59	Other functional intestinal disorders	1	31.5	1	33.5
J21	Acute bronchiolitis	0	0	0	0
R10	Abdominal and pelvic pain	1	6.5	0	7.5
K40	Inguinal hernia	0	43.5	0.5	44
K52	Other noninfective gastroenteritis and colitis	0	2	0	2
S09	Other and unspecified injuries of head	0.5	1.5	0	2
H50	Other strabismus	0	0.5	73.5	74
H66	Suppurative and unspecified otitis media	0.5	50.5	0	51
Z47	Other orthopaedic follow-up care	5	3	1	9
G40	Epilepsy	0	11	0	11
Missing		0.5	0	0.5	1
Q53	Undescended testicle	0	32	0	32
K02	Dental caries	0	47	0	47
Z54	Convalescence	0	0	0	0
S01	Open wound of head	0	0.5	0	0.5
K35	Acute appendicitis	0	0	0	0
J05	Acute obstructive laryngitis [croup] and epiglottitis	0	0	0	0
Z53	Persons encount health services spec procs not carried out	0	24.5	0	24.5
J03	Acute tonsillitis	0	0	0	0
R69	Unknown and unspecified causes of morbidity	0	0	0	0
R06	Abnormalities of breathing	0	2	0	2
K07	Dentofacial anomalies [including malocclusion]	0	48	3	51
K21	Gastro-oesophageal reflux disease	0	1.5	0	1.5
Q54	Hypospadias	0	9.5	0	9.5
A08	Viral and other specified intestinal infections	0	0	0	0
J18	Pneumonia, organism unspecified	0	0	0	0
T39	Poison by nonopioid analgesic antipyretic and antirheumatics	0	0	0	0
C49	Malignant neoplasm of other connective and soft tissue	0	31.5	0	31.5
M24	Other specific joint derangements	0.5	0	0	0.5
J34	Other disorders of nose and nasal sinuses	1	18	0	19
L60	Nail disorders	31.5	2.5	2	36
S00	Superficial injury of head	0	0.5	0	0.5
J22	Unspecified acute lower respiratory infection	0	0.5	0	0.5
P92	Feeding problems of newborn	0	0	0	0
Q66	Congenital deformities of feet	0	0	0	0
N39	Other disorders of urinary system	0	3	1	4
E10	Insulin-dependent diabetes mellitus	0	1.5	0	1.5
R11	Nausea and vomiting	0	1	0	1
Z13	Special screening exam for other diseases and disorders	0.5	10	0	10.5
R62	Lack of expected normal physiological development	0	5.5	0	5.5
S82	Fracture of lower leg, including ankle	0	0	0	0
T85	Comps oth internal prosthetic devices implants & grafts	0	7	0	7
S02	Fracture of skull and facial bones	7.5	9.5	0	17
K62	Other diseases of anus and rectum	0	10.5	2	12.5
Q38	Other congenital malformations of tongue, mouth and pharynx	0	23	0	23
D69	Purpura and other haemorrhagic conditions	0	2.5	0	2.5
N13	Obstructive and reflux uropathy	0	3	0	3
Q65	Congenital deformities of hip	0	0	0	0

2 DAYCASES (cont.)

Diagnosis		Royal Sussex County	Royal Alexandra	Other Sites	Total
T81	Complications of procedures, not elsewhere classified	0	2.5	0.5	3
Q43	Other congenital malformations of intestine	0	7.5	0	7.5
B34	Viral infection of unspecified site	0	1	0	1
K42	Umbilical hernia	0	18.5	0	18.5
L03	Cellulitis	0	0	0	0
S42	Fracture of shoulder and upper arm	0	0	0	0
L02	Cutaneous abscess, furuncle and carbuncle	0	0	0	0
Q17	Other congenital malformations of ear	0	10	0.5	10.5
T17	Foreign body in respiratory tract	0	2	0	2
Z48	Other surgical follow-up care	0	8.5	2	10.5
J02	Acute pharyngitis	0	0	0	0
H72	Perforation of tympanic membrane	0.5	4.5	0	5
Q10	Congen malformations of eyelid lacrimal apparatus & orbit	0	0	18.5	18.5
Q40	Other congenital malformations of upper alimentary tract	0	1.5	0	1.5
Z43	Attention to artificial openings	0	3.5	0	3.5
All Others		18	386.5	92.5	497
Total		70	1241	200	1511

3.EMERGENCIES

Diagnosis		Royal Sussex County	Royal Alexandra	Other Sites	Total
J45	Asthma	1.5	355.5	1.5	358.5
J35	Chronic diseases of tonsils and adenoids	4	2	0	6
H65	Nonsuppurative otitis media	0	5	0	5
J06	Acute upper respiratory infections multiple and unsp sites	0.5	235.5	0	236
N47	Redundant prepuce, phimosis and paraphimosis	0.5	7	0	7.5
R56	Convulsions, not elsewhere classified	0	178	0	178
S52	Fracture of forearm	120.5	38	0	158.5
K59	Other functional intestinal disorders	1	76.5	0	77.5
J21	Acute bronchiolitis	0.5	131	0	131.5
R10	Abdominal and pelvic pain	15.5	93	0	108.5
K40	Inguinal hernia	0	17.5	0	17.5
K52	Other noninfective gastroenteritis and colitis	0.5	111.5	0	112
S09	Other and unspecified injuries of head	5	105	0	110
H50	Other strabismus	0	0	0	0
H66	Suppurative and unspecified otitis media	0	12	0	12
Z47	Other orthopaedic follow-up care	0	5	0	5
G40	Epilepsy	0.5	72	0	72.5
Missing		18	4.5	0	22.5
Q43	Undescended testicle	0	8.5	0	8.5
K02	Dental caries	0	0.5	0	0.5
Z54	Convalescence	0	77	0	77
S01	Open wound of head	8	66	4.5	78.5
K35	Acute appendicitis	5.5	70	0	75.5
J05	Acute obstructive laryngitis [croup] and epiglottitis	0.5	72	0	72.5
Z53	Persons encount health services spec procs not carried out	0	1.5	0	1.5
J03	Acute tonsillitis	2.5	31.5	0	34
R69	Unknown and unspecified causes of morbidity	0.5	69.5	0	70
R06	Abnormalities of breathing	0.5	59	0	59.5
K07	Dentofacial anomalies [including malocclusion]	0	2	0	2
K21	Gastro-oesophageal reflux disease	0	20.5	0	20.5
Q54	Hypospadias	0	0.5	0	0.5
A08	Viral and other specified intestinal infections	0	56.5	0	56.5
J18	Pneumonia, organism unspecified	0.5	56	0	56.5
T39	Poison by nonopioid analgesic antipyretic and antirheumatics	16.5	37	0	53.5

3 EMERGENCIES (cont.)

Diagnosis		Royal Sussex County	Royal Alexandra	Other Sites	Total
C49	Malignant neoplasm of other connective and soft tissue	0	10	0	10
M24	Other specific joint derangements	0	47	0	47
J34	Other disorders of nose and nasal sinuses	0	1	0	1
L60	Nail disorders	1	0.5	0	1.5
S00	Superficial injury of head	0	45.5	0	45.5
J22	Unspecified acute lower respiratory infection	1	43	0	44
P92	Feeding problems of newborn	0	43	0	43
Q66	Congenital deformities of feet	0	0	0	0
N39	Other disorders of urinary system	0	29	0	29
E10	Insulin-dependent diabetes mellitus	4	32	0	36
R11	Nausea and vomiting	0	31	0	31
Z13	Special screening exam for other diseases and disorders	0	2.5	0	2.5
R62	Lack of expected normal physiological development	0	19.5	0	19.5
S82	Fracture of lower leg, including ankle	22.5	12.5	0	35
T85	Comps oth internal prosthetic devices implants & grafts	0	17.5	0	17.5
S02	Fracture of skull and facial bones	4.5	10	0	14.5
K62	Other diseases of anus and rectum	0	2.5	0	2.5
Q38	Other congenital malformations of tongue, mouth and pharynx	0	0	0	0
D69	Purpura and other haemorrhagic conditions	0.5	24	0	24.5
N13	Obstructive and reflux uropathy	0	2	0	2
Q65	Congenital deformities of hip	0	0.5	0	0.5
T81	Complications of procedures, not elsewhere classified	3	17	0	20
Q43	Other congenital malformations of intestine	0	0	0	0
B34	Viral infection of unspecified site	0.5	24	0	24.5
K42	Umbilical hernia	0	0.5	0	0.5
L03	Cellulitis	1.5	24	0	25.5
S42	Fracture of shoulder and upper arm	12.5	11	0	23.5
L02	Cutaneous abscess, furuncle and carbuncle	0	22	0	22
Q17	Other congenital malformations of ear	0	0.5	0	0.5
T17	Foreign body in respiratory tract	0.5	19	0	19.5
Z48	Other surgical follow-up care	0	4	0	4
J02	Acute pharyngitis	0	8	0	8
H72	Perforation of tympanic membrane	0	0	0	0
Q10	Congen malformations of eyelid lacrimal apparatus & orbit	0	0.5	0	0.5
Q40	Other congenital malformations of upper alimentary tract	0	17	0	17
Z43	Attention to artificial openings	0	3.5	0	3.5
All Others		135.5	807.5	9.5	952.5
Total		389.5	3408.5	15.5	3813.5

APPENDIX 7

PROVIDER BASED SUMMARY DATA (1996-97)
RATE PER ANNUM
BY
OPCS4 PROCEDURE CODE

APPENDIX 7: Provider based summary data (1996-97) rate per annum by OPCS4 procedure code

(Common admissions covered by 40 OPCS4 procedures & accounting for 75.96% of all surgical admissions)

1. ALL ADMISSIONS

Procedure		Royal Sussex County	Royal Alexandra	Other Sites	Total
F34	Excision of tonsil	39	309	0	348
E20	Operations on adenoid	0	321.5	0	321.5
D15	Drainage of middle ear	5	225	0	230
N30	Operations on prepuce	0.5	204	2.5	207
W26	Other closed reduction of fracture of bone	139.5	59	0	198.5
F09	Surgical removal of tooth	0	159.5	4	163.5
Y53	Percutaneous approach to organ under image control	11.5	107.5	1	120
T20	Primary repaier of inguinal hernia	0	103	1.5	104.5
X33	Other blood transfusion	0.5	104	0	104.5
H01	Emergency excision of appendix	10	76	0	86
N09	Other placement of testis in scrotum	0	84	0	84
C31	Combined operations on muscles of eye	0	0.5	81.5	82
H54	Dilation of anal sphincter	0	75.5	0	75.5
X48	Immobilisation using plaster cast	7.5	57	0	64.5
G45	Diag. fibreoptic endoscopicexam of u. gastrointestinal tract	1	51	0	52
M73	Repair of urethra	0	44.5	0	44.5
S06	Other excision of lesion of skin	4.5	31	8.5	44
X29	Continuous infusion of therapeutic substance	3	40	0	43
X49	Other immobilisation	0.5	40.5	0	41
X35	Other intravenous injection	0	38	0	38
M45	Diagnostic endoscopic exam. of bladder	0	36	0.5	36.5
S68	Excision of nail	28.5	5	1	34.5
T19	Simple excision of inguinal hernia sac	0	33.5	0	33.5
X27	Correction of minor congenital deformity of foot	0	32.5	0	32.5
W28	Other internal fixation of bone	7	20.5	1	28.5
F26	Other operations on tongue	0	27	0	27
S47	Opening of skin	1	26	0	27
N13	Other operations on testis	0	26.5	0	26.5
F05	Other repair of lip	0.5	25.5	0	26
T24	Repair of umbilical hernia	0	26	0	26
M81	Operations on urethral orifice	0	25.5	0	25.5
A55	Diagnostic spinal puncture	1.5	23	0	24.5
H22	Diagnostic endoscopic exam. of colon	0.5	23.5	0	24
S41	Suture of skin of head or neck	4	18	0	22
S42	Suture of skin of other site	3.5	18.5	0	22
C27	Operations on nasolacrimal duct	0	0	20.5	20.5
S57	Exploration of other skin of other site	11.5	9	0	20.5
D20	Other operations on middle ear	2	18	0	20
W92	Other operations on joint	0	20	0	20
G40	Incision of pylorus	0	18.5	0	18.5
Q11	Other evacuation of contents of uterus	2.5	0	16	18.5
All other procedures		142.5	697	116.5	956
N/A	Medical admission - no procedure	204.5	3128	14.5	3347
Total		632	6388	269	7289

2.DAYCASES

Procedure		Royal Sussex County	Royal Alexandra	Other Sites	Total
F34	Excision of tonsil	0	1	0	1
E20	Operations on adenoid	0	124	0	124
D15	Drainage of middle ear	2	152	0	154
N30	Operations on prepuce	0	157	2	159
W26	Other closed reduction of fracture of bone	3	5.5	0	8.5
F09	Surgical removal of tooth	0	114	4	118
Y53	Percutaneous approach to organ under image control	0	45.5	1	46.5
T20	Primary repaier of inguinal hernia	0	42.5	0.5	43
X33	Other blood transfusion	0	39.5	0	39.5
H01	Emergency excision of appendix	0	0	0	0
N09	Other placement of testis in scrotum	0	32	0	32
C31	Combined operations on muscles of eye	0	0	54.5	54.5
H54	Dilation of anal sphincter	0	42.5	0	42.5
X48	Immobilisation using plaster cast	0.5	1.5	0	2
G45	Diag. fibreoptic endoscopicexam of u. gastrointestinal tract	1	5.5	0	6.5
M73	Repair of urethra	0	4	0	4
S06	Other excision of lesion of skin	4.5	21	8.5	34
X29	Continuous infusion of therapeutic substance	0	15.5	0	15.5
X49	Other immobilisation	0	0	0	0
X35	Other intravenous injection	0	19	0	19
M45	Diagnostic endoscopic exam. of bladder	0	13.5	0.5	14
S68	Excision of nail	25	3	1	29
T19	Simple excision of inguinal hernia sac	0	19.5	0	19.5
X27	Correction of minor congenital deformity of foot	0	0	0	0
W28	Other internal fixation of bone	3.5	0.5	1	5
F26	Other operations on tongue	0	17.5	0	17.5
S47	Opening of skin	0	0.5	0	0.5
N13	Other operations on testis	0	3.5	0	3.5
F05	Other repair of lip	0	6	0	6
T24	Repair of umbilical hernia	0	19	0	19
M81	Operations on urethral orifice	0	16	0	16
A55	Diagnostic spinal puncture	0	11.5	0	11.5
H22	Diagnostic endoscopic exam. of colon	0.5	5.5	0	6
S41	Suture of skin of head or neck	0	0	0	0
S42	Suture of skin of other site	0	0	0	0
C27	Operations on nasolacrimal duct	0	0	20.5	20.5
S57	Exploration of other skin of other site	0	1.5	0	1.5
D20	Other operations on middle ear	1	14.5	0	15.5
W92	Other operations on joint	0	0	0	0
G40	Incision of pylorus	0	0	0	0
Q11	Other evacuation of contents of uterus	0	0	14.5	14.5
All other procedures		19.5	193	84	296.5
N/A	Medical admission - no procedure	9.5	94	8	111.5
Total		70	1241	200	1511

3.EMERGENCIES

Procedure		Royal Sussex County	Royal Alexandra	Other Sites	Total
F34	Excision of tonsil	0	0.5	0	0.5
E20	Operations on adenoid	0	2.5	0	2.5
D15	Drainage of middle ear	0	3.5	0	3.5
N30	Operations on prepuce	0.5	3.5	0	4
W26	Other closed reduction of fracture of bone	129	51.5	0	180.5
F09	Surgical removal of tooth	0	3.5	0	3.5
Y53	Percutaneous approach to organ under image control	10.5	52.5	0	63
T20	Primary repaier of inguinal hernia	0	9.5	0	9.5
X33	Other blood transfusion	0.5	42.5	0	43
H01	Emergency excision of appendix	9.5	73.5	0	83
N09	Other placement of testis in scrotum	0	1	0	1
C31	Combined operations on muscles of eye	0	0	0	0
H54	Dilation of anal sphincter	0	5.5	0	5.5
X48	Immobilisation using plaster cast	7	22	0	29
G45	Diag. fibreoptic endoscopicexam of u. gastrointestinal tract	0	2.5	0	2.5
M73	Repair of urethra	0	0.5	0	0.5
S06	Other excision of lesion of skin	0	1	0	1
X29	Continuous infusion of therapeutic substance	3	16.5	0	19.5
X49	Other immobilisation	0.5	36	0	36.5
X35	Other intravenous injection	0	3.5	0	3.5
M45	Diagnostic endoscopic exam. of bladder	0	1	0	1
S68	Excision of nail	1	0	0	1
T19	Simple excision of inguinal hernia sac	0	1.5	0	1.5
X27	Correction of minor congenital deformity of foot	0	0	0	0
W28	Other internal fixation of bone	0	1	0	1
F26	Other operations on tongue	0	4	0	4
S47	Opening of skin	0.5	24	0	24.5
N13	Other operations on testis	0	16.5	0	16.5
F05	Other repair of lip	0.5	18	0	18.5
T24	Repair of umbilical hernia	0	0.5	0	0.5
M81	Operations on urethral orifice	0	1	0	1
A55	Diagnostic spinal puncture	1.5	8	0	9.5
H22	Diagnostic endoscopic exam. of colon	0	0	0	0
S41	Suture of skin of head or neck	4	18	0	22
S42	Suture of skin of other site	3.5	18.5	0	22
C27	Operations on nasolacrimal duct	0	0	0	0
S57	Exploration of other skin of other site	11	6.5	0	17.5
D20	Other operations on middle ear	0	0	0	0
W92	Other operations on joint	0	1.5	0	1.5
G40	Incision of pylorus	0	17.5	0	17.5
Q11	Other evacuation of contents of uterus	2	0	0	2
All other procedures		81	128.5	9.5	219
N/A	Medical admission - no procedure	124	2811	6	2941
Total		389.5	3408.5	15.5	3813.5

APPENDIX 8

PROVIDER BASED SUMMARY DATA (1996-97)
RATE PER ANNUM
BY
HRG

APPENDIX 8: Provider based summary data (1996-97) rate per annum by HRG

1 Number and percentage of attendances by hospital and HRG (95/6 - 96/7)

	Total Number				Total Percentage			
HRG	Royal Sussex	Royal Alexandra	Other Sites	Total	Royal Sussex	Royal Alexandra	Other Sites	Total
b02 - Eyes: band b	0.5	26	58	84.5	0.08	0.41	21.56	1.16
b04 - Eyes: band d	0	1	106	107	0.00	0.02	39.41	1.47
c02 - Ear procedures cat.1 <70 w/o cc	9	240	0.5	249.5	1.42	3.76	0.19	3.42
c16 - Mouth & throat procedures cat.2 <30 w/o cc	1	185.5	5	191.5	0.16	2.90	1.86	2.63
c25 - Mouth & throat procedures cat.3 w cc	10	113	0	123	1.58	1.77	0.00	1.69
c26 - Mouth & throat procedures cat.3 w/o cc	40.5	545.5	0	586	6.41	8.54	0.00	8.04
f54 - Inflammatory bowel disease - cat.3	0.5	81	0	81.5	0.08	1.27	0.00	1.12
f73 - Hernia cat.4	0	129	1.5	130.5	0.00	2.02	0.56	1.79
f84 - Appendix - cat.3	9	75	0	84	1.42	1.17	0.00	1.15
h18 - Non-infective bone & cartilage disorders <65 w/o cc	3	120.5	0	123.5	0.47	1.89	0.00	1.69
h47 - Closed u. limb fractures & dislocations <75 w/o cc	134.5	48	0	182.5	21.28	0.75	0.00	2.50
h49 - Sprains strains & minor open wounds <70 w/o cc	41.5	102	0	143.5	6.57	1.60	0.00	1.97
l47 - Penis minor operation procedure	0.5	208.5	2.5	211.5	0.08	3.26	0.93	2.90
l51 - Scrotum testis & vas deferens major open proc. <16	0	91	1	92	0.00	1.42	0.37	1.26
p01 - Asthma & recurrent wheeze	1.5	409.5	2	413	0.24	6.41	0.74	5.67
p03 - U. respiratoty tract infection	5	284	0	289	0.79	4.45	0.00	3.96
p04 - L. respiratoty tract infection	1	206.5	0	207.5	0.16	3.23	0.00	2.85
p05 - Obstructed airways	0.5	84.5	0	85	0.08	1.32	0.00	1.17
p14 - Other infections	5.5	131.5	0	137	0.87	2.06	0.00	1.88
p20 - Seizures	0.5	266	0	266.5	0.08	4.16	0.00	3.66
p32 - Gastrointestinal disorders	13.5	428	0	441.5	2.14	6.70	0.00	6.06
p33 - Ingestion & poisoning	23	125	0	148	3.64	1.96	0.00	2.03
p34 - Traumatic injury	16	97	0.5	113.5	2.53	1.52	0.19	1.56
s23 - Convalescent & relief care <50 w/o cc	0.5	79.5	0	80	0.08	1.24	0.00	1.10
s28 - Other admissions	1.5	160.5	0	162	0.24	2.51	0.00	2.22
Others - nervous system	5.5	47	0	52.5	0.87	0.74	0.00	0.72
Others - eye & periorbita	0	4.5	35	39.5	0.00	0.07	13.01	0.54
Others - mouth head neck & ears	45	291.5	1	337.5	7.12	4.56	0.37	4.63
Others - musculoskeletal	69.5	305	8.5	383	11.00	4.77	3.16	5.25
Others - obstetrics & neonatal care	3	91	0	94	0.47	1.42	0.00	1.29
Others - diseases of childhood	11.5	430.5	2	444	1.82	6.74	0.74	6.09
Others - respiratory & cardiovascular	5	79.5	3	87.5	0.79	1.24	1.12	1.20
Others - digestive hepato-biliary & pancreatic	11	292	5.5	308.5	1.74	4.57	2.04	4.23
Others - skin endocrine & metabolic	52.5	97	7.5	157	8.31	1.52	2.79	2.15
Others - urinary tract & reproductive	11	251.5	24.5	287	1.74	3.94	9.11	3.94
Others - haematolgy, non-specific groupings, psychiatry	5	143.5	0	148.5	0.79	2.25	0.00	2.04
U01 - Invalid diagnosis	81.5	5	0.5	87	12.90	0.08	0.19	1.19
U02 - Invalid procedure	12.5	110.5	4.5	127.5	1.98	1.73	1.67	1.75
U03 - Invalid coding	0.5	1.5	0	2	0.08	0.02	0.00	0.03
Total	*632*	*6388*	*269*	*7289*	*100*	*100*	*100*	*100*

2 Number and percentage of Daycase admissions by hospital and HRG (95/6 - 96/7)

	Number Daycases			Percentage Daycases		
HRG	Royal Sussex	Royal Alexandra	Other Sites	Royal Sussex	Royal Alexandra	Other Sites
b02 - Eyes: band b	0	6	50	0	23.08	85.34
b04 - Eyes: band d	0	0	70	0	0	66.04
c02 - Ear procedures cat.1 <70 w/o cc	3	163	1	33.33	67.92	100
c16 - Mouth & throat procedures cat.2 <30 w/o cc	0	124	5	0	66.85	100
c25 - Mouth & throat procedures cat.3 w cc	0	20	0	0	17.70	0
c26 - Mouth & throat procedures cat.3 w/o cc	0	112	0	0	20.44	0
f54 - Inflammatory bowel disease - cat.3	0	43	0	0	52.47	0
f73 - Hernia cat.4	0	61	1	0	47.29	33.33
f84 - Appendix - cat.3	N/A	N/A	N/A	N/A	N/A	N/A
h18 - Non-infective bone & cartilage disorders <65 w/o cc	2	2	0	50.00	1.66	0
h47 - Closed u. limb fractures & dislocations <75 w/o cc	1	2	0	0.74	4.17	0
h49 - Sprains strains & minor open wounds <70 w/o cc	2	2	0	4.82	1.96	0
l47 - Penis minor operation procedure	0	159	2	0	76.02	80.00
l51 - Scrotum testis & vas deferens major open proc. <16	0	33	1	0	36.26	50.00
p01 - Asthma & recurrent wheeze	N/A	N/A	N/A	N/A	N/A	N/A
p03 - U. respiratoty tract infection	0	5	0	0	1.58	0
p04 - L. respiratoty tract infection	N/A	N/A	N/A	N/A	N/A	N/A
p05 - Obstructed airways	0	2	0	0	2.37	0
p14 - Other infections	0	3	0	0	2.28	0
p20 - Seizures	1	13	0	100	4.89	0
p32 - Gastrointestinal disorders	N/A	N/A	N/A	N/A	N/A	N/A
p33 - Ingestion & poisoning	0	1	0	0	0.80	0
p34 - Traumatic injury	0	1	0	0	0.52	0
s23 - Convalescent & relief care <50 w/o cc	N/A	N/A	N/A	N/A	N/A	N/A
s28 - Other admissions	1	23	0	33.33	14.33	0
Others - nervous system	0	3	0	0	5.32	0
Others - eye & periorbita	0	1	21	0	22.22	58.57
Others - mouth head neck & ears	10	109	1	22.22	37.22	100
Others - musculoskeletal	9	42	8	12.95	13.77	94.12
Others - obstetrics & neonatal care	N/A	N/A	N/A	N/A	N/A	N/A
Others - diseases of childhood	2	68	2	17.39	15.68	100
Others - respiratory & cardiovascular	0	15	2	0	18.24	50.00
Others - digestive hepato-biliary & pancreatic	3	71	5	22.73	24.14	90.91
Others - skin endocrine & metabolic	37	22	8	70.48	22.68	100
Others - urinary tract & reproductive	0	69	22	0	27.44	89.80
Others - haematolgy, non-specific groupings, psychiatry	0	25	0	0	17.07	0
U01 - Invalid diagnosis	1	0	1	0.61	0	100
U02 - Invalid procedure	1	47	4	4.00	42.08	88.89
U03 - Invalid coding	N/A	N/A	N/A	N/A	N/A	N/A
Total	*140*	*2482*	*400*	*22.15*	*38.85*	*148.70*

3 Number and percentage of Emergency admissions by hospital and HRG (95/6 - 96/7)

	Number Emergencies			Percentage Emergencies		
HRG	Royal Sussex	Royal Alexandra	Other Sites	Royal Sussex	Royal Alexandra	Other Sites
b02 - Eyes: band b	1	19	6	100	71.15	10.34
b04 - Eyes: band d	N/A	N/A	N/A	N/A	N/A	N/A
c02 - Ear procedures cat.1 <70 w/o cc	1	6	0	11.11	2.50	0
c16 - Mouth & throat procedures cat.2 <30 w/o cc	1	27	0	100	14.29	0
c25 - Mouth & throat procedures cat.3 w cc	2	1	0	15.00	0.44	0
c26 - Mouth & throat procedures cat.3 w/o cc	7	7	0	16.05	1.19	0
f54 - Inflammatory bowel disease - cat.3	1	7	0	100	8.02	0
f73 - Hernia cat.4	0	10	0	0	7.75	0
f84 - Appendix - cat.3	9	73	0	94.44	96.67	0
h18 - Non-infective bone & cartilage disorders <65 w/o cc	2	61	0	50.00	50.62	0
h47 - Closed u. limb fractures & dislocations <75 w/o cc	127	45	0	94.42	93.75	0
h49 - Sprains strains & minor open wounds <70 w/o cc	39	100	0	92.77	98.04	0
l47 - Penis minor operation procedure	1	5	0	100	2.16	0
l51 - Scrotum testis & vas deferens major open proc. <16	0	5	0	0	5.49	0
p01 - Asthma & recurrent wheeze	2	408	2	100	99.51	100
p03 - U. respiratoty tract infection	3	275	0	60.00	96.65	0
p04 - L. respiratoty tract infection	1	206	0	100	99.52	0
p05 - Obstructed airways	1	83	0	100	98.22	0
p14 - Other infections	5	128	0	90.91	96.96	0
p20 - Seizures	1	254	0	100	95.30	0
p32 - Gastrointestinal disorders	13	377	0	92.59	87.97	0
p33 - Ingestion & poisoning	23	121	0	100	96.40	0
p34 - Traumatic injury	16	95	1	100	97.42	100
s23 - Convalescent & relief care <50 w/o cc	0	75	0	0	94.34	0
s28 - Other admissions	1	94	0	66.67	58.57	0
Others - nervous system	6	40	0	100	84.04	0
Others - eye & periorbita	0	4	5	0	77.78	14.29
Others - mouth head neck & ears	11	74	0	23.33	25.21	0
Others - musculoskeletal	45	118	1	64.03	38.52	5.88
Others - obstetrics & neonatal care	2	88	0	66.67	96.70	0
Others - diseases of childhood	12	352	0	100	81.65	0
Others - respiratory & cardiovascular	5	40	1	90.00	50.31	33.33
Others - digestive hepato-biliary & pancreatic	8	66	0	72.73	22.43	0
Others - skin endocrine & metabolic	12	53	0	21.90	54.12	0
Others - urinary tract & reproductive	10	40	1	86.36	15.71	2.04
Others - haematolgy, non-specific groupings, psychiatry	2	4	0	40.00	2.79	0
U01 - Invalid diagnosis	18	5	0	22.09	90.00	0
U02 - Invalid procedure	11	54	0	84.00	48.42	0
U03 - Invalid coding	1	1	0	100	66.67	0
Total	*390*	*3409*	*16*	*61.63*	*53.36*	*5.76*

4 Average length of stay of all admissions by hospital and HRG (95/6 - 96/7)

	Average Length of Stay		
HRG	Royal Sussex	Royal Alexandra	Other Sites
b02 - Eyes: band b	0	1.67	0.15
b04 - Eyes: band d	N/A	1.00	0.29
c02 - Ear procedures cat.1 <70 w/o cc	1.00	0.09	0
c16 - Mouth & throat procedures cat.2 <30 w/o cc	2.50	0.20	0
c25 - Mouth & throat procedures cat.3 w cc	2.30	1.12	N/A
c26 - Mouth & throat procedures cat.3 w/o cc	1.79	1.03	N/A
f54 - Inflammatory bowel disease - cat.3	5.00	0.69	N/A
f73 - Hernia cat.4	N/A	0.91	0.67
f84 - Appendix - cat.3	3.94	4.69	N/A
h18 - Non-infective bone & cartilage disorders <65 w/o cc	1.17	3.39	N/A
h47 - Closed u. limb fractures & dislocations <75 w/o cc	1.35	1.04	N/A
h49 - Sprains strains & minor open wounds <70 w/o cc	1.29	0.91	N/A
l47 - Penis minor operation procedure	1.00	0.22	0.20
l51 - Scrotum testis & vas deferens major open proc. <16	N/A	0.75	0.50
p01 - Asthma & recurrent wheeze	1.67	1.70	2.00
p03 - U. respiratoty tract infection	2.20	1.94	N/A
p04 - L. respiratoty tract infection	18.50	3.48	N/A
p05 - Obstructed airways	1.00	1.13	N/A
p14 - Other infections	2.00	1.86	N/A
p20 - Seizures	1.00	2.14	N/A
p32 - Gastrointestinal disorders	2.63	2.22	N/A
p33 - Ingestion & poisoning	0.61	0.82	N/A
p34 - Traumatic injury	1.84	1.19	2.00
s23 - Convalescent & relief care <50 w/o cc	7.00	1.89	N/A
s28 - Other admissions	1.00	1.37	N/A
Others - nervous system	1.45	2.59	N/A
Others - eye & periorbita	N/A	2.78	0.41
Others - mouth head neck & ears	1.48	0.76	0
Others - musculoskeletal	3.59	2.64	0.24
Others - obstetrics & neonatal care	2.83	2.14	N/A
Others - diseases of childhood	1.59	3.40	0
Others - respiratory & cardiovascular	3.60	3.19	2.67
Others - digestive hepato-biliary & pancreatic	6.50	3.19	0.18
Others - skin endocrine & metabolic	0.30	2.31	0
Others - urinary tract & reproductive	2.18	2.37	N/A
Others - haematolgy, non-specific groupings, psychiatry	0.25	0.42	N/A
U01 - Invalid diagnosis	2.09	3.90	0
U02 - Invalid procedure	7.64	2.53	0
U03 - Invalid coding	12.00	2.33	N/A
Total	*2.01*	*1.85*	*0.28*

APPENDIX 9

PROVIDER BASED SUMMARY DATA (1996-97)
RATE PER ANNUM
BY
LENGTH OF TIME ON WAITING LIST

APPENDIX 9: Provider based summary data (1996-97) rate per annum by length of time on waiting list

1. ALL ADMISSIONS

Length of wait	Royal Sussex County	Royal Alexandra	Other Sites	Total
0 days	0	0.5	0	0.5
1-7 days	58	236.5	24.5	319
8-14 days	6	126.5	10.5	143
15-21 days	6	106	6	118
22 days - 1 month	4.5	166.5	9	180
>1 - 2 months	26.5	607.5	35.5	669.5
>2 - 6 months	31	966.5	113.5	1111
> 6 months - 1 year	7.5	359	28	394.5
Greater than 1 year	2.5	74	6.5	83
Not on waiting list	*490*	*3745*	*35.5*	*4271*
Total	632	6388	269	7289

2.DAYCASES

Length of wait	Royal Sussex County	Royal Alexandra	Other Sites	Total
0 days	0	0	0	0
1-7 days	46	119.5	21.5	187
8-14 days	4.5	59	10	73.5
15-21 days	1.5	42.5	5	49
22 days - 1 month	1	80	8.5	89.5
>1 - 2 months	3	277	28.5	308.5
>2 - 6 months	2	367	83	452
> 6 months - 1 year	0	123.5	22	145.5
Greater than 1 year	0.5	30.5	5	36
Not on waiting list	*11.5*	*142*	*16.5*	*170*
Total	70	1241	200	1511

3.EMERGENCIES

Length of wait	Royal Sussex County	Royal Alexandra	Other Sites	Total
0 days	0	0	0	0
1-7 days	0	1.5	0	1.5
8-14 days	0	0.5	0	0.5
15-21 days	0	0	0	0
22 days - 1 month	0	0	0	0
>1 - 2 months	0	0.5	0	0.5
>2 - 6 months	0	1	0	1
> 6 months - 1 year	0	0	0	0
Greater than 1 year	0	0	0	0
Not on waiting list	*389.5*	*3405*	*15.5*	*3810*
Total	389.5	3408.5	15.5	3814

APPENDIX 10

PROVIDER & AREA BASED COMPARATIVE DATA (1996-97)
RATE PER ANNUM
BY
OPCS4 PROCEDURE

APPENDIX 10: Provider & area based comparative data (1996-97) rate per annum by OPCS4 procedure

1. ALL ADMISSIONS - Numbers

	Procedure	Royal Sussex County	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
A55	Diagnostic spinal puncture	1.5	23	0	24.5	37.5	76.5	575
C27	Operations on nasolacrimal duct	0	0	20.5	20.5	22	29.5	157
C31	Combined operations on muscles of eye	0	0.5	81.5	82	81.5	107.5	440.5
D15	Drainage of middle ear	5	225	0	230	245.5	507.5	3337.5
D20	Other operations on middle ear	2	18	0	20	20.5	36	168
E20	Operations on adenoid	0	321.5	0	321.5	279.5	284	1194
F05	Other repair of lip	0.5	25.5	0	26	30.5	36	98.5
F09	Surgical removal of tooth	0	159.5	4	163.5	160	176	829
F26	Other operations on tongue	0	27	0	27	25.5	38.5	223
F34	Excision of tonsil	39	309	0	348	353	585.5	3835.5
G40	Incision of pylorus	0	18.5	0	18.5	15	21	119
G45	Diag. fibreoptic endoscopicexam of u. gastrointestinal tract	1	51	0	52	40	53.5	314
H01	Emergency excision of appendix	10	76	0	86	97.5	206	1028
H22	Diagnostic endoscopic exam. of colon	0.5	23.5	0	24	13.5	22.5	116
H54	Dilation of anal sphincter	0	75.5	0	75.5	41	77	265.5
M45	Diagnostic endoscopic exam. of bladder	0	36	0.5	36.5	25.5	31	133
M73	Repair of urethra	0	44.5	0	44.5	26.5	30.5	215
M81	Operations on urethral orifice	0	25.5	0	25.5	15.5	22.5	79.5
N09	Other placement of testis in scrotum	0	84	0	84	56.5	95	521.5
N13	Other operations on testis	0	26.5	0	26.5	22	39.5	160
N30	Operations on prepuce	0.5	204	2.5	207	172	282.5	1836
Q11	Other evacuation of contents of uterus	2.5	0	16	18.5	22	59.5	468
S06	Other excision of lesion of skin	4.5	31	8.5	44	74	132.5	774.5
S41	Suture of skin of head or neck	4	18	0	22	31.5	36	165
S42	Suture of skin of other site	3.5	18.5	0	22	30	34	154.5
S47	Opening of skin	1	26	0	27	27.5	31.5	229
S57	Exploration of other skin of other site	11.5	9	0	20.5	32	41.5	266
S68	Excision of nail	28.5	5	1	34.5	40.5	55	212
T19	Simple excision of inguinal hernia sac	0	33.5	0	33.5	27.5	71	682
T20	Primary repaier of inguinal hernia	0	103	1.5	104.5	69.5	63.5	298.5
T24	Repair of umbilical hernia	0	26	0	26	17	33	241.5
W26	Other closed reduction of fracture of bone	139.5	59	0	198.5	220.5	377	2021.5
W28	Other internal fixation of bone	7	20.5	1	28.5	33	73.5	413
W92	Other operations on joint	0	20	0	20	15.5	12.5	55
X27	Correction of minor congenital deformity of foot	0	32.5	0	32.5	27.5	27.5	69.5
X29	Continuous infusion of therapeutic substance	3	40	0	43	73	249	937
X33	Other blood transfusion	0.5	104	0	104.5	103	105	785.5
X35	Other intravenous injection	0	38	0	38	41	101	562
X48	Immobilisation using plaster cast	7.5	57	0	64.5	61.5	75	359.5
X49	Other immobilisation	0.5	40.5	0	41	39	46.5	166.5
Y53	Percutaneous approach to organ under image control	11.5	107.5	1	120	105	103.5	286
All other procedures		142.5	697	116.5	956	1233.5	2362.5	17051.5
N/A	Medical admission - no procedure	204.5	3128	14.5	3347	3633	6825	47972
Total		632	6388	269	7289	7737.5	13674	89815.5

2. ALL ADMISSIONS - Percentages

Procedure		Royal Sussex County	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
A55	Diagnostic spinal puncture	0.24	0.36	0.00	0.34	0.48	0.56	0.64
C27	Operations on nasolacrimal duct	0.00	0.00	7.62	0.28	0.28	0.22	0.17
C31	Combined operations on muscles of eye	0.00	0.01	30.30	1.12	1.05	0.79	0.49
D15	Drainage of middle ear	0.79	3.52	0.00	3.16	3.17	3.71	3.72
D20	Other operations on middle ear	0.32	0.28	0.00	0.27	0.26	0.26	0.19
E20	Operations on adenoid	0.00	5.03	0.00	4.41	3.61	2.08	1.33
F05	Other repair of lip	0.08	0.40	0.00	0.36	0.39	0.26	0.11
F09	Surgical removal of tooth	0.00	2.50	1.49	2.24	2.07	1.29	0.92
F26	Other operations on tongue	0.00	0.42	0.00	0.37	0.33	0.28	0.25
F34	Excision of tonsil	6.17	4.84	0.00	4.77	4.56	4.28	4.27
G40	Incision of pylorus	0.00	0.29	0.00	0.25	0.19	0.15	0.13
G45	Diag. fibreoptic endoscopicexam of u. gastrointestinal tract	0.16	0.80	0.00	0.71	0.52	0.39	0.35
H01	Emergency excision of appendix	1.58	1.19	0.00	1.18	1.26	1.51	1.14
H22	Diagnostic endoscopic exam. of colon	0.08	0.37	0.00	0.33	0.17	0.16	0.13
H54	Dilation of anal sphincter	0.00	1.18	0.00	1.04	0.53	0.56	0.30
M45	Diagnostic endoscopic exam. of bladder	0.00	0.56	0.19	0.50	0.33	0.23	0.15
M73	Repair of urethra	0.00	0.70	0.00	0.61	0.34	0.22	0.24
M81	Operations on urethral orifice	0.00	0.40	0.00	0.35	0.20	0.16	0.09
N09	Other placement of testis in scrotum	0.00	1.31	0.00	1.15	0.73	0.69	0.58
N13	Other operations on testis	0.00	0.41	0.00	0.36	0.28	0.29	0.18
N30	Operations on prepuce	0.08	3.19	0.93	2.84	2.22	2.07	2.04
Q11	Other evacuation of contents of uterus	0.40	0.00	5.95	0.25	0.28	0.44	0.52
S06	Other excision of lesion of skin	0.71	0.49	3.16	0.60	0.96	0.97	0.86
S41	Suture of skin of head or neck	0.63	0.28	0.00	0.30	0.41	0.26	0.18
S42	Suture of skin of other site	0.55	0.29	0.00	0.30	0.39	0.25	0.17
S47	Opening of skin	0.16	0.41	0.00	0.37	0.36	0.23	0.25
S57	Exploration of other skin of other site	1.82	0.14	0.00	0.28	0.41	0.30	0.30
S68	Excision of nail	4.51	0.08	0.37	0.47	0.52	0.40	0.24
T19	Simple excision of inguinal hernia sac	0.00	0.52	0.00	0.46	0.36	0.52	0.76
T20	Primary repaier of inguinal hernia	0.00	1.61	0.56	1.43	0.90	0.46	0.33
T24	Repair of umbilical hernia	0.00	0.41	0.00	0.36	0.22	0.24	0.27
W26	Other closed reduction of fracture of bone	22.07	0.92	0.00	2.72	2.85	2.76	2.25
W28	Other internal fixation of bone	1.11	0.32	0.37	0.39	0.43	0.54	0.46
W92	Other operations on joint	0.00	0.31	0.00	0.27	0.20	0.09	0.06
X27	Correction of minor congenital deformity of foot	0.00	0.51	0.00	0.45	0.36	0.20	0.08
X29	Continuous infusion of therapeutic substance	0.47	0.63	0.00	0.59	0.94	1.82	1.04
X33	Other blood transfusion	0.08	1.63	0.00	1.43	1.33	0.77	0.87
X35	Other intravenous injection	0.00	0.59	0.00	0.52	0.53	0.74	0.63
X48	Immobilisation using plaster cast	1.19	0.89	0.00	0.88	0.79	0.55	0.40
X49	Other immobilisation	0.08	0.63	0.00	0.56	0.50	0.34	0.19
Y53	Percutaneous approach to organ under image control	1.82	1.68	0.37	1.65	1.36	0.76	0.32
All other procedures		22.55	10.91	43.31	13.12	15.94	17.28	18.99
N/A	Medical admission - no procedure	32.36	48.97	5.39	45.92	46.95	49.91	53.41
Total		100	100	100	100	100	100	100

3. ALL ADMISSIONS - Rankings

Procedure		Royal Sussex County	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
A55	Diagnostic spinal puncture	17	31	36	33	22	17	13
C27	Operations on nasolacrimal duct	40	42	3	37	36	37	34
C31	Combined operations on muscles of eye	29	40	2	13	11	11	17
D15	Drainage of middle ear	10	4	15	4	4	3	3
D20	Other operations on middle ear	16	37	41	40	37	30	30
E20	Operations on adenoid	25	2	13	3	3	5	6
F05	Other repair of lip	23	28	33	31	26	29	39
F09	Surgical removal of tooth	26	6	6	7	7	9	9
F26	Other operations on tongue	36	24	29	27	33	28	27
F34	Excision of tonsil	3	3	14	2	2	2	2
G40	Incision of pylorus	42	35	39	42	41	41	37
G45	Diag. fibreoptic endoscopicexam of u. gastrointestinal tract	18	15	22	16	20	24	20
H01	Emergency excision of appendix	7	11	18	11	10	8	7
H22	Diagnostic endoscopic exam. of colon	24	30	35	34	42	39	38
H54	Dilation of anal sphincter	30	12	19	14	18	16	24
M45	Diagnostic endoscopic exam. of bladder	33	20	12	22	32	35	36
M73	Repair of urethra	31	16	23	17	31	36	28
M81	Operations on urethral orifice	39	29	34	32	40	40	40
N09	Other placement of testis in scrotum	28	10	17	12	16	15	15
N13	Other operations on testis	37	25	30	29	35	27	33
N30	Operations on prepuce	20	5	7	5	6	6	5
Q11	Other evacuation of contents of uterus	15	41	4	41	34	22	16
S06	Other excision of lesion of skin	11	23	5	18	12	10	11
S41	Suture of skin of head or neck	12	36	40	36	25	31	32
S42	Suture of skin of other site	13	34	38	35	27	32	35
S47	Opening of skin	19	26	31	28	30	34	26
S57	Exploration of other skin of other site	6	38	42	38	24	26	23
S68	Excision of nail	4	39	11	23	19	23	29
T19	Simple excision of inguinal hernia sac	34	21	27	24	29	20	12
T20	Primary repaier of inguinal hernia	27	9	8	9	14	21	21
T24	Repair of umbilical hernia	38	27	32	30	38	33	25
W26	Other closed reduction of fracture of bone	2	13	20	6	5	4	4
W28	Other internal fixation of bone	9	32	10	26	23	19	18
W92	Other operations on joint	41	33	37	39	39	42	42
X27	Correction of minor congenital deformity of foot	35	22	28	25	28	38	41
X29	Continuous infusion of therapeutic substance	14	18	25	19	13	7	8
X33	Other blood transfusion	21	8	16	10	9	12	10
X35	Other intravenous injection	32	19	26	21	17	14	14
X48	Immobilisation using plaster cast	8	14	21	15	15	18	19
X49	Other immobilisation	22	17	24	20	21	25	31
Y53	Percutaneous approach to organ under image control	5	7	9	8	8	13	22
All other procedures		1	1	1	1	1	1	1

APPENDIX 11

PROVIDER & AREA BASED COMPARATIVE DATA (1996-97)
RATE PER ANNUM
BY
HRG

APPENDIX 11: Provider & area based comparative data (1996-97) rate per annum by HRG

1. ALL ADMISSIONS - Numbers

HRG	Royal Sussex	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
b02 - Eyes: band b	0.5	26	58	84.5	87	102.5	495.5
b04 - Eyes: band d	0	1	106	107	106	166.5	809.5
c02 - Ear procedures cat.1 <70 w/o cc	9	240	0.5	249.5	259.5	538.5	3618.5
c16 - Mouth & throat procedures cat.2 <30 w/o cc	1	185.5	5	191.5	213.5	412	3172.5
c25 - Mouth & throat procedures cat.3 w cc	10	113	0	123	108.5	113	386
c26 - Mouth & throat procedures cat.3 w/o cc	40.5	545.5	0	586	554.5	797.5	4811
f54 - Inflammatory bowel disease - cat.3	0.5	81	0	81.5	45.5	79.5	287
f73 - Hernia cat.4	0	129	1.5	130.5	87	95.5	539
f84 - Appendix - cat.3	9	75	0	84	86.5	190.5	1089
h18 - Non-infective bone & cartilage disorders <65 w/o cc	3	120.5	0	123.5	113.5	135.5	537.5
h47 - Closed u. limb fractures & dislocations <75 w/o cc	134.5	48	0	182.5	190.5	354	2013.5
h49 - Sprains strains & minor open wounds <70 w/o cc	41.5	102	0	143.5	187.5	294	1997.5
l47 - Penis minor operation procedure	0.5	208.5	2.5	211.5	171.5	280	1845
l51 - Scrotum testis & vas deferens major open proc. <16	0	91	1	92	66	129.5	804
p01 - Asthma & recurrent wheeze	1.5	409.5	2	413	422.5	665.5	3584.5
p03 - U. respiratoty tract infection	5	284	0	289	292.5	578.5	3836
p04 - L. respiratoty tract infection	1	206.5	0	207.5	211	411.5	2405.5
p05 - Obstructed airways	0.5	84.5	0	85	91.5	181	887.5
p14 - Other infections	5.5	131.5	0	137	150	427	3180.5
p20 - Seizures	0.5	266	0	266.5	260.5	456	2546.5
p32 - Gastrointestinal disorders	13.5	428	0	441.5	452.5	966.5	5971.5
p33 - Ingestion & poisoning	23	125	0	148	156.5	282.5	1371.5
p34 - Traumatic injury	16	97	0.5	113.5	141	255.5	1455
s23 - Convalescent & relief care <50 w/o cc	0.5	79.5	0	80	75	77	148
s28 - Other admissions	1.5	160.5	0	162	173	317	1842
Others - digestive hepato-biliary & pancreatic	5.5	47	0	52.5	240	390	3211.5
Others - diseases of childhood	0	4.5	35	39.5	533	1057.5	8305
Others - eye & periorbita	45	291.5	1	337.5	42.5	72	473
Others - haematolgy, non-specific groupings, psychiatry	69.5	305	8.5	383	154.5	261.5	2414
Others - mouth head neck & ears	3	91	0	94	410.5	721	4899.5
Others - musculoskeletal	11.5	430.5	2	444	423.5	693.5	4301
Others - nervous system	5	79.5	3	87.5	84	146	1076
Others - obstetrics & neonatal care	11	292	5.5	308.5	103.5	269	2242
Others - respiratory & cardiovascular	52.5	97	7.5	157	127	266.5	1977
Others - skin endocrine & metabolic	11	251.5	24.5	287	218.5	337	2129
Others - urinary tract & reproductive	5	143.5	0	148.5	223	406	3010
U01 - Invalid diagnosis	81.5	5	0.5	87	127.5	171.5	1926.5
U02 - Invalid procedure	12.5	110.5	4.5	127.5	338	542.5	3369.5
U03 - Invalid coding	0.5	1.5	0	2	9	33	847.5
Total	*632*	*6388*	*269*	*7289*	*7737.5*	*13674*	*89816*

2. ALL ADMISSIONS - Percentages

HRG	Royal Sussex	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
b02 - Eyes: band b	0.08	0.41	21.56	1.16	1.12	0.75	0.55
b04 - Eyes: band d	0.00	0.02	39.41	1.47	1.37	1.22	0.90
c02 - Ear procedures cat.1 <70 w/o cc	1.42	3.76	0.19	3.42	3.35	3.94	4.03
c16 - Mouth & throat procedures cat.2 <30 w/o cc	0.16	2.90	1.86	2.63	2.76	3.01	3.53
c25 - Mouth & throat procedures cat.3 w cc	1.58	1.77	0.00	1.69	1.40	0.83	0.43
c26 - Mouth & throat procedures cat.3 w/o cc	6.41	8.54	0.00	8.04	7.17	5.83	5.36
f54 - Inflammatory bowel disease - cat.3	0.08	1.27	0.00	1.12	0.59	0.58	0.32
f73 - Hernia cat.4	0.00	2.02	0.56	1.79	1.12	0.70	0.60
f84 - Appendix - cat.3	1.42	1.17	0.00	1.15	1.12	1.39	1.21
h18 - Non-infective bone & cartilage disorders <65 w/o cc	0.47	1.89	0.00	1.69	1.47	0.99	0.60
h47 - Closed u. limb fractures & dislocations <75 w/o cc	21.28	0.75	0.00	2.50	2.46	2.59	2.24
h49 - Sprains strains & minor open wounds <70 w/o cc	6.57	1.60	0.00	1.97	2.42	2.15	2.22
l47 - Penis minor operation procedure	0.08	3.26	0.93	2.90	2.22	2.05	2.05
l51 - Scrotum testis & vas deferens major open proc. <16	0.00	1.42	0.37	1.26	0.85	0.95	0.90
p01 - Asthma & recurrent wheeze	0.24	6.41	0.74	5.67	5.46	4.87	3.99
p03 - U. respiratoty tract infection	0.79	4.45	0.00	3.96	3.78	4.23	4.27
p04 - L. respiratoty tract infection	0.16	3.23	0.00	2.85	2.73	3.01	2.68
p05 - Obstructed airways	0.08	1.32	0.00	1.17	1.18	1.32	0.99
p14 - Other infections	0.87	2.06	0.00	1.88	1.94	3.12	3.54
p20 - Seizures	0.08	4.16	0.00	3.66	3.37	3.33	2.84
p32 - Gastrointestinal disorders	2.14	6.70	0.00	6.06	5.85	7.07	6.65
p33 - Ingestion & poisoning	3.64	1.96	0.00	2.03	2.02	2.07	1.53
p34 - Traumatic injury	2.53	1.52	0.19	1.56	1.82	1.87	1.62
s23 - Convalescent & relief care <50 w/o cc	0.08	1.24	0.00	1.10	0.97	0.56	0.16
s28 - Other admissions	0.24	2.51	0.00	2.22	2.24	2.32	2.05
Others - digestive hepato-biliary & pancreatic	1.74	4.57	2.04	4.23	3.10	2.85	3.58
Others - diseases of childhood	1.82	6.74	0.74	6.09	6.89	7.73	9.25
Others - eye & periorbita	0.00	0.07	13.01	0.54	0.55	0.53	0.53
Others - haematolgy, non-specific groupings, psychiatry	0.79	2.25	0.00	2.04	2.00	1.91	2.69
Others - mouth head neck & ears	7.12	4.56	0.37	4.63	5.31	5.27	5.46
Others - musculoskeletal	11.00	4.77	3.16	5.25	5.47	5.07	4.79
Others - nervous system	0.87	0.74	0.00	0.72	1.09	1.07	1.20
Others - obstetrics & neonatal care	0.47	1.42	0.00	1.29	1.34	1.97	2.50
Others - respiratory & cardiovascular	0.79	1.24	1.12	1.20	1.64	1.95	2.20
Others - skin endocrine & metabolic	8.31	1.52	2.79	2.15	2.82	2.46	2.37
Others - urinary tract & reproductive	1.74	3.94	9.11	3.94	2.88	2.97	3.35
U01 - Invalid diagnosis	12.90	0.08	0.19	1.19	1.65	1.25	2.14
U02 - Invalid procedure	1.98	1.73	1.67	1.75	4.37	3.97	3.75
U03 - Invalid coding	0.08	0.02	0.00	0.03	0.12	0.24	0.94
Total	*100*	*100*	*100*	*100*	*100*	*100*	*100*

3. ALL ADMISSIONS - Rankings

HRG	Royal Sussex	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
b02 - Eyes: band b	29	35	2	33	31	34	35
b04 - Eyes: band d	36	39	1	27	28	29	31
c02 - Ear procedures cat.1 <70 w/o cc	16	11	17	11	10	9	7
c16 - Mouth & throat procedures cat.2 <30 w/o cc	27	14	8	14	14	12	12
c25 - Mouth & throat procedures cat.3 w cc	15	21	30	25	27	33	37
c26 - Mouth & throat procedures cat.3 w/o cc	7	1	20	1	1	3	4
f54 - Inflammatory bowel disease - cat.3	30	29	34	35	37	36	38
f73 - Hernia cat.4	37	18	14	22	32	35	33
f84 - Appendix - cat.3	17	32	36	34	33	26	27
h18 - Non-infective bone & cartilage disorders <65 w/o cc	23	20	29	24	26	31	34
h47 - Closed u. limb fractures & dislocations <75 w/o cc	1	33	37	15	16	16	19
h49 - Sprains strains & minor open wounds <70 w/o cc	6	23	31	20	17	19	20
l47 - Penis minor operation procedure	31	12	11	12	19	21	23
l51 - Scrotum testis & vas deferens major open proc. <16	38	27	16	29	36	32	32
p01 - Asthma & recurrent wheeze	25	4	13	4	5	6	8
p03 - U. respiratoty tract infection	20	8	22	8	8	7	6
p04 - L. respiratoty tract infection	28	13	24	13	15	13	16
p05 - Obstructed airways	32	28	33	32	30	27	29
p14 - Other infections	18	17	27	21	22	11	11
p20 - Seizures	33	9	23	10	9	10	14
p32 - Gastrointestinal disorders	10	3	21	3	3	2	2
p33 - Ingestion & poisoning	8	19	28	19	20	20	26
p34 - Traumatic injury	9	25	18	26	23	25	25
s23 - Convalescent & relief care <50 w/o cc	34	31	35	36	35	37	39
s28 - Other admissions	26	15	25	16	18	18	24
Others - digestive hepato-biliary & pancreatic	13	6	7	7	11	15	10
Others - diseases of childhood	12	2	12	2	2	1	1
Others - eye & periorbita	39	37	3	38	38	38	36
Others - haematolgy, non-specific groupings, psychiatry	22	16	26	18	21	24	15
Others - mouth head neck & ears	5	7	15	6	6	4	3
Others - musculoskeletal	3	5	5	5	4	5	5
Others - nervous system	19	34	38	37	34	30	28
Others - obstetrics & neonatal care	24	26	32	28	29	22	17
Others - respiratory & cardiovascular	21	30	10	30	25	23	21
Others - skin endocrine & metabolic	4	24	6	17	13	17	18
Others - urinary tract & reproductive	14	10	4	9	12	14	13
U01 - Invalid diagnosis	2	36	19	31	24	28	22
U02 - Invalid procedure	11	22	9	23	7	8	9
U03 - Invalid coding	35	38	39	39	39	39	30

APPENDIX 12

PROVIDER & AREA BASED COMPARATIVE DATA (1996-97)
RATE PER ANNUM
BY
ICD10 DIAGNOSIS

APPENDIX 12: Provider & area based comparative data (1996-97) rate per annum by ICD10 DIAGNOSIS

1. ALL ADMISSIONS - Numbers

ICD10 Diagnosis		Royal Sussex County	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
A08	Viral and other specified intestinal infections	0	56.5	0	56.5	60.5	153	728
B34	Viral infection of unspecified site	0.5	25.5	0	26	35	130.5	1273
C49	Malignant neoplasm of other connective and soft tissue	0	53.5	0	53.5	55.5	54	108.5
D69	Purpura and other haemorrhagic conditions	0.5	29.5	0	30	32	42	238.5
E10	Insulin-dependent diabetes mellitus	4	34	0	38	36.5	68	349.5
G40	Epilepsy	0.5	90	0	90.5	89	147	777
H50	Other strabismus	0	1	107.5	108.5	113	170.5	869.5
H65	Nonsuppurative otitis media	4	335	0	339	316	564.5	3051
H66	Suppurative and unspecified otitis media	2	94	0	96	100	123	923
H72	Perforation of tympanic membrane	2.5	19.5	0	22	24.5	36.5	145.5
J02	Acute pharyngitis	0	22.5	0	22.5	21	24.5	227.5
J03	Acute tonsillitis	5.5	66.5	0	72	76	129	2042.5
J05	Acute obstructive laryngitis [croup] and epiglottitis	0.5	73.5	0	74	82	164.5	800.5
J06	Acute upper respiratory infections multiple and unsp sites	0.5	245.5	0	246	247	483	2735.5
J18	Pneumonia, organism unspecified	0.5	56	0	56.5	62.5	143.5	727.5
J21	Acute bronchiolitis	0.5	132	0	132.5	131.5	225.5	1439
J22	Unspecified acute lower respiratory infection	1	45	0	46	48.5	106.5	752
J34	Other disorders of nose and nasal sinuses	8.5	40	0	48.5	53	67.5	349.5
J35	Chronic diseases of tonsils and adenoids	42	312.5	0	354.5	349.5	607	3241.5
J45	Asthma	1.5	357.5	1.5	360.5	373.5	565	2922.5
K02	Dental caries	0	83.5	0	83.5	84	250.5	2353
K07	Dentofacial anomalies [including malocclusion]	1	59.5	3	63.5	72.5	115	481
K21	Gastro-oesophageal reflux disease	0	57.5	0	57.5	42.5	64.5	330
K35	Acute appendicitis	6	71.5	0	77.5	86	156.5	895
K40	Inguinal hernia	0	117.5	1.5	119	83.5	113	862
K42	Umbilical hernia	0	25.5	0	25.5	16.5	33	248.5
K52	Other noninfective gastroenteritis and colitis	0.5	114.5	0	115	120	220	1422
K59	Other functional intestinal disorders	2	149.5	1	152.5	121.5	210.5	1229
K62	Other diseases of anus and rectum	0	29.5	2	31.5	16	30	169.5
L02	Cutaneous abscess, furuncle and carbuncle	0.5	24.5	0	25	21.5	25	202
L03	Cellulitis	1.5	24	0	25.5	26.5	37	160
L60	Nail disorders	35.5	9	2	46.5	53	78	339
M24	Other specific joint derangements	1	48	0	49	48.5	62.5	218.5
N13	Obstructive and reflux uropathy	0	28	0	28	21.5	39.5	206
N39	Other disorders of urinary system	0	38.5	1	39.5	41.5	102	849.5
N47	Redundant prepuce, phimosis and paraphimosis	0.5	189	2	191.5	158.5	271.5	1765.5
P92	Feeding problems of newborn	0	44.5	0	44.5	42.5	68	286.5
Q10	Congen malformations of eyelid lacrimal apparatus & orbit	0	0.5	20.5	21	19	17.5	69
Q17	Other congenital malformations of ear	0.5	23	0.5	24	43.5	58	338
Q38	Other congenital malformations of tongue, mouth and pharynx	0	30.5	0	30.5	27.5	42	229
Q40	Other congenital malformations of upper alimentary tract	0	21	0	21	17	29	172
Q43	Other congenital malformations of intestine	0	27.5	0	27.5	17.5	20	136
Q53	Undescended testicle	0	87	0	87	57.5	107.5	606.5
Q54	Hypospadias	0	57.5	0	57.5	34.5	36.5	244
Q65	Congenital deformities of hip	0	28	0	28	25	34	140
Q66	Congenital deformities of feet	0.5	44	0	44.5	41.5	49.5	254
R06	Abnormalities of breathing	0.5	68.5	0	69	69	148.5	1102
R10	Abdominal and pelvic pain	17.5	107	0	124.5	129	346	1895.5
R11	Nausea and vomiting	0	38	0	38	39.5	119	800.5

1. ALL ADMISSIONS - Numbers (cont.)

ICD10 Diagnosis		Royal Sussex County	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
R56	Convulsions, not elsewhere classified	0	186.5	0	186.5	181.5	320	1834.5
R62	Lack of expected normal physiological development	0	37	0	37	42	66.5	374
R69	Unknown and unspecified causes of morbidity	0.5	71.5	0	72	68	64.5	98
S00	Superficial injury of head	0	46.5	0	46.5	50	80.5	360.5
S01	Open wound of head	8	66.5	5.5	80	100	112	505.5
S02	Fracture of skull and facial bones	14	20.5	0	34.5	40	65.5	466.5
S09	Other and unspecified injuries of head	6.5	107.5	0	114	124.5	181	1236.5
S42	Fracture of shoulder and upper arm	14	11.5	0	25.5	30	61.5	390.5
S52	Fracture of forearm	124.5	38.5	0	163	181	327.5	1837.5
S82	Fracture of lower leg, including ankle	23.5	13	0	36.5	41	68.5	474.5
T17	Foreign body in respiratory tract	0.5	23	0	23.5	21	26.5	178
T39	Poison by nonopioid analgesic antipyretic and antirheumatics	16.5	39	0	55.5	61.5	117.5	525.5
T81	Complications of procedures, not elsewhere classified	3.5	24	0.5	28	29	44.5	283.5
T85	Comps oth internal prosthetic devices implants & grafts	0	35.5	0	35.5	33	30.5	144
Z13	Special screening exam for other diseases and disorders	0.5	37	0	37.5	37.5	58	384
Z43	Attention to artificial openings	0	21	0	21	15	18.5	106
Z47	Other orthopaedic follow-up care	8.5	81.5	1	91	92.5	143.5	732.5
Z48	Other surgical follow-up care	0	21	2	23	22.5	30	227
Z53	Persons encount health services spec procs not carried out	0	72.5	0	72.5	53.5	61	151.5
Z54	Convalescence	1	81	0	82	76.5	76.5	91
All Others		187	1612.5	117	1916.5	2427	4659	35783
Missing		81.5	5	0.5	87	127.5	171.5	1926.5
Total		632	6388	269	7289	7737.5	13673.5	89815.5

2. ALL ADMISSIONS - Percentages

	ICD10 Diagnosis	Royal Sussex County	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
A08	Viral and other specified intestinal infections	0	0.88	0	0.78	0.78	1.12	0.81
B34	Viral infection of unspecified site	0.08	0.40	0	0.36	0.45	0.95	1.42
C49	Malignant neoplasm of other connective and soft tissue	0	0.84	0	0.73	0.72	0.39	0.12
D69	Purpura and other haemorrhagic conditions	0.08	0.46	0	0.41	0.41	0.31	0.27
E10	Insulin-dependent diabetes mellitus	0.63	0.53	0	0.52	0.47	0.50	0.39
G40	Epilepsy	0.08	1.41	0	1.24	1.15	1.08	0.87
H50	Other strabismus	0	0.02	39.96	1.49	1.46	1.25	0.97
H65	Nonsuppurative otitis media	0.63	5.24	0	4.65	4.08	4.13	3.40
H66	Suppurative and unspecified otitis media	0.32	1.47	0	1.32	1.29	0.90	1.03
H72	Perforation of tympanic membrane	0.40	0.31	0	0.30	0.32	0.27	0.16
J02	Acute pharyngitis	0	0.35	0	0.31	0.27	0.18	0.25
J03	Acute tonsillitis	0.87	1.04	0	0.99	0.98	0.94	2.27
J05	Acute obstructive laryngitis [croup] and epiglottitis	0.08	1.15	0	1.02	1.06	1.20	0.89
J06	Acute upper respiratory infections multiple and unsp sites	0.08	3.84	0	3.37	3.19	3.53	3.05
J18	Pneumonia, organism unspecified	0.08	0.88	0	0.78	0.81	1.05	0.81
J21	Acute bronchiolitis	0.08	2.07	0	1.82	1.70	1.65	1.60
J22	Unspecified acute lower respiratory infection	0.16	0.70	0	0.63	0.63	0.78	0.84
J34	Other disorders of nose and nasal sinuses	1.34	0.63	0	0.67	0.68	0.49	0.39
J35	Chronic diseases of tonsils and adenoids	6.65	4.89	0	4.86	4.52	4.44	3.61
J45	Asthma	0.24	5.60	0.56	4.95	4.83	4.13	3.25
K02	Dental caries	0	1.31	0	1.15	1.09	1.83	2.62
K07	Dentofacial anomalies [including malocclusion]	0.16	0.93	1.12	0.87	0.94	0.84	0.54
K21	Gastro-oesophageal reflux disease	0	0.90	0	0.79	0.55	0.47	0.37
K35	Acute appendicitis	0.95	1.12	0	1.06	1.11	1.14	1.00
K40	Inguinal hernia	0	1.84	0.56	1.63	1.08	0.83	0.96
K42	Umbilical hernia	0	0.40	0	0.35	0.21	0.24	0.28
K52	Other noninfective gastroenteritis and colitis	0.08	1.79	0	1.58	1.55	1.61	1.58
K59	Other functional intestinal disorders	0.32	2.34	0.37	2.09	1.57	1.54	1.37
K62	Other diseases of anus and rectum	0	0.46	0.74	0.43	0.21	0.22	0.19
L02	Cutaneous abscess, furuncle and carbuncle	0.08	0.38	0	0.34	0.28	0.18	0.22
L03	Cellulitis	0.24	0.38	0	0.35	0.34	0.27	0.18
L60	Nail disorders	5.62	0.14	0.74	0.64	0.68	0.57	0.38
M24	Other specific joint derangements	0.16	0.75	0	0.67	0.63	0.46	0.24
N13	Obstructive and reflux uropathy	0	0.44	0	0.38	0.28	0.29	0.23
N39	Other disorders of urinary system	0	0.60	0.37	0.54	0.54	0.75	0.95
N47	Redundant prepucc, phimosis and paraphimosis	0.08	2.96	0.74	2.63	2.05	1.99	1.97
P92	Feeding problems of newborn	0	0.70	0	0.61	0.55	0.50	0.32
Q10	Congen malformations of eyelid lacrimal apparatus & orbit	0	0.01	7.62	0.29	0.25	0.13	0.08
Q17	Other congenital malformations of ear	0.08	0.36	0.19	0.33	0.56	0.42	0.38
Q38	Other congenital malformations of tongue, mouth and pharynx	0	0.48	0	0.42	0.36	0.31	0.25
Q40	Other congenital malformations of upper alimentary tract	0	0.33	0	0.29	0.22	0.21	0.19
Q43	Other congenital malformations of intestine	0	0.43	0	0.38	0.23	0.15	0.15
Q53	Undescended testicle	0	1.36	0	1.19	0.74	0.79	0.68
Q54	Hypospadias	0	0.90	0	0.79	0.45	0.27	0.27
Q65	Congenital deformities of hip	0	0.44	0	0.38	0.32	0.25	0.16
Q66	Congenital deformities of feet	0.08	0.69	0	0.61	0.54	0.36	0.28
R06	Abnormalities of breathing	0.08	1.07	0	0.95	0.89	1.09	1.23
R10	Abdominal and pelvic pain	2.77	1.68	0	1.71	1.67	2.53	2.11
R11	Nausea and vomiting	0	0.59	0	0.52	0.51	0.87	0.89

2. All admissions -percentages (Cont.)

ICD10 Diagnosis	Royal Sussex County	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
R56 Convulsions, not elsewhere classified	0	2.92	0	2.56	2.35	2.34	2.04
R62 Lack of expected normal physiological development	0	0.58	0	0.51	0.54	0.49	0.42
R69 Unknown and unspecified causes of morbidity	0.08	1.12	0	0.99	0.88	0.47	0.11
S00 Superficial injury of head	0	0.73	0	0.64	0.65	0.59	0.40
S01 Open wound of head	1.27	1.04	2.04	1.10	1.29	0.82	0.56
S02 Fracture of skull and facial bones	2.22	0.32	0	0.47	0.52	0.48	0.52
S09 Other and unspecified injuries of head	1.03	1.68	0	1.56	1.61	1.32	1.38
S42 Fracture of shoulder and upper arm	2.22	0.18	0	0.35	0.39	0.45	0.43
S52 Fracture of forearm	19.70	0.60	0	2.24	2.34	2.40	2.05
S82 Fracture of lower leg, including ankle	3.72	0.20	0	0.50	0.53	0.50	0.53
T17 Foreign body in respiratory tract	0.08	0.36	0	0.32	0.27	0.19	0.20
T39 Poison by nonopioid analgesic antipyretic and antirheumatics	2.61	0.61	0	0.76	0.79	0.86	0.59
T81 Complications of procedures, not elsewhere classified	0.55	0.38	0.19	0.38	0.37	0.33	0.32
T85 Comps oth internal prosthetic devices implants & grafts	0	0.56	0	0.49	0.43	0.22	0.16
Z13 Special screening exam for other diseases and disorders	0.08	0.58	0	0.51	0.48	0.42	0.43
Z43 Attention to artificial openings	0	0.33	0	0.29	0.19	0.14	0.12
Z47 Other orthopaedic follow-up care	1.34	1.28	0.37	1.25	1.20	1.05	0.82
Z48 Other surgical follow-up care	0	0.33	0.74	0.32	0.29	0.22	0.25
Z53 Persons encount health services spec procs not carried out	0	1.13	0	0.99	0.69	0.45	0.17
Z54 Convalescence	0.16	1.27	0	1.12	0.99	0.56	0.10
All Others	29.59	25.24	43.49	26.29	31.37	34.07	39.84
Missing	12.90	0.08	0.19	1.19	1.65	1.25	2.14
Total	100	100	100	100	100	100	100

3. ALL ADMISSIONS - Rankings

ICD10 Diagnosis		Royal Sussex County	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
A08	Viral and other specified intestinal infections	N/A	30	N/A	33	31	19	29
B34	Viral infection of unspecified site	29	53	N/A	59	51	24	15
C49	Malignant neoplasm of other connective and soft tissue	N/A	32	N/A	36	33	51	67
D69	Purpura and other haemorrhagic conditions	30	48	N/A	54	54	54	51
E10	Insulin-dependent diabetes mellitus	17	46	N/A	46	50	40	41
G40	Epilepsy	31	15	N/A	18	19	21	26
H50	Other strabismus	N/A	70	2	15	15	16	21
H65	Nonsuppurative otitis media	18	3	N/A	4	4	4	3
H66	Suppurative and unspecified otitis media	21	14	N/A	16	16	26	19
H72	Perforation of tympanic membrane	20	65	N/A	68	60	59	63
J02	Acute pharyngitis	N/A	60	N/A	67	64	68	53
J03	Acute tonsillitis	16	26	N/A	28	25	25	7
J05	Acute obstructive laryngitis [croup] and epiglottitis	32	20	N/A	25	23	17	24
J06	Acute upper respiratory infections multiple and unsp sites	33	5	N/A	5	5	5	5
J18	Pneumonia, organism unspecified	34	31	N/A	34	29	23	30
J21	Acute bronchiolitis	35	9	N/A	10	9	11	13
J22	Unspecified acute lower respiratory infection	25	35	N/A	41	38	33	27
J34	Other disorders of nose and nasal sinuses	11	38	N/A	38	35	41	42
J35	Chronic diseases of tonsils and adenoids	4	4	N/A	3	3	2	2
J45	Asthma	23	2	10	2	2	3	4
K02	Dental caries	N/A	17	N/A	21	21	10	6
K07	Dentofacial anomalies [including malocclusion]	26	27	5	30	26	29	34
K21	Gastro-oesophageal reflux disease	N/A	28	N/A	31	41	45	45
K35	Acute appendicitis	15	22	N/A	24	20	18	20
K40	Inguinal hernia	N/A	10	11	12	22	30	22
K42	Umbilical hernia	N/A	54	N/A	60	69	61	49
K52	Other noninfective gastroenteritis and colitis	36	11	N/A	13	14	12	14
K59	Other functional intestinal disorders	22	8	12	9	13	13	17
K62	Other diseases of anus and rectum	N/A	49	7	52	70	64	60
L02	Cutaneous abscess, furuncle and carbuncle	37	55	N/A	63	62	67	57
L03	Cellulitis	24	57	N/A	61	58	57	61
L60	Nail disorders	5	68	9	39	36	36	43
M24	Other specific joint derangements	27	33	N/A	37	39	46	55
N13	Obstructive and reflux uropathy	N/A	50	N/A	56	63	56	56
N39	Other disorders of urinary system	N/A	41	14	44	44	34	23
N47	Redundant prepuce, phimosis and paraphimosis	38	6	6	6	8	9	12
P92	Feeding problems of newborn	N/A	36	N/A	42	42	39	46
Q10	Congen malformations of eyelid lacrimal apparatus & orbit	N/A	71	3	69	66	71	71
Q17	Other congenital malformations of ear	39	58	16	64	40	49	44
Q38	Other congenital malformations of tongue, mouth and pharynx	N/A	47	N/A	53	57	55	52
Q40	Other congenital malformations of upper alimentary tract	N/A	61	N/A	70	68	65	59
Q43	Other congenital malformations of intestine	N/A	52	N/A	58	67	69	66
Q53	Undescended testicle	N/A	16	N/A	20	32	32	31
Q54	Hypospadias	N/A	29	N/A	32	52	58	50
Q65	Congenital deformities of hip	N/A	51	N/A	57	59	60	65
Q66	Congenital deformities of feet	40	37	N/A	43	45	52	48
R06	Abnormalities of breathing	41	24	N/A	29	27	20	18
R10	Abdominal and pelvic pain	7	13	N/A	11	10	6	9
R11	Nausea and vomiting	N/A	42	N/A	45	48	27	25

3.All Admissions - Rankings (cont.)

ICD10 Diagnosis		Royal Sussex County	Royal Alexandra	Other Sites	Brighton Healthcare	Brighton Hove & Lewes	ESB&H	South Thames (East)
R56	Convulsions, not elsewhere classified	N/A	7	N/A	7	6	8	11
R62	Lack of expected normal physiological development	N/A	44	N/A	48	43	42	39
R69	Unknown and unspecified causes of morbidity	42	23	N/A	27	28	44	69
S00	Superficial injury of head	N/A	34	N/A	40	37	35	40
S01	Open wound of head	13	25	4	23	17	31	33
S02	Fracture of skull and facial bones	9	64	N/A	51	47	43	36
S09	Other and unspecified injuries of head	14	12	N/A	14	12	14	16
S42	Fracture of shoulder and upper arm	10	67	N/A	62	55	47	37
S52	Fracture of forearm	2	40	N/A	8	7	7	10
S82	Fracture of lower leg, including ankle	6	66	N/A	49	46	38	35
T17	Foreign body in respiratory tract	43	59	N/A	65	65	66	58
T39	Poison by nonopioid analgesic antipyretic and antirheumatics	8	39	N/A	35	30	28	32
T81	Complications of procedures, not elsewhere classified	19	56	15	55	56	53	47
T85	Comps oth internal prosthetic devices implants & grafts	N/A	45	N/A	50	53	62	64
Z13	Special screening exam for other diseases and disorders	44	43	N/A	47	49	50	38
Z43	Attention to artificial openings	N/A	62	N/A	71	71	70	68
Z47	Other orthopaedic follow-up care	12	18	13	17	18	22	28
Z48	Other surgical follow-up care	N/A	63	8	66	61	63	54
Z53	Persons encount health services spec procs not carried out	N/A	21	N/A	26	34	48	62
Z54	Convalescence	28	19	N/A	22	24	37	70
All Others		1	1	1	1	1	1	1
Missing		3	69	17	19	11	15	8

APPENDIX 13

NUMBERS OF FCE'S IN BRIGHTON HEALTHCARE FOR 16 AND UNDER YEAR OLDS BY OPCS4 PROCEDURE CODE

APPENDIX 13: Numbers of FCEs in Brighton Healthcare for 16 and under year olds by OPCS4 procedure code

1 Paediatric procedures

Procedure	Number
A12 - Creation of connection from ventricle to brain	1
A14 - Other ops on connection from ventricle to brain	5
A48 - Other ops on spinal cord	0.5
A55 - Diagnostic spinal puncture	24.5
B10 - Ops on thyroglossal tissue	7.5
B27 - Total excison of breast	1.5
B33 - Incision of breast	1
B35 - Ops on nipple	1.5
E42 - Exteriorisation of trachea	2.5
E44 - Other ops on carina	0.5
E48 - Therapeutic fibreoptic endscopic ops on l respiratory tract	0.5
E49 - Diagnostic fibreoptic endscopic exam on l respiratory tract	1
E50 - Therapeutic endscopic ops on l respiratory tract - bronchscope	1.5
E51 - Diagnostic endscopic exam on l respiratory tract - bronchscope	3.5
F02 - Extirpation of lesion of lip	1.5
F03 - Correction of deformity of lip	1
F05 - Other repair of lip	26
F06 - Other ops on lip	2
F38 - Extirpation of lesion of other part of mouth	2
F40 - Other repair of other part of mouth	1
F42 - Other ops on mouth	1
F44 - Excision of salivary gland	1
F45 - Extirpation of lesion of salivary gland	1.5
F50 - Transposition of salivary duct	2.5
F53 - Other open ops on salivary duct	1
G08 - Artificial opening into oesophagus	0.5
G15 - Other therapeutic fibreoptic endoscopic ops on oesophagus	9
G16 - Diagnostic fibreoptic endoscopic exam on oesophagus	0.5
G18 - Other therapeutic endoscopic ops on oesophagus - oesophagoscope	15
G19 - Diagnostic endoscopic exam on oesophagus - oesophagoscope	0.5
G21 - Other ops on oesophagus	0.5
G24 - Antireflux ops	12.5
G31 - Connection of stomach to duodenum	0.5
G34 - Artificial opening into stomach	8.5
G35 - Ops on ulcer of stomach	0.5
G40 - Incision of pylorus	18.5
G44 - Other fibreoptic therapeutic endoscopic ops on u GI tract	6.5
G45 - Diagnostic fibreoptic endoscopic exam on u GI tract	52
G47 - Intubation of stomach	7
G53 - Other open ops on duodenum	2.5
G58 - Excision of jejunum	0.5
G67 - Other ops on jejunum	12
G69 - Excision of ileum	0.5
G70 - Open extirpation of lesion of ileum	2
G73 - Attention to connectionof ileum	0.5
G74 - Creation of artificial opening into ileum	1
G75 - Attention to artificial opening into ileum	1.5
G76 - Intraabdominal manipulation of ileum	3
G82 - Other ops on ileum	0.5
H01 - Emergency excision of appendix	86
H02 - Other excision of appendix	1
H05 - Total excision of colon	0.5

13.1 Paediatric Procedures (continued)	Number
H07 - Other excision of right hemicolon	0.5
H09 - Excision of left hemicolon	0.5
H10 - Excision of sigmoid colon	1
H11 - Other excision of colon	1
H12 - Extirpation of lesion of colon	1
H14 - Exteriorisation of caecum	0.5
H15 - Other exteriorisation of colon	5.5
H18 - Other endoscopic ops on colon	0.5
H19 - Other open ops on colon	0.5
H20 - Endoscopic extirpation of lesion of colon	0.5
H21 - Other therapeutic endoscopic ops on colon	0.5
H22 - Diagnostic endoscopic exam on colon	24
H23 - Endoscopic extirpation of lesion of l bowel using fibreoptic sigmoidoscope	1.5
H25 - Diagnostic endoscopic exam of l bowel using fibreoptic sigmoidoscope	0.5
H27 - Other therapeutic endoscopic ops on sigmoid colon using fibreoptic sigmoidoscope	0.5
H41 - Other ops on rectum through anus	2
H42 - Perineal ops for prolapse of rectum	0.5
H44 - Manipulation of rectum	16
H48 - Excision of lesion of anus	2.5
H50 - Repair of anus	3.5
H52 - Destruction of haemorrhoid	0.5
H54 - Dilation of anal sphincter	75.5
H55 - Other ops on perianal region	2
H56 - Other ops on anus	6
H58 - Drainage through perineal region	7
H59 - Excision of pilonidal sinus	3
H60 - Other ops on pilonidal sinus	2
H62 - Other ops on bowel	4
J69 - Total excision of spleen	0.5
J70 - Other excision of spleen	0.5
K09 - Closure of defect of artioventricular septum	2
L74 - Arteriovenous shunt	0.5
L85 - Ligation of varicose vein of leg	0.5
L91 - Other vein related ops	11
N01 - Extirpation of scrotum	1
N03 - Other ops on scrotum	5.5
N06 - Other excision of testis	1
N07 - Extirpation of lesion of testis	2.5
N09 - Other placement of testis in scrotum	84
N10 - Prosthesis of testis	1
N11 - Ops on hydrocele sac	2
N13 - Other ops on testis	26.5
N15 - Ops on epididymis	1
N19 - Ops on variocele	0.5
N27 - Extirpation of lesion of penis	1.5
N28 - Plastic ops on penis	1.5
N30 - Ops on prepuce	207
N32 - Other ops on penis	7
N34 - Other ops on male genital tract	1
S06 - Other excision of lesion of skin	44
S08 - Curettage of lesion of skin	2.5
S10 - Other destruction of lesion of skin of head or neck	0.5
S15 - Other biopsy of skin	1
S41 - Suture of skin of head or neck	22
S42 - Suture of skin of other site	22
S43 - Removal of repair material from skin	8.5

13.1 Paediatric Procedures (continued)	Number
S44 - Removal of other inorganic substance from skin	11.5
S45 - Removal of other substance from skin	6
S47 - Opening of skin	27
S55 - Exploration of burnt skin of other site	1.5
S56 - Exploration of other skin of head or neck	3.5
S57 - Exploration of other skin of other site	20.5
S60 - Other ops on skin	1.5
S64 - Extirpation of nail bed	2
S66 - Other ops on nail bed	1.5
S68 - Excision of nail	34.5
S70 - Other ops on nail	8
T10 - Therapeutic endoscopic ops on pleura	0.5
T11 - Diagnostic endoscopic exam of pleura	0.5
T12 - Puncture of pleura	5
T19 - Simple excision og inguinal hernia sac	33.5
T20 - Primary repair of inguinal hernia	4.5
T22 - Primary repair of femoral hernia	1
T24 - Repair of umbilical hernia	26
T25 - Primary repair of incisional hernia	0.5
T27 - Repair of other hernia of abdominal wall	12
T28 - Other repair of anterior abdominal wall	1.5
T29 - Operations on umbilicus	7
T30 - Opening of abdomen	2.5
T31 - Other ops on anterior abdominal wall	0.5
T33 - Open extirpation of lesion of peritoneum	0.5
T34 - Open drainage of peritoneum	0.5
T37 - Ops on mesentery of small intestine	2
T41 - Other open ops on peritoneum	1.5
T43 - Diagnostic endoscopic exam of peritoneum	3.5
T86 - Sampling of lymph nodes	0.5
T87 - Excision or biopsy of lymph nodes	12.5
T94 - Ops on bronchial cleft	3
T96 - Other ops on soft tissue	0.5
V03 - Opening of cranium	0.5
X29 - Continuous infusion of therapeutic substance	43
X30 - Injection of therapeutic substance	6.5
X31 - Injection of radiocontrast material	1
X33 - Other blood transfusion	4.5
X35 - Other intravenous injection	38
X45 - Donation of organ	0.5
X48 - Immobilisation using plaster cast	64.5
X49 - Other immobilisation	41
X50 - External resucitation	2
X59 - Anaesthetic without surgery	0.5
Y09 - Chemical destruction of organ noc	0.5
Y13 - Other destruction of lesion of organ noc	0.5
Y22 - Drainage of organ noc	0.5
Y35 - Introduction of removable radioactive material into organ noc	0.5
Y41 - Examination of organ noc	0.5
Y44 - Other methods of operation on organ noc	0.5
Y50 - Approach through abdominal cavity	0.5
Y52 - Approach to organ through other artificial opening	1
Y53 - Percutaneous approach to organ under image control	120
Y80 - General anaesthetic	0.5
Y82 - Local anaesthetic	3.5
Z90 - Sub - leg region	0.5
Total	1525.5

2 Urology procedures

Procedure	Number
M02 - Total excision of kidney	8.5
M03 - Partial excision of kidney	3.5
M05 - Open repair of kidney	12.5
M06 - Incision of kidney	1
M13 - Percutaneous puncture of kidney	1
M16 - Other ops on kidney	1.5
M18 - Excisionofd ureter	0.5
M19 - Urinary division	0.5
M20 - Replantation of ureter	13
M25 - Other open ops on ureter	0.5
M29 - Other therapeutic endoscopic ops on ureter	1
M30 - Diagnostic endscopic exam of ureter	2
M32 - Ops on ureteric orifice	2.5
M39 - Other open ops on contents of bladder	0.5
M42 - Endoscopic extirpation of lesion of bladder	0.5
M44 - Other therapeutic endoscopic ops on bladder	0.5
M45 - Diagnostic endoscopic exam of bladder	36.5
M47 - Urerthral catheterisation of bladder	12
M58 - Other ops on outlet of female bladder	0.5
M72 - Excision of urethra	0.5
M73 - Repair of urethra	44.5
M75 - Other open ops on urethra	0.5
M76 - Therapeutic endoscopic ops on urethra	4.5
M77 - Diagnostic endoscopic exam on urethra	1
M79 - Other ops on urethra	10.5
M81 - Ops on urethral orifice	25.5
M83 - Other ops on urinary tract	0.5
Total	186